Message

From: Lindstrom, Andrew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=04BF7CF26AA44CE29763FBC1C1B2338E-LINDSTROM, ANDREW]
Sent: 10/3/2018 10:29:31 AM
To: Bergman, Erica [Erica.Bergman@dep.nj.gov]; Goodrow, Sandra [Sandra.Goodrow@dep.nj.gov]
CC: Libelo, Laurence [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=da33642e6438407daf4c35afe870046b-Libelo, Laurence]; Lang, Johnsie [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b220365e540947f7a7c55cde0904f73e-Lang, Johns]
Subject: RE: Do you have any info on where Solvey sends their waste? What landfills?

Erica and Sandy,

Thank you very much.

This is an important question. Even if they incinerate the sludge we should try to figure out where it's ultimately going so we can test the final disposal site.

I wouldn't assume that the incineration leads to complete mineralization of all the organic fluorine. If the ash is land-applied or placed in and unlined disposal site there could be real problems.

Thank you,

Andy

From: Bergman, Erica <Erica.Bergman@dep.nj.gov>
Sent: Tuesday, October 2, 2018 4:52 PM
To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Goodrow, Sandra <Sandra.Goodrow@dep.nj.gov>
Cc: Libelo, Laurence <Libelo.Laurence@epa.gov>; Lang, Johnsie <lang.johnsie@epa.gov>
Subject: RE: Do you have any info on where Solvey sends their waste? What landfills?

Andy,

Sorry, I've been focusing on Solvay's liquid effluent, but regarding potential sludge, Solvay does have some waste water treatment onsite, they mentioned pH neutralization, sediment settling, flocculation & clarification steps. I think it's probable that Solvay uses an on-site incinerator for sludge, but I'd need confirmation.

See attached Water Treatment flow diagram provided by Solvay several years ago. I have only a very basic understanding of their process/treatment systems, they consist of an organic (polymer) side and an inorganic (gas) side.

Notes on the diagram: Solvay installed the Activated Carbon Treatment system in 2014, when they discovered PFAS contamination in their groundwater recovery wells (RW 1, 2, 3 and 4) which were being used as source water for their process. This GAC treatment is a pilot scale system that partially treats PFAS (effluent range has been 340-12,000 ng/L PFNA); Solvay is supposed to be upgrading this system in 2019. The Ion Exchange Treatment System only partially treats PFAS to <5 ppm(!) as reported by Solvay. I wonder how effective the GAC or Ion Exchange is treating Solvay's replacement?

I'll forward your question regarding Chemours and their sludge management to Helen Dudar who manages the Chemours site.

Erica Bergman
Site Remediation Program – Bureau of Case Management
401 E. State Street - Mail Code 401-05F
P.O. Box 420
Trenton, NJ 08625-0420
erica.bergman@dep.nj.gov
609-292-7406

New Jersey
DEPARTMENT of
ENVIRONMENTAL
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From: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Sent: Monday, October 1, 2018 2:47 PM
To: Bergman, Erica <Erica.Bergman@dep.nj.gov>; Goodrow, Sandra <Sandra.Goodrow@dep.nj.gov>
Cc: Libelo, Laurence <Libelo.Laurence@epa.gov>; Lang, Johnsie <lang.johnsie@epa.gov>
Subject: [EXTERNAL] RE: Do you have any info on where Solvey sends their waste? What landfills?

Erica,

Thank you very much for the information on the liquid organic waste. Do they have solids too?

This is somewhat reassuring, but there's likely to be a lot of PFAS either buried or applied to surface soils in a number of places.

Does Solvay have an on-site WWTP? The Chemours plant here in Fayetteville is on record of producing 35,000 lbs of PFAS related wastes per week that have been buried at the Sampson County landfill.

And while we're at it, what about Chemours Chambers Works' solids?

Supplemental Information – Permit Renewal Application – April 27, 2016

Sludge Management Plan

The Chemours Company – Fayetteville Works operates a Class 3 Wastewater Treatment Plant which is comprised of a single-stage activated sludge biological system.

Excess sludge is removed from the system by diverting part of the Recycled Activated Sludge (at approximately 0.6% solids) from the clarifiers to a Dissolved Air Floatation ("DAF") unit for initial thickening.

The sludge from the DAF (at approximately 3% solids) is transferred to a Mix Tank where polymer agents are added to enhance the dewatering process.

The semi-thickened sludge is transferred from the Mix Tank to a Rotary Filter for final thickening, whereby the sludge is thickened to 6% solids.

The thickened sludge is then transferred to a Screw Press where it is dewatered to a concentration of 9-20% solids.

Following the Screw Press, the sludge is typically dried in steam heated dryers to a concentration of 40-55% solids.

The dried sludge, or on occasion the dewatered sludge, is transported off-site to a commercial Subtitle D landfill. This sludge is currently being disposed of at the Waste Industries "Sampson County" Landfill near Roseboro, NC.

In 2015, the average weekly quantity of generated wasted sludge was approximately 35,000 lb.

Michael E. Johnson, PE
Environmental Manager

From: Bergman, Erica <Erica.Bergman@dep.nj.gov>
Sent: Friday, September 28, 2018 11:01 AM
To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Goodrow, Sandra <Sandra.Goodrow@dep.nj.gov>
Cc: Libelo, Laurence <Libelo.Laurence@epa.gov>
Subject: RE: Do you have any info on where Solvey sends their waste? What landfills?

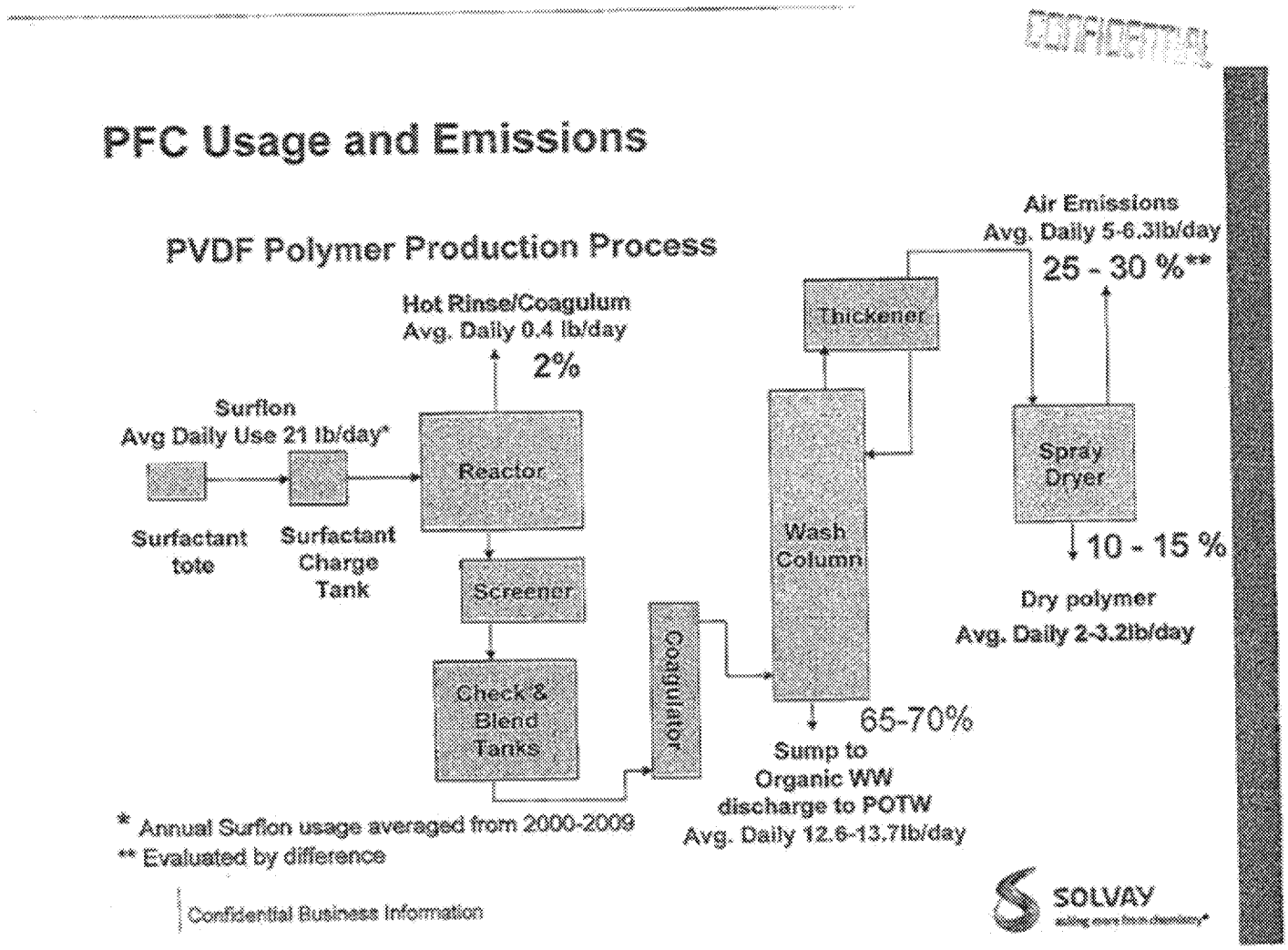
Andy,

We took a look at this issue after Solvay and DEP first met when they presented their usage of PFAS in their polyvinylidine fluoride (PVDF) polymer process. Solvay's "PFC Usage and Emissions" slide on their powerpoint presentation (see below) shows that their organic wastewater stream is discharged to a POTW, which would be Gloucester County Utilities Authority (GCUA) located near and to the south of the Solvay plant. I contacted the Pretreatment and Residuals program within DEP and was provided with the attached Excel spreadsheet which tracked GCUA's sludge management since 1986, note there was some missing reports from some years. GCUA began incineration of sludge in 1997. The letters and numbers just prior to the place names in the header designate the "type" of operation of these places:

A: landfill
J: land application
M: incineration
F: compost

1: land application
3: incineration
5: out of state

NOTE: SOLVAY HAS DESIGNATED THE SLIDE BELOW AS CONFIDENTIAL BUSINESS INFORMATION – DO NOT DISTRIBUTE



Erica Bergman

Site Remediation Program – Bureau of Case Management
401 E. State Street - Mail Code 401-05F
P.O. Box 420
Trenton, NJ 08625-0420
erica.bergman@dep.nj.gov
609-292-7406

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From: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Sent: Wednesday, September 26, 2018 6:43 AM
To: Bergman, Erica <Erica.Bergman@dep.nj.gov>; Goodrow, Sandra <Sandra.Goodrow@dep.nj.gov>
Cc: Libelo, Laurence <Libelo.Laurence@epa.gov>
Subject: [EXTERNAL] FW: Do you have any info on where Solvey sends their waste? What landfills?

Erica and Sandy,

Laurence is with our solid waste folks in DC.

I think we talked about this before, but this is a topic that I think we need to follow up on. It would be helpful for designing future monitoring efforts.

Thank you very much,

Andy

From: Libelo, Laurence
Sent: Tuesday, September 25, 2018 3:20 PM
To: Washington, John <Washington.John@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Subject: Do you have any info on where Solvey sends their waste? What landfills?