



**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

August 28, 2012

RE: 3DP00024*EP
PCC AIRFOILS
INDUSTRIAL USER INSPECTION
MINERVA
STARK COUNTY

Gina Decker, CIH
PCC Airfoils, LLC
3860 Union Ave. SE
Minerva, OH 44657

Dear Ms. Decker:

On August 7, 2012, representatives of this office conducted an Industrial User Inspection of the above facility. The Ohio EPA was represented by Donna Kniss, Ryan Laake and Michael Irwin. David Hadzinsky, Mike Biss and you represented the company. PCC Airfoils discharges Wastewater to the Village of Minerva Wastewater treatment plant and has been issued Indirect Discharge (IDP) permit 3DP00024*EP. The purpose of the inspection was to evaluate compliance with the existing IDP.

PCC Airfoils currently employs approximately 450 people in a six-day/week, three-shift/day schedule. PCC Airfoils conducts foundry operations; the base metals are mainly nickel, cobalt, and chromium, with other metals used infrequently. The primary metal used is nickel. The castings are acid etched to show that the grain of the metal is solid. There are other metal finishing operations, which include dye penetrant testing at the separate "prototype barn". It has been determined that PCC Airfoils is appropriately classified under 40 Code of Federal Regulations (CFR) 433, Metal Finishing, rather than 40 CFR 464, Metal Molding and Casting, because PCC Airfoils does not cast any of the metals regulated by 40 CFR 464.

Wastewater from production areas, including floor drains, is routed to the pretreatment system. Water is collected in the rinse water equalization tank, and then batch processed. The treatment included acid addition for chromium reduction; however, this step is no longer required, and acid is added only when the pH of the Wastewater is too high for subsequent processing. The Wastewater is pH adjusted; polymer is added, and the resulting solids settled in an inclined plate clarifier. The supernatant from the clarifier is monitored for pH and flow prior to discharge to the sanitary sewer. The supernatant is also checked for nickel concentration with a portable test kit prior to discharge. Sludge from the clarifier is routed through sludge thickening tanks, and the solids removed in a plate and frame filter press. The filtrate is routed back to the head of the treatment process. There are additional tanks for collection of specific Wastewater streams and for batch treatment.

There are audible and visual alarms for upset conditions in the pretreatment system. The pretreatment system tanks were well marked, with the tank identifier number and source tank numbers. The buffers used to calibrate the treatment system pH probes were expired. Mr. Biss agreed to replace them, preferably with smaller containers so the expiration dates can be monitored more closely.

Casting quality tests include taking x-ray pictures of the castings. The wastewater from these operations is routed through silver recovery units, which discharge downstream of the pretreatment system.

Samples of combined sanitary and process Wastewater are collected at a manhole downstream of all discharge locations. Ream and Haager personnel collect the sample on and conduct the analyses. The composite sampler is set up in a "doghouse" over the manhole, which is located on PCC Airfoils property, but outside the secured area. Because the sampler is outside the secured area, it should be locked or otherwise secured to prevent tampering with the sample.

A review of the chain-of-custody (COC) forms showed that grab samples were being collected for metals, despite the presence of the sampler. The IDP requires composite samples for metals analyses. It was also unclear if the reported pH values are from the sample immediately after it is collected or is taken back in the laboratory; pH must be analyzed within 15 minutes of sample collection in order to be valid. PCC Airfoils personnel also did not know the composite sampler and collection bottle cleaning and replacement protocols. PCC Airfoils must obtain information from Ream and Haager documenting the proper sample collection and analysis methods. Please provide a copy of the information to this office.

A review of the discharge monitoring data from July 2005 to July 2012 showed numerous metals violations; a table of the violations is attached. Frequently the metals violations occurred on the same date, suggesting an operating upset in the pretreatment system. Multiple metals violations can indicate a higher solids concentration in the effluent. Because the effluent is blue because of the cobalt, effluent turbidity can be difficult to evaluate. It is difficult to optimize precipitation in wastewater containing multiple metals, because the target pH differs for each metal. Also, concentrated solutions, even after batch treatment, must be slowly bled into the pretreatment system to prevent an upset. PCC Airfoils must evaluate the pretreatment system to ensure that it is operating at the optimum target pH and with the proper polymer. Mr. Hadzinsky stated that the silver violations were due to the iron in the silver recovery units not being replaced at the proper intervals, and that PCC Airfoils was working to ensure that the recovery units were serviced more frequently and on a regular schedule.

Please provide the information requested above within 30 days of the receipt of this letter. If you have any questions or comments, please contact me at (330) 963-1285. I can also be reached via e-mail at donna.kniss@epa.state.oh.us.

Sincerely,



Donna J. Kniss
District Engineer
Division of Surface Water
Northeast District Office

DJK/cs

Attachment

cc w/ Attachment: David Hadzinsky, PCC Airfoils
Don Ludke, Village of Minerva
Ryan Laake, Ohio EPA, DSW CO

File: Pretreatment Industrial User/Permit-Compliance

Attachment

PCC Airfoils, Inc. Minerva Facility
IDP limit violations July 1, 2005 to July 1, 2012

Parameter	Limit Type	Limit	Reported Value	Violation Date
Silver, Total (Ag)	30D Conc	80	207.5	12/1/2005
Silver, Total (Ag)	1D Conc	140	207.	12/6/2005
Nickel, Total (Ni)	1D Conc	250	287.	12/27/2005
Silver, Total (Ag)	1D Conc	140	208.	12/27/2005
Silver, Total (Ag)	30D Conc	80	189.	2/1/2006
Silver, Total (Ag)	1D Conc	140	178.	2/7/2006
Silver, Total (Ag)	1D Conc	140	200.	2/14/2006
Silver, Total (Ag)	30D Conc	80	115.5	3/1/2006
Nickel, Total (Ni)	1D Conc	250	277.	3/7/2006
Silver, Total (Ag)	1D Conc	140	191.	3/7/2006
Silver, Total (Ag)	30D Conc	80	85.	4/1/2006
Silver, Total (Ag)	1D Conc	140	144.	4/4/2006
Silver, Total (Ag)	30D Conc	80	103.	5/1/2006
Nickel, Total (Ni)	1D Conc	250	252.	5/23/2006
Silver, Total (Ag)	1D Conc	140	183.	5/23/2006
Nickel, Total (Ni)	1D Conc	250	298.	7/10/2007
Nickel, Total (Ni)	30D Conc	250	525.	8/1/2007
Nickel, Total (Ni)	1D Conc	250	1040.	8/7/2007
Nickel, Total (Ni)	30D Conc	250	621.	9/1/2007
Zinc, Total (Zn)	30D Conc	360	458.	9/1/2007
Silver, Total (Ag)	30D Conc	80	116.	9/1/2007
Nickel, Total (Ni)	1D Conc	250	580.	9/4/2007
Zinc, Total (Zn)	1D Conc	360	492.	9/4/2007
Nickel, Total (Ni)	1D Conc	250	662.	9/11/2007
Zinc, Total (Zn)	1D Conc	360	424.	9/11/2007
Silver, Total (Ag)	1D Conc	140	152.	9/11/2007
Nickel, Total (Ni)	30D Conc	250	407.	11/1/2007
Silver, Total (Ag)	30D Conc	80	220.	11/1/2007
Nickel, Total (Ni)	1D Conc	250	584.	11/6/2007
Silver, Total (Ag)	1D Conc	140	247.	11/6/2007
Silver, Total (Ag)	1D Conc	140	193.	11/13/2007
Nickel, Total (Ni)	1D Conc	250	282.	12/4/2007
Silver, Total (Ag)	30D Conc	80	86.	3/1/2008
Nickel, Total (Ni)	30D Conc	250	422.	4/1/2008
Nickel, Total (Ni)	1D Conc	250	733.	4/9/2008
Cyanide, Total	1D Conc	0.17	.425	11/11/2008
Cyanide, Total	1D Conc	0.17	.235	1/6/2009
Copper, Total (Cu)	1D Conc	270	608.	2/10/2009
Nickel, Total (Ni)	1D Conc	420	1060.	2/10/2009
Zinc, Total (Zn)	1D Conc	360	829.	2/10/2009

Parameter	Limit Type	Limit	Reported Value	Violation Date
Silver, Total (Ag)	1D Conc	140	171.	3/2/2009
Zinc, Total (Zn)	30D Conc	710	800.	10/1/2009
Zinc, Total (Zn)	1D Conc	360	1510.	10/6/2009
Zinc, Total (Zn)	1D Conc	360	1170.	11/10/2009
Nickel, Total (Ni)	1D Conc	420	530.	1/19/2010
Zinc, Total (Zn)	1D Conc	360	430.	1/19/2010
Zinc, Total (Zn)	1D Conc	360	470.	2/19/2010
Silver, Total (Ag)	30D Conc	120	125.	3/1/2010
Silver, Total (Ag)	1D Conc	140	210.	3/2/2010
Silver, Total (Ag)	1D Conc	140	156.	7/13/2010
Zinc, Total (Zn)	1D Conc	360	637.	10/4/2011
Silver, Total (Ag)	1D Conc	140	142.	10/4/2011
Silver, Total (Ag)	1D Conc	140	206.	12/13/2011