From:	Katie Hill Brandt
To:	Cordes, Richard M (MPCA)
Cc:	ben.bertram@sanimax.com
Subject:	Fw: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels
Date:	Thursday, August 20, 2015 10:49:09 AM
Attachments:	ATT00006.png ATT00008.png Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels 19 Aug 2015 - REVISED.pdf

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Dick,

Here is my original email from yesterday. Thanks.

Katie Hill Brandt, PE | Environmental Engineer
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----- Forwarded by Katie Hill Brandt/seh on 08/20/2015 10:47 AM -----

From: Katie Hill Brandt/seh
To: Richard.Cordes@state.mn.us,
Cc: ben.bertram@sanimax.com
Date: 08/19/2015 11:51 AM
Subject: RE: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels

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Hi Dick,

Regarding your question from yesterday, Ben was referring to the new boiler and burner system that they will be installing for the new boiler (Boiler #3) in order to fire RAFVO/glycerin. We are not requesting any changes be made to the boilers that are currently in the permit.

Please find the attached revised memo, which incorporates your and Ben's comments. The facility intends to keep a copy of this memo on site in order to meet the recordkeeping requirements of 40 CFR 63.11225(c)(2)(ii). Samimax intends to fire refined animal fats that have been processed either by Sanimax or third parties. Glycerin fired at the facility will be Sanimax-generated.

Let me know if you have any questions.

Regards,
Katie

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From: "Cordes, Richard M (MPCA)" <richard.cordes@state.mn.us>
To: "Bertram, Benjamin - 1230" <Ben.Bertram@SANIMAX1COM.onmicrosoft.com>,
Cc: Katie Hill Brandt <khillbrandt@sehinc.com>
Date: 08/18/2015 09:21 AM
Subject: RE: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels

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Ben –

Thank you for your responses to my questions. They will help me prepare a defensible permit and technical support document.

Your response suggests to me that at least one of your boilers is currently unable to burn some of the proposed fuels. Does this mean that your current permit needs to be amended to reflect the equipment that's needed to burn RAFVO and glycerin? Also, it would help me if you would propose permit conditions that ensure that the materials being burned are not solid wastes (as an alternative to the conditions I proposed). Use 40 CFR 63.11225(c)(2)(ii) as a guide.

Let me know if you have any questions. Thanks.

Dick

From: Bertram, Benjamin - 1230 [mailto:Ben.Bertram@SANIMAX1COM.onmicrosoft.com]
Sent: Monday, August 17, 2015 4:12 PM
To: Cordes, Richard M (MPCA)
Cc: Katie Hill Brandt
Subject: RE: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels

Good Afternoon Richard –

Just following up on my email from last week regarding the permit conditions. I look forward to hearing back from you.

Thanks,
Ben

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We Are The 3R

From: Bertram, Benjamin - 1230
Sent: Wednesday, August 12, 2015 3:09 PM
To: 'Cordes, Richard M (MPCA)'; Katie Hill Brandt
Subject: RE: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels

Good Afternoon Richard –

Please see my responses to your questions in red below. These can be formalized in a memo from Katie if need be as well, but I just wanted to address them right away as we are anxiously awaiting permit approval.

I would also like to address your comments regarding the permit conditions to limit animal fats to be burned to those produced at the Sanimax facility in SSP, as well as your condition that glycerin be Sanimax generated material. Can you please provide information as to why you are proposing this condition in regards to the RAFVO we would be firing in the boiler? From our standpoint, the reason behind adding RAFVO to the current permit was to allow flexibility in operations while still meeting the requirements of our air permit. It is our intent to continue burning Natural unless markets and economies would dictate that it was more economical to fire RAFVO fuels in lieu of the natural gas. You are correct that Sanimax does produce these fuels onsite, but we also buy and sell these commodities on the open market and would require the flexibility to burn RAFVO fuels, regardless of where they were processed. The fuels that would be run through the boiler/burner system would be required to meet strict specifications in order to be fired in the equipment and would also necessarily be in compliance with our existing air permit. Therefore, I would like to request that this condition not be included in the air permit as it will eliminate the flexibility (should we be curtailed or markets make a major shift) that we are seeking by adding RAFVO to the air permit at this time.

Thank you for your time and I look forward to hearing back from you regarding these conditions.

Thanks and have a great day.

Ben

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We Are The 3R

From: Cordes, Richard M (MPCA) [mailto:richard.cordes@state.mn.us]
Sent: Wednesday, August 12, 2015 8:30 AM
To: Katie Hill Brandt
Cc: Bertram, Benjamin - 1230
Subject: RE: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels

Katie –

The memo is in pretty good shape. I would, however, like you to supplement the memo with the following items:

- An explanation of why the animal byproducts, prior to processing, are not suitable fuels; In order to burn RAFVO in our specified burner and boiler system, the fuels have to meet very strict specifications in order to not foul up the burner and allow the equipment to burn RAFVO as a fuel. The entire fuel train and burner assembly will require special design parameters in order to allow us to burn these fuels. This also requires that the materials be fed to the boiler at a constant, steady temperature to ensure that they are in liquid form to be fired. Prior to processing, these would not be considered burnable within our equipment as they would not meet the specifications necessary to fire.
- A table comparing the level of emissions from the combustion of animal fats (and/or the content of precursors to emissions in the animal fats) to those of traditional fuels;
- A description of the storage method(s) for the processed animal fats and glycerin prior to combustion; and Prior to combustion these fuels would be stored in a double-wall tank equipped with a leak detection system.
- A description of a reasonable time frame for on-site storage of the processed animal fat and glycerin prior to combustion. If we were to decide to burn RAFVO within our burner/boiler system, the fuel would turn over on a weekly basis, meaning we would likely not have the fuel stored for more than a week at a time before being burned. There is always potential that this could vary depending on the amount of RAFVO being burned and the markets that are driving the push to burn RAFVO in lieu of natural gas.

Based on the memo, I plan to include permit conditions that limit the processed animal fats to be combusted at the SSP facility to those generated on-site and the glycerin to be combusted at the SSP facility to Sanimax-generated material.

Richard Cordes, P.E.
Principal Engineer
Air Quality Permit Section
Minnesota Pollution Control Agency
richard.cordes@state.mn.us
Phone: (651)757-2291
Fax: (651)296-8717

From: Katie Hill Brandt [mailto:khillbrandt@sehinc.com]
Sent: Tuesday, August 04, 2015 11:07 AM
To: Cordes, Richard M (MPCA)
Cc: ben.bertram@sanimax.com
Subject: Sanimax Memo - Use of Refined Animal Fats and Glycerin as Boiler Fuels

Dick,

Attached is the memo we drafted for Sanimax regarding the use of refined animal fats and glycerin as boiler fuels, in support of the boiler permitting project. Please let me know if you have any questions.

Thanks,
Katie

Katie Hill Brandt, PE | Environmental Engineer
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