NRC	FORM	374
(7-94)		

U.S. NUCLEAR REGULATORY COMMISSION

10

TOTAL TOTAL

MATERIALS LICENSE

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Pursua Federa by the materi person specifi Nuclea	licens ial desi is authorical in	ee, a license is hereby issued author gnated below; to use such material prized to receive it in accordance we Section 183 of the Atomic Energy	orizing the licensee to real for the purpose(s) are with the regulations of the purpose of 1954, as a per section of the purpose of 1954, as a per section of the purpose of 1954, as a per section of the purpose of 1954, as a per section of 1954, as a p	and 70, and in refiance eccive, acquire, possess, and at the place(s) designate applicable Part(s). This ended and in cultilates	on stat and tra ated be s licen	ements and representations heretofore r nsfer byproduct, source, and special nu- clow; to deliver or transfer such materi	
		Licensee					
by the Ecensee, a Beene is hereby leaded authorizing the Biconsee to receive, angular, possess, and transfer bypostations to such material disequated below; to use such material for the purposets) and at the place(s) designated below; to deliver or transfer a persons authorized to receive it in accordance with the regulations of the applicable Part(s). This Breast shall be deemed to contain specified in Section 183 of the Atomic Energy Acr of 1934, as amended, and is subject to all applicable rules, regulations, and Noclear Regulatory Commission now or hereafter in effect and to any conditions specified below. Licensee 1. Crow Butte Resources, Inc. 2. 1870 Broadway, Suite 3450 Denver, Colorado 80202 4. Expiration Date 5. Docket or Reference No. 7. Chemical and/or Physical February 28, 2008 8. Maximum Annount that May Possess at Any One Under This License 1. Natural Uranium 8. Maximum Annount that May Possess at Any One Under This License 2. In Immitted as defined in 10 CFR 40.4 8. Maximum Annount that May Possess at Any One Under This License 2. Unlimited as defined in 10 CFR 40.4 8. Unlimited below the Administrative Conditions SECTION 9: Administrative Conditions 9.1 Authorized place of use shall be the licensee's Crow Butte uranium recovery and processing facilities in Dawes County, Nebraska. 9.2 All written notices and reports to the NRC required under this license, with the exception of resubmitted in accordance with 10 CFR 40.85, shall be addressed to the Chief, Uranium Reconstranch, Division of Weste Marnagament, Office of Nuclear Material Safety and Safeguards, Stop T 7-J-8, Nuclear Regulatory Commission, 11548 Rockville Pike, Rockville, Mix D20850, Semiannual effluent monitoring reports required under 10 CFR 40.65 shall be addressed to Director, Division of Nuclear Regulatory Commission, 11548 Rockville Pike, Rockville, Mix D20850, Semiannual effluent monitoring reports required under 10 CFR 40.65 shall be addressed to Director, Division of Nuclear Regulatory Commission, 11548 Rockville							
2	16	70 Broadway, Suite 3450			SI	JA-1534, Amendment No. 6	
2.	De	enver, Colorado 80202		4. Expiration Date	Fe	ebruary 28, 2008	
Spec a.					40	-8943	
Byproduct, Source Special Nuclear M A. Natural U Byproduct		clear Material	7. Chemical and Form	l/or Physical	May Possess at Any One		
	Byproduct material			ed	b.	Unlimited Quantity generated under operations authorized by this	
SECT	ΓΙΟΝ	9: Administrative Cond	ditions				
9.1	Aut fac	thorized place of use shall ilities in Dawes County, No	be the licensee's ebraska.	Crow Butte uraniu	m red	covery and processing	
9.2	Bra Sto Ser Dire	nch, Division of Waste Ma p T 7-J-8, Nuclear Regula miannual effluent monitorin ector, Division of Nuclear M	inagement, Office tory Commission, ig reports require Material Safety Re	nall be addressed to of Nuclear Materia 11545 Rockville P d under 10 CFR 40 egion IV Nuclear F	to the al Sa ike, F	c Chief, Uranium Recovery fety and Safeguards, Mail Rockville, MD 20850.	
	Inci Ope	dent and event notification erations Center at (301) 81	ns that require tele 16-5100.	1. And 10, and in retrance on statements and representations heretofore made ceceive, acquire, possess, and transfer byproduct, source, and special nuclear and at the place(s) designated below; to deliver or transfer such material to the applicable Part(s). This license shall be deemed to contain the conditions aded, and is subject to all applicable rules, regulations, and orders of the conditions specified below. 3. License Number SUA-1534, Amendment No. 6 4. Expiration Date February 28, 2008 5. Docket or Reference No. 8. Maximum Amount that Licensee May Possess at Any One Time Under This License 9. Unlimited 9. Quantity generated under operations authorized by this license 10. Crow Butte uranium recovery and processing siried under this license, with the exception of reports shall be addressed to the Chief, Uranium Recovery of Nuclear Material Safety and Safeguards, Mail 11545 Rockville Pike, Rockville, MD 20850, dunder 10 CFR 40.65 shall be addressed to egion IV, Nuclear Regulatory Commission, xas, 76011. Sephone notification shall be made to the NRC dance with the commitments, representations, and dated December 1995, as amended by submittals 1, 1997, which are hereby incorporated by conditions below. Whenever the word "will" or ints, it shall denote a requirement.			
9.3	Process to the Atomic Energy Act of 1954, as amended, the beautry Reorganization Act of 1974 (Public Law 93-438), and Title 1 Foreieral Regulations, Chapter 1, Paris 36, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in refluence on statements and representations benefor by the Ricenses, Electives to see such material designated below; to use such material for the purposets) and at the place(s) designated below; to deliver or transfer such pacification receives in section 181 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable below; to deliver or transfer such pacified in Section 181 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable mics, reministrons, and or function Regulatory Commission now or hereafter in effect and to any conditions specified below. Licensec Crow Butte Resources, Inc. 1670 Broadway, Suite 3450 Denver, Colorado 80202 2		as amended by submittals by incorporated by				
9.4	Pursuant to the Atomic Eaergy Act of 1934, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 1 Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in refrance on statements and representations been by the florense in License is hereby issuard discharge the Energy and at the placets) designated behavior defined to receive it in accordance with the registations of the applicable Part(5). This florense bable the deemed to cerular in the registations of the applicable Part(5). This florense dubling the energy Act of 1934 as amended, and is subject to all applicable rules, regulations, and ore specified in Section 183 of the Atomic Energy Act of 1934 as amended, and is subject to all applicable rules, regulations, and ore Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below. 1. Crow Butte Resources, Inc. 2. 1670 Broadway, Suite 3450 Denver, Colorado 80202 1. Expiration Date February 28, 2008 2. Decket or Reference No. 3. License Number 3. License Number 5. Decket or Reference No. 4. Expiration Date February 28, 2008 5. Decket or Reference No. 5. Decket or Reference No. 6. Byproduct Source, and/or Special Nuclear Material Unspecified 1. Order of Reference No. 8. Maximum Amount that February 28, 2008 7. Decket or Reference No. 9. Authorized place of use shall be the licensee's Crow Butte uranium recovery and processing facilities in Dawes County, Nebraska. 9.2 All written notices and reports to the NRC required under this license, with the exception of reports and the process of the Chief, Uranium Recover Branch, Division of Nuclear Material Safety, Region IV, Nuclear Material Safety and Safeguards, Mai Stop T 7-J-8, Nuclear Regulatory Commission, 11454 Rockville Pike, Rockville,	e conditions specified in					
	(1)	Make changes in	the facility or proc	ess, as presented	in the	e approved application.	

SECTION 9: Administrative Conditions

- Authorized place of use shall be the licensee's Crow Butte uranium recovery and processing 9.1 facilities in Dawes County, Nebraska.
- 9.2 All written notices and reports to the NRC required under this license, with the exception of reports submitted in accordance with 10 CFR 40.65, shall be addressed to the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, Mail Stop T 7-J-8, Nuclear Regulatory Commission, 11545 Rockville Pike, Rockville, MD 20850. Semiannual effluent monitoring reports required under 10 CFR 40.65 shall be addressed to Director, Division of Nuclear Material Safety, Region IV, Nuclear Regulatory Commission, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas, 76011.

- The licensee shall conduct operations in accordance with the commitments, representations, and 9.3 statements contained in the license application dated December 1995, as amended by submittals dated April 1, June 25, July 28, and October 31, 1997, which are hereby incorporated by reference, except where superseded by license conditions below. Whenever the word "will" or "shall" is used in the above referenced documents, it shall denote a requirement.
- The licensee may, without prior NRC approval, and subject to the conditions specified in 9.4 Α. Part B of this condition:

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-								
	(2)	Make changes in the procedures presented	in the approved application.					
	(3)	Conduct tests or experiments not presented	in the approved application.					
B.	The licer condition	nsee shall file an application for an amendment to sare satisfied:	to the license, unless the following					
	(1)	The change, test, or experiment does not co stated in this license (excluding information rapplication), or impair the licensee's ability to	nflict with any requirement specifically referenced in the approved license meet all applicable NRC regulations.					
	(2)	There is no degradation in the essential safe license application, or provided by the approximation in the essential safe.	ty or environmental commitments in the ved reclamation plan.					
	(3)	The change, test, or experiment is consistent and selected in the Environmental Assessment	t with the conclusions of actions analyzed ent dated February 1998.					
C.	employed member of manageric construction member services for assuring members health physother technical members and the physother technical members are provided and the physother technical members are provided and the physother technical members are provided and the physical members are provided and the	I by the licensee, and one of these shall be designed the SERP shall have expertise in management all and financial changes; one member shall have on and shall have responsibility for implementing shall be the site Corporate Radiation Safety Officing changes conform to radiation safety and enviously be included in the SERP as appropriate, to ysics, groundwater hydrology, surface-water hydrology disciplines. Temporary members or permanager.	consist of a minimum of three individuals gnated as the SERP chairman. One int and shall be responsible for approval of expertise in operations and/or g any operational changes; and one cer or equivalent, with the responsibility ironmental requirements. Additional address technical aspects such as drology, specific earth sciences, and anent members, other than the three					
9.5	costs, if acoperations	There is no degradation in the essential safety or environmental commitments in the license application, or provided by the approved reclamation plan. The change, test, or experiment is consistent with the conclusions of actions analyzed and selected in the Environmental Assessment dated February 1998. Ilicensee's determinations concerning Part B of this condition shall be made by a "Safety and irronmental Review Panel" (SERP). The SERP shall consist of a minimum of three individuals oloyed by the licensee, and one of these shall be designated as the SERP chairman. One other of the SERP shall have expertise in management and shall be responsible for approval of nagerial and financial changes; one member shall have expertise in operations and/or struction and shall have responsibility for implementing any operational changes; and one of the site Corporate Radiation Safety Officer or equivalent, with the responsibility assuring changes conform to radiation safety and environmental requirements. Additional others may be included in the SERP as appropriate, to address technical aspects such as a sthe physics, groundwater hydrology, surface-water hydrology, specific earth sciences, and or technical disciplines. Temporary members or permanent members, other than the three every expecified individuals, may be consultants. Ilicensee shall maintain an NRC-approved financial surety arrangement, consistent with CFR 40, Appendix A, Criterion 9, adequate to cover the estimated reclamation and closure s, if accomplished by a third party, for all existing operations and any planned expansions or rational changes for the upcoming year. Reclamation includes all cited activities and undwater restoration, as well as off-site disposal of all 11e.(2) byproduct material. In three months of NRC approval of a revised closure plan and cost estimate, the licensee is submit for NRC review and approval, a proposed revision to the financial surety arrangement timated costs in the newly approved site closure plan exceed the amount cover						
	if estimate existing fir	ed costs in the newly approval, a proposed reveal costs in the newly approved site closure plan nancial surety. The revised surety shall then be	plan and cost estimate, the licensee vision to the financial surety arrangement exceed the amount covered in the in effect within three months of written					
	30 days puthe existin annual upbreakdowi	dates to the surety amount, required by 10 CFR o NRC by October 1 of each year. If NRC has rior to the expiration date of the existing surety a grangement, prior to expiration, for one year, date of the surety, the licensee shall submit supmof the costs and the basis for the cost estimatence of a minimum 15 percent contingency, change, and any other conditions affecting estimated conditions.	not approved a proposed revision arrangement, the licensee shall extend Along with each proposed revision or porting documentation showing a les with adjustments for inflation, ges in engineering plans, activities					

- Make changes in the procedures presented in the approved application.
- Conduct tests or experiments not presented in the approved application.
- The licensee shall file an application for an amendment to the license, unless the following
 - The change, test, or experiment does not conflict with any requirement specifically stated in this license (excluding information referenced in the approved license application), or impair the licensee's ability to meet all applicable NRC regulations.
 - There is no degradation in the essential safety or environmental commitments in the license application, or provided by the approved reclamation plan.
 - The change, test, or experiment is consistent with the conclusions of actions analyzed and selected in the Environmental Assessment dated February 1998.
- (2) Make changes in the procedures presented
 (3) Conduct tests or experiments not presented
 B. The licensee shall file an application for an amendment to conditions are satisfied:

 (1) The change, test, or experiment does not constated in this license (excluding information report application), or impair the licensee's ability to the constant of the sessential safe license application, or provided by the approximation of the sessential safe license application, or provided by the approximation and selected in the Environmental Assessment of the SERP shall have expertise in management and selected in the Environmental Assessment of the SERP shall have expertise in management managerial and financial changes; one member shall be designed by the licensee, and one of these shall be designed by the licensee, and one of these shall be designed by the licensee, and one of these shall be designed by the construction and shall have responsibility for implementing member shall be the site Corporate Radiation Safety Office for assuring changes conform to radiation safety and environments may be included in the SERP as appropriate, to health physics, groundwater hydrology, surface-water hy The licensee's determinations concerning Part B of this condition shall be made by a "Safety and Environmental Review Panel" (SERP). The SERP shall consist of a minimum of three individuals employed by the licensee, and one of these shall be designated as the SERP chairman. One member of the SERP shall have expertise in management and shall be responsible for approval of managerial and financial changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and one member shall be the site Corporate Radiation Safety Officer or equivalent, with the responsibility for assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP as appropriate, to address technical aspects such as health physics, groundwater hydrology, surface-water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three
 - The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criterion 9, adequate to cover the estimated reclamation and closure costs, if accomplished by a third party, for all existing operations and any planned expansions or operational changes for the upcoming year. Reclamation includes all cited activities and groundwater restoration, as well as off-site disposal of all 11e.(2) byproduct material.

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	operation	90 days prior to beginning construction associal change which was not included in the anrapproval an updated surety to cover the exp	ciated with any planned expansion or nual surety update, the licensee shall provide ansion or change.
	the State arrangem State, ide decomminate analyses, the NRC- Reclamate in Append	approved site closure plan or the NRC-appro	view, and the final approved surety surety, where authorized to be held by the and covers the above-ground fsite disposal, soil and water sample the site. The basis for the cost estimate is oved revisions to the plan. Indiannual updates should follow the outline "Recommended Outline for Site-Specific In"
	of Credit i Nebraska for the pu	te Resources, Inc.'s currently approved suret ssued by the Royal Bank Of Canada (New Y , shall be continuously maintained in the sun rpose of complying with 10 CFR 40, Append d by both the State of Nebraska and NRC.	ty instrument, an Irrevocable Standby Letter /ork Branch), in favor of the State of n total amount of no less than \$11,114,877 lix A, Criterion 9, until a replacement is
	[Applicabl	e Amendment: 5]	
9.6	process a operational Additional in-plant ar	andard operating procedures (SOPs) shall be ctivities involving radioactive materials that a call activities shall enumerate pertinent radiationally, written procedures shall be established for environmental monitoring, bioassay analy up-to-date copy of each written procedure so	snall be kept in the process area to which it
	approved and when principles	procedures for both operational and non-op in writing by the site Corporate Radiation Sa ever a change in procedure is proposed to e are being applied. In addition, the CRSO shOPs at least annually.	erational activities shall be reviewed and ifety Officer (CRSO) before implementation ensure that proper radiation protection hall perform a documented review of all
9.7	licensed be shall idented agreement licensee seems.	see shall dispose of 11e.(2) byproduct matericy NRC or an NRC Agreement State to receive the disposal facility to NRC in writing. The transition of the event the hall notify NRC in writing, in accordance with fexpiration or termination. A new agreement of the expiration or termination, or the licensee	ve 11e.(2) byproduct material. The licensee e licensee's approved waste disposal ne agreement expires or is terminated, the license Condition 9.2, within 7 days after nt shall be submitted for NRC approval within
9.8	Prior to Re	guidance document entitled "Guidelines for D elease for Unrestricted Use or Termination of laterial," dated May 1987, or suitable alternat	e restricted area shall be in accordance with Decontamination of Facilities and Equipment f Licenses for Byproduct, Source, or Special tive procedures approved by NRC prior to

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At least 90 days prior to beginning construction associated with any planned expansion or operational change which was not included in the annual surety update, the licensee shall provide NRC approval an updated surety to cover the expansion or change.

The licensee shall also provide NRC with copies of surety-related correspondence submitted to the State of Nebraska, a copy of the State's surety review, and the final approved surety arrangement. The licensee also must ensure that the surety, where authorized to be held by the State, identifies the NRC-related portion of the surety and covers the above-ground decommissioning and decontamination, the cost of offsite disposal, soil and water sample analyses, and groundwater restoration associated with the site. The basis for the cost estimate the NRC-approved site closure plan or the NRC-approved revisions to the plan. Reclamation/decommissioning plan, cost estimates and annual updates should follow the outli in Appendix E to NUREG-1699 (NRC, 1997), entitled "Recommended Outline for Site-Specific. Str. Leach Facility Reclamation and Stabilization Cost Estimates."

Crow Butte Resources, Inc.'s currently approved surety instrument, an Irrevocable Standby Lett of Credit issued by the Royal Bank Of Canada (New York Branch), in favor of the State of Nebraska, shall be continuously maintained in the sum total amount of no less than \$11,114,87 for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Nebraska and NRC.

[Applicable Amendment: 5]

Written standard operating procedures (SOPs) shall be established and foliowed for all operation and activities shall continuously maintained in read and approved in writing by the site Corporate Radiation Safety Officer (CRSO) before implementatic in-plant and environmental moniforing, bloassays analyses, and instrument calibrations. An approved, up-to-date copy of each written procedure shall be kept in the process area to The licensee shall also provide NRC with copies of surety-related correspondence submitted to arrangement. The licensee also must ensure that the surety, where authorized to be held by the analyses, and groundwater restoration associated with the site. The basis for the cost estimate is Reclamation/decommissioning plan, cost estimates, and annual updates should follow the outline in Appendix E to NUREG-1569 (NRC, 1997), entitled "Recommended Outline for Site-Specific In

- licensed by NRC or an NRC Agreement State to receive 11e.(2) byproduct material. The licensee agreement must be maintained on-site. In the event the agreement expires or is terminated, the licensee shall notify NRC in writing, in accordance with License Condition 9.2, within 7 days after the date of expiration or termination. A new agreement shall be submitted for NRC approval within
- Release of equipment, materials, or packages from the restricted area shall be in accordance with the NRC guidance document entitled "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated May 1987, or suitable alternative procedures approved by NRC prior to

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9.9	Before engaging in any construction activity not previous complete a cultural resource inventory. All construction development will be completed in compliance with the N (as amended) and its implementing regulations (36 CFR Resources Protection Act of 1979 (as amended) and its	associated with the proposed ational Historic Preservation Act of 1966 Part 800), and the Archaeological
	In order to ensure that no unapproved disturbance of cu in the discovery of previously unknown cultural artifacts inventoried and evaluated in accordance with 36 CFR Pa until the licensee has received authorization from NRC to	shall cease. The artifacts shall be artifacts shall occur
	Prior to any developmental activity in the immediate vicinidentified in Section 2.4 of the approved license applicate documentation of its coordination with the Nebraska States	on, the licensee shall provide
9.10	The licensee shall conduct operations within the permit a the approved license application, as amended by the sul	
9.11	The licensee is hereby exempted from the requirements for areas within the facility, provided that all entrances to accordance with Section 20.1902(e) and with the words, CONTAIN RADIOACTIVE MATERIAL."	the facility are conspicuously posted in
9.12	Any corporate organization changes affecting the assign radiation safety staff as described in Section 5 of the appreciatory Guide 8.31.	
9.13	The licensee shall have a training program for all site em Guide 8.31 and as detailed in the approved license appli the topics identified in Section 2.5 of Regulatory Guide 8	cation. The training program shall cover
	The CRSO, or their designee, shall have the education, Regulatory Guide 8.31. The CRSO shall also receive 40 refresher training every two (2) years.	
	Individuals designated as the Health Physics Technician on matters dealing with radiological safety. In addition, t at all times. The HPT shall have the qualifications specific equivalent. Any person newly hired as an HPT shall have CRSO as part of a comprehensive training program until and at least for 6 months from the date of appointment.	he CRSO shall be accessible to the HPT fied in Regulatory Guide 8.31, or reall work reviewed and approved by the
9.14	DELETED by Amendment No. 4	

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- The licensee shall construct all wells in accordance with methods described in Section 3.1.2 of the

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MATERIALS LICENSE SUPPLEMENTARY SHEET

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SECTION 10: Operations, Controls, Limits, and Restrictions

10.1 The licensee shall use a lixiviant composed of native groundwater, with added sodium carbonate/bicarbonate and oxygen or hydrogen peroxide, as described in the approved license application.

Mechanical integrity tests shall be performed on each injection and production well before the wells are utilized and on wells that have been serviced with equipment or procedures that could damage the well casing. Additionally, asch well shall be retested at least once each five (5) year it is in use. The integrity test shall be performed on each injection and production well before the wells are utilized and on wells that have been serviced with equipment or procedures that could damage the well casing. Additionally, asch well shall be retested at least once each five (5) year it is in use. The integrity test shall pressurize the well to 125 percent of the maximum operating pressure and shall maintain 90 percent of this pressure for 20 minutes to pass the test. A single point resistance test may be used only in conjunction with another-approved well integrity test and abandoned.

10.3 The licensee shall establish pre-operational baseline groundwater quality data for all mine units. Baseline water quality sampling shall provide representative pre-mining groundwater quality data and restoration criteria as described in the approved license application.

The data shall consist, at a minimum, of the following sampling and analyses.

A. Three samples shall be analyzed for alkalinity, emmonia, arsenic, batjum, bicarbonate, boro cadmium, calcium, carbonate, choride, chromium, copper, fluoride, fron, lead maperial managaries, emercury, mobybdenum, nicke, nitrate, nitrite, pit, potassium, radium-226, selenium, slica, sodium, specific conductivity, sulfate, temperature, total dissolved solds, unan damage the well casing. Additionally, each well shall be retested at least once each five (5) years pressure and shall maintain 90 percent of this pressure for 20 minutes to pass the test. A single point resistance test may be used only in conjunction with another approved well integrity testing method. If any well casing failing the integrity test cannot be repaired, the well shall be plugged

The licensee shall establish pre-operational baseline groundwater quality data for all mine units. Baseline water quality sampling shall provide representative pre-mining groundwater quality data

Three samples shall be collected from production and injection wells at a minimum density of one production or injection well per 4 acres. These samples shall be collected at least 14

- The samples shall be analyzed for alkalinity, ammonia, arsenic, barium, bicarbonate, boron, cadmium, calcium, carbonate, chloride, chromium, copper, fluoride, iron, lead, magnesium,
- Groundwater restoration goals shall be established on a parameter-by-parameter basis, and
- establish Upper Control Limits (UCLs) for designated upper aquifer and perimeter monitor wells.
 - upper aquifer monitor well per 5 acres, and (2) all perimeter monitor wells. These samples

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	20	r each monitor well, UCLs shall be calcula percent above the maximum concentration mples.	nted for each indicator parameter as equal to on measured for that parameter among the three
10.5	The plan restoration	t throughput shall not exceed a maximum on flow. Annual yellowcake production sh	flow rate of 5000 gallons per minute, excluding all not exceed 2 million pounds.
10.6	Each of t	the R&D evaporation ponds shall have at nercial evaporation ponds shall have at le	least 0.9 meters (3 feet) of freeboard. Each of ast 1.5 meters (5 feet) of freeboard.
	pond sys	tem to enable transferring the contents of subsequent transfer of liquid, freeboard re	s, sufficient reserve capacity in the evaporation a pond to the other ponds. In the event of a equirements shall be suspended during the
10.7	sanitary v ponds; di 3, 1988, a licensee's	wastes, shall be returned to the process of sposed by land irrigation in accordance w as modified by its submittal on June 7, 19 s report submitted on August 24, 1993, as	r process waste streams, with the exception of rcuit; discharged to the solar evaporation ith the licensee's proposal submitted on August 93; or deep well injected in accordance with the modified by submittals dated December 7,
	1995, and	d April 3, 1996.	
10.8	The licen approved	see shall maintain effluent control system license application, with the following exc	s as specified in Sections 4.1 and 5.7.1.1 of the septions:
	fort be cod	h in the standard operating procedures, to closed-in as an airborne radiation area an oldown, or packaging operations shall be t	ipment fails to operate within specifications set ne drying and packaging room shall immediately d heating operations shall be switched to emporarily suspended. Packaging operations is operational to draw air into the system.
	neç cha doc ope or a its e	amber is maintained. This shall be accom cumenting checks of air pressure different eration, or (2) installing instrumentation whair pressure differential falls below the rec	perating procedures for the dryer heating plished by either (1) performing and ial approximately every four hours during ich will signal an audible alarm if the water flow ommended levels. If an audible alarm is used, ed at the beginning and end of each drying
	maintena for which or design as a mini Relevant	nce jobs where the potential for significan no standard written operating procedure ee qualified by way of specialized radiatio mum, the information described in Section	Work Permit (RWP) for all work or non-routine t exposure to radioactive materials exists, and exists. The RWP shall be issued by the CRSO, n protection training, and RWPs shall include, 2.2 of Regulatory Guide 8.31, "Information Exposures at Uranium Recovery Facilities Will
		adiological monitoring for airborne uraniun ons shown in Figure 5.7-1 in the approved	n and radon daughters shall be conducted at license application.

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10.11	sha	 Should the results of monitoring exceed an action il decontaminate themselves to less than the action 	on level of 1000 dpm/100 cm², employees level. If decontamination cannot be
10.12	tne	icensee also shall perform in vivo measurements in	on 5.7.5 of the approved license application, n accordance with the recommendations
10.13	and addi	MATERIALS LICENSE SUPPLEMENTARY SHEET MACE A 40-8943 Employees shall monitor themselves with an alpha survey instrument prior to exiting the restricted area. Should the results of monitoring exceed an action level of 1000 dpm/100 cm², employees shall decontaminate themselves to less than the action level of 1000 dpm/100 cm², employees shall decontaminate themselves to less than the action level. If decontamination cannot be accomplished, the employee shall report the incident to the CRSO for investigation. In addition to the bioassay program discussed in Section 5.7.5 of the approved license application, he licensee also shall perform in vivo measurements in accordance with the recommendations contained in Revision 1 of Regulatory Guide 8.22. It radiation monitoring, sampling, and detection equipment shall be recalibrated after each repair and as recommended by the manufacturer, or at least annually, whichever is more frequent. In addition, all radiation survey instruments shall be operationally checked with a radiation source ach day when in use. The licensee shall maintain an area within the restricted area boundary for temporary storage of ontaminated materials. All contaminated wastes and evaporation pond residues shall be isposed at a radioactive waste disposal site licensed to accept 11 e.(2) byproduct material. The licensee shall construct evaporation ponds 2 and 5 in accordance with the engineering design aport dated April 27, 1988, as modified by the submittals dated May 11, and Julyl 16, 1992. Fill material shall be classified as a silty sand material in accordance with the Unified Soil Classification System. Quality control of the fill shall be performed in accordance with the guidance provided for radon barrier materials in the NRC 'Staff Technical Position on Testing and Inspection Plans during Construction of DoE's Remedial Action at In	
10.14	cont	MATERIALS LICENSE SUPPLEMENTARY SHEET MATERIALS LICENSE SUPPLEMENTARY SHEET MATERIALS LICENSE SUPPLEMENTARY SHEET MOUNT SUPPLEMENTARY SHEET SUA-1534, Amend. No. 6 Docket or Reference Number 40-8943 Employees shall monitor themselves with an alpha survey instrument prior to exiting the restricted area. Should the results of monitoring exceed an action level of 1000 dpm/100 cm², employees shall decontamination cannot be accomplished, the employee shall report the incident to the CRSO for investigation. In addition to the bioassay program discussed in Section 5.7.5 of the approved license application, the licensee also shall perform in vivo measurements in accordance with the recommendations contained in Revision 1 of Regulatory Guide 8.22. All radiation monitoring, sampling, and detection equipment shall be recalibrated after each repair and as recommended by the manufacturer, or at least annually, whichever is more frequent. In addition, all radiation survey instruments shall be operationally checked with a radiation source each day when in use. The licensee shall maintain an area within the restricted area boundary for temporary storage of contaminated materials. All contaminated wastes and evaporation pond residues shall be sisposed at a radioactive waste disposal site licensed to accept 11e. (2) byproduct material. The licensee shall construct evaporation ponds 2 and 5 in accordance with the engineering design eport dated April 27, 1988, as modified by the submittals dated May 11, and July 16, 1992. The license shall construct evaporation ponds 2 and 5 in accordance with the Unified Soil Classification System. Quality control of the fill shall be performed in accordance with the guidance provided for radon barrier materials in the	
10.15	repo	rt dated April 27, 1988, as modified by the submitta	in accordance with the engineering design als dated May 11, and July 16, 1992.
	A.	Fill material shall be classified as a silty sand mat Classification System.	erial in accordance with the Unified Soil
	B.	for radon barrier materials in the NRC "Staff Tech Inspection Plans during Construction of DOE's Re	inical Position on Testing and
	C.		pe submitted to NRC within 3 months of the
10.16		Production zone monitor wells drilled after April, 1 feet from a mine unit and no greater than 400 fee	999, shall be spaced no greater than 300 to between the wells.
SECTI	ON 1	1: Monitoring, Recording, and Bookl	ceeping Requirements
11.1	be m	easured and recorded daily. During well-field oper	nifold pressures on the entire system, shall rations, injection pressures shall not exceed
	than Marc even	14 days apart, except in the event of the situations h 19, 1998. If a designated monitor well is not sam t, the reasons for the postponement of sampling sh	identified in the licensee's submittal dated applied within 14 days of a previous sampling
	shall	take a confirming water sample within 48 hours aft	er the results of the first analyses are

- lipna survey instrument prior to exiting the restricted area. Should the results of monitoring exceed an action level of 1000 dpm/100 cm², employees shall decontaminate themselves to less than the action level. If decontamination cannot be
- 10.12 In addition to the bioassay program discussed in Section 5.7.5 of the approved license application, the licensee also shall perform in vivo measurements in accordance with the recommendations
- 10.13 All radiation monitoring, sampling, and detection equipment shall be recalibrated after each repair and as recommended by the manufacturer, or at least annually, whichever is more frequent. In addition, all radiation survey instruments shall be operationally checked with a radiation source
- 10.14 The licensee shall maintain an area within the restricted area boundary for temporary storage of contaminated materials. All contaminated wastes and evaporation pond residues shall be disposed at a radioactive waste disposal site licensed to accept 11e.(2) byproduct material.
- 10.15 The licensee shall construct evaporation ponds 2 and 5 in accordance with the engineering design report dated April 27, 1988, as modified by the submittals dated May 11, and July 16, 1992.
 - Fill material shall be classified as a silty sand material in accordance with the Unified Soil
 - Quality control of the fill shall be performed in accordance with the guidance provided Inspection Plans during Construction of DOE's Remedial Action at Inactive Uranium
 - As-built drawings of the constructed ponds shall be submitted to NRC within 3 months of the
- Production zone monitor wells drilled after April, 1999, shall be spaced no greater than 300

- Flow rates on each injection and recovery well, and manifold pressures on the entire system, shall be measured and recorded daily. During well-field operations, injection pressures shall not exceed
- All designated perimeter and upper aquifer monitor wells shall be sampled and tested no more than 14 days apart, except in the event of the situations identified in the licensee's submittal dated March 19, 1998. If a designated monitor well is not sampled within 14 days of a previous sampling event, the reasons for the postponement of sampling shall be documented. Sampling shall not be

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· (1 0 1)			License Number
		MATERIALS LICENSE	SUA-1534, Amend. No. 6
		SUPPLEMENTARY SHEET	Docket or Reference Number
		Control of the I	40-8943
	indiciple in indiciple indiciple in indiciple in indiciple in indiciple in indiciple indiciple in indiciple indiciple in indiciple in indiciple in indiciple in indiciple in i	cate an exceedance, a third sample shall be taken are after the second set of samples was acquired. If cate an exceedance, the first sample shall be considered the second or third sample confirms that a UCL stion shall be placed on excursion status. Upon confirming NRC in accordance with License Condition 1 case the sampling frequency for the indicator parameter (7) days. Corrective actions for confirmed excursioning in Section 5.7.8.1 of the approved license application of the indicator parameter (3) consecutive weekly sampling an excursion for three (3) consecutive weekly sampling the consecutive weekly sampling an excursion for three (3) consecutive weekly sampling the consecutive weekly s	neither the second nor the third sample dered in error. (s) has been exceeded, the well in a firmation of an excursion, the licensee 12.2, implement corrective action, and a seters at the excursion well to once every sions may be, but are not limited to, those colication. An excursion is considered a meters are below the concentration levels
11.3	The acco	licensee shall establish and conduct an effluent and rdance with the program submitted by letter dated N	l environmental monitoring program in March 18, 1999.
11.4	The revis	licensee shall perform and document inspections in ion to its Evaporation Pond Onsite Inspection Progr	accordance with the February 5, 1996, am.
	be fu more	time 6 inches or more of fluid is detected in a common pecific conductance. If the water quality is degraded orther sampled and analyzed for chloride, alkalinity, of fluid is detected an R&D pond standpipe, it shall ide, alkalinity, sodium, and sulfate.	ercial pond standpipe, it shall be analyzed d beyond the action level, the water shall sodium, and sulfate. Any time 6 inches or I be analyzed for specific conductance,
	unde five p	n verification of a liner leak, the licensee shall notify dition 12.3, lower the fluid level by transferring the portake repairs, as needed. Water quality in the affect parameters listed above once every 7 days during the last 14 days following repairs.	NRC in accordance with License ond's contents to an alternate cell, and sted standpipe shall be analyzed for the ne leak period and once every 7 days for
11,5	The li	icensee shall conduct the in-plant radiological inspecense renewal application, with the following modific	ection program described in Section 5.3 of cations:
	Α.	The licensee shall document problems observed d inspections in writing; and	uring the daily visual walk-through
	B.	The CRSO and plant manager, or qualified design observe general radiation control practices and to and equipment.	ees, shall perform weekly inspections to review required changes in procedures
11.6	analy audit subs	results of the following activities, operations, or actions is surveys and monitoring; survey/monitoring equivalent in an action in a survey in a survey in a survey in a course in a survey in a survey in a course in a cour	uipment calibration results; reports on required by this license; and any Unless otherwise specified in the NRC
11.7	licens made	icensee shall maintain records of any changes mad se termination. These records shall include written s by the Safety and Environmental Review Panel, th ges are in compliance with the requirements referre	e pursuant to License Condition 9.4 until safety and environmental evaluations, at provide the basis for determining that d to in Part B of License Condition 9.4.

indicate an exceedance, a third sample shall be taken and analyzed in a hours after the second set of samples was acquired. If neither the second indicate an exceedance, the first sample shall be considered in error. If either the second or third sample confirms that a UCL(s) has been exceedance, the first sample shall be considered in error. If either the second or third sample confirms that a UCL(s) has been exceedance, the first sample shall be confirmation of an excursion status. Upon confirmation of an excursion status are proved in Section 5.7.8.1 of the approved license application. An excordance with the program submitted by letter dated March 18, 1999.

11.4 The licensee shall establish and conduct an effluent and environmental in accordance with the program submitted by letter dated March 18, 1999.

11.4 The licensee shall perform and document inspections in accordance with revision to its Evaporation Pond Onsite Inspection Program.

Any time 6 inches or more of fluid is detected in a commercial pond stand for specific conductance. If the water quality is degraded beyond the activative status and submitted submitted by letter dated March 18, 1999.

11.5 The licensee shall perform and document inspections in accordance with revision to its Evaporation Pond Onsite Inspection Program.

Any time 6 inches or more of fluid is detected in a commercial pond stand for specific conductance. If the water quality is degraded beyond the activative submitted by letter dated March 18, 1999.

11.5 The licensee shall perform and document problems observed during the leak period and teast 14 days following repairs.

11.6 The results of the following activities, operations, or actions shall be documented and the license renewal application, with the following modifications:

11.6 The results of the following activities, operations, or actions shall be documented by the Safety and environmental Re indicate an exceedance, a third sample shall be taken and analyzed in a similar manner with 48 hours after the second set of samples was acquired. If neither the second nor the third sample If either the second or third sample confirms that a UCL(s) has been exceeded, the well in question shall be placed on excursion status. Upon confirmation of an excursion, the licensee shall notify NRC in accordance with License Condition 12.2, implement corrective action, and increase the sampling frequency for the indicator parameters at the excursion well to once every seven (7) days. Corrective actions for confirmed excursions may be, but are not limited to, those described in Section 5.7.8.1 of the approved license application. An excursion is considered concluded when the concentrations of the indicator parameters are below the concentration levels

- The licensee shall establish and conduct an effluent and environmental monitoring program in
- The licensee shall perform and document inspections in accordance with the February 5, 1996,

- The licensee shall conduct the in-plant radiological inspection program described in Section 5.3 of
 - The licensee shall document problems observed during the daily visual walk-through
 - The CRSO and plant manager, or qualified designees, shall perform weekly inspections to observe general radiation control practices and to review required changes in procedures
- The results of the following activities, operations, or actions shall be documented: sampling; analyses; surveys and monitoring; survey/monitoring equipment calibration results; reports on audits and inspections; all meetings and training courses required by this license; and any subsequent reviews, investigations, or corrective actions. Unless otherwise specified in the NRC regulations, all such documentation shall be maintained for a period of at least five (5) years.
- The licensee shall maintain records of any changes made pursuant to License Condition 9.4 until license termination. These records shall include written safety and environmental evaluations. made by the Safety and Environmental Review Panel, that provide the basis for determining that changes are in compliance with the requirements referred to in Part B of License Condition 9.4.

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	SECTION 12.0: 12.1 Effluent a 10 CFR 4 entitled, "Sinjection rate of the every telephone confirmed, submitted excursion when the rate of the every telephone confirmed, submitted excursion when the rate of the every telephone confirmed, submitted excursion when the rate of the every telephone confirmed, submitted excursion when the rate of the every telephone confirmed in addition, leak exists the results. 2.4 Until license 11e. (2) bypinclude: day corrective a impacted a corrective a impacted a the environmer report detain this required. 3.5 The license least 12 models. 3.6 An annual An Regulatory accompany										No 4	
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		SUPPLEMENT	ARY SHEE	Т					4()-8943	3	
	MATERIALS LICENSE SUPPLEMENTARY SHEET SECTION 12.0: Reporting Requirements 2.1 Effluent and environmental monitoring program 10 CFR 40.65 shall be reported in the format significant entitled, "Sample Format for Reporting Monitoring injection rates, recovery rates, and injection materials and injection materials and injection materials and supplementation in accordance with License Conditions submitted to NRC within 60 days of excursion excursion event, corrective actions taken, and rewhen the report is submitted, the report also mun reports to NRC which will provide an update of a licensee shall terminate injection of lixiviant into aquifer cleanup is complete. 2.3 In the event evaporation pond standpipe water a be notified by telephone within 48 hours of verified in addition, a written report shall be submitted to leak exists. This report shall include analytical deak exists. This report shall be followed, report detailing the conditions leading to the spill, This requirement is in addition to the reporting reference of the planned final shutdor. The licensee shall submit a detailed decommissical least 12 months prior to the planned final shutdor. An annual ALARA audit of the radiation safety proving Guide 8.31 and Section 5.3 of the approving Guide 8.31 and Section 5.3 of the approving Guide 8.31 and Section 5.3 of the approximation and accompany the audit team. A report of this audition accompany the audit team. A report of this audition accompany the audit team.											
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12.1	entitled, "S	ample Format	portea in for Repor	tne torma tina Moni	it shown ii toring Dat	n Table 3 (of Regul	atam. C	D: -1 -	4 4 4	(Rev.	. 1)
12.2	In the eventelephone vaconfirmed, is submitted to excursion e when the reports to N In addition, licensee shall	t a lixiviant exc within 24 hours in accordance o NRC within 6 vent, corrective port is submitt IRC which will if the well(s) and	cursion is and by lewith Lice of days of actions ed, the reprovide a restill on iection of	confirmed etter withinse Cond f excursion taken, and eport also n update	d by grour n seven (7 ition 9.2. n confirma d results must conf of correcti	ndwater mo 7) days fro In additior ation. The obtained. tain a sche ive actions	onitoring m the tir n, a writto report s If the we edule for taken a	me the en republic that described the sum of	excur ort sha escribe re still ubmitta result	sion is all be the on ex al of fu	cursi uture ained	on
12.3	In addition, a leak exists.	a written repor This report sh	t shall be	ours of ve	erification, I to NRC v	In accord	ance wit	h Lice	nse Co	onditio	n 9.2	•
	include: date corrective ac	e, spill volume, ctions, results	s, and all total acti	spills of p vity of eac	rocess ch ch radion:	iemicals. I	Docume	nted in	nforma	tion s	L . 11	3,
	environment report detaili	This notificating the condition	i spills of tion shall ons leadin	process c be followed a to the s	hemicals, ed, within pill_corre	that may l seven (7)	nave a r days, by	adiolog	gical ir littal of	npact a wri	tten	
2.5	The licensee	shall submit a	detailed	decommi	ssionina r	lan to NR	C for roy					
2.6	An annual Al Regulatory G accompany t	LARA audit of Suide 8.31 and the audit team.	the radiat Section : A report	tion safety 5.3 of the	/ program approved	shall be p license ap	erforme	n. The	CRS	\cap cha	Ш	

SECTION 12.0: Reporting Requirements

- Effluent and environmental monitoring program results submitted in accordance with 12.1 10 CFR 40.65 shall be reported in the format shown in Table 3 of Regulatory Guide 4.14, (Rev. 1) entitled, "Sample Format for Reporting Monitoring Data." These reports also shall include injection rates, recovery rates, and injection manifold pressures.
- In the event a lixiviant excursion is confirmed by groundwater monitoring, NRC shall be notified by 12.2 telephone within 24 hours and by letter within seven (7) days from the time the excursion is confirmed, in accordance with License Condition 9.2. In addition, a written report shall be submitted to NRC within 60 days of excursion confirmation. The report shall describe the excursion event, corrective actions taken, and results obtained. If the well(s) are still on excursion when the report is submitted, the report also must contain a schedule for the submittal of future reports to NRC which will provide an update of corrective actions taken and the results obtained. In addition, if the well(s) are still on excursion at the time the 60-day report is submitted, the licensee shall terminate injection of lixiviant into the wellfield on excursion until such time that aquifer cleanup is complete.
- In the event evaporation pond standpipe water analyses indicate that a pond is leaking, NRC shall 12.3 be notified by telephone within 48 hours of verification, in accordance with License Condition 9.2. In addition, a written report shall be submitted to NRC within 30 days of first notifying NRC that a leak exists. This report shall include analytical data, describe the mitigative action, and discuss the results of that action.
- 12.4 Until license termination, the licensee shall maintain documentation on all spills of source or 11e.(2) byproduct materials, and all spills of process chemicals. Documented information shall include: date, spill volume, total activity of each radionuclide released, radiological survey results, corrective actions, results of remediation surveys, and a map showing the spill location and impacted area.

- The licensee shall submit a detailed decommissioning plan to NRC for review and approval at 12.5 least 12 months prior to the planned final shutdown of mining operations.
- An annual ALARA audit of the radiation safety program shall be performed in accordance with 12.6 Regulatory Guide 8.31 and Section 5.3 of the approved license application. The CRSO shall accompany the audit team. A report of this audit shall be retained on-site for NRC inspection. The report also shall summarize the results of the daily walk-through inspections.

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12.7	environme	see shall furnish nts made under ental evaluation o the approved	of each li	ondition 9. n addition	4, includin	ig a summary	of the s	afety a	nd	ge on 9.4.	
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