pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0247537**
Facility Type	**Industrial**	APS ID	**835064**
Major / Minor	**Minor**	Authorization ID	**1013286**

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

Applicant and Facility Information

Applicant Name	**Four Seasons Produce, Inc.**	Facility Name	**Four Seasons Produce, Inc.**
Applicant Address	400 Wabash Road, PO Box 788	Facility Address	400 Wabash Road
	Ephrata, PA 17522		Ephrata, PA 17522
Applicant Contact	Randy Groff	Facility Contact	Randy Groff
Applicant Phone	(717) 721-2795	Facility Phone	(717) 721-2795
Client ID	136034	Site ID	637527
SIC Code	4222	Municipality	East Cocalico Township
SIC Description	Trans. & Utilities - Refrigerated Warehousing And Storage	County	Lancaster
Date Application Received	February 10, 2014	EPA Waived?	Yes
Date Application Accepted	August 21, 2014	If No, Reason	

Purpose of Application: Renewal of NPDES permit for discharge of non-contact cooling water and stormwater.

Summary of Review

Four Seasons Produce, Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on September 28, 2009 and became effective on October 1, 2009. The permit authorized discharge of industrial wastewater from the existing facility located in East Cocalico Township, Lancaster County into Cocalico Creek. The existing permit expiration date was September 30, 2014, and the permit has been administratively extended since that time.

Per the previous fact sheet, Four Seasons Produce distribution center receives, stores, and ships produce. The facility previously used public water in its cooling system and discharged a blowdown from the cooling tower to the public sewer system. The sewer authority wanted the small amount of noncontact cooling water out of the sewer system. Four Seasons Produce now discharges the blowdown to its stormwater detention pond, where it flows to Cocalico Creek by way of the storm drain piping system.

Changes to this renewal: A Total Copper monitoring requirement has been added to the permit.

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

Approve	Deny	Signatures	Date
		Benjamin R. Lockwood / Environmental Engineering Specialist	October 29, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Summary of Review

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.

Supplemental information for this report is located in an attachment.

Four Seasons Produce PA0247537

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.029
Latitude	40º 12' 14"	Longitude	76º 9' 6"
Quad Name	Ephrata	Quad Code	1736
Wastewater Description:	Noncontact Cooling Water (NCCW) and Stormwater		
Receiving Waters	Cocalico Creek	Stream Code	7656
NHD Com ID	57461731	RMI	13.5
Drainage Area	41.4 mi^2	Yield (cfs/mi^2)	0.096
Q_{7-10} Flow (cfs)	3.96	Q_{7-10} Basis	USGS PA StreamStats
Elevation (ft)	353	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	WWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, Siltation, Cause Unknown, Pathogens		
Source(s) of Impairment	Crop Related Agric, Grazing Related Agric, Urban Runoff/Storm Sewers, Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Ephrata Area Joint Authority Water System		
PWS Waters	Cocalico Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	3.4

Changes Since Last Permit Issuance: The USGS PA StreamStats is showing a drainage area of 41.4 mi^2 and a Q_{7-10} flow of 3.96 cfs at the point of discharge.

Other Comments: None

Compliance History	
Summary of DMRs:	A summary of the past 12-month DMR effluent data is presented on the next page of this fact sheet.
Summary of Inspections:	6/9/2014: A routine inspection was conducted by Andrew Hall, DEP Water Quality Specialist. He documented that the effluent consists of only non-contact cooling water from three chiller units which discharges to a retention pond. Water is drawn from East Cocalico Township water supply well. The facility was not discharging at the time of inspection, so readings were not taken. 2/24/2015: A routine inspection was conducted by Andrew Hall. He noted that monitoring was not being completed on holidays and weekends, and that the influent water meter was being used to report flow. He recommended that they begin monitoring effluent flow. Some black dust was present at Outfall 001, presumably runoff from the parking lot. No water quality concerns were noted. 4/26/2018: A routine inspection was conducted. The stormwater drain appeared free of debris and chiller effluent was not discharging at the time of inspection. Little to no algae growth was present on the surface of the pond.

Other Comments: There are currently no open violations associated with the permittee or the facility.

Compliance History

DMR Data for Outfall 001 (from September 1, 2018 to August 31, 2019)

Parameter	SEP-18	OCT-18	NOV-18	DEC-18	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19	JUL-19	AUG-19
Flow (MGD) Average Monthly	15990	11762	7374	6346	5660	6098	7531	11673	14319	18732	22170	19134
Flow (MGD) Daily Maximum	25439	17646	13414	10407	8058	9793	12362	14955	19904	24986	29124	23839
pH (S.U.) Minimum	7.8	8.2	8.4	8.3	8.3	8.4	8.4	8.1	7.9	8.4	8.4	8.5
Temperature (ºF) Minimum	65.4	66.8	58.9	62.6	55.3	54.1	57.1	66.1	68.0	67.2	68.3	66.8
Temperature (ºF) Average Monthly	72.2	72.1	66.9	66.5	65.8	65.7	68.9	68.9	70.4	73.7	77	74.8
Temperature (ºF) Daily Maximum	79	77.2	72.9	69.5	67.7	67.9	70.1	70.5	72.5	80.7	82.4	80.3

Existing Effluent Limitations and Monitoring Requirements

The table below summarizes the effluent limits and monitoring requirements implemented in the existing NDPES permit.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	2/week	Grab
Temperature (ºF)	XXX	XXX	Monitor & Report	Monitor & Report	Monitor & Report	XXX	2/week	I-S

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	.029
Latitude	40º 12' 14"	**Longitude**	76º 9' 6"

Wastewater Description: Noncontact Cooling Water (NCCW) and Stormwater

pH

PA Code §§ 95.2(1) requires effluent pH limits of 6.0 to 9.0 standard units (S.U.) at all times in effluent. The permit will continue to require pH limit of 6.0 to 9.0 S.U.

Temperature Limitations

A reasonable potential (RP) analysis was performed for temperature which is the main pollutant of concern in the NCCW. Effluent limitations for temperature were calculated using the Case 2 Thermal Worksheet with an updated wastewater flow of 0.029 mgd, which is the maximum daily discharge. A stream Q_{7-10} flow of 3.96 cfs was used in the temperature worksheet. The worksheet recommended permit limits for a discharge to WWF of 110°F, which is the cap for limits generated by the worksheet. This is consistent with the existing Temperature limit for Outfall 001; therefore, it will remain the same. A printout of the worksheet is attached.

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the Pennsylvania Chesapeake Watershed Implementation Plan (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a Phase 2 Watershed Implementation Plan Wastewater Supplement (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. The Phase 2 Supplement was most recently revised on September 6, 2017. Industrial discharges have been prioritized by Central Office based on their delivered TN and TP loadings to the Bay. Significant industrial wastewater dischargers are facilities that discharge more than 75 lbs/day of TN or 25 lbs/day of TP on an average annual basis and the rest are classified as non-significant dischargers. DEP developed a Chesapeake Bay industrial waste (IW) monitoring plan for all industrial facilities that discharge to the Chesapeake Bay. This facility is classified as a non-significant discharger with little or no potential to introduce nutrients to the receiving stream; therefore, no monitoring for TP and TN series will be required at this time for Outfall 001.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Screening Analysis worksheet and PENTOXSD to develop appropriate permit requirements for toxic pollutants of concern.

Based on effluent sample results reported on the application, Sulfate, Total Antimony, Total Arsenic, Total Cadmium, Total Copper, Total Selenium, and Total Zinc were candidates for PENTOXSD modeling as these pollutants are discharged at a level that has the reasonable potential to cause excursions above the state water quality criteria. DEP's Standard Operating Procedure (SOP) No. BPNPSM-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends using the 90th percentile of long-term data for background and discharge characteristics when using PENTOXSD. A 90th percentile analysis was performed on data from October 2004 to December 2018, taken from the WQN Station ID 273 on the Conestoga River, resulting in a Stream pH of 8.4 and a Stream Hardness of 270 mg/l. The resulting WQBELs from PENTOXSD were entered into the Toxics Screening Analysis, which recommended a monitoring requirement for Total Copper. This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. PENTOXSD Model Results are attached to this fact sheet. The Toxics Screening Analysis uses the following logic:

a. Establish average monthly and instantaneous maximum (IMAX) limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

The maximum concentration reported for Total Copper was greater than 10% of its respective WQBEL, per DEP's SOP No. BPNPSM-PMT-033, a monitoring requirement will be established for this parameter. A monitoring frequency of 1/month will be used.

Chemical Additives

The following chemical additives are currently used at the plant and are expected to be present in the effluent:

Chemical Additive	Purpose	Maximum Usage (lb/day)	Usage Frequency
Formula 1345	Penetrate and disperse silt and slime	1.0	
Formula 1595	Biocide	72 ppm	Continuous
Formula 3020-F	Foam Control	0.42	
Formula 1598-G	Bacteria and biofilm control	0.18	
Ultra-Kleen Solution #1	Biocide	25	2/Week
Formula 1020	Biocide	21.62 ounces/1000 gal water	Continuous

These chemicals have been added to DEP's Approved List of Chemical Additives. The permit will include Part C conditions for chemical additive usage and reporting requirements.

Total Dissolved Solids (TDS)

Total Dissolved Solids and its major constituents including Bromide, Chloride, and Sulfate have become statewide pollutants of concern and threats to DEP's mission to prevent violations of water quality standards. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/l and the discharge flow exceeds 0.1 mgd, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 mgd or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/l.

Four Seasons Produce reported the maximum effluent TDS concentration of 2,990 mg/l and believed absent for Bromide. Based upon the data provided in the application, monitoring of TDS and its major constituents will not be included in the permit.

Stormwater

Outfall 001 receives all of the stormwater from the property. Four Seasons Produce is classified under SIC Code 8915 All materials are stored under roof, so the stormwater discharge does not fall within the EPA definition of stormwater associated with industrial activity per 40 CFR 122.26(b)(14); therefore, monitoring will not be required. Part C requirements for stormwater outfalls will be included in the permit.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is an aquatic life impairment due to nutrients from crop production (crop land or dry land), siltation from grazing in riparian or shoreline zones, and cause unknown from urban runoff/storm sewers. There is a recreational impairment due to pathogens from an unknown source. The discharge will not contribute to these impairments.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions addressed by DEP in this fact sheet.

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)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/week	Grab
Temperature (ºF)	XXX	XXX	Report Inst Min	Report	Report Daily Max	XXX	2/week	I-S
Total Copper	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite

Compliance Sampling Location: At discharge from cooling tower

Other Comments: None

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☒	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	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:
☐	Other: