pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0112623**
Facility Type	**Industrial**	APS ID	**980282**
Major / Minor	**Minor**	Authorization ID	**1250777**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**JJ Bucher Producing Corp**	Facility Name	**JJ Bucher Producing**
Applicant Address	2568 Bells Run Road	Facility Address	Horse Run Road
	Shinglehouse, PA 16748-3030		Shinglehouse, PA 16748
Applicant Contact	Gregory Maxson	Facility Contact	Gregory Maxson
Applicant Phone	(814) 697-6593	Facility Phone	(814) 697-6593
Client ID	7155	Site ID	235814
SIC Code	1311,1389	Municipality	Shinglehouse Borough
SIC Description	Mining - Crude Petroleum And Natural Gas,Mining - Oil And Gas Field Services, Nec	County	Potter
Date Application Received	October 31, 2018	EPA Waived?	Yes
Date Application Accepted	February 15, 2019	If No, Reason	Facility accepts and treats oil and gas resource extraction water
Purpose of Application	Renewal of a NPDES Permit		

Summary of Review

This facility receives and discharges wastewater from oil stripper wells which is piped from the Horse Run Oil Lease. Water is injected into oil wells to increase pressure and oil recovery from an existing reservoir. No other types of wastewater are received such as from natural gas/hydraulic fracturing flowback water.

A map of the discharge location is attached.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
✓		Keith C. Allison / Project Manager	December 9, 2019
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.02
Latitude	41º 58' 9.55"	Longitude	-78º 12' 13.80"
Quad Name	Shinglehouse, PA	Quad Code	0320
Wastewater Description:	Other Miscellaneous Discharges		
Receiving Waters	Oswayo Creek (WWF)	Stream Code	57116
NHD Com ID	112362505	RMI	11.4
Drainage Area	150 mi^2	Yield (cfs/mi^2)	0.05775
Q_{7-10} Flow (cfs)	8.66	Q_{7-10} Basis	USGS Gage 03010655, Oswayo Creek @ Shinglehouse, PA (1976-2008)
Elevation (ft)	1463.2	Slope (ft/ft)	0.00116
Watershed No.	16-C	Chapter 93 Class.	WWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	PA/NY State Line		
PWS Waters	Oswayo Creek	Distance from Outfall (mi)	Approx. 7.2

Changes Since Last Permit Issuance: Stream flow has been determined from data in the USGS publication *Selected Stream Flow Characteristics for Streamgage Locations in and near Pennsylvania*. See Attachment B.

Other Comments:

No downstream water supply is expected to be affected by this discharge with the limitations, monitoring, and conditions proposed. The Department considers the Pennsylvania-New York state border to be the next nearest water supply for modeling purposes because there is no nearer public water supply on Oswayo Creek.

Stormwater Requirements

The facility is not subject to the requirements for Stormwater discharge from industrial activities per 40 CFR 122.26(b)(14)(iii) because storm water does not come in contact with “overburden, raw material, intermediate products, finished products, byproducts or waste products”.

Treatment Facility Summary
Treatment Facility Name: JJ Bucher Treatment Facility

WQM Permit No.	Issuance Date
5385201	11/26/1985

Changes Since Last Permit Issuance: None

Comments: Wastewater treatment consists of an oil/water separator, a series of four 2,100-gallon settling tanks and a 350 bbl (14,700 gallon) steel storage tank. No wastewater is trucked to the site for treatment. The facility receives no other types of wastewater such as natural gas wastewater/hydraulic fracturing flow back water. No chemical additives are added to the wastewater.

Compliance History	
Summary of DMRs:	The facility has not discharged since October 2012. Per inspection reports the permittee has been trucking the small amount of water received to New York for well plugging and reuse. The permittee began using the eDMR system in May 2019.
Summary of Inspections:	The facility has been inspected annually over the past permit term. The most recent inspection of the discharge, on October 3, 3019, by Brandon Shihinski, WQS, identified no violations at the time of inspection.
Other Comments:	A WMS query found no open violations in eFACTS for JJ Bucher Producing Corporation.

Existing Effluent Limitations and Monitoring Requirements								
Parameter	**Effluent Limitations**						**Monitoring Requirements**	
	Mass Units (lbs/day) (1)		**Concentrations (mg/L)**				**Minimum (2) Measurement Frequency**	**Required Sample Type**
	Average Monthly	**Daily Maximum**	**Minimum**	**Average Monthly**	**Daily Maximum**	**Instant. Maximum**		
Flow (MGD)	Report	0.02	XXX	XXX	XXX	XXX	1/day	Measured
pH	XXX	XXX	6.0	XXX	XXX	9.0	1/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Total Dissolved Solids	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Oil and Grease	XXX	XXX	XXX	15	XXX	30	1/month	Grab
Acidity, Total (as CaCO3)	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Alkalinity, Total (as CaCO3)	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Iron, Dissolved	XXX	XXX	XXX	XXX	XXX	7.0	1/month	Grab
Iron, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Benzene	0.31	0.48	XXX	1.9	2.9	4.7	1/month	Grab
Chloride	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Bromide	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	0.02
Latitude	41º 58' 8.27"	**Longitude**	-78º 12' 15.40"

Wastewater Description: Other Miscellaneous Discharges

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH	6 – 9 std. units	Min - Max		25 PA § 95.2(1)
Oil and Grease	15/30	Mo. Ave./Inst. Max		25 PA § 95.2(2)(ii)
Dissolved Iron	7.0	Inst. Max		25 PA § 95.2(4)

Comments: The above limits are included in the existing permit and will remain.

The discharge fits under the Effluent Limitation Guidelines (ELGs) at 40 CFR §435.60, Oil and Extraction Point Source, Subpart F – Stripper Category. However, these regulations have no specific discharge limitations.

The discharge is not subject to 40 CFR §437 for Centralized Waste Treatment because the wastewater is not trucked in.

Water Quality-Based Limitations

Because the facility has not discharged since 2012 and no current effluent data is available the previous analysis for the 2014 renewal will be reiterated here.

A reasonable potential analysis (see Attachment D) was conducted for the previous renewal which recommended monitoring for Total Dissolved Solids, Chloride, Cadmium and Silver, and recommended a limitation for Benzene.

In conjunction with the reasonable potential analysis PENTOXSD modeling was performed for parameters identified in the analysis as being candidates for it. See attachment E for the modeling inputs/outputs. The PENTOXSD model is a single discharge mass-balance water quality analysis model that includes consideration for mixing and other factors to determine recommended water quality-based limitations. The model incorporates the water quality criteria of Chapter 93 of the Department's regulations. Modeling was performed at the maximum discharge flow rate of 0.02 MGD. As noted above, the Pennsylvania-New York State line on Oswayo Creek was considered the nearest downstream water supply.

Benzene was monitored quarterly in the prior permit period and ranged from 0.17 to 1.25 and because the highest seen level was greater than 50% of the suggested limitation of 1.9 mg/L the limitation for Benzene was included in the permit and will remain.

While Cadmium and Silver monitoring were recommended by the analysis these were not included in the permit and will not be included at this time. Renewal sampling for these two parameters were non-detectable at 30 µg/L for Cadmium and 100 µg/L for Silver while their water-quality based limits were determined to be 92 µg/L and 697 µg/L, respectively. Monitoring for the prior renewal was not detect for both of these parameters at a detection level of 10 µg/L.

Bromide monitoring was also included in the permit due to the significant levels seen in the discharge at 185 mg/L which is greater than the Department's screening level of 10 mg/L.

All of these existing monitoring requirements and limitations will remain in the current permit.

Because no data is available to conduct a current reasonable potential analysis, the draft permit will include additional conditions. The following conditions will be included in Part C of the permit for the permittee to notify the Department when discharge is expected to recommence and to submit a new NPDES application which would include up-to-date discharge sampling after recommencing the discharge. Dates for the report submittal assume that this permit will be issued in January 2020 and will be changed if this is not the case.

I. Recommencement of Discharge

1. The permittee shall notify the Department in writing at least 30 days prior to recommencing discharge at the facility and the notice shall include any proposed changes in operation from those currently permitted.

2. *Refer to Part A.III.C.1. and A.III.C.2. of this NPDES Permit regarding planned changes to the facility or waste stream if the permittee intends any changes in operations from those currently permitted. Such changes may require approval by the Department through a NPDES Permit amendment prior to implementation.*

3. *Within six months after resuming discharge at the facility, the permittee must submit a complete NPDES Permit application with all requirements for a permit renewal including, but not limited to, complete discharge information and all required influent and effluent monitoring. All effluent monitoring should meet the Department's Target Quantitation Limits (QLs) in order to give the Department adequate information to conduct a reasonable potential analysis. The Department will evaluate the application to determine whether additional monitoring or effluent limitations or other permit conditions should be included in the NPDES Permit.*

4. *Changes to the treatment process may also require approval through a Water Quality Management Permit pursuant to the Clean Streams Law and 25 Pa Code §91 prior to implementation.*

II. Reporting of Outlook

The permittee shall submit annual reports to the Department specifying whether the permittee expects to recommence discharge in the following year and when the anticipated startup would occur. The reports shall be due by the anniversary of the effective date of this permit for each year of coverage under this permit.

These reports shall be due on February 1, 2021; February 1, 2022; February 1, 2023; February 1, 2024; and February 1, 2025 and shall be submitted to the DEP Northcentral Regional Office.

Best Professional Judgment (BPJ) Limitations

Comments: The existing Total Suspended Solids (TSS) limitations were based on BPJ. No additional BPJ limits are necessary for this discharge at this time beyond the technology and water quality-based limitations noted above.

Anti-Backsliding

No limitations were made less stringent consistent with the anti-degradation requirements of the Clean Water Act and 40 CFR 122.44(l).

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	0.02	XXX	XXX	XXX	XXX	1/day	Measured
pH	XXX	XXX	6.0	XXX	XXX	9.0	1/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Total Dissolved Solids	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Oil and Grease	XXX	XXX	XXX	15	XXX	30	1/month	Grab
Acidity, Total (as CaCO3)	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Alkalinity, Total (as CaCO3)	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Iron, Dissolved	XXX	XXX	XXX	XXX	XXX	7.0	1/month	Grab
Iron, Total	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Benzene	0.31	0.48	XXX	1.9	2.9	4.7	1/month	Grab
Chloride	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Bromide	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

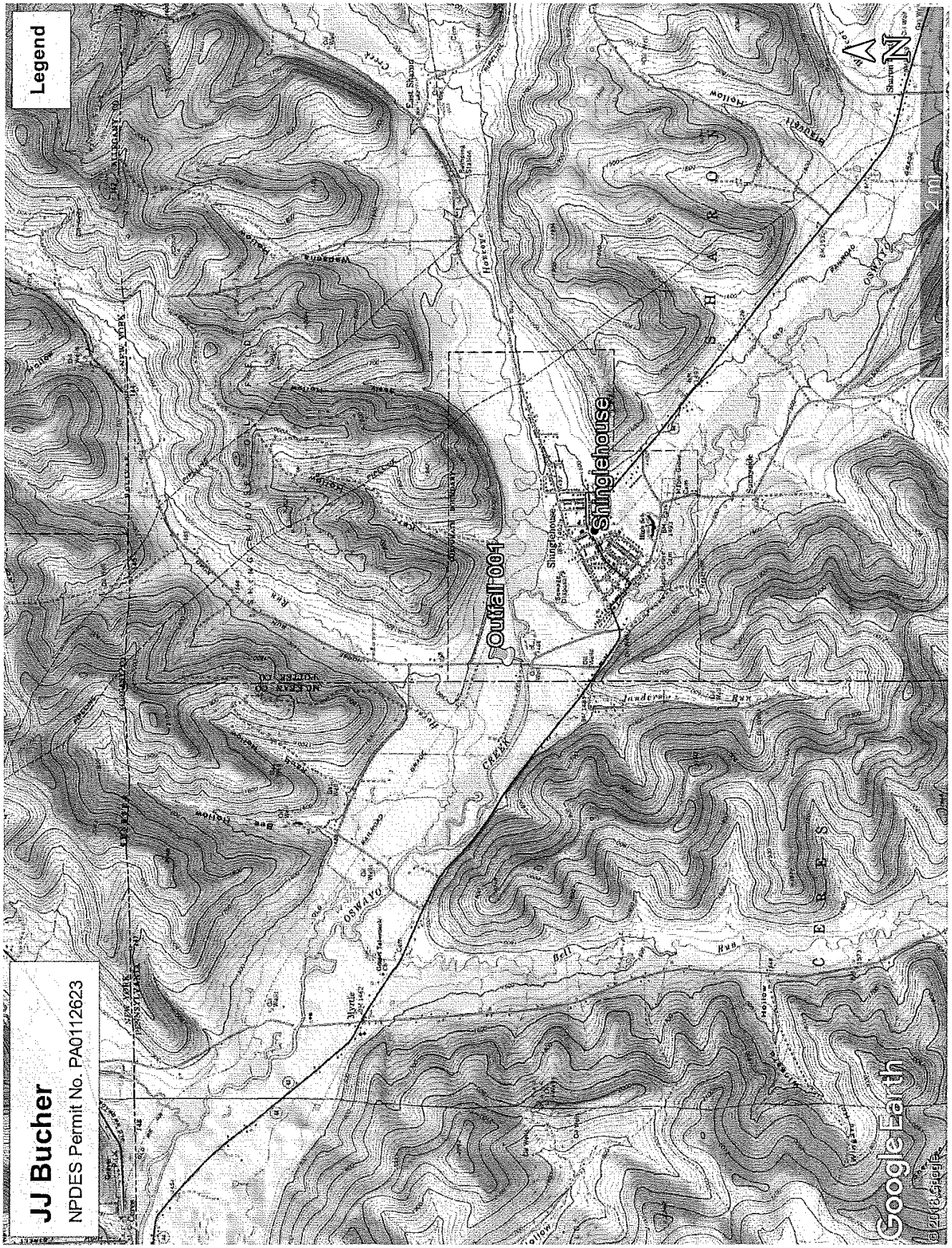
Compliance Sampling Location: Outfall 001

Other Comments: The above limitations and monitoring are unchanged from the existing permit.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	PENTOXSD for Windows Model (see Attachment **E**)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment **D**)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Industrial Permits, 9/10/13
☒	Other: *Selected Stream Flow Characteristics for Streamgage Locations in and near Pennsylvania*, Stucky and Roland, 2011, pgs 13 & 26

Attachments:

A. Discharge Location Map
B. Stream Flow Reference
C. Text of 40 CFR §435.60
D. Toxics Screening Analysis (2014)
E. PENTOXSD Modeling (2014)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NPDES Permit No. PA0112623
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Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01614000	Back Creek near Jones Springs, W.Va.	39.512	-78.037	235	N
01614090	Conococheague Creek near Fayetteville, Pa.	39.930	-77.439	5.05	N
01614500	Conococheague Creek at Fairview, Md.	39.716	-77.825	494	N
01616500	Opequon Creek near Martinsburg, W.Va.	39.424	-77.939	273	N
01617000	Tuscarora Creek above Martinsburg, W.Va.	39.470	-77.971	11.3	N
01617800	Marsh Run at Grimes, Md.	39.515	-77.777	18.9	N
01618000	Potomac River at Shepherdstown, W.Va.	39.435	-77.801	5,939	N
01619000	Antietam Creek near Waynesboro, Pa.	39.716	-77.607	93.5	N
01619500	Antietam Creek near Sharpsburg, Md.	39.450	-77.730	281	LF
01637500	Catoctin Creek near Middletown, Md.	39.427	-77.556	66.9	N
01639000	Monocacy River at Bridgeport, Md.	39.679	-77.235	173	N
01639140	Piney Creek near Taneytown, Md.	39.661	-77.221	31.3	N
01639500	Big Pipe Creek at Bruceville, Md.	39.612	-77.237	102	N
01640500	Owens Creek at Lantz, Md.	39.677	-77.464	5.93	N
01640965	Hunting Creek near Foxville, Md.	39.620	-77.466	2.14	N
01640970	Hunting Creek Tributary near Foxville, Md.	39.628	-77.462	4.01	N
01641000	Hunting Creek at Jimtown, Md.	39.594	-77.397	18.4	LF
01641500	Fishing Creek near Lewistown, Md.	39.527	-77.467	7.29	N
01642500	Linganore Creek near Frederick, Md.	39.415	-77.333	82.3	LF
01643000	Monocacy River at Jug Bridge near Frederick, Md.	39.403	-77.366	817	N
01643500	Bennett Creek at Park Mills, Md.	39.294	-77.407	62.8	N
03007800	Allegheny River at Port Allegany, Pa.	41.819	-78.293	248	N
03008000	Newell Creek near Port Allegany, Pa.	41.895	-78.349	7.79	N
03009680	Potato Creek at Smethport, Pa.	41.810	-78.430	160	N
03010500	Allegheny River at Eldred, Pa.	41.963	-78.386	550	N
03010655	Oswayo Creek at Shinglehouse, Pa.	41.962	-78.198	98.7	N
03011020	Allegheny River at Salamanca, N.Y.	42.156	-78.715	1,608	N
03011800	Kinzua Creek near Guffey, Pa.	41.766	-78.719	38.8	N
03012550	Allegheny River at Kinzua Dam, Pa.	41.841	-79.012	2,180	Y
03013000	Conewango Creek at Waterboro, N.Y.	42.171	-79.069	290	N
03014500	Chadakoin River at Falconer, N.Y.	42.113	-79.204	194	Y
03015000	Conewango Creek at Russell, Pa.	41.938	-79.133	816	Y
03015280	Jackson Run near North Warren, Pa.	41.903	-79.238	12.8	N
03015500	Brokenstraw Creek at Youngsville, Pa.	41.853	-79.317	321	N
03016000	Allegheny River at West Hickory, Pa.	41.571	-79.408	3,660	Y
03017500	Tionesta Creek at Lynch, Pa.	41.602	-79.050	233	N
03020000	Tionesta Creek at Tionesta Creek Dam, Pa.	41.478	-79.444	479	Y
03020500	Oil Creek at Rouseville, Pa.	41.482	-79.695	283	N
03021350	French Creek near Wattsburg, Pa.	42.015	-79.783	92.0	N
03021410	West Branch French Creek near Lowville, Pa.	42.082	-79.850	52.3	N
03021500	French Creek at Carters Corners, Pa.	41.956	-79.877	208	N
03021520	French Creek near Union City, Pa.	41.908	-79.897	221	Y
03022540	Woodcock Creek at Blooming Valley, Pa.	41.691	-80.048	31.1	N
03022554	Woodcock Creek at Woodcock Creek Dam, Pa.	41.696	-80.108	45.6	Y
03023100	French Creek at Meadville, Pa.	41.633	-80.160	788	Y

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.---Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
[5]01611500	1924–2008	83	37.2	39.3	56.4	45.6	65.6	56.0
[4]01613000	1934–2008	75	270	286	446	335	534	453
01613050	1967–2008	40	0	0	.1	<.1	.4	.2
[5]01614000	1930–2008	41	3.2	3.8	8.2	5.4	11.4	8.1
01614090	1962–1981	19	.2	.3	.8	.4	1.0	.7
[4]01614500	1930–2008	79	48.1	55.0	91.9	65.3	105	81.4
[5]01616500	1949–2008	60	34.4	36.7	54.4	41.0	61.9	48.7
01617000	1950–2008	24	.8	1.1	2.3	1.3	2.7	1.5
[4]01617800	1966–2008	43	.2	.5	3.0	.9	3.4	1.4
01618000	1930–2004	68	333	424	708	516	869	680
01619000	1950–2008	19	22.5	23.4	37.5	25.9	41.8	32.9
[4]01619500	1901–2008	82	57.9	65.2	93.1	72.4	103	82.5
[4]01637500	1949–2008	60	.6	.9	3.2	1.7	5.4	4.2
[4]01639000	1944–2008	65	.6	.8	4.7	2.9	8.2	6.6
[4]01639140	1992–2001	10	0	.1	.9	.3	1.5	.8
[4]01639500	1949–2008	60	—	7.1	23.9	10.4	26.6	17.2
[4]01640500	1933–1984	52	.1	.2	.6	.3	.8	.6
[4]01640965	1983–1994	12	<.1	<.1	.1	.1	.1	.1
[4]01640970	1983–1991	9	0.1	0.1	0.3	0.2	0.5	0.4
[4]01641000	[3]1951–1968	18	.9	1.1	1.9	1.5	2.5	1.9
[4]01641000	[2]1970–1991	22	2.1	2.4	3.6	3.2	4.6	4.2
[4]01641500	1949–1984	36	.8	.9	1.5	1.1	1.8	1.4
[4]01642500	[3]1933–1970	35	6.0	6.8	15.3	9.0	18.5	13.4
[4]01642500	[2]1972–1982	11	7.2	8.6	18.1	12.2	23.9	19.9
[4]01643000	1931–2008	78	45.1	49.2	105	63.9	128	93.1
[4]01643500	1950–2008	50	3.2	3.8	11.0	5.9	13.0	10.2
03007800	1976–2008	33	13.2	15.4	35.2	20.9	47.8	35.5
03008000	1968–1979	12	0	0	.2	<.1	.6	<.1
03009680	1976–1995	20	11.2	13.5	26.9	17.2	38.8	29.5
03010500	1941–2008	68	27.6	31.0	65.0	42.8	91.5	63.0
03010655	1976–2008	33	4.9	5.7	11.8	7.4	15.6	10.6
03011020	1905–2008	104	117	127	218	159	291	217
03011800	1967–2008	42	4.2	4.9	8.8	6.2	12.1	9.0
03012550	[2]1967–1991	25	—	414	681	542	944	828
03012550	[3]1937–1965	29	168	176	260	212	319	267
03013000	1940–1993	54	28.2	31.0	48.3	35.1	58.7	41.5
03014500	1936–2008	73	7.4	10.8	28.6	15.3	41.0	24.1
03015000	[2]1951–2008	58	76.4	81.7	143	95.1	180	115
03015000	[3]1941–1949	9	69.6	71.6	122	86.5	141	131
03015280	1964–1978	15	.7	.9	1.9	1.3	2.7	2.0
03015500	1911–2008	98	32.2	34.4	54.8	40.7	70.1	51.4
03016000	[2]1967–2008	44	527	579	1,230	708	1,630	906
03016000	[3]1943–1965	23	292	312	466	368	560	486
03017500	1939–1979	41	14.6	16.3	30.0	22.1	42.2	35.4
03020000	1942–1991	50	7.5	14.8	72.6	40.7	86.2	67.9

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of December 3, 2019

Title 40 → Chapter I → Subchapter N → Part 435 → Subpart F

Title 40: Protection of Environment
PART 435—OIL AND GAS EXTRACTION POINT SOURCE CATEGORY

Subpart F—Stripper Subcategory

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§435.60 Applicability; description of the stripper subcategory.

The provisions of this subpart are applicable to those onshore facilities which produce 10 barrels per well per calendar day or less of crude oil and which are operating at the maximum feasible rate of production and in accordance with recognized conservation practices. These facilities are engaged in production, and well treatment in the oil and gas extraction industry.

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§435.61 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 shall apply to this subpart.

(b) The term "onshore" shall mean all land areas landward of the inner boundary of the territorial seas as defined in 40 CFR 125.1(gg).

(c) The term "well" shall means crude oil producing wells and shall not include gas wells or wells injecting water for disposal or for enchanced recovery of oil or gas.

(d) The term "gas well" shall mean any well which produces natural gas in a ratio to the petroleum liquids produced greater than 15,000 cubic feet of gas per 1 barrel (42 gallons) of petroleum liquids.

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TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.1

Facility: JJ Bucher Producing Corp | NPDES Permit No.: PA0112623 | Outfall: 001
Analysis Hardness (mg/L): 126 | Discharge Flow (MGD): 0.02 | Analysis pH (SU): 7

Parameter		Maximum Concentration in Application or DMRs (µg/L)	Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Total Dissolved Solids		35800000	500000	Yes	225400000	Monitor
Chloride		17400000	250000	Yes	112700000	Monitor
Bromide		185000	N/A	No		
Sulfate	<	100	250000	No (Value < QL)		
1,4-Dioxane			N/A			
Total Aluminum	<	500	750	No		
Total Barium		870	2400	No		
Total Boron	<	1000	1600	No		
Total Cobalt	<	100	19	Yes	5338	No Limits/Monitoring
Total Iron		11400	1500	Yes	421466	No Limits/Monitoring
Dissolved Iron	<	500	300	Yes	84293	No Limits/Monitoring
Total Manganese		1820	1000	Yes	280977	No Limits/Monitoring
Total Molybdenum	<	100	N/A	No		
Total Arsenic	<	10	10	Yes	2809	No Limits/Monitoring
Total Copper	<	100	10.91	Yes	1514	No Limits/Monitoring
Total Lead	<	100	3.23	Yes	1260	No Limits/Monitoring
Total Nickel	<	100	63.2	Yes	18418	No Limits/Monitoring
Total Beryllium	<	10	N/A	No		
Total Cadmium	<	30	0.289	Yes	92	Monitor
Total Silver	<	100	4.79	Yes	697	Monitor
Total Zinc	<	100	142.5	No		
Toluene		169	330	No		
Benzene		1250	1.2	Yes	1902	Establish Limits
Total Chromium	<	100	N/A	No		
Osmotic Pressure (mOs/kg)	<	10	50000	No		
Phenol		7	10400	No		

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin	Stream Code:	Stream Name:
16C	57116	OSWAYO CREEK

RMI	Name	Permit Number	Disc Flow (mgd)
11.40	JJ Bucher	PA0112623	0.0200

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent WQBEL (µg/L)	Most Stringent WQBEL Criterion
ARSENIC	10	INPUT	15.602	2809.774	THH
BENZENE	215	INPUT	335.435	1902.935	CRL
CADMIUM	30	INPUT	46.805	92.879	CFC
CHLORIDE (PWS)	1.74E+07	INPUT	2.714E+07	1.127E+08	THH
COBALT	100	INPUT	156.016	5338.57	CFC
COPPER	100	INPUT	156.016	1514.028	AFC
DISSOLVED IRON	500	INPUT	780.08	84293.22	THH
LEAD	100	INPUT	156.016	1260.659	CFC
MANGANESE	1820	INPUT	2839.493	280977.4	THH
NICKEL	100	INPUT	156.016	18418.01	CFC
PHENOLICS (PWS)	7	INPUT	10.921	2254.152	THH
SILVER	100	INPUT	156.016	697.557	AFC
TOTAL DISSOLVED SOLIDS (PWS	3.58E+07	INPUT	5.585E+07	2.2541E+08	THH
TOTAL IRON	11400	INPUT	17785.83	421466.1	CFC

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
57116	11.40	1463.20	150.00	0.00000	0.00	☑

Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary Hard	Tributary pH	Stream Hard	Stream pH	Analysis Hard	Analysis pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.05775	0	0	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH
		(mgd)	(mgd)	(mgd)						(mg/L)	
JJ Bucher	PA0112623	0.02	0	0	0	0	0	0	0	8810	6.9

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
ARSENIC	10	0	0.5	0.5	0	0	0	0	1	0
BENZENE	215	0	0.5	0.5	0	0	0	0	1	0
CADMIUM	30	0	0.5	0.5	0	0	0	0	1	0
CHLORIDE (PWS)	1.7E+07	0	0.5	0.5	0	0	0	0	1	0
COBALT	100	0	0.5	0.5	0	0	0	0	1	0
COPPER	100	0	0.5	0.5	0	0	0	0	1	0
DISSOLVED IRON	500	0	0.5	0.5	0	0	0	0	1	0
LEAD	100	0	0.5	0.5	0	0	0	0	1	0
MANGANESE	1820	0	0.5	0.5	0	0	0	0	1	0
NICKEL	100	0	0.5	0.5	0	0	0	0	1	0
PHENOLICS (PWS)	7	0	0.5	0.5	0	0	0	0	1	0
SILVER	100	0	0.5	0.5	0	0	0	0	1	0
TOTAL DISSOLVED SOLIDS (PWS)	3.6E+07	0	0.5	0.5	0	0	0	0	1	0
TOTAL IRON	11400	0	0.5	0.5	0	0	0	0	1	0

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
57116	9.44	1451.20	158.00	0.00000	0.00	☑

Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary Hard	Tributary pH	Stream Hard	Stream pH	Analysis Hard	Analysis pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.05775	0	0	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
		0	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
ARSENIC	0	0	0.5	0.5	0	0	0	0	1	0
BENZENE	0	0	0.5	0.5	0	0	0	0	1	0
CADMIUM	0	0	0.5	0.5	0	0	0	0	1	0
CHLORIDE (PWS)	0	0	0.5	0.5	0	0	0	0	1	0
COBALT	0	0	0.5	0.5	0	0	0	0	1	0
COPPER	0	0	0.5	0.5	0	0	0	0	1	0
DISSOLVED IRON	0	0	0.5	0.5	0	0	0	0	1	0
LEAD	0	0	0.5	0.5	0	0	0	0	1	0
MANGANESE	0	0	0.5	0.5	0	0	0	0	1	0
NICKEL	0	0	0.5	0.5	0	0	0	0	1	0
PHENOLICS (PWS)	0	0	0.5	0.5	0	0	0	0	1	0
SILVER	0	0	0.5	0.5	0	0	0	0	1	0
TOTAL DISSOLVED SOLIDS (PWS)	0	0	0.5	0.5	0	0	0	0	1	0
TOTAL IRON	0	0	0.5	0.5	0	0	0	0	1	0

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
57116	4.20	1430.00	241.00	0.00000	0.10	☑

Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary Hard	Tributary pH	Stream Hard	Stream pH	Analysis Hard	Analysis pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.05775	0	0	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH
		(mgd)	(mgd)	(mgd)						(mg/L)	
		0	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
ARSENIC	0	0	0.5	0.5	0	0	0	0	1	0
BENZENE	0	0	0.5	0.5	0	0	0	0	1	0
CADMIUM	0	0	0.5	0.5	0	0	0	0	1	0
CHLORIDE (PWS)	0	0	0.5	0.5	0	0	0	0	1	0
COBALT	0	0	0.5	0.5	0	0	0	0	1	0
COPPER	0	0	0.5	0.5	0	0	0	0	1	0
DISSOLVED IRON	0	0	0.5	0.5	0	0	0	0	1	0
LEAD	0	0	0.5	0.5	0	0	0	0	1	0
MANGANESE	0	0	0.5	0.5	0	0	0	0	1	0
NICKEL	0	0	0.5	0.5	0	0	0	0	1	0
PHENOLICS (PWS)	0	0	0.5	0.5	0	0	0	0	1	0
SILVER	0	0	0.5	0.5	0	0	0	0	1	0
TOTAL DISSOLVED SOLIDS (PWS)	0	0	0.5	0.5	0	0	0	0	1	0
TOTAL IRON	0	0	0.5	0.5	0	0	0	0	1	0

PENTOXSD Analysis Results

Hydrodynamics

SWP Basin	Stream Code:	Stream Name:
16C	57116	OSWAYO CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope	Depth (ft)	Width (ft)	WD Ratio	Velocity (fps)	Reach Trav Time (days)	CMT (min)
Q7-10 Hydrodynamics											
11.400	8.6625	0	8.6625	0.03093	0.0012	0.7993	52.428	65.596	0.2075	0.5773	153.737
9.440	9.1245	0	9.1245	NA	0.0008	0.8172	54.836	67.102	0.2036	1.5727	NA
4.200	13.918	0.1547	13.763	NA	0	0	0	0	0	0	NA
Qh Hydrodynamics											
11.400	49.033	0	49.033	0.03093	0.0012	1.7115	52.428	30.633	0.5468	0.2191	49.35
9.440	51.311	0	51.311	NA	0.0008	1.7472	54.836	31.386	0.5356	0.5979	NA
4.200	74.211	0.1547	74.056	NA	0	0	0	0	0	0	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number
11.40	JJ Bucher	PA0112623

AFC

Q7-10: **CCT (min)** 15 **PMF** 0.312 **Analysis pH** 6.998 **Analysis Hardness** 198.469

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ARSENIC	0	0	0	0	340	340	30074.33
	Dissolved WQC. Chemical translator of 1 applied.						
CADMIUM	0	0	0	0	3.92	4.282	378.774
	Dissolved WQC. Chemical translator of 0.915 applied.						
COPPER	0	0	0	0	25.636	26.705	2362.127
	Dissolved WQC. Chemical translator of 0.96 applied.						
LEAD	0	0	0	0	135.036	195.386	17282.67
	Dissolved WQC. Chemical translator of 0.691 applied.						
NICKEL	0	0	0	0	836.206	837.882	74113.94
	Dissolved WQC. Chemical translator of 0.998 applied.						
SILVER	0	0	0	0	10.458	12.304	1088.301
	Dissolved WQC. Chemical translator of 0.85 applied.						
PHENOLICS (PWS)	0	0	0	0	NA	NA	NA
BENZENE	0	0	0	0	640	640	56610.5
CHLORIDE (PWS)	0	0	0	0	NA	NA	NA
TOTAL IRON	0	0	0	0	NA	NA	NA
DISSOLVED IRON	0	0	0	0	NA	NA	NA
MANGANESE	0	0	0	0	NA	NA	NA
COBALT	0	0	0	0	95	95	8403.122
TOTAL DISSOLVED SOLIDS (PWS)	0	0	0	0	NA	NA	NA

CFC

Q7-10: **CCT (min)** 153.737 **PMF** 1 **Analysis pH** 6.999 **Analysis Hardness** 130.998

Parameter	Stream Conc. (µg/L)	Stream CV	Trib Conc. (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ARSENIC	0	0	0	0	150	150	42146.61
	Dissolved WQC. Chemical translator of 1 applied.						
CADMIUM	0	0	0	0	0.297	0.331	92.879
	Dissolved WQC. Chemical translator of 0.898 applied.						
COPPER	0	0	0	0	11.28	11.75	3301.471
	Dissolved WQC. Chemical translator of 0.96 applied.						

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
11.40	**JJ Bucher**	**PA0112623**						
	LEAD	0	0	0	0	3.372	4.487	1260.659
		Dissolved WQC. Chemical translator of 0.752 applied.						
	NICKEL	0	0	0	0	65.353	65.55	18418.01
		Dissolved WQC. Chemical translator of 0.997 applied.						
	SILVER	0	0	0	0	NA	NA	NA
	PHENOLICS (PWS)	0	0	0	0	NA	NA	NA
	BENZENE	0	0	0	0	130	130	36527.06
	CHLORIDE (PWS)	0	0	0	0	NA	NA	NA
	TOTAL IRON	0	0	0	0	1500	1500	421466.1
		WQC = 30 day average. PMF = 1.						
	DISSOLVED IRON	0	0	0	0	NA	NA	NA
	MANGANESE	0	0	0	0	NA	NA	NA
	COBALT	0	0	0	0	19	19	5338.57
TOTAL DISSOLVED SOLIDS (PWS)		0	0	0	0	NA	NA	NA

THH

Q7-10: **CCT (min)** 153.737 **PMF** 1 **Analysis pH** NA **Analysis Hardness** NA

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ARSENIC	0	0	0	0	10	10	2809.774
CADMIUM	0	0	0	0	NA	NA	NA
COPPER	0	0	0	0	NA	NA	NA
LEAD	0	0	0	0	NA	NA	NA
NICKEL	0	0	0	0	610	610	171396.2
SILVER	0	0	0	0	NA	NA	NA
PHENOLICS (PWS)	0	0	0	0	5	5	2254.152
	WQC applied at RMI 4.2 with a design stream flow of 13.91775.						
BENZENE	0	0	0	0	NA	NA	NA
CHLORIDE (PWS)	0	0	0	0	250000	250000	1.127E+08
	WQC applied at RMI 4.2 with a design stream flow of 13.91775.						

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number							
11.40	**JJ Bucher**	**PA0112623**							
	TOTAL IRON		0	0	0	0	NA	NA	NA
	DISSOLVED IRON		0	0	0	0	300	300	84293.22
	MANGANESE		0	0	0	0	1000	1000	280977.4
	COBALT		0	0	0	0	NA	NA	NA
	TOTAL DISSOLVED SOLIDS (PWS)		0	0	0	0	500000	500000	2.2541E+08

WQC applied at RMI 4.2 with a design stream flow of 13.91775.

CRL

Qh: **CCT (min)** 49.35 **PMF** 1

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ARSENIC	0	0	0	0	NA	NA	NA
CADMIUM	0	0	0	0	NA	NA	NA
COPPER	0	0	0	0	NA	NA	NA
LEAD	0	0	0	0	NA	NA	NA
NICKEL	0	0	0	0	NA	NA	NA
SILVER	0	0	0	0	NA	NA	NA
PHENOLICS (PWS)	0	0	0	0	NA	NA	NA
BENZENE	0	0	0	0	1.2	1.2	1902.935
CHLORIDE (PWS)	0	0	0	0	NA	NA	NA
TOTAL IRON	0	0	0	0	NA	NA	NA
DISSOLVED IRON	0	0	0	0	NA	NA	NA
MANGANESE	0	0	0	0	NA	NA	NA
COBALT	0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number							
11.40	**JJ Bucher**	**PA0112623**							
TOTAL DISSOLVED SOLIDS (PWS)			0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number
11.40	JJ Bucher	PA0112623