

WFK



Smith Ranch - Highland
Uranium Project
P. O. Box 1210
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February 13, 2004

40-8964

Mr. Lowell Spackman, Acting District I Supervisor
Land Quality Division
Wyoming Department of Environmental Quality
Herschler Building
122 West 25th Street
Cheyenne, WY 82002

RE: Permit to Mine 603
A-Wellfield Long-Term Ground Water Monitor Plan

Dear Mr. Spackman:

In correspondence dated November 25, 2003, Mr. Richard Chancellor, Administrator of the Land Quality Division (LQD) conveyed to Power Resources, Inc. (PRI) that the restoration of the A-Wellfield mining zone ground water at the Highland Uranium Project (HUP) was approved. However, since the approval was partially based on flow and transport modeling, Mr. Chancellor requested that PRI submit a post restoration ground water monitoring plan. PRI met with Mr. Chancellor and Mr. Ingle on February 4, 2004 to discuss the post restoration ground water monitoring plan for the A-Wellfield. PRI has included several of the LQD recommendations in this plan. Presented below is PRI's proposed long-term ground water monitoring (LTM) plan for the A-Wellfield.

Objective

The objective of the LTM plan is to verify that the geochemical process of natural attenuation will occur within the 20-Sand formation downgradient of the A-Wellfield. Constituents of concern as identified by the LQD are uranium, radium, selenium, iron and manganese. The LTM plan will document that concentrations of constituents of concern within the restored A-Wellfield ground water will be decreased through natural attenuation as the ground water migrates to the northeast. Specifically, the concentration of radium is expected to decrease through adsorption to organic matter and clays, and the concentration of redox sensitive elements (uranium, selenium, iron and manganese) will be decreased as the restored ground water migrates towards and through a more reducing environment.

To achieve this objective, PRI will locate a new monitor well relatively close and downgradient to the restored A-Wellfield ground water. Also, PRI will make use of three existing monitor wells and has developed a ground water sampling and analysis strategy.



LTM Plan Monitor Well

To determine the location of the new monitor well, PRI will first attempt to identify the extent of lateral flaring of mining solutions, which occurred during mining in the 20-Sand downgradient of the A-Wellfield. This is important since the restored ground water must be monitored as it moves through a geochemically reduced environment as opposed to the potentially slightly oxidized zone of flaring. Once this is accomplished, a LTM Well will be located and completed in the appropriate zone to monitor the restored ground water as it migrates away from the wellfield. This well will be located downgradient of a mining well (historic Production or Injection Well) that has been sampled for the constituents of concern. Figure 1 shows the area that is being considered for the LTM Well.

Additional Monitoring

PRI will utilize three wells already in use as monitoring wells to track changes in the 20-Sand ground water quality over time and distance (see Figure 1). Well MP-3 will track the changes within the wellfield as up gradient ground water flushes the restored wellfield area. Wells M-3 and M-4 will be used to detect any changes to the downgradient conditions that may potentially decrease the effectiveness of the natural attenuation process. Also, water level data, collected from all four wells will be used to determine the ground water gradient and flow rate in the 20-Sand.

Ground Water Sampling and Analysis

The sampling frequency of the four LTM plan wells will be semi-annual (twice per year), since the ground water flow rate in the 20-Sand is expected to be approximately five feet per year. More frequent sampling would be unnecessary due to this slow rate of ground water flow. The water samples collected from the monitor wells will be analyzed for the parameters listed in Table 1. The parameters include the constituents of concern to LQD and additional parameters that will be used as markers to track the restored ground water.

Table 1
Uranium
Radium
Selenium
Iron
Manganese
Chloride
Alkalinity
TDS
pH

Duration of the LTM Plan and Reporting of Data

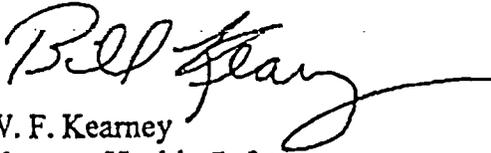
The duration of the monitoring plan will be based on the ground water flow rate and the distance of the long-term monitor well from the selected A-Wellfield mining well. Since the expected

ground water flow rate is about five feet per year, a maximum of fifteen years should be sufficient to confirm that natural attenuation is occurring. However, it is possible that the length of time may be reduced to as short as five years depending on the extent of the zone of flaring and the placement of the LTM Well.

PRI will report the results of the ground water quality analysis and the water level data in the Annual Report. A discussion will also be provided that interprets the results of the data.

Upon approval of the plan by LQD, PRI will begin installation of the LTM Well. If you have questions, please don't hesitate to call me, or Leland Huffman, Restoration Superintendent.

Sincerely,



W. F. Kearney
Manager-Health, Safety
& Environmental Affairs

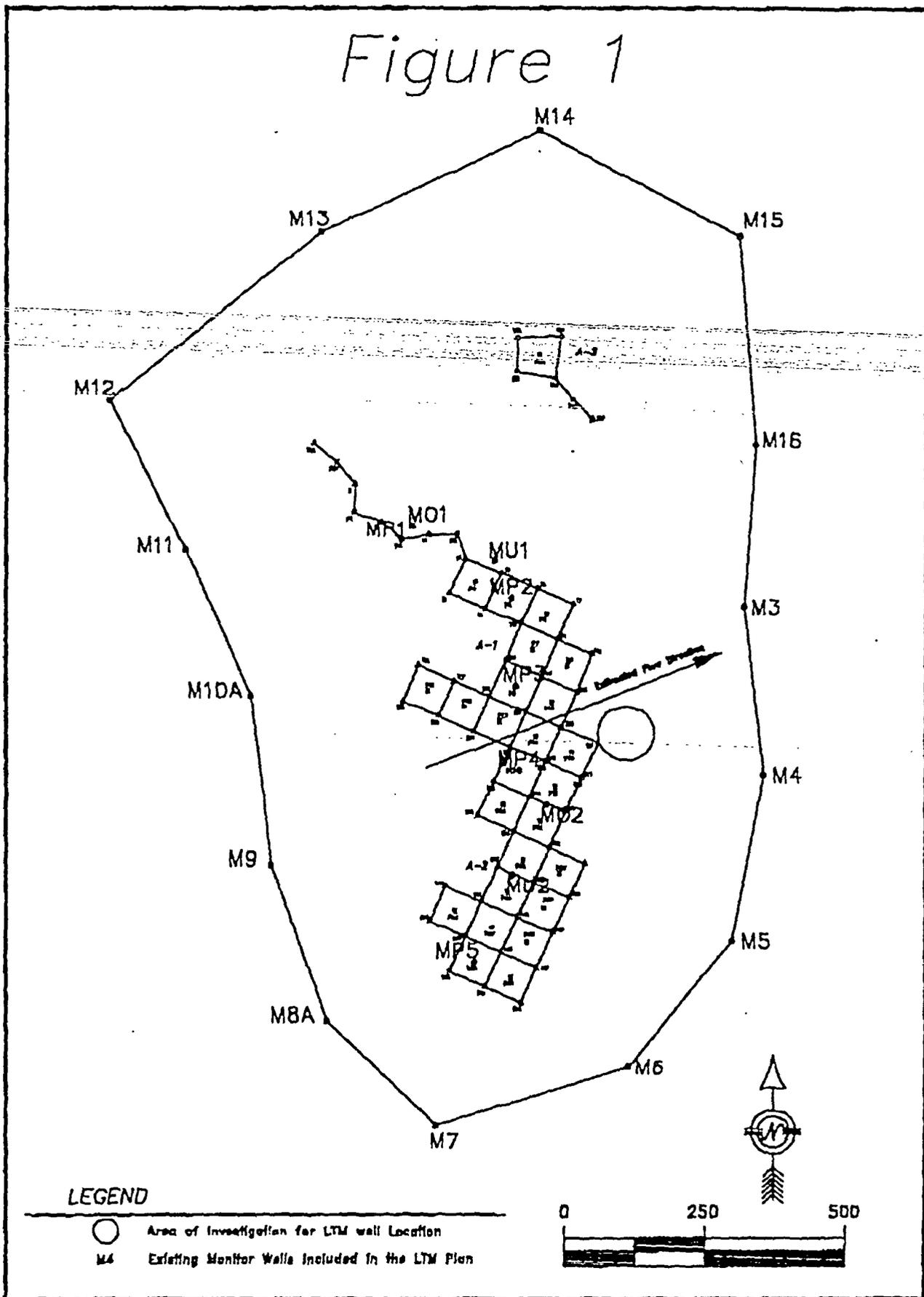
WFK/ksj

cc: S.P. Collings
File HUP-4.3.3.1

R. Knode

I. Huffman

Figure 1



A-Wellfield Long-Term Monitor Location

WFK



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March 24, 2004

Mr. Lowell Spackman, Acting District I Supervisor
Land Quality Division
Wyoming Department of Environmental Quality
Herschler Building
122 West 25th Street
Cheyenne, WY 82002

RE: Permit to Mine 603
A-Wellfield Revised Long-Term Ground Water Monitoring Plan

Dear Mr. Spackman:

In correspondence dated February 13, 2004, Power Resources, Inc. (PRI) proposed a post restoration ground water monitoring plan for the A-Wellfield as requested by Mr. Richard Chancellor, Administrator of the Land Quality Division (LQD). Mr. Steve Ingle of the LQD responded in correspondence dated March 4, 2004, which outlined two proposed modifications to PRI's original submittal. The following is PRI's response to Mr. Ingle's proposed changes to the previously submitted long-term ground water monitoring (LTM) plan.

LQD Proposed Modifications

PRI accepts Mr. Ingle's first proposed modification to monitor Well MP-4 instead of Well MP-3.

In reference to Mr. Ingle's second proposed modification, PRI agrees to add an additional well to the LTM plan located on the oxidized side of the redox interface downgradient of the A-Wellfield. PRI believes that by adding an additional well closer to the wellfield edge, the duration of the LTM Plan may be decreased.

Objective

The objective of the LTM plan is to verify that the geochemical process of natural attenuation will occur within the 20-Sand formation downgradient of the A-Wellfield. Constituents of concern as identified by the LQD are uranium, radium, selenium, iron and manganese. The LTM plan will document that concentrations of constituents of concern within the restored A-Wellfield ground water will be decreased through natural attenuation as the ground water migrates to the northeast. Specifically, the concentration of radium is expected to decrease



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through adsorption to organic matter and clays, and the concentration of redox sensitive elements (uranium, selenium, iron and manganese) will be decreased as the restored ground water migrates towards and through a more reducing environment.

PRI is proposing a plan that will demonstrate that the 20-Sand formation has the capacity to naturally decrease the concentrations of ground water constituents of concern. This will be demonstrated by monitoring the ground water as it migrates out of the wellfield, through the zone of flaring and into the reduced portion of the sandstone formation that remains unaffected by mining.

PRI Revised LTM Plan

To determine the locations of the two new monitor wells, PRI will identify the extent of lateral flaring of mining solutions, which occurred during mining in the 20-Sand downgradient of the A-Wellfield. This is important since the restored ground water must be monitored as it moves through a geochemically reduced environment as opposed to the potentially slightly oxidized zone of flaring. Once this is accomplished, two LTM Wells will be located and completed in the appropriate zone to monitor the restored ground water as it migrates away from the wellfield. One of the new LTM Wells will be located within the zone of flaring, while the second LTM Well will be located downgradient in an area unaffected by mining solutions. These wells will be located northeast of a mining well (historic Production or Injection Well) that has been sampled for the constituents of concern. Figure 1 shows the area that is being considered for these LTM Wells.

Additional Monitoring

PRI will utilize three wells already in use as monitoring wells to track changes in the 20-Sand ground water quality over time and distance (see Figure 1). Well MP-4 will track the changes within the wellfield as up gradient ground water flushes the restored wellfield area. Wells M-3 and M-4 will be used to detect any changes to the downgradient conditions that may potentially decrease the effectiveness of the natural attenuation process. Also, water level data, collected from all five wells will be used to determine the ground water gradient and flow rate in the 20-Sand.

Ground Water Sampling and Analysis

The sampling frequency of the five LTM plan wells will be semi-annual (twice per year), since the ground water flow rate in the 20-Sand is expected to be approximately five feet per year. More frequent sampling is unnecessary due to this slow rate of ground water flow. The water samples collected from the monitor wells will be analyzed for the parameters listed in Table 1. The parameters include the constituents of concern to LQD and Tracking Parameters that will be used as markers to track the restored ground water. Sampling of the LTM Wells will not begin until the cessation of active restoration in Mine Unit B.

Table 1	
LQD Parameters	Tracking Parameters
Uranium	Chloride
Radium	Alkalinity
Selenium	TDS
Iron	pH
Manganese	

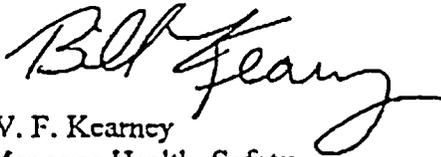
Duration of the LTM Plan and Reporting of Data

The duration of the monitoring plan will be based on the ground water flow rate and the distance of the long-term monitor wells from the selected A-Wellfield mining well. Since the expected ground water flow rate is about five feet per year, a maximum of fifteen years should be sufficient to confirm that natural attenuation is occurring. However, it is possible that the length of time may be reduced to as short as five years depending on the extent of the zone of flaring and the placement of the LTM Wells.

PRI will report the results of the ground water quality analysis and the water level data in the Annual Report. A discussion will also be provided that interprets the results of the data.

Upon approval of the plan by LQD, PRI will begin installation of the LTM Wells. If you have questions, please don't hesitate to call me, or Leland Huffman, Restoration Superintendent.

Sincerely,

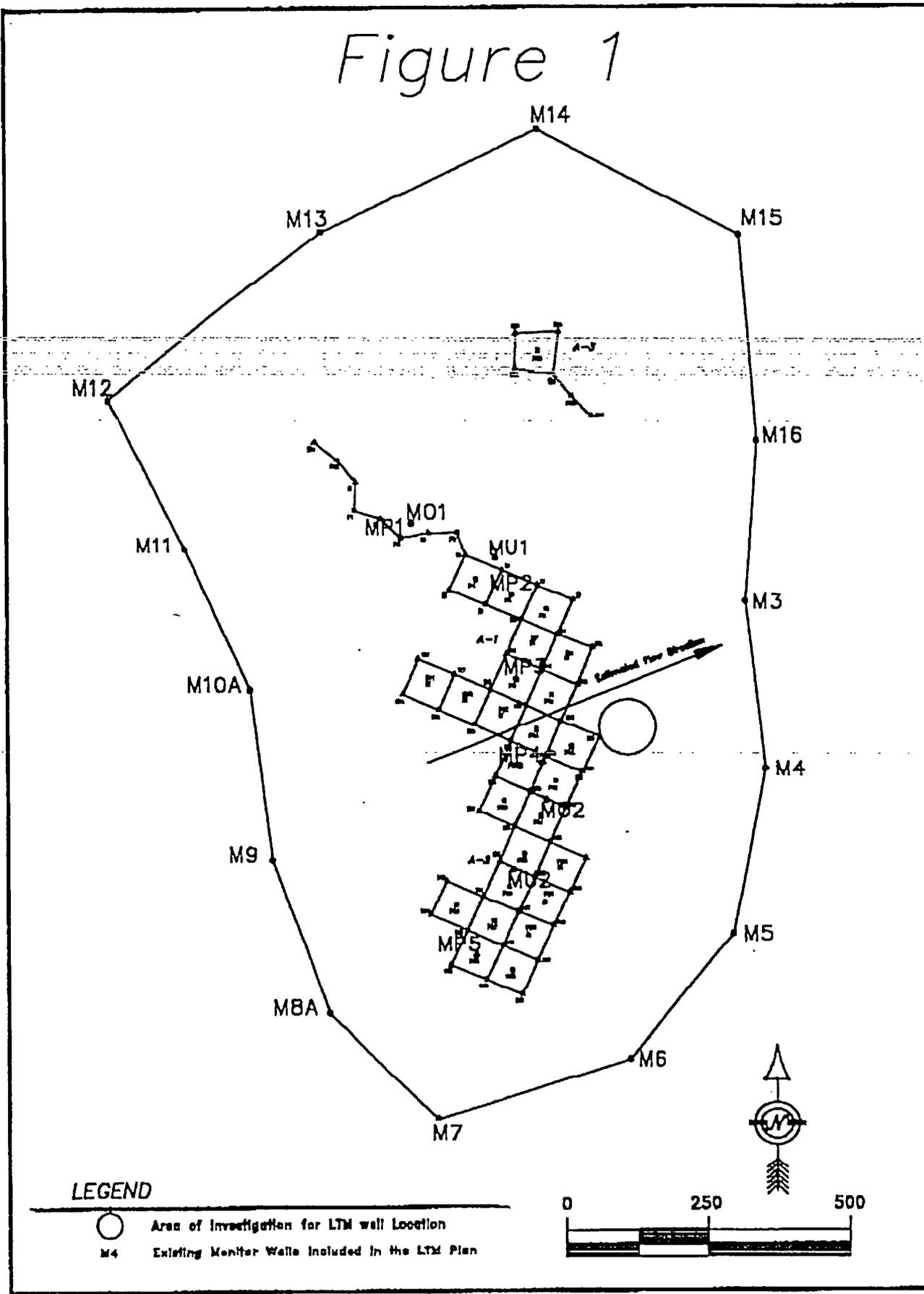


W. F. Kearney
 Manager-Health, Safety
 & Environmental Affairs

WFK/lah

cc: S.P. Collings R. Knode L. Huffman
 File HUP-4.4.1 File HUP-4.3.3.1 File HUP-4.6.4.2
 S. Ingle-LQD/WYDEQ

Figure 1



A-Wellfield Long-Term Monitor Location