

SPDES PERMIT FACT SHEET: Wastewater Data, Receiving Water Data, and, Permit Limit Derivation.

Date	September 23, 2009
Permit Writer	William Mirabile
WQ Engineer	Aslam Mirza

NOTE: See *Explanatory Notes* on last page for key to abbreviations.

(1) General Permittee Data:

Permit Number	Permittee Name	Facility Name	Location (C, T, V)	County	Industrial Code	Major/Sub Basin
007 2061	CWM Chemical Services, LLC	CWM Chemical Services, LLC	Porter (T)	Niagara	4953	01/01

(2) Summary of Final Outfall Flow Rate(s) and Receiving Water Data:

Outfall Information					Receiving Water Information								
Outfall #	Latitude	Longitude	Flow Rate (MGD)		Name	Class	Water Index Number	For use by WQ Engineer - Critical Data					
	° , ' , ''	° , ' , ''	Average	Maximum				7Q10 (MGD)	30Q10 (MGD)	Dilution/ Mixing	pH (SU)	Temp (°F)	Hardness (mg/l)
001 *	43 ° 13 ' 06 ''	79 ° 02 ' 56 ''	0.72	1.0	Niagara River	A-Special	O-158	-	Acute = Chronic =	50:1 100:1			144
01A (New) (CWT) **	° ' ''	° ' ''	NA	NA	NA	NA	NA	-	-	-	-	-	-
01B (New) (CWT) **	° ' ''	° ' ''	NA	NA	NA	NA	NA	-	-	-	-	-	-
002	43 ° 13 ' 47 ''	78 ° 58 ' 54 ''	6.4 ***	61	Storm water to Trib of Fourmile Creek	C	0-156-1C-3	0.00	-	-	-	-	158
02A (New)	° ' ''	° ' ''	NA	NA	Internal storm water outfall to Final Discharge Outfall 002	NA	NA	-	-	-	-	-	
02B (New)	° ' ''	° ' ''	NA	NA	Internal storm water outfall to Final Discharge Outfall 002	NA	NA	-	-	-	-	-	
02C (New)	° ' ''	° ' ''	NA	NA	Internal storm water outfall to Final Discharge Outfall 002	NA	NA	-	-	-	-	-	
003	43 ° 13 ' 44 ''	78 ° 58 ' 24 ''	0.71 ***	10	Storm water to Trib of Fourmile Creek	C	0-156-1C-3	0.00	-	-	-	-	158
004	43 ° 13 ' 19 ''	78 ° 57 ' 54 ''	0.3 ***	2.4	Storm water to Twelvemile Creek	C	O-152a	0.00	-	-	-	-	169

* Flows for the years 2004, 2005 & 2006.

** Centralized Waste Treatment category internal monitoring point.

*** Flow rates are for discharge days only, and not averaged over 365 days.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	001
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Source(s) of Wastewater	Treatment of hazardous and non-hazardous industrial wastes generated off site, and landfill leachate and contaminated ground water generated onsite.
Existing Wastewater Treatment Facilities	Onsite Aqueous Waste Treatment facility consisting of oil/water separation, settling, pH adjustment, precipitation, filter presses, bio-inoculation, sand filtration, and activated carbon, before discharge to a facultative pond.
EPA Point Source Category	4953

Effluent Parameter (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T, WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
WET TESTING	NA				NA						Recommended?	YES		NA	
Flow Rate, units = MG	Average	0.81	Maximum	0.99	Monitor/1.0		DA/DM	NA	NA	R	NA	NA	NA	NA	NA
pH (su)	Minimum	7.6	Maximum	8.2	6.5 - 8.5		Range		-	R	-	-	-	-	T
Alkalinity (mg/l)	78/100	120/140	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Specific Conductance (µmho/cm)	9300/11000	12000/15000	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Hardness (mg/l)	1200/1300	1400/1500	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Temperature (°F)	54/68	67/77	-	-	-	-	-	-	-	No further mon.	-	-	-	-	T
Solids, Total Suspended (mg/l)	7.1/13	17/26	-	-	Monitor/45	-	DA/DM	-	-	BPJ (DMR data)	-	-	-	-	T
Solids, Total Dissolved (mg/l)	5600/6100	7200/8000	-	-	Monitor/8000	-	DA/DM	-	-	BPJ (DMR data)	-	-	-	-	T
Solids, Volatile Dissolved (mg/l)	2600/6100	17000/56000	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Settleable (ml/l)	<0.1/<0.1	0.1/0.1	-	-	Monitor/0.2	-	DA/DM	-	-	R	-	-	-	-	T
BOD ₅ (mg/l) (Prequalification)	3.4/3.8	4.2/4.6	-	-	Monitor/45	-	DA/DM	-	-	R	-	-	-	-	T
BOD ₅ (mg/l) (Outfall)	-	-	-	-	Monitor/45	-	DA/DM	-	-	New monitoring requirement, BPJ	-	-	-	-	T
Dissolved Oxygen (mg/l) (Prequalification)	11/8.5 (Ave/Min)	13/15	-	-	Monitor/6.0	-	DA/DMin	-	-	R	-	-	-	-	T
Dissolved Oxygen (mg/l) (Outfall)	-	-	-	-	Monitor/6.0	-	DA/DMin	-	-	New monitoring requirement, BPJ	-	-	-	-	T

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	001
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Effluent Parameter (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T, WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Carbon, Total Organic	11/20	20/26	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Chlorides, Total (mg/l)	2500/2800	3000/3200	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Chlorine, Total Residual (mg/l)	<1.0/<1.0	1.0/1.0	-	-	Monitor/0.5	-	DA/DM	-	-	BPJ (DMR data)	0.005	-	-	-	T
Cyanide, Total (µg/l)	<20/<20	20/20	-	-	Monitor/50	-	DA/DM	-	-	BPJ (DMR data)	5.2	-	-	-	T
Fluoride, Total (mg/l)	1.3/1.4	1.5/1.6	-	-	Monitor/6.0	-	DA/DM	-	-	BPJ (DMR data)	1.5	-	-	-	T
MBAS (Surfactants) (mg/l)	0.065/0.094	0.11/0.13	-	-	Monitor/1.0	-	DA/DM	-	-	R	-	-	-	-	T
Nitrogen, Ammonia (as N) (mg/l)	3.4/4.1	7.9/11	-	-	Monitor/11	-	DA/DM	-	-	BPJ (DMR data)	-	-	-	-	T
Nitrogen, Total Organic (mg/l)	2.3/3.1	3.9/4.8	-	-	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Nitrite (as N) (mg/l)	0.8/1.1	1.7/2.2	-	-	Monitor/1.5	-	DA/DM	-	-	R	-	-	-	-	T
Nitrite & Nitrate (as N) (mg/l)	2.2/3.1	3.8/4.8	-	-	Monitor/10	-	DA/DM	-	-	R	-	-	-	-	T
Oil & Grease (mg/l)	<5.0/<5.0	5.0/5.0	-	-	Monitor/15	-	DA/DM	-	-	R	-	-	-	-	T
Phosphorus, Total (mg/l)	<0.2/<0.2	0.2/0.2	-	-	Monitor/0.5	-	DA/DM	-	-	BPJ (DMR data)	-	-	-	-	T
Sulfate, Total (mg/l)	1100/1300	1500/1700	-	-	Monitor/Monitor	-	DA/DM	-	-	R	250	-	-	-	T
Sulfide, Total (mg/l)	<1.0/<1.0	1.0/1.0	-	-	Monitor/0.4	-	DA/DM	0.1	0.4	BPJ (DMR data)	0.002	0.2	-	DM	WQ/DL

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	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Aluminum, Total (µg/l)	300/640	600/840	-	-	Monitor/1000	-	DA/DM	-	-	BPJ (DMR data)	100	-	-	-	T
Antimony, Total (µg/l)	<60/<60	60/60	-	-	Monitor/60	-	DA/DM	-	-	BPJ (DMR data)	3.0	-	-	-	T
Arsenic, Total (µg/l)	11/13	14/15	-	-	Monitor/20	-	DA/DM	-	-	BPJ (DMR data)	50	-	-	-	T
Barium, Total (µg/l)	<200/<200	200/200	-	-	Monitor/200	-	DA/DM	-	-	BPJ (DMR data)	1000	-	-	-	T
Beryllium, Total (µg/l)	<5.0/<5.0	5.0/5.0	-	-	Monitor/10	-	DA/DM	-	-	BPJ (DMR data)	3.0	-	-	-	T
Cadmium, Total (µg/l)	<5.0/<5.0	5.0/5.0	-	-	Monitor/10	-	DA/DM	-	-	BPJ (DMR data)	2.79	-	-	-	T
Chromium, Total (µg/l)	35/100	110/210	-	-	Monitor/210	-	DA/DM	-	-	BPJ (DMR data)	50	-	-	-	T
Cobalt, Total (µg/l)	<50/<50	50/50	-	-	Monitor/50	-	DA/DM	-	-	BPJ (DMR data)	5.0	-	-	-	T
Copper, Total (µg/l)	<25/<25	25/25	-	-	Monitor/50	-	DA/DM	-	-	BPJ (DMR data)	12.23	-	-	-	T
Iron, Total (µg/l)	290/590	850/1500	-	-	Monitor/1500	-	DA/DM	-	-	BPJ (DMR data)	300	-	-	-	T
Lead, Total (µg/l)	<5.0/<5.0	5.0/5.0	-	-	Monitor/50	-	DA/DM	-	-	BPJ (DMR data)	5.62	-	-	-	T
Manganese, Total (µg/l)	280/400	600/860	-	-	Monitor/1100	-	DA/DM	-	-	R	300	-	-	-	T
Mercury, Total (ng/l) (EPA Method 245)	<200/<200	200/200	-	-	-	-	-	-	-	No further monitoring.	-	-	-	-	-
Mercury, Total (ng/l) (Method 1631) - INTERIM	-	-	-	-	Monitor/250	-	DA/DM	-	0.5	BPJ	-	-	-	-	T
Mercury, Total (ng/l) (Method 1631) - FINAL	-	-	-	-	Monitor/Monitor	-	DA/DM	-	0.5	BPJ	-	-	-	-	T
Molybdenum, Total (µg/l)	<410/<410	410/410	-	-	Monitor/410	-	DA/DM	-	-	R	No STD/GV	-	-	-	T

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	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Nickel, Total (µg/l)	200/380	440/620	-	-	Monitor/550	-	DA/DM	-	-	R	70.8	-	-	-	T
Selenium, Total (µg/l)	6.6/8.7	10/12	-	-	Monitor/40	-	DA/DM	-	-	R	4.6	-	-	-	T
Silver, Total (µg/l)	<25/<25	25/25	-	-	Monitor/30	-	DA/DM	-	-	BPJ (DMR data)	0.1	-	-	-	T
Strontium, Total (µg/l)	2500/3000	3500/4200	-	-	Monitor/4000	-	DA/DM	-	-	R	-	-	-	-	T
Thallium, Total (µg/l)	<10/<10	10/10	-	-	Monitor/50	-	DA/DM	-	-	R	0.5	50	-	DM	WQ
Tin, Total (µg/l)	<10/<10	10/10	-	-	Monitor/10	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
Titanium, Total (µg/l)	<1000/ <1000	1000/1000	-	-	Monitor/1000	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
Vanadium, Total (µg/l)	<42/<42	42/42	-	-	Monitor/42	-	DA/DM	-	-	R	14	-	-	-	T
Zinc, Total (µg/l)	20/21	21/22	-	-	Monitor/50	-	DA/DM	-	-	BPJ (DMR data)	112.6	-	-	-	T
Acenaphthylene* (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	5.3	-	-	-	T
Benzidine (µg/l)	<50/<50	50/50	-	-	Monitor/2.0	-	DA/DM	0.08	0.32	BPJ (DMR data)	0.1	2.0	-	DA	WQ
Benzo(a)anthracene (µg/l)	<10/<10	10/10	-	-	Monitor/0.2	-	DA/DM	0.013	0.052	BPJ (DMR data)	0.002	0.2	-	DA	WQ
Benzo(b)fluoranthene (µg/l)	<10/<10	10/10	-	-	Monitor/0.2	-	DA/DM	0.018	0.072	BPJ (DMR data)	0.002	0.2	-	DA	WQ
Benzo(ghi)perylene (µg/l)	<5.5/<5.5	5.5/5.5	-	-	Monitor/5.5	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
Benzothiazole (µg/l)	6.1/9.7	23/44	-	-	-	-	-	-	-	No further monitoring	-	-	-	-	-

* Separate listing in permit is deleted, because this parameter is included in the general limit of 10 µg/l per SVOA for EPA 625 scan (see Footnote 6 of permit).

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	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Bis(2-chloroethoxy)methane* (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	5.0	-	-	-	T
Bis(2-chloroethyl)ether (µg/l)	<10/<10	10/10	-	-	Monitor/3.0	-	DA/DM	0.3	1.2	R	0.03	3.0	-	DA	WQ
Bis(2-chloroisopropyl)ether*(µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
Bis(2-ethylhexyl)phthalate (µg/l)	<50/<50	50/50	-	-	Monitor/20	-	DA/DM	-	-	BPJ (DMR data)	0.6	-	-	-	T
2-Chloroethyl vinyl ether (µg/l)	18/29	28/34	-	-	Monitor/20	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
4-Chloro-3-methylphenol * (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
2-Chlorophenol (µg/l)	<10/<10	10/10	-	-	Monitor/10	-	DA/DM	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
4-Chlorophenyl phenylether*(µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
1,4-Dichlorobenzene (µg/l)	6.3/10	27/54	-	-	Monitor/20	-	DA/DM	-	-	R	3.0	-	-	-	T
3,3'-Dichlorobenzidine (µg/l)	<20/<20	20/20	-	-	Monitor/20	-	DA/DM	-	-	BPJ (DMR data)	5.0	-	-	-	T
Dichlorodifluoromethane (µg/l)	2.0/3.4	3.3/4.0	-	-	Monitor/10	-	DA/DM	-	-	R	5.0	-	-	-	T
2,4-Dichlorophenol * (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	0.3	-	-	-	T
Diethylphthalate* (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	50	-	-	-	T
2,4-Dimethylphenol * (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
2,4-Dinitrophenol (µg/l)	<10/<10	10/10	-	-	Monitor/60	-	DA/DM	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
2,4-Dinitrotoluene* (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	5.0	-	-	-	T
Hexamethylbenzene (µg/l)	2.4/8.0	7.2/12	-	-	-	-	-	-	-	No further monitoring	-	-	-	-	-
Indeno(123cd)pyrene (µg/l)	5.6/5.9	5.8/5.9	-	-	Monitor/5.5	-	DA/DM	0.043	0.172	R	0.002	0.2	-	DA	WQ

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	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
2-Methyl-4,6-Dinitrophenol (µg/l)	<50/<50	50/50	-	-	Monitor/70	-	DA/DM	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
Methylene Chloride* (µg/l)	4.2/7.0	6.7/8.2	-	-	*	-	-	-	-	BPJ (DMR data)	5.0	-	-	-	T
2-Nitrophenol * (µg/l)	<10/<10	10/10	-	-	*	-	-	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
Pentachlorophenol (µg/l)	<20/<20	20/20	-	-	Monitor/20	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
Phenanthrene (µg/l)	<10/<10	10/10	-	-	Monitor/10	-	DA/DM	-	-	BPJ (DMR data)	5.0	-	-	-	T
Phenols, Total (µg/l) (4AAP Method)	<10/<10	10/10	-	-	Monitor/10	-	DA/DM	-	-	BPJ (DMR data)	1.0	-	-	-	T
2,4,6-Trichlorophenol (µg/l)	<10/<10	10/10	-	-	Monitor/10	-	DA/DM	-	-	BPJ (DMR data)	No STD/GV	-	-	-	T
Semi-volatile Organics** (µg/l)	***	***	-	-	Monitor/10**	-	DA/DM	-	-	R	NA	-	-	-	T
Volatile Organics** (µg/l)	***	***	-	-	Monitor/10**	-	DA/DM	-	-	R	NA	-	-	-	T
Aroclor 1016 (ng/l) (Method 608)	48/65	78/96	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1221 (ng/l) (Method 608)	46/65	80/100	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1232 (ng/l) (Method 608)	47/65	78/98	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1242 (ng/l) (Method 608)	49/65	76/93	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1248 (ng/l) (Method 608)	36/65	98/160	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1254 (ng/l) (Method 608)	36/65	97/160	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1260 (ng/l) (Method 608)	39/65	90/130	-	-	65/65	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL

* Separate listing in permit is deleted, because this parameter is included in the general limit of 10 µg/l per SVOA for EPA 625 scan (see Footnote 6 of permit).

** Each individual SVOA (Method 625) or VOA (Method 624) has a Daily Maximum limit of 10 µg/l, unless specified otherwise.

*** SVOA and VOA analytical results are summarized in the **Prequalification Report** which is transmitted to the Region for review and approval before each batch discharge to the Niagara River. Since these analyses are done via scans and most analytes are not individually reported in the DMRs, individual analytical results and statistics (for analytes not individually specified in the permit) are not available from the computerized database.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	01A - New Internal Outfall - CWT* Monitoring (Oils and Organics Category), Mercury, Aroclors, Pesticides, Dioxins/Furans
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Source(s) of Wastewater	Process wastewater following treatment, before discharge to Fac Pond.
Existing Wastewater Treatment Facilities	Oil/water separation, carbon pretreatment, pH adjustment, biotowers, sand filters (optional), primary carbon treatment, polish carbon treatment.

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Flow Rate, units = GPD	Average -		Maximum -		Monitor	GPD	-	-	BPJ	NA	NA	NA	NA	NA	
pH (su)	Minimum -		Maximum -		6.0 - 9.0	Range			40 CFR Part 437, Subpart D	-	-	-	-	T	
BOD ₅ (mg/l)	-	-	-	-	Mon./Mon.	-	DA/DM	-	-	BPJ	-	-	-	T	
Solids, Total Suspended (mg/l)	-	-	-	-	31/74	-	DA/DM	-	-	40 CFR Part	-	-	-	T	
Oil & Grease (mg/l)	-	-	-	-	38/130	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
Mercury, Total (ng/l) (Method 1631) INTERIM	-	-	-	-	Mon./Mon.	-	DA/DM	-	0.5	BPJ	-	-	-	T	
Mercury, Total (ng/l) (Method 1631) FINAL	-	-	-	-	Monitor/50	-	DA/DM	-	0.5	BPJ	-	-	-	T	
Acetone (mg/l)	-	-	-	-	8.0/30	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
Acetophenone (mg/l)	-	-	-	-	0.056/0.11	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
Bis(2-ethylhexyl) phthalate (mg/l)	-	-	-	-	0.10/0.22	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
2-Butanone (mg/l)	-	-	-	-	1.8/4.8	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
Butylbenzyl phthalate (mg/l)	-	-	-	-	0.089/0.19	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
Carbazole (mg/l)	-	-	-	-	0.28/0.60	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
o-Cresol (mg/l)	-	-	-	-	0.56/1.9	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
p-Cresol (mg/l)	-	-	-	-	0.20/0.70	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	
n-Decane (mg/l)	-	-	-	-	0.44/0.95	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	T	

* Although this new outfall is used for compliance with *Centralized Waste Treatment (CWT)* criteria, it is also used for compliance determinations for Total Mercury using EPA Method 1631, PCB Aroclors using EPA Method 608, Pesticides using Method 608, and Dioxins/Furans using EPA Method 1613, for determination of treated effluent concentrations before possible dilution from precipitation in the Fac Pond.

Note: Compliance determination with CWT BOD requirements will be made during prequalification monitoring for discharge from Outfall 001 to the Niagara River.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	01A - New Internal Outfall - CWT* Monitoring (Oils and Organics Category), Mercury, Aroclors, Pesticides, Dioxins/Furans
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Source(s) of Wastewater	Process wastewater (gate receipts, landfill leachate, extracted ground water, site water) following treatment, before discharge to Fac Pond.
Existing Wastewater Treatment Facilities	Oil/water separation, carbon pretreatment, pH adjustment, biotowers, sand filters (optional), primary carbon treatment, polish carbon treatment.

Effluent Parameter (Units) <small>(concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)</small>	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
Avg/Max	95%/99%	Avg/Max	95%/99%	conc.								mass	Type		conc.
Fluoroanthene (mg/l)	-	-	-	-	0.027/0.054	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	-	T
n-Octadecane (mg/l)	-	-	-	-	0.30/0.59	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	-	T
Phenols, Total (mg/l)	-	-	-	-	1.1/3.7	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	-	T
Pyridine (mg/l)	-	-	-	-	0.18/0.37	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	-	T
2,4,6-Trichlorophenol (mg/l)	-	-	-	-	0.11/0.16	-	DA/DM	-	-	40 CFR Part 437, Subpart D	-	-	-	-	T
Pesticides (ug/l) (Method 608)	-	-	-	-	Monitor	Monitor	DA/DM	-	-	BPJ	-	-	-	-	T
Aroclor 1016 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T
Aroclor 1221 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T
Aroclor 1232 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T
Aroclor 1242 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T
Aroclor 1248 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T
Aroclor 1254 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T
Aroclor 1260 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	BPJ	-	-	-	-	T

* Although this new outfall is used for compliance with *Centralized Waste Treatment (CWT)* criteria, it is also used for compliance determinations for Total Mercury using EPA Method 1631, PCB Aroclors using EPA Method 608, Pesticides using Method 608, and Dioxins/Furans using EPA Method 1613, for determination of treated process water effluent concentrations before possible dilution from precipitation in the Fac Pond.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall 01B - New Internal Outfall - CWT Monitoring (Metals Category)

Source(s) of Wastewater	Process wastewater (gate receipts, landfill leachate) following treatment, before discharge to Fac Pond.
Existing Wastewater Treatment Facilities	May include acidification, chemical reduction, lime slurry addition, followed by filter presses.

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Flow Rate, units = GPD	Average	-	Maximum	-	Monitor		GPD	-	-	BPJ	NA	NA	NA	NA	NA
pH (su)	Minimum	-	Maximum	-	6.0 - 9.0			Range		40 CFR Part 437, Subpart D	-	-	-	-	T
Antimony (mg/l)	-	-	-	-	0.21/0.25	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Arsenic (mg/l)	-	-	-	-	0.10/0.16	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Cadmium (mg/l)	-	-	-	-	0.10/0.47	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Chromium (mg/l)	-	-	-	-	3.1/16	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Cobalt (mg/l)	-	-	-	-	0.12/0.19	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Copper (mg/l)	-	-	-	-	1.1/4.1	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Lead (mg/l)	-	-	-	-	0.28/1.3	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Mercury (mg/l)	-	-	-	-	0.00074/ 0.0023	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Nickel (mg/l)	-	-	-	-	1.4/4.0	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Silver (mg/l)	-	-	-	-	0.035/0.12	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Tin (mg/l)	-	-	-	-	0.12/0.41	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Titanium (mg/l)	-	-	-	-	0.062/0.95	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Vanadium (mg/l)	-	-	-	-	0.066/0.22	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T
Zinc (mg/l)	-	-	-	-	0.64/2.87	-	DA/DM	-	-	40 CFR Part 437, Subpart A	-	-	-	-	T

Note: CWT Oil & Grease, Total Suspended Solids, and pH criteria are required to be met at Outfall 01A.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall 002

Source(s)	Storm water discharged through SMP-06 (includes storm water from SMP-03, SMP-04, and SMP-05)
Existing Treatment Facilities	Settling (retention basin)

Effluent Parameter (Units) <small>(concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)</small>	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Flow Rate, units = MGD	Average	6.4	Maximum	61	Monitor/Monitor	-	DA/DM	-	-	R	NA	NA	NA	NA	NA
pH (SU)	7.4/8.2	7.8/8.4	-	-	6.5 - 8.5	-	DA/DM	-	-	R	-	-	-	-	T
Specific Conductance (µmho/cm)	810/1600	1100/1600	-	-	-	-	-	-	-	No further monitoring	-	-	-	-	-
Solids, Total Suspended (mg/l, lb/d)	13/160	37/130	750/12000	6100/62000	20/40	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Total Dissolved (mg/l, lb/d)	500/800	740/910	23000/160000	200000/350000	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Settleable (ml/l)	<0.1/<0.1	0.1/0.1	-	-	Monitor/0.1	-	DA/DM	-	-	R	-	-	-	-	T
BOD ₅ (mg/l, lb/d)	2.2/4.1	3.0/3.4	150/1000	940/3400	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Dissolved Oxygen (mg/l)	9.1/2.9 (Avg/Min)	-	-	-	Monitor/Monitor	-	DA/D Min	-	-	R	-	-	-	-	T
Ammonia (as N) (mg/l, lb/d)	0.04/0.32	0.14/0.18	3.4/33	10/21	1.5/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Oil & Grease (mg/l, lb/d)	5.1/7.1	5.4/6.0	-/690	-	Monitor/15	-	DA/DM	-	-	R	-	-	-	-	T
Copper, Total (µg/l, lb/d)	<25/<25	25/25	1.9/13	6.2/11	Monitor/60	-	DA/DM	1.0	4.0	R	20.7 (A)*	25.0	-	DM	WQ
Zinc, Total (µg/l, lb/d)	24/53	44/60	2.2/12	7.4/14	Monitor/80	-	DA/DM	-	-	BPJ (DMR data)	-	-	-	-	T

* Acute standard applies.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	002
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Source(s)	Storm water discharged through SMP-06 (includes storm water from SMP-03, SMP-04, and SMP-05)
Existing Treatment Facilities	Settling (retention basin)

Effluent Parameter (Units) <small>(concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)</small>	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
Avg/Max	95%/99%	Avg/Max	95%/99%	conc.								mass	conc.		mass
Aroclor 1016 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1221 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1232 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1242 (ng/l, g/d) (Method 608)	69/240	220/380	0.21/5.6	0.92/2.4	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1248 (ng/l, g/d) (Method 608)	<65/94	-/330	-/1.1	-/0.04	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1254 (ng/l) (Method 608)	<65/<65	-/-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1260 (ng/l, g/d) (Method 608)	<65/91	-/330	0.05/3.3	0.4/0.9	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
2-Chloroethyl vinyl ether (ug/l, lb/d)	1.4/20	4.2/8.1	0.07/3.7	0.41/0.86	-	-	-	-	-	No further monitoring	No STD/GV	-	-	-	-
Dichlorodifluoromethane (ug/l)	<2.0/<2.0	2.0/2.0	-	-	Monitor/10	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
Methylene chloride (ug/l, lb/d)	3.8/17	7.0/14	0.37/8.6	1.2/3.1	-	-	-	-	-	No further monitoring	200	-	-	-	-
Phenols, Total (ug/l, lb/d) (4AAP Method)	8.7/10	14/16	0.68/5.1	2.2/3.3	8.0/Monitor	-	DA/DM	2.0	8.0	R	5.0	5.0	-	DA	WQ/DL
Volatile Organics (Method 624) * (ug/l)	-	-	-	-	Monitor/10 **	-	DA/DM	-	-	R	NA	-	-	-	T

* Individual VOAs which have been detected in the Method 624 scan for routine monitoring are listed in the *Summary of VOA Detections in Storm Water*, on Page 20 of this Fact Sheet.

** Each individual VOA (Method 624) has a Daily Maximum limit of 10 ug/l, unless specified otherwise

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfalls	02A, 02B, 02C (New Outfalls - Internal Compliance Monitoring)
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Source(s)	Storm water originating from the former Salts Area, former Process Area, former Lagoons area, and closed landfills SLF 1-6 and SLF 12.
Existing Treatment Facilities	Settling (retention basin), carbon cloth and perforated plate assembly.

Effluent Parameter (Units) <small>(concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)</small>	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Solids, Total Suspended (mg/l)	-	-	-	-	Monitor	-	DA	-	-	BPJ	-	-	-	-	T
Solids, Total Dissolved (mg/l)	-	-	-	-	Monitor	-	DA	-	-	BPJ	-	-	-	-	T
Solids, Total Settleable (ml/l)	-	-	-	-	Monitor	-	DA	-	-	BPJ	-	-	-	-	T
Aroclor 1016 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL
Aroclor 1221 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL
Aroclor 1232 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL
Aroclor 1242 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL
Aroclor 1248 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL
Aroclor 1254 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL
Aroclor 1260 (ng/l) (Method 608)	-	-	-	-	Monitor/200	-	DA/DM	65	200	40 CFR 122.45(h), BPJ	-	-	-	-	WQ/DL

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	003
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Source(s)	Storm water discharged through SMP-07
Existing Treatment Facilities	Settling (retention basin)

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Flow Rate, units = MGD	Average	0.71	Maximum	10	Monitor/Monitor	-	DA/DM	-	-	R	NA	NA	NA	NA	NA
pH (SU)	7.7/8.5	8.2/8.7	-	-	6.5 - 8.5	-	DA/DM	-	-	R	-	-	-	-	T
Specific Conductance (µmho/cm)	1000/1900	1400/2100	-	-	-	-	-	-	-	No further monitoring	-	-	-	-	-
Solids, Total Suspended (mg/l)	6.7/30	14/30	58/250	180/530	20/40	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Total Dissolved (mg/l)	600/1100	2400/4800	5400/25000	15000/34000	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Settleable (ml/l)	0.1/0.1	0.1/0.1	0.1/0.1	0.1/0.1	Monitor/0.1	-	DA/DM	-	-	R	-	-	-	-	T
BOD ₅ (mg/l)	2.5/6.2	4.2/5.2	19/120	61/120	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Dissolved Oxygen (mg/l)	10/3.6 (Avg/Min)	-	-	-	Monitor/Monitor	-	DA/D Min	-	-	R	-	-	-	-	T
Ammonia (as N) (mg/l)	0.04/0.20	0.12/0.15	0.22/0.98	0.54/0.72	1.5/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Oil & Grease (mg/l)	5.1/9.9	5.8/6.9	-/130	-/219	Monitor/15	-	DA/DM	-	-	R	-	-	-	-	T
Copper, Total (µg/l)	<25/<25	25/25	-	-	Monitor/60	-	DA/DM	1.0	4.0	R	20.7 (A) *	25.0	-	DM	WQ
Zinc, Total (µg/l)	39/140	82/120	0.40/2.9	1.2/1.7	Monitor/135	-	DA/DM	-	-	R	173 (A)	-	-	-	T

* Acute standard applies.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	003
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Source(s)	Storm water discharged through SMP-07
Existing Treatment Facilities	Settling (retention basin)

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	mass		
Aroclor 1016 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1221 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1232 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1242 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1248 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1254 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
Aroclor 1260 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R	See PCBs	-	-	-	WQ/DL
2-Chloroethyl vinyl ether (µg/l)	14/15	24/31	0.10/0.39	0.23/0.36	-	-	-	-	-	No further monitoring	No STD/GV	-	-	-	-
Dichlorodifluoromethane (µg/l)	<2.0/<2.0	2.0/2.0	-	-	Monitor/10	-	DA/DM	-	-	R	No STD/GV	-	-	-	T
Methylene chloride (µg/l)	3.3/14	5.3/6.5	0.02/0.08	0.06/0.08	-	-	-	-	-	No further monitoring	200	-	-	-	-
Phenols, Total (µg/l) (4AAP Method)	8.7/10	14/16	0.06/0.20	0.15/0.19	8.0/Monitor	-	DA/DM	2.0	8.0	R	5.0	5.0	-	DA	WQ/DL
Volatile Organics (µg/l) *	-	-	-	-	Monitor/10 **	-	DA/DM	-	-	R	NA	-	-	-	T

* Individual VOAs detected in the Method 624 scan for routine monitoring are listed in the *Summary of VOA Detections in Storm Water* on Page 20 of this Fact Sheet.

** Each individual VOA (Method 624) has a Daily Maximum limit of 10 µg/l, unless specified otherwise.

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	004
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Source(s)	Storm water discharged through SMP-09
Existing Treatment Facilities	Settling (retention basin)

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit				Permit Basis (T or WQ)
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent		Type	
Avg/Max	95%/99%	Avg/Max	95%/99%	conc.								mass	Type		conc.
Flow Rate, units = MGD	Average	0.30	Maximum	2.4	Monitor/Monitor	-	DA/DM	-	-	R	NA	NA	NA	NA	NA
Specific Conductance (umho/cm)	730/1500	1100/1700	-	-	-	-	-	-	-	No further monitoring	-	-	-	-	-
pH (SU)	7.7/8.6	8.1/8.6	-	-	6.5 - 8.5	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Total Suspended (mg/l)	5.2/29	14/27	22/200	77/290	20/40	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Total Dissolved (mg/l)	480/1300	820/1200	1500/7700	4400/12000	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Solids, Settleable (ml/l)	0.1/0.1	0.1/0.1	0.1/0.1	0.1/0.1	Monitor/0.1	-	DA/DM	-	-	R	-	-	-	-	T
BOD ₅ (mg/l)	2.3/5.7	3.5/4.2	5.8/27	16/28	Monitor/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Dissolved Oxygen (mg/l)	8.7/4.3 (Avg/Min)	-	-	-	Monitor/Monitor	-	DA/D Min	-	-	R	-	-	-	-	T
Ammonia (as N) (mg/l)	0.05/0.16				1.5/Monitor	-	DA/DM	-	-	R	-	-	-	-	T
Oil & Grease (mg/l)	5.7/29	8.8/15	13/67	37/94	Monitor/15	-	DA/DM	-	-	R	-	-	-	-	T
Copper, Total (µg/l)	<25/<25	25/25	-	-	Monitor/60	-	DA/DM	1.0	4.0	R	22.0 (A)	26.6	-	DM	WQ
Zinc, Total (µg/l)	24/54	39/48	0.07/0.27	0.18/0.23	Monitor/80	-	DA/DM	-	-	Action Level converted to Limit	183	-	-	-	T

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	004
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Source(s)	Storm water discharged through SMP-09
Existing Treatment Facilities	Settling (retention basin)

Effluent Parameter (Units) <small>(concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)</small>	Existing Effluent Quality				Technology Based Effluent Limit						Water Quality Based Effluent Limit			Permit Basis (T or WQ)		
	concentration		mass		conc.	mass	Type	MDL conc.	PQL conc.	Basis	AWQC conc.	Effluent				
	Avg/Max	95%/99%	Avg/Max	95%/99%								conc.	conc.	mass	Type	
Aroclor 1016 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
Aroclor 1221 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
Aroclor 1232 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
Aroclor 1242 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
Aroclor 1248 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
Aroclor 1254 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
Aroclor 1260 (ng/l) (Method 608)	<65/<65	-	-	-	Monitor/200	-	DA/DM	65	200	R		See PCBs	-	-	-	WQ/DL
2-Chloroethyl vinyl ether (µg/l, lb/d)	15/15	18/20	0.04/0.20	0.11/0.17	-	-	-	-	-	No further monitoring	No STD/GV	-	-	-	-	
Dichlorodifluoromethane (µg/l)	<2.0/<2.0	2.0/2.0	-	-	Monitor/10	-	DA/DM	-	-	R		No STD/GV	-	-	-	T
Methylene chloride (µg/l, lb/d)	2.9/3.0	3.4/3.6	0.0079/0.04	0.022/0.034	-	-	-	-	-	No further monitoring	200	-	-	-	-	
Phenols, Total (µg/l) (4AAP Method)	9.3/10	13/15	0.02/0.13	0.07/0.09	8.0/Monitor	-	DA/DM	2.0	8.0	R		5.0	5.0	-	DA	WQ/DL
Volatile Organics (µg/l)	-	-	-	-	Monitor/10 *	-	DA/DM	-	-	R		NA	-	-	-	T

* Each individual VOA (Method 624) has a Daily Maximum limit of 10 µg/l, unless specified otherwise.

(4) Summary of VOA Detections in Storm Water

Outfall 002

<u>Analyte</u>	<u>Results (ug/l)</u>		
	<u>2004</u>	<u>2005</u>	<u>2006</u>
1,1,1-Trichloroethane	2, 4	2	
1,1,2-Trichloroethane	2,3	1	
1,1,2,2-Tetrachloroethane	2,2		
1,2-Dichlorobenzene	1		
1,2-Dichloroethane	3, 4	1, 1	1
2-Chloroethylvinyl ether (questionable results)		>15, >15	
Bromomethane (questionable results)		14	
Carbon Tetrachloride	14, 5	5, 4	7, 2
Chlorobenzene	2		1
Chloroform	16, 11, 2, 2, 1	3, 1, 7, 4, 2	7, 2, 1
Methylene Chloride	7, 15		
Tetrachloroethene	2, 2	3, 2	
Trichloroethene	12, 22, 3, 4	4, 3, 7, 6, 3	6
N = 54 (detects)	Maximum - 22 µg/l		

Outfall 003

<u>Analyte</u>	<u>Results (ug/l)</u>		
	<u>2004</u>	<u>2005</u>	<u>2006</u>
1,1,1-Trichloroethane	2	No Detects	No Detects

Outfall 004

No detects.

(5) Additional Issues:

Water Quality Based Effluent Limits (WQBELs):

New York State water quality regulations (for surface waters) are implemented by applying the Total Maximum Daily Load (TMDL) process to watersheds, drainage basins or waterbody segments on a pollutant specific basis. The analysis determines if there is a “reasonable potential” that the discharge of a pollutant will result in exceedance of ambient water quality criteria (AWQC). If there is a reasonable potential for an exceedance of AWQC, the TMDL is used to establish waste load allocations for point sources and load allocations for nonpoint sources of the pollutant. For point sources, the waste load allocations are translated to WQBELs for inclusion in SPDES permits. Reference - TOGS 1.3.1, USEPA Guidance for Water Quality - Based Decisions: The TMDL Process, 40 CFR 130 and the Clean Water Act 303(d).

The following table has been completed only for those parameters for which WQBELs were determined to be necessary.

Parameter					
Amount to be Allocated (TMDL)					
Number of Sources					
Allocation to this Permit					

Statistics:

The statistical methods utilized are consistent with TOGS 1.2.1 and the USEPA, Office of Water, Technical Support Document For Water Quality-based Toxics Control, March 1991, Appendix E. Generally based on lognormal analysis. If other data distributions such as normal or delta-lognormal are utilized it is noted below. Statistical calculations were not performed for parameters with insufficient data. Generally, ten or more data points are needed to calculate percentiles. Two or more data points are necessary to calculate an average and a maximum. Non-detects (indicated by “<” or “ND”) were included in the statistical calculations at the reported detection limit unless otherwise noted.

Monitoring data collected during the following time period was used to calculate statistics: June 2003 - June 2006

This data was taken from the following source(s): DMRs

Internal Waste Stream Monitoring:

40 CFR 122.45(h)(1) allows the permit authority to monitor and limit parameters at internal locations when controlling them solely at the final outfall is impractical or infeasible. Dilution of a process wastewater with large volumes of cooling water and/or storm water is one example of when the use of an internal monitoring point is justified. Monitoring at the following internal outfalls is necessary for the reasons specified:

Outfalls 02A, 02B, and 02C are established as new internal outfalls at SMP-03, SMP-04, and SMP-05. These SMPs are downgradient of the former process and lagoons areas, which have been demonstrated in the past to be contaminated with PCBs and VOCs, and the storm water discharged from them is conveyed to SMP-06 for discharge through SPDES Outfall 002 and eventually to Fourmile Creek. Capping of the most contaminated upgradient areas has been initiated by the permittee, but some of this capping is inadequate or incomplete, and there remains a reasonable potential for site contaminants in the soils to reach SMPs 03, 04 and 05 via surface water runoff. Since PCB or other types of contamination from any single SMP could become diluted with runoff from the other SMPs, resulting in the masking of the contamination by diluting to a level which is below analytical detection (EPA Method 608), it is necessary to monitor site runoff for PCBs and pesticides before this water enters and commingles with storm water from upstream or downstream areas.

The discharge of PCBs, and more recently several pesticides (detected during special monitoring) from Outfall 002, has been demonstrated, and although the permittee has taken steps to reduce the possibility of contaminants reaching Outfall 002, through the installation of rock check dams, face plates, and fabric filters at the upstream SMPs, monitoring for site contaminants in runoff water does not occur until after it is released from the SMPs and is discharged through Outfall 002. With the storm water treatment system that is presently in place, there is no assurance that PCBs or other organic contaminants are removed from the retained storm water before discharge through the control gates, since any contaminants present could be diluted to a point below analytical detection, with runoff water from upgradient or downgradient areas before reaching the monitoring point at Outfall 002. Since compliance with State and federal effluent quality criteria is not allowed by dilution, it is necessary to establish compliance with these criteria upstream of Outfall 002, at the SMPs which are closer to the source of potential contamination and prior to potential dilution.

WET Testing:

Testing is required, in accordance with TOGS 1.3.2, for the following reasons:

WET testing requirements are continued as in the existing permit.

(5) Additional Issues: (Continued)

Indicator Parameters:

In accordance with 40 CFR 122.44(e)(2), The permit writer has determined that effective treatment and/or acceptable performance for specific parameters is indicated by one or more other parameters which are limited and therefore a decision has been made to not limit or monitor these specific parameters. This judgement is based on the similarity between this and the regulated parameter(s) and historical data where available. The use of indicator parameters is not appropriate for WQBELs. Following is a list of the affected parameters:

There are no indicator parameters used in this permit.

Schedules of Compliance and Pollutant Minimization Plans:

- 1) **Pollutant Minimization Plan** for Total Mercury - New PMP required because the calculated water quality based effluent limit (WQBEL) of 0.7 nanograms/liter (ng/L) is below the permit limit of 30 ng/l, using EPA Method 1631. The goal of this PMP will be to meet the calculated WQBEL. PMP requirements do not apply to any specific outfalls. It is the permittee's requirement to determine where potential problem areas and discharges might exist and to develop the PMP accordingly to meet the stated goals.
- 2) **Pollutant Minimization Plan** for PCBs - New PMP required because the calculated water quality based effluent limit (WQBEL) of 0.001 nanograms/liter (ng/l) for Total PCBs is below the permit limit (quantification level) of 200 ng/L per Aroclor, using EPA Method 608. The goal of this PMP will be to meet the calculated WQBEL. PMP requirements do not apply to any specific outfalls. It is the permittee's requirement to determine where potential problem areas and discharges might exist and to develop the PMP accordingly to meet the stated goals.
- 3) **Schedule of Compliance - Dioxins/Furans (EPA Method 1613 scan)** - Required for Outfall 01A for the following reasons:
 - a. One congener, 2,3,7,8-TCDD was detected at 11 pg/l during special monitoring of effluent from the Aqueous Treatment System for the permit modification application. This result indicates a reasonable potential that other related congeners may be present;
 - b. Site history for the management or disposal of wastes containing these compounds is unknown, and the Aqueous Treatment System does treat substantial quantities of leachate from onsite landfills. These wastes may have been historically disposed of at this site;
 - c. These compounds are closely associated with PCBs, which are prevalent (in low concentrations) in site soils;
 - d. This facility accepts hazardous wastes generated offsite, and although the facility's current hazardous waste permit does not presently allow the permittee to knowingly accept landfill production wastes containing Dioxins/Furans, these compounds may still be present in other offsite-generated wastes bound for land disposal at this site. Also, the facility's current hazardous waste permit presently allows the land disposal of offsite wastes derived from Dioxins/Furans, and allows the permittee to treat both offsite production and derived wastes containing these compounds in its Aqueous Waste Treatment system;
 - e. These BCCs are required to be monitored at this internal outfall to determine concentrations in the treated process wastewater without the potential influence of dilution by runoff or snow melt. (Ref. 40 CFR Part 122.45(h) and Division of Water TOGS 1.2.1). Monitoring is Bi-Monthly for one year.
- 4) **Schedule of Compliance - Organochlorine Pesticides (EPA Method 608)** - Required for Outfalls 02A, 02B & 02C for the following reasons:
 - a. Analyses for pesticides samples taken at SMP-06 (SPDES Outfall 002) and SMP-07 (SPDES Outfall 003) for the permit modification application used EPA Method 608. All samples were shown to be non-detect (ND). It is not known whether the laboratory used detection limits as a result of an Method Detection Limits (MDL) study for investigation of interfering substances, or for some other reason, but the detection limits used for these analyses were, in most cases, significantly higher than the published MDLs (in some cases by 2 orders of magnitude). Examples include 4,4'-DDE and gamma-BHC (Lindane) with a published detection limit of 0.004 µg/l, while the permit application sample analyses used a detection of 0.10 µg/l. Due to the higher detection limits used in most cases for the permit application sampling, these data are not considered as confirmation that all pesticides are non-detect in site storm water.
 - b. On September 21, 2006 the Department's *Division of Solid & Hazardous Materials* (DSHM) obtained information from a DEC site monitor that the permittee had excavated a trench north of the Tank Farm in an area that drains to SMP-05, for the purpose of making structural repairs. The trench water was drained through the SMP without authorization. Upon learning this, the DSHM, in consultation with the DOW, required the permittee to take samples of the trench water for laboratory analyses (using EPA Solid Waste Method 8081). Analyses by a NELAP-certified laboratory of these samples indicated detections (estimated with a J qualifier) in the trench water of 4,4'-DDE (0.032 µg/l), alpha-Chlordane (0.021 µg/l), delta-BHC (0.036 µg/l), Endosulfan I (Alpha) (0.025 µg/l), Endrin (0.028 µg/l), and Heptachlor epoxide (0.022 µg/l). Further, the trench water had direct detection results (not estimated) of 0.050 µg/l for alpha-BHC and gamma-BHC (Lindane). The detection limits for the Method 8081 analyses were 0.048 µg/l except for Toxaphene, which was 0.095 µg/l.
 - c. As a result of the above-noted detections, the DSHM, in consultation with the DOW, took a second round of samples of the trench water on October 5, 2006, and also of surface water at SMP-03, SMP-04, and SMP-05, for pesticides and PCB analyses in a NELAP-certified Department laboratory. These analyses indicated no detections for pesticides in the trench water, but there were pesticide detections at SMP-05 for alpha-BHC (0.013 µg/l), gamma-BHC (0.0020 µg/l, J qualified), and beta-BHC (0.027 µg/l).

(6) Summary of Proposed Permit Changes:

Monitoring Requirements

OUTFALL 001

Temperature - No further monitoring.

Total Suspended Solids - Limit reduced from 60 mg/l DM to 45 mg/l DM to reflect actual discharge levels (from DMR data).

Total Dissolved Solids - Limit reduced from 13000 mg/l DM to 8000 mg/l DM to reflect actual discharge levels (from DMR data).

Dissolved Oxygen - Daily **Minimum** limit is increased from 2.0 mg/l to 6.0 mg/l to reflect actual discharge levels (from DMR data) and in consideration of in-stream standard. Monitoring is also added at the final discharge point with the same Daily Minimum limit at the outfall to the Niagara River.

BOD⁵ - Monitoring is added at the final discharge point at the outfall to the Niagara River.

Ammonia (as N) - Limit is reduced from 20 mg/l DM to 11 mg/l DM to reflect actual discharge levels (from DMR data).

Sulfide - Limit reduced from 2000 µg/l DM to 400 µg/l DM to reflect the requirement for a water quality-based limit and the PQL.

Total Aluminum - Limit reduced from 4000 µg/l DM to 1000 µg/l DM to reflect actual discharge levels (from DMR data).

Total Antimony - Limit reduced from 90 µg/l DM to 60 µg/l DM to reflect actual discharge levels (from DMR data).

Total Arsenic - Limit reduced from 80 µg/l DM to 20 µg/l DM to reflect actual discharge levels (from DMR data).

Total Barium - Limit reduced from 1000 µg/l DM to 200 µg/l DM to reflect actual discharge levels (from DMR data).

Total Beryllium - Limit reduced from 20 µg/l DM to 10 µg/l DM to reflect actual discharge levels (from DMR data).

Total Cadmium - Limit reduced from 50 µg/l DM to 10 µg/l DM to reflect actual discharge levels (from DMR data).

Total Residual Chlorine - Limit reduced from 1000 µg/l DM to 500 µg/l DM to reflect actual discharge levels (from DMR data).

Total Chromium - Limit reduced from 370 µg/l DM to 210 µg/l DM to reflect actual discharge levels (from DMR data).

Total Cobalt - Limit reduced from 75 µg/l DM to 50 µg/l DM to reflect actual discharge levels (from DMR data).

Total Copper - Limit reduced from 300 µg/l DM to 50 µg/l DM to reflect actual discharge levels (from DMR data).

Total Cyanide - Limit reduced from 400 µg/l DM to 50 µg/l DM to reflect actual discharge levels (from DMR data).

Total Fluoride - Limit reduced from 12000 µg/l DM to 6000 µg/l DM to reflect actual discharge levels (from monitoring data).

Total Phosphorus - Limit reduced from 5000 µg/l DM to 500 µg/l DM to reflect actual discharge levels (from DMR data).

Total Sulfide - Limit reduced from 2000 µg/l DM to 400 µg/l DM to reflect the requirement for a water quality-based limit and the PQL.

Total Iron - Limit reduced from 3100 µg/l DM to 1500 µg/l DM to reflect actual discharge levels (from DMR data).

Total Lead - Limit reduced from 100 µg/l DM to 50 µg/l DM to reflect actual discharge levels (from DMR data).

Total Mercury (EPA Method 245) - No further monitoring using this EPA method. Monitoring using Method 1631 is added to prequalification testing.

Total Mercury (EPA Method 1631) - Total Mercury was found at the concentration of 126 ng/l during special monitoring of the Aqueous Waste Treatment System effluent for the permit application. This BCC is required to be monitored during prequalification sampling only on an INTERIM basis at 250 ng/l Daily Maximum for a period of 18 months from the EDPM, after which the FINAL limit will be applied at Outfall 01A, at a limit of 50 ng/l Daily Maximum.

(6) Summary of Proposed Permit Changes (Continued):

OUTFALL 001 (Continued)

Total Silver - Limit reduced from 60 µg/l DM to 30 µg/l DM to reflect actual discharge levels (from DMR data).

Total Zinc - Limit reduced from 500 µg/l DM to 50 µg/l DM to reflect actual discharge levels (from DMR data).

PCB Aroclors - The narrative limit of "Non-Detect" has been quantified at the MDL of 65 ng/l DM for EPA Method 608.

Acenaphthylene - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

Benzidine - Limit reduced from 200 µg/l DM to 2.0 µg/l DA to reflect the requirement for a water quality-based limit. All monitoring data have been ND at 50 µg/l.

Benzo(a)anthracene - Limit reduced from 40 µg/l DM to 0.20 µg/l DA to reflect the requirement for a water quality-based limit. All monitoring data have been ND at 10 µg/l.

Benzo(b)fluoranthene - Limit reduced from 20 µg/l DM to 0.20 µg/l DA to reflect the requirement for a water quality-based limit. All monitoring data have been ND at 10 µg/l.

Benzothiazole - No further monitoring. This compound has never been identified in a pond qualification, and there is no approved EPA analytical method listed.

Bis(2-chloroethoxy)methane - Parameter deleted as an individual listing in permit, and limit reduced from 30 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

Bis(2-chloroethyl)ether - Limit reduced from 30 µg/l DM to 3.0 µg/l DA to reflect the requirement for a water quality-based limit.

Bis(2-chloroisopropyl)ether - Parameter deleted as an individual listing in permit, and limit reduced from 30 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

Bis(2-ethylhexyl)phthalate - Limit reduced from 50 µg/l DM to 20 µg/l DM to reflect actual discharge levels (from DMR data).

4-Chloro-3-methylphenol - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 8). All monitoring data have been ND at 10 µg/l.

2-Chlorophenol - Limit reduced from 20 µg/l DM to 10 µg/l DM to reflect actual discharge levels (from DMR data).

4-Chlorophenyl phenyl ether - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

3,3'-Dichlorobenzidine - Limit reduced from 70 µg/l DM to 20 µg/l DM to reflect actual discharge levels (from DMR data).

2,4-Dichlorophenol - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

Diethylphthalate - Parameter deleted as an individual listing in permit, and limit reduced from 40 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

2,4-Dimethylphenol - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

2,4-Dinitrophenol - Limit is reduced from 120 µg/l to 60 µg/l, based on DMR data and BPJ.

2,4-Dinitrotoluene - Parameter deleted as an individual listing in permit, and limit reduced from 30 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

Hexamethylbenzene - No further monitoring. This compound has never been identified in a pond qualification, and there is no approved EPA analytical method listed.

Indeno(123cd)pyrene - Limit reduced from 5.5 µg/l DM to 0.20 µg/l DA to reflect the requirement for a water quality-based limit.

(6) Summary of Proposed Permit Changes (Continued):

OUTFALL 001 (Continued)

2-Methyl-4,6-dinitrophenol - Limit reduced from 100 µg/l DM to 70 µg/l DM to reflect actual discharge levels (from DMR data).

Methylene chloride - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 624 scan (see permit Footnote No.7).

2-Nitrophenol - Parameter deleted as an individual listing in permit, and limit reduced from 20 µg/l DM to the general limit of 10 µg/l per individual SVOA, as part of the Method 625 scan (see permit Footnote No. 6). All monitoring data have been ND at 10 µg/l.

Phenanthrene - Limit reduced from 30 µg/l DM to 10 µg/l DM to reflect actual discharge levels (from DMR data).

Total Phenols - Limit reduced from 220 µg/l DM to 10 µg/l DM to reflect actual discharge levels (from DMR data).

2,4,6-Trichlorophenol - Limit reduced from 20 µg/l DM to 10 µg/l DM to reflect actual discharge levels (from DMR data).

OUTFALL 01A - New Internal Outfall

Centralized Waste Treatment Parameters - This internal outfall is a monitoring point before discharge to Tanks T-58 and T-125 and has been established for compliance determinations for the "Oils" and "Organics" Multiple Wastestream Category (Subchapter D), of the *Centralized Waste Treatment (CWT)* regulations, 40 CFR Part 437. Compliance with all CWT parameters specified in the Subchapter D category, except *BOD*, is required at this monitoring point, since final treatment for all CWT parameters except *BOD* is completed before this point. Compliance with CWT *BOD* requirements will be determined during prequalification monitoring at the Fac Pond before discharge to the Niagara River, because the Fac Pond provides additional treatment before final discharge.

Monitoring Period - The permittee has requested to sample prequalification tank water before it is discharged to the Fac Pond, for SPDES compliance purposes. However, statistically-based regulatory criteria express limits as either Maximum Monthly Average (i.e., 30-Day or Daily Average), Maximum Daily, or both. Since each of the tanks T-58 and T-125 can take several days or weeks to fill, and the regulatory criteria are expressed in terms of daily average and daily maximum, a 24-hour composite and not a tank sample (effectively a multiple-day composite) is appropriate and specified for all monitoring at this outfall.

Bioaccumulative Chemicals of Concern - This outfall is also to be used as a compliance monitoring point for *Total Mercury*, *PCB Aroclors*, *Pesticides*, and *Dioxins/Furans*, due to the considerations listed below. These substances are *Bioaccumulative Chemicals of Concern* (BCCs) and are considered conservative (non-degradable) by the Department. As such, monitoring their concentrations at an internal outfall after final treatment and before the effect of dilution is required (Ref. 40 CFR Part 122.45(h) and Division of Water TOGS 1.2.1). Rationale for BCC monitoring is as follows:

- 1) *Total Mercury (EPA Method 1631)* - Total Mercury was found at the concentration of 126 ng/l during special monitoring of the Aqueous Waste Treatment System effluent for the permit application. This BCC is "Monitor" on an INTERIM basis for 18 months from the EDPM, after which a FINAL limit of 50 ng/l Daily Maximum, will be effective, to determine compliance for the final treated process wastewater without the potential influence of dilution by runoff or snow melt. (Ref. 40 CFR Part 122.45(h) and Division of Water TOGS 1.2.1).
- 2) *PCB Aroclors (EPA Method 608)* - These BCCs are required to be monitored at this point, at compliance levels of 300 ng/l, to determine concentrations in the treated process wastewater without the potential influence of dilution by runoff or snow melt. (Ref. 40 CFR Part 122.45(h) and Division of Water TOGS 1.2.1).
- 3) *Organochlorine Pesticides (EPA Method 608)* - The EPA Method 608 scan analyses for these BCCs are being added to the permit as "Monitor" requirements for the following reasons: 1) Detections were noted at Outfall 001 during special monitoring for the permit modification application, for 4,4'-DDE (1.2 µg/l), 4,4'-DDT (1.6 µg/l), and gamma-BHC (0.72 µg/l); 2) The analytical procedures for the special monitoring used detection limits which were significantly higher than the published Method Detection Limits (MDLs), in some cases by two orders of magnitude. Therefore, there is no assurance that other pesticides are not present, or that the detected pesticides were just a one-time event; 3) Site history suggests onsite management or disposal of pesticide-containing wastes, and the Aqueous Treatment Facility does treat substantial quantities of contaminated onsite groundwater and leachate from onsite landfills; and 4) These BCCs are required to be monitored at this point to determine concentrations in the treated process wastewater without the potential influence of dilution by runoff or snow melt. (Ref. 40 CFR Part 122.45(h) and Division of Water TOGS 1.2.1).

(6) Summary of Proposed Permit Changes (Continued):

OUTFALL 01B - New Internal Outfall

This newly-established internal outfall is a monitoring point for compliance with *Centralized Waste Treatment (CWT)* requirements, as specified in 40 CFR Part 437, Subchapter A, for the “Metals” Category.

OUTFALL 002

Specific conductance - This parameter is deleted because it does not indicate the presence of PCBs, which was its original purpose.

Copper, Total - Limit reduced from 60 µg/l DM to 25 µg/l DM to reflect the requirement for a water quality-based limit.

Zinc, Total - Limit reduced from 135 µg/l DM to 80 µg/l DM to reflect actual discharge levels (from DMR data).

2-Chloroethyl vinyl ether - No further monitoring or reporting as a special parameter-specific requirement, since included as part of the Method 624 scan for VOAs, and past monitoring results do not indicate a problem with compliance, detection, or lab issues.

Methylene chloride - No further monitoring or reporting as a special parameter-specific requirement, since included as part of the Method 624 scan for VOAs, and past monitoring results do not indicate a problem with compliance, detection, or lab issues.

OUTFALLS 02A (SMP-05), 02B (SMP-04), and 02C (SMP-03) - New Internal Outfalls

Outfalls 02A, 02B, and 02C are new internal outfalls which will require routine monitoring for PCB Aroclors and solids for the reasons stated below. The Department believes that internal outfalls are necessary because the SMPs are located some distance upstream of Outfall 002, and it is possible that during periods of high precipitation and/or snow melt, the storm water exiting the upstream SMPs can be diluted to the extent that previously (upgradient) detectable PCBs could be diluted to the point of non-detect before reaching SPDES Outfall 002 for final discharge. Meeting discharge limits through dilution is not allowed by federal regulations (40 CFR Part 122.45(h)) and the Department’s Division of Water TOGS 1.2.1.

Past remediation steps by the permittee have resulted in certain site areas with contaminated soils being covered with various materials to reduce or eliminate the migration of contaminants in storm water. However, some of these site areas have been covered only with fill material, top soil and grass, or have been paved with gravel. There are other site areas which have been documented to be contaminated at low levels with PCBs and volatile compounds, which have not been covered at all. It is the DOW’s position that an ongoing potential exists for contaminated sediments to be transported by storm water to the SPDES final discharge outfalls, particularly from the former Process Area, which is upgradient of these SMPs. The Department’s Division of Solid & Hazardous Materials (DSHM) concurs with this position, as documented by the past requirement under the permittee’s Part 373 permit to complete a *Process Area Investigation Plan*, as well as in an October 17, 2006 letter to this effect from the DSHM to the permittee.

In addition to upgradient contaminated soils, contamination has also been documented in upgradient ground water (discussed below). This is further evidenced by the fact that a ground water extraction system has been installed upgradient of SMP-04 and is operated continuously, except during the winter months.

Solids (Total Suspended, Total Dissolved, Total Settleable)

Solids sampling is included with these new internal outfalls because storm water has been observed by Department staff (both DOW and DSHM), at times, to flow over the top of the carbon cloths, and solids have been observed to flow through the carbon cloths. Since the carbon cloths were installed to reduce solids discharge (some of which may contain PCBs), bypassing this system results in no treatment of the stormwater, and solids monitoring is necessary to quantify the extent of such bypassing.

PCBs

PCB Aroclor monitoring is being added to the permit at these outfalls, with specific numeric limits, for the following reasons:

- 1) Past soils sampling for PCBs has documented that they are present in site soils which are upgradient upgradient of SMP-03, SMP-04, and SMP-05 (Golder Associates Report, March 2001). Although some site areas identified with certain levels of contamination have had cap or cover systems placed over them to prevent migration of both PCBs (and VOCs), the covered areas did not include all areas identified as contaminated, following a later soil/sediment monitoring program carried out by the DSHM in November 2006, with assistance from the DOW (as discussed in the next item). Further, some of the cover material placed may not be impervious, or may not otherwise be adequate to completely isolate PCBs in soil.

Outfalls 02A (SMP-05), 02B (SMP-04), and 02C (SMP-03) - New Internal Outfalls (Continued)

- 2) Numerous PCB detections have been noted in past monitoring at SPDES Outfall 002. To address this issue, the permittee had installed rock check dams upstream of each control gate, as well as carbon cloth at each control gate. This step had the effect of eliminating detections of PCBs at 0.065 µg/l, with only 1 or 2 detections since the installations. However, it has been recently observed by Department staff that during periods of exceptionally high flow, storm water can pass around or over the top of the carbon cloth structures, untreated. Due to this fact, as well as questions on the frequency of change out, removal efficiencies of the solids control system, and proper determination of when the carbon is spent, the Department continues to question the effectiveness of the carbon cloth system for removal of organics from storm water, and does not consider the effectiveness of the present system to be demonstrated.
- 3) In April 2006, the permittee submitted a revised *Process Area Investigation Plan* to the DSHM. It contained analytical results from September 2005 surface water sampling at SMPs upstream of Outfall 002. Specifically, the permittee collected samples both upstream and downstream of the carbon cloth at SMP-03, SMP-04, and SMP-05 on three separate occasions. All samples were analyzed for PCBs using EPA Method 608. As a result of the sampling at SMP-03, Aroclor 1242 was detected upstream of the carbon cloth on all three occasions at concentrations ranging from 0.053 µg/l to 0.45 µg/l, and downstream of the carbon cloth on two occasions at concentrations ranging from 0.105 µg/l to 0.344 µg/l. Also, Aroclor 1260 was detected at SMP-03 on one occasion at a concentration of 0.222 µg/l upstream of the carbon cloth and at a concentration of 0.155 µg/l downstream of the carbon cloth.
- 4) During the first week of December 2006, the DSHM, in consultation with the DOW, received split samples of surface water from the permittee which were taken in accordance with the approved April 2006 *Process Area Investigation Plan*, and had them analyzed for PCBs in the DEC laboratory. These samples were obtained both upstream and downstream of the carbon cloths at all three of the previously mentioned SMPs. At SMP-03, Aroclor-1254 was detected both upstream of the gate (0.30 µg/l) and downstream of the gate (0.25 µg/l). At SMP-04, this same Aroclor was detected both upstream of the control gate (0.21 µg/l) and downstream of the control gate (0.33 µg/l). The laboratory’s Case Narrative noted that, for these analyses, the recovery from the spiked blank was only 50-60%, lower than the 70% or greater recovery desired, resulting in the possibility that the reported hits may be lower than the actual site sample concentrations.
- 5) During a sediment sampling program for PCB Aroclors carried out by the Department’s DSHM in November 2006, in flow paths leading to and from the SMPs (storm water management points), PCBs were found to be prevalent in many areas of the site. A summary of results from the study is shown in the table below. It should be stressed that sediment sampling results are being used for SPDES evaluative purposes as a way of establishing the presence and relative prevalence of PCBs, which would create a continuous *potential* for migration and discharge in storm water. As all sediment PCB values are in µg/kg, no correlation is intended with aqueous methodology, storm water concentrations, or regulatory criteria.

DSHM SEDIMENT SAMPLING PROGRAM - SUMMARY OF RESULTS (µg/kg)

KEY: UG = Upgradient, DG = Downgradient, D = Diluted sample results, E = Estimated results, x/x = Duplicate sample results

<u>Location</u>	<u>Aroclor 1016</u>	<u>Aroclor 1254</u>	<u>Aroclor 1260</u>	<u>“Total” PCBs</u>
UG of SMP-08				ND
DG of SMP-08				ND
UG of SMP-07 (SPDES Outfall 003)		29		29
	71		380	451
		1100/540 (D)	1500/680 (D)	2600/1220
DG of SMP-07		56		56
DG of SMP-06 (SPDES Outfall 002)	17			17
	89		160	249
UG of SMP-05	70		67	137
	110		140	250
	44/72		32/57	76/129
DG of SMP-05				ND
UG of SMP-04	65		75	140
UG of SMP-03	580		280	790
	230		160	390
	170		66	236
	3000 (D)		810 (D)	3810
	290		170	460
	300		150	450
	2800		390	3190
DG of SMP-03	350		66	416

(6) Summary of Proposed Permit Changes (Continued):

OUTFALL 003

Specific conductance - This parameter is deleted because it does not indicate the presence of PCBs, which was its original purpose.

Copper, Total - Limit reduced from 60 µg/l DM to 25 µg/l DM to reflect the requirement for a water quality-based limit.

2-Chloroethyl vinyl ether - No further monitoring or reporting as a special parameter-specific requirement, since included as part of the Method 624 scan for VOAs, and past monitoring results do not indicate a problem with compliance, detection, or lab issues.

Methylene chloride - No further monitoring or reporting as a special parameter-specific requirement, since included as part of the Method 624 scan for VOAs, and past monitoring results do not indicate a problem with compliance, detection, or lab issues.

OUTFALL 004

Specific conductance - This parameter is deleted because it does not indicate the presence of PCBs, which was its original purpose.

Copper, Total - Limit reduced from 60 µg/l DM to 25 µg/l DM to reflect the requirement for a water quality-based limit.

Zinc, Total - Action Level converted to a limit and reduced from 135 µg/l DM to 80 µg/l DM to reflect actual discharge levels (from DMR data).

2-Chloroethyl vinyl ether - No further monitoring or reporting as a special parameter-specific requirement, since included as part of the Method 624 scan for VOAs, and past monitoring results do not indicate a problem with compliance, detection, or lab issues.

Methylene chloride - No further monitoring or reporting as a special parameter-specific requirement, since included as part of the Method 624 scan for VOAs, and past monitoring results do not indicate a problem with compliance, detection, or lab issues.

Citizen's Review Board

The Citizens Review Board (CRB) was a citizens' group which was established in 1981 and was comprised of 5 members (2 Canadian and 3 local). To the Department's knowledge, these included the Town of Porter, The Town of Lewiston, Operation Clean, Operation Clean-Niagara, and Pollution Probe. This board was involved with the permitting of Sanitary Landfill (SLF) 11 (closed for several years). The SPDES permit also allows the CRB to collect samples of the effluent from Outfall 001 or from the fac pond, for separate analyses and verification of effluent quality by an outside laboratory, at the expense of the permittee. This provision was originally incorporated into the SPDES permit because, in the CRB's early years, the New York State Department of Health's Environmental Laboratory Approval Program (ELAP) was not yet developed, and the permittee performed some or all of its own chemical analyses onsite. The permit provision allowing for the CRB was, therefore, a means for independent verification of the permittee's own analytical results. However, ELAP was established in 1984 under Section 502 of the Public Health Law, followed by promulgation of NYCRR 55-2 of the public health regulations. The ELAP program is responsible for certification of laboratories performing environmental analyses on samples originating in New York State, through annual audits, to ensure compliance with analytical and quality assurance/quality control procedures. ELAP is also consistent with the National Environmental Laboratory Approval Program (NELAP). The laboratory approval program ensures uniform and consistent procedures between all laboratories.

SPDES regulations 6 NYCRR Part 750 incorporates by reference both ELAP and EPA (40 CFR Part 136) sampling and analytical protocols for all SPDES permit requirements. The permittee is ELAP certified for performing Metals and VOA analyses onsite, but not SVOAs. Therefore, samples for SVOAs, as well as certain other organic and inorganic parameters, are sent to an ELAP-certified laboratory offsite for analyses.

Although the CRB has not existed, or at least functioned, for many years, according statements by the permittee in the August 18, 2003 cover letter which accompanied the permit modification application, the permittee does provide a copy of the cover letter of the prequalification data package submitted to the Department for review, to the Supervisors of the Towns of Lewiston and Porter. The data is available from the permittee for review not only by these entities, but the public in general. Copies of the cover letter are also sent to certain members of Residents Organized for Lewiston-Porter's Environment (ROLE). Finally, in a May 10, 2007 letter from the permittee to the Supervisor of the Town of Lewiston, the permittee has offered to allow for both the Town and the County Health Department to collect and analyze samples from Fac Pond No. 3, at their own expense, with analyses to be performed at a laboratory of their choosing.

To the Department's knowledge, the CRB has not functioned since the 1980s, probably due to the closure of SLF 11 as well as development of the ELAP program, which has eliminated the need for separate verification of laboratory results. Because of these developments, the reference to the Citizens Review Board and all associated provisions are deleted from the SPDES permit. Further, with a stringent laboratory audit and certification process in place under New York State and federal laws and regulations, the Department is not providing for any citizen's group to replace the CRB. Any outside citizen's group or organization is free to discuss additional sampling arrangements with the permittee, outside of the SPDES permitting process.

Special Condition No. 5.b. (Outfall Specific) - Leakage Test Requirements

A testing frequency of Annually has been added to the permit, with the requirement to test within 2 months prior to anticipated discharge.

(7) Explanatory Notes:

Please note that some of these terms are not applicable to every Fact Sheet.

AL -	Action level calculated in accordance with TOGS 1.2.1 (non-POTWs) and TOGS 1.3.3 (POTWs). See the permit for a complete definition.
AVG or Av -	Average. The arithmetic mean.
AWQC -	Ambient water quality criteria for the receiving water. The applicable standard, guidance value or estimated value in accordance with TOGS 1.1.1, TOGS 1.3.1 and 6NYCRR 700-705.
Basis -	The technical analysis, internal guidance, regulation and/or law upon which an effluent limit or monitoring requirement is proposed.
BAT -	Best Available Technology Economically Achievable in accordance with TOGS 1.2.1 (non-POTWs) and TOGS 1.3.3 (POTWs), 40 CFR 125, 6NYCRR 750, ECL 17-0811 and the Clean Water Act.
BCT -	Best Conventional Control Technology in accordance with TOGS 1.3.4, 40 CFR 125, 6NYCRR 750, ECL 17-0811 and the Clean Water Act.
BPJ -	Best Professional Judgement in accordance with TOGS 1.2.1 (non-POTWs) and TOGS 1.3.3 (POTWs), 40 CFR 122 and 125, 6NYCRR 750, ECL 17-0811 and the Clean Water Act.
BPT -	Best Practicable Control Technology in accordance with TOGS 1.2.1, 40 CFR 125, 6NYCRR 750, ECL 17-0811 and the Clean Water Act.
Conc. -	Concentration in units of mg/l, ug/l or ng/l.
DA	Daily Average
Design Flow -	Treatment system design capacity as noted in an approved engineering report.
DL	Detection limit.
Final -	Final permit period requirements. A level of performance that must be achieved according to a schedule specified in either the permit or a consent order.
g/d -	Grams per day discharged.
GW -	Groundwater effluent limitation developed in accordance with TOGS 1.2.1 (non-POTWs), TOGS 1.3.3 (POTWs), TOGS 1.1.2 and 6NYCRR 703.
GV -	Guidance value.
Ind -	Indicated parameter. See definition in section (4).
Interim -	Interim permit period requirements. A level of performance that must be achieved while improvements are being implemented in order to achieve final permit period requirements.
lbs/d or #/d -	Pounds per day discharged.
Mass -	Mass discharge in units of #/d or g/d discharge.
Max or Mx -	The maximum value.
MGD -	Million gallons per day.
mg/l -	Milligrams per liter.
Dilution/Mixing -	Used to determine dilution available in receiving waters. For lakes, estuaries and slowly flowing rivers and streams, mixing zone dilution is generally assumed to be 10:1 unless data is available to indicate otherwise.
MA -	Monthly average.
Model -	Calibrated water quality model applied in accordance with TOGS 1.3.1.
Mon -	Monitor only.
NA -	The characteristics of this parameter and the reported discharge levels do not justify routine monitoring or a limit. Also indicates "Not Applicable."
ND -	Non-Detect
ng/l -	Nanograms per liter. 1000 ng/l = 1 ug/l = 0.001 mg/l.
pg/l -	Picograms per liter. 1000 pg/l = 1 ng/l = 0.001 ug/l = 0.000001 mg/l.
PQL -	The DEC published or site specific practical quantitation limit; the concentration in wastewater at which analytical results are thought to be accurate to within approximately plus or minus thirty percent.
R -	"Rolled Over", i.e. the specific requirement in this permit is equivalent to the previous permit. R(T) is roll over of a technology based requirement and R(WQ) is roll over of a WQBEL.
Range -	The discharge is limited to a range of effluent values, e.g. a pH limit of (6.0-9.0) SU.
RREL -	EPA's Risk Reduction Engineering Laboratory treatability database.
STD -	Standard
T -	Technology based effluent limit or requirement.
TOGS -	Technical and Operational Guidance Series. Internal guidance to permit drafters used by the NYSDEC Division of Water to aid in permit drafting. Copies of these guidance documents may be obtained from the internet at http://www.dec.state.ny.us/website/dow/togs/index.htm .
ug/l -	Micrograms per liter. 1000 ug/l = 1 mg/l.
VOAs, SVOAs -	These parameters represent scans for "Volatile Organic Analytes" and "Semi-Volatile Analytes." Detections vary among the compounds which are included in these scans.
WET-	Whole Effluent Toxicity (testing). See TOGS 1.3.2.
WQ -	Water quality.
WQBEL -	Water quality-based effluent limit. See information in section (4).
7Q10 -	The minimum average 7 consecutive day flow at a recurrence interval of 10 years. Applicable to evaluations involving aquatic health based AWQC.
30Q10 -	The minimum average 30 consecutive day flow at a recurrence interval of 10 years. Applicable to evaluations involving human health based AWQC.
95% -	The 95th percent confidence interval for the historical effluent data used to draft the permit.
99% -	The 99th percent confidence interval for the historical effluent data used to draft the permit.
133 -	Secondary treatment requirements in accordance with TOGS 1.3.3, 40 CFR 133, 6NYCRR 750, ECL 17-0509 and the Clean Water Act.

