East Chicago Sanitary District

2019 Annual Report

EAST CHICAGO SANITARY DISTRICT 2019 ANNUAL REPORT

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The status regarding Industrial Discharge Permits maintained by the East Chicago Sanitary District (District) for 2019 is as follows.

Permitted Industrial Users

The District has 23 Industrial Users (IUs) permitted to discharge into the City of East Chicago sewer system. This includes five Categorical IUs (CIUs) [Electric Coating Technologies (#312), TAC East, Inc. (#415), National Processing (#514), Lakeshore Railcar LLC (#521) and Safety-Kleen Systems (#901)]. Along with the five CIUs, three additional IUs [W. R. Grace (#401), US Steel Corporation (#936) and US Gypsum (#951) are classified as a Significant IUs (SIUs). One permit, US Steel Corporation (#936) ceased operation at the East Chicago Tin Plant in November 2019. The District confirmed the closure and discontinuation of water service at #936 on December 5, 2019. One other CIU, TAC East, Inc. (#415) ceased operation as of August 14, 2019 due to a fire at the facility. A permit renewal application for Buckeye Terminals, LLC (#124) was submitted on October 30, 2019 and is under review. Buckeye Terminals, LLC #124 permit allows for occasional discharges from their infrequently scheduled dewatering activities. The District will allow Buckeye Terminals, LLC to continue any future discharges under the local limits contained in their existing permit until the new, updated permit is re-issued.

The District issued amended permits to all Permittees in January 2019. The amended permits incorporated the new local limits that were adopted into an Ordinance by the East Chicago City Council on November 13, 2018. Each of the IUs was informed that the new local limits were effective immediately.

Attachment I summarizes the dates of the inspections, SPCC plan requirements and permit expiration dates. The District inspected 21 of the permitted outfalls. One permitted facility, Tradebe Treatment & Recycling (#561), was not inspected as there were operations involving any permitted discharge into the sewer. No inspection was completed at TAC East, Inc. (#415) as their facility experienced a fire in August 2019 resulting in the closure of the facility and ceasing of all operations.

Inspections and Monitoring

Attachment II summarizes the compliance monitoring events, industrial self-monitoring events and inspections completed at the 23 permitted outfalls. There were 241 separate compliance monitoring events performed by the District. A total of 64 monitoring events completed were at the five Categorical Industrial Users (CIUs): Electric Coating Technologies #312 (12), TAC East, Inc. #415 (12), National Processing #514 (12), Lakeshore

Railcar LLC #521 (24) and Safety-Kleen Systems #901 (21). Except for TAC East #415, each of the five CIUs performed self-monitoring. No self-monitoring was performed at TAC East due to the fire and closing of the facility. Self-monitoring was also performed at the three groundwater remediation permitted facilities, GATX #112, Buckeye Terminals, LLS #124 and USS Lead #411. A total of 12 self-monitoring events were completed. No sampling was performed Tradebe #561 as this facility did not have any industrial discharges during the 2019 calendar year.

Enforcement Actions & Compliance Status

The District issued written Notices of Violations (NOVs) and fines to five different IUs for 41 violations as noted in the table below.

East Chicago Sanitary District
Compliance Status Report
Report Date Range: 1/1/2019 - 12/31/2019

Varnu	Variable	Violation	Limit Description	Limit
56031	401 pH	1	Daily Minimum Limit	< 5
57161	415 FOG {mg/L}	1	Daily Maximum Limit	>117
57602	415 SGT-HEM {mg/l}	1	Daily Maximum Limit	>26
57441	415 Total Nickel (Ni) {mg/L}	1	Daily Maximum Limit	>0.8
62191	521 Amen. Cyanide {mg/L}	2	Daily Maximum Limit	>0.019
62151	521 Ammonia NH3N {mg/L}	3	Daily Maximum Limit	>134
62161	521 FOG {mg/L}	3	Daily Maximum Limit	>36
62171	521 Phenol {mg/L}	1	Daily Maximum Limit	>0.96
62421	521 Total Copper (Cu) {mg/L}	1	Daily Maximum Limit	>0.5
62411	521 Total Zinc (Zn) {mg/L}	2	Daily Maximum Limit	>2.87
70191	901 Amen. Cyanide {mg/L}	19	Daily Maximum Limit	>0.019
70161	901 FOG {mg/L}	1	Daily Maximum Limit	>117
70171	901 Phenol {mg/L}	1	Daily Maximum Limit	>0.96
70461	901 Total Mercury (Hg) {mg/L}	3	Daily Maximum Limit	>0.00029
76141	951 Total Phosphorus {mg/L}	1	Daily Maximum Limit	>31
	Total	41		

The characterization of the compliance status of each IU is provided in Attachment III. Only five IUs experienced violations, and except for Safety-Kleen Systems, have demonstrated they had achieved compliance with their permitted discharge requirements with follow-up sampling. One IU that continues to experience chronic violations with regard to their CN discharges is Safety-Kleen Systems (#901). Because of their historical record of repeat and chronic violations, Safety Kleen is typically monitored on a twice a month basis. Safety-Kleen Systems was identified as having chronic violations with respect to cyanide discharges on 19 separate occasions. Lakeshore Railcar exceeded the cyanide local limit on only two occasions. No other IU had any CN violations. As a result of the adoption of the new local limits, effective November 15, 2018, there has been a significant reduction in the number of violations. The total number of violations observed in 2019 (41) is much lower than the 128 violations in 2017 and 57 violations in 2018. The total number of cyanide violations reported in 2019 (21) is also significantly lower than reported in previous years.

Attachment IV summarizes the NOVs issued as well as the fines assessed to each IU. As summarized in the attachment, $79,500 in fines was assessed to the five IUs for the 2019 violations. The fines totals for each IU were as follows: W R Grace #401 - $1,000; TAC East #415 - $3,000; Lakeshore Railcar #521 - $12,000; Safety-Kleen Systems #901 - $12,500 and U S Gypsum #951 - $2,500. A $1,000 fine was issued to TAC East #415 for not providing their monthly discharge report on time. With the exception of fines associated with the CN violations by Safety-Kleen Systems ($47,500), all other assessed fines were paid. Safety-Kleen Systems has been appealing the fines for CN violations pending a resolution of their appeal of the CN violations. The District is evaluating the development of an alternate CN local limits based on mass-load or flow-based calculations. Once alternate CN limits are developed and adopted, the District believes that Safety-Kleen Systems will no longer experience chronic violations with regard to CN.

Attachment V provides the proposed Compliance Monitoring and Inspection Work Plan for 2019. It is anticipated that the District will complete 232 compliance monitoring events based upon completing a monthly sampling event at each of the IUs except for those with low or periodic discharges (GATX #112, Buckeye Terminals #124, and USS Lead #411. Additionally, the District will conduct at least a full site inspection of each IU, as a minimum. No inspections are anticipated for TAC East #415 who has ceased operations due to the fire at their facility and US Steel #951 who has suspended operations at their tin mill in East Chicago.

Attachment VI provides a summary of the Organic Scan for the POTW. The influent, effluent and sludge samples for the volatile organic compound (VOC), semi-volatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs) analyses were collected on September 17, 2019. All analytical results were reported as non-detect.

The POTW discharge violations for 2019 are summarized in the table below.

East Chicago Sanitary District
Compliance Status Report
Report Date Range: 1/1/2019 - 12/31/2019

Permit	Parameter	Violations	Limit Description	Limit
108	EFF FECAL COL {COL/100m}	0	Daily Maximum Limit	>235
108	EFF FECAL COL {COL/100m}	0	Monthly Maximum Limit	>125
109	EFFLUENT pH {SU}	0	Daily Minimum Limit, pH	<6
109	EFFLUENT pH {SU}	0	Daily Maximum Limit, pH	>9
114	EFFLUENT TSS {mg/l}	11	Monthly Maximum Limit	>8.5
114	EFFLUENT TSS {mg/l}	31	Weekly Average Maximum Limit	>12.8
116	EFFLUENT T-PHOS {mg/l}	0	Monthly Maximum Limit	>1
120	EFFLUENT O & G {mg/l}	0	Daily Maximum Limit	>10
121	EFFLUENT D.O. {mg/l}	0	Daily Minimum Limit, DO winter	<6
124	EFFLUENT CBOD5 {mg/l}	0	Weekly Average Maximum Limit, winter	>10.7
124	EFFLUENT CBOD5 {mg/l}	0	Monthly Average, winter	>7.1
128	EFFLUENT CN- {mg/l}	0	Daily Maximum Limit	>0.0085
128	EFFLUENT CN- {mg/l}	0	Monthly Maximum Limit	>0.0043
244	EFF. E. COLI {MPN/100ml}	0	Monthly Average - Max	=125
309	EFFLUENT MERCURY, TOTAL REC. LL 1631E {ppt}	3	Daily Maximum Limit	>3.16
309	EFFLUENT MERCURY, TOTAL REC. LL 1631E {ppt}	6	Monthly Maximum Limit	>1.3
312	EFFLUENT CBOD WEEKLY AVERAGE LBS/DAY - Summer {l	0	Weekly Maximum Loading Limit - SUmmer	=1689.9
313	EFFLUENT CBOD WKLY AVG mg/L - Summer {mg/l}	0	Weekly Maximum Limit - Summer	=7.5
	Total	51		

There were no cyanide (CN) violations noted for exceeding the either the daily maximum limit or the monthly average limit. TSS violations, both for the weekly average maximum (31) and monthly maximum average (11) were reported. The TSS violations are suspected to be the result of inefficient filtration by the media in our six traveling bed filters, allowing fine sediment to pass through the tertiary filter system. Three daily maximum and six monthly maximum average limits for mercury were also reported.

Attachment I - Inspection and Permit Information 2019

User	Outfall	Permit Expiration	SPPC Plan Required	CIU/SIU	Inspection Date	SIC Code
GATX CORPORATION	112	10/2/2021	N		10/17/2019	
BUCKEYE TERMINALS, LLC	124	6/14/2019	N		11/22/2019	4613
ELECTRIC COATING TECHN.	312	7/14/2023	Y	CIU/SIU	10/25/2019	3313
W.R. GRACE- CONN	401	8/31/2021	Y	SIU	11/5/2019	2819
USS LEAD REFINERY, INC.	411	10/10/2022	N		1/10/2019	3341
TAC EAST, INC	415	10/3/2022	Y	CIU/SIU	closed 8/14/1	7699
GREEN LAKE TUBE LLC	511	8/8/2021	Y		12/12/2019	3317
NATIONAL PROCESSING	514	8/8/2021	Y	CIU/SIU	12/12/2019	3312
ICO POLYMERS N.A. INC. (IPNA)	518	6/6/2022	Y		12/6/2019	3089, 3087
LAKESHORE RAILCAR & TANKCAR SERVICES	521	5/30/2023	Y	CIU/SIU	11/18/2019	4785
PRAXAIR, INC., PRODUCTION	531	11/22/2021	Y		12/11/2019	2813
PRAXAIR, INC., RARE GASES	541	7/31/2021	Y		11/19/2019	2813
TRADEBE TREATMENT & RECYC	561	6/30/2020	Y			4953
ARCELORMITTAL IN HARBOR EAST	611	1/2/2022	Y		11/16/2019	3312
ARCELORMITTAL IN HARBOR EAST	804	1/2/2022	Y		12/16/2019	3312
ARCELORMITTAL IN HARBOR EAST LONG CARB	805	1/2/2022	Y		12/16/2019	3312
SAFETY-KLEEN SYSTEMS	901	8/21/2023	Y	CIU/SIU	11/14/2019	2992
ARCELORMITTAL IN HARBOR WEST	931	6/6/2022	Y		12/16/2019	3312
ARCELORMITTAL IN HARBOR WEST	934	6/6/2022	Y		12/16/2019	3312
ARCELORMITTAL IN HARBOR WEST	935	6/6/2022	Y		12/16/2019	3312
UNITED STATES STEEL CORP.	936	11/21/2021	Y	SIU	11/8/2019	3312
PRAXAIR, INC., HYDROGEN PLANT	941	6/21/2020	Y		12/9/2019	2813
UNITED STATES GYPSUM CO.	951	11/21/2021	Y	SIU	12/13/2019	3275

Attachment II - Monitoring 2019

User	Outfall	Compliance Monitoring Events	Industrial Self-Monitoring events	Number of Inspections
GATX CORPORATION	112	1	1	1
BUCKEYE TERMINALS, LLC	124	3	1	1
ELECTRIC COATING TECHN.	312	13	2	1
W.R. GRACE- CONN	401	12		1
USS LEAD REFINERY, INC.	411	4	3	1
TAC EAST, INC	415	7	0	
GREEN LAKE TUBE LLC	511	12		1
NATIONAL PROCESSING	514	12	1	1
ICO POLYMERS N.A. INC. (IPNA)	518	12		1
LAKESHORE RAILCAR & TANKCAR SERVICES	521	21	2	1
PRAXAIR, INC., PRODUCTION	531	12		1
PRAXAIR, INC., RARE GASES	541	12		1
TRADEBE TREATMENT & RECYC	561	0		
ARCELORMITTAL IN HARBOR EAST	611	12		1
ARCELORMITTAL IN HARBOR EAST	804	12		1
ARCELORMITTAL IN HAR EAST LONG CARBON	805	12		1
SAFETY-KLEEN SYSTEMS	901	21	2	1
ARCELORMITTAL IN HARBOR WEST	931	1		1
ARCELORMITTAL IN HARBOR WEST	934	12		1
ARCELORMITTAL IN HARBOR WEST	935	12		1
UNITED STATES STEEL CORP.	936	11		1
PRAXAIR, INC., HYDROGEN PLANT	941	12		1
UNITES STATES GYPSUM CO.	951	15		1
	Totals	**241**	**12**	**21**

Attachment III - Pretreatment Performance Summary 2019

User	Outfall	Always Compliant	Minor Non-Compliance	Significant Non-Compliance	Back in Compliance	On Compliance Schedule
GATX CORPORATION	112	X				
BUCKEYE TERMINALS, LLC	124	X				
ELECTRIC COATING TECHN.	312	X				
W.R. GRACE- CONN	401		X		X	
USS LEAD REFINERY, INC.	411	X				
TAC EAST, INC	415		X		X	
GREEN LAKE TUBE LLC	511	X				
NATIONAL PROCESSING	514	X				
ICO POLYMERS N.A. INC. (IPNA)	518	X				
LAKESHORE RAILCAR & TANKCAR SERVICES	521		X		X	
PRAXAIR, INC., PRODUCTION	531	X				
PRAXAIR, INC., RARE GASES	541	X				
TRADEBE TREATMENT & RECYC	561	X				
ARCELORMITTAL IN HARBOR EAST	611	X				
ARCELORMITTAL IN HARBOR EAST	804	X				
ARCELORMITTAL IN HAR EAST LONG CARBON	805	X				
SAFETY-KLEEN SYSTEMS	901			X		X
ARCELORMITTAL IN HARBOR WEST	931	X				
ARCELORMITTAL IN HARBOR WEST	934	X				
ARCELORMITTAL IN HARBOR WEST	935	X				
UNITED STATES STEEL CORP.	936	X				
PRAXAIR, INC., HYDROGEN PLANT	941	X				
UNITES STATES GYPSUM CO.	951		X		X	

Attachment IV -Compliance and Enforcement Information 2019

Sample Date	Outfall	Parameter	Reported Concentration	Fine Amount	Fine Paid
11/19/2019	401	pH	3.3	$1,000	$1,000
5/15/2019	415	NI	2.83	$1,000	$1,000
6/24/2019	415	FOG	191	$1,000	$1,000
6/24/2019	415	SGT-HEM	88.8	$1,000	$1,000
Late report	415	DIS VOL REP		$1,000	$1,000
1/9/2019	521	O&G (HEM)	41	$1,000	$1,000
1/11/2019	521	O&G (HEM)	41.9	$1,000	$1,000
2/26/2019	521	CN	0.021	$1,000	$1,000
4/9/2019	521	ZN	3	$1,000	$1,000
5/29/2019	521	NH3	148	$1,000	$1,000
6/27/2019	521	NH3	482	$1,000	$1,000
6/27/2019	521	FOG	43.3	$1,000	$1,000
7/9/2019	521	NH3	299	$1,000	$1,000
9/18/2019	521	Phenol	4.49	$1,000	$1,000
10/23/2019	521	Zinc	71.3	$1,000	$1,000
12/12/2019	521	CU	0.615	$1,000	$1,000
12/12/2019	521	CN	0.02	$1,000	$1,000
1/15/2019	901	CN	0.12	$2,500	not paid
2/25/2019	901	CN	0.099	$2,500	not paid
3/26/2019	901	O&G (HEM)	118	$2,500	$2,500
3/26/2019	901	HG	0.0004	$2,500	$2,500
3/26/2019	901	CN	0.46	$2,500	not paid
4/15/2019	901	CN	0.13	$2,500	not paid
4/29/2019	901	HG	0.0003	$2,500	$2,500
4/29/2019	901	OH	4.09	$2,500	$2,500
4/29/2019	901	CN	0.27	$2,500	not paid
5/23/2019	901	Hg	0.0004	$2,500	$2,500
5/23/2019	901	Cn	0.65	$2,500	not paid
6/17/2019	901	Cn	0.055	$2,500	not paid
6/24/2019	901	Cn	0.078	$2,500	not paid
7/17/2019	901	CN	0.27	$2,500	not paid
7/29/2019	901	CN	0.16	$2,500	not paid
8/14/2019	901	CN	0.055	$2,500	not paid
8/29/2019	901	CN	0.12	$2,500	not paid
9/12/2019	901	CN	0.32	$2,500	not paid
9/30/2019	901	CN	0.067	$2,500	not paid
10/16/2019	901	CN	0.078	$2,500	not paid
10/29/2019	901	CN	0.13	$2,500	not paid
11/6/2019	901	CN	0.12	$2,500	not paid
11/21/2019	901	CN	0.095	$2,500	not paid
12/10/2019	901	CN	0.13	$2,500	not paid
10/23/2019	951	Phosphorous	266	$2,500	$2,500

$79,500 $ 32,000

Attachment V - Compliance Monitoring and Inspection Work Plan 2020

User	Outfall	Permit Expiration Date	Compliance Monitoring Events	Industrial Self-Monitoring Events	Number of Inspections	
GATX CORPORATION	112	10/2/2021	6		1	
BUCKEYE TERMINALS, LLC	124	6/14/2019	0		0	
ELECTRIC COATING TECHN.	312	7/14/2023	12	2	1	
W.R. GRACE- CONN	401	8/31/2021	12		1	
USS LEAD REFINERY, INC.	411	10/10/2022	4	4	1	
TAC EAST, INC	415	10/3/2022	Ceased operation			
GREEN LAKE TUBE LLC	511	8/8/2021	12		1	
NATIONAL PROCESSING	514	8/8/2021	12	2	1	
ICO POLYMERS N.A. INC. (IPNA)	518	6/6/2022	12		1	
LAKESHORE RAILCAR & TANKCAR SERVICES	521	5/30/2023	18	2	1	
PRAXAIR, INC., PRODUCTION	531	11/22/2021	12		1	
PRAXAIR, INC., RARE GASES	541	7/31/2021	12		1	
ARCELORMITTAL IN HARBOR EAST	611	1/2/2022	12		1	
ARCELORMITTAL IN HARBOR EAST	804	1/2/2022	12		1	
ARCELORMITTAL IN HAR EAST LONG CARBON	805	1/2/2022	12		1	
SAFETY-KLEEN SYSTEMS	901	8/21/2023	24	2	1	
ARCELORMITTAL IN HARBOR WEST	931	6/6/2022	12		1	
ARCELORMITTAL IN HARBOR WEST	934	6/6/2022	12		1	
ARCELORMITTAL IN HARBOR WEST	935	6/6/2022	12		1	
UNITED STATES STEEL CORP.	936	11/14/2023	Suspended Operations			
PRAXAIR, INC., HYDROGEN PLANT	941	6/21/2020	12		1	
UNITES STATES GYPSUM CO.	951	11/21/2021	12		1	
			232	12	19	

Attachment VI - Summary of Detected Analytes in Organic Scans East Chicago POTW 2019

Analyte	Influent		Effluent		Sludge	
	Results	Units	Results	Units	Results	Units
VOCs	All Non Detect	mg/L	All Non Detect	mg/L	All Non Detect	mg/Kg dry
SVOCs	All Non Detect	mg/L	All Non Detect	mg/L	All Non Detect	mg/Kg dry
Pesticides	All Non Detect	µg/L	All Non Detect	µg/L	All Non Detect	µg/kg
PCBs	All Non Detect	mg/L	All Non Detect	mg/L	All Non Detect	mg/Kg dry