

January 6, 2000

## LICENSE SUA-1341 DOCKET NO. 40-8502

Mr. John J. Surmeier, Chief Uranium Recovery Branch Division of Waste Management Mail Stop T7J9 Nuclear Regulatory Commission Washington, D.C. 20555

# RE: Quarterly Progress Report of Monitor Wells on Excursion Status

Dear Mr. Surmeier:

This letter serves as a progress report, as required by License Section 11.2 and 12.2, summarizing the 8 monitor wells which remained on excursion status during the fourth quarter of 1999. Seven of these wells are located at the Irigaray Mine, while well MW89 is at the Christensen Mine. The attached table MONITOR WELLS ON EXCURSION STATUS, lists the weekly sample analysis data and water level elevations for each well. Note that the values in bold exceed their respective UCL.

### **IRIGARAY MINE**

### Interior Unit 1 Sand Monitor Wells

SSM3 (Production Unit 2) has been on excursion status since August 28, 1996. No significant net changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 54.5 (UCL 38.5), conductivity was 1756 (UCL 1451) and alkalinity was 148.2 (UCL 219.1). Note that monitor wells SSM3, SSM41, SSM42 and SSM43 are all located in restored mine units, therefore, no corrective actions have been taken.

SSM18 (Production Unit 8) has been on excursion status since September 11, 1996. No significant net changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 18.3 (UCL 14.7), conductivity was 1707 (UCL 1849) and alkalinity was 145.6 (UCL 119.4). Note that monitor wells SSM18, SSM40 and DM10 are all located in Mine Units 6-9, which are currently in restoration. Therefore, no corrective actions have been taken.

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CHRISTENSEN MINE OPERATIONS 935 PENDELL BOULEVARD, P.O. BOX 730, MILLS, WYOMING 82644 TEL: (307) 464-1427 FAX: (307) 464-1429 Mr. J. Surmeier January 6, 2000 Page 2 of 2

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SSM40 (Production Unit 8) has been on excursion status since March 6, 1994. No significant net changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 14.4 (UCL 13.6), conductivity was 1530 (UCL 1672) and alkalinity was 111.3 (UCL 109.2).

SSM41 (Production Unit 4) has been on excursion status since November 17, 1998. No significant net changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 32.6 (UCL 24.9), conductivity was 2405 (UCL 2566) and alkalinity was 129.6 (UCL 126.8).

SSM42 (Production Unit 3) has been on excursion status since October 10, 1990. No significant net changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 55.8 (UCL 23.3), conductivity was 2270 (UCL 1571) and alkalinity was 132.9 (UCL 213.2).

SSM43 (Production Unit 1) has been on excursion status since October 11, 1989. No significant net changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 36.1 (UCL 25.6), conductivity was 1699 (UCL 1456) and alkalinity was 142.6 (UCL 170.4).

#### Interior Deep Sand Monitor Wells

DM10 (Production Unit 6) has been on excursion status since February 2, 1994. Alkalinity, conductivity and chloride all showed small net increases at the end of the quarter. On December 27, chloride was 20.0 (UCL 16.4), conductivity was 776 (UCL 606) and alkalinity was 181.0 (UCL 107.5).

**CHRISTENSEN MINE** 

### Perimeter Ore Zone Monitor Wells

MW89 (Mine Unit 2) has been on excursion status since October 5, 1999. No significantnet changes were noted in the three excursion parameters, at the end of the quarter. On December 27, chloride was 17.3 (UCL 13.6), conductivity was 758 (UCL 823) and alkalinity was 123.0 (UCL 121.3).

Please contact me if you have any questions regarding this report.

Sincerely,

John Vaselin Radiation Safety Officer

cc: Division Director/NRC, Arlington, TX Tom Hardgrove/COGEMA

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	Monitor Well ID # : SSM3 Location: Irigaray Mine						
Sample Date	CL mg/l UCL 38.5	Cond. umhos UCL 1451	Alk. mg/l UCL 219.1	pН	Water Level Elevation	U308 mg/l	
10-04-99	52.6	1755	154.2	7.8	4306.8	<0.4	
10-13-99	55.3	1756	156.7	7.8	4306.8	<0.4	
10-19-99	53.9	1762	157.4	7.9	4306.7	<0.4	
10-28-99	55.0	1731	155.6	7.8	4306.8	< 0.4	
11-03-99	53.5	1755	156.6	7.8	4306.8	<0.4	
11-09-99	52.8	1760	155.9	7.8	4306.7	<0.4	
11-16-99	54.0	1767	154.5	7.8	4305.4	< 0.4	
11-22-99	53.8	1734	155.2	7.9	4305.4	<0.4	
12-01-99	53.9	1754	151.4	7.8	4305.4	< 0.4	
12-07-99	54.6	1741	152.7	7.8	4305.4	< 0.4	
12-15-99	54.7	1768	148.6	7.9	4305.4	< 0.4	
12-20-99	54.6	1764	154.7	7.8	4305.4	<0.4	
12-27-99	54.5	1756	148.2	7.8	4307.0	< 0.4	

	Monitor	Well ID # : SS	6M18 Lo	ocation: Irig	garay Mine	
Sample Date	CL mg/l	Cond. umhos	Alk. mg/l	pН	Water Level	U308 mg/l
•	UCL 14.7	UCL 1849	UCL 119.4		Elevation	
10-04-99	18.0	1716	148.5	7.7	4310.5	< 0.4
10-13-99	18.8	1721	150.2	7.8	4310.5	< 0.4
10-19-99	18.3	1721	153.0	7.8	4310.5	< 0.4
10-28-99	18.0	1684	146.8	7.7	4310.4	< 0.4
11-03-99	17.9	1699	152.0	7.7	4310.3	< 0.4
11-09-99	17.8	1715	150.3	7.8	4310.5	< 0.4
11-16-99	18.6	1726	150.5	7.7	4309.4	< 0.4
11-22-99	18.3	1710	152.2	7.8	4309.4	< 0.4
12-01-99	18.6	1713	151.1	7.8	4309.4	< 0.4
12-07-99	18.5	1704	150.9	7.9	4309.4	< 0.4
12-15-99	18.4	1722	146.2	7.8	4309.4	<0.4
12-20-99	18.6	1721	151.4	7.7	4309.4	< 0.4
12-27-99	18.3	1707	145.6	7.7	4310.7	< 0.4

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Sample Date	CL mg/l	Cond. umhos	Alk. mg/l	pН	Water Level	U308 mg/l
•	UCL 13.6	UCL 1672	UCL 109.2		Elevation	
10-04-99	14.8	1536	118.8	7.9	4312.2	<0.4
10-13-99	14.1	1491	111.6	8.0	4312.2	<0.4
10-19-99	13.9	1511	114.0	8.1	4312.1	<0.4
10-28-99	13.9	1465	111.1	8.1	4312.2	<0.4
11-03-99	13.9	1507	114.3	7.9	4312.1	< 0.4
11-09-99	14.0	1516	114.5	8.0	4312.1	< 0.4
11-16-99	14.0	1530	111.7	8.1	4312.1	< 0.4
11-22-99	14.7	1565	116.1	8.2	4312.1	<0.4
12-01-99	14.3	1532	112.6	8.1	4312.1	<0.4
12-07-99	14.2	1514	111.7	8.2	4312.1	<0.4
12-15-99	14.0	1509	107.9	8.1	4312.1	<0.4
12-20-99	14.5	1517	114.7	8.1	4312.1	<0.4
12-27-99	14.4	1530	111.3	8.0	4312.3	< 0.4

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	Monitor	Well ID # : SS	SM41 Lo	cation: Ir					
Sample Date	CL mg/l UCL 24.9	Cond. umhos UCL 2566	Alk. mg/l UCL 126.8	рН	Water Level Elevation	U308 mg/l			
10-04-99	31.2	2415	130.6	7.8	4306.7	<0.4			
10-13-99	33.1	2420	132.5	7.8	4306.7	<0.4			
10-19-99	31.6	2417	132.8	7.9	4306.7	<0.4			
10-28-99	32.5	2386	131.8	7.8	4306.7	<0.4			
11-03-99	31.7	2408	134.8	7.8	4306.7	<0.4			
11-09-99	32.1	2416	136.3	7.8	4306.6	<0.4			
11-16-99	32.0	2318	131.5	7.8	4306.9	<0.4			
11-22-99	31.9	2398	131.7	7.9	4306.9	<0.4			
12-01-99	32.3	2411	130.7	7.8	4306.9	<0.4			
12-07-99	32.0	2394	131.6	7.8	4306.9	<0.4			
12-15-99	32.5	2427	129.0	7.9	4306.9	<0.4			
12-20-99	32.7	2410	134.4	7.8	4306.9	<0.4			
12-27-99	32.6	2405	129.6	7.8	4307.0	<0.4			

	Monitor	Well ID # : SS	6M42 Lo	cation: Ir	rigaray Mine				
Sample Date	CL mg/l UCL 23.3	Cond. umhos UCL 1571	Alk. mg/l UCL 213.2	рН	Water Level Elevation	U308 mg/l			
10-04-99	54.0	2293	137.5	7.8	4302.8	<0.4			
10-13-99	55.8	2282	136.7	7.8	4302.8	< 0.4			
10-19-99	54.9	2300	139.4	7.9	4302.7	< 0.4			
10-28-99	56.2	2260	138.4	7.8	4302.8	<0.4			
11-03-99	54.6	2285	138.1	7.7	4302.7	< 0.4			
11-09-99	54.4	2288	138.7	7.8	4302.6	< 0.4			
11-16-99	55.4	2302	135.5	7.7	4302.6	< 0.4			
11-22-99	55.9	2271	138.7	7.9	4302.6	< 0.4			
12-01-99	58.0	2275	141.8	7.8	4302.6	<0.4			
12-07-99	56.2	2265	137.0	7.8	4302.6	< 0.4			
12-15-99	55.5	2293	130.7	7.8	4302.6	<0.4			
12-20-99	56.5	2287	138.0	7.8	4302.6	<0.4			
12-27-99	55.8	2270	132.9	7.7	4302.7	<0.4			

	Monitor	Well ID # : SS	SM43 Lo	cation: Ir	rigaray Mine			
Sample Date	CL mg/l UCL 25.6	Cond. umhos UCL 1456	Alk. mg/l UCL 170.4	рН	Water Level Elevation	U308 mg/l		
10-04-99	33.9	1702	140.6	7.8	4305.5	<0.4		
10-13-99	35.7	1703	142.9	7.9	4305.6	<0.4		
10-19-99	34.4	1704	144.3	8.1	4305.5	< 0.4		
10-28-99	35.1	1674	142.6	7.9	4305.5	<0.4		
11-03-99	34.1	1700	142.9	7.9	4305.5	<0.4		
11-09-99	34.3	1705	144.1	7.9	4305.4	<0.4		
11-16-99	34.5	1718	140.4	7.9	4304.1	<0.4		
11-22-99	34.1	1693	139.9	8.0	4304.1	<0.4		
12-01-99	34.3	1699	138.1	8.0	4304.1	< 0.4		
12-07-99	34.7	1687	140.1	8.0	4304.1	<0.4		
12-15-99	34.8	1716	136.5	8.0	4304.1	< 0.4		
12-20-99	36.2	1704	146.6	8.0	4304.1	<0.4		
12-27-99	36.1	1699	142.6	7.9	4305.7	< 0.4		

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Sample Date	CL mg/l UCL 16.4	Cond. umhos UCL 606	Alk. mg/l UCL 107.5	рН	Water Level Elevation	U308 mg/l
10-04-99	18.3	754	174.6	8.2	4277.5	<0.4
10-13-99	18.6	747	174.8	8.2	4277.8	<0.4
10-19-99	19.0	761	178.9	8.3	4277.6	<0.4
10-28-99	18.9	741	176.7	8.2	4277.3	<0.4
11-03-99	19.2	761	184.7	8.2	4276.8	<0.4
11-09-99	19.3	764	184.3	8.2	4278.7	<0.4
11-16-99	19.2	768	180.9	8.2	4278.7	<0.4
11-22-99	18.9	766	186.2	8.3	4278.7	<0.4
12-01-99	19.1	756	178.2	8.3	4278.7	< 0.4
12-07-99	20.0	760	182.7	8.2	4278.7	<0.4
12-15-99	20.2	780	182.7	8.2	4278.7	<0.4
12-20-99	21.1	777	194.6	8.2	4278.7	<0.4
12-27-99	20.0	776	181.0	8.2	4281.6	<0.4

	Monitor W	/ell ID #: MW	89 Loca	tion: Chr	hristensen Mine				
Sample Date	CL mg/l	Cond. umhos	Alk. mg/l	pН	Water Level	U308 mg/l			
	UCL 13.6	UCL 823	UCL 121.3		Elevation				
10-05-99	17.5	756	123.6	8.2	4496.3	<0.4			
10-11-99	17.4	752	123.3	7.6	4495.5	<0.4			
10-18-99	17.4	756	124.7	8.4	4495.5	<0.4			
10-25-99	17.1	750	124.0	8.3	4498.2	<0.4			
11-02-99	17.3	750	126.1	8.3	4502.0	<0.4			
11-09-99	17.1	749	124.6	8.3	4502.0	<0.4			
11-15-99	17.4	753	124.1	8.3	4501.6	<0.4			
11-22-99	16.9	755	124.9	8.3	4502.2	<0.4			
11-29-99	16.6	745	123.5	8.3	4501.5	<0.4			
12-06-99	17.0	753	122.6	8.3	4501.9	<0.4			
12-13-99	16.9	747	121.0	8.3	4501.5	< 0.4			
12-20-99	17.0	744	126.2	8.3	4502.2	<0.4			
12-27-99	17.3	758	123.0	8.3	4502.8	< 0.4			

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