From:	Lantner, Murray
To:	Bakun, George:; Coleman, Andrew; Modigliani, Justine
Cc:	Nolan, Meghan E
Subject:	RE: Draft Response: EPA and NJDEP Response to Phillips 66 April 3, 2020 response to USEPA Feb. 2020 Inspection Report - Phillips 66 Bayway Refinery
Date:	Saturday, August 8, 2020 9:44:00 PM

Thanks George we will look through it and let you know we have any feedback.
Much appreciated.
Murray

From: Bakun, George:
Sent: Friday, August 7, 2020 1:08 PM
To: Lantner, Murray <Lantner.Murray@epa.gov>; Coleman, Andrew <Andrew.Coleman@dep.nj.gov>; Modigliani, Justine <Modigliani.Justine@epa.gov>
Cc: Nolan, Meghan E <meghan.e.nolan@p66.com>
Subject: FW: Draft Response: EPA and NJDEP Response to Phillips 66 April 3, 2020 response to USEPA Feb. 2020 Inspection Report - Phillips 66 Bayway Refinery

Murray/Andrew:

Our responses (in magenta for easier reference) follow each of your comments below and an updated Table 1 (Action Plan) and Polypropylene Resin Separator O&M Manual are attached which incorporate our responses when applicable. As always, please feel free to contact me with any questions or need for additional information. Despite the challenges that the Covid19 virus continues to present to everyone, we feel we have made significant progress implementing our action plan and that the results onsite have been beneficial.

George

From: Bakun, George:
Sent: Thursday, June 25, 2020 1:33 PM
To: Lantner, Murray <Lantner.Murray@epa.gov>
Cc: Coleman, Andrew <Andrew.Coleman@dep.nj.gov>; Nolan, Meghan E <Meghan.E.Nolan@p66.com>; Modigliani, Justine <Modigliani.Justine@epa.gov>
Subject: RE: EPA and NJDEP Response to Phillips 66 April 3, 2020 response to USEPA Feb. 2020 Inspection Report - Phillips 66 Bayway Refinery

Thank you very much. The additional time is very much appreciated.

From: Lantner, Murray <Lantner.Murray@epa.gov>
Sent: Thursday, June 25, 2020 1:20 PM
To: Bakun, George: <George.Bakun@p66.com>
Cc: Coleman, Andrew <Andrew.Coleman@dep.nj.gov>; Nolan, Meghan E <Meghan.E.Nolan@p66.com>; Modigliani, Justine <Modigliani.Justine@epa.gov>
Subject: [EXTERNAL]RE: EPA and NJDEP Response to Phillips 66 April 3, 2020 response to USEPA Feb.

2020 Inspection Report - Phillips 66 Bayway Refinery

George thanks for your quick response, yes 45 days is fine, Lets Monday August 10, 2020.
Let us know if you have any questions or if you run into delays.
Much appreciated.
Murray

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Email: Lantner.Murray@epa.gov

From: Bakun, George: <george.bakun@p66.com>
Sent: Thursday, June 25, 2020 11:06 AM
To: Lantner, Murray <Lantner.Murray@epa.gov>
Cc: Coleman, Andrew <Andrew.Coleman@dep.nj.gov>; Nolan, Meghan E <meghan.e.nolan@p66.com>; Modigliani, Justine <Modigliani.Justine@epa.gov>
Subject: RE: EPA and NJDEP Response to Phillips 66 April 3, 2020 response to USEPA Feb. 2020 Inspection Report - Phillips 66 Bayway Refinery

Murray/Andrew,
I am confirming receipt and we will strive to respond within the 30 days but I would appreciate an extension to 45 days if possible. As you know, the refinery has been operating as an essential business throughout the Covid response and few have been taking time off due to the restrictions. With restrictions being eased in our area, people are starting to plan/take time off that was being delayed due to Covid (including myself). The additional time would simplify ensuring proper reviews and interactions with all involved.
Regards,
George

From: Lantner, Murray <Lantner.Murray@epa.gov>
Sent: Thursday, June 25, 2020 10:52 AM
To: Bakun, George: <George.Bakun@p66.com>
Cc: Coleman, Andrew <Andrew.Coleman@dep.nj.gov>; Nolan, Meghan E <Meghan.E.Nolan@p66.com>; Modigliani, Justine <Modigliani.Justine@epa.gov>
Subject: [EXTERNAL]EPA and NJDEP Response to Phillips 66 April 3, 2020 response to USEPA Feb. 2020 Inspection Report - Phillips 66 Bayway Refinery

Dear George:

We hope that you are all doing ok and thank you for your comprehensive April 3, 2020, response to EPA's inspection report from last year's joint NJDEP/EPA inspection. As a follow up to your April 3, 2020 response which I've discussed with Andrew Coleman of NJDEP we had the following comments.

1. Relative to Table 1 of the Letter, which includes the Action Plan for USEPA Potential Noncompliance Items and Areas of Concern, please provide us (EPA and NJDEP) with the status of projects that were scheduled for 2nd quarter and 3rd quarter 2020 (but also subject to Covid Limitations) by October 30, 2020 and an update on remaining projects by January 30, 2020.

Response to 1:

Despite onsite manning restrictions imposed in response to Covid 19 mandates, significant progress has been made on the outstanding action items since Table 1 was initially submitted. Attached is an updated Table 1 with the current status of the actions that Bayway committed to in response to NJDEP and USEPA inspection reports. Since our initial submission, the remaining action items have either been completed or started. Barring unforeseen consequences, all proposed work in the updated Table 1 is expected to be completed by the end of the third quarter except for the following:

- Stabilization of the reservoir shoreline with stone which can not proceed without NJDEP approval of a flood zone permit application that was submitted (No. II.B.6);
- Installation of a permanent pump to pump out the culvert at the railroad track underpass (No. II.B.8.b and III.C.10) which is now targeted for completion by 4Q20 due to Covid 19 manpower impacts and identification of additional work (e.g., pump sump construction);
- Upgrading of condenser sewer box observed foaming over during Clam-Trol application, which is a new action item added in response to number 3 of your email (No. II.B.8.a), targeted for completion by 4Q20; and
- Removal of staining from the banks and walls of the Tremley Separator which will follow completion of ongoing skimming of the separator basin but for which preliminary efforts using hot water washing were ineffective; the staining is permanently fixed to portions of the inner bank and inner wall surfaces releasing no sheen when hot water washed (No. III.A. Line No. 5, Outfall 010A).

We will update Table 1 for you by October 30, 2020 and again by January 31, 2021, as requested.

2. For EPA Item II.B.4.a – when is the next turnaround for the clarifier scheduled when the

permanent fix for weir plate will be done?

Response to 2:

Bayway has three clarifiers and can operate with two clarifiers in service. Clarifier No. 3 turnaround was completed in 2019. Clarifier No. 2 turnaround is planned for 2021, with Covid 19 manning restrictions delaying the extensive work associated with a clarifier turnaround from being conducted this year. Clarifier No. 1 turnaround will then be scheduled after Clarifier No. 2 is completed, currently targeted for 2022. We note that the section of weir plating being discussed makes up less than one percent of the Clarifier No. 1 perimeter and has no measurable impact on the clarifier performance with the temporary repair in place.

3. For Items Line 4 Outfall 004 AOC, II.B.7.a and 8.a (Including 4/3/20 Attachment 1, Deficiency 2) – for the Clam Trol Application and foaming issue related to Condenser sewer overflows and foaming at Outfall 004, and BMPs for Clam-Trol application. During Clam-Trol applications and until foaming subsides a vactor truck needs to be stationed at Outfall 004 to vacuum up foam accumulating behind the boom. Additionally, specify what measures will be taken to eliminate the condenser sewer overflows?

Response to 3:

We are agreeable to the requirement for a vacuum truck to be positioned at DSN 004A outfall to manage scum associated with Clam-Trol applications and have revised our Clam-Trol procedure again accordingly. We note that there could be circumstances during which the truck may have to leave DSN 004A temporarily (e.g., to discharge when full) but that floating material discharged during the Clam-Trol application will continue to be contained for recovery at the DSN 004A containment boom.

Regarding the condenser sewer box observed to be foaming over during the Clam-Trol application, we are designing a modification to the box to stop the foam over with the intent of completing the modification this year, barring any further manpower limitations and/or operational conditions that may prevent working on the box safely while the process unit is running. We note again though that the foam that came out of the sewer box was still contained within paved portions of the site that still drained to the permitted outfall or to the wastewater treatment plant.

4. Bayway 4/3/20 response II.B.8.b and Attachment 1, Deficiency 3 in Phillips April 3, 2020, response to EPA was related to process sewer overflows during wet weather. It

has been identified that the process sewer tributary to the Wastewater Treatment Plant Outfall 002, overflows to Outfall 004 during large wet weather events. Outfall 004 is listed as a Cooling Water Ditch. Process sewer overflows and discharges to a different outfall other than 002, are not authorized and constitute unpermitted discharges which must be corrected. Please submit a plan of action to eliminate process sewer overflows.

Response to 4:

The email comment refers to process sewer overflows addressed in response to USEPA Item no. II.B.8.b, which is the culvert that passes beneath the railroad tracks within the refinery site, and the cooling water outfall DSN 004A known onsite as Poly Ditch. We wish to clarify that the culvert area has no outlet other than the WWTP process sewer. It is a low point within the site with no stormwater sewers within the area. In the event of a process sewer overflow into the culvert area, it drains or is pumped back into the process sewer when sewer flows diminish. It is not possible for an overflow in the culvert area to reach a surface water body, including outfall DSN 004A.

Regarding the request for a plan of action to stop process sewer overflows, Bayway believes that it has already completed actions or committed to completing actions to control process sewer overflows through our responses to the inspection reports, including:

- Installation of a permanent pump at the culvert to control the water level in the culvert is planned to be completed this year;
- Installation of the containment valve for the Tank 132 and Tank 133 area is ongoing with completion expected this quarter;
- The raised manhole that was cracked below grade by unreported vehicular contact that led to the July 31, 2019 process sewer overflow was repaired and protected with concrete barriers in 2019 to prevent possible future vehicular contact; and
- The process sewer manhole that released oil during an extreme rain event on July 22, 2019 was modified in 2019 to prevent a future release.

There have not been any process sewer overflows reported since July 2019.

5. Attachment 1 – corrective Action No. 1 - Polypropylene Area O&M Plan included in Attachment 1 – Attachment A. EPA and NJDEP had the following comments/questions/concerns with the O&M Plan for the Polypropylene Area

Response to 5:

We have attached for your review an updated **Polypropylene Resin Separator Operations**

and Maintenance (O&M) Manual that was revised to incorporate our responses to your email items a through h, which follow.

a. P66 must report on whether the trial use of covers over roll-off receiving baghouse exhausts will be part of the final O&M Plan

a – Based on the trial for a roll-off receiving baghouse exhaust, Bayway decided not to extend the trial to include the second roll-off that receives baghouse exhaust. Rather, Bayway decided to protect the uncovered roll-offs from wind by installing corrugated sheeting across the open sides of the baghouse exhaust roll-off area. This should control any loose residual to within the area that drains to the resin separator. The manual includes a discussion of the trial for posterity.

b. Trial use of cover over the separator outlet pipe designed to act as a second underflow baffle. – Status of Trial and will it be part of Final O&M Plan.

b – The cover that was installed over the separator outlet as a trial has been very effective. As a result, the manual was revised to indicate that the outlet cover is an integral part of the separator.

c. There is a concern about the polypropylene fluff material that enters the resin separator. Does the fluff float like the pellets, or does some of it get suspended in the water column? Is the resin separator effective in removing fluff? If not, additional treatment options should be included.

c – The finer resin particles referred to as fluff still consist of polypropylene and are thus lighter than water and will float to the surface in non-turbulent water. Observations of the separator outlet support that these particles are removed in the separator. The manual has been revised to emphasize the importance of avoiding turbulent conditions that adversely affect separator effectiveness, particularly while skimming.

d. The draft O&M Manual mentions a cover over the separator outfall pipe. Please provide details on what this cover is. How does this cover act as a secondary underflow baffle?

d – The cover that was installed over the separator outlet is essentially a three sided box with an open bottom and hinged cover on top that is placed in front of the outlet pipe. The sides against the concrete wall are gasketed to seal any gaps between the outlet wall and the box. The bottoms of the three sides extend below the water surface and the bottom of the outlet opening, creating an underflow baffle for flow from the separator to the outlet. The outlet cover is normally closed but is hinged so that it can be lifted open (e.g., for visual observations

or sample collection).

e. The draft O&M Plan also mentions removal of plastic material between the separator baffle and outfall pipe cover? Please explain how this is done.

e – Contracted skimming requirements were expanded to include manual skimming of residual trapped on the surface in the area between the separator baffle and outlet cover as part of the routine skimming operation. This is typically done using a fine mesh net but removal of floating material between the baffle and outlet cover can also be done by vacuum truck if needed.

f. Has P66 considered constructing a second, primary baffle in the resin separator? Such a baffle could trap the majority of pellets. The space between the primary and secondary could be there to trap any pellets not stopped by the primary.

f – In response to your email, Bayway considered the installation of a second baffle within the separator basin and determined that it would likely make the separator less effective for fluff removal. Two important factors used in separator design are the density and diameter of the particles that must separate from the water stream and float to the surface for skimming. Given that the density of the resin particles is not dependent on their size, the primary factor affecting the length of the resin separator becomes the particle size to be removed. The smaller the particle, the longer the separator length needed for particle removal. Installation of a second baffle may help capture larger particles sooner but will also result in less time for smaller particles to separate in each of the shorter compartments. The first baffle could also introduce turbulence in the underflow which would start the separation process over again for any fluff in the underflow.

As stated in response to c, the pellet separator works well with the exception that some resin can get re-entrained if turbulent conditions are introduced. Observations have shown that skimming can cause some turbulence because of the distance that resin may have to travel or be pushed to the vacuum point. Rather than installing another baffle, Bayway decided to install another vacuum point at each end of the separator to shorten the distance particles have to travel to be skimmed. The additional vacuum points are targeted for completion third quarter.

g. Does P66 have the ability to close the outfall pipe completely to allow cleaning of the resin separator so that no pollutants are discharged during cleaning or maintenance operations.

g – The separator was not constructed with an outlet valve because it was designed for continuous flow during normal operations. The manual was amended to include the need to stop flow into the separator and plug the inlet and outlet (e.g., with plugs or balloons) for any

cleaning or maintenance that requires containment (e.g., for chemical treatment).

h. Does P66 have provisions to heat the water in this separator during extreme cold weather events to prevent freezing, and the potential interruption of the separator effectiveness?

h – The separator was not designed with provisions to prevent freezing during cold weather conditions. Although flow into, through and out of the separator continues year round, it is possible for the more static portions of the separator surface to freeze during cold weather and separator effectiveness can be impacted if freezing is allowed to continue unabated during prolonged cold periods. The manual has been amended to address frozen conditions that affect separator effectiveness by thawing the frozen surface using either steam hoses from the process unit or onsite boiler feed water from a vacuum truck.

6. Note that for Item II.B.9 note that EPA Region 2's laboratory has approved some non 40 CFR 136 methods over the years, but our laboratory confirmed that the methods listed in the lab reports (for those parameters noted in the inspection report) were not on the EPA Region 2 approved list either. If P66 needs contacts at EPA's lab to determine if there were separate approvals for certain analytical methods please let us know.

Response to 6:

Thank you for offering to refer us to USEPA's Region 2 laboratory but by working with our contracted lab, Bayway has been able to have all NJPDES compliance sample analyses performed by a NJ certified lab using 40 CFR 136 methods as of March, including quarterly and semiannual analyses.

7. Valve Maintenance Program – Line No. 3 Outfall 017A AOC – Valve Head – valve head under repair see Att. 2 Deficiency No. 6 and 11.
   Based on an email from NJDEP - The oil water separators in operation at P66 are treatment works who's design was likely approved by the Department or another regulatory agency before construction. All the components of the treatment works should be exercised and in working order. Past Department inspections have often identified valves that do not properly work. P66 should not wait until an emergency to open or close valves.

Response to 7:

First, Bayway wishes to clarify that the facilities in question with containment valves are stormwater management facilities and stormwater management facilities are exempt from NJDEP's Treatment Works Approval rules at N.J.A.C. 7:14A. However, more to the point, as we

stated in our initial responses, Bayway believes the procedures and practices that are currently in place are sufficient to ensure containment, particularly in an emergency. Examples include:

- Each of the four stormwater oil-water separators have two outlet valves providing redundancy in the event that one valve does not open.
- A stormwater discharge valve is exercised at least once per quarter for each containment area where quarterly stormwater sampling is required per NJPDES NJ0026671, and generally more frequently due to frequency of rain in New Jersey.
- Operators are required to log the position (i.e., open or closed) of each containment valve each shift.
- In the event that a valve issue results while being opened or closed, the operator is required to report the issue to their supervisor for follow-up.
- Bayway has an established maintenance process for planning all equipment repairs, including valves.
- Bayway has operators and contractors onsite with the ability to address valve issues in an emergency if needed.
- The four tankfield oil-water separators are designed to prevent a bypass of floating material in the event a valve does not open (e.g., during or following heavy rain).

Please respond back to EPA and NJDEP on the above **items within 30 days.** Also, if you need additional time due to Covid or other concerns please let us know. Thanks again for your time and effort both during the inspection and in the follow up. It is much appreciated.

Sincerely,

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From: Bakun, George: <george.bakun@p66.com>
Sent: Monday, April 06, 2020 11:33 AM
To: Lantner, Murray <Lantner.Murray@epa.gov>
Cc: Coleman, Andrew <Andrew.Coleman@dep.nj.gov>; Nolan, Meghan E <meghan.e.nolan@p66.com>
Subject: Response to USEPA NJPDES Inspection Report

The response to USEPA's NJPDES inspection report for Bayway Refinery is being mailed today. I am also going to try and email it in 4 parts to you due to email size limitations. The first part is the response letter and action status table. The remaining 3 parts will be the 3 associated NJDEP inspection report responses that are used as references in the USEPA response.