



Clean Air Act Compliance Inspection Report

United States Environmental Protection Agency
Region 10 – Seattle, WA

Partial Compliance Evaluation

Cosmo Specialty Fibers, Inc.
Cosmopolis, Washington

Inspection Dates: February 22-23, 2023

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Attachment 1	Photo Log
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1. Basic Facility and Inspection Information

Facility: Cosmo Specialty Fibers, Inc.
1701 1st Street
Cosmopolis, WA 98537

Mailing Address: P.O. Box 539
Cosmopolis, WA 98537

AFS Number: WA0000005302700001

Permit Number: Title V Operating Permit #0000809
Washington Department of Ecology
Industrial Section

Facility Contact: Paula Stoppler – Technical Director
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Inspection: February 22-23, 2023

Inspection Report: May 3, 2023

Inspection Notice: Announced

Disclaimer

This report is a summary of observations and information gathered from the facility at the time of the inspection. The information provided does not constitute a final decision regarding compliance with the Clean Air Act (CAA) and applicable regulations or permits, nor is it meant to be a comprehensive report of all activities and processes conducted at the facility.

2. Introduction

- a) This was a Clean Air Act (CAA) compliance inspection by the Environmental Protection Agency (EPA). I provided notice of this inspection to Paula Stoppler via phone call on February 15, 2023.
- b) The purpose/scope of this inspection with respect to the CAA included the following:
 - 1. Conduct a physical walk-through inspection of the Bleach Plant, including all equipment vented to the Bleach Plant Stack as well as equipment vented to atmosphere or any control device.
 - 2. Investigation of the excess emissions release event observed by EPA inspectors during the December 2022 inspection.
 - 3. Various follow-up items from the December inspection, which could include examination of industrial process equipment, air pollution control equipment, review of various documents, and discussions with facility staff, in addition to the observations of the inspectors regarding these topics or others related to compliance with the CAA.
- c) The facility was entirely shut down during this inspection.

3. Inspection Elements and Field Observations – February 22, 2023

- a) Arrival – The EPA inspectors arrived at the facility parking lot around 09:30 where we met with Ha Tran of the Washington Department of Ecology. The three inspectors generally conducted the inspection as a group.
 - 1. The inspectors met with Paula Stoppler, Technical Director and Erik Hiles, Environmental Engineer, for Cosmo Specialty Fibers, Inc., at the facility front offices. Also present for the facility was Eric Heikkila, a representative of the new facility owner.
- b) Opening Conference – An opening conference was held in a conference room, where the EPA inspectors presented our inspector credentials and explained the purpose of the inspection, as described above. We explained that the inspection would be a partial compliance evaluation focused on the Bleach Plant, and that we intended to thoroughly document the Bleach Plant and all emission units that are routed to the Bleach Plant Stack as well as those that are routed elsewhere. In addition, we explained that we planned to investigate the operating conditions that existed during the release that had been observed during the December 2022 inspection. We also explained that there were a few follow up items from the December 2022 inspection that we may look into as time allows. Photos, videos and confidential business information (CBI) were not explicitly discussed. The arrangements agreed upon during the December 2022 inspection were followed.
- c) Process Discussions – The opening conference bled into a process and facility discussion that continued for the remainder of the morning. The following items were discussed:
 - 1. General Updates.
 - a. Facility status: Facility is currently shut down. New owner is assessing what is needed in order to restart. Mr. Heikkila and Ms. Stoppler explained that the facility has very significant repair, maintenance, and replacement projects that are necessary prior to startup being possible.

At the time of the inspection, Mr. Heikkila stated that he was still compiling the list of work that is needed prior to startup.

- b. Ms. Stoppler informed us that she had dug through the digital archives and found past Weyerhaeuser documents pertaining to 40 CFR 63, Subpart S that contained testing information and testing history for the facility.
- c. Mr. Heikkila stated that he had worked for Weyerhaeuser at the facility beginning in 1972 until it closed in 2006. Later, when Cosmo Specialty Fibers bought the facility in 2010, they brought him on to oversee the restart that occurred in 2011.

2. Process Notes.

- a. The following process notes are based on information provided verbally during the inspection by Ms. Stoppler and Mr. Heikkila. It was also noted that Mr. Heikkila has traced all the ducts feeding into the Bleach Plant Stack.
- b. Bleach Plant Washers
 - 1. Process order: 1, 2A, 2, 4 and 3. The caustic extraction stage occurs at Washer 2A. The washers are not in the same physical order as the process order. Physically, the washers are in the following order: 1, 2, 3, 2A, and 4.
 - 2. All washers are vacuum drum washers, which is the same basic design as the Brownstock Washers.
 - 3. Washers 1, 2, and 3 are vented directly to atmosphere via a common hood and stack. Washers 2A and 4 each are individually vented to the Bleach Plant Stack.
 - 4. Washers 1, 2, and 4 only receive “tempered water”, which is essentially heated freshwater. The water is heated via non-contact heat exchangers to extract heat from the hot acid in the Acid Plant. Washer 2A receives the filtrate from the #2 Washer Footbox. Washer 3 receives whitewater from the High White Water Tank, which in turn receives whitewater from the pulp dryer, aka “The Machine”.
- c. Seal Pots / Footboxes
 - 1. Each Bleach Plant Washer has a seal pot that receives the washer filtrate, creating a liquid seal in the same manner as Brownstock Washer seal pots. The facility uses the term Footbox to refer to the seal pots. The term Seal Tank is used on some process diagrams.
 - 2. The inspectors observed and photographed Footboxes 1 through 4 during the inspection. Footboxes 2 and 3 are vented directly to atmosphere, while Footboxes 1 and 4 are vented to the Bleach Plant Stack.
 - 3. The inspectors did not observe Footbox 2A during the inspection. In tracing all the ducts leading to the Bleach Plant Stack, no duct was identified leading back to Footbox 2A, indicating this Footbox is likely vented to atmosphere. This was not confirmed during the

inspection. P&ID “E.PID.008 -D”¹ shows a vent off Footbox 2A with no destination, which would be consistent with a vent to atmosphere.

4. The Bleach Plant effluent liquid stream contains most of the lignin removed from the pulp. Removal occurs in the caustic extraction stage (Washer 2A), and the brown-colored effluent is sent to the bioponds.
 5. Chlorine dioxide scrubber effluent is routed to Footbox #1, which is vented to the Bleach Plant Stack. Effluent from Footbox #1 goes to the deaeration tank and then to the sour sewer.
 6. The Bleach Plant Stack has no controls, and all process units vented to it go to atmosphere.
- d. Chlorine Dioxide Tower (CD Tower)
1. Pulp is pushed upwards through the “up-tube” (see photo 53 – CD Tower at center, up-tube to the right) and flows over the top to fall downwards into the CD Tower. The CD Tower is normally kept approximately 80% full.
 2. Pulp exits the bottom of the CD Tower and is pumped to the #4 Washer, to remove residual chlorine dioxide. Most CD should be consumed in the CD Tower.
- e. General Bleach Plant Process Notes
1. See “G1469-GXX-E, Gen Mill Process Flow.pdf” in addition to the following notes.
 2. The Bleach Plant Blow Tank has its own vent directly to atmosphere. The Blow Tank is the 2nd vessel from the left in photos 32, 33, and 92. The vent to atmosphere is visible exiting the top of the Blow Tank.
 3. Note that from Washer 2, pulp flow is only to the #8 Steam Mixer → Standpipe → Chlorine Dioxide Tower. The diagram reviewed during the inspection indicates a branch in the flow with the word “OR” indicating the pulp could alternatively flow from Washer 2 → #6 Steam Mixer → Bleach Cell Belt, but this diagram is incorrect. See “Flow Diagram Chip Receiving to Warehouse”² and photo 95.
 4. Similarly, from the #7 Steam Mixer, pulp flow is to the Bleach Cell Belt. The flow diagram referenced above again includes the word “OR” to indicate pulp may alternatively be directed to the #1 or #2 Bleach High Density Tanks, but this is incorrect.
 5. The Bleach Cell Belt is an additional bleaching stage that uses hydrogen peroxide which is added to the pulp before it enters the cells and then drops down into the Bellmer. The cells and Bellmer are open to atmosphere.

¹ See “E-PID-008 Bleach caustic stage.pdf”.

² See “G1469-GXX-E, Gen Mill Process Flow.pdf”.

6. From the Bellmer, the pulp is routed to the #1 or #2 Bleach High Density Tanks → #1 or #2 Bleach Low Density Tanks → Screens → Bleach Deckers → Pulp Dryer.
3. December Release Event.
 - a. Tyson Henry (no longer employed by Cosmo Specialty Fibers) created a document³ providing descriptive information regarding the release event that was partially observed by the EPA inspectors during the December 2022 inspection.
 - b. Ms. Stoppler and Mr. Hiekkila indicated that Mr. Henry believed that pulp flowed backwards from the #4 Washer into the bottom of the CD Tower, pushing the pulp level in the tower upwards. This would have forced gasses in the headspace out the vent line that leads to the Bleach Plant Stack. These process conditions are described on page 4 of the document, under the section from 2:00 – 3:00 pm. However, the data provided show that this event only occurred once, over an approximately 4-minute period from 14:40 to 14:44.
4. Past Emission Testing.
 - a. In looking through old facility documents, Ms. Stoppler identified multiple documents related to Bleach Plant emission unit testing by Weyerhaeuser staff around 2004-2005. These documents are listed in Attachment 3.
 - b. The inspectors reviewed some of the Weyerhaeuser Bleach Plant testing documents during the inspection. The documents indicate, and Ms. Stoppler and Mr. Heikkila confirmed, that at that time, Weyerhaeuser was developing a compliance strategy for the Bleach Plant with respect to 40 CFR 63, Subpart S leading up to the facility shutdown in 2006.
 - c. When the mill was sold to Cosmo Specialty Fibers in 2010 and then started up in 2011, the Subpart S compliance strategy effort was not re-started. In 2013, Washington Department of Ecology (Ecology) issued Administrative Order 9585⁴ which rescinded Ecology's previous Subpart S compliance date which had been November 16, 2006, and instead required compliance with Subpart S within three years of EPA promulgation of the revised dissolving pulp mill effluent limitation guidelines in 40 CFR 430.14-17 and 430.44-47. Revisions to the effluent limitation guidelines in 40 CFR 430.14-17 and 430.44-47 were promulgated in 1998⁵.
 - d. Since Ecology's issuance of Order 9585, the facility has not done anything to control HAP emissions from the Bleach Plant. The facility interpretation has been that compliance with the provisions of Subpart S is not required until three years after EPA promulgation of the dissolving pulp mill effluent guidelines listed above, which they do not believe has occurred.

³ See "Narrative Description of Bleach Plant Events 12-8.docx".

⁴ See "2013May1MACT WA-ECY determination.pdf"

⁵ <https://www.govinfo.gov/content/pkg/FR-1998-04-15/pdf/98-9613.pdf>

- e. The inspectors noted that the current language in 40 CFR 63, Subpart S has changed with respect to the list of affected sources. This means that the list of emission units and emission points evaluated by Weyerhaeuser in the early 2000's may not be complete with respect to the current Subpart S list of affected sources.
 - 5. The discussion ended at approximately 12:20, and the inspectors departed the site for lunch.
- d) Field Observations – afternoon
- 1. Following a break for lunch, the inspectors proceeded to the field, specifically focusing on the Bleach Plant. We were accompanied by Ms. Stoppler, Mr. Heikkila, and Mr Hiles. The emission units and process areas observed are identified in this section. Photos P1000032.jpg through P1000093.jpg were recorded, and one video clip (P1000066.mov) was recorded (see Attachment 1).
 - 2. Process units/areas observed and field notes recorded:
 - a. After observing the Bleach Plant from the ground, we closely examined the Bleach Plant Stack, traced all ducts venting to the stack, and identified all emission units and process areas venting to the stack. The emission/process units that vent to the Bleach Plant Stack are documented with photos and descriptions in Attachment 1, and are listed below:
 - 1. Chlorine dioxide generator scrubber exhaust
 - 2. Chlorinator
 - 3. #1 Footbox
 - 4. #4 Footbox
 - 5. Chlorine dioxide tower
 - 6. #2A Bleach Washer
 - 7. #4 Bleach Washer
 - b. In addition to identifying all process/emission units that vent to the Bleach Plant Stack, the inspectors next toured the Bleach Plant to identify and observe process areas or emission units that vent directly to atmosphere. The process/emission unit that vent directly to atmosphere identified during the inspection are documented with photos and descriptions in Attachment 1, and are listed below:
 - 1. Bleach Plant Blow Tank
 - 2. #1, #2, and #3 Bleach Washers
 - 3. #2 and #3 Footboxes
 - 4. 2A Auxiliary Product Stock Tank
- e) Office Discussion
- 1. We returned to the facility offices around 15:50 and held additional discussions regarding the December 8, 2022 Bleach Plant release observed by the inspectors during the previous inspection. The narrative description (see above) prepared by Tyson Henry was reviewed in more detail. The following notes were recorded:
 - a. The document includes screenshots from PARCView (a process data collection/display/storage system used by the facility) covering the

- entire day of 12/8/22. Mr. Henry broke the day up into several time periods, with screenshots showing selected data tags (specific process parameters monitored within PARCView).
- b. On 12/8/22, the inspectors had returned from lunch around 14:10, which was the time we initially observed a green colored plume exiting the Bleach Plant Stack. According to the PARCView data, the Chlorine Dioxide Tower level during this time was fairly steady, indicating that the excess chlorine emissions observed during this time (approximately 14:00-14:30) may have been originating from a different unit or process vented to the Bleach Plant Stack. The discussions during the February inspection did not identify a likely process cause for the excess emissions observed during this timeframe on 12/8/22.
 - c. During review of the PARCView data, the group noted that the Vacuum from the #4 Bleach Washer was erratic during this timeframe (14:00-14:30) on 12/8/22. Some discussion occurred of this as a possible source of excess emissions during this timeframe.
 - d. At about 14:40, the PARCView data shows that the level in the Chlorine Dioxide Tower began rising significantly, which is a possible source of the denser green emission plume the inspectors observed around that time on 12/8/22. Mr. Henry's narrative describes the operational conditions occurring during that time which resulted in "back flow of stock from the 3rd Stage washer back into the CD Tower."
 - e. Mr. Henry's document identifies another possible cause of excess emissions during this time, pointing out that the #4 Footbox level rose by over 100% around 14:25, potentially contributing to the green emission plume. The #4 Footbox is vented to the Bleach Plant Stack.
 - f) The inspection concluded for the day at around 17:15, and the inspectors departed the facility.

4. Inspection Elements and Field Observations – February 23, 2023

- a) The EPA inspectors arrived at the facility around 09:20 and met with Ms. Stoppler, Mr. Heikkila and Mr. Hiles in the facility conference room. Inspector Tran arrived around 09:30.
- b) Office Discussions. The following discussions occurred:
 - 1. The remaining inspection scope was discussed, to include review of documents related to the Bleach Plant, and field tracing of the chlorine dioxide supply lines from the Chlorine Dioxide Generator to the points where chlorine dioxide is added to the stock. Follow-up items from the December 2022 inspection as time allows.
 - 2. The group reviewed a large 3-ring binder entitled "Title V Air Testing Pulp Group". The binder is shown in photo 94. This binder contains a compilation of late 1990's emission testing performed by Weyerhaeuser. The first section of the binder relates to the Brownstock Washers, while the last 2/3 of the binder pertains to the Bleach Plant. A copy of this full document was included in the inspection

records request, which is discussed in more detail below and is included as Attachment 3 to this report.

3. Process/document discussions included review of the annotated process flow diagrams shown in photos 95 and 96. The diagram in photo 95 shows the overall process flow diagram of the entire facility from chip receiving to warehouse, while the diagram in photo 96 depicts the stock flow timeline from the digesters to the product balers.
4. The inspection records request was developed in discussion with Ms. Stoppler. The request is included as Attachment 3 to this report. Several of the documents were briefly reviewed during the inspection, and many documents (as detailed in the records request) were provided during the inspection via OneDrive folder.

c) Field Observations and Office Discussions – afternoon

1. Following a break for lunch, the inspectors returned to the facility around 13:00.
2. Office Discussions.
 - a. A brief continuation of the records discussion occurred until about 13:30.
3. Field Observations.
 - a. The inspectors next proceeded to the field, accompanied by Ms. Stoppler, Mr. Heikkila, and Mr. Hiles.
 - b. The chlorine dioxide lines were visually traced from the Chlorine Dioxide Generator into the Absorber (titanium line), from the Absorber to the Chlorine Dioxide Storage Tank (PVC line), and from the Chlorine Dioxide Storage Tank to the pre-treatment injection point upstream of the Chlorinator and the injection point at the inlet of the Uptube upstream of the Chlorine Dioxide Tower (Kynar lines). The inspectors also visually traced a chlorine dioxide sampling line that extends to the facility roof.
4. Office Discussions.
 - a. The group returned to the facility offices to discuss follow-up items from the December 2022 inspection. The only follow-up item examined further during the February inspection pertained to identifying and obtaining details regarding any bypass lines existing on the non-condensable gas (NCG) closed vent systems.
 - b. While reviewing various facility piping & instrumentation diagrams (P&IDs) with Ms. Stoppler, Mr. Heikkila, and Mr. Hiles, the group also called Kim Zimmer (Power and Recovery Supervisor) on the phone. The following notes were recorded:
 1. While reviewing the “Red Liquor Evaporation NCG System P&ID”⁶, a 2-inch bypass line (vent to atmosphere) was identified on the NCG line leading to the Recovery Boiler #1. Ms. Zimmer stated that each of the two Recovery Boilers is equipped with this manual bypass line, which is used for isolation of the flame

⁶ See “R2257-REP-D.TIF”. Upper right quadrant of the diagram. The 2-inch vent to atmosphere is upstream of Recover Boiler #1, just upstream of the Flame Arrestor No. 1.

arrestor when necessary for maintenance. According to Ms. Zimmer, neither of these bypass lines are equipped with a car seal or equivalent.

2. During the discussion, Ms. Zimmer stated that there may be additional small bypass lines in areas of the NCG system that periodically need to be isolated.
3. In order to learn more about what bypass lines may exist, Greg Dineen, Machine Room Superintendent, joined the group. Mr. Dineen and Ms. Zimmer, in discussion, indicated there may be additional small bypass lines in the NCG line that runs to the Acid Plant near the “Oliver”. Additionally, there may be small bypass lines on 90-degree bends in the line that serve as cleanouts.

5. Field Observations.

- a. The inspectors proceeded to the field around 15:15 with the four facility staff (the previous three, plus Mr. Dineen).
- b. The 2-inch bypass line with manual valve on Recovery Boiler #1 was observed and photographed (see photos 97-99). The manual valve was in the open position, did not have a car seal or equivalent, and had a lockout tag attached. Mr. Dineen climbed the platform to read the tag, which he said indicated that the valve had been locked out on 12/19/22. This lockout date corresponds to the December facility shutdown.
- c. The 2-inch bypass line with manual valve on Recovery Boiler #2 was observed and photographed (see photos 100-104). The manual valve was in the open position, did not have a car seal or equivalent, and had a lockout tag attached. Inspector Whyte climbed the platform to read the tag, which he photographed. The tag shows a lockout date of 12/20/22. This lockout date corresponds to the December facility shutdown.
- d. Four small bypass lines with manual valves were identified on the NCG line leading to the Cooling Towers. See photos 105-106. The valves were in the closed position, and were not equipped with car seals or equivalent.
- e. A 4-inch diameter vent line was noted entering the NCG line leading to the Cooling Towers (see photo 107). After tracing the vent line back upstream, Mr. Dineen stated that this line vents a knock-out pot on a water line from the clean water side of the Hogging Jet condenser in the MEE evaporator area.
- f. A larger bypass line with a manual valve was identified on the “2A NCG” line (see photos 108-110). This vent line was not equipped with a car seal or equivalent.
- g. Two red liquor knock-out pots were observed, with “P” traps and liquid drain lines (see photos 111-116). One drain line (in the open position) was connected to a red colored hose, while a second drain line (in the closed position) drained directly onto the floor.

6. Office Discussions.

- a. The group returned to the facility office around 16:05, and the inspectors requested that the NCG system P&ID’s be added to the inspection

records request. This was done, and the drawings were included in the file transfer provided during the inspection, as detailed in Attachment 3.

5. Closing Conference – February 23, 2023

- a) The closing conference was held in the facility offices beginning around 16:15. I led the discussion, including providing an overview of the EPA Region 10 compliance process.
- b) Attendees:
 - 1. Cosmo: Paula Stoppler, Eric Heikkila
 - 2. Ecology: Ha Tran
 - 3. EPA: Brendan Whyte, Zach Hedgpeth
- c) Next, the following issues were identified as potential compliance concerns under the CAA. I clarified that these items did not necessarily constitute violations and may not include any additional compliance concerns that are identified post-inspection.
 - 1. Bypass lines identified on the NCG closed vent system that did not appear to meet the requirements of 40 CFR 63, Subpart S.
 - 2. Red liquor knockout pot drain lines going directly to the open floor and to the red hose with unknown destination.
 - 3. Bleach Plant operating essentially uncontrolled (compliance status with respect to 40 CFR 63, Subpart S), and the release event.
 - 4. The four potential compliance concerns that had been identified during the December 2022 inspection were also mentioned:
 - a. Hazardous Air Pollutants (HAPs) contained in the FGD Scrubber and Nuisance Tower Scrubber effluent are not being included in the facility calculations demonstrating compliance with the emission standards in 40 CFR 63.444(c).
 - b. Multiple issues were identified related to both the monthly and annual NCG inspections and reports, as described in this report.
 - c. Recovery Boilers do not appear to be equipped with Continuous Monitoring Systems (CMS) to demonstrate continuous destruction of HAPs contained in the ACE and MEE evaporator systems closed vent systems, as required in 40 CFR 63.453.
 - d. The release observed from the Bleach Plant.
- d) The closing conference ended and the inspectors departed the facility around 16:50.