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February 25, 2015

Sherri Stumbo
USDA Forest Service
4350 South Cliffs Dr.
Pocatello, ID 83204

Subject: Biological Selenium Removal Treatment Technology Fluidized Bed Bioreactor Pilot Study January 2016 Progress Report

Dear Sherri,

This progress report summarizes key activities in January 2016 associated with the fluidized bed bioreactor (FBR) pilot study located near Hoopes Spring. This pilot study is being conducted as part of the Smoky Canyon Mine Remedial Investigation/Feasibility Study (RI/FS) to provide information on the effectiveness of the active biological treatment system in removing selenium and other COPCs from South Fork Sage Creek Springs and Hoopes Spring. Operation and monitoring of the pilot study follows the *Pilot Study Work Plan and Sampling and Analysis Plan (Work Plan/SAP), Biological Selenium Removal Treatment Technology Fluidized Bed Bioreactor* (prepared by Formation Environmental, dated September 2014, with revised text and tables dated March 5, 2015), along with Work Plan/SAP Addenda 01, 02, and 03 which Simplot submitted to the Agencies (and were subsequently approved) in the summer of 2015, and Addendum 04 submitted to and approved by the Agencies in January 2016.

To address head loss through the sand filter and the presence of biological growth at the treatment system outfall, resulting in a shut down in late November 2015, Simplot submitted Work Plan/SAP Addendum 04, Pilot Test Plan: Nutrient Dosing to the Agencies on December 10, 2015. This addendum presented a plan to add a nutrient dosing system to encourage growth of the preferred floccing microorganisms. Additional information regarding the proposed plan was requested by the Agencies on December 10, 2015, and the revised Addendum 04 was submitted and approved on January 16, 2016. The system was restarted on January 19, 2016 and operated continuously through the end of the month. Sample collection was conducted on January 27, 2016 (Week 0).

Identification of Deliverables and Data Transmittals

At the time of this report no laboratory data have been received for samples collected in January. Field data for the Week 0 samples are presented in Table 1.0.

Upcoming Activities

The following activities associated with the FBR pilot study are planned through March 2016, or have occurred as of the date of this progress report:

- The system was shut down on February 10, 2016 to further optimize the nutrient feeds;
- The system was restarted on February 19, 2016;
- Initiation of performance monitoring during the first week of March (week 0 monitoring as specified in Work Plan/SAP Addendum 01); and
- Continuation of weekly monitoring.

Please contact me if there are questions regarding this monthly progress report.

Sincerely,

Monty Johnson
Environmental Engineering Manager
J. R. Simplot Company

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Table 1.0
Field Water Quality Data

Week 0		Station >>	Influent	Bioreactor	Effluent
		Sample ID >>	SC0116-LSSHS-IN001	SC0116-LSSHS-BE001	SC0116-LSSHS-EF001
		Date >>	1/27/2016	1/27/2016	1/27/2016
Analyte	**Units**	**Design Basis**			
Dissolved Oxygen	mg/L	≥6	11.46	6.81	10.58
ORP	mV		205	-114	67
pH	SU	6 - 9	6.84	6.55	6.64
Specific Conductance	umhos/cm		447	462	473
Temperature	C	8 - 17	12.3	12.14	12.12
Turbidity	NTU	2	1.3	**14.1**	**4.8**