1913525 - R8 SDMS

Coleman, Charles

From: JC Combs <jcombs.prls@gmail.com>
Sent: Monday, August 24, 2015 8:30 AM
To: Coleman, Charles; Richard Tabish
Subject: Re: Approval Letter Template.
Attachments: EPA_CharlesColeman.doc

Mr. Coleman,

I hope you enjoyed your recent travels / holiday.

I wanted to briefly touch base and resend the Anaconda Copper Mining Slag Recycling Program Overview for your review. I understand that you'll be speaking with Richard Tabish sometime today, as per the request of Pat Grady and BP/ARCO.

We appreciate all of your time, effort and help with this recycling project.

All the best and we look forward to speaking with you soon . . .

Jeffrey Combs & Richard Tabish

On Fri, Aug 14, 2015 at 11:47 AM, Coleman, Charles <COleman.Charles@epa.gov> wrote:

Rick,

I'm not sure we have letter template for where you are at in the process. Our templates are generally for the purchase of property within a Superfund site. If you are able to work out an arrangement with BP, then you(and/or BP) will need to submit development plan for Agency approval.

However, if you need to provide your investors any assurances, we can help you with that. See Jim Davison. We recently helped him to craft a letter for his investor group.

FYI, I will be out of the office next week.

Charlie

From: Rick Tabish [mailto:rbtabish@gmail.com]
Sent: Friday, August 14, 2015 10:35 AM
To: Coleman, Charles

Cc: JC Combs
Subject: Approval Letter Template.

Charlie,

Jeff Combs with Premier Industries, LLC is putting the informational email and letter together for your perusal. Is there a template we fill out for required criteria or do we give the proposed details ourselves? We want to get this filed with you as soon as possible. I spoke with Pat Grady and BP is meeting next week on this project. We may be getting some traction. In addition, we want all our ducks in a row and have the EPA on board and well informed about movement forward.

Thanks for all your help!

Sincerely

Richard B. Tabish

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8/13/2015

Mr. Charles Coleman
Environmental Protection Agency - Anaconda Project Director
Region 8 | Montana Office Federal Building
10 West 15th Street, Ste 3200
Helena, MT 59626

Re: Recycling Program Proposal for the MGS and WSS (Slag Piles) in Anaconda Montana – Utilization of Copper Refining Slag (CRS) for production of Foundry Grade Pig Iron & Spherical Silica based Proppant

Mr. Coleman,

Basin Industrial Services (BIS) along with our partners Premier Industries (PI) would like to propose an Environmental Recycling program based in Anaconda Montana. The focus of our program is to recycle the current Copper Refining Slag (CRS) pile owned by British Petroleum (BP) and managed by Atlantic Richfield (AR).

The program will utilize the CRS for the development and production of two byproducts – Foundry Grade Pig Iron and Certified Spherical Silica based Proppant. Additionally, the patent pending process is very environmentally friendly. This is due to the fact that nearly 100% of the CRS is utilized in the production of the two products leaving virtually no waste to dispose of.

We have done our research and found that the site containing the CRS is on the EPA's watch list. We feel that our program could not be timelier and would fit within the guidelines and parameters as a "Viable Solution" to and for this Environmental issue.

BIS along with PI has successfully completed all of the necessary process, environmental, customer, and financial due diligence in order to justify its proposed program. We have presented this viable beneficial Recycling Program to the AR team for their consideration, which in turn has taken it to BP. BIS and PI are proposing that ARCO/BP consider entering into a long-term definite supply Agreement for the CRS. This Agreement would be shared with the EPA as the key component to a Viable Solution for ARCO/BP that would address their responsibility to Recycle/Clean Up the CRS pile.

Recycling Plan High Level Overview

History – BIS and PI have been working in conjunction with the Proppant Research Group at Montana Tech to develop a patent pending process that will convert the CRS into Foundry Grade Pig Iron & Spherical Silica based Proppant for the last 1.5 years.

> *The Proppant Research Group (PRG) at Montana Tech of the University of Montana in Butte is our testing and advising strategic source. John Getty of the Geophysical Engineering Department was the primary driver behind the formation of the Proppant Research Group. Over the past 6 years he has developed a national and international reputation in the evaluation of natural and manmade proppant materials, and he has been actively involved in the research and development of novel materials for this application.*

The conversion process is structured around a two-phased heating process utilizing induction furnaces. The first phase begins with a complete melt of the CRS. The median temperature is raised to a level that causes the molten slag to separate into two separate layers. Adding certain materials and ingredients to the CRS prior to the melt enhances this process.

Once the bottom layer is channeled off into Pig Iron Ingot Molds, the remaining molten glass enters into phase two – Super heating. This phase starts by raising the median temperature of the melt to a level that allows the liquefied glass to be poured onto a disc atomizer thus creating the Spherical Silica Based Proppant. Utilization of a patented flux allows various elements such as Alumina to bond with the Glass beads giving it enhanced crush strength without compromising its spherical nature.

This entire process in metered and monitored on a micro level thus eliminating the release of Sulfur dioxide and Sulfur Trioxide. All fumes are captured, scrubbed, filtered and then released. Additionally, we are considering capturing the heat generated from the furnaces, turning it back into electricity for introduction into the local power grid.

This project is unique in the very sense that we do not have to develop a new market for the finished products generated from the slag. Both products, Pig Iron and Proppant have a staple market for immediate sale. The pig iron is highly marketable due to the malleability of the iron because of the slight copper content existing. (See Summary Below) The market demand will also eliminate the need for large storage facilities.

1) <u>PIG IRON VOLUME SUMMARY</u>

- For every ton of Anaconda slag that is processed, ~400 lbs of pig iron will be produced.
- The United States currently produces less than 3% of the World's merchant pig iron and imports $1.6 Billion worth of pig iron per year. We have already developed a relationship with one of the largest pig iron brokers in the United States and they have expressed great interest in our Montana USA-Made pig iron.
- A scheduled 10-furnace operation conservatively consuming 180,000-250,000 annual tons of Anaconda slag will generate between 35,000 and 50,000 annual TONS of pig iron, less than 1% of the total annual imported

2) <u>PROPPANT VOLUME SUMMARY</u>

- We intend to ramp up to 10 - ten ton furnaces within 18 months and ultimately 30-40 furnaces in place within 4 years. Please view "AR Slag Input Table" for the first 10 furnaces input production for 20 months (See Table Below)
- A scheduled 10-furnace operation conservatively consuming 180,000-250,000 annual tons of Anaconda slag will generate between 80,000 and 160,000 annual TONS of glass proppant
- All proppant generated as a yield product from the slag pile will meet the compliant specified industry standard (API). Based on current testing and material data we are convinced the slag generated proppant will outperform the standard bauxite/ceramic proppant resulting from the specific properties, makeup and design.

BIS carries a high safety rating with **INSnetworld** and **PEC Premier**. Both safety management consortiums are widely used and relied on by the oil industry. The breadth of operational savvy and logistics tied to operational flow in the Bakken remain currently high.

The transportation and delivery of proppant to the Bakken market is well thought out and structured by intimate knowledge of existing tried and tested rail road transfer stations around the greater basin area. The breadth of service and knowledge we possess from an experience and logistical standpoint allows us to be fluent with every demurrage site, option and operator for proposed proppant delivery and distribution.

BIS and PI enjoy very productive and healthy relationships with all of the above-mentioned entities. Numerous conversations have taken place with our clients about purchasing glass proppant. The overwhelming response was very favorable towards any API certified proppant meeting industry performance standards. The discussion of an "American Made" recycled resource has further fortified our market position compared to competitive alternatives.

In closing – We at BIS and PI appreciate the position the EPA plays in making sure each and every solution that is brought before you meets or exceeds the stringent standards by which you operate. This allows organizations like ours the opportunity to develop recycling projects that are focused around areas of concern, such as the Anaconda Copper Mining Slag Pile, that turn the piled up material into useful products in a responsible manner that is environmentally friendly and tremendously beneficial for the state and local economies.

We look forward to speaking with you in the near future about how we can bring this project to fruition.

All the best . . .

Richard Tabish and Jeffrey Combs