Austin,Deanna

From: Hiltke, Mark F. (Newport News) [Mark.F.Hiltke@ngc.com]
Sent: Thursday, August 20, 2009 1:06 PM
To: Austin,Deanna
Cc: Thorn, Frank (Newport News)
Subject: Water Softener Discharge Building 78

Deanna,
The powerhouse (B78) operates a water softening system in its boiler system to contol hardness. City water hardness is reduced by by exchanging the Mg and Ca ions w/ Na ions. Every 2 or 3 days the system is regenerated by flushing with a NaCl brine solution. The resulting discharge has the following characteristics:

Discharge volume: 5500 gallons every 2 or 3 days
Average flow rate: 73 gpm
Temperature: Ambient
Avg. pH: 7.5

The discharge is automated and triggered by the # of gallons of water softened, approx. every 350,000 gallons. The discharge will enter outfall 015 on the north side of B78. Please add "Water Softener Regeneration Water" to Outfall 015. Call w/ any questions. Thanks...Mark

M.F. Hiltke
NGSB Environmental Engineer 3
534-4067

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 015
Outfall Description: Steam Condensate, Industrial AC Condensate from Building 78, water softener regeneration water, and river cooling water

SIC CODE: 3731

(X) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS [a]	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NA	NA	NL	1/3 Months	Estimate
pH (S.U.)	3		NA	6.0	9.0	1/3 Months	Grab
Temperature (^{0}C)	3		NA	NA	43	1/3 Months	I. S.
Dissolved Copper (ug/l) [b]	3		NA	NA	NL	1/6 Months	Grab
Dissolved Zinc (ug/l) [b]	3		NA	NA	NL	1/6 Months	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY, I.S. = Immersion Stabilization

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31); 2nd quarter (April 1 - June 30); 3rd quarter (July 1 - September 30); 4th quarter (October 1 - December 31). Sample results shall be submitted by the 10th of the month following the sampling period.

1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30); 2nd half (July 1 - December 31). Sample results shall be reported by the 10th of the month following the sampling period.

[a] Samples are to be collected during times when storm water is not contributing flow to the outfalls.

[b] See Parts I.C.4. and I.C.5. for quantification levels and reporting requirements, respectively.

The bases for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment.

Outfalls: 013, 017, 024, 027, 032, and 034

Discharge: Process wastewater and cooling water from the graving docks. Stormwater is also discharged.

Outfall Changes: Pipe flushing discharges added to the types of process wastewater discharges covered under this section. Also there are changes associated with outfalls 013, 024, and 027 associated with total phosphorus monitoring. Added stormwater to the discharge description.

Monitoring Requirement Changes:

Total Phosphorus	The total phosphorus limit and monitoring was removed based upon information that the shipyard has no sources of phosphorus at these outfalls (letter date 5/14/2009). Additionally, the nutrient enriched water policy was altered so that these types of discharges (discharges of 1 MGD or greater into receiving streams that have been labeled as nutrient enriched) are not included. The decision to remove the TP monitoring and limit is BPJ based upon agency decision. DEQ Central Office is to work on a policy to address the backsliding issues.

Outfalls: 015

Discharge: Steam Condensate, AC condensate from Building 78, water softener regeneration water, and river cooling water

Outfall Changes: River cooling water was added as a process wastewater discharge to this outfall. This was done per the modification request with additional information received by email on 5/26/09 and 6/1/09. Water softener water added via email 8/20/09.

Monitoring Requirement Changes:

There are no monitoring changes to this outfall.

Outfall: 019

Discharge: Steam Condensate, AC Condensate from Various Buildings, and deionized test water from B-161

Outfall Changes: Added deionized test water from B-161 per the modification request as a source of process wastewater discharges.
Both the dye study and the metals translator study were performed for this outfall and approved. The dye study gives an acute dilution ratio of 10:1. The metals translator for copper is 0.75 and for zinc is 0.65. The acute dilution was enough for this outfall to not need copper or zinc limits. The metal translators were not used.

Monitoring Requirement Changes:

TABLE III(b)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL

OTHER CHANGES FROM:	RATIONALE:	DATE & INITIAL
Added pipe flushing discharge as a process wastewater type for outfall 044	To match the rest of the graving docks/drydocks.	DDA 8/18/09
Removed outfall 161 from the permit.	Per email dated 8/17/09. This outfall is no longer in use. Equipment has been dismantled.	DDA 8/18/09
Added water softener regeneration water to outfall 015	Per email dated 8/20/09.	DDA 8/20/09