86 Crow Butte Road P.O. Box 169 Crawford, Nebraska 69339-0169



January 3, 2006

Mr. Gary Janosko
Branch Chief
Fuel Cycle Licensing Branch
Division of Fuel Cycle Safety and Safeguards
c/o Document Control Desk
U.S. Nuclear Regulatory Commission
Washington D.C. 20555

Re:

Docket No. 40-8943 License No. SUA-1534

Annual Report of Changes, Tests, or Experiments

Dear Mr. Janosko:

Crow Butte Resources, Inc. (CBR) is providing this annual report summarizing the changes, tests or experiments made under License Condition 9.4 of SUA-1534 during calendar year 2005. This report is made in accordance with the reporting requirements contained in License Condition 9.4 (E).

CBR's source material license was renewed on March 4, 1998. The renewed license contained Performance Based License Conditions (PBLC). In a PBLC, CBR is allowed to make changes or conduct tests and experiments under certain conditions. These changes, test and experiments must be reviewed and approved by the CBR Safety and Environmental Review Panel (SERP). During 2005, the CBR SERP approved three changes.

The following materials are attached to provide the required summary information and documentation required by License Condition 9.4 (E).

- SERP Evaluation Index, which summarizes each SERP Action and tracks any modifications to an approved action affected by subsequent SERP actions.
- A copy of the text of each approved SERP Evaluation. These evaluations describe
 the change or test approved and the safety and environmental evaluation
 performed by the SERP. Supporting documentation is maintained on site for NRC
 review.

MMSSOI



Mr. Gary Janosko January 3, 2006 Page Two

None of the SERP approvals in 2005 resulted in page changes to the License Renewal Application (LRA). Therefore, revised pages are not attached to this report.

If you have any questions or require further information, please do not hesitate to contact me at (308) 665-2215.

Sincerely,

CROW BUTTE RESOURCES, INC.

Michael L. Griffin

Manager of Health, Safety, and Environmental Affairs

Enclosures: As Stated

cc: U.S. Nuclear Regulatory Commission

Mr. Steven Cohen - ADDRESSEE ONLY

Fuel Cycle Licensing Branch

Mail Stop T-8F42

Washington, DC 20555



2005 SERP Evaluation Index



Safety and Environmental Review Panel

2005 SERP Index

SERP Evaluation Number	Date	Action Taken	Modifications to Previous SERP Actions
SERP 05-01	31 May 05	Wellhouse 40 Review and Approval	None
SERP 05-02	21 November 05	Wellhouse 44 Review and Approval	None
SERP 05-03	23 November 2005	Experiment using Hydrogen Peroxide across the belt filter for vanadium removal. Review and Approval	None



SERP 05-01 Evaluation



Crow Butte Resources, Inc.

Safety and Environmental Review Panel

Evaluation Report - SERP 05-01

Wellhouse 40 Approval to Operate

May 31, 2005

The Crow Butte Resources, Inc. (CBR) Safety and Environmental Review Panel (SERP) met to review and approve operation of Wellhouse 40 in Mine Unit 8 at the Crow Butte Uranium Project.

The SERP appointed for this evaluation consisted of the following members:

Name	Title	Area of Expertise
Jim Stokey	Mine Manager	Management
Mike Griffin	Manager of Health, Safety, and Environmental Affairs	Permitting/ Environmental
Rhonda Grantham	Radiation Safety Officer	Radiation Safety
Lee Moeller	Maintenance Superintendent	Construction
John Cash	Operations Superintendent	Operations
Mike Brost	Chief Geologist	Well Construction
Larry Teahon	Environmental Coordinator	Environmental

Dr. Stokey is the SERP Chairman. Mr. Griffin was appointed SERP Secretary for this evaluation.

Purpose of SERP Evaluation

The purpose of this evaluation by the CBR SERP was to review and approve Wellhouse 40 for operation.

SERP 04-06



License Condition 9.4 allows CBR to make changes in the facility or procedures or conduct tests or experiments that are not presented in the approved application if such changes do not:

- i. Result in any appreciable increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated);
- ii. Result in any appreciable increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated);
- iii. Result in any appreciable increase in the consequences of an accident previously evaluated in the license application (as updated);
- iv. Result in any appreciable increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated);
- v. Create a possibility for an accident of a different type that any previously evaluated in the license application (as updated);
- vi. Create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated);
- vii. Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER) or the environmental assessment (EA) or the technical evaluation reports (TERs) or other analysis and evaluations for license amendments.
- viii. For the purposes of SERP evaluations, SSC means any SSC which has been referenced in a staff SER, TER, EA, or environmental impact statement (EIS) and supplements and amendments.

The SERP evaluation was conducted in accordance with CBR Standard Operating Procedure (SOP) C-2, Safety and Environmental Review Panel. The SERP reviewed the Wellhouse startup checklists and supporting documentation and evaluated this information as compared with the requirements of the licensing basis, including the following documents:

- Title 10, Code of Federal Regulations;
- Source Materials License SUA-1534, Amendment No. 18 dated November 16, 2004;
- Application for Renewal of USNRC Radioactive Source Materials License SUA-1534, Crow Butte Resources, Inc. December 1995;
- Environmental Assessment for Renewal of Source Materials License No. SUA-1534, USNRC February 1998;
- Safety Evaluation Report for Renewal of Source Materials License No. SUA-1534, USNRC February 1998;
- Technical Evaluation Reports issued in support of amendments to SUA-1534.

SERP 04-06



Title 10 Code of Federal Regulations

The proposed change will have no impact on CBR's ability to meet all applicable NRC regulations.

Source Materials License SUA-1534 Requirements

Amendment 18 to SUA-1534 dated November 16, 2004 was reviewed for specific requirements related to approval and operation of a wellhouse.

Mine Unit 8 was previously approved by the CBR SERP (see SERP 02-05 dated July 10, 2002). Therefore, no review of monitor well location, installation or baseline sampling and Upper Control Limit determination is required for approval of Wellhouse 40.

<u>License Condition 10.2:</u> This License Condition requires that CBR construct all wells in accordance with the methods contained in the Section 3.1.2 of the approved License Renewal Application (LRA). License Condition 10.2 also requires that CBR perform mechanical integrity tests (MIT) for all injection and production wells.

The well construction methods in use for Wellhouse 40 are the same as those described in the LRA. All MIT data sheets were contained in the Notice of Intent to Operate Wellhouse 40 that was submitted to the NDEQ. These MIT data sheets were provided by the Chief Geologist and reviewed by the SERP. The records indicate that the MITs performed in Wellhouse 40 met the requirements.

<u>License Condition 9.3:</u> This License Condition requires that CBR conduct operations in accordance with the representations contained in the LRA. Section 3.1.3 of the LRA discusses construction materials, instrumentation, and monitoring requirements. Section 3.3 also discusses instrumentation, including wellhouse injection and production instrumentation and wet building alarms for wellhouses. Section 7.2.3 of the LRA requires that leak tests be performed on all wellfield piping before placing the system into production operations.

The SERP reviewed the Wellhouse Start-up Checklist for Wellhouse 40. This checklist was developed by the Wellfield Construction staff to document completion of all required actions before initiating operations in a wellhouse. Some of these actions are required by regulatory and licensing requirements, while some were developed over the course of mining experience at Crow Butte. The Maintenance Superintendent reviewed these items and stated that all had been completed and the appropriate controls were in place.





A copy of the Wellhouse Start-Up Checklist is attached to this SERP Evaluation. Supporting documentation in the form of pressure tests and ground continuity checks are also attached.

Environmental Assessment

The SERP reviewed the contents of the Environmental Assessment (EA) prepared by NRC in February 1998 to determine whether the proposed change could cause substantive safety or environmental impacts.

Well construction and testing as described in the EA has been completed for the wells associated with Wellhouse 40.

Section 3.3.1 discusses leak testing of wellfield piping. The SERP reviewed the completion of pressure testing for piping systems associated with Wellhouse 40 and found that they meet the intent of the EA.

Financial Surety

The proposed change is covered in the NRC-approved financial surety maintained by CBR and approved by Amendment 18 to SUA-1534 in the amount of \$16,033,706.

Safety Evaluation Report

The Safety Evaluation Report (SER) principally provides the basis for worker safety at Crow Butte and does not specifically address the issues related to approval of Wellhouse 40.

Technical Evaluation Reports

The SERP reviewed the Technical Evaluation Reports (TERs) prepared by NRC staff to support amendments made to SUA-1534 since renewal in 1998. None of the TERs prepared since license renewal directly address issues related to approval of a new Wellhouse for operation.

Degradation of Essential Safety or Environmental Commitment

SUA-1534 allows CBR to make changes as long as they do not degrade the essential safety or environmental commitments made in the application. The SERP determined that safety commitments made in the LRA and discussed in the EA have been met and that startup of Wellhouse 40 in Mine Unit 8 will not degrade the safety and environmental commitments.





Based upon this evaluation of the licensing basis, the CBR SERP hereby approves startup and operation of Wellhouse 40 in Mine Unit 8.

Approved this 31st day of May 2005. Jim Stokey, Mine Manager SERP Chairman Mike Griffin, Manager of Health, Safety, and Environmental Affairs SERP Secretary Rhonda Grantham, Radiation Safety Officer Lee Moeller, Maintenance Superintendent Inn Cash, Operations Superintendent Mike Brost, Chief Geologist

Larry Teahon, Environmental Coordinator

FAX (402) 471-2909

STATE OF NEBRASKA



DEC 1 6 2004

DEPARTMENT OF ENVIRONMENTAL QUALITY
Michael J. Linder
Director
Sulte 400, The Atrium
1200 'N' Street
P.O. Box 98922
Lincoln, Nebraska 68509-8922
Phone (402) 471-2186

Mike Johanns

Mr. Stephen Collings, President Crow Butte Resources, Inc. 141 Union Blvd., Ste. 330 Lakewood, Colorado 80228

Dear Mr. Collings:

On November 8, 2004, the Nebraslat Department of Environmental Quality received a submittal of information from Crow Butte Resources, Inc. The submittal serves as Notice of Intent to Operate and contains Well Completion Reports and Casing Integrity Test Reports for recently installed wells (Wellhouse 40) in the construction of Mine Unit 8.

The Department has reviewed the information submitted and determined that it is adequate and complete. Upper Control Limits and Restoration Values established for Mine Unit 8 have already been submitted and approved. Approval of the additional portion of Mine Unit 8 will not alter those values. The Department hereby approves the Notice of Intent to Operate for the additional portion of Mine Unit 8.

If you have any questions or comments concerning this letter or the review of the Notice of Intent to Operate, please contact David Micsbach of my staff at (402) 471-4982. Thank you.

Mincerely

Michael J. Linder

Director

ML/dlm word/files/dayo/chr/letter/notintwh.doc

Well House Start-Up Checklist

Well House # 40

ltem	Description	Person	Comments	Date Completed	initial
- 1	Permit To Operate	Brost / Stokey			
(2)	Complete Pressure Testing (Trunkline and House)	McDowell / Stokey		3.15,00	*
3	Pipelines checked for leaks	McDowell / Stokey		કુ ૧ ૬ .વડ	25
	Pipelines buried	McDowell / Stokey		4-6.05	/ K
5	Pressure gauge on injection manifold	R. Roberts / Stokey		4-6.00	K
6	Injection lines equipped with totalizing flow meters	R. Roberts / Stokey		5/1/050	BAG
7 .	Injection and Production total flows can be measured	Sulc BRile/H. Douthit / Stokey		3-16-05	D
8	Unused trunkline locked out by two separate means	McDowell / Stokey		4-4-05	7
9	Isolation valves are closed and chained	McDowell / Stokey		4-6-05	15
10	Map of 2' lines	McDowell/Beins / Stokey		<u>3-15-0</u>	K
①	Well-field Layout map in house	McDowell/Beins / Stokey		4.4.05	5
(12)	Check berms	Griffin / Stokey		5/18/05	zug
13	Pressure check oxygen lines	McDowell / Stokey		\$15.0	The
14	Continuity check on producers	B. Tiensvold / Stokey		<u>3/10/05</u>	RI
(15)	Ground fault check Clampter / A Form	REA/B. Tiensvold / Stokey		3/10/05	BT
16	Communications wire check	B. Tiensvoid / Stokey		311405	BT
17	Heater size check	B. Tiensvold / Stokey		3/10/05	BT
18	Processor installed well house	Bob B. Pile/H. Douthit / Stokey		3-16-05	#
19	UPS installed and operational	13a b B-Pile/H. Douthit / Stokey		3-1605	
20	Wet house alarm installed	B. Tiensvold / Stokey		2/10/05	क्ष
21	Wet house alarm checked	P. Dunn/J. Douthit / Stokey		4-18-05	20
22	Oxygen solenoid checked	P. Dunn/J. Douthit / Stokey		5-03-0	
23	Check fuses in control panel	B. Tlensvold / Stokey		3/10/05	BT
24	Program MMI	Hattic B. Pile / Stokey		3-1505	H
25	Program PLC	Houtile / Bb B-Pile / Stokey		3-16-05	#D
26	Switch on for alarming	P. Dunn/J. Douthit / Stokey		4-180	JU
27	Set Scalar Card 'K' Factors	P. Dunn/J. Douthit / Stokey		4-18-65	Jp
28	Fire extinguisher w/placard	McDowell / Stokey	`.	1/1/	
29	Off tags and lockouts	B. Tiensvold/Dunn/Douthit / Stokey		2/10/05	1 /2 1
30	Contaminated and uncontaminated cans	P. Dunn/J. Douthit / Stokey		4-18-05	20
(31)	Complete 2" Jateral inspection	McDowell / Stokey		416-6	
(32)		McDowell / Stokey		11115	12
(33)	Labels on Monitor Wells	McDowell / Stokey		4-4-05	15
34				 	
35					
36					
37					<u> </u>

86 Crow Butte Road P. O. Box 169 Crawford, Nebraska 69339-0169

(308) 665-2215 (308) 665-2341 - FAX

GROUND RESISTANCE TEST RECORD

TEST SET USED: AEMC Model 3711 Ground Resistance Tester

GROUND TEST RESULTS: Wellhouse 40 OHMS: 26.3, 12.6, 56.2 = 7.40 OHMS

CONCLUSIONS:

THE TEST RESULTS ARE SATISFACTORY

TEST PERFORMED BY:

CROW BUTTE RESOURCES, INC.

Robert Tiensvold

Date: January 27, 2005

Crow Butte Resources

Pump Continuity Wellhouse

40

Technician: Bob Tiensvold

Non-Service Lines Locked-Out: Yes

			Meter		
Item#	Well #	Initial	Reading		Comments
1	P 2699	BY	1.2	Ohms	
2	P 2901	BT	1,4	Ohms	
3	P 2944	BT	1.1	Ohms	
4	P 2968	BT	18	Ohms	
5	P 3308	BO	1.1	Ohms	
6	P 3309	BO	1.6	Ohms	
7	P 3424	BS	,4	Ohms	
8	P 3438	BT	16	Ohms	
9	P 3439	BT	.6	Ohms	
10	P 3440	BT	1.5	Ohms	
11	P 3441	BT	1.0	Ohms	
12	P 3442	BT	.9	Ohms	
13	P 3443	BT	1.4	Ohms	
14	P 3444	BT	1.2	Ohms	
15	P 3629	BT	.7	Ohma	
16	P 3631	BT	1.3	Ohms	
17	P 3633	BT	1.1	Ohms	
18	P 3639	BT	1.2	Ohms	
19	P 3640	181	1.2	Ohms	

Item#	Well #	initial	meter Reading	Comments
20	P 3643	BT	1.4 Ohms	
21	P 3673	BT	1. Ohms	
22	P 3833	165	1,5 Ohms	
23	P 3834	BT	1.4 Ohms	
24	P 3838	BT	1. 6 Ohms	
25	P 3840	137	1.9 Ohms	
26	P 3877	BT	1. Ohms	
27	P 3879	BT	1.5 Ohms	
28	P 3905	BT	1.0 Ohms	
29	P 3907	BT	1. O Ohms	
30	P 3908	131	1.4 Ohms	
			Ohm s	
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			Ohms	
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Crow Butte Resources

Final Inspection of Piping Wellhead to Plant

Wellhouse:

Review of Pressure Test Data Complete:

Date: 4-1.05
Mine Manager: V.F.C. Foreman:

W.F.C. Foreman: _

Item#	Well#	initialed by	Comments
1	P 2699	K	OK
2	P 2901	太	OK
3	P 2944	45	01
4	P 2968	K	OK
5	P 3308	1.K	OK
6	P 3309	KT	OK
7	P 3424	KY	OK
8	P 3438	₹ 5	ok
9	P 3439	XV,	014
10	P 3440	75	6/C
11	P 3441	30	OK
12	P 3442	K	OK
13	P 3443		OK
14	P 3444	15	6/6
15	P 3629	X	OK
16	P 3631	M	OIC
17	P 3633	Kn	OK
18	P 3639	1	17
19	P 3640	K	016

140U-26	rvice Lines Lo	ckea-out:	
Item#	Well #	Initialed by	Comments
20	P 3643		016
21	P 3673	M	OK
22	P 3833	1 PC	OK
23	P 3834	K	010
24	P 3838	15	OK
25	P 3840	M	OK
26	P 3877	K	OX.
27	P 3879	1	UE
28	P 3905	X	0/6
29	P 3907	15	0/6
30	P 3908	*5	0/C
		<u> </u>	
	•		
		1	
			أساخ وخيران ووروع والمتعارض والمتعار

	Item#	Well #	Initialed by	Comments
	1	1 2677	M	016
	2	1 2800	K	O/C OK
	3	I 2967	M	OK
4-6.	4	1 3422	15	NEED TO STORY OX
/ 0	5	1 3423	R^\	OK
	6	1 3426	K	Ok.
	7	I 3427	KN	٥١٤.
	8	1 3429	K	olc
	9	1 3430	K	OK.
4-6	10	1 3431	K	the destroy of
4-6	11	1 3432	*	Heen whaleh OK
	12	1 3433	*	014
416	13	1 3434	R	NEED IN talled OR
	14	1 3630	K	OK
	15	I 3632	K	OK
	16	1 3635	N N	0 K
	17	1 3636	K	OK
	18	1 3637	\\ \(\times \)	OK.
	19	1 3638	₹ ~	010

1.00

Item#	Well #	Initialed by	Comments
20	I 3641		OCC
21	1 3642	K	OK
22	I 3660	*	OIC
23	I 3661	No.	016
24	1 3662	125	0/4
25	1 3663	X.	OF
26	1 3668	1	0/6
27	I 3669	*	OX
28	1 3670	125	OK
29	I 3732	KI	OK
30	1 3835	*	0/0
31	1 3836	K	OK
32	I 3837	*	014
33	1 3839	KY	OK
34	1 3878	En	OK
35	1 3880	M	OC
36	I 3881	L'AS	OK
37	1 3890	15	0/6
38	I 3891	KA	010

_	Item#	Well #	Initialed by	Comments
ſ	39	I 3899	14	DK
١	40	1 3906	K	016
ı	41	1 3909	*	Niele installe Of
I	42	1 3921	*	OK
۱	43	1 3929	200	OIC
I	44	1 3930	*	0/6
١	45	1 3931	150	OK
ļ	46	1 3932	KI	OK
١	47	1 3933	1	OK
١	48	I 3934	X	DK
١	49	1 3935	der.	0/6
	50	1 3936	6	D/L
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SERP 05-02 Evaluation



Crow Butte Resources, Inc.

Safety and Environmental Review Panel

Evaluation Report – SERP 05-02

Wellhouse 44 Approval to Operate

November 21, 2005

The Crow Butte Resources, Inc. (CBR) Safety and Environmental Review Panel (SERP) met to review and approve operation of Wellhouse 44 in Mine Unit 9 at the Crow Butte Uranium Project.

The SERP appointed for this evaluation consisted of the following members:

Name	Title	Area of Expertise
Mike Griffin	Manager of Health, Safety, and Environmental Affairs (Mine Manager designee)	Management
Tate Hagman	Health Physics Technician (RSO designee)	Radiation Safety
Robert Dunn	Wellfield Operations Foreman	Operations
Lee Moeller	Maintenance Superintendent	Construction
Mike Brost	Chief Geologist	Well Construction

Dr. Stokey is the SERP Chairman. Mr. Griffin was appointed SERP Chairman for this evaluation based on Dr. Stokey's absence.

Purpose of SERP Evaluation

The purpose of this evaluation by the CBR SERP was to review and approve Wellhouse 44 for operation.





License Condition 9.4 allows CBR to make changes in the facility or procedures or conduct tests or experiments that are not presented in the approved application if such changes do not:

- i. Result in any appreciable increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated);
- ii. Result in any appreciable increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated);
- iii. Result in any appreciable increase in the consequences of an accident previously evaluated in the license application (as updated);
- iv. Result in any appreciable increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated);
- v. Create a possibility for an accident of a different type that any previously evaluated in the license application (as updated);
- vi. Create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated);
- vii. Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER) or the environmental assessment (EA) or the technical evaluation reports (TERs) or other analysis and evaluations for license amendments.
- viii. For the purposes of SERP evaluations, SSC means any SSC which has been referenced in a staff SER, TER, EA, or environmental impact statement (EIS) and supplements and amendments.

The SERP evaluation was conducted in accordance with the instructions contained in the Environmental, Health, and Safety Management System (EHSMS) Volume II, Management Procedures, EHS-6, Managing Change. The SERP reviewed the Wellhouse startup checklists and supporting documentation and evaluated this information as compared with the requirements of the licensing basis, including the following documents:

- Title 10, Code of Federal Regulations;
- Source Materials License SUA-1534, Amendment No. 19 dated June 8, 2005;
- Application for Renewal of USNRC Radioactive Source Materials License SUA-1534, Crow Butte Resources, Inc. December 1995;
- Environmental Assessment for Renewal of Source Materials License No. SUA-1534, USNRC February 1998;
- Safety Evaluation Report for Renewal of Source Materials License No. SUA-1534, USNRC February 1998;
- Technical Evaluation Reports issued in support of amendments to SUA-1534.





Title 10 Code of Federal Regulations

The proposed change will have no impact on CBR's ability to meet all applicable NRC regulations.

Source Materials License SUA-1534 Requirements

Amendment 19 to SUA-1534 dated June 8, 2005 was reviewed for specific requirements related to approval and operation of a wellhouse.

Mine Unit 9 was previously approved by the CBR SERP (see SERP 03-05 dated October 22, 2003). Therefore, no review of monitor well location, installation or baseline sampling and Upper Control Limit determination is required for approval of Wellhouse 44.

<u>License Condition 10.2:</u> This License Condition requires that CBR construct all wells in accordance with the methods contained in the Section 3.1.2 of the approved License Renewal Application (LRA). License Condition 10.2 also requires that CBR perform mechanical integrity tests (MIT) for all injection and production wells.

The well construction methods in use for Wellhouse 44 are the same as those described in the LRA and contained in EHSMS Volume III, Operations Manual, Procedure P-25, Well Installation. MITs were performed in accordance with EHSMS Volume III, Operations Manual, Procedure P-23, Mechanical Integrity Test (MIT). All MIT data sheets were contained in the Notice of Intent to Operate Wellhouse 44 (or in the original Mine Unit 9 Notice of Intent) that was submitted to the NDEQ. These MIT data sheets were provided by the Chief Geologist and reviewed by the SERP. The records indicate that the MITs performed in Wellhouse 44 met the requirements.

<u>License Condition 9.3:</u> This License Condition requires that CBR conduct operations in accordance with the representations contained in the LRA. Section 3.1.3 of the LRA discusses construction materials, instrumentation, and monitoring requirements. Section 3.3 also discusses instrumentation, including wellhouse injection and production instrumentation and wet building alarms for wellhouses. Section 7.2.3 of the LRA requires that leak tests be performed on all wellfield piping before placing the system into production operations.

The SERP reviewed the Wellhouse Start-up Checklist for Wellhouse 44. This checklist was developed by the Wellfield Construction staff to document completion of all required actions before initiating operations in a wellhouse. Some of these actions are required by regulatory and licensing requirements, while some were developed over the course of mining experience at Crow Butte. Construction activities are governed by

SERP 05-02



EHSMS Volume III, Operations Manual, Procedure P-15, Installation of Wellfield Pipelines. The Maintenance Superintendent reviewed these items and stated that all had been completed and the appropriate controls were in place.

A copy of the Wellhouse Start-Up Checklist is attached to this SERP Evaluation. Supporting documentation in the form of pressure tests and ground continuity checks are also attached.

Environmental Assessment

The SERP reviewed the contents of the Environmental Assessment (EA) prepared by NRC in February 1998 to determine whether the proposed change could cause substantive safety or environmental impacts.

Well construction and testing as described in the EA has been completed for the wells associated with Wellhouse 44.

Section 3.3.1 discusses leak testing of wellfield piping. The SERP reviewed the completion of pressure testing for piping systems associated with Wellhouse 44 and found that they meet the intent of the EA.

Financial Surety

The proposed change is covered in the NRC-approved financial surety maintained by CBR and approved by Amendment 18 to SUA-1534 in the amount of \$16,033,706.

Safety Evaluation Report

The Safety Evaluation Report (SER) principally provides the basis for worker safety at Crow Butte and does not specifically address the issues related to approval of Wellhouse 44.

Technical Evaluation Reports

The SERP reviewed the Technical Evaluation Reports (TERs) prepared by NRC staff to support amendments made to SUA-1534 since renewal in 1998. None of the TERs prepared since license renewal directly address issues related to approval of a new Wellhouse for operation.



Degradation of Essential Safety or Environmental Commitment

SUA-1534 allows CBR to make changes as long as they do not degrade the essential safety or environmental commitments made in the application. The SERP determined that safety commitments made in the LRA and discussed in the EA have been met and that startup of Wellhouse 44 in Mine Unit 9 will not degrade the safety and environmental commitments.

Based upon this evaluation of the licensing basis, the CBR SERP hereby approves startup and operation of Wellhouse 44 in Mine Unit 9.

Approved this 21st day of November 2005.

Mike Griffin, Manager of Health, Safety, and Environmental Affairs (Mine Manag designee)	
designee)	gei
SERP Chairman	

Tate Hagman, Health Physics Technician (Radiation Safety Officer designee)

Robert Dunn, Wellfield Operations Foreman

. . .

Lee Moeller, Maintenance Superintendent

Mike Brost, Chief Geologist

NOTE: NORTHEAST CORNER OF WH44 SOUTH OF THE COUNTY ROAD NEEDS BERM WORK. EARTHWORK SCHEDURED FOR 22 NOW 2005.
INJECTION WILL NOT BEGIN IN THIS AREA UNTIL WORK IS COMPLETED AND HAS BEEN CHECKED BY THE WELLFIELD OPERATIONS FORMAND.

X (402) 471-2909

STATE OF NEBRASKA



Mike Johanna Governor MAR 8 2005

DEPARTMENT OF ENVIRONMENTAL QUALITY

Michael J. Linder

Director

Suite 400. The Atrium

1200 'N' Street

P.O. Box 98922

Lincoline Nebraske 68509-8922

MAR

Rights (402) 471-2186

Mr. Stephen Collings, President Crow Butte Resources, Inc. 141 Union Blvd., Ste. 330 Lakewood, Colorado 80228

Dear Mr. Collings:

On February 3, 2005, the Nebraska Department of Environmental Quality received a submittal of information from Crow Butte Resources, Inc. The submittal serves as Notice of Intent to Operate and contains Well Completion Reports and Casing Integrity Test Reports for recently installed wells (Wellhouse 44) in the construction of Mine Unit 9.

The Department has reviewed the information submitted and determined that it is adequate and complete. Upper Control Limits and Restoration Values established for Mine Unit 9 have already been submitted and approved. Approval of the additional portion of Mine Unit 9 will not alter those values. The Department hereby approves the Notice of Intent to Operate for the additional portion of Mine Unit 9.

If you have any questions or comments concerning this letter or the review of the Notice of Intent to Operate, please contact David Miesbach of my staff at (402) 471-4982. Thank you.

Sincerely,

Michael J. Under

Director

ML/dlm word/files/dave/cbr/letter/notintwh.doc

Well House Start-Up Checklist

Well House # 44

Date

Fire extinguisher w/placard Off tags and lockouts Contaminated and uncontaminated cans Complete 2" lateral inspection Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	Item	Description	Person	Comments	Date Completed	Initial
Pipelines checked for leaks Pipelines buried Rechever! / Stokey Pipelines decked out by two separate means Rechever! / Stokey Pipelines buried Pipelines buried Rechever! / Stokey Pipelines buried Rechever! / Stoke	1	Permit To Operate	Brost / Stokey			
Fipelines buried Pressure gauge on injection manifold Pressure gauge on injection total flows can be measured Pressure of the pressure of	2	Complete Pressure Testing (Trunkline and House)	McDowell / Stokey	······································	11-4-0	5 1/2
Pressure gauge on injection manifold R. Roberts / Stokey Injection and equipped with totalizing flow meters R. Roberts / Stokey Injection and Production total flows can be measured B. Plant Douthit / Stokey Unused trundline locked out by two separate means boldston valves are closed and chained McDowell / Stokey Map of 2" fines McDowell / Stokey Mills field Layout map in house McDowell / Stokey McDowell /	3	Pipelines checked for leaks	McDowell / Stokey		11-4-4	· K
Injection lines equipped with totalizing flow meters R. Roberts / Stokey Injection and Production total flows can be measured B. Pileril. Doublit / Stokey Unused trunkline locked out by two separate means McDowell / Stokey Injection and Production total flows can be measured McDowell / Stokey Injection and Production total flows can be measured McDowell / Stokey Injection and Production total flows can be measured McDowell / Stokey Injection and Production total flows can be measured McDowell / Stokey Injection and Production total flows can be measured McDowell / Stokey Injection and Production total flows Injection and Production f	4	Pipelines buried	McDowell / Stokey	·····	11-4-15	X 1
Injection and Production total flows can be measured Unused trunkline locked out by two separate means B. PlieAt. Doublet / Stokey Unused trunkline locked out by two separate means B. Solation valves are closed and chained McDowell / Stokey Mgb of 2" lines McDowell / Stokey Well-field Layout map in house McDowell / Stokey Check berms Griffin / Stokey Check berms Griffin / Stokey Check berms McDowell / Stokey Continuity check on producers Ground fault check REAR. Thensveld / Stokey Ground fault check REAR. Thensveld / Stokey Held of Communications wire check B. Tensveld / Stokey Held of Stokey Well house slarm checked DPS Installed and operational B. Plient, Douthit / Stokey Well house slarm checked Processor installed B. Tieneveld / Stokey Well house slarm checked P. Dunnul, Douthit / Stokey Well house slarm checked Check fuses in control panel Program PLC Check fuses in control panel B. Tieneveld / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors P. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors D. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors D. Dunnul, Douthit / Stokey Held ST Set Scalar Card 'K' Factors D. Dunnul, Douthit / Stokey Held ST Stokey	5	Pressure gauge on injection manifold	R. Roberts / Stokey		11-4.05	15
Unused trunkline locked out by two separate means McDowell / Biokey 1/-/5 1/-/	6	Injection lines equipped with totalizing flow meters	R. Roberts / Stokey		11-18,0	16
Isolation valves are closed and chained McDowell / Stokey	7	Injection and Production total flows can be measured	B. Pile/H. Douthit / Stokey		11/18/05	BO
McDowell/Beins / Stokey Well-field Layout map in house McDowell/Beins / Stokey Check berms Pressure check oxygen lines McDowell / Stokey Continuity check on producers B. Tensvold / Stokey Continuity check on producers B. Tensvold / Stokey Communications wire check B. Tensvold / Stokey McDowell / Stokey	8	Unused trunkline locked out by two separate means	McDowell / Stokey		11-15	6
Well-Rield Layout map in house McDowell/Bains / Stokey // 6 / 6 / 6 / 6 / 6 / 6 / 6 / 6 / 6	9	Isolation valves are closed and chained	McDowell / Stokey		11-15	5
Check berms Griffin / Blokey Pressure check oxygen lines McDowell / Blokey Continuity check on producers B. Tiensvold / Blokey McDowell / Blokey McDowell / Blokey McDowell / Blokey Millos BT Ground fault check REA/B. Tiensvold / Blokey Millos BT Heater size check B. Tiensvold / Blokey McDowell / Blokey Millos BT Heater size check B. Tiensvold / Blokey McDowell / Blokey	10	Map of 2" lines	McDowell/Beins / Stokey		118-8	5
Pressure check oxygen lines McDowell / Stokey M/B	11	Well-field Layout map in house	McDowell/Beins / Stokey		11.8.00	A)
Continuity check on producers B. Thensvold / Stokey // #/05 BT	12	Check berms	Griffin / Stokey			
Ground fault check REA/B. Tensvold / Blokey 11/4/05 87	13	Pressure check oxygen lines	McDowell / Stokey	· · · · · · · · · · · · · · · · · · ·	11-15:05	· R
Communications wire check	14	Continuity check on producers	B. Tiensvold / Stokey		11/4/05	BT
Heater size check B. Tiensvold / Stokey	15	Ground fault check	REA/B. Tiensvold / Stokey		1114/05	B1
Processor installed well house B. Pilerh. Douthit / Stokey II/fos Discription	16	Communications wire check	B. Tiensvold / Stokey		11/18/05	87
UPS installed and operational B. Pilerit, Douthit / Stokey 1/4/05 Methouse alarm installed B. Tiensvold / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey 1/4/05 Methouse alarm checked P. Dunni/J. Douthit / Stokey P. Dunni/J. Douth	17	Heater size check	B. Tiensvold / Stokey		114105	<i>B</i> 7
Wet house alarm installed B. Tiensvold / Stokey Wet house alarm checked P. Dunn/J. Douthit / Stokey Oxygen solenoid checked P. Dunn/J. Douthit / Stokey Check fuses in control panel Program MMI B. Pile / Stokey Program PLC Switch on for alarming P. Dunn/J. Douthit / Stokey II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM II-18-05 TM II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM II-18-05 TM II-18-05 TM II-18-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 TM II-	18	Processor installed well house	B. Pile/H. Douthit / Stokey		11/4/95	131
Wet house alarm checked P. Dunn/J. Douthit / Stokey Check fuses in control panel B. Tiensvold / Stokey Program MMI Program MMI B. Pile / Stokey Program PLC Switch on for alarming Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey Fire extinguisher w/placard Off tags and lockouts Contaminated and uncontaminated cans Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	19	UPS installed and operational	B. Pile/H. Douthit / Stokey		11/4/05	131
Oxygen solenoid checked P. Dunn/J. Douthit / Stokey Check fuses in control panel B. Tiensvold / Stokey Program MMI B. Pile / Stokey Program PLC Switch on for alarming P. Dunn/J. Douthit / Stokey II-18-05 T// Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 T// Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey II-18-05 T// Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey Off tags and lockouts Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II-18-05 T// II-18-05 T	20	Wet house alarm installed	B. Tiensvold / Stokey	······································	11/4/05	61
Check fuses in control panel B. Tiensvold / Stokey Program MMI B. Pile / Stokey Program PLC Switch on for alarming P. Dunn/J. Douthit / Stokey II-18-05 TV Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey Off tags and lockouts Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II-18-05 TV II-18-	21	Wet house alarm checked	P. Dunn/J. Douthit / Stokey	······································	11-48-0	
Program MMI B. Pile / Stokey Program PLC B. Pile / Stokey II-8-05 TM P. Dunn/J. Douthit / Stokey P. Dunn/J. Douthit / Stokey II-8-05 TM II-8-05 TM II-8-05 TM P. Dunn/J. Douthit / Stokey II-8-05 TM I	22	Oxygen solenoid checked	P. Dunn/J. Douthit / Stokey	 	11-18.05	70
Program PLC Switch on for alarming P. Dunn/J. Douthit / Stokey II-16-05 TM II-16-05 TM Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey McDowell / Stokey Off tags and lockouts Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II-21-05 Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant McDowell / Stokey	23	Check fuses in control panel	B. Tiensvold / Stokey	· · · · · · · · · · · · · · · · · · ·	11/4/05	137
Switch on for alarming P. Dunn/J. Douthit / Stokey Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey // 28 Fire extinguisher w/placard McDowell / Stokey Off tags and lockouts Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II/ 40 J. B. To Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	24	Program MMI	B. Pile / Stokey	·	1111	HD.
Set Scalar Card 'K' Factors P. Dunn/J. Douthit / Stokey Fire extinguisher w/placard Off tags and lockouts Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	25	Program PLC	B. Pile / Stokey		11-18-05	TN
Fire extinguisher w/placard McDowell / Stokey Off tags and lockouts Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II-21-35 Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	26	Switch on for alarming	P. Dunn/J. Douthit / Stokey		11-16-65	10.
Off tags and lockouts B. Tiensvold/Dunn/Douthit / Stokey Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II-21-35 30 - Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	27	Set Scalar Card 'K' Factors	P. Dunn/J. Douthit / Stokey 🕜	1.1	11-21-0	30
Contaminated and uncontaminated cans P. Dunn/J. Douthit / Stokey II-21-35 10 - Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	28	Fire extinguisher w/placard	McDowell / Stokey	N/H ·	17.8-03	XX
Complete 2" lateral inspection McDowell / Stokey Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	29	Off tags and lockouts	B. Tiensvold/Dunn/Douthit / Stokey		1111-111-21	
Visually inspect entire system to plant Labels on Monitor Wells McDowell / Stokey	30	Contaminated and uncontaminated cans	P. Dunn/J. Douthit / Stokey		11-21-05	10.
33 Labels on Monitor Wells McDowell / Stokey / 4.05 34 35 36	31	Complete 2" lateral inspection	McDowell / Stokey		H-4-05	\$50
34 35 36	32	Visually inspect entire system to plant	McDowell / Stokey	 	11-4-06	<i>1</i> 257
35 36	33	Labels on Monitor Wells	McDowell / Stokey	···	1:4.00	
36	34					
	35					
	36			·····	1	
3′	37				1	

Crow Butte Resources
Pump Continuity

Weilhouse

44

Date:

Technician: Bob Tiensvold

Non-Service Lines Locked-Out:

Yes

No

ltem#	Well#	Initial	Meter Reading		Comments
1	P 3716	RT.	1.9	Ohms	OK
2	P 3718	BT	.9	Ohms	OK
3	P 3721	BT	2.0	Ohms	OK
4	P 3722	BT	1.5	Ohma	6K
5	P 3723	BT	1.3	Ohms	8K
6	P 3724	BT	1.2	Ohms	BIC
7	P 3725	BT	1.2.	Ohms	8K
8	P 3726	BT	1.2	Ohms	614
9	P 3727	BT	1.4	Ohms	BK
10	P 3728	BT	1.2-	Ohms	BK BK
11	P 3742	135	1.6	Ohms	BK
12	P 3748	BT	15	Ohms	01(
13	P 3753	BI	1.2	Ohms	OK
14	P 3755	37	20	Ohms	OK
15	P 3762	31	1.7	Ohms	015
16	P 3777	BT	1.4	Ohms	Ok
17	P 3781	01	1.5	Ohms	OK
18	P 3783	BT	1.4	Ohms	GK
19	P 3793	85	.7	Ohms	BK

			Meter		
Item #	Well #	Initial	Reading		Comments
20	P 3794	BT	12	Ohms	BK
21	P 3796	187	1.3	Ohms	CK
22	P 3797	165	12	Ohms	OK
23	P 3800	35	1.7	Ohms	BK
24	P 3811	BT	1.4	Ohms	<u>ok</u>
25	P 3813	185	1.2	Ohms	6K
26	P 3821	135	.6	Ohms	OK
27	P 3853	BT	1.1	Ohms	OK
28	P 3865	BT	1.0	Ohms	as
29	P 3970	35	1.5	Ohms	Ol r
30	P 3972	BT	.8	Ohms	OK
				Ohms	

Crow Butte Resources

Final Inspection of Piping Wellhead to Plant

Wellhouse:

44

Review of Pressure Test Data Complete:_ Initialed by Comments

Item #	Well#	Initialed by	Comments
1	P 3716	#1	OK
2	P 3718	151	0/2
3	P 3721	57	OK
4	P 3722	K	0/C 0/C
5	P 3723	*	3/6
6	P 3724	K	Oll
7	P 3725	27	ove
8	P 3726	37	OK
9	P 3727	37	O/C
10	P 3728	37	0k
11	P 3742	21	C/L
12	P 3748	TT	ar.
13	P 3753	- Tangeri - Tangeri	B IC
14	P 3755		OK
15	P 3762		914
16	P 3777	K	OIC
17	P 3781	K	OK
18	P 3783	1	0%
19	P 3793	L	D/C

Date: _	11-4-05
Mine Manager: _	
W.F.C. Foreman: _	Lub WEL our

Non-Service Lines Locked-Out:_

Item#	Well #	Initialed by	Comments	Item #	Well#	Initialed by	Comme
1	1 3004	₹n	06	20	I 3785	KY	OR
2	1 3707	A	OC	21	I 3786	JT	00
3	1 3708	37	OA	22	1 3788	31	ଚ
4	1 3713	-	OK	23	I 3789	F	010
5	I 3714	37	OK.	24	1 3790	M	0/
6	l 3719	3	3/2	25	1 3792	K	0
7	1 3729	KY	010	26	I 3795	5+	qi
8	I 3741	57	O.E	27	I 3799	K	0/0
9	1 3743	57	6/4	28	1 3801	K	0
10	I 3747	ンナ	06	29	1 3802	25	0
11	1 3749	37	0 1	30	1 3805	*	010
12	I 3757	57	05	31	1 3806	*	01
13	1 3774		OK	32	1 3807	X	D
14	1 3776		OK	33	1 3812	丁さ	0
15	I 3778	1	BK	34	1 3816	K	OK
16	1 3779	27	0 K	35	1 3817	15	01
17	1 3780	K	OIC	36	1 3820	27	101
18	1 3782	M	OR	37	1 3850	4	0/
19	1 3784	K	0/0	38	I 3851	12	0
					<i>-</i>		

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Item #	₩eii #	Initialed by	Comments
20	I 3785	KY	OK
21	I 3786	JT	OK .
22	1 3788	27	P)C
23	1 3789	M	OIC
24	I 3790	M	0,10
25	I 3792	K	01
26	I 3795	サナ	aje
27	I 3799	K	dl
28	1 3801	K	OK
29	1 3802	25	010
30	1 3805	*	010
31	1 3806	*	0/1
32	1 3807	X	8/1
33	1 3812	7	OK
34	1 3816	M	OK
35	1 3817	15	010
36	1 3820	27	DK
37	1 3850	4	0/6
38	I 3851		0/(

item #	Well#	Initialed by	Comments	
39	1 3854	57	0 k	
40	1 3950	157	OK	
41	l 3951	2	WEED GAUGE (FIXE)	
42	1 3959	77	a	
43	1 3960	37	OK	
44	I 3961	K	OK	
45	I 3965	57	OK	
46	1 3966	K	OK	
47	l 3971	K	OK	
48	1 3990	E	OIC	
49	1 3991	K	0/2	
50	1 4060	15	OC	
	<u> </u>			



SERP 05-03 Evaluation



Crow Butte Resources, Inc.

Safety and Environmental Review Panel

Evaluation Report - SERP 05-03

Approval to Conduct Experiment for Vanadium Removal

November 23, 2005

The Crow Butte Resources, Inc. (CBR) Safety and Environmental Review Panel (SERP) met to review and approve an experiment where hydrogen peroxide will be added to the wash water at a rate of 0.5% by weight across the belt filter to enhance the removal of vanadium.

The SERP appointed for this evaluation consisted of the following members:

Name	Title	Area of Expertise
Jim Stokey	Mine Manager	Management
Mike Griffin	Manager of Health, Safety, and Environmental Affairs	Radiation Safety
John Cash	Operations Superintendent	Operations
Lee Moeller	Maintenance Superintendent	Construction
Larry Teahon	Environmental Coordinator	Environment

Dr. Stokey is the SERP Chairman. Mr. Teahon was appointed SERP Secretary for this evaluation.

Purpose of SERP Evaluation

The purpose of this evaluation by the CBR SERP was to review and approve an experiment where hydrogen peroxide will be added to the wash water at a rate of 0.5% by weight across the belt filter to enhance the removal of vanadium.





License Condition 9.4 allows CBR to make changes in the facility or procedures or conduct tests or experiments that are not presented in the approved application if such changes do not:

- i. Result in any appreciable increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated);
- ii. Result in any appreciable increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated);
- iii. Result in any appreciable increase in the consequences of an accident previously evaluated in the license application (as updated);
- iv. Result in any appreciable increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated);
- v. Create a possibility for an accident of a different type that any previously evaluated in the license application (as updated);
- vi. Create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated);
- vii. Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER) or the environmental assessment (EA) or the technical evaluation reports (TERs) or other analysis and evaluations for license amendments.
- viii. For the purposes of SERP evaluations, SSC means any SSC which has been referenced in a staff SER, TER, EA, or environmental impact statement (EIS) and supplements and amendments.

The SERP evaluation was conducted in accordance with the instructions contained in the Environmental, Health, and Safety Management System (EHSMS) Volume II, Management Procedures, EHS-6, Managing Change. The SERP reviewed the proposed experiment and supporting documentation and evaluated this information as compared with the requirements of the licensing basis, including the following documents:

- Title 10, Code of Federal Regulations;
- Source Materials License SUA-1534, Amendment No. 19 dated June 8, 2005;
- Application for Renewal of USNRC Radioactive Source Materials License SUA-1534, Crow Butte Resources, Inc. December 1995;
- Environmental Assessment for Renewal of Source Materials License No. SUA-1534, USNRC February 1998;
- Safety Evaluation Report for Renewal of Source Materials License No. SUA-1534, USNRC February 1998;
- Technical Evaluation Reports issued in support of amendments to SUA-1534.

SERP 05-03



Title 10 Code of Federal Regulations

The proposed change will have no impact on CBR's ability to meet all applicable NRC regulations.

Source Materials License SUA-1534 Requirements

Amendment 19 to SUA-1534 dated June 8, 2005 was reviewed for specific requirements related to approval of experiments.

<u>License Condition 9.3:</u> This License Condition requires that CBR conduct operations in accordance with the representations contained in the LRA. Section 3.1.4 of the LRA discusses the uranium recovery process. This experiment will cause a deviation in the process flow described in Figure 3.1-6.

Environmental Assessment

The SERP reviewed the contents of the Environmental Assessment (EA) prepared by NRC in February 1998 to determine whether the proposed change could cause substantive safety or environmental impacts. No environmental impacts were identified.

Financial Surety

The proposed change is covered in the NRC-approved financial surety maintained by CBR and approved by Amendment 18 to SUA-1534 in the amount of \$16,033,706.

Safety Evaluation Report

The Safety Evaluation Report (SER) principally provides the basis for worker safety at Crow Butte and does not specifically address the issues related to chemical safety.

Technical Evaluation Reports

The SERP reviewed the Technical Evaluation Reports (TERs) prepared by NRC staff to support amendments made to SUA-1534 since renewal in 1998. None of the TERs prepared since license renewal directly address issues related to chemical processes.

Degradation of Essential Safety or Environmental Commitment

SUA-1534 allows CBR to make changes as long as they do not degrade the essential safety or environmental commitments made in the application. The SERP determined that safety commitments made in the LRA and discussed in the EA have been met and





that an experiment where hydrogen peroxide is added to the wash water at a rate of 0.5% by weight across the belt filter will not degrade the safety and environmental commitments.

Based upon this evaluation of the licensing basis, the CBR SERP hereby approves an experiment where hydrogen peroxide will be added to the wash water at a rate of 0.5% by weight across the belt filter for vanadium removal.

Approved this 23rd day of November 2005.

Jim Stokey, Mine Manager

SERP Chairman

Mike Griffin, Manager of Health, Safety, and Environmental Affairs

John Cash, Operations Superintendent

Lee Moeller, Maintenance Superintendent

Larry Teahon, Environmental Coordinator

SERP Secretary