pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0244635**
Facility Type	**Storm Water**	APS ID	**992780**
Major / Minor	**Minor**	Authorization ID	**1272501**

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

Applicant and Facility Information

Applicant Name	**Morton Salt, Inc.**	Facility Name	**Morton Salt Fairless Hills Facility**
Applicant Address	444 West Lake Street, Suite 3000	Facility Address	1121 Bordentown Road
	Chicago, IL 60606-0090		Morrisville, PA 19067-6702
Applicant Contact	Maureen Kelly	Facility Contact	Maureen Kelly
Applicant Phone	(312) 807-3329	Facility Phone	(312) 807-3329
Client ID	315117	Site ID	712407
SIC Code	5169	Municipality	Falls Township
SIC Description	Wholesale Trade - Chemicals And Allied Products, Nec	County	Bucks
Date Application Received	April 1, 2019	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Permit Renewal.

Summary of Review

Morton Salt, Inc. (Morton) has submitted an individual NPDES permit application to discharge stormwater from Fairless Hills bulk salt storage facility into Delaware River via detention basin. The stormwater discharge from salt storage facility was covered under NPDES General Permit PAR800157 issued in October 2008. It was determined that due to the bulk storage of salt and operations, this facility would be better served with Individual NPDES permit rather than General Permit (PAG03) for stormwater discharge associated with industrial activities. Therefore, individual NPDES permit PA0244635 was issued to previous owner, International Salt Company. Later, the permit was transferred to Morton Salt, Inc.

Morton Salt currently leases approximately 13.7 acres from Waste Management Inc. for its existing salt storage operations. Current operations at Morton's Fairless Hills Facility consists of the offloading salt products from marine vessels, bulk salt storage, and salt blending. Salt is received at the site via ships and is distributed from the site by truck to municipalities, independent contractors, and Morton's nearby salt packaging facility.

The discharge of stormwater from existing site activity is covered under Individual Permit for stormwater discharges associated with industrial activity. The type of constituent that are expected to be present in the discharge are the same as that would be expected from the site eligible for facility's previous General Permit with Appendix K (Salt Storage and Distribution Piles). Stormwater from the site is being discharged into Delaware River through Outfall 001.

Facility Operations:

Salt arrives at the facility via marine vessels and is off-loaded using clamshell grabs or buckets. Salt from ships is loaded into hoppers located on dock, which load trucks with salt product. Salt is then transported to various salt piles, which are stored in the western and eastern portions of the facility. A portion of stockpiled salt is transported by truck to Morton's nearby Fairless Hills Packaging plant for packaging and distribution. The road salt piles are located on asphalt pads to provide a clean surface for the salt and to minimize contact stormwater from entering groundwater. The piles are constructed and covered

Approve	Deny	Signatures	Date
		Ketan Thaker / Project Manager	
		Pravin C. Patel, P.E. / Environmental Engineer Manager	

Summary of Review

after each shipment by marine vessel. The number of days required to off-load a ship is dependent on the size of the vessel. Off-loading of the largest cargo (70,000 tons) could require up to 7 working days. Following build-out of the pile, 2-3 working days are typically required to cover the stockpile. However, up to 7 days may be necessary to account for unsafe weather conditions (e.g. high winds) that may delay the cover installation or when covering activities overlap with weekends, holidays etc. As such 14 days may be required form the start of off-loading a ship to when the cover system is installed. There may be times when multiple ship off-loading events may overlap (i.e. back to back) resulting in the stockpile potentially being uncovered for longer period of time then noted above. Otherwise, the covered pile only be maintained open along the working face, as necessary, to remove salt or in preparation to replenish the pile. A portion of the road salt is transported to the blended salt pile (Pile 3), where it is mixed with an additive. The additive is composed of magnesium chloride and distillers condensed solubles, molasses, or corn syrup, which is stored temporarily in a frac tank located on site until blending operations are completed. The road salt and blended salt products are distributed from stockpiles via truck to contractors and municipalities.

Stormwater Management System:

The existing stormwater management system at the site consists of a series of swales and a stormwater detention/sedimentation basin. The drainage area for outfall 001 is 13.7 acres and includes salt stockpiles, haul roads, truck scales, drainage swales and detention basin. Stormwater is routed through the stormwater management system and is discharged via Outfall 001. Four riprap swales located to the north and south of stockpiles that are designed to capture stormwater runoff from the pads and stockpiles and transport the stormwater to the detention basin. The riprap swales were designed to control the flow velocity to promote the settling of suspended sediment to the bottom of swale. The detention basin consists of an earthen base lined with an impervious membrane, a riprap channel, and vegetated banks to minimize erosion and absorb pollutants. The basin is designed to settle suspended solids present in stormwater and regulate the peak discharge rate of stormwater via engineered outlet control structure. The detention basin discharges into a riprap channel in the southwestern portion of the site that is also lined with an impervious membrane. The channel ultimately discharges to Delaware River.

The stormwater sampling results and DMRs show high concentrations of TDS, TSS, BOD5 and Chlorides in the effluent. Morton must address this issue by additional BMPs. This permit renewal includes monthly monitoring for TDS from November through April. Effluent limits for all the parameters will remain the same for this permit renewal and are based on 25 Pa Code 95.2, 95.10 and General Permit PAG-03, Appendix K for Salt Storage and Distribution.

Following are effluent limits:

PARAMETERS	EFFLUENT LIMITS (MG/L)	BASIS
pH (S.U.)	6.0 to 9.0 SU	25 Pa Code 95.2
BOD5	Report	Appendix K of PAG-03 (Salt Facility)
Total Suspended Solids	Report	Appendix K of PAG-03 (Salt Facility)
Total Dissolved Solids	Report	25 Pa Code 95.10
Osmotic Pressure (mOs/kg)	Report	BPJ
Oil and Grease	15.0	25 Pa Code 95.2
Nitrate-Nitrite as N	Report	BPJ
Total Nitrogen	Report	BPJ
Total Phosphorus	2.0	BPJ
Free Cyanide	Report	Appendix K of PAG-03 (Salt Facility)
Chloride	Report	Appendix K of PAG-03 (Salt Facility)

Act-14 Notifications to Falls Township and to Bucks County Planning Commission on March 25, 2019.

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*

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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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0
Latitude	40Âº 8' 5.64"	Longitude	-74Âº 45' 23.19"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Delaware River (WWF, MF)	Stream Code	
NHD Com ID	25486816	RMI	126.3100
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS), POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN, SOURCE UNKNOWN		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Compliance History

DMR Data for Outfall 001 (from October 1, 2018 to September 30, 2019)

Parameter	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18
Flow (GPD) Average Quarterly	55399			247318			184004			45507		
pH (S.U.) Instantaneous Minimum	7.1			6.1			8.05			7.38		
pH (S.U.) Instantaneous Maximum	7.1			6.1			8.05			7.75		
BOD5 (lbs/day) Average Quarterly	59.6			12.4			90.5			113.5		
BOD5 (lbs/day) Daily Maximum	59.6			12.4			90.5			113.5		
BOD5 (mg/L) Average Quarterly	129			6.0			59			229		
BOD5 (mg/L) Daily Maximum	129			6.0			59			229		
TSS (lbs/day) Average Quarterly	73.9			20.6			368.3			219.7		
TSS (lbs/day) Daily Maximum	73.9			20.6			368.3			219.7		
TSS (mg/L) Average Quarterly	160			10.0			240			579		
TSS (mg/L) Daily Maximum	160			10.0			240			579		
Total Dissolved Solids (lbs/day) Average Quarterly	19913.4			16892.9			10508.9			16091.8		
Total Dissolved Solids (lbs/day) Daily Maximum	19913.4			16892.9			10508.9			16091.8		
Total Dissolved Solids (mg/L) Average Quarterly	43100			8190			6848			42400		
Total Dissolved Solids (mg/L) Daily Maximum	43100			8190			6848			42400		
Osmotic Pressure (mOs/kg) Average Quarterly	1040			262			202			1390		
Osmotic Pressure (mOs/kg) Daily Maximum	1040			262			202			1390		

Oil and Grease (mg/L) Average Quarterly	6.2			< 4.8			6			9.05		
Oil and Grease (mg/L) Daily Maximum	6.2			< 4.8			6			9.05		
Nitrate-Nitrite (lbs/day) Average Quarterly	< 0.020			0.23			< 4.60			0.06		
Nitrate-Nitrite (lbs/day) Daily Maximum	< 0.020			0.23			< 4.60			0.06		
Nitrate-Nitrite (mg/L) Average Quarterly	< 0.020			0.11			< 3			0.15		
Nitrate-Nitrite (mg/L) Daily Maximum	< 0.020			0.11			< 3			0.15		
TKN (lbs/day) Average Quarterly	9.56			7.8			29.77			41.84		
TKN (lbs/day) Daily Maximum	9.56			7.8			29.77			41.84		
TKN (mg/L) Average Quarterly	20.7			3.78			19.4			110.25		
TKN (mg/L) Daily Maximum	20.7			3.78			19.4			110.25		
Total Phosphorus (lbs/day) Average Quarterly	0.35			0.56			1.81			1.58		
Total Phosphorus (lbs/day) Daily Maximum	0.35			0.56			1.81			1.58		
Total Phosphorus (mg/L) Average Quarterly	0.75			0.27			1.18			4.15		
Total Phosphorus (mg/L) Daily Maximum	0.75			0.27			1.18			4.15		
Free Cyanide (mg/L) Average Quarterly	< 0.020			0.44			0.014			0.07		
Free Cyanide (mg/L) Daily Maximum	< 0.020			0.44			0.014			0.07		
Chloride (lbs/day) Average Quarterly	8085.5			8229.9			5678			10057.4		
Chloride (lbs/day) Daily Maximum	8085.5			8229.9			5678			10057.4		
Chloride (mg/L) Average Quarterly	17500			3990			3700			26500		
Chloride (mg/L) Daily Maximum	17500			3990			3700			26500		

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 Quarterly	Daily Maximum	Minimum	Average Quarterly	Daily Maximum	Instant. Maximum		
Flow (GPD)	Report	XXX	XXX	XXX	XXX	XXX	1/quarter	Calculation
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
BOD5	Report	Report	XXX	Report	Report	XXX	1/quarter	Grab
TSS	Report	Report	XXX	Report	Report	XXX	1/quarter	Grab
Total Dissolved Solids	Report	Report	XXX	Report	Report	XXX	1/quarter	Grab
Total Dissolved Solids Nov 1 - Apr 30	Report Avg Mo	Report	XXX	Report Avg Mo	Report	XXX	1/month	Grab
Osmotic Pressure (mOs/kg)	XXX	XXX	XXX	Report	Report	XXX	1/quarter	Grab
Oil and Grease	XXX	XXX	XXX	15	30	XXX	1/quarter	Grab
Nitrate-Nitrite	Report	Report	XXX	Report	Report	XXX	1/quarter	Grab
TKN	Report	Report	XXX	Report	Report	XXX	1/quarter	Grab
Total Phosphorus	Report	Report	XXX	2.0	4.0	XXX	1/quarter	Grab
Free Cyanide	XXX	XXX	XXX	Report	Report	XXX	1/quarter	Grab
Chloride	Report	Report	XXX	Report	Report	XXX	1/quarter	Grab