

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT



| | | | |
|-----------------------|------------------|----------------------------|---------------------------|
| Industrial Code: | 4953/1422 | SPDES Number: | NY0004880 |
| Discharge Class (CL): | 03 | DEC Number: | 4-0103-00016/00020 |
| Toxic Class (TX): | T | Effective Date (EDP): | EDP |
| Major Drainage Basin: | 12 | Expiration Date (ExDP): | ExDP |
| Sub Drainage Basin: | 01 | Modification Dates: (EDPM) | |
| Water Index Number: | H-240 | | |
| Compact Area: | | | |

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 et.seq.)(hereinafter referred to as "the Act").

| PERMITTEE NAME AND ADDRESS | | | |
|----------------------------|----------------------------------|------------|----------------------------------|
| Name: | Norlite LLC | Attention: | Darrell Monk |
| Street: | 628 South Saratoga Street | | |
| City: | Cohoes | State: | NY Zip Code: 12047 |

is authorized to discharge from the facility described below:

| FACILITY NAME AND ADDRESS | | | |
|---------------------------------|----------------------------------|--------------|--|
| Name: | Norlite LLC | | |
| Location (C,T,V): | Cohoes (C) | County: | Albany |
| Facility Address: | 628 South Saratoga Street | | |
| City: | Cohoes | State: | NY Zip Code: 12047 |
| From Outfall No.: | 003 | at Latitude: | 42 ° 45 ' 14 " & Longitude: 73 ° 40 ' 20 " |
| into receiving waters known as: | Salt Kill Creek (H-239) | | Class: D |

and (list other Outfalls, Receiving Waters & Water Classifications)

- 004 Salt Kill Creek (H-239) D**
- 006 Mohawk River (H-240) C**
- 06B Mohawk River (H-240) C**

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1 and 750-2.

| DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS | | | |
|---|----------------------------|--------|----------------------------------|
| Mailing Name: | Norlite LLC | | |
| Street: | 628 Saratoga Street | | |
| City: | Cohoes | State: | NY Zip Code: 12047 |
| Responsible Official or Agent: | Darrell Monk | | Phone: (518) 235-0401 |

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

CO BWP - Permit Coordinator
RWE
RPA
USEPA Region 2
NYSDOH District Office

| | |
|--|-----------|
| Permit Administrator: | |
| Address: 625 Broadway Albany, NY 12233-1750 | |
| Signature: | Date: / / |

OUTFALL SUMMARY

| OUTFALL | DESCRIPTION | RECEIVING WATER / CLASS | LATITUDE LONGITUDE |
|---------|--|----------------------------|-----------------------------|
| 003 | Quarry Water | Salt Kill Creek Class D | 42° 45' 20" 73° 42' 22" |
| 004 | Shale Fines Leachate and Storm Runoff from Landfill Area | Salt Kill Creek Class D | 42° 45' 16" 73° 42' 05" |
| 006 | Treated Scrubber Blowdown, Boiler Blowdown, Trunnion Non-Contact Cooling Water, Treated Quarry Water | Mohawk River Class C | 42° 45' 34" 73° 41' 44" |
| 06A | Treated Scrubber Blowdown, Boiler Blowdown, Trunnion Non-Contact Cooling Water, Treated Quarry Water | NA | NA |
| 06B | Treated Outfall 006 Effluent at Manhole by Railroad Tracks | Mohawk River Class C | 42°45'33.25" 73°42'2.02" |

DRAFT

PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

| OUTFALL | WASTEWATER TYPE | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---------|---|--|---|--|
| | This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water. | This cell lists classified waters of the state to which the listed outfall discharges. | The date this page starts in effect. (e.g. EDP or EDPM) | The date this page is no longer in effect. (e.g. ExDP) |

| PARAMETER | MINIMUM | MAXIMUM | UNITS | SAMPLE FREQ. | SAMPLE TYPE |
|---------------------------------|--|--|--------------------|--------------|-------------|
| e.g. pH, TRC, Temperature, D.O. | The minimum level that must be maintained at all instants in time. | The maximum level that may not be exceeded at any instant in time. | SU, °F, mg/l, etc. | See below | See below |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | COMPLIANCE LEVEL / ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE |
|-----------|---|--|---|---|---|---|
| | Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based limits, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change. | For the purposes of compliance assessment, the permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters present in the sample unless otherwise specified. If a sample result is below the detection limit of the most sensitive method, compliance with the permit limit for that parameter was achieved. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This Minimum Level (ML) can be neither lowered nor raised without a modification of this permit. | Action Levels are monitoring requirements, as defined below in Note 2, which trigger additional monitoring and permit review when exceeded. | This can include units of flow, pH, mass, temperature, or concentration. Examples include µg/l, lbs/d, etc. | Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly. All monitoring periods (quarterly, semiannual, annual, etc) are based upon the calendar year unless otherwise specified in this Permit. | Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period. |

Notes:

1. EFFLUENT LIMIT TYPES:

- a. **DAILY DISCHARGE:** The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.
- b. **DAILY MAX:** The highest allowable daily discharge. **DAILY MIN:** The lowest allowable daily discharge.
- c. **MONTHLY AVG:** The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
- d. **7 DAY ARITHMETIC MEAN (7 day average):** The highest allowable average of daily discharges over a calendar week.
- e. **30 DAY GEOMETRIC MEAN:** The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
- f. **7 DAY GEOMETRIC MEAN:** The highest allowable geometric mean of daily discharges over a calendar week.
- g. **RANGE:** The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

2. **ACTION LEVELS:** Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards.

PERMIT LIMITS, LEVELS AND MONITORING

| OUTFALL | WASTEWATER TYPE | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---------|-----------------|-----------------|-----------|----------|
| 003 | Quarry Water | Salt Kill Creek | EDP | ExDP |

| PARAMETER | MINIMUM | MAXIMUM | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FOOTNOTES (FN) |
|-----------|---------|---------|-------|------------------|-------------|----------------|
| pH | 6.0 | 9.0 | SU | Daily | Grab | |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | | COMPLIANCE LEVEL/ ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FN |
|--------------------------|------------------------------------|-----------|----------------------|--------------|----------------|------------------|-------------|----|
| | Monthly Avg | Daily Max | | | | | | |
| Flow | M | M | - | - | MGD | Daily | Estimate | 1 |
| Solids, Total Suspended | 25 210 | 45 370 | - | - | mg/l lb/day | Weekly | Composite | |
| Solids, Total Dissolved | M M | M M | - | - | mg/l lb/day | Weekly | Composite | |
| Solids, Settleable | M | 0.1 | - | - | ml/l | Weekly | Grab | |
| Mercury, Total | M | 50 | - | - | ng/l | Weekly | Grab | |
| Chlorine, Total Residual | M | 19 | 20 | - | µg/l | Weekly | Grab | |

FOOTNOTES: See page 9 of this Permit.

| OUTFALL | WASTEWATER TYPE | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---------|---|-----------------|-----------|----------|
| 004 | Shales Fines Leachate and Storm Runoff from Landfill Area | Salt Kill Creek | EDP | ExDP |

| PARAMETER | MINIMUM | MAXIMUM | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FOOTNOTES (FN) |
|-------------|---------|---------|-------|------------------|-------------|----------------|
| pH | 6.0 | 9.0 | SU | Daily | Grab | |
| Temperature | - | 90 | °F | Daily | Grab | |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | | COMPLIANCE LEVEL/ ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FN |
|---------------------------------------|------------------------------------|---------------|----------------------|--------------|----------------|------------------|--------------|----|
| | Monthly Avg | Daily Max | | | | | | |
| Flow | M | M | - | - | MGD | Daily | Estimate | 2 |
| Solids, Total Suspended | 25 11 | 45 19 | - | - | mg/l lb/day | Daily | Composite | |
| Solids, Total Dissolved | M M | M M | - | - | mg/l lb/day | Daily | Composite | |
| Chlorides | M M | M M | - | - | mg/l lb/day | Daily | Grab | |
| Cadmium, Total | M M | 4.0 0.0017 | - | - | µg/l lb/day | Daily | Grab | |
| Chromium, Hexavalent | M M | 16 0.0070 | - | - | µg/l lb/day | Daily | Grab | |
| Chromium, Total | M M | 570 0.25 | - | - | µg/l lb/day | Daily | Grab | |
| Copper, Total | M M | 14 0.006 | - | - | µg/l lb/day | Daily | Grab | |
| Lead, Total | M M | 80 0.035 | - | - | µg/l lb/day | Daily | Grab | |
| Mercury | M | 50 | - | - | ng/l | Daily | Grab | |
| Nickel, Total | M M | 470 0.20 | - | - | µg/l lb/day | Daily | Grab | |
| Zinc, Total | M M | 120 0.052 | - | - | µg/l lb/day | Daily | Grab | |
| Chlorine, Total Residual | M | 19 | 20 | - | µg/l | Daily | Grab | |
| Whole Effluent Toxicity (WET) Testing | | | | | | | | |
| WET - Acute Invertebrate | - | - | - | 0.3 | TUa | Quarterly | See footnote | 3 |
| WET - Acute Vertebrate | - | - | - | 0.3 | TUa | Quarterly | See footnote | 3 |
| WET - Chronic Invertebrate | - | - | - | 1.0 | TUc | Quarterly | See footnote | 3 |
| WET - Chronic Vertebrate | - | - | - | 1.0 | TUc | Quarterly | See footnote | 3 |

FOOTNOTES: See page 9 of this Permit.

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| OUTFALL | WASTEWATER TYPE | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---------|--|-----------------|-----------|----------|
| 006 | Treated Scrubber Blowdown, Boiler Blowdown, Trunnion Non-Contact Cooling Water and Plant Water | Mohawk River | EDP | ExDP |

| PARAMETER | MINIMUM | MAXIMUM | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FOOTNOTES (FN) |
|-------------------------------------|---------|---------|-------|------------------|-------------|----------------|
| pH | 6.0 | 9.0 | SU | Daily | Grab | |
| Temperature | - | 115 | °F | Daily | Grab | 4, 5 |
| Oxidation/Reduction Potential (ORP) | M | M | mV | Continuous | Recorder | 6 |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | | COMPLIANCE LEVEL/ ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FN |
|---|------------------------------------|------------|----------------------|--------------|----------------|------------------|--------------|----|
| | Monthly Avg | Daily Max | | | | | | |
| Flow | M | M | - | - | MGD | Continuous | Recorded | |
| Solids, Total Suspended | M M | 66 66 | - | - | mg/l lb/day | Daily | Grab | |
| Solids, Total Dissolved | M M | M M | - | - | mg/l lb/day | Weekly | Grab | |
| Chlorides | - - | M M | - | - | mg/l lb/day | Monthly | Grab | |
| Sulfates | - - | M M | - | - | mg/l lb/day | Weekly | Grab | |
| Chlorine, Total Residual | M M | 1.0 1.0 | - | - | mg/l lb/day | Daily | Grab | 6 |
| Hydrogen Sulfide (as total dissolved sulfide) | M M | M M | - | - | mg/l lb/d | Weekly | Grab | |
| Ammonia (as NH3) | M M | M M | - | - | mg/l lb/day | Monthly | Grab | |
| Whole Effluent Toxicity (WET) Testing | | | | | | | | |
| WET - Acute Invertebrate | - | - | - | 15 | TUa | Quarterly | See footnote | 3 |
| WET - Acute Vertebrate | - | - | - | 15 | TUa | Quarterly | See footnote | 3 |
| WET - Chronic Invertebrate | - | - | - | 100 | TUc | Quarterly | See footnote | 3 |
| WET - Chronic Vertebrate | - | - | - | 100 | TUc | Quarterly | See footnote | 3 |

FOOTNOTES: See page 9 of this Permit.

| OUTFALL | WASTEWATER TYPE | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---------|--|-----------------------|-----------|----------|
| 06A | Treated Scrubber Blowdown, Boiler Blowdown, and Trunnion Cooling Water | Internal Outfall, 006 | EDP | ExDP |

| PARAMETER | MINIMUM | MAXIMUM | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FOOTNOTES (FN) |
|-----------|---------|---------|-------|------------------|-------------|----------------|
| pH | 6.0 | 9.0 | SU | Daily | Grab | |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | | COMPLIANCE LEVEL/ ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FN |
|-------------------------|------------------------------------|----------------|----------------------|--------------|----------------|------------------|-------------|------|
| | Monthly Avg | Daily Max | | | | | | |
| Flow | M | M | - | - | MGD | Daily | Recorded | |
| Solids, Total Suspended | 34 18 | 110 59 | - | - | mg/l lb/day | Daily | Grab | |
| Solids, Total Dissolved | M M | 34000 34000 | - | - | mg/l lb/day | Daily | Grab | |
| Chlorides | M M | M M | - | - | mg/l lb/day | Daily | Grab | |
| BOD5 | 30 16 | 45 24 | - | - | mg/l lb/day | Daily | Grab | 7 |
| Ammonia, as N | M M | 20 11 | - | - | mg/l lb/day | Daily | Grab | 7 |
| Arsenic, Total | 72 0.038 | 84 0.044 | - | - | µg/l lb/day | Daily | Grab | |
| Barium, Total | 510 0.27 | 1200 0.64 | - | - | µg/l lb/day | Daily | Grab | |
| Beryllium, Total | 370 0.20 | 820 0.44 | - | - | µg/l lb/day | Daily | Grab | |
| Cadmium, Total | 26 0.014 | 71 0.038 | - | - | µg/l lb/day | Daily | Grab | |
| Chromium, Total | 14 0.0075 | 25 0.013 | - | - | µg/l lb/day | Daily | Grab | |
| Copper, Total | 14 0.0075 | 23 0.012 | - | - | µg/l lb/day | Daily | Grab | 7 |
| Iron, Total | 610 0.33 | 1200 0.64 | - | - | µg/l lb/day | Daily | Grab | 7 |
| Lead, Total | 32 0.017 | 57 0.030 | - | - | µg/l lb/day | Daily | Grab | |
| Mercury, Total | M M | 50 M | - | - | ng/l g/day | Daily | Grab | 7, 8 |
| Nickel, Total | 370 0.20 | 550 0.29 | - | - | µg/l lb/day | Daily | Grab | |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | | COMPLIANCE LEVEL/ ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FN |
|-----------------|------------------------------------|--------------|----------------------|--------------|----------------|------------------|-------------|----|
| | Monthly Avg | Daily Max | | | | | | |
| Silver, Total | 8.0 0.0043 | 13 0.0069 | - | - | µg/l lb/day | Daily | Grab | 7 |
| Selenium, Total | M M | 130 0.07 | - | - | µg/l lb/day | Daily | Grab | |
| Titanium, Total | 22 0.012 | 60 0.032 | - | - | µg/l lb/day | Daily | Grab | 7 |
| Zinc, Total | 54 0.029 | 82 0.044 | - | - | µg/l lb/day | Daily | Grab | |

FOOTNOTES: See page 9 of this Permit.

| OUTFALL | WASTEWATER TYPE | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---------|---|-----------------|-----------|----------|
| 06B | Outfall 006 effluent measured at MH by railroad | Mohawk | EDP | ExDP |

| PARAMETER | MINIMUM | MAXIMUM | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FOOTNOTES (FN) |
|-----------|---------|---------|-------|------------------|-------------|----------------|
| pH | 6.0 | 9.0 | SU | Weekly | Grab | |

| PARAMETER | EFFLUENT LIMIT or CALCULATED LEVEL | | COMPLIANCE LEVEL/ ML | ACTION LEVEL | UNITS | SAMPLE FREQUENCY | SAMPLE TYPE | FN |
|----------------|------------------------------------|--------------|----------------------|--------------|----------------|------------------|-------------|----|
| | Monthly Avg | Daily Max | | | | | | |
| Temperature | M | 90 | - | - | °F | Weekly | Grab | 4 |
| Sulfide, Total | M M | 0.27 0.27 | - | - | mg/l lb/day | Weekly | Grab | 7 |
| Color | - | M | - | - | PCU | Weekly | Observation | 10 |

FOOTNOTES: See page 9 of this Permit.

FOOTNOTES:

1. Estimate flow by multiplying pumping rate by the total time elapsed during discharge.
2. Estimate flow by using a bucket and stop watch.

3. Whole Effluent Toxicity (WET) Testing:

Testing Requirements - WET testing shall consist of **Acute and if necessary Chronic**. WET testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be *Ceriodaphnia dubia* (water flea - invertebrate) and *Pimephales promelas* (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24 hr composite samples with one renewal for Acute tests and three 24 hr composite samples with two renewals for Chronic tests). The appropriate dilution series bracketing the IWC and including one exposure group of 100% effluent should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test is required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing.

The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) for **Outfall 004** is 0.3:1 for acute, and 1:1 for chronic. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) for **Outfall 006** is 15:1 for acute, and 100:1 for chronic.

Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

Monitoring Period - WET testing shall be performed at the specified sample frequency during calendar years ending in 7 and 2.

Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: $TU_a = (100)/(48 \text{ hr LC}_{50})$ or $(100)/(48 \text{ hr EC}_{50})$ (note that Acute data is generated by both Acute and Chronic testing) and $TU_c = (100)/(NOEC)$ when Chronic testing has been performed or $TU_c = (TU_a) \times (10)$ when only Acute testing has been performed and is used to predict Chronic test results, where the 48 hr LC₅₀ or 48 hr EC₅₀ and NOEC are expressed in % effluent. This must be done for both species and using the Most Sensitive Endpoint (MSE) or the lowest NOEC and corresponding highest TU_c. Report a TU_a of 0.3 if there is no statistically significant toxicity in 100% effluent as compared to control.

The complete test report including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period to the Toxicity Testing Unit, Bureau of Watershed Assessment and Management, 625 Broadway, Fourth Floor, Albany, NY 12233-3502. A summary page of the test results for the invertebrate and vertebrate species indicating TU_a, 48 hr LC₅₀ or 48 hr EC₅₀ for Acute tests and/or TU_c, NOEC, IC₂₅, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Reduction Evaluation (TRE) in accordance with Department guidance. If such additional testing or performance of a TRE is necessary, the permittee shall be notified in writing by the Regional Water Engineer. The written notification shall include the reason(s) why such testing or a TRE is required.

4. The 115 °F limit applies at outfall 006. The 90 °F limit applies at 06B manhole.
5. Plant Water shall be defined as that treated Quarry Water that is discharged through Outfall 006, to aid in the control of the temperature of the entire outfall.
6. Grab samples shall be collected following the addition of sodium hypochlorite for hydrogen sulfide control. The addition of sodium hypochlorite shall be made whenever the ORP reading is unstable or falling below +100 toward zero or negative.
7. See Compliance Schedule on page 17
8. An interim limit of 520 ng/l monthly average and 1200 ng/l daily max applies until **EDP + 2 years**.
9. See Schedule of Submittals on page 18
10. PCU is defined as Platinum-Cobalt Units.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES

1. **General** - The permittee shall develop, maintain, and implement a Best Management Practices (BMP) plan to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and stormwater discharges including, but not limited to, drainage from raw material storage. The BMP plan shall be documented in narrative form and shall include the 13 minimum BMPs and any necessary plot plans, drawings, or maps. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the plan and may be incorporated by reference. A copy of the current BMP plan shall be submitted to the Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.
2. **Compliance Deadlines** - The initial completed BMP plan shall be submitted **WITHIN 6 MONTHS OF EDP** to the Regional Water Engineer. The BMP plan shall be implemented within 6 months of submission, unless a different time frame is approved by the Department. The BMP plan shall be reviewed annually and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions (with the exception of SWPPPs - see item (5.) below) must be submitted to the Regional Water Engineer within 30 days. Note that the permittee is not required to obtain Department approval of the BMP plan (or of any SWPPPs) unless notified otherwise. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
3. **Facility Review** - The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in Tables 6-10 of SPDES application Form NY-2C (available at http://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.pdf) or that are required to be monitored for by the SPDES permit. **Particular attention shall be given to the following substance(s): mercury.**
4. **13 Minimum BMPs:** Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. **Additional USEPA guidance is available in EPA-833-F-06-026.**

As a minimum, the plan shall include the following BMPs:

- | | | |
|-------------------------------------|---|---------------------------------|
| 1. BMP Pollution Prevention Team | 6. Security | 10. Spill Prevention & Response |
| 2. Reporting of BMP Incidents | 7. Preventive Maintenance | 11. Erosion & Sediment Control |
| 3. Risk Identification & Assessment | 8. Good Housekeeping | 12. Management of Runoff |
| 4. Employee Training | 9. Materials/Waste Handling, Storage, & Compatibility | 13. Street Sweeping |
| 5. Inspections and Records | | |

Note that for some facilities, especially those with few employees, some of the above BMPs may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the BMP Plan that do not apply to your facility, along with an explanation.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters** - As part of BMP #11, a SWPPP shall be developed prior to the initiation of any site disturbance of one acre or more of uncontaminated area. Uncontaminated area means soils or groundwater which are free of contamination by any toxic or non-conventional pollutants identified in Tables 6-10 of SPDES application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Engineer; nor is such discharge authorized by any SPDES general permit for stormwater discharges. SWPPPs are not required for discharges of stormwater from construction activity to groundwaters. The SWPPP shall conform to the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual*, unless a variance has been obtained from the Regional Water Engineer, and to any local requirements. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall also be submitted to the Regional Water Engineer if contamination, as defined above, is involved and the permittee must obtain a determination of any SPDES permit modifications and/or additional treatment which may be required prior to soil disturbance. Otherwise, the SWPPP shall be submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent (NOI)* form shall be submitted (available at www.dec.ny.gov/chemical/43133.html) prior to soil disturbance. Note that submission of a NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges, nor are any additional permit fees incurred. SWPPPs must be developed and submitted for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.
6. **Required Sampling For "Hot Spot" Identification** - Development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines etc.) which contributes elevated levels of problem pollutants to the wastewater and/or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal and/or isolation of the segment and/or B.A.T. treatment of wastewaters emanating from the segment.

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MERCURY MINIMIZATION PROGRAM – Industrial Facilities

1. **General** - The permittee shall develop, implement, and maintain a Mercury Minimization Program (MMP) for those outfalls which have mercury effluent limits. The MMP is required because the permit limit exceeds the statewide water quality based effluent limit (WQBEL) of 0.70 nanograms/liter (ng/L) for Total Mercury. The goal of the MMP is to reduce mercury effluent levels in pursuit of the WQBEL. Note – the mercury-related requirements in this permit conform to the mercury Multiple Discharge Variance specified in NYSDEC policy *DOW 1.3.10*.

2. **MMP Elements** - The MMP shall be documented in narrative form and shall include any necessary drawings or maps. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP shall include an on-going program consisting of: periodic monitoring; an acceptable control strategy which will become enforceable under this permit; and, submission of periodic status reports.

A. **Monitoring** - The permittee shall conduct periodic monitoring designed to quantify and, over time, track the reduction of mercury. Wastewater treatment plant influents and effluents, and other outfalls shall be monitored in accordance with the minimum frequency specified on the mercury permit limits page. Additionally, key locations in the wastewater and/or stormwater collection systems, and known or potential mercury sources, including raw materials, shall be monitored at the above frequency during the first year of the MMP. Monitoring of key locations and known/potential sources may be reduced during subsequent years if downstream outfalls have maintained mercury levels less than 50 ng/l during the previous year. Additional monitoring shall be completed as may be required elsewhere in this permit or upon Department request. Monitoring shall be coordinated so that the results can be effectively compared between internal locations and final outfalls.

All permit-related wastewater and stormwater mercury compliance point (outfall) monitoring shall be performed using EPA Method 1631. Use of EPA Method 1669 during sample collection is recommended. Unless otherwise specified, all samples should be grabs. Monitoring at influent and other locations tributary to compliance points may be performed using either EPA Methods 1631 or 245.7. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate.

B. **Control Strategy** - An acceptable control strategy is required for reducing mercury discharges via cost-effective measures, which may include, but is not limited to: source identification; replacement of mercury-containing equipment, materials, and products with mercury-free alternatives where environmentally preferable; more stringent control of tributary waste streams; remediation; and/or installation of new or improved treatment facilities. Required monitoring shall also be used, and supplemented as appropriate, to determine the most effective way to operate the wastewater treatment system(s) to ensure effective removal of mercury while maintaining compliance with other permit requirements.

C. **Bulk Chemical Evaluation** - For chemicals used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee shall obtain a manufacturer's certificate of analysis and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. The permittee shall only use bulk chemicals which contain <10 ppb mercury, if available. This requirement is only applicable to chemicals that would impact wastewater effluent.

C. **Annual Status Report** - An annual status report shall be submitted to the Regional Water Engineer and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, summarizing: (a) all MMP monitoring results for the previous year; (b) a list of known and potential mercury sources; (c) all action undertaken pursuant to the strategy during the previous year; (d) actions planned for the upcoming year; and, (e) progress toward the goal. The first annual status report is due one year after the permit is modified to include the MMP requirement and follow-up status reports are due annually thereafter. A file shall be maintained containing all MMP documentation which shall be available for review by NYSDEC representatives. Copies shall be provided upon request.

3. **MMP Modification** - The MMP shall be modified whenever: (a) changes at the facility or within the collection system increase the potential for mercury discharges; (b) actual discharges exceed 50 ng/L; (c) a letter from the Department identifies inadequacies in the MMP; or (d) pursuant to a permit modification.

DISCHARGE NOTIFICATION REQUIREMENTS

- (a) Except as provided in (c) and (g) of these Discharge Notification Act requirements, the permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit. Such signs shall be installed before initiation of any discharge.
- (b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above, unless a new deadline is set explicitly by such permit modification or renewal.
- (c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.
- (d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty four inches (18" x 24") and shall have white letters on a green background and contain the following information:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY _____

OUTFALL No. : _____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: () - ### - ####

OR:

NYSDEC Division of Water Regional Office Address :

NYSDEC Division of Water Regional Phone: () - ### - ####

- (e) For each discharge required to have a sign in accordance with a), the permittee shall, concurrent with the installation of the sign, provide a repository of copies of the Discharge Monitoring Reports (DMRs), as required by the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of this permit. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be at the business office repository of the permittee or at an off-premises location of its choice (such location shall be the village, town, city or county clerk’s office, the local library or other location as approved by the Department). In accordance with the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of your permit, each DMR shall be maintained on record for a period of five years
- (f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

DISCHARGE NOTIFICATION REQUIREMENTS (continued)

- (g) All requirements of the Discharge Notification Act, including public repository requirements, are waived for any outfall meeting any of the following circumstances, provided Department notification is made in accordance with (h) below:
- (i) such sign would be inconsistent with any other state or federal statute;
 - (ii) the Discharge Notification Requirements contained herein would require that such sign could only be located in an area that is damaged by ice or flooding due to a one-year storm or storms of less severity;
 - (iii) instances in which the outfall to the receiving water is located on private or government property which is restricted to the public through fencing, patrolling, or other control mechanisms. Property which is posted only, without additional control mechanisms, does not qualify for this provision;
 - (iv) instances where the outfall pipe or channel discharges to another outfall pipe or channel, before discharge to a receiving water;
or
 - (v) instances in which the discharge from the outfall is located in the receiving water, two-hundred or more feet from the shoreline of the receiving water.
- (h) If the permittee believes that any outfall which discharges wastewater from the permitted facility meets any of the waiver criteria listed in (g) above, notification (form enclosed) must be made to the Department's Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, of such fact, and, provided there is no objection by the Department, a sign and DMR repository for the involved outfall(s) are not required. This notification must include the facility's name, address, telephone number, contact, permit number, outfall number(s), and reason why such outfall(s) is waived from the requirements of discharge notification. The Department may evaluate the applicability of a waiver at any time, and take appropriate measures to assure that the ECL and associated regulations are complied with.

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

| Outfall(s) | Parameter(s) Affected | Interim Effluent Limit(s) | Compliance Action | Due Date |
|--|-----------------------|---|-------------------|----------------|
| 06C | Sulfide, Total | Monitor | Meet permit limit | EDP + 3 months |
| | Silver | Monitor | | |
| | Titanium | Monitor | Meet permit limit | EDP + 2 years |
| 06A | BOD5 | Monitor | | |
| | Ammonia, as N | Monitor | | |
| | Copper | 0.12 mg/l, 0.064 lb/day daily max | | |
| | Iron | 5.4 mg/l, 2.9 lb/day, daily max | Meet permit limit | EDP + 2 years |
| | Mercury | 520 ng/l monthly average, 1200 ng/l daily max | | |
| <p>The above compliance actions are one time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.</p> | | | | |

- b) For any action where the compliance date is greater than 9 months past the previous compliance due date, the permittee shall submit interim progress reports to the Department every nine (9) months until the due date for these compliance items are met.
- c) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
1. A short description of the non-compliance;
 2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
 3. A description or any factors which tend to explain or mitigate the non-compliance; and
 4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- d) The permittee shall submit copies of any document required by the above schedule of compliance to the NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

SCHEDULE OF SUBMITTALS

- a) The permittee shall submit the following information to the Regional Water Engineer at the address listed on the Recording, Reporting and Monitoring page of this Permit, and to the Bureau of Water Permits, 625 Broadway, Albany NY 12233-3505:

| Outfall(s) | Parameter(s) Affected | Required Action | Due Date |
|------------|-----------------------|---|--------------------------------------|
| 006 | All | Permittee shall perform dye study to verify outfall location. Permittee shall provide the Department with latitudinal and longitudinal coordinates for outfall location. This study shall be coordinated with the Department so that a NYSDEC representative may be present. Permittee shall submit data for mixing zone analysis. | EDP + 3 months EDP + 3 months |

- b) Unless noted otherwise, the above actions are one time requirements. The permittee shall submit the results of the above actions to the satisfaction of the Department. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the above submittal(s), unless noted otherwise. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

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MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations(s) specified below:

Outfall 003: Sampling point shall be at valve above discharge point.

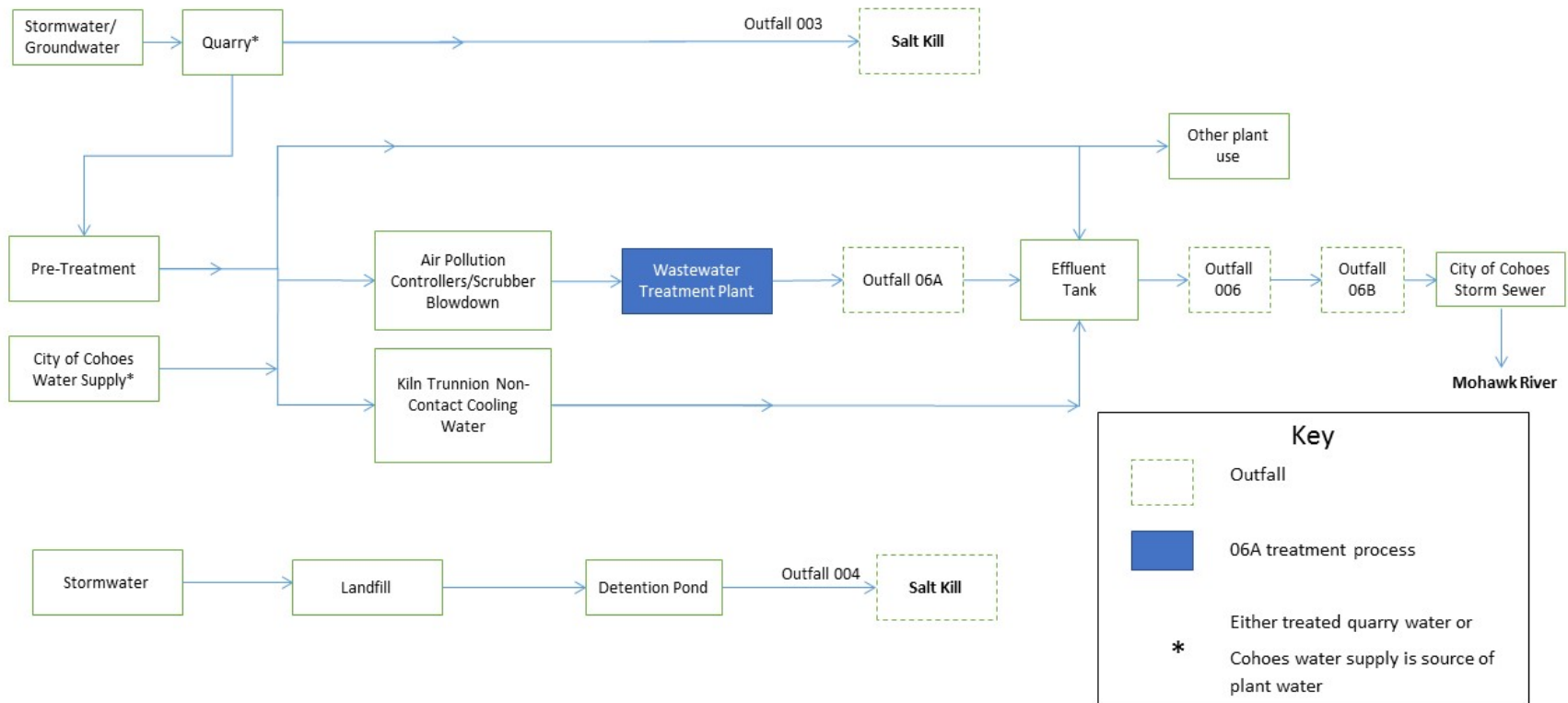
Outfall 004: Sampling point shall be at manhole located at approximately 42°45'15.48"N, 73°42'8.24"W.

Internal Outfall 06A: Samples shall be taken post-carbon filters.

Outfall 006: Samples shall be taken from sampling valves for either Tank A or Tank B, depending on treatment plant operations.

Outfall 06B: Sampling point shall be at manhole located at approximately 42°45'33.25"N, 73°42'2.02"W.

Water Flow Diagram



GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:.
- B. General Conditions
- | | |
|--|--|
| 1. Duty to comply | 6 NYCRR Part 750-2.1(e) & 2.4 |
| 2. Duty to reapply | 6 NYCRR Part 750-1.16(a) |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR Part 750-2.1(g) |
| 4. Duty to mitigate | 6 NYCRR Part 750-2.7(f) |
| 5. Permit actions | 6 NYCRR Part 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights | 6 NYCRR Part 750-2.2(b) |
| 7. Duty to provide information | 6 NYCRR Part 750-2.1(i) |
| 8. Inspection and entry | 6 NYCRR Part 750-2.1(a) & 2.3 |
- C. Operation and Maintenance
- | | |
|-----------------------------------|---|
| 1. Proper Operation & Maintenance | 6 NYCRR Part 750-2.8 |
| 2. Bypass | 6 NYCRR Part 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset | 6 NYCRR Part 750-1.2(a)(94) & 2.8(c) |
- D. Monitoring and Records
- | | |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR Part 750-2.5(a)(2), 2.5(c)(1), 2.5(c)(2), 2.5(d) & 2.5(a)(6) |
| 2. Signatory requirements | 6 NYCRR Part 750-1.8 & 2.5(b) |
- E. Reporting Requirements
- | | |
|--|---------------------------------------|
| 1. Reporting requirements | 6 NYCRR Part 750-2.5, 2.6, 2.7 & 1.17 |
| 2. Anticipated noncompliance | 6 NYCRR Part 750-2.7(a) |
| 3. Transfers | 6 NYCRR Part 750-1.17 |
| 4. Monitoring reports | 6 NYCRR Part 750-2.5(e) |
| 5. Compliance schedules | 6 NYCRR Part 750-1.14(d) |
| 6. 24-hour reporting | 6 NYCRR Part 750-2.7(c) & (d) |
| 7. Other noncompliance | 6 NYCRR Part 750-2.7(e) |
| 8. Other information | 6 NYCRR Part 750-2.1(f) |
| 9. Additional conditions applicable to a POTW | 6 NYCRR Part 750-2.9 |
| 10. Special reporting requirements for discharges that are not POTWs | 6 NYCRR Part 750-2.6 |
- F. Planned Changes
1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The alteration or addition to the permitted facility may meet of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
 - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

In addition to the Department, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

GENERAL REQUIREMENTS continued

G. Notification Requirement for POTWs

1. All POTWs shall provide adequate notice to the Department and the USEPA of the following:
 - a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - c. For the purposes of this paragraph, adequate notice shall include information on:
 - i. the quality and quantity of effluent introduced into the POTW, and
 - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

H. Sludge Management

The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

I. SPDES Permit Program Fee

The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

J. Water Treatment Chemicals (WTCs)

New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the Department.
2. The permittee shall **maintain a logbook** of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
3. The permittee shall **submit a completed *WTC Annual Report Form*** each year that they use and discharge WTCs. This form shall be attached to either the December DMR or the annual monitoring report required below.

The *WTC Notification Form* and *WTC Annual Report Form* are available from the Department's website at <http://www.dec.ny.gov/permits/93245.html>.

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be summarized, signed and retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent. **Also, monitoring information required by this permit shall be summarized and reported by submitting;**

(if box is checked) completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

(if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 each year and must summarize information for January to December of the previous year in a format acceptable to the Department.

(if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:
 Regional Water Engineer and/or County Health Department or Environmental Control Agency specified below

Send the **original** (top sheet) of each DMR page to:
 Department of Environmental Conservation
 Division of Water, Bureau of Water Compliance
 625 Broadway
 Albany, New York 12233-3506

Phone: (518) 402-8177

Send an **additional copy** of each DMR page to:

Send the **first copy** (second sheet) of each DMR page to:
 Department of Environmental Conservation
 Regional Water Engineer, Region 4
 1130 North Westcott Road
 Schenectady, New York 12306-2014

Phone: (518) 357-2045

- B. Monitoring and analysis shall be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- C. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.
- D. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- E. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- F. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

Industrial SPDES Permit Fact Sheet

I. SUMMARY OF PROPOSED PERMIT CHANGES

A State Pollutant Discharge Elimination System (SPDES) permit EBPS modification is proposed. Following is a summary of the proposed changes in the draft permit as compared to the currently effective permit, the details of these changes are specified below and in the draft permit:

Outfall 003

- New limits for settleable solids, total residual chlorine, and mercury;
- New mass limit for total suspended solids;
- New monitoring requirement for total dissolved solids;

Outfall 004

- Addition of mass limits to cadmium, hexavalent chromium, and lead;
- New limits for pH, total suspended solids, copper, nickel, chromium, zinc, and mercury;
- New monitoring requirements for chlorides, total residual chlorine, and total dissolved solids;
- Addition of WET action levels.

Outfall 006

- Addition of concentration limits to total suspended solids;
- New limits for total residual chlorine;
- Addition of mass monitoring requirements for total dissolved solids, chlorides, sulfates, total sulfide, and ammonia;
- Addition of WET action levels;
- Schedule of Submittals for a dye study to verify outfall location and conduct a mixing zone analysis.

Outfall 06A

- New limits for arsenic, barium, beryllium, cadmium, total chromium, copper, iron, lead, mercury, nickel, silver, titanium, zinc, total suspended solids, total dissolved solids, total residual chlorine, ammonia, BOD5 and pH;
- New concentration limits for selenium.

Outfall 06B

- Designation of new sampling point;
- New limit for total sulfide;
- New monitoring requirements for temperature and color.

Outfall 007

- No longer used.

Outfall 008

- No longer used.

Please note that when the Department updates a permit this typically includes updated forms incorporating the latest general conditions.

II. BACKGROUND INFORMATION

As noted throughout this document, SPDES permits are based on both federal and state requirements including laws, regulations, policies, and guidance. These references can generally be found on the internet. Current locations include: Clean Water Act (CWA) www.epa.gov/lawsregs/laws/index.html#env; Environmental Conservation Law (ECL) www.dec.ny.gov/regulations/40195.html; federal regulations www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR; state environmental regulations www.dec.ny.gov/regulations/regulations.html; and, NYSDEC water policy, often referred to as Technical and Operational Guidance Series memos (TOGS), www.dec.ny.gov/regulations/2654.html.

A. Administrative History

The current SPDES permit for the facility became effective on February 2, 2004 and expired on February 1, 2007. A SPDES Modification was received on September 20, 2007. The application review was suspended on January 16, 2008 by mutual agreement with applicant. A re-submission was received on July 6, 2009 and forwarded to the Central Office and Region 4. A SPDES Renewal request was received on July 28, 2011. This application review was suspended on August 11, 2011 (SPDES EBPS Technical Review). The current permit is SAPA extended because it was received more than 180 days prior to the expiration date.

The Department has initiated a modification to the facility's SPDES permit, pursuant to 6 NYCRR Part 750-1.18 & 750-1.19, the priority ranking system, known as New York State's Environmental Benefit Permit Strategy (EBPS). The facility currently has an EBPS score of 197 and a ranking of 7. In response to the Department's April 1, 2009 Request for Information, the permittee provided a SPDES NY-2C permit application form and sampling data on July 21, 2009.

B. Outfall and Receiving Water Information

The facility discharges, or proposes to discharge, wastewater and/or stormwater to waters of the state via the following outfalls:

Outfall 003 – Quarry water. Treatment is provided for this outfall and consists of settling for removal of solids.

Outfall 004 – Shale fines leachate and stormwater runoff. Treatment is not provided for this outfall.

Outfall 06A – Internal outfall; treated scrubber blowdown, boiler blowdown, and trunnion non-contact cooling water. Treatment is provided for this outfall and consists of chemical addition, precipitation, and sulfide impregnated carbon filtration for removal of metals.

Outfall 006 – Outfalls 06A/B; treated scrubber blowdown, boiler blowdown, trunnion non-contact cooling water, and plant water. Treatment is provided for this outfall at internal outfall 06A.

Outfall 06B – Redesignation of outfall; sampling location downstream of outfall 006 at a manhole by rail road tracks; consists of treated Outfall 006 effluent.

Outfall 007 – Permittee requested this outfall be removed as it is no longer used.

Outfall 008 – Permittee requested this outfall be removed as it is no longer being considered.

The location of the outfall(s), and the name, classification, and index numbers of the receiving waters are indicated in the *Outfall & Receiving Water Location Table* at the end of this fact sheet. The classifications of individual surface waters are specified in 6 NYCRR Parts 800 – 941. The best uses and other requirements applicable to the specific water classes are specified in 6 NYCRR Part 701.

The 7Q10 flow was obtained from USGS Streamgauge Statistics, station # 01357500, Mohawk River at Cohoes, NY. The 7Q10 is approximately equal to the 10th percentile of flow data; 90 percent of flows exceed the estimated 7Q10. The Mohawk River flows over Cohoes Falls and reaches the “Sprouts of the Mohawk,” where multiple channels split off from the main river. There are three outlets from the sprouts that feed directly into the Hudson. The permittee discharges to the southern-most branch. The flow through each outlet was estimated using the USGS station gage and a ratio of drainage basins obtained through USGS Streamstats. The 30Q10 flow was estimated by applying a multiplier of 1.2 to the 7Q10 flow. Mixing zone analyses are conducted in accordance with the following documents: EPA T.S.D, entitled “Water Quality Based Toxics Control,” dated March, 1991; EPA Region VIII “Mixing Zones and Dilution Policy”, dated December, 1994; NYSDEC TOGS 1.3.1, entitled “Total Maximum Daily Loads and Water Quality Based Effluent Limits.” Other critical receiving water data for Temperature, pH, hardness and/or salinity were based on Department monitoring via the Rotating Integrated Basin Studies (RIBS) program. Where applicable, background data was incorporated into WQBEL determinations. This flow information is listed in the *Pollutant Summary Table* at the end of this fact sheet together with applicable ambient water quality criteria, ambient background data (if available), and outfall pollutant data.

Impaired Waterbody Information – The CWA requires states to identify impaired waters, where designated uses are not fully supported. For these impaired waters/pollutants, states must consider the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of the specific pollutant(s) restricting waterbody uses. As of July 2010, this stretch of the Mohawk River (1201-0085) is listed as having minor impacts. Aquatic life and habitat/hydrology are suspected of stress from ammonia, nutrients (phosphorus), pathogens, and silt/sediments.

The overview from PWL reads: Aquatic life support and recreational uses (fishing, swimming) in this portion of the Mohawk River, are affected by silt/sediment loads, elevated nutrient concentrations and pathogens. Urban runoff and municipal CSOs are considered the primary sources. Although there is no agriculture along this reach of the river, nonpoint source loadings from agricultural activities throughout the basin are also thought to contribute to impacts in this reach. Hydro modification and flow diversions also impact water uses.

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Mohawk River in Cohoes, Albany County, is conducted annually at the Route 32 bridge. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality; such sampling was last conducted at this site in 2006. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling using multiplate samplers indicated non- to slightly impacted conditions. Water column chemistry indicates iron to be present at levels that constitute a parameter of concern. However, iron is considered to be naturally occurring and not a source of water quality impacts. Dissolved aluminum and water temperature both exceeded assessment criteria in one of 6 samples, but median values for these parameters are well below applicable criteria. Toxicity testing using water from this location detected no mortality or reproductive effects on the test organism. Sediment screening for acute toxicity indicated slight sediment toxicity and no pore water toxicity was indicated. Bottom sediments analysis based on sediment quality guidelines developed for freshwater ecosystems revealed overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms, although PCB, PAHs, pesticides and metals levels were found to be somewhat elevated. Based on the consensus of these established assessment indicators, overall water quality at this site shows that in spite of some concerns that should continue to be monitored, aquatic life and recreational uses are considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAM/RIBS, January 2010)

C. Discharge Composition

The *Pollutant Summary Table* at the end of this fact sheet presents the existing effluent quality of the facility. Concentration and mass data are presented, based on Discharge Monitoring Report (DMR), permit application, and possibly other data submitted by the permittee for the period July 1, 2009 to June 30, 2015. The statistical methods utilized to calculate 95th and 99th percentiles are in accordance with TOGS 1.2.1 and the USEPA, Office of Water, Technical Support Document For Water Quality-based Toxics Control, March 1991, Appendix E. Statistical calculations were not performed for parameters with insufficient data. Generally, ten or more data points are needed to calculate percentiles (See TOGS 1.2.1 Appendix D). Non-detects were excluded from the statistical calculations.

D. Compliance History

A review of the facility's DMRs and other published compliance information from July 31, 2012 to June 30, 2015 indicates that the facility had the following violations:

| Outfall | Parameter | Permit Limit | Reported Value | Date |
|---------|------------------------|--------------|----------------|-------------------|
| 006 | pH | 6.0-9.0 SU | 5.0 SU | December 31, 2013 |
| 006 | Total Suspended Solids | 66 lb/day | 68 lb/day | November 30, 2013 |
| 06A | Total Iron | 2.88 lb/day | 3.98 lb/day | March 31, 2013 |

III. PROPOSED PERMIT REQUIREMENTS

Sections 101, 301(b), 304, 308, 401, 402, and 405 of the CWA and Titles 5, 7, and 8 of Article 17 ECL provide the basis for the effluent limitations and other conditions in the draft permit. The NYSDEC evaluates discharges with respect to these sections of the CWA, ECL, and the relevant federal/state regulations, policy, and guidance to determine which conditions to include in the draft permit.

For existing permittees, the previous permit typically forms the basis for the next permit. Permit revisions are implemented where justified due to changed conditions at the facility and/or in response to updated regulatory requirements.

A. Effluent Limitations

If applicable, the existing permit limits are evaluated to determine if these should be continued, revised, or deleted. Generally, existing limits are continued unless there is justification to do otherwise. Other pollutant monitoring data are also reviewed to determine the presence of additional contaminants that should be included in the permit.

The permit writer determines the **technology-based effluent limits (TBELs)** that must be incorporated into the permit. A TBEL requires a minimum level of treatment for industrial point sources based on currently available treatment technologies and/or Best Management Practices (BMPs). The Department then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances to occur, **water quality-based effluent limits (WQBELs)** must be included in the permit. A WQBEL is designed to ensure that the water quality standards of receiving waters are being met. In general, the CWA requires that the effluent limits for a particular pollutant are the more stringent of either the TBEL or WQBEL.

1. TBELs & Anti-Backsliding:

CWA sections 301(b) and 402, ECL sections 17-0509, 17-0809 and 17-0811, and 6 NYCRR Part 750-1.11 require technology-based controls on effluents. A TBEL is set based upon an evaluation of New Source Performance Standards (NSPS), Best Available Technology Economically Achievable (BAT), Best Conventional Pollutant Control Technology (BCT), Best Practicable Technology Currently Available (BPT), and Best Professional Judgment (BPJ). BPJ limits may be set using any reasonable method that takes into consideration the criteria set forth in 40 CFR 125.3.

In many cases, BPT, BCT, BAT and NSPS limitations are based on effluent guidelines developed by USEPA for specific industries. For this facility there are effluent guidelines in the Waste Combustors Point Source category, Subpart A—Commercial Hazardous Waste Combustor subcategory that apply. The applicable regulations are 40 CFR 444 and 444.13, respectively. These regulations require the monitoring and limitation of TSS, arsenic, cadmium, chromium, copper, lead, mercury, silver, titanium, zinc and pH. USEPA has not yet promulgated effluent limits or monitoring requirements for the Lightweight Aggregates Subcategory, so outfalls 003 and 004 have no categorical limits. Specific effluent limits for these pollutants are identified below and in the *Summary Table* at the end of this fact sheet.

For facilities that are subject to effluent guidelines and have substances in their discharges that are not explicitly limited by the regulations, or for industrial sectors for which there are no applicable effluent guidelines in 40 CFR 402-471, the permit writer is authorized to use BPJ in developing TBELs. The authority for BPJ is contained in Section 402(a)(1) of the CWA, which authorizes the Department to issue a permit containing “such conditions as the Administrator determines are necessary to carry out the provisions of the Act.” The NPDES regulations in 40 CFR 125.3 state that permits developed on a case-by-case basis under Section 402(a)(1) of the CWA must consider: The appropriate technology for the category class of point sources, of which the applicant is a member, based on available information; and, any unique factors relating to the applicant. Applicable state regulations include 6 NYCRR Part 750-1.11.

Anti-backsliding requirements are specified in the CWA, sections 402(o) and 303(d)(4), ECL 17-0809 and regulations at 40 CFR 122.44(l) and 6 NYCRR Part 750-1.10. These requirements are summarized in TOGS 1.2.1. Generally, the regulations prohibit the relaxation of effluent limits in reissued permits unless one of the specified exceptions applies. In practice, limits in reissued permits will generally be no less stringent than previous permit limits to ensure compliance with anti-backsliding requirements. Otherwise, the specific exceptions that allow backsliding will be cited on a case-by-case basis.

Following is the TBEL & Anti-backsliding assessment for each pollutant present in the discharge(s). A summary of this analysis is provided in the *Pollutant Summary Table* at the end of this fact sheet.

Pollutant-Specific TBEL & Anti-Backsliding Analysis:

Outfall 003

Mass limits were developed using the reported maximum flow of 1.0 MGD.

Flow – Monitoring is required for informational purposes.

pH range – Consistent with 40 CFR §436 Subpart B, TOGS 1.2.1 Attachment C, and the previous permit, the required effluent pH range is 6.0 to 9.0 standard units (SU).

Mercury – See WQBEL section below.

Solids, Total Suspended – In accordance with anti-backsliding provisions of 40 CFR §122.44, the proposed TBEL remains 25/45 mg/l and new corresponding mass limit of 210/370 lb/day.

Solids, Total Dissolved – Monitoring is required for informational purposes.

Solids, Settleable – In accordance with TOGS 1.2.1, Attachment C – Model Technology BPJ Limits, a TBEL of 0.1 ml/l daily max is proposed.

Residual Chlorine, Total – See WQBELs.

Total recoverable phenolics, chloride, nitrate nitrogen, TKN, organic nitrogen, and phosphorus were detected at levels which do not justify routine monitoring.

Outfall 004

Mass limits were developed using the reported average flow of 0.052 MGD.

Flow – Monitoring is required for informational purposes.

pH range – Consistent with TOGS 1.2.1 Attachment C and the previous permit, the required effluent pH range is 6.0 to 9.0 standard units (SU).

Temperature – In accordance with anti-backsliding provisions of 40 CFR §122.44, the TBEL remains a daily maximum of 90°F.

Mercury – See WQBEL section below.

Solids, Total Suspended – In accordance with anti-backsliding provisions of 40 CFR §122.44, the proposed TBEL remains 25/45 mg/l and new corresponding mass limit of 11/19 lb/day. See WQBELs.

Solids, Total Dissolved – Monitoring is required for informational purposes.

Cadmium – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains 4.0 µg/l daily maximum, along with a new corresponding mass limit of 0.0017 lb/day.

Chromium, Total – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains 1.8 mg/l, along with a new corresponding mass limit of 0.74 lb/day. See WQBELs.

Chromium, Hexavalent – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains 16.0 µg/l with a mass limit of 0.0070 lb/day, daily maximum.

Copper – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains 18 µg/l with a mass limit of 0.0078 lb/day. See WQBELs.

Lead – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains 80.0 µg/l with a mass limit of 0.035 lb/day, daily maximum.

Nickel – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains a daily maximum of 1.8 mg/l and 0.78 lb/day. See WQBELs.

Zinc – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains a daily maximum of 300.0 µg/l and 0.13 lb/day. See WQBELs.

Chlorides – Monitoring is required for informational purposes.

Residual Chlorine, Total – See WQBELs.

Arsenic, selenium, total residual chlorine, BOD, COD, TKN, organic nitrogen, and phosphorus were detected at levels that do not justify routine monitoring.

Outfall 06A

The maximum flow given in application is 0.065 MGD; the maximum flow reported in the 36 month DMR coverage is 0.54 MGD. This value was highly anomalous. Removing the outlier drops the maximum flow to 0.064 MGD. Mass limits were developed using a maximum flow of 0.064 MGD.

Flow – Monitoring is required for informational purposes.

pH range – In accordance with 40 CFR §444, the TBEL range for pH is 6.0 – 9.0 su.

Mercury – In accordance with 40 CFR §444, TBEL limits for mercury are 1.3/2.3 µg/l and 0.0007/0.0012 lb/day, daily max. See WQBELs.

Solids, Total Suspended – In accordance with 40 CFR §444, the TBEL concentration limits are 34.0 mg/l monthly average and 110 mg/l daily maximum. The calculated mass loading effluent limits are 18 lbs/day monthly average and 59 lbs/day, daily maximum.

Arsenic – In accordance with 40 CFR Part 444, the TBEL concentration limits are 72 µg/l monthly average and 84 µg/l daily maximum. The calculated mass loading effluent limits are 0.038 lbs/day monthly average and 0.044 lbs/day daily maximum.

Barium – In accordance with TOGS 1.2.1 Attachment C – Model Technology BPJ Limits, the TBEL concentration effluent limits are 0.51 mg/l monthly average and 1.2 mg/l daily maximum. The calculated mass loading effluent limits are 0.27 lbs/day monthly average and 0.64 lbs/day daily maximum.

Beryllium – In accordance with TOGS 1.2.1 Attachment C – Model Technology BPJ Limits, the TBEL concentration effluent limits are 0.37 mg/l monthly average and 0.82 mg/l daily maximum. The calculated mass loading effluent limits are 0.20 lbs/day monthly average and 0.44 lbs/day daily maximum.

Cadmium – In accordance with 40 CFR Part 444, the TBEL concentration limits are 26 µg/l monthly average and 71 µg/l daily maximum. The calculated mass loading effluent limits are 0.014 lbs/day monthly average and 0.038 lbs/day daily maximum.

Chromium, Total – In accordance with 40 CFR Part 444, the TBEL concentration limits are 14 µg/l monthly average and 25 µg/l daily maximum. The calculated mass loading effluent limits are 0.0075 lbs/day monthly average and 0.013 lbs/day daily maximum.

Copper – Copper is a categorical parameter. In accordance with 40 CFR Part 444, the TBEL concentration limits are 14 µg/l monthly average and 23 µg/l daily maximum. The calculated mass loading effluent limits are 0.0075 lbs/day monthly average and 0.012 lbs/day daily maximum.

Iron – In accordance with TOGS 1.2.1 Attachment C – Model Technology BPJ Limits, the TBEL concentration effluent limits are 0.61 mg/l monthly average and 1.2 mg/l daily maximum. The calculated mass loading effluent limits are 0.33 lbs/day monthly average and 0.64 lbs/day daily maximum.

Nickel – In accordance with TOGS 1.2.1 Attachment C – Model Technology BPJ Limits, the TBEL concentration effluent limits are 0.37 mg/l monthly average and 0.55 mg/l daily maximum. The calculated mass loading effluent limits are 0.20 lbs/day monthly average and 0.29 lbs/day daily maximum.

Silver – In accordance with 40 CFR Part 444, the TBEL concentration limits are 8 µg/l monthly average and 13 µg/l daily maximum. The calculated mass loading effluent limits are 0.0043 lbs/day monthly average and 0.0069 lbs/day daily maximum.

Selenium – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the proposed TBEL remains a daily maximum of 0.13 mg/l and 0.07 lb/day.

Titanium – In accordance with 40 CFR Part 444, the TBEL concentration limits are 22 µg/l monthly average and 60 µg/l daily maximum. The calculated mass loading effluent limits are 0.012 lbs/day monthly average and 0.032 lbs/day, daily maximum.

Zinc – In accordance with 40 CFR Part 444, the TBEL concentration limits are 54 µg/l monthly average and 82 µg/l daily maximum. The calculated mass loading effluent limits are 0.029 lbs/day monthly average and 0.044 lbs/day daily maximum.

Chlorides and Total Dissolved Solids – Monitoring is required for informational purposes.

Ammonia—Ammonia was detected in the effluent during RFI NY-2C sampling. In accordance with TOGS 1.2.1 Attachment C-Model Technology BPJ Limits, a limit of 20 mg/l and 11 lb/day daily maximum is proposed.

BOD5—BOD5 was detected in the effluent during RFI NY-2C sampling. In accordance with TOGS 1.2.1 Attachment C-Model Technology BPJ Limits, a limit of 35/40 mg/l and 16/24 lb/day monthly average/daily maximum is proposed.

Total residual chlorine, COD, TKN, organic nitrogen, nitrate nitrogen, and chloroform were detected at levels that do not justify routine monitoring.

Outfall 06B

Redesignated outfall. See WQBELs.

Outfall 006

Mass limits were developed using an average flow of 0.12 MGD.

Flow – Monitoring is required for informational purposes.

pH range – In accordance with 40 CFR Part 122.44, the proposed TBEL remains 6.0 – 9.0 su.

Temperature – See WQBEL section below.

Mercury – Controlled by limits on outfall 06A. See WQBEL section below.

Solids, Total Suspended – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, the daily maximum TBEL is 66 mg/l and 66 lbs/day.

Solids, Total Dissolved – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, monitoring is required. See WQBELs.

Chlorides – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, monitoring is required.

Chlorine, Total Residual – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, monitoring is required. See WQBELs.

Ammonia – In accordance with anti-backsliding provisions of 40 CFR Part 122.44, monitoring is required.

Bis(2-ethylhexyl)phthalate, chromium, BOD, COD, TKN, organic nitrogen, nitrate nitrogen, and phosphorus were detected at levels that do not justify routine monitoring.

2. WQBELs & Anti-Degradation:

In addition to the TBELs previously discussed, the NYSDEC evaluated the discharge to determine compliance with CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 700-704 and 750-1.11. These require that permits include limits for all pollutants or parameters which “are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” The limits must be stringent enough to ensure that water quality standards are met and must be consistent with any available wasteload allocation (WLA). These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6.

The procedure for developing WQBELs includes knowing the pollutants present in the discharge(s), identifying water quality criteria applicable to these pollutants, determining if WQBELs are necessary (reasonable potential), and calculating the WQBELs. Factors also considered in this analysis include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources. If the expected concentration of the pollutant of concern in the receiving water may exceed the ambient water quality standard or guidance value then there is reasonable potential that the discharge may cause or contribute to a violation of the water quality, and a WQBEL or WLA for the pollutant is required.

Antidegradation Policy: New York State implements the antidegradation portion of the CWA based upon two documents: (1) Organization and Delegation Memorandum #85-40, entitled “Water Quality Antidegradation Policy,” signed by the Commissioner of NYSDEC, dated September 9, 1985; and, (2) TOGS 1.3.9, entitled “Implementation of the NYSDEC Antidegradation Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985).” A SPDES permit cannot be issued that would result in the water quality criteria being violated. The permit for the facility contains effluent limits which ensure that the existing beneficial uses of the receiving waters will be maintained.

Following is the WQBEL analysis for each pollutant present in the discharge(s). Anti-degradation analysis which justifies applying water quality standards of a higher classification is noted below, if applicable. Refer to section II.B. above for information on discharge location, receiving water information (class, dilution, chemistry), and the existence of any TMDLs. A summary of this analysis is provided in the *Pollutant Summary Table* at the end of this fact sheet.

Pollutant-Specific WQBEL & Anti-Degradation Analysis:

Outfall 003

Mass limits were developed using the reported maximum flow of 1.0 MGD.

Temperature –This outfall is not a thermal discharge so routine monitoring or limits are not necessary.

Mercury – Mercury was detected in the effluent at a level of 1.8 ng/L, which exceeds the water quality standard of 0.7 ng/L. New York State’s mercury multiple discharge variance (MDV) in TOGS 1.3.10 is being applied. Consequently, the permit includes a 50 ng/L daily maximum effluent limit; a mercury minimization program requirement; and routine monitoring using EPA Method 1631. Refer to TOGS 1.3.10 for further detail.

Residual Chlorine, Total – Sampling result was above the WQS of 19 ug/l for class D waters. No dilution is present, so the limit becomes the WQS. A daily maximum of 19 ug/l is superseded by a compliance level limit of 20 ug/l.

Outfall 004

Mass limits were developed using the reported average flow of 0.052 MGD.

Metals –Zinc is expected to be present in the effluent. The dissolved water quality standard was calculated using the hardness-based formula in TOGS 1.1.1 and the hardness value representative of the receiving water. This hardness value is cited below in the Pollutant Summary Table. The dissolved standard was then converted to a “total” standard using a translator of 1.014 chronic, developed from an analysis of EPA National STORET database. The WQS was calculated as follows: $[\text{concentration}] = 0.978 \exp(0.8473[\ln(100)] + 0.884) \times 1.014 = 0.12 \text{ mg/l}$ and 0.052 lb/day. The total standard is shown below in the Pollutant Summary Table. Comparison of the total standard to existing effluent quality (see table) indicates that a WQBEL is necessary.

Nickel is expected to be present in the effluent. The dissolved water quality standard was calculated using the hardness-based formula in TOGS 1.1.1 and the hardness value representative of the receiving water. This hardness value is cited below in the Pollutant Summary Table. The dissolved standard was then converted to a “total” standard using a translator of 1.003 chronic, developed from an analysis of EPA National STORET database. The WQS was calculated as follows: $[\text{concentration}] = (0.998) \exp(0.846[\ln(100)] + 2.255) \times 1.003 = 0.47 \text{ mg/l}$ and 0.20 lb/day. The total standard is shown below in the Pollutant Summary Table. Comparison of the total standard to existing effluent quality (see table) indicates that a WQBEL is necessary.

Chromium is expected to be present in the effluent. The dissolved water quality standard was calculated using the hardness-based formula in TOGS 1.1.1 and the hardness value representative of the receiving water. This hardness value is cited below in the Pollutant Summary Table. The dissolved standard was then converted to a “total” standard using a translator of 1.163 chronic, developed from an analysis of EPA National STORET database. The WQS was calculated as follows: $[\text{concentration}] = (0.316) \exp(0.819[\ln(100)] + 3.7256) \times 1.163 = 0.569 \text{ mg/l}$ and 0.25 lb/day. The total standard is shown below in the Pollutant Summary Table. The WQBEL is more stringent than the TBEL.

Copper is expected to be present in the effluent. The dissolved water quality standard was calculated using the hardness-based formula in TOGS 1.1.1 and the hardness value representative of the receiving water. This hardness value is cited below in the Pollutant Summary Table. The dissolved standard was then converted to a “total” standard using a translator of 1.003 chronic, developed from an analysis of EPA National STORET database. The WQS was calculated as follows: $[\text{concentration}] = (0.96) \exp(0.9422[\ln(100)] - 1.7) \times 1.042 = 0.014 \text{ mg/l}$ and 0.006 lb/day. The total standard is shown below in the Pollutant Summary Table. The WQBEL is more stringent than the TBEL.

Residual Chlorine, Total – Sampling result was above the WQS of 19 ug/l for class D waters. No dilution is present, so the limit becomes the WQS. A daily maximum of 19 ug/l is superseded by a compliance level limit of 20 ug/l.

WQBELs were calculated for cadmium, hexavalent chromium, lead, and total chromium, but were not described in detail as TBELs were more stringent.

Whole Effluent Toxicity (WET) Testing - WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. Per TOGS 1.3.2, WET testing may be required when any one of the following seven criteria are applicable:

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
2. There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
3. There is the presence of substances for which WQBELs are below analytical detectability.
4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
5. There are observed detrimental effects on the receiving water biota.
6. Previous WET testing indicated a problem.
7. Treatment plants which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs < 1 MGD which are managing industrial pretreatment programs.

An evaluation of the discharge using the seven criteria noted above indicated that toxicity may be expected in the discharge. Criteria applicable to the discharge include number(s) 2 and 4. Based upon this evaluation, a reasonable potential analysis was performed using existing WET data, if available. The reasonable potential analysis indicated that the discharge does have the reasonable potential to cause or contribute to an exceedance of the water quality standard for WET.

WET testing action levels of 0.3 TUa and 1.6 TUC have been included in the draft permit for each species. The chronic action level is equal to the chronic dilution ratio. The acute action level is equal to 50% of the chronic dilution ratio multiplied by 0.3. Refer to the SPDES permit for details. Available WET test data is summarized in the following table where MSS indicates “most sensitive species”. Other table acronyms are defined in TOGS 1.3.2.

| Test Date | MSS LC50 (%Effluent) | 48H MSS TUa | TUa Action Level | MSS Survival 100% Effluent | Acute Test Result | MSS RPD TUa | Acute WET Limit Required | MSS 7D NOEC/IC25 (%Effluent) | MSS NOEC/IC25 TUC | TUC Action Level | Chronic Test Result NOEC/IC25 | MSS RPD IC25 TUC | Chronic WET Limit Required |
|-----------|----------------------|-------------|------------------|----------------------------|-------------------|-------------|--------------------------|------------------------------|-------------------|------------------|-------------------------------|------------------|----------------------------|
| No Data | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Outfall 06A

This outfall is an internal outfall. Some WQBELs calculated at outfall 006 will apply at outfall 06A.

Mercury – Mercury was detected in the effluent at a level of 760 ng/L, which exceeds the water quality standard of 0.7 ng/L. New York State’s mercury multiple discharge variance (MDV) in TOGS 1.3.10 is being applied.

Consequently, the permit includes a 50 ng/L daily maximum effluent limit; a mercury minimization program requirement; and routine monitoring using EPA Method 1631. Refer to TOGS 1.3.10 for further detail.

Outfall 06B

Mass limits were developed using an average flow of 0.12 MGD.

Temperature— Temperature is regulated by 6 NYCRR Part 704.2. For class C water, the maximum allowable temperature is 90 °F. The permittee has previously shown by engineering calculations, and confirmed by sampling, that if the temperature were 115 °F or less at the point where the discharge exits the Norlite Corporation property, the temperature would be reduced to 90 °F at the final discharge point to the Mohawk River. It is proposed to maintain the current permit limit of 115 °F, daily maximum and 90 °F, quarterly average.

Sulfide, Total— Hydrogen sulfide is expected to be present in the effluent. There is a water quality standard (WQS) for hydrogen sulfide of 2.0 ug/l. A monthly average monitor only and a daily max limit of 0.27 mg/l / 0.27 lb/day are proposed for total sulfide.

This limit was calculated using SM 4500-S²⁻/ Calculation of Un-ionized Hydrogen Sulfide found in *Standard Methods for the Examination of Water and Wastewater (20th Edition)*. Applicable parameters include:

Combined TDS (permitted effluent + Mohawk) = 500 mg/l
Mohawk temperature= 10 C
Mohawk minimum pH= 6.7 SU
H₂S WQS x 100:1 dilution= 0.2 mg/l

With proper mixing and dilution of the effluent, the resulting limit assumes the permittee's effluent will meet the instream H₂S WQS of 2 ug/l.

Color—Anecdotal evidence suggests that color may be a concern. In accordance with BPJ, monitoring is proposed.

Outfall 006

Mass limits were developed using an average flow of 0.12 MGD.

Total Suspended Solids (TSS) – The narrative water quality standards provided in 6 NYCRR Part 703.2 state that the discharge of suspended solids shall not cause deposition or impair the receiving waters for their best usages. The dilution ratio is at least 1:1 so a limit equal to the TBEL is appropriate.

Total Dissolved Solids (TDS) –Routine monitoring has indicated regularly occurring high levels of TDS. In accordance with BPJ, a daily maximum limit of 34,000 mg/l and 34,000 lb/day is proposed. Monthly average monitoring is also proposed. **This limit applies at outfall 06A.**

Sulfates – Anecdotal evidence suggests sulfates may be a constituent of concern. In accordance with BPJ, daily maximum monitoring is proposed.

Temperature – Temperature is regulated by 6 NYCRR Part 704.2. For class C water, the maximum allowable temperature is 90 °F. The permittee has previously shown by engineering calculations, and confirmed by sampling, that if the temperature were 115 °F or less at the point where the discharge exits the Norlite Corporation

property, the temperature would be reduced to 90 °F at the final discharge point to the Mohawk River. It is proposed to maintain the current permit limit of 115 °F, daily maximum and 90 °F, quarterly average.

Mercury – Mercury was detected in the effluent during RFI sampling at a level of 38 ng/L, which exceeds the water quality standard of 0.7 ng/L. New York State’s mercury multiple discharge variance (MDV) in TOGS 1.3.10 is being applied. Consequently, the permit includes a 50 ng/L daily maximum effluent limit; a mercury minimization program requirement; and routine monitoring using EPA Method 1631. Refer to TOGS 1.3.10 for further detail.

Chlorine, Total Residual—In accordance with BPJ, a daily maximum limit of 1.0 mg/l and 1.0 lb/day is proposed.

Oxidation/Reduction Potential – In accordance with BPJ, monthly average/daily max monitoring is proposed.

Sulfide, Total—Hydrogen sulfide is expected to be present in the effluent. Monthly/daily maximum monitoring requirements are proposed.

WQBELs were calculated for arsenic, barium, beryllium, cadmium, total chromium, copper, iron, lead, nickel, silver, titanium, and zinc, but are not described in detail as TBELs were more stringent.

Whole Effluent Toxicity (WET) Testing - WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. Per TOGS 1.3.2, WET testing may be required when any one of the following seven criteria are applicable:

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
2. There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
3. There is the presence of substances for which WQBELs are below analytical detectability.
4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
5. There are observed detrimental effects on the receiving water biota.
6. Previous WET testing indicated a problem.
7. Treatment plants which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs < 1 MGD which are managing industrial pretreatment programs.

An evaluation of the discharge using the seven criteria noted above indicated that toxicity may be expected in the discharge. Criteria applicable to the discharge include number(s) 2 and 4. Based upon this evaluation, a reasonable potential analysis was performed using existing WET data, if available. The reasonable potential analysis indicated that the discharge does have the reasonable potential to cause or contribute to an exceedance of the water quality standard for WET.

WET testing action levels of 15 TU_a and 100 TU_c have been included in the draft permit for each species. The chronic action level is equal to the chronic dilution ratio. The acute action level is equal to 50% of the chronic dilution ratio multiplied by 0.3. Refer to the SPDES permit for details. Available WET test data is summarized in the following table where MSS indicates “most sensitive species”. Other table acronyms are defined in TOGS 1.3.2.

| Test Date | MSS LC50 (%Effluent) | 48H TUa | MSS TUa | TUa Action Level | MSS Survival 100% Effluent | Acute Test Result | MSS RPD TUa | Acute WET Limit Required | MSS 7D NOEC/IC25 (%Effluent) | MSS NOEC/IC25 TUc | TUc Action Level | Chronic Test Result NOEC/IC25 | MSS RPD IC25 TUc | Chronic WET Limit Required |
|-----------|----------------------|---------|---------|------------------|----------------------------|-------------------|-------------|--------------------------|------------------------------|-------------------|------------------|-------------------------------|------------------|----------------------------|
| No Data | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

C. Other Conditions Specific To This Permit

Compliance Schedule(s):

| Outfall | Parameter | Interim Limit | Compliance Date |
|---------|----------------|--|-----------------|
| 06A | Silver | Monitor | EDP + 3 months |
| 06C | Sulfide, Total | Monitor | EDP +3 months |
| 06A | Titanium | Monitor | EDP + 3 months |
| 06A | Copper | 0.12 mg/l, 0.064 lb/day daily max (99 %ile) | EDP + 2 years |
| 06A | Iron | 5.4 mg/l, 2.9 lb/day daily max | EDP + 2 years |
| 06A | Mercury | 520 ng/l/ 1200 ng/l monthly average/ daily max (95/99%ile) | EDP + 2 years |
| 06A | BOD5, ammonia | Monitor | EDP + 2 years |

Best Management Practices (BMPs): The permittee is required to implement a BMP plan that prevents, or minimizes the potential for, the release of significant amounts of toxic or hazardous pollutants to state waters. The BMP plan requires annual review by the permittee. This requirement is being continued from the previous permit.

Discharge Notification Act: In accordance with Discharge Notification Act (ECL 17-0815-a), the permittee is required to post a sign at each point of wastewater discharge to surface waters. The permittee is also required to provide a public repository for DMRs as required by the SPDES permit. This requirement is being continued from the previous permit.

Special Conditions:

Schedule of Submittals- Short Term High Intensity Monitoring of copper, BOD5, and ammonia at outfall 007. Dye study at outfall 006.

D. General Conditions Applicable To All Permits

The permit contains standard regulatory language that is required to be in all SPDES permits. These permit provisions, based largely upon 40 CFR 122 subpart C and 6 NYCRR Part 750, include requirements pertaining to monitoring, recording, reporting, and compliance responsibilities. These “general conditions” of permits are typically specified, summarized, or referenced on the first and last pages of the permit.

OUTFALL & RECEIVING WATER LOCATION TABLE

| Outfall Number | Design Flow Rate (MGD) | Latitude | Longitude | Receiving Water Name | Water Class | Water Index Number | Major/Sub Basin |
|-----------------------|-------------------------------|-----------------|------------------|-----------------------------|--------------------|---------------------------|------------------------|
| 003 | 1.0 ⁽¹⁾ | 42° 45' 20" | 73° 42' 22" | Salt Kill Creek | D | H-239 | 1201-0095 |
| 004 | 0.1 ⁽²⁾ | 42° 45' 16" | 73° 42' 05" | Salt Kill Creek | D | H-239 | 1201-0095 |
| 006 | 0.14 | 42° 45' 34" | 73° 41' 44" | Mohawk River | C | H-240 | 1201-0085 |

Footnotes: (1) Water is stored and 1 MGD is discharged when active. This amounts to about 35 MGY.

(2) Water is stored and a maximum batch discharge of 0.1 MGD occurs when active. This amounts to about 0.6 MGY.

POLLUTANT SUMMARY TABLE(S)

| | |
|-----------|-----|
| Outfall # | 003 |
|-----------|-----|

| Effluent Parameter <small>(concentration in ug/l and mass in lbs/day unless otherwise specified)</small> | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis <small>(T or WQ or NA)</small> |
|---|---------------------------|---------|---------|---------|-------|------|-------|--------------|-----------------------------|--------------------|-----------------------|-------|------|--|
| | concentration | | mass | | conc. | mass | Type | PQL conc. | Ambient Criteria | Ambient Background | WQBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | | | | | conc. | conc. | conc. | conc. | mass | |
| Flow Rate, units = MGD | Average | 0.096 | Maximum | 1.0 | M | | | NA | 7Q10 = 0.05 | , 30Q10 = 0.06 | Dilution/Mixing = int | | | T |
| pH (su) | Minimum | 6.8 | Maximum | 8.7 | 6-9 | | Range | | 6.5-8.5 | 7.8 | - | - | - | WQ |
| Hardness (mg/L) | 120 | - | - | - | - | - | - | - | - | 100 | - | - | - | NA |
| Total suspended solids (mg/l) | 9.3/20 | 13/23 | - | - | 25 | 210 | MA | - | - | - | 10 | 1.2 | DM | WQ |
| | 12/26 | 17/35 | - | - | 45 | 380 | DM | - | - | - | - | - | - | - |
| Bis(2-ethylhexyl)phthalate | 6.6 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Phenolics, total recoverable (mg/l) | 0.002 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Chloride (mg/l) | 51 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Chlorine, total residual (mg/l) | 0.03 | - | - | - | M | M | DM | - | 0.019 | - | - | - | - | T |
| Solids, total dissolved (mg/l) | 540 | - | - | - | M | M | DM | - | NA | - | - | - | - | T |
| Solids, Settleable (ml/l) | <0.1 | - | - | - | 0.1 | - | DM | - | Narrative | - | - | - | - | T |
| Nitrogen, nitrate (mg/l) | 0.01 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| TKN (mg/l) | 2.2 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Nitrogen, organic (mg/l) | 2.2 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Nitrogen, nitrate (mg/l) | 0.34 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Phosphorus (as P) (mg/l) | 0.04 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Oxygen, dissolved (mg/l) | 8.9 | - | - | - | - | - | - | - | 3.0 | - | - | - | - | NA |
| Mercury (ng/l) | 1.8 | - | - | - | - | - | - | - | 0.7 | - | - | - | - | NA |

NA for when standard exists, but does not apply to class D waters.

| | |
|-----------|-----|
| Outfall # | 004 |
|-----------|-----|

| Effluent Parameter <small>(concentration in ug/l and mass in lbs/day unless otherwise specified)</small> | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis <small>(T or WQ or NA)</small> |
|---|---------------------------|-------------|---------|---------|---------|----------|-------|-------|--|--------------------|--------|--------|------|--|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | Mass | Type | conc. | Conc. | Conc. | Conc. | Mass | Type | |
| Flow Rate, units = MGD | Average | 0.052 | Maximum | 0.081 | Monitor | | | NA | 7Q10 = 0.05 cfs, 30Q10 = 0.06, Dilution/Mixing = int | | | | | |
| pH (su) | Minimum | 7.7 | Maximum | 8.5 | 6-9 | | Range | | 6.0-9.5 | 7.8 | - | - | - | T |
| Temperature (F) | 59/78 | 64/103 | - | - | 90 | - | DM | - | 90 | 13 | - | - | - | T |
| Solids, total suspended (mg/l) | 7.7/15 | 9.1/22 | - | - | 25 | 11 | DA | | - | - | 10 | 7.3 | DM | WQ |
| | 7.7/15 | 9.1/22 | - | - | 45 | 19 | DM | | | | | | | |
| Cadmium (as Cd) (mg/l) | <0.002/0.002 | - | - | - | 0.004 | 0.0017 | DM | | 0.0041 | - | 0.0041 | 0.0018 | DM | T |
| Chromium, hexavalent (as Cr) (mg/l) | <0.01/0.01 | - | - | - | 0.016 | 0.0070 | DM | | 0.016 | - | 0.016 | 0.0069 | DM | T |
| Chromium, total (as Cr) (mg/l) | <0.005/0.005 | - | - | - | 1.8 | 0.74 | DM | | 0.57 | - | 0.57 | 0.25 | DM | WQ |
| Copper, total (mg/l) | <0.01/0.01 | - | - | - | 0.018 | 0.0078 | DM | | 0.014 | - | 0.014 | 0.006 | DM | WQ |
| Lead, total (mg/l) | <0.018/0.02 | - | - | - | 0.080 | 0.035 | DM | | 0.097 | - | 0.097 | 0.036 | DM | T |
| Mercury (ng/l) | <100/200 | - | - | - | 200 | 0.000087 | DM | | 0.70 | - | 50 | - | DM | WQ |
| Nickel, total (mg/l) | <0.015/0.015 | - | - | - | 1.8 | 0.78 | DM | - | 0.47 | - | 0.47 | 0.20 | DM | WQ |
| Zinc, total (mg/l) | <0.029/0.049 | 0.032/0.053 | - | - | 0.30 | 0.13 | DM | - | 0.12 | - | 0.12 | 0.052 | DM | WQ |
| Arsenic | 9 | - | - | - | - | - | - | - | 340 | - | 340 | 0.14 | DM | NA |
| Selenium | 41 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Hardness, total (mg/l) | 1100 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Chlorides (mg/l) | 730 | - | - | - | M | M | DM | - | NA | - | - | - | - | T |
| Chlorine, total residual (mg/l) | 0.05 | - | - | - | - | - | - | - | 0.019 | - | - | - | - | NA |
| Solids, total dissolved (mg/l) | 3300 | - | - | - | M | M | DM | - | NA | - | - | - | - | T |
| BOD (mg/l) | 15 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| COD (mg/l) | 77 | - | - | - | - | - | - | - | - | - | - | - | - | NA |

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) |
|--|---------------------------|---------|---------|---------|-------|------|------|-------|-----------------------------|--------------------|-------|-----------|------|---------------------------------|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | Mass | Type | conc. | Conc. | Conc. | Conc. | Mass | Type | |
| TKN (mg/l) | 2.2 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Nitrogen, organic (mg/l) | 2.2 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Phosphorus (as P) (mg/l) | 0.09 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Oxygen, dissolved (mg/l) | 8.1 | - | - | - | - | - | - | - | 3.0 | - | - | - | - | NA |
| WET –Acute Invertebrate | - | - | - | - | - | - | - | - | - | - | 0.3 | Quarterly | AL | WQ |
| WET –Acute Vertebrate | - | - | - | - | - | - | - | - | - | - | 0.3 | Quarterly | AL | WQ |
| WET –Chronic Invertebrate | - | - | - | - | - | - | - | - | - | - | 1.0 | Quarterly | AL | WQ |
| WET –Chronic Vertebrate | - | - | - | - | - | - | - | - | - | - | 1.0 | Quarterly | AL | WQ |

Ambient criteria in dissolved form unless marked with ^T (total).
 Ambient background in dissolved form unless marked with ^T (total).

| | |
|-----------|-----|
| Outfall # | 06A |
|-----------|-----|

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) |
|--|---------------------------|---------|--------------|---------------|----------|-------------|-------|-------|--|--------------------|---------|------|------|---------------------------------|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | |
| Flow Rate, units = MGD | Average | 0.068 | Maximum | 0.54 | M | | MA/DM | NA | 7Q10 = 220 , 30Q10 = 270 , Dilution/Mixing = 100:1 | | | | | T |
| pH (su) | Minimum | 5.0 | Maximum | 9.0 | 6-9 | | Range | | 6.5-8.5 | 7.8 | - | - | - | T |
| Arsenic (lb/d) | - | - | 0.017/0.022 | 0.019/0.035 | 72/84 | 0.038/0.044 | MA/DM | 4.0 | | | See 006 | | | T |
| Barium (lb/d) | - | - | 0.033/0.11 | 0.038/0.099 | 510/1200 | 0.27/0.64 | MA/DM | 1.0 | | | See 006 | | | T |
| Beryllium (lb/d) | - | - | 0.0022/0.003 | 0.0023/0.0031 | 370/820 | 0.20/0.44 | MA/DM | 0.80 | | | See 006 | | | T |

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) |
|--|---------------------------|---------|-----------------|-----------------|----------|---------------|-------|------------------|-----------------------------|-------|---------|-------|----|---------------------------------|
| | concentration | | mass | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | mass | Type | | |
| Cadmium (lb/d) | - | - | 0.0011/0.006 | 0.0012/0.0021 | 26/71 | 0.014/0.038 | MA/DM | 0.40 | | | See 006 | | | T |
| Chromium (lb/d) | - | - | 0.0029/0.024 | 0.0053/0.0073 | 14/25 | 0.0075/0.013 | MA/DM | 4.0 | | | See 006 | | | T |
| Copper | - | - | 0.014/0.12 | 0.017/0.064 | 14/23 | 0.0075/0.012 | MA/DM | 4.0 | | | See 006 | | | T |
| Iron | - | - | 0.96/4.0 | 1.2/3.7 | 610/1200 | 0.33/0.64 | MA/DM | 4.0 | | | See 006 | | | See 006 |
| Lead | - | - | 0.01/0.02 | 0.011/0.019 | 32/57 | 0.017/0.030 | MA/DM | 4.0 | | | See 006 | | | T |
| Mercury | - | - | 0.00025/0.00076 | 0.00028/0.00064 | 1.3/2.3 | 0.0007/0.0012 | MA/DM | 0.0005 | | | See 006 | | | See 006 |
| Nickel | - | - | 0.037/0.13 | 0.043/0.12 | 370/550 | 0.20/0.29 | MA/DM | 4.0 | | | See 006 | | | T |
| Silver | <0.010 | - | - | - | 8.0/13 | 0.0043/0.0069 | MA/DM | 0.80 | | | See 006 | | | T |
| Selenium | - | - | 0.026/0.05 | 0.028/0.049 | 130 | 0.07 | DM | 4.0 | | | See 006 | | | T |
| Titanium | <0.010 | - | - | - | 22/60 | 0.012/0.032 | MA/DM | 5.0 | | | See 006 | | | T |
| Zinc | - | - | 0.033/0.57 | 0.029/0.095 | 54/82 | 0.029/0.044 | MA/DM | 0.20 | | | See 006 | | | T |
| Hardness (mg/l) | 82 | - | - | - | - | - | - | - | - | 100 | - | - | - | NA |
| Chloride (mg/l) | 2500 | - | - | - | - | - | - | - | NA | 24 | - | - | - | NA |
| Chlorine, total residual (mg/l) | 0.13 | - | - | - | - | - | - | 0.020 | 0.005 | - | - | - | - | NA |
| Solids, total dissolved (mg/l) | 10000 | - | - | - | - | - | - | - | 500 | 160 | 34000 | 34000 | DM | NA |
| TSS (mg/l) | 8.5 | - | - | - | 34/110 | 18/59 | MA/DM | - | - | - | - | - | - | T |
| BOD5 (mg/l) | 170 | - | - | - | 30/45 | 16/24 | MA/DM | - | - | - | - | - | - | T |
| Ammonia (NH3) (mg/l) | 63 | - | - | - | 20 | 11 | DM | - | - | - | - | - | - | T |
| COD (mg/l) | 320 | - | - | - | - | - | - | - | - | - | - | - | - | NA |

Permittee: Norlite Corporation
 Facility: Norlite Corporation
 SPDES No: NY0004880

Date: 01/08/16
 Permit Writer: Carrie Smith
 PAGE 20 OF 24

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) | |
|--|---------------------------|---------|---------|---------|-------|------|------|-------|-----------------------------|--------------------|-------|------|------|---------------------------------|----|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | | |
| TKN (mg/l) | 63 | - | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Nitrogen, organic (mg/l) | 4.5 | - | - | - | - | - | - | - | - | NA | 0.45 | - | - | - | NA |
| Nitrogen, nitrate (mg/l) | 0.09 | - | - | - | - | - | - | - | - | NA | 3.4 | - | - | - | NA |
| Chloroform (mg/l) | 7.0 | - | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Dissolved oxygen (mg/l) | <1 | - | - | - | - | - | - | - | - | 4.0 | 9.5 | - | - | - | NA |

NA for when standard exists, but does not apply to class C waters.
 Ambient criteria in dissolved form unless marked with ^T (total).
 Water quality does not apply at internal outfall; see WQBEL determination at 006.

| | |
|-----------|---------------------|
| Outfall # | 06B (MH @ railroad) |
|-----------|---------------------|

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) | |
|--|---------------------------|---------|---------|---------|-------|------|------|-------|-----------------------------|--|-------|------|------|---------------------------------|----|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | | |
| Flow Rate, units = MGD | Average | - | Maximum | - | - | - | - | - | NA | 7Q10 = 220 , 30Q10 = 270 , Dilution/Mixing = 100:1 | | | | | NA |
| pH | - | - | - | - | M | - | - | - | - | - | - | - | - | - | T |
| Temperature | 76/87 | 94/110 | - | - | 70 | - | DM | - | 70 | - | - | - | - | - | T |
| Sulfide, Total | - | - | - | - | - | - | - | - | 2.0 | - | 270 | 0.27 | DM | - | WQ |
| Color | - | - | - | - | - | - | - | - | Narrative | - | M | - | - | - | WQ |

| | |
|-----------|-----|
| Outfall # | 006 |
|-----------|-----|

| Effluent Parameter <small>(concentration in ug/l and mass in lbs/day unless otherwise specified)</small> | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & QBELs | | | | | Permit Basis <small>(T or WQ or NA)</small> |
|---|---------------------------|-------------|---------|---------|---------|------|-------|-------|----------------------------|--|-------|-------|------|--|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | QBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | |
| Flow Rate, units = MGD | Average | 0.12 | Maximum | 0.12 | M | | | | NA | 7Q10 = 220 , 30Q10 = 270 , Dilution/Mixing = 100:1 | | | T | |
| pH (su) | Minimum | 5.0 | Maximum | 9.0 | 6-9 | | Range | | 6.5-8.5 | 7.8 | - | - | - | WQ |
| Temperature (F) (daily) | 91/104 | 94/113 | - | - | 115 | - | DM | - | - | 55 | - | - | - | T |
| Temperature (F) (quarterly) | 76/87 | 94/110 | - | - | - | - | - | - | - | 13 | - | - | - | See outfall 06C |
| Dissolved oxygen (mg/l) | <1 | - | - | - | - | - | - | - | 4.0 | 9.5 | - | - | - | NA |
| Hardness (mg/L) | 120 | - | - | - | - | - | - | - | - | 100 | - | - | - | NA |
| Solids, total suspended (mg/l)(lb/d) | - | - | 19/68 | 23/73 | 66 | 66 | DM | - | - | - | - | - | - | T |
| Solids, total dissolved (mg/l) | 16000/21000 | 18000/24000 | - | - | M | M | DM | - | 500 | 160 | 34000 | 34000 | DM | T |
| Chlorides (mg/l) | 110000/380000 | 27000/54000 | - | - | M | M | DM | - | NA | 16 | - | - | - | T |
| Chlorine, total residual (mg/l) | <0.29/0.11 | 0.051/0.075 | - | - | M | M | DM | 0.020 | 0.005 | - | 2.0 | 2.0 | DM | WQ |
| Ammonia (NH3) (mg/l) | 25/55 | 140/280 | - | - | M | M | MA/DM | - | 1.4 | 0.11 | - | - | - | T |
| Bis(2-ethylhexyl)phthalate | 18 | - | - | - | - | - | - | - | 0.6 | - | 50 | 0.050 | DM | NA |
| Chromium (mg/l) | 0.007 | - | - | - | - | - | - | - | 0.074 | 0.012 | 6.2 | 6.2 | - | NA |
| BOD5 (mg/l) | 35 | - | - | - | See 06A | - | - | - | - | - | - | - | - | NA |

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) |
|--|---------------------------|---------|---------|---------|---------|------|------|------------------|-----------------------------|------------------|-------------|-----------|------|-------------------------------------|
| | concentration | | mass | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | |
| COD (mg/l) | 140 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| TKN (mg/l) | 34 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Nitrogen, organic (mg/l) | 3.7 | - | - | - | - | - | - | - | - | 0.45 | - | - | - | NA |
| Nitrogen, nitrate (mg/l) | 0.45 | - | - | - | - | - | - | - | - | 3.4 | - | - | - | NA |
| Phosphorus (as P) (mg/l) | 0.02 | - | - | - | - | - | - | - | NA | 0.66 | - | - | - | NA |
| Arsenic | - | - | - | - | See 06A | - | - | 4.0 | 150/340 | 0.49 | 15000/17000 | 8.0/9.1 | DM | See 06A |
| Barium | - | - | - | - | See 06A | - | - | 1.0 | NA | 20* | - | - | - | See 06A |
| Beryllium | - | - | - | - | See 06A | - | - | 0.80 | 1100 ^T | 41* | 100000 | 53 | DM | See 06A |
| Cadmium | - | - | - | - | See 06A | - | - | 0.40 | 2.1/3.8 | 0.11 | 220/200 | 0.11/0.11 | DM | See 06A |
| Chromium | - | - | - | - | See 06A | - | - | 4.0 | 74/570 | 12* | 7200/88200 | 3.8/47 | DM | See 06A |
| Copper | - | - | - | - | See 06A | - | - | 4.0 | 9.0/13 | 2.1 | 720/600 | 0.38/0.32 | DM | See 06A |
| Iron | - | - | - | - | See 06A | - | - | 4.0 | 300 ^T | 785 ^T | 300 | 0.16 | DM | WQ |
| Lead | - | - | - | - | See 06A | - | - | 4.0 | 0.77/1.4 | 0.2 | 450/6100 | 0.24/3.3 | DM | See 06A |
| Mercury (ng/l) | 38 | - | - | - | See 06A | - | - | - | 0.7 | 3.2 | 50 | - | DM | WQ |
| Silver | - | - | - | - | See 06A | - | - | 0.80 | 0.10 (ionic) | 1.0* | 10 | 0.01 | DM | See 06A |
| Selenium | - | - | - | - | See 06A | - | - | - | 4.6 | 1.0* | 360 | 0.19 | DM | See 06A |
| Titanium | - | - | - | - | See 06A | - | - | 5.0 | - | - | - | - | - | See 06A |
| Zinc | - | - | - | - | See 06A | - | - | 0.20 | 83/120 | 2.8 | - | 5.2 | DM | See 06A |
| Hydrogen sulfide | - | - | - | - | - | - | - | - | 2.0 | - | 200 | - | AL | WQ |
| WET –Acute Invertebrate | - | - | - | - | - | - | - | - | - | - | 15 | Quarterly | AL | WQ |
| WET –Acute Vertebrate | - | - | - | - | - | - | - | - | - | - | 15 | Quarterly | AL | WQ |

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & QBELs | | | | | Permit Basis (T or WQ or NA) | |
|--|---------------------------|---------|---------|---------|-------|------|------|-------|----------------------------|--------------------|-------|------|-----------|---------------------------------|----|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | QBEL | | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | | |
| WET -Chronic Invertebrate | - | - | - | - | - | - | - | - | - | - | - | 100 | Quarterly | AL | WQ |
| WET -Chronic Vertebrate | - | - | - | - | - | - | - | - | - | - | - | 100 | Quarterly | AL | WQ |

Ambient background in dissolved form unless marked with ^T (total).
 Asterisk (*) indicates data originates from USGS.

| | |
|-----------|-----|
| Outfall # | 007 |
|-----------|-----|

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & QBELs | | | | | Permit Basis (T or WQ or NA) |
|--|---------------------------|---------|---------|---------|-------|--------|-------|-------|--|--------------------|-------|------|------|---------------------------------|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | QBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | |
| Flow Rate, units = MGD | Average | 0.03 | Maximum | 1.5 | M | | MA/DM | NA | 7Q10 = 0.05 cfs , 30Q10 = 0.06 cfs , Dilution/Mixing = Int | | | | | NA |
| pH (su) | 8.7 | | - | | 6-9 | | Range | | 6.0-9.5 | 7.8 | - | - | - | NA |
| Hardness, total (mg/l) | 270 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Phenolics, total recoverable (mg/l) | 0.0006 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Arsenic | 10 | - | - | - | - | - | - | - | 340 | - | - | - | - | NA |
| Copper | 19 | - | - | - | - | - | - | - | 13 | - | - | - | - | NA |
| Titanium | 10 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Zinc | 38 | - | - | - | - | - | - | - | 300 | - | - | - | - | NA |
| Chloride (mg/l) | 140 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Solids, Settleable (ml/l) | <0.1 | - | - | - | 0.1 | - | DM | - | - | - | - | - | - | NA |
| TSS (mg/l) | 280 | - | - | - | 25/45 | 6.3/11 | MA/DM | - | - | - | - | - | - | NA |

Permittee: Norlite Corporation
 Facility: Norlite Corporation
 SPDES No: NY0004880

Date: 01/08/16
 Permit Writer: Carrie Smith
 PAGE 24 OF 24

| Effluent Parameter (concentration in ug/l and mass in lbs/day unless otherwise specified) | Existing Effluent Quality | | | | TBELs | | | | Water Quality Data & WQBELs | | | | | Permit Basis (T or WQ or NA) |
|--|---------------------------|---------|---------|---------|-------|------|------|-------|-----------------------------|--------------------|-------|--------|------|-------------------------------------|
| | concentration | | mass | | | | | PQL | Ambient Criteria | Ambient Background | WQBEL | | | |
| | Avg/Max | 95%/99% | Avg/Max | 95%/99% | conc. | mass | Type | conc. | conc. | conc. | conc. | mass | Type | |
| TDS (mg/l) | 260 | - | - | - | - | - | - | - | NA | | | | | NA |
| Chlorine, total residual (mg/l) | 0.02 | - | - | - | - | - | - | - | 0.019 | - | 0.019 | 0.0048 | - | NA |
| Solids, total dissolved (mg/l) | 260 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| BOD (mg/l) | 8.0 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| Ammonia (NH3) (mg/l) | 2.4 | - | - | - | - | - | - | - | 1.4 | - | - | - | - | NA |
| COD (mg/l) | 9.0 | - | - | - | - | - | - | - | - | - | - | - | - | NA |
| TKN (mg/l) | 3.1 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Nitrogen, nitrate (mg/l) | 1.4 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Phosphorus (as P) (mg/l) | 0.25 | - | - | - | - | - | - | - | NA | - | - | - | - | NA |
| Oxygen, dissolved (mg/l) | 11 | - | - | - | - | - | - | - | 3.0 | - | - | - | - | NA |
| Mercury (ng/l) | 43 | - | - | - | - | - | - | - | 0.7 | - | 50 | - | DM | NA |

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