Message

From: BECKHAM, LISA [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=75A0012699094CF59508BB04E90B393C-LBECKHAM]
Sent: 10/13/2017 10:57:16 PM
To: DANIEL SHORE [dshore@fullcircledg.com]
CC: Longhurst, Scott [scott.longhurst@crowncastle.com]
Subject: RE: Introduction to Bradam Steam Reformation from Daniel Shore
Attachments: adi_1500025.pdf; Aemerge Applicability Determination 2017_04_07.pdf; Signed Matt Salaazar EPA applicability letter 2-19-2016.docx

Hi Daniel,

Here's the summary of the potential applicable requirements and how to request an applicability determination:

For municipal waste:

- 40 CFR 60 Subpart AAAA – Small Municipal Waste Combustion, >11 tpd and <=250 tpd
- 40 CFR 60 Subpart Eb – Large Municipal Waste Combustion, >250 tpd
- See attached applicability determination from EPA related to Subpart AAAA that details different ways to be exempt from the regulation. (Document ad9_1500025)

Potential Exemptions:

- Small power producer and cogeneration exemptions: see 40 CFR 60.1020(b) and (d) and 40 CFR 60.50b(e) and (f)
    - Assistance with requirements to meet the exemptions: https://www.ferc.gov/industries/electric/gen-info/qual-fac/what-is.asp
- Co-fired combustors: See 40 CFR 60.1020(g) and 40 CFR 60.50b(j)

How to request an applicability determination:

- Mail hardcopy of your request to:
    - Matt Salazar, Manager Air & TRI Section
      Enforcement Division (ENF-2-1)
      U.S. EPA Region 9
      75 Hawthorne St
      San Francisco, CA 94105
- Email a copy to:
    - Salazar.Matt@epa.gov
    - brahmbhatt.Roshni@epa.gov
    - Mia.Marcia@epa.gov
- A sample request is also attached (Word document), as well as our response back (pdf).

It was great speaking to you today – have a great weekend!

Lisa Beckham
Environmental Engineer
Air Permits Office
EPA Region 9
(415) 972-3811

From: DANIEL SHORE [mailto:dshore@fullcircledg.com]
Sent: Thursday, October 12, 2017 11:23 AM

To: BECKHAM, LISA <BECKHAM.LISA@EPA.GOV>
Cc: Longhurst, Scott <scott.longhurst@crowncastle.com>
Subject: Introduction to Bradam Steam Reformation from Daniel Shore

Lisa,
I left a message introducing myself yesterday and thought I would follow up with some written info to help start our conversation. Charlie Tupac of SCAQMD Permitting has sent us your way after meeting with us. Full Circle Development Group is heading the development, and we are proposing a 200,000 ton per year waste conversion pilot plant in conjunction with Orange County Waste and Recycling using the Bradam Group's Steam Reformation Technology.

I am including an introduction to the Bradam Group and their Steam Reformation process. Also attached are the third party test results for the pilot plant which was extensively tested in Canada, proposed emissions calculations, and a letter from Battelle concerning the technology. While a pilot plant has been run and tested, a full sized commercial plant has not yet been built.

Technology Brief: The Bradam technology uses a nitrogen flush to remove oxygen before the presorted and ground (high moisture content 25-40%) waste enters the kiln, the kiln is indirectly heated, initial compression and resultant steam in the kiln auger is responsible for the steam reformation process converting solid waste into syngas with a high hydrogen composition. All outputs of the process are sellable products for the plant. There are no catalysts used in the steam reformation process and there is no waste produced. All process outputs are either recaptured and reused or sold.

The OCWR pilot plant is proposed to produce hydrogen and syngas as the main products with accompanying products including recovered metals, water and inert aggregate.

We look forward to talking with you soon and beginning the process of review regarding Incinerator Rule Applicability Determination. Other than this issue of process/technology definition, AQMD did not find any "red flags" in our pre-permit review meeting.

Regards,

Daniel Shore
Director
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Direct 310.600.6642

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