

From: Paulson, Oscar (CCC) [Oscar.Paulson@riotinto.com]
Sent: Wednesday, December 09, 2009 7:50 PM
To: Webb, James
Cc: Haag, Kelly (RTEA-Temp); Schutterle, Shelley (CCC)
Subject: RE: Spill of Pumpback Fluid - December 7, 2009

James Webb:

This e-mail is being sent as a follow-up to our telephone conversation on Tuesday, December 8, 2009. The following is planned regarding the spilled pumpback water:

- Following escape from the lines, the water froze immediately due to the extreme cold and did not penetrate into the ground.
- On Monday, December 11, 2009, the areas that contain frozen pumpback water will be surveyed by a licensed surveyor to accurately map the areas involved.
- Once mapped, the areas will be dyked/bermed to prevent escape of the water on the surface as well as the commingling of it with other surface water when it thaws.
- The spill is along the fence along the north side of the road connecting the Mill Area with the tailings impoundment and is around the fence posts. Any attempts to excavate the frozen water/ice now would result in the tearing out of the fence and probably the inadvertent excavation of large chunks of frozen ground beneath the spill.
- Once these areas are dyked/bermed, they will be monitored and either:
 - Frozen chunks of pumpback water will be removed as the area thaws and be placed in the tailings impoundment or;
 - Upon thawing, the water will be pumped or otherwise transported to the tailings impoundment, since the thawing pumpback water will pool as it thaws on the frozen ground beneath it.

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From: Webb, James [mailto:James.Webb@nrc.gov]
Sent: Tuesday, December 08, 2009 11:30 AM
To: Paulson, Oscar (CCC)
Cc: Gersey, Linda; Cohen, Stephen
Subject: RE: Spill of Pumpback Fluid - December 7, 2009

Mr. Paulson,

Thank you for the email. In our phone conversation yesterday (December 7, 2009, 3:40 PM EST), if I am correct, you indicated that the frozen fluids (ice) from the spill will be returned to the tailings impoundment. If so, can you provide us with a schedule for this action?

Jim Webb

James Webb
Project Manager
DWMEP/DURLD/URLB
U.S. NRC
Washington D.C.

From: Paulson, Oscar (CCC) [mailto:Oscar.Paulson@riotinto.com]
Sent: Tuesday, December 08, 2009 1:05 PM
To: Webb, James
Cc: Schutterle, Shelley (CCC); Haag, Kelly (RTEA-Temp)
Subject: Spill of Pumpback Fluid - December 7, 2009

James Webb:

As described briefly to you in our telephone conversation at 1:40 p.m. on Monday, December 7, 2009, severe cold during the early morning hours of December 7, 2009 caused the hose carrying pumpback fluid from TMWs-96 and 97 to freeze and separate, causing a spill of pumpback fluid west of the tailings impoundment and north of the road connecting the Mill Area with the tailings impoundment. In addition, freezing of the line from TMW-57 during the same time period caused some pumpback water to spray out of the line depositing ice on surrounding vegetation and on the ground in the vicinity of TMW-57.

The following pertains to the incident:

Spill Description	TMWs-96 and 97	
	Date:	Time:
Start:	6-Dec-09	23:30
Stop:	7-Dec-09	11:30
Estimated Duration:	720 minutes	
Flow Rate of TMW-96:	3.96gallons per minute	
Flow Rate of TMW-96:	8.98gallons per minute	
Total Flow Rate in Pipe:	12.94gallons per minute	
Estimated Volume Released:	9316.8 gallons	
Radionuclides:	Table 2 Effluent	

	Concentration			Estimated Fluid Concentration (Adjusted for Flow Rates) (pCi/L)
	(pCi/L)	TMW-96 Concentrations (pCi/L)	TMW-97 Concentrations (pCi/L)	
Natural uranium:	300	49.0	20.9	29.5
Radium-226	60	4.4	3.5	3.8
Radium-228	60	8.0	7.4	7.6
Thorium-230	100	0.2	0.2	0.2
Sum of Fractions:				

Spill Description

TMW-57

	Date:	Time:
Start:	6-Dec-09	23:30
Stop:	7-Dec-09	11:30
Estimated Duration:	720	minutes

Flow Rate of Well: Spray from hole in pipe

Estimated Volume Released: <1,000. gallons

Radionuclides:

	Table 2 Effluent Concentration (pCi/L)	TMW-57 Concentrations (pCi/L)	Fractional Concentration
Natural uranium:	300	3.5	0.0117
Radium-226	60	2.7	0.0450
Radium-228	60	5.6	0.0933
Thorium-230	100	0.2	0.0020
Sum of Fractions:			0.1520

Notes: Concentrations based on most recent samples collected from the wells. The fluid on the ground was sampled, analytical results are pending.

The concentrations of radionuclides in the fluid are below the limits in 10 CFR 20 / Table 2 - Effluent Concentrations

The spills did not enter any drainages.

The spills occurred entirely on private land owned by the licensee.

The spills occurred within the site's fenced area so there is no public access to the All spilled fluid pooled on the ground surface and froze in place.

All spilled fluid accumulated above the plume in the underlying aquifer.

The affected areas will be surveyed on Monday, December 14, 2009.

The spills will be documented in the site's 40.36 File.

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E-mail Properties

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Subject: RE: Spill of Pumpback Fluid - December 7, 2009

Sent Date: 12/09/2009 7:50:12 PM

Received Date: 12/09/2009 7:50:12 PM

From: Paulson, Oscar (CCC)

Created By: Oscar.Paulson@riotinto.com

Recipients:

James.Webb@nrc.gov (Webb, James)

Tracking Status: None

Kelly.Haag@riotinto.com (Haag, Kelly (RTEA-Temp))

Tracking Status: None

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Options

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Recipients received: