COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5

Purpose: NPDES Industrial User Compliance Evaluation Inspection

Facility:
Continuous Cast Alloys
100 Quarry Rd
Rochelle, IL 61068

Date of Inspection: February 2, 2021

EPA Inspectors:
Val Dooling, Environmental Engineer, (312) 886-7167
John "Jack" Bajor, Environmental Engineer, (312) 353-4633

Facility Representatives:
Jason Fowler, Owner, (630) 768- 1546
Steve Dilling, Foreman, (815) 703- 8813

City of Rochelle Representatives:
Sharon Hawkins, Pretreatment and Lab Manager, (815) 561- 2067
Jay Mulholland, Director or Water and Water Reclamation, (815) 562- 2761

Report Prepared By:
Val Dooling, Environmental Engineer, (312) 886-7167

EPA Inspector Signature and Date: VALERIE DOOLING Digitally signed by VALERIE DOOLING Date: 2021.03.23 15:44:13 -05'00'

Approver Name and Title:
Ryan J. Bahr, Chief, Section 2, Water Enforcement and Compliance Assurance Branch

Approver Signature and Date: RYAN BAHR Digitally signed by RYAN BAHR Date: 2021.03.23 15:55:45 -05'00'

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I. INTRODUCTION

The purpose of this announced inspection at the Continuous Cast Alloys facility (CCA) ILP000398, located at 100 Quarry Rd in Rochelle, Illinois was to evaluate and document CCA's compliance with the Clean Water Act (CWA). In particular, the purpose was to determine compliance with general pretreatment and categorical standards and to determine self-monitoring accuracy and the potential for spills. The facility does not have a NPDES permit, or a state pretreatment permit, but does have Utilities Discharge permit #055 with the City of Rochelle (Appendix C).

II. BACKGROUND

Continuous Cast Alloys is an indirect industrial discharger to the City of Rochelle (Rochelle)'s wastewater plant (NPDES #IL0030741) located at 888 Elliots Way, Rochelle, Illinois 61068, which discharges to the Kyte River. The City of Rochelle sent an industrial user survey to EPA, listing Continuous Cast Alloys as a categorical user under 40 CFR 471.35 Subpart C Nickel Cobalt Forming- New Source and 40 CFR 471.55 Subpart E- Refractory metals Forming – New Source; however, the EPA had not yet received records from the IU. Rochelle does not have an approved pre-treatment program; however, Ms. Hawkins, the City of Rochelle's Pretreatment and Lab Manager, told us she believes Rochelle might be requested to have a pre-treatment program during its next NPDES permit renewal cycle.

According to the Rochelle Municipal Utilities pretreatment survey (Appendix D), CCA makes over 300 different products from cobalt, nickel, chromium, molybdenum, carbon, beryllium, tungsten, and boron which are sold as metal ingots, dental metal, dental rods and welding rods. The majority of each metal product is comprised of cobalt or nickel. No products have beryllium concentration at or greater than 0.01%. The company began production at its current site in November 2015 and employs 21 employees and an additional 10 in administrative roles. It operates two shifts from 5 AM – 11 PM.

In November 2020, Jason Fowler took over management of CCA as owner and informed EPA that the company is expected to expand. According to Mr Fowler, he expects the company to increase production by 20% over the next 12 months. At the facility, there are four induction furnaces in operation and another furnace is expected to be installed during the year. Mr. Dilling, CCA's Foreman, does not expect any increase in water or wastewater use due to the new furnaces. According to the production numbers of the year 2020 sent by Mr. Fowler, the facility casts between 2,600 and 11,665 lbs of metal a month, averaging 7,555 lbs per month (Appendix E).

III. OPENING CONFERENCE

At 9:00am on February 2, 2021, Jack Bajor and I arrived Continuous Cast Alloys. I began the opening conference at 9:14 AM when all participants had arrived. Mr. Bajor presented inspector credentials to Jason Fowler and I presented my Temporary Letter of Authorization and explained that my permanent credentials were delayed due to COVID. During the opening conference, I explained the purpose of the inspection, presented Mr. Fowler with small business information,

and requested whether any information was Confidential Business Information (CBI). Mr. Fowler replied that nothing discussed during the inspection would be CBI.

IV. FACILITY PROCESSES AND WASTEWATER INTERVIEW

Weighing raw material to specified alloy ratios, heating and pouring into sand molds are done offsite. According to the RMU Industrial Survey (Appendix D), onsite the pre-made ingot is heated in a furnace and metal rods are horizontal casted, which are then cooled with a closed-loop water cistern. The cast metal rods are straightened, and annealed during a waterless process, then cut to size using closed-loop water cooled saws and centerless grinders. The product is then polished in a vibratory bowl using soap, water, EB-543 polish, and corncobs. CCA has a lab onsite with an optical emission spectrometer to evaluate the percentage of the metal. The alloy content of the products are also tested using an x-ray fluorescent Niton analyzer, according to Mr. Dilling.

According to Mr. Dilling, CCA uses city water for cooling units, sanitary water, and fire sprinklers. They have both contact and non-contact cooling water onsite. A dry cooler is used at the facility for furnace cooling. The non-contact water has an ethylene glycol additive, and the contact cooling water is city water with no additive. No cooling water is discharged to the sewers, but water does need to be added occasionally, due to evaporation. In a power outage, free flow of city water through the system could occur.

CCA has one connection to Rochelle's sewer system that occurs after pretreatment. According to Mr. Dilling, the pretreatment unit consists of one 125-gallon tank in which RM-10 flocculant is added. The solids are pumped to filter paper to air dry. The solid filter cake is collected in barrels and sold to a recycler. The liquid filtrate is sent to the city sewer. Mr. Dilling operates the pretreatment unit as a batch discharge during 2nd shift three days per week and does not have a class K operating certification.

CCA creates two waste products, according to Mr. Dilling. In addition to the filter cake, resin from the saw blades and metal sawdust from the centerless grinder and water-cooled saws produces a slurry which air dries to a solid. Both waste products are collected in barrels and sold to a recycler in Belvidere, Wisconsin called Custom Alloys. Mr. Dilling told us that they keep the waste in barrels until they have enough to sell to the recycler, perhaps every six months: however, they try to remelt as much waste product as possible.

According to Mr. Dilling there is no hazardous waste at the facility and the facility does not use solvents or degreasers. Any metal with beryllium content is cut with water to minimize dust. The water-cooled saws use a synthetic coolant (Photo 18) and the centerless grinder uses an oil-based coolant which are stored in barrels. The facility does not use steam, alkaline, molten salt or ammonia cleaners. According to Mr. Dilling, a dry dust collection sweeper is used as needed. Additionally, he told us, once, or twice a month a wet sweeper with soap additive cleaner is used. The wet sweeper wasterwater is collected in buckets and dumped into the pretreatment unit.

There are two air scrubbers at the facility; however, both are dry scrubbers, and do not use water, Mr Dilling told us.

I asked whether the facility took any water samples and Mr. Dilling replied that the resource tank water in the cooling system is tested for salinity and based on the results he will make chemical additions if needed to minimize scale buildup. The last testing was performed four months ago. He informed us that the facility does not test wastewater or any other waters. He also informed us that he does not submit any semi-annual monitoring reports to the EPA. Mr. Dilling told us there is no Toxic Organic Management Plan.

V. FACILITY WALKTHROUGH

The physical inspection of the facility began at 10:36 AM. Mr. Fowler and Mr. Mulholland left the inspection. Mr. Dilling led Mr. Bajor, Ms. Hawkins and me on a tour of the facility, which involved walking around the laboratory, warehouse, and production areas. An aerial map of the site is included in Appendix B and photos of the facility are included in Appendix A.

We walked into the laboratory and Mr. Dilling showed us an example of a "heat sheet" which is used to determine the ratios of the metals used in ingots. In the warehouse and shipping area, Mr. Dilling showed where numerous buckets of different kinds of metals are stored before they are melted. Mr. Dilling also showed aluminum and copper raw metal used in making products. In the warehouse area, he showed us a specially designed automatic saw, called a "Barrett Saw", named after its inventor (Photos 1 & 2). According to Mr. Dilling, the saw is water cooled in a recirculating closed loop system. The cut product is collected in a bucket, which also collects some water, that then has to be manually dumped back into the tank.

In the melting production area, we saw employees melting an NP Special ingot in order to horizontally cast a metal rod through a die (Photo 3). At the time, the furnace was registering at 2640° F. Mr. Dilling pointed out the water-cooling on the extruded metal (Photo 5). He showed us the dry cooling tank and five pumps (Photos 4, 6 & 7), one dedicated pump for each furnace. He showed us where the cooling water sample is collected and the storage area for water treatment chemicals. Mr. Dilling pointed out tanks of liquid nitrogen and explained that the facility uses a recirculated argon chiller which is cooled by liquid nitrogen. He also showed us an induction furnace which is offline for repair (Photo 8).

In the cutting production area, Mr. Dilling showed us a digital straightener (Photo 10) which has a two-minute cycle and in the process also anneals the metal. The facility has two other analog straighteners that are not timed. Mr. Dilling showed the vibratory bowl (Photo 14) used for polishing and the pre-treatment unit (Photo 11). Next to the pretreatment unit, I saw a 55-gallon barrel of EB-543 polish (Photo 12) with no secondary containment. I saw another barrel currently open with a hose sitting on top that looked like it was recently filled and had some liquid nearby. No employees were currently nearby or actively filling the barrel. When asked about the filled barrel, Mr. Dilling informed us that it was a temporary solution to a problem there were having. These barrels were stored near a floor drain that was partially boarded over. When asked where the floor drains went, Mr. Dilling told me that he thought the floor drain that

goes along the production area (northwest to southeast) drains to the sewer and the floor drain that goes across the production area (northeast to southwest) drains to a holding tank between the truck bays. He also mentioned that there is a vent in that area (Photo 15), so he thinks it goes to a holding tank, but he has not seen it open. Mr. Dilling told us that there was a large pile of snow in that area, due to plowing, so we could not access the holding tank at that time.

Mr. Dilling showed us where the facility stored oil and synthetic lubricants and hydraulic oil in 55-gallon barrels used for the saws and grinders (Photos 17 & 18). I noted there was no secondary containments for any barrels. Also, in the production area, we saw two pipe cutting saws, and one centerless grinder, which use the lubricants. The saws have a carbon resin saw blade that is used so the cut is flush and does not leave a metal tail. The final area that Mr. Dilling showed us was the warehouse maintenance area, which included the wet and dry sweepers. I noticed a floor drain (Photo 19) and ask Mr. Dilling if it was ever used. He replied that he dumps mop bucket and soap down this drain, and he believes it flows to the grounds outside the building.

VI. CLOSING CONFERENCE

I began the closing conference at 12:32PM with Mr. Dilling and Ms. Hawkins, by going over the preliminary areas of concern that are highlighted in the next section and told them of the next steps. I noted that additional areas may be identified as EPA developed its inspection report. After concluding the inspection and thanking Mr. Dilling and Ms. Hawkins, Mr. Bajor and I left the facility.

VII. POST INSPECTION COMMUNICATION

On February 23, 2021, I requested clarifying information from the facility via email. I asked how three different wastestreams were disposed of. I asked for confirmation on where the floor drains went, and I asked for the correct spelling of the automatic saw. I also requested production data for the years 2018-2019, three years of water and sewer bills, three years of waste hauler bills and confirmation whether the facility had submitted baseline monitoring reports to U.S. EPA.

Mr. Dilling called me the following day and told me that floor cleaning mop water goes in the pretreatment unit or down the floor drain in the maintenance area. Recirculated saw cooling water goes in the pretreatment unit, while swarf, the solid saw dust, is collected and sold to the recycler. How often the water cooled saw water is replaced depends on the operator and the saw, but could be as frequently as monthly or daily.

During that call, Mr. Dilling told me that both floor drains in the production area (the northwest to southeast drain and the northeast to southwest drain) drain to the holding tank and not the sewer. He believes that the floor drain in the maintenance area is a French drain to the exterior. He requested employees only put liquid into the drain, because it will plug up if any solids are discharged. He also told me that he does not have any hauling receipts, city bills or information on a baseline monitoring report, and requested that information from Torrie Mack and Andre Madrigal. As of finalization of this report, I have not received submission of the requested records.

VIII. AREAS OF CONCERN:

1. Effluent guideline standards 40 CFR §471.35 regulates nickel cobalt forming subcategory pretreatment standards for new sources (z) sawing or grinding rinse and (ff) miscellaneous wastewater sources.

   Effluent guideline standards 40 CFR §471.55 regulates refractory metals forming subcategory pretreatment standards for new sources (q) tumbling or burnishing wastewater and (t) sawing or grinding contact cooling water and (w) miscellaneous wastewater sources.

   Continuous Cast Alloys discharges vibratory bowl wastewater, saw cooling water and floor cleaning wastewater to City of Rochelle sewer and does not monitored its discharges.

2. Floor drains on the production floor and maintenance floor possibly discharge to holding tank or exterior French drain; however, the fate of those discharges is unknown.

3. Oils and lubricants are stored in the vicinity of the floor drains and pretreatment waste is collected in barrels next to the floor drains. I observed unknown liquids draining towards the floor drains.

4. Oils and lubricants are stored in barrels with no secondary containment for spill protection.

5. Facility did not provide records of a baseline monitoring report and has not submitted semi-annual reports to U.S.EPA.

6. Facility intends to significantly increase production and has not given advanced notice to the Control Authority, U.S. EPA.

7. Facility did not provide records of recycling hauling receipts, sewer and water bills for the past 3 years.

IV. REFERENCES AND DOCUMENTS RECEIVED

Hardcopy Documents Collected during Inspection:

1. Rochelle Municipal Utilities Industrial Survey of Continuous Cast Alloys
2. Rochelle Municipal Utilities Discharge Permit 055 to Continuous Cast Alloys

3. Rochelle Illinois Cde of Ordinances Article III: Water and Article IV: Sewers and Sewage Disposal

Digital Documents received via email on 2/24/2021:

- From Jason Fowler: CCA-000 Rev 2 CCA Quality Management Systems.docx
- From Jason Fowler: CCALbsCastedSumm2020.xlsx
- From Sharon Hawkins: 2019 NPDES Permit.pdf
- From Sharon Hawkins: BW report.pdf

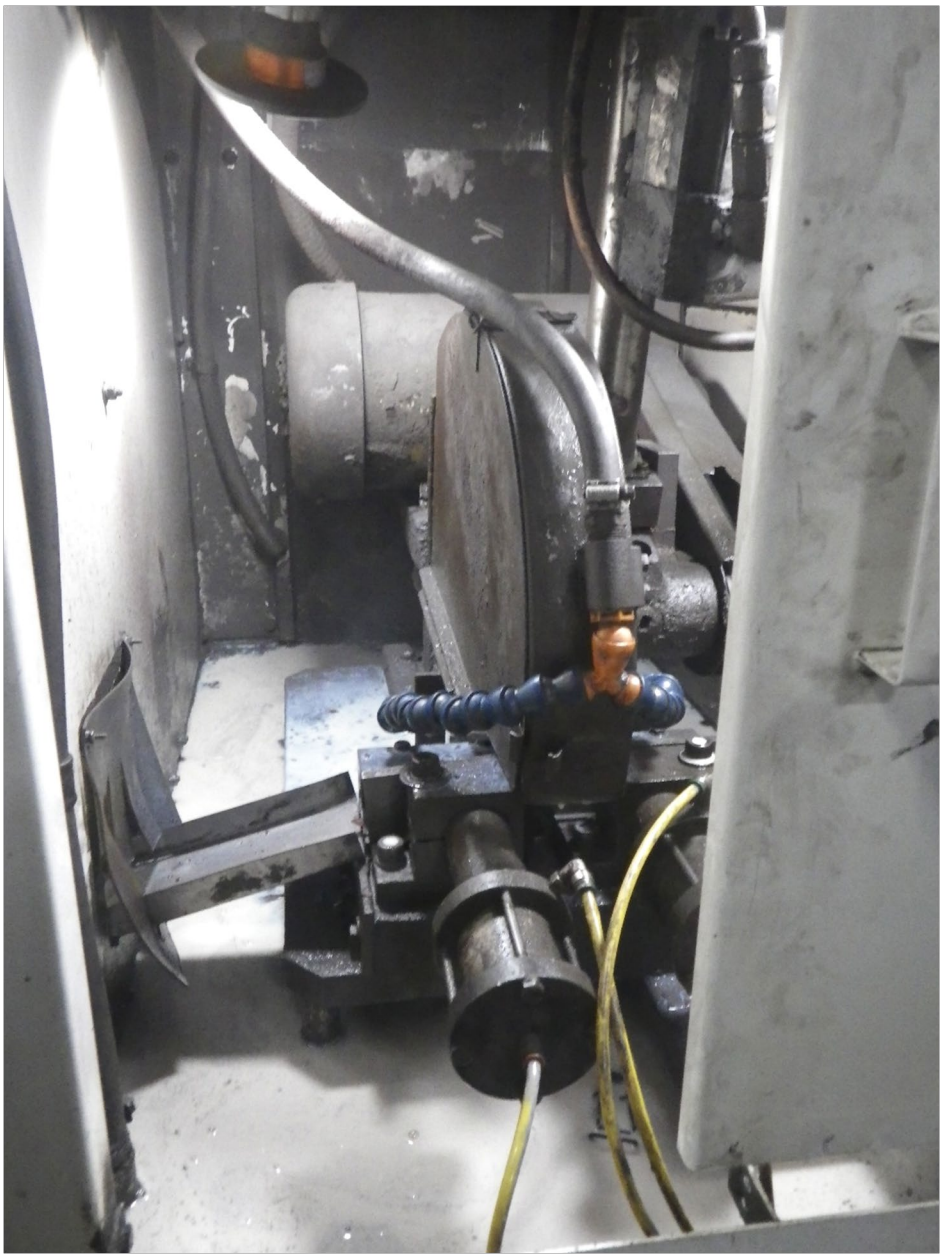
Digital Documents received via email on 2/4/2021:

- From Sharon Hawkins: Cont Cast Alloys Rochelle.pdf

APPENDIX A: FACILITY PHOTO LOG

Continuous Cast Alloys
EPA Inspection February 2, 2021
All photos taken by Val Dooling, Environmental Engineer, U.S. EPA
Camera: Pentax WG-1

1: IMGP0023
Description: Back of automatic "Barrett Saw". Recirculated cooling water is collected in white box. Note liquid stored in bucket nearby.
Location: CCA Building Warehouse Area
Camera Direction: 150° South
Date/Time: February 2, 2021 10:56 AM



2: IMGP0024
Description: Water-cooled automatic “Barrett Saw”. Water is collected and recirculated. Product and water slides down metal ramp and is collected in a bucket (outside photo).
Location: CCA Building Warehouse Area
Camera Direction: East
Date/Time: February 2, 2021 11:04 AM

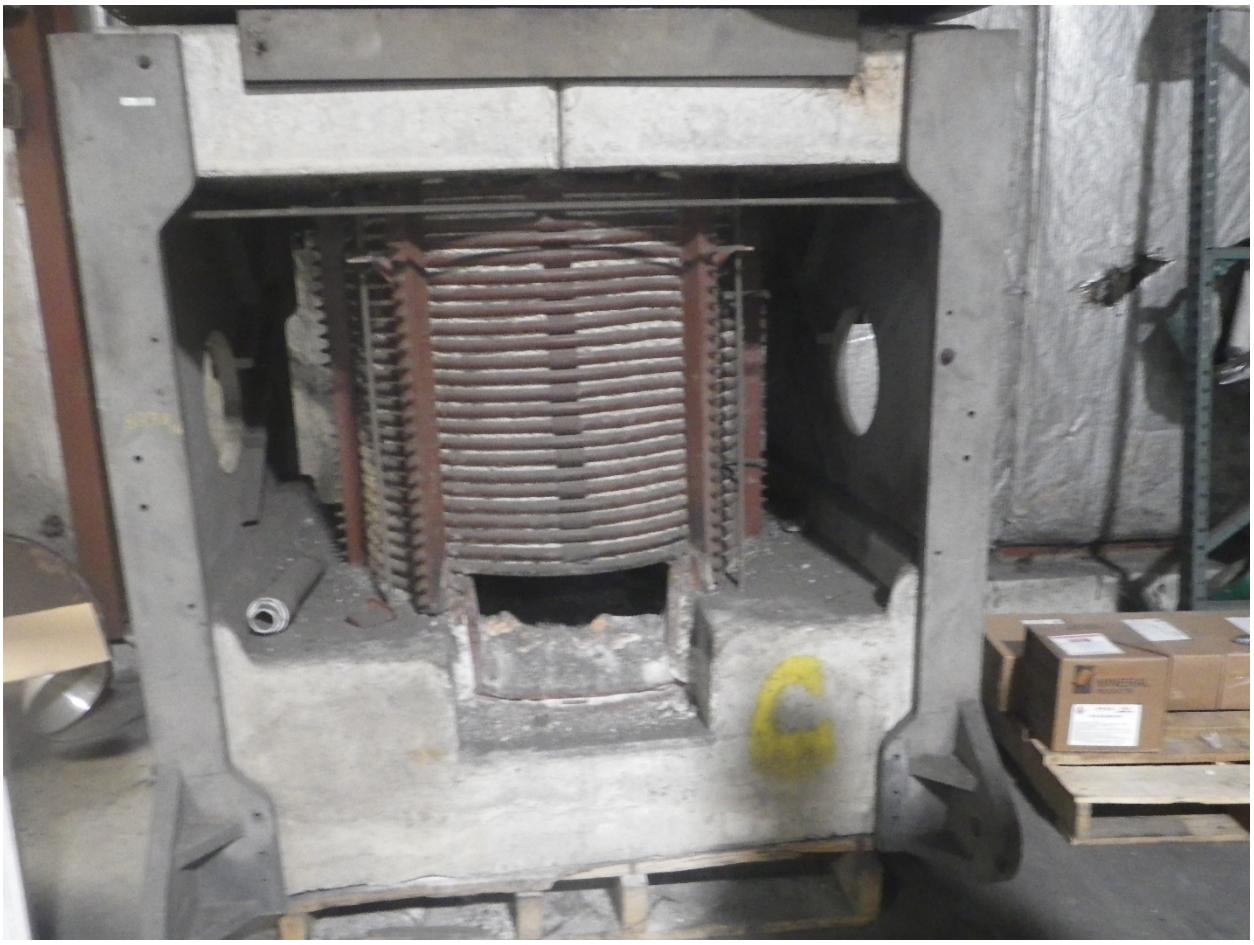
3: IMGP0025
Description: Metal ingot melted in a furnace. Current temperature logged as 2685°F.
Location: CCA Building Production Area
Camera Direction: South
Date/Time: February 2, 2021 11:07 AM

4: IMGP0026
Description: Cooling water tank and two yellow pumps. Note water softener and buckets of chemicals on right.
Location: CCA Building Production Area
Camera Direction: East
Date/Time: February 2, 2021 11:14 AM

5: IMGP0027 (redacted)
Description: Furnace (from photo 3) on left of photo, producing horizontial cast rod. Cooling water on extrusion through die.
Note: Photo was redacted to remove peronally identifible information of employee
Location: CCA Building Production Area
Camera Direction: East
Date/Time: February 2, 2021 11:16 AM

6: IMGP0028
Description: Four of five cooling water pumps in gallery. Each pump is dedicated to an individual furnance.
Location: CCA Building Production Area
Camera Direction: West
Date/Time: February 2, 2021 11:22 AM

7: IMGP0029
Description: Cooling water tank on left and pump gallery on right. Liquid nitrogen tank (outside of photo on left) is also used for cooling.
Location: CCA Building Production Area
Camera Direction: West
Date/Time: February 2, 2021 11:22 AM



8: IMGP0030
Description: Outfall. Offline furnance to be repaired, shows induction and hot water copper rods.
Location: CCA Building Production Area
Camera Direction: Southeast
Date/Time: February 2, 2021 11:31 AM

9: IMGP0031
Description: Dry air scrubber with six vents.
Location: CCA Building Production Area
Camera Direction: Northeast
Date/Time: February 2, 2021 11:36 AM

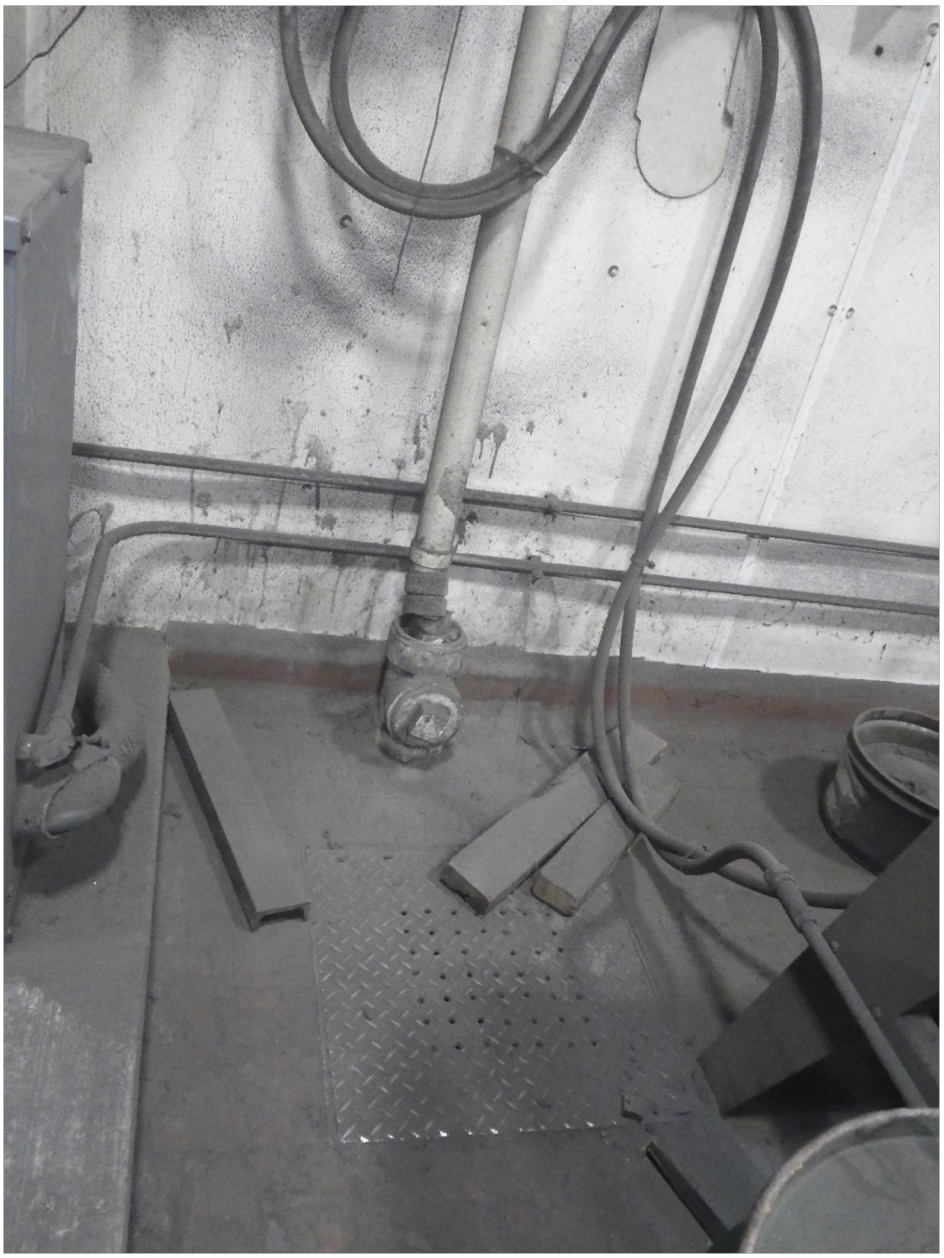
10: IMGP0032
Description: Straightening and annealing operation.
Location: CCA Building Production Area
Camera Direction: East
Date/Time: February 2, 2021 11:41 AM

11: IMGP0033
Description: Filter paper on pretreatment unit. Dried solid waste “cake” is collected in bin for collection and recycling.
Location: CCA Building Production Area
Camera Direction: South
Date/Time: February 2, 2021 11:49 AM

12: IMGP0034
Description: Floor drains, some covered with wood. Left to right drain connects to sewer, and fore to background drain is collected in holding tank. Note barrels with no secondary containment. Note unknown liquid on floor around middle barrel flowing to floor drain.
Location: CCA Building Production Area
Camera Direction: Northeast
Date/Time: February 2, 2021 11:49 AM

13: IMGP0035
Description: Close up of barrell (on right of photo 12).
Location: CCA Building Production Area
Camera Direction: Down
Date/Time: February 2, 2021 11:50 AM

14: IMGP0036
Description: Vibratory bowl used for polishing dental metals.
Location: CCA Building Production Area
Camera Direction: West
Date/Time: February 2, 2021 11:56 AM



15: IMGP0037
Description: Floor drain to outside holding tank.
Location: CCA Building Production Area
Camera Direction: East
Date/Time: February 2, 2021 11:57 AM

16: IMGP0038
Description: Water cooled saw and 15 gallon recirculating water holding tank.
Location: CCA Building Production Area
Camera Direction: Northwest
Date/Time: February 2, 2021 12:01 PM

17: IMGP0039
Description: Hydraulic oil for saw machinery.
Location: CCA Building Production Area
Camera Direction: North
Date/Time: February 2, 2021 12:05 PM

18: IMGP0040
Description: Oil storage area. Note no secondary containment.
Location: CCA Building Production Area
Camera Direction: North
Date/Time: February 2, 2021 12:06 PM

19. IMGP0041
Description: Floor drain in maintenance area. Drains to outside of building.
Location: CCA Building Maintenance Area
Camera Direction: Northwest
Date/Time: February 2, 2021 12:23 PM

APPENDIX B: AERIAL FACILITY IMAGE

APPENDIX C: ROCHELLE MUNICIPAL UTILITES DISCHARGE PERMIT 055 TO CONTINUOUS CAST ALLOYS

TO MDX
TO ANDREW 5/18/20

ROCHELLE MUNICIPAL UTILITIES
DISCHARGE PERMIT 055
Revised 5/12/2020
In accordance with provisions of the City of Rochelle Municipal Code:

Continuous Cast Alloys
100 Quarry Road
Rochelle, IL 61068

hereafter in this document identified as Permittee, is hereby authorized to discharge process wastewater to the City of Rochelle's Water Reclamation Plant. Discharge shall be in accordance with the conditions set forth in Part 1 through Part 4 and Standard Conditions of this permit. Non-compliance with any term or condition of this permit shall constitute a violation of the Rochelle Municipal Code.

This permit will become effective December 1, 2019 and will expire on November 30, 2022.

If Permittee wishes to continue to discharge after November 30, 2022, an application must be filed a minimum of ninety days prior to that date. This application must be in accordance with the requirements of Rochelle Municipal Code 98-159.

By: Jay Mulholland
Director of Water/Water Reclamation: Jay Mulholland

Date Issued: 5/18/2020

333 Lincoln Highway
Rochelle, IL 61068
www.rmu.net

2/1/2021 VL 2

PART 1: EFFLUENT LIMITATIONS

A. During the period of December 1, 2019 through November 30, 2022, the Permittee is authorized to discharge domestic wastewater to Rochelle Municipal Utilities (RMU) sewerage system from the outfall listed below:

001 –13.16A to 13.16 Manhole

B. During the time period of December 1, 2019 through November 30, 2022, the discharge from this outfall shall not exceed the following effluent limitations:

Parameter	Local Limit Guidelines
pH	5.0 - 9.0 Standard Units
Ammonia-nitrogen	35.0 mg/L
Arsenic	0.25 mg/L
Barium	2.0 mg/L
BOD 5	250.0 mg/L
COD	600.0 mg/L
Cadmium	0.5 mg/L
Chromium (total)	1.0 mg/L
Copper	1.0 mg/L
Cyanide	0.025 mg/L
Iron	4.0 Mg/L
Lead	0.30 mg/L
Manganese	1.0 mg/L
Mercury	0.0005 mg/L
Nickel (total)	1.0 mg/L
Phenols (total)	0.5 mg/L
Nonpolar fats	125.0 mg/L
Polar oils	20.0 mg/L
Phosphorus	10.0 mg/L
Selenium	1.0 mg/L
Silver	0.1 mg/L
Total Suspended Solids	300.0 mg/L
Zinc	2.0 mg/L

C. The Permittee shall not discharge process wastewater containing any of the following substances from outfall 001:

1. Any pollutant, including oxygen demanding pollutants at a flow rate and/or concentration which will cause the pollutant to pass through to the receiving waters or interfere with the POTW's operation. For the purpose of this section, the terms "pass through" and "interference" have the same definitions as appear in the Rochelle Municipal Code 98-151(d).

2. Products containing quaternary ammonia compounds (QAC's) and biocides which inhibit or are toxic to the nitrifiers necessary for the treatment process.

3. A discharge that imparts color which cannot be removed by the treatment process, and/or consequently imparts color to the treatment plant's effluent, and thereby causes a violation of the POTW's NPDES permit.

4. Should there be a pass through to the treatment plant's effluent that can be attributed to the Permittee, the Permittee will be liable for acute biotoxicity testing of Ceriodaphnia dubia according to USEPA testing procedures. Wastewater personnel will be responsible for the collection and handling of samples, and the Permittee will be responsible for the cost of testing and handling charges.

D. All discharges shall comply with all other applicable laws, regulations, standards, and requirements contained in Rochelle Municipal Code and any applicable State and Federal pretreatment laws, regulations, standards and requirements, including any such laws, regulations, standards, or requirements that may become effective during the term of this permit.

PART 2: MONITORING REQUIREMENTS

A. Random yearly sampling may be performed by RMU. A composite sampler will be placed in a discharge manhole. The sample will be tested for pH, COD, BOD, TSS and Ammonia. Should the testing exceed any of the Local Limits, Part 2- B will apply.

B. From December 1, 2019 through November 30, 2022, the Permittee shall monitor the effluent for the parameters listed in Part 1 B as requested by RMU personnel. All samples and testing are to be collected and performed at Permittee's expense.

PART 3: REPORTING REQUIREMENTS

A. If Permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by EPA, or as specified in the permit, the results of such monitoring shall be included in any calculations of actual daily maximum or monthly average pollutant discharge and results shall be reported in the monthly report submitted to RMU.

B. Monitoring Reports: Monitoring results obtained shall be reported on an Industrial User Monitoring Report form as requested. The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed during the six months preceding the submission of each report.

C. If the results of any analysis indicate that a violation of this permit has occurred, the Permittee must:

1. Inform the Water Reclamation Department of the violation within 24 hours; and,

2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of the first violation.

D. Accidental Discharge Report:

1. Permittee shall notify the Water Reclamation Division at 815-562-4155, immediately upon the occurrence of an accidental discharge of substances prohibited by Rochelle Municipal Code or any slug loads or spills that may enter the public sewer. During normal business hours RMU should be notified by telephone at 815-562-2761. At all other times, RMU should be notified by telephone at 815-562-4155. The notification shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective actions taken. The Permittee's notification of accidental releases in accordance with this section does not relieve it of other reporting requirements that arise under local, State, or Federal laws.

2. Within five days following an accidental discharge, the Permittee shall submit to RMU a detailed written report. The report shall specify:

a. Description and cause of the upset, slug load or accidental discharge; the cause, and the possible impact upon the Water Reclamation Department compliance status. The description should also include location of discharge, type, concentration and volume of waste.

b. Duration of non-compliance, including exact dates and time of non-compliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.

c. All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of non-compliance.

E. All reports required by this permit shall be submitted to RMU at the following address:

Rochelle Municipal Utilities – Water/Water Reclamation Division
Attn: Sharon A. Hawkins
P.O. Box 456
Rochelle, IL 61068
Email: shawkins@rmu.net

PART 4 - SPECIAL CONDITIONS

A. Permittee will notify RMU, the USEPA, and the State hazardous waste authorities of any discharge to the system, which, if otherwise disposed of would be a hazardous waste under 40 CFR part 261. This provision is required by 40 CFR 403.12 (p).

B. An annual site visit will be conducted by RMU personnel.

STANDARD CONDITIONS

A Permittee shall provide wastewater treatment as necessary to comply with the Rochelle Municipal Code and shall achieve compliance with all categorical pretreatment standards, local limits, and the prohibitions set forth in the Rochelle Municipal Code.

B All applications, user reports and information submitted by Permittee must be signed by an authorized representative of the user and contain the following certification statement:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1. For the purpose of the above paragraph, a responsible corporate officer means: (1) the president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (2) the manager of one or more manufacturing, production, or operation facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five million dollars (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. The individuals described above may designate another authorized representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to the Director of Utilities of RMU.

C. Permittee may petition the Director of Utilities to appeal the terms of this permit within 15 working days of notice of its issuance. This petition must be in writing, and failure to submit a timely petition for review shall be deemed to be a waiver of the administrative appeal. In its petition, the appealing party must indicate the provisions objected to, the reasons for the objection, and the alternative condition, if any, it seeks to place in the wastewater discharge permit. The effectiveness of the permit shall not be stayed pending the appeal. If the Director of Utilities fails to act within thirty (30) days, a request for reconsideration shall be deemed to be denied. Decisions to reconsider a wastewater discharge permit, not to issue a wastewater discharge permit, or not to modify a wastewater discharge permit shall be considered final administrative actions for purposes of judicial review. Aggrieved parties seeking judicial review of the final administrative wastewater discharge permit decision must do so by filing a complaint with the Circuit Court for Ogle County within thirty (30) days after receipt of the final decisions from the administrative review.

D. This permit may be modified for good cause, including, but not limited to:

1. Incorporation of any new or revised Federal, State, or local pretreatment standards or requirements.
2. Addressing significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of the wastewater discharge permit issuance.
3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge.
4. Information indicating that the permitted discharge poses a threat to the POTW, RMU personnel, or the receiving waters.
5. Violation of any terms or conditions of the wastewater discharge permit.
6. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit or application or in any required reporting.
7. Revisions of or a grant of variance from categorical pretreatment standards pursuant to 40 CFR 403.13.
8. Correct typographical or other errors in the wastewater discharge permit.
9. Reflect a transfer of the facility ownership to a new owner or operator.

The filing of a request by Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

E. Wastewater discharge permits may be transferred to a new owner or operator only if the permittee gives at least ninety (90) days advance written notice to the Director of Utilities, and the Director of Utilities approves the wastewater discharge permit transfer. The notice to the Director of Utilities must include a written certification by the new owner or operator which:

1. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes.
2. Identifies the specific date on which the transfer is to occur.
3. Acknowledges full responsibility for complying with the existing wastewater discharge permit. Failure to provide advance notice of a transfer renders the wastewater discharge permit void as of the date of facility transfer.

F. This permit may be terminated for the following reasons:

1. Failure to notify the Director of Utilities of significant changes to the wastewater prior to the changed discharge.
2. Failure to provide prior notifications to the Director of Utilities of changed conditions pursuant 98-161(e) of the Rochelle Municipal Code(Reports of Changed Conditions)
3. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application.
4. Falsifying self-monitoring reports.
5. Tampering with monitoring equipment.
6. Refusing to allow the Director of Utilities timely access to the facility premises and records.
7. Failure to meet effluent limitations.
8. Failure to pay fines.
9. Failure to pay sewer charges.
10. Failure to meet compliance schedules.
11. Failure to complete a wastewater survey or the wastewater discharge permit application.
12. Failure to provide advance notice of the transfer of the transfer of business ownership of a permitted facility.
13. Violation of any pretreatment standard or requirement, or

any terms of the wastewater discharge permit or Rochelle Municipal Code

This wastewater discharge permit shall be voidable upon cessation of operations or transfer of business ownership. This wastewater discharge permit is void upon the issuance of a new wastewater discharge permit to the Permittee.

G. The Permittee shall apply for a wastewater discharge permit reissuance by submitting a completed permit application, in accordance with 98-159 (e) of Rochelle Municipal Code a minimum of ninety (90) days prior to the expiration of this wastewater discharge permit.

H. All wastewater samples must be representative of the user's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure to keep a monitoring facility in good working order shall not be grounds for the user to claim that sample results are unrepresentative of its discharge.

I. Permittee must notify the Director of Utilities of any planned significant changes to operations or system which might alter the nature, quality , or volume of its wastewater at least forty-five (45) days before the change. For purposes of this requirement, significant changes include, but are not limited to:

1. Flow increases or decreases of twenty percent (20%) or greater.
2. The discharge of any previously unreported pollutants.

J. A notice shall be permanently posted on the appropriate facility bulletin board or other prominent place advising employees whom to call in the event of an accidental discharge. Permittee shall ensure that all employees who may cause or suffer such an accidental discharge to occur are advised of the emergency notification procedure.

K. Permittees subject to the reporting requirements of the Rochelle Municipal Code shall retain and make available for inspection and copying, all records of information obtained pursuant to any monitoring activities required by the Rochelle Municipal Code and any additional records of information obtained pursuant to monitoring activities undertaken by the user independent of such requirements. Records shall include the date, exact place, method, and time of sampling, and the name of the person(s) taking the samples, the dates analyses were performed, who performed the analyses, the analytical techniques or methods used, and the results of such analyses. These records shall remain available for a period of at least three (3) years. This period shall automatically be extended for the duration of any litigation concerning the user or the City, or where the user has been specifically notified of a longer retention period by the Director of Utilities.

L. The Director of Utilities shall have the right to enter the premises of the Permittee to determine whether the user is complying with all requirement of Rochelle Municipal Code and any wastewater discharge permit or order issued hereunder. Permittees shall allow the Director of Utilities ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.

1. Where a user has security measures in force which require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards, so that, upon presentation of suitable identification, the Director of Utilities will be permitted to enter without delay for the purposes of performing specific responsibilities.
2. The Director of Utilities shall have the right to set up on the user's property or require installation of, such devices as are necessary to conduct sampling and/or metering of the user's operations.
3. The Director of Utilities may require the user to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the user at its own expense. All devices used to measure wastewater flow and quality shall be calibrated at six month intervals to ensure their accuracy.
4. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the user at the written or verbal request of the Director of Utilities and shall not be replaced. The costs of clearing such access shall be born by the user.
5. Unreasonable delays in allowing the Director of Utilities access to the Permittee's premises shall be a violation of the Rochelle Municipal Code.

M. RMU is required to publish a list of POTW users, including the Permittee, which, during the previous twelve (12) months were in significant noncompliance with applicable pretreatment standards and requirements. "Significant Noncompliance" shall mean that a industrial user's violation(s) meets one or more of the following criteria:

1. Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent (66%) or more of wastewater measurement taken during a six (6) month period exceed the daily maximum limit or average limit for the same pollutant parameter by any amount.
2. Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of wastewater measurements taken for each pollutant parameter during a six (6) month period equals or exceeds the product of the daily maximum limit or the average limit multiplied by the applicable criteria (1.4 for BOD, TSS, fats oils and grease, and 1.2 for all other pollutants except pH.)
3. Any other discharge violation that the Director of Utilities believes has caused alone, or in combination with other discharge, interference or pass through, including endangering the health of POTW personnel or the general public.
4. Any discharge of pollutants that has caused imminent endangerment to the public or to the environment, or has resulted in RMU's exercise of its emergency authority to halt or prevent such a discharge.
5. Failure to meet, within ninety (90) days of the scheduled date, a compliance schedule milestone contained in a wastewater discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance.
6. Failure to provide within thirty (30) days after the due date, any required reports, including baseline monitoring reports, reports on compliance with categorical pretreatment standard

deadlines, periodic self monitoring reports, and reports on compliance with compliance schedules.
7. Failure to accurately report noncompliance
8. Any other violation which the Director of Utilities determines will adversely affect the operation or implementation of the local pretreatment program

N. If the Permittee violates, or continues to violate any provision of the Rochelle Municipal Code, a wastewater discharge permit, or order issued hereunder, or any other pretreatment standard or requirement, the Permittee shall be liable to the City for a maximum civil penalty of $1,000 per violation, per day. In the case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the period of violation. If the Permittee willfully or negligently violates any provision of Rochelle Municipal Code, a discharge permit or any other pretreatment standard or requirement, the Permittee shall, upon conviction, be guilty of a misdemeanor, punishable by a fine, up to the maximum allowed under State law, per violation, per day or imprisonment for not more than six (6) months or both.

O. If any provisions of this permit are invalidated by any court of competent jurisdiction, the remaining provisions shall not be effected and shall continue in full force and effect.

P. Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be ground for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

Q. If the Permittee knowingly makes any false statements, representations, or certifications in any application, record, report, plant, or other documentation filed, or required to be maintained, pursuant to Rochelle Municipal Code, a discharge permit, or who falsifies, tampers with, or knowingly render inaccurate any monitoring device or method required under Rochelle Municipal Code shall, upon conviction, be punished by a fine, up to the maximum fine allowable under State law, per violation, per day, or imprisonment for not more than six (6) months, or both.

2. CLASSIFICATION SUMMARY

Detailed notes were taken during each site inspection to document manufacturing processes, process waste produced, process waste hauled, and liquids stored on site. Special consideration was taken to note sources of water used in the manufacturing process and what chemicals or processes would be of concern to the wastewater treatment plant processes at the WRF.

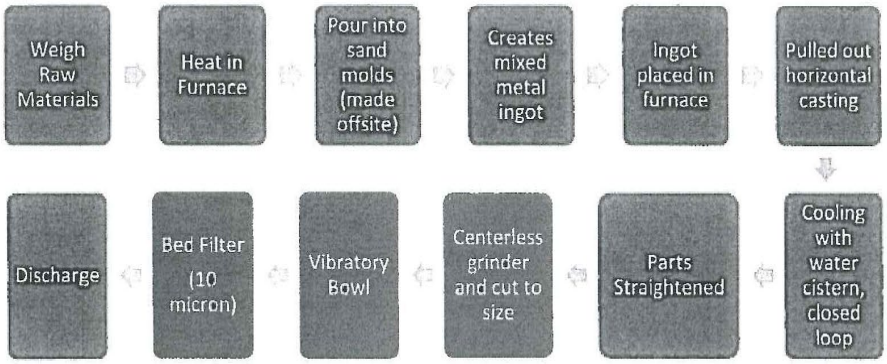
2.1 Continuous Cast Alloys

Continuous Cast Alloys
100 Quarry Road
Rochelle, IL
Date of site inspection: May 14, 2019
Time of site inspection: 9:22 AM

Lisa Lucht and Sharon Hawkins met with Jim Bull, Maintenance Manager to conduct the site inspection. Continuous Cast Alloys completes horizontal continuous casting using nickel, cobalt, chrome, molybdenum, silicon, carbon, beryllium, tungsten, and boron. Metal ingots are heated in an induction furnace (high frequency) to melt the metal and create an ingot. The ingot allows for better control of how much metal is processed and mixes the metals. The ingot is placed in a furnace for heating and pulled in the horizontal casting process. A closed loop system is used with a water-cistern cooling the water and recirculating it. Water is lost through evaporation.

FIGURE 1

Continuous Cast Alloys Manufacturing and Finishing Process



After cooling, the parts are straightened and some are put through the centerless grinder. Parts are cut to size and some parts are processed in a vibratory bowl with soap, water, and ~~walnut shells~~. All liquids from the floor scrubber, centerless grinder, and vibratory bowl are treated in a 10 micron bed filter before discharge to the sanitary sewer.

The industry mentioned that they would like to start new processes using metal powders. Depending on the operation and metals used, this may introduce a separate category that would need to be regulated.

Continuous Cast Alloys uses water in a closed loop system for cooling. Some parts are processed with the centerless grinder or in the vibratory bowl for cleaning. The water from each of these additional procedures is treated in a 10 micron bed filter before discharge.

Classification

The horizontal continuous casting process is regulated under 40 CFR 471 – Nonferrous Metals Forming with the following subparts:

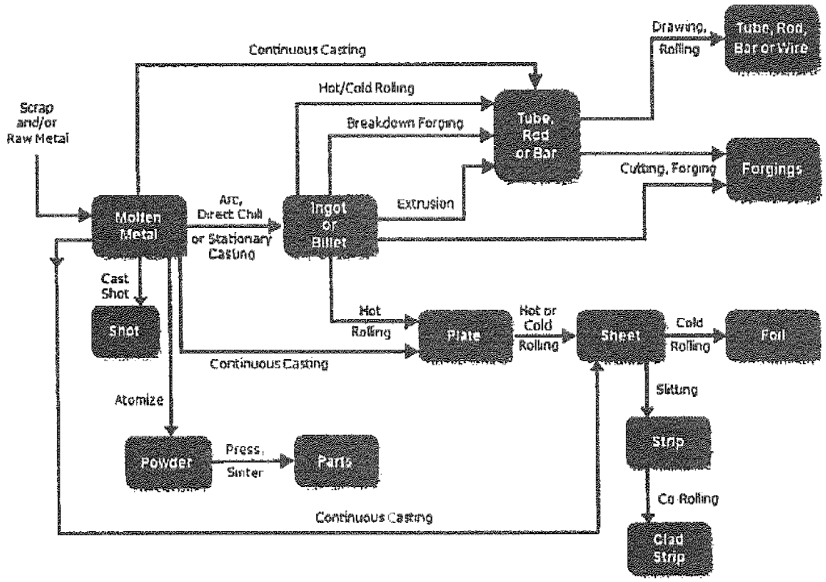
Nickel – Subpart C Nickel-Cobalt Forming Subcategory
Molybdenum, Tungsten – Subpart E Refractory Metals Forming Subcategory

Note that this category is regulated with a production based standard which is complicated to regulate and permit.

The following metals are covered under this classification: bismuth, cobalt, niobium (columbium), gold, hafnium, lead, magnesium, **molybdenum, nickel**, palladium, platinum, rhenium, silver, tantalum, tin, titanium, **tungsten**, uranium, vanadium, zinc, and zirconium.

FIGURE 2

40 CFR 471 Nonferrous Metals Forming Operations



Casting of nonferrous metals is included in the Nonferrous Metals Forming category when it is performed as an integral part of the nonferrous metals forming process and located at the same plant site at which nonferrous metals are formed. This includes casting of ingots as Continuous Cast Alloys completes.

The following classifications were also considered, but were not applicable:

40 CFR 421 – Nonferrous Metals Manufacturing – this regulation applies to the manufacturing process for these metals, rather than the forming of raw metal.

40 CFR 420 – Iron and Steel Manufacturing – this regulation is for iron and steel manufacturing and forming only. Continuous Cast Alloys uses only nonferrous metals (nickel, cobalt, chrome, molybdenum, silicon, carbon, beryllium, tungsten, and boron.)

40 CFR 464 – Metal Molding and Casting – this regulation applies to aluminum, copper, ferrous metals, and zinc casting. None of these metals are used at Continuous Cast Alloys.

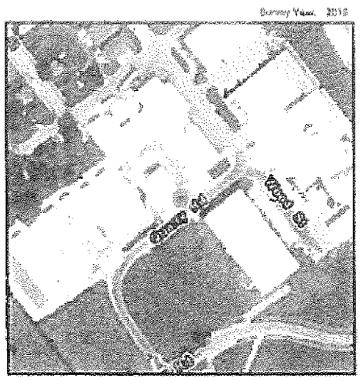
40 CFR 468 – Copper Forming Category – this regulation includes Subpart B – Beryllium Copper Forming, however forming of beryllium copper alloys is excluded for any copper alloy that contains 0.10% or greater beryllium. The USEPA guidance documents indicate that a separate beryllium subpart was to be developed, however that subcategory has not been developed since the 1989 Aluminum, Copper, and Nonferrous Metals Forming & Metal Powders Pretreatment Standards: A Guidance Manual was published.

Recommendations

This industry should be permitted as a Categorical Industrial User – 40 CFR 471 Nonferrous Metals Manufacturing – Subparts C (Nickel-Cobalt Forming Subcategory) and E (Refractory Metals Forming Subcategory) for the metals molybdenum and tungsten. Based on the difficult nature of permitting production based industries, we would further recommend that the industry become a zero discharge industry and be permitted as such.

APPENDIX D: ROCHELLE MUNICIPAL UTILITES INDUSTRIAL SURVEY OF CONTINUOUS CAST ALLOYS

ROCHELLE MUNICIPAL UTILITIES
INDUSTRY SURVEY



User ID: 1017
Business name: Continuous Cast Alloys

Site address: 100 Quarry Road

Site representative: Nathan Weibye
Title: President
Site Phone: 8155628200
Email: nate@ccalloys.com

Number of employees
First shift: 10
Second shift: 2
Third shift: 0

Number of units: 1
Hours of operation
Monday-Friday: 15
Saturday/Sunday:

Date that service/production began at this site (MM/YYYY): 11/2015

Services performed or products produced at this site: horizontal continuous casting

Raw materials used on site: nickel, cobalt, chrome, molybdenum, silicon, carbon, beryllium, tungsten, boron,

At this facility, this business does manufacturing? Yes **Does assembly?** No **Has an office?** Yes
Has a warehouse? Yes **Has a cafeteria?** No

Process wastewater (non-domestic) discharged to sewer? Yes
Description: Process water from cleaning metal parts with detergent soap.

Does the firm haul any process waste? No **Description:**

Does the business precondition their water? No, we do not precondition water

Does the business treat their discharge at any point within their process? No

Does the firm store liquids in drums? We do not store liquids in drums
Name(s) of substance(s) contained in drums, and number of gallons:

Does the firm store liquids in totes or bulk tanks? We do not store liquid in totes or tanks
Name of substance and number of gallons:

Does the facility use any materials which include, but are not limited to cleaning products, raw materials or chemicals in a process which contain phosphorus in the ingredients? No
Inks or dyes used? No **If yes, inks or dyes washed down the drain?** No

Does the business have a backflow preventer? YF

Additional Notes: horizontal continuous casting plus cleaning of parts - likely CIU LGL 10/10/18

Submitted by: Industry
Survey entry status: Survey completed online
Survey screening status: Site inspection needed
Classification:
Classification Notes:

2/2/2021 SD 1

Rochelle Municipal Utilities
Classification Site Inspection Report

Rochelle MUNICIPAL UTILITIES

Inspection date: 5/14/19 Inspection time: 9:22

Business Name: Continuous Cast Alloys
Site Address: 100 Quarry Road
City, State, Zip: Rochelle, IL 61068
Phone: 815-562-8200 Fax: _____
Parent Company (if applicable) JWF Group
Mailing Address: _____
Address: _____
City, State, Zip: _____
Phone: _____ Fax: _____

Site Representative:
Name: Jim Bull
Title: Maintenance Manager
Phone: 815-558-7696 Email: JBull@ccalloys.com

Business representative(s) in attendance: Jim Bull
Municipal representative(s): Sharon Hawkins

SECTION A – GENERAL SITE INFORMATION

1. Date of Facility Startup: 11-2015
2. Building Type: Single building X Multi-unit building _____ Units in Building _____
3. Number of employees
   Monday – Friday Daytime Shift 12 Evening Shift 3 Night Shift _____ Total _____
   Saturday/Sunday Daytime Shift _____ Evening Shift _____ Night Shift _____ Total _____
4. Hours of operation (when necessary - not common)
   Monday – Friday Daytime Shift 5a - Evening Shift 10-11pm Night Shift _____
   Saturday/Sunday Daytime Shift _____ Evening Shift _____ Night Shift _____
5. Does facility have an on-site cafeteria? Yes _____ No X
6. Check all applicable processes and sub-processes on site:
   _____ Retail X Office _____ Wholesale Distributor _____ Assembly/Fabrication
   _____ Food Service _____ Medical Office X Warehouse _____ Laundry
   _____ Auto/Truck Repair _____ R & D Lab X Packaging X Manufacturing
   _____ Vehicle Wash _____ Photo-developing _____ Printing (not copying)
   _____ Other _____
7. Has this business completed the IEPA Connection Permit WPC-PS-1 application form? Yes _____ No _____
8. Does this business have scheduled shutdown periods? Yes _____ No X (not common)
9. When is the facility cleaned (What shift)? At what frequency? What is cleaned (floors, equipment, etc.)?
   daily - floor sweeper / scrubber - 5:00 night shift working on procedures / equipment cleaning

detergent + filtered before discharge to sewer

SECTION B - PRODUCTION PROCESS AND WASTE PRODUCTION

10. What service, business process or manufacturing is performed at this site? What is the product(s) produced at this site?
horizontal continuous casting - metal foundry
planning to expand - powdered metal - take metal and turn to powder - put powder in mold 30,000 SF - cooling system would be closed loop

11. What raw materials are used?
nickel, cobalt, chrome, molybdenum, silicon, carbon, beryllium, tungsten, boron

Acids		Bases/Caustics		Hazardous Waste		Solvents	
Dyes		Inks		Paints		Cyanides	
Plating Solutions		Soluble Metals		Fats, Oil, Grease		Metal Salt Compounds	
Pesticides		Phenolics		Mercury		Organic Chemicals	
Petroleum products							

none

12. Are inks or dyes used in production? Yes _____ No X

13. What are the Standard Industrial Codes (SIC) codes associated with this process?

14. Process Flow Diagram / Facility Layout:

Bed filter - over membrane

metal ingot → induction furnace (high frequency) → molten metal → pull → cut to length

weld rod .125 upto 5/8

dental metal - often shipped out

dental rod (contains berylium) - most goes to china

dental rod - make this for the united states

make the rods for Jostens rings

solids - removed from membrane - sold

3 fork lifts - propane powered

SECTION C – SANITARY DISCHARGE

15. Is process wastewater produced at this facility? Yes X No ____
16. Is process wastewater discharged? Yes X No ____
17. Check all sources of sanitary waste:

X Domestic — X Process wastewater — X Parts washing
X Cooling water, non-contact (closed loop system) — ___ Cooling water, contact — ___ Boiler blowdown
___ Equipment cleaning — X Facility cleaning — ___ Air Pollution Control Unit
___ Cooling tower blowdown – If yes, what bacterial control chemicals are used? ____

18. Does this facility have an inspection manhole? ~~not sure~~ Yes X No ____
Location of inspection manhole: near open field (vacant) – 3 basins near rear of building?
19. Does this facility have a pretreatment system? Yes ____ No X
If yes, describe would be helpful to know what requirements they need to meet for post membrane
Is the pretreatment system operated by a Class K operator? Yes ____ No X
Does the business have an IEPA permit for the pretreatment system? Yes ____ No X
20. Does this business have waste hauled from site? Yes X No ____
Type of waste hauled: particulate metal from membrane
Hauling company ____
Frequency of hauling ~1x per month
Are hauling records kept for a minimum of three years? Yes ____ No ____
unknown if kept

SECTION D – STORAGE AND MATERIALS

21. Does this business store liquids in drums on site? Yes ____ No X
If yes, substance(s) stored: ____ Number of drums ____
____ Number of drums ____
22. Does this business store liquids in bulk tanks on site? Yes X No ____
Substance(s) Stored: 250 gal ethalyn-glycol Number of gallons 250 gal
____ Number of gallons ____
23. Is spill containment provided around materials storage area? no
24. Are employees trained on proper spill clean-up procedures? Yes ____ No X
25. Are there floor drains in the production areas? Yes X 4? No ____
If yes, are floor drains in production areas open or capped? Open X Capped ____
If open, where do the floor drains discharge? sanitary sewer
If open, are floor drains used regularly? not regularly

requested a spill clean up kit –

Non-Ferrous Metals
Beryllium
Tungsten
Molybdenum

Forming
Nickel
Cobalt

Continuous Cast Alloys

~~40 CFR 421 Non Ferrous Metals Mfg~~

Horizontal Continuous casting manufacturing - Y

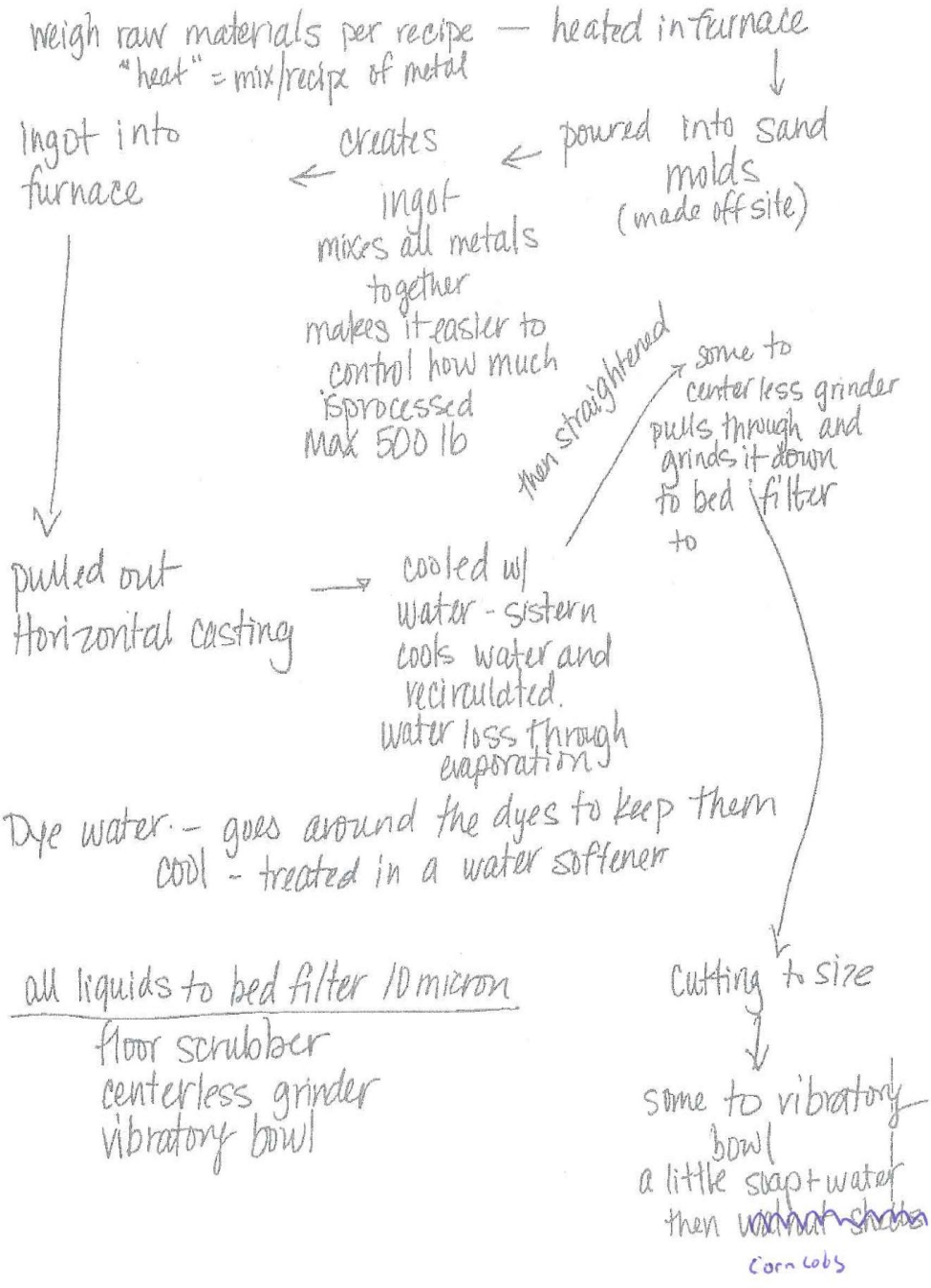
- process waste produced and discharged from cleaning metal parts with water

~~40 CFR 420 Iron and Steel manufacturing~~
~~Subpart F Continuous Casting Subcategory~~ No iron or steel

3 places where water is used

- closed system for dye cooling
- ethalyn-glycol – out to cooling system, fan banks
- cleaning -
- dental rod goes through vibratory bowl. → membrane then to sewer
centerless grinder with bed filter
- during a power outage - City water kicks in to circulate in the system
50/50 ethalyn-glycol (50%) solution with water (50%) will discharge 200 gallons with a power outage automatically for safety

looking to isolate berylium process


weigh raw materials per recipe
"heat" = mix/recipe of metal
heated in furnace
poured into sand molds
(made off site)
creates ingot
mixes all metals together
makes it easier to control how much is processed
Max 500 lb
ingot into furnace
pulled out
Horizontal casting
cooled w/ water - sistern
cools water and recirculated.
water loss through evaporation
then straightened
some to centerless grinder
pulls through and grinds it down to bed filter
to
Dye water - goes around the dyes to keep them cool - treated in a water softener
all liquids to bed filter 10 micron
floor scrubber
centerless grinder
vibratory bowl
Cutting to size
some to vibratory bowl
a little soap + water
then
Corn cobs

Liquid nitrogen and Argon - keeps gas barrier over furnace

they may have a sampling manhole

Nickel - non ferrous
Cobalt
Chrome
molybdenum
silicon
carbon
beryllium
tungsten
boron

APPENDIX E: CCALbsCastedSumm2020.xlsx: PRODUCTION DATA FOR THE YEAR 2020

CCA Lbs. Casted Summary by Month

	Lbs. Casted	
Jan	5,446	
Feb	9,241	
Mar	7,087	through 3/20. Final log not sent
Apr	7,215	
May	9,456	
Jun	11,276	
Jul	6,616	
Aug	7,472	
Sep	5,034	through 9/22. no final log sent
Oct	11,665	
Nov	2,601	through 11/11-no logs sent since
Dec		
Total	83,109	
	7,555	