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30 March 2020

Mr. John Winders
Izaak's, (Former O'Connell's Store)
105 Bridge Street
Wolf Creek, MT. 59648

RE: Request for Additional Work Under a Form 8 for the Release at the Former O'Connell's Store Based on the Latest Ground-water Sampling Data, Facility #25-05639, Release #4225, WPID #10893.

Dear Mr. Winders,

Based on our conversation of 17 March 2020, I have reviewed the 19 August 2019 sampling report and determined that my conclusions and recommendations still identify the preferred path to figuring out how to deal with this historic release. Given the difficulty of obtaining sound data from the small-diameter piezometer, a standard 2-inch monitoring well locator just a few feet to the east of IMW-2 would provide not only the lithologic information, but a means of purging water from the area close to where the UST had been located. Once the soil and ground-water data are analyzed, the DEQ and I can then plan on how to best deal with the residual contamination or simply let Mother Nature tend to the remediation. Based on the available data, the contamination does not appear to be moving off the Izaak's property.

Mr. Donnie McCurry has requested of me a Form 8 to authorize the additional work described above to get the investigation process moving. The effort would be, in simple terms, a standard sampling event with a new well completed close to MW-2. The most important aspects of the event are the collection of "soil" data from the new boring, thorough purging and well development of the new well prior to collection of a water sample and, careful survey of the new well's top-of-casing (TOC) elevation so that the ground-water gradient and flow direction are clearly established. I plan on conducting soil sampling every two feet from two feet below the ground surface (bgs) to the bottom of the boring at 15-16 feet. The well would be completed with 10 feet of 0.020 slotted casing sand packed to about 4 feet bgs, sealed with hydrated bentonite chips from 4 to 2 feet bgs, and completed with an 8-inch steel flush mount set in concrete.

Since the release was initially addressed in 1999 with the wells and piezometers completed in 2000, and follow-up sampling not initiated until 2014 with another three-year break from 2015 to 2018, this release is not a high priority site for the DEQ. What is needed are more complete data from the soil and ground-water around IMW-2. Data from previous sampling events indicate that the water table appears to be fairly constant in the range of 7.5 to 9.0 feet below the ground surface. One problem that Mr. Carter and I dealt with early on were data that indicated well MW-2 acted as a ground-water sink. This simply didn't make sense given the expected high transmissivity of the Missouri River alluvium near

Craig. When we resurveyed the well and piezometer top-of-casing elevations, the flow direction and gradient were much more in keeping with what one would expect for a well so close to the river.

This release is 100% eligible so that any approved work is paid for by the Petroleum Fund. Thus, there is no financial burden on the party responsible for the release or who may assume ownership for the release at a future date should a new owner assume that responsibility. As it stands now, more data are needed and the cost would be minimal as would the time frame to complete one new well.

Respectfully,



Earl F. Griffith PG

Wyoming # 1033

CC: Mr. Donnie McCurry, MT DEQ

Cost Estimate
Izaak's (former O'Connell's Store)
Craig, Montana
2 April 2020

The estimated costs herein utilize the PTRCB 2020 approved costs for gec Inc. However, when those approved costs do not adequately cover the real costs of the task at hand, I have attempted to provide an estimated cost that reflects the present professional effort involved in completing the task. This is a simple cost adjustment to an existing WP per the request of DEQ case manager Donnie McCurry and covers the sampling of four wells under the protocols as stated on the original WP (WPID 10893) and the completion of a new well to complement the existing well array.

Task 1: Form 8 Preparation

<u>Direct Costs</u>	<u>Units</u>	<u>Rate</u>	<u>Cost</u>
Senior Geologist	4	\$155.00	<u>\$620.00</u>
Estimated Cost Task 1			\$620.00

Task 2: Locate Five Wells, Expose the Flush Mounts, Clean the Lids, and Open The Flush Mounts and Wells.

<u>Direct Costs</u>	<u>Units</u>	<u>Rate</u>	<u>Cost</u>
Labor	2.5 hours	\$118.00	\$295.00
Metal Locator	2.5 hours	\$ 8.25	<u>\$ 20.63</u>
Estimated Costs Task 2			\$315.63

Task 3: Well purging-includes water-table measurement before and after (\$42.25/well) Purge pump for four hours @ \$8.75/hr, labor (three hours at \$118.00), mileage (80 miles); Purge only the four (4) wells to be sampled. Mobilization costs include the labor rate for Sr. Geologist (\$137.00/hr) who will oversee well boring and well completion.

<u>Direct Costs</u>	<u>Units</u>	<u>Rate</u>	<u>Cost</u>
mobilization	80 miles	\$ 6.40	\$512.00
labor	4	\$118.00	\$472.00
pump	4	\$ 8.75	\$ 35.00
water measurement	6	\$ 42.25	<u>\$253.50</u>
Estimated Cost Task 3			\$1,272.50

Total Estimated Costs Task 6	\$2,500.00
Total Estimated Costs Task 7	<u>\$ 896.00</u>
Total Estimated Costs (two sampling events)	\$9,499.48