

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



NPDES PERMIT

issued to

Tilcon Connecticut Inc.
P.O. Box 1357
New Britain, CT 06050

Location Address:

301 Hartford Avenue
Newington, CT 06111

Facility ID: 094-024

Permit ID: CT0030155

Receiving Stream: Piper Brook

Permit Expires: May 8, 2016

SECTION 1: GENERAL PROVISIONS

- (A) This permit is reissued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and section 402(b) of the Clean Water Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an N.P.D.E.S. permit program.
(B) Tilcon Connecticut Inc., ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(10)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

Section 22a-430-3 General Conditions

- (a) Definitions
(b) General
(c) Inspection and Entry
(d) Effect of a Permit
(e) Duty
(f) Proper Operation and Maintenance
(g) Sludge Disposal
(h) Duty to Mitigate
(i) Facility Modifications; Notification
(j) Monitoring, Records and Reporting Requirements
(k) Bypass
(l) Conditions Applicable to POTWs
(m) Effluent Limitation Violations (Upsets)
(n) Enforcement
(o) Resource Conservation
(p) Spill Prevention and Control
(q) Instrumentation, Alarms, Flow Recorders
(r) Equalization

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Section 22a-430-4 Procedures and Criteria

- (a) Duty to Apply
 - (b) Duty to Reapply
 - (c) Application Requirements
 - (d) Preliminary Review
 - (e) Tentative Determination
 - (f) Draft Permits, Fact Sheets
 - (g) Public Notice, Notice of Hearing
 - (h) Public Comments
 - (i) Final Determination
 - (j) Public Hearings
 - (k) Submission of Plans and Specifications. Approval.
 - (l) Establishing Effluent Limitations and Conditions
 - (m) Case by Case Determinations
 - (n) Permit issuance or renewal
 - (o) Permit Transfer
 - (p) Permit revocation, denial or modification
 - (q) Variances
 - (r) Secondary Treatment Requirements
 - (s) Treatment Requirements for Metals and Cyanide
 - (t) Discharges to POTWs - Prohibitions
- (C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the Permittee to enforcement action including, but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.
- (D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157b of the CGS.
- (E) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner of Environmental Protection ("Commissioner"). To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.
- (F) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the Permittee pursuant to this permit will result in compliance or prevent or abate pollution.
- (G) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- (H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the Regulations of Connecticut State Agencies.

SECTION 2: DEFINITIONS

- (A) The definitions of the terms used in this permit shall be the same as the definitions contained in section PERMIT No. CT0030155

22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA, except for "No Observable Acute Effect Level (NOAEL)" which is redefined below.

(B) In addition to the above, the following definitions shall apply to this permit:

"-----" in the limits column on the monitoring table means a limit is not specified but a value must be reported on the DMR

"Annual" in the context of any sampling frequency found in Section 5, shall mean the sample must be collected in the month of July.

"Average Monthly Limit"; means the maximum allowable "Average Monthly Concentration" as defined in section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in section 22a-430-3(a) of the RCSA.

"Critical Test Concentration (CTC)" means the specified effluent dilution at which the Permittee is to conduct a single-concentration Aquatic Toxicity test.

"Daily Composite" means (1) a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than sixty (60) minutes and combined proportionally to flow, or (2) a composite sample continuously collected over a full operating day proportionally to flow. Upon submission of documentation by the applicant satisfactory to the Commissioner that a discharge is of consistent effluent quality, the Commissioner may allow equal sampling intervals of up to four (4) hours for a daily composite sample.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or, the arithmetic average of all grab sample results defining a grab sample average.

"Daily Quantity" means the quantity of waste discharged during an operating day.

"Grab Sample Average" means the arithmetic average of all grab sample analyses. Grab samples shall be collected at least once every four hours over a full operating day for as long as a discharge exists on that day (minimum of two grab samples per day).

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"In stream Waste Concentration (IWC)" means the concentration of a discharge in the receiving water after mixing has occurred in the allocated zone of influence.

"Maximum Daily Limit", means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l); otherwise, it means the maximum allowable "Daily Quantity" as defined above, unless it is expressed as a flow quantity. If expressed as a flow quantity it means "Maximum Daily Flow" as defined in section 22a-430-3(a) of the RCSA.

"NA" as a Monitoring Table abbreviation means "not applicable".

"No Observable Acute Effect Level (NOAEL)" means any concentration equal to or less than the critical test concentration in a single concentration (pass/fail) toxicity test conducted pursuant to section 22a-430-3(j)(7)(A)(i) RCSA demonstrating greater than 50% survival of test organisms in 100% (undiluted) effluent and 90% or greater survival of test organisms at the CTC.

"ug/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner, has issued a final determination and found that such discharge will not cause pollution of any of the waters of the state. The Commissioner's decision is based on Application No. 200302203 for permit reissuance received on August 5, 2003 and the administrative record established in the processing of that application.
- (B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.
- (C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the CGS or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or CGS or regulations adopted thereunder which are then applicable.

SECTION 4: GENERAL EFFLUENT LIMITATIONS

- (A) No discharge shall contain, or cause in the receiving stream, a visible oil sheen or floating solids; or, cause visible discoloration or foaming in the receiving stream.
- (B) No discharge shall cause acute or chronic toxicity in the receiving water body beyond any zone of influence specifically allocated to that discharge in this permit.
- (C) The temperature of any discharge shall not increase the temperature of the receiving stream above 85°F, or, in any case, raise the normal temperature of the receiving stream more than 4°F.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- (A) The discharge shall not exceed and shall otherwise conform to the specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the table below:

Table A

Discharge Serial Number: 001-1 Monitoring Location: 1

Wastewater Description: Quarry pump-out water.

Monitoring Location Description: At the discharge point into the "in-quarry" detention basin.

Allocated Zone of Influence (ZOI): 57,320 gph In stream waste concentration (IWC): 21.6%

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test ²
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency ¹	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency	Sample Type or measurement to be reported	
Aquatic Toxicity, Daphnia pulex, NOAEL=100 ³	%	NA	NA	NR	NA	≥90	2/Year ⁶	Grab	
Aquatic Toxicity, Pimephales promelas, NOAEL=100 ³	%	NA	NA	NR	NA	≥90	2/Year ⁶	Grab	
Chemical Oxygen Demand ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	
Copper, Total ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*
Flow Rate, (Average Daily) ⁵	gpd	-----	NA	Continuous	Total Daily Flow	NA	NR	NA	
Flow, Maximum during a 24 hour period ⁵	gpd	NA	378,000	Continuous	Total Daily Flow	NA	NR	NA	
Flow, (Day of Sampling)	gpd	NA	378,000	Continuous	Total Daily Flow	NA	NR	NA	
Lead, Total ⁴	mg/l	0.00626	0.00914	NR	NA	0.00914	Monthly	Grab	*
Nitrogen, Nitrate (Total as N) ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	
Nitrogen, Total Kjeldahl ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	
Oil Petroleum, Total Recoverable ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	
pH, (Day of Sampling)	S.U.	NA	NA	NR	NA	6.0 – 9.0	Monthly	Grab	
Phosphorus, Total as P ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*
Total Suspended Solids ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	
Zinc, Total ⁴	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*

Table Footnotes:

Footnotes:

¹ The first entry in this column is the 'Sample Frequency'. If a 'Reporting Frequency' does not follow this entry and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'.

² Minimum Level Test refers to Section 6 Paragraph (A)(3) of this permit.

³ The results of the toxicity tests are recorded in % survival. The Permittee shall report the % survival result on the DMR based on criteria in Section 6(B) of this permit.

⁴ Indicates that testing for this parameter shall be performed on the same sample used for aquatic toxicity testing.

⁵ For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each month.

⁶ 2/Year in the context of a sampling frequency, means sampling is required in the months of June and October.

- (1) All samples shall be comprised of only the wastewater described in this table. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. All samples collected shall be representative of the discharge during standard operating conditions.
- (2) In cases where limits and sample type are specified but sampling is not required by this permit, the limits specified shall apply to all samples which may be collected and analyzed by the Department of Environmental Protection personnel, the Permittee, or other parties.
- (3) The limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

SECTION 6: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

(A) Chemical Analysis

- (1) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the methods approved pursuant to the 40 CFR 136 unless an alternative method has been approved in writing pursuant to 40 CFR 136.4 or as provided in section 22a-430-3(j)(7) of the RCSA. Chemicals which do not have methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified in this permit.
- (2) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136 unless otherwise specified:
- (3) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Table A. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

<u>Parameter</u>	<u>Minimum Level</u>
Aluminum	10.0 ug/L
Chlorine, total residual	20.0 ug/L
Copper	5.0 ug/L
Lead	5.0 ug/L
Phosphorus	10.0 ug/L
Zinc	10.0 ug/L

- (4) The value of each parameter for which monitoring is required under this permit shall be reported to the maximum level of accuracy and precision possible consistent with the requirements of this section of the permit.
- (5) Effluent analyses for which quantification was verified during the analysis at or below the minimum levels specified in this section and which indicate that a parameter was not detected shall be reported as "less than x" where 'x' is the numerical value equivalent to the analytical

method detection limit for that analysis.

- (6) Results of effluent analyses which indicate that a parameter was not present at a concentration greater than or equal to the Minimum Level specified for that analysis shall be considered equivalent to zero (0.0) for purposes of determining compliance with effluent limitations or conditions specified in this permit.
- (7) The analytical method used to determine the concentration of total residual Chlorine shall be Standard Methods 4500-Cl-F (DPD Ferrous Titrimetric Method).

(B) Acute Aquatic Toxicity Test

- (1) Samples for monitoring of Aquatic Toxicity shall be collected and handled as prescribed in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821-R-02-012).
 - (a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 4 degrees Centigrade until Aquatic Toxicity testing is initiated.
 - (b) Effluent samples shall not be dechlorinated, filtered, or modified in any way, prior to testing for Aquatic Toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility.
 - (c) Chemical analyses of the parameters identified in Section 5 Table A shall be conducted on an aliquot of the same sample tested for Aquatic Toxicity.
 - (i) At a minimum, pH, specific conductance, total alkalinity, total hardness, and total residual chlorine shall be measured in the effluent sample and, during Aquatic Toxicity tests, in the highest concentration of test solution and in the dilution (control) water at the beginning of the test and at test termination. If Total Residual Chlorine is not detected at test initiation, it does not need to be measured at test termination. Dissolved oxygen, pH, and temperature shall be measured in the control and all test concentrations at the beginning of the test, daily thereafter, and at test termination.
 - (d) Tests for Aquatic Toxicity shall be initiated within 24 hours of sample collection.
- (2) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (invertebrate) above shall be conducted for 48-hours utilizing neonatal Daphnia pulex (less than 24-hours old)
- (3) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (vertebrate) above shall be conducted for 48-hours utilizing larval Pimephales promelas (1-14 days old with no more than 24-hours range in age).
- (4) Tests for Aquatic Toxicity shall be conducted as prescribed for static non-renewal acute tests in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821-R-02-012), except as specified below.
 - (a) For Aquatic Toxicity Limits and for monitoring only conditions, expressed as an NOAEL value, Pass/Fail (single-concentration) tests shall be conducted at a specified Critical Test Concentration (CTC) equal to the Aquatic Toxicity Limit, or 100% in the case of monitoring only conditions, as prescribed in section 22a-430-3(j)(7)(A)(I) of the

Regulations of Connecticut State Agencies, except that five replicates of undiluted effluent and five replicates of effluent diluted to the CTC shall be included.

- (b) Organisms shall not be fed during the tests.
 - (c) Copper nitrate shall be used as the reference toxicant in tests with freshwater organisms.
 - (d) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/L (plus or minus 5 mg/L) as CaCO₃ shall be used as dilution water in tests with freshwater organisms at the specified CTC.
- (5) Compliance with limits on Aquatic Toxicity shall be determined as follows:
- (a) For limits expressed as an NOAEL value, compliance shall be demonstrated when the results of a valid pass/fail Aquatic Toxicity test indicates there is greater than 90% survival in the undiluted effluent.
- (C) The Permittee shall annually monitor the chronic toxicity of the DSN 001-1 for the first three years of the permit in accordance with the following specifications.
- (1) Chronic toxicity testing of the discharge shall be conducted annually during July, August, or September of each year.
 - (2) Chronic toxicity testing shall be performed on the discharge in accordance with the test methodology established in "Short term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms" (EPA-821-R-02-013) as referenced in 40 CFR 136 for Cerio daphnia survival and reproduction and Fathead Minnow larval survival and growth.
 - (3) Chronic toxicity tests shall utilize a minimum of five effluent dilutions prepared using a dilution factor of 0.5 (100% effluent, 50% effluent, 25 % effluent, 12.5 % effluent, 6.25 % effluent, 0 % effluent).
 - (4) Piper Brook water collected immediately upstream of the area influenced by the discharge shall be used as site water control (0% effluent) for the toxicity test.
 - (5) A laboratory water control consisting of synthetic freshwater prepared in accordance with EPA-821-R-02-012 at a hardness of 50±5 mg/l shall be included in the test protocol in addition to the site-water control.
 - (6) Grab samples of the discharge and grab samples of the Piper Brook for use as site water control shall be collected on: day 0, for test solution renewal on day 1 and day 2 of the test; day 2, for test solution renewal on day 3 and day 4 of the test; and day 4, for test solution renewal on day 5, 6, and 7 of the test. Chronic toxicity analyses shall also be performed on a laboratory water control sample. Samples shall not be dechlorinated, pH or hardness adjusted, or chemically altered in any way.
 - (7) All samples of the discharge and the Piper Brook water used in the chronic toxicity test shall, at a minimum, be analyzed and results reported in accordance with the provisions listed in Section 6(A) of this permit for the following parameters:

pH
Hardness
Alkalinity

Copper (Total recoverable and dissolved)
Lead (Total recoverable and dissolved)
Aluminum, Total

Conductivity	Nitrogen, Ammonia (total as N)
Nitrogen, Nitrate (Total as N)	Chlorine, (Total residual)
Solids, Total Suspended	Phosphorus, Total
Zinc, (Total recoverable and dissolved)	
Iron, Total	

SECTION 7: REPORTING REQUIREMENTS

- (A) The results of chemical analyses and any aquatic toxicity test required above shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing) at the following address. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

- (B) Complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LC50 and NOAEL for survival, growth and/or reproduction, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the day of sample collection shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Protection and Land Reuse at the following address. The ATMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Water Protection and Land Reuse (Attn: Aquatic Toxicity)
Connecticut Department of Environmental Protection
79 Elm St.
Hartford, CT 06106-5127

- (C) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.), but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR and ATMR, as scheduled, indicating "NO DISCHARGE". For those Permittees whose required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

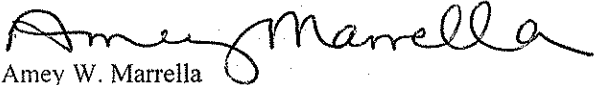
SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

- (A) If any sample analysis indicates that an Aquatic Toxicity effluent limitation in Section 5 of this permit has been exceeded or that the test was invalid, another sample of the effluent shall be collected and tested for Aquatic Toxicity and associated chemical parameters, as described above in Section 5 and Section 6, and the results reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing), at the address listed above, within 30 days of the exceedance or invalid test. Results of all tests, whether valid or invalid, shall be reported.
- (B) If any two consecutive test results or any three test results in a twelve month period indicates that an Aquatic Toxicity Limit has been exceeded, the Permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall submit a report to Bureau of Materials Management and

Compliance Assurance (Attn: Aquatic Toxicity) for the review and approval of the Commissioner in accordance with section 22a-430-3(j)(10)(c) of the RCSA describing proposed steps to eliminate the toxic impact of the discharge on the receiving water body. Such a report shall include a proposed time schedule to accomplish toxicity reduction and the Permittee shall comply with any schedule approved by the Commissioner.

- (C) The Permittee shall notify the Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division, within 72 hours and in writing within thirty days of the discharge of any substance listed in the application but not listed in the permit if the concentration or quantity of that substance exceeds two times the level listed in the application.

This permit is hereby issued on *May 9, 2011*.


Amey W. Marrella
Deputy Commissioner

SF/EMW

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Tilcon Connecticut Inc.

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT0030155

APPLICATION #: 200302203

FACILITY ID. 094-024

<u>Mailing Address:</u>					<u>Location Address:</u>						
Street:	P.O. Box 1357				Street:	301 Hartford Avenue					
City:	New Britain	ST:	CT	Zip:	06050	City:	Newington	ST:	CT	Zip:	06111
Contact Name:	Frank T. Lane				DMR Contact	Frank T. Lane					
Phone No.:	(203) 484-1418				Phone No.:	(203) 484-1418					

PERMIT INFORMATION

DURATION 5 YEAR X 10 YEAR ___ 30 YEAR _____

TYPE New ___ Reissuance X Modification _____

CATEGORIZATION POINT (X) NON-POINT () GIS # ___

NPDES (X) PRETREAT () GROUND WATER(UIC) () GROUND WATER (OTHER) ()

NPDES MAJOR (MA) _____
 NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI) _____
 NPDES or PRETREATMENT MINOR (MI) X _____

PRETREAT SIGNIFICANT INDUS USER (SIU) _____
 PRETREAT CATEGORICAL (CIU) _____

Note: If it's a CIU then check off SIU

POLLUTION PREVENTION MANDATE ___ **ENVIRONMENTAL EQUITY ISSUE** _____

COMPLIANCE ISSUES

COMPLIANCE SCHEDULE YES NO X (If yes check off what it is in relation to.)

POLLUTION PREVENTION ___ **TREATMENT REQUIREMENT** ___ **WATER CONSERVATION**

WATER QUALITY REQUIREMENT ___ **REMEDIATION** ___ **OTHER** _____

IS THE PERMITTEE SUBJECT TO A PENDING ENFORCEMENT ACTION? NO X YES ___

OWNERSHIP CODE

Private X Federal ___ State ___ Municipal (town only) ___ Other public _____

DEP STAFF ENGINEER Ewa Wozniak

PERMIT FEES

<i>Discharge Code</i>	<i>DSN</i>	<i>Annual Fee</i>
101041Y	DSN 001	\$4,337.50

FOR NPDES DISCHARGES

Drainage basin Code: 4402

Present/Future Water Quality Standard: B/B

NATURE OF BUSINESS GENERATING DISCHARGE

Mineral & Mining Processing.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

No treatment is necessary.

RESOURCES USED TO DRAFT PERMIT

- Federal Effluent Limitation Guideline 40 CFR 436.22 Subpart B*
name of category
- Performance Standards*
- Federal Development Document*
name of category
- Treatability Manual*
- Department File Information*
- Connecticut Water Quality Standards*
- Anti-degradation Policy*
- Coastal Management Consistency Review Form*
- Other - Explain*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

- Best Professional Judgment (See Other Comments)*
- Case-by-Case Determination (See Other Comments)*

GENERAL COMMENTS

The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated

for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. Statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for water quality limits. The company provided the Department with four analytical results of quarry pump out wastewater samples taken at four different time periods. These analytical results showed that the concentrations of copper, lead and zinc were all below the minimum detection levels, as specified in Section 6(A) of this permit. Therefore, the Department used half of the minimum detection level for copper, lead and zinc to calculate whether water quality limits needed to be incorporated in the permit. Only lead triggered reasonable potential to exceed water quality in the receiving stream. Based on these calculations the Department incorporated average monthly and maximum daily water quality limits for total lead.

OTHER COMMENTS

This discharge consists of water dewatering from the quarry mining areas. This water is collected in a retention basin 3 and used primarily for dust control during the construction season, usually from March through December of each year. This individual permit regulates the quarry pump-out water only, prior to its discharge to retention basin 3. This is a change from the previous permit, which not only covered the quarry pump-out water but also covered the non contact cooling water from the rock crushers and stormwater from the site as an overflow from retention basin 3. At this time, the non-contact cooling water from the rock crushers will be covered under the General Permit for the Discharge of Minor Non-contact Cooling and Heat Pump Water, prior to it discharging to retention basin 3, and the stormwater will be covered under the General Permit for the Discharge of Stormwater Associated with Industrial Activity.

During this permit reissuance cycle, the company requested to have its average monthly flow limit of 198,000 gallons per day eliminated from the permit. The company also asked to have its maximum daily flow limit increased from 344,000 gallons per day to 378,000 gallons per day. This increase in flow would allow the company to discharge the same amount of water the company is allowed to divert through its diversion permit.

A ZOI calculation was performed to determine whether the ZOI in the previous permit was still applicable. Based on USGS Gage Stations upstream of the discharge location (Station No. 01190100 for Piper Brook and Station No. 01190200 for Mill Brook) it was determined that the 7Q10 flow at the discharge location is 2.63 cfs or 1,699,695 gallons per day. This in turn translates to a ZOI of 70,820 gallons per hour.

However, since the non-contact cooling water from the rock crushers will be covered under the General Permit for the Discharge of Minor Non-contact Cooling and Heat Pump Water, the ZOI of 70,820 gallons per hour must be adjusted to correlate with the 10:1 dilution that is necessary to comply with the General Permit. Therefore, the dilution available for the non-contact cooling water was determined and then subtracted from the overall ZOI to determine the ZOI that may be allocated to the quarry pump-out wastewater only.

Dilution available for quarry pump-out water = ZOI – NCCW 10:1 dilution

Flow of NCCW = 36,000 gallons per day

IWC = 0.1

$$\begin{aligned} \text{ZOI for NCCW} &= \frac{(\text{Discharge Flow})}{\text{IWC}} - \text{Discharge Flow} \\ &= \frac{(378,000 \text{ gpd})}{0.1} - 378,000 \text{ gpd} = 324,000 \text{ gpd} \end{aligned}$$

ZOI allocated to NCCW 10:1 dilution = 13,500 gallons per hour

$$\begin{aligned} \text{Dilution available for quarry pump-out water} &= 70,820 \text{ gph} - 13,500 \text{ gph} \\ &= 57,320 \text{ gph} \end{aligned}$$

The previous permit had an allocated ZOI of 45,833 gallons per hour. However, pursuant to section 22a-430-4(l)(4)(xxiii) of the RCSA, the Department has the ability to change the standards/conditions from the previous permit and make them less stringent, without triggering anti-backsliding, when the circumstances on which the previous permit was based have changed. Using actual 7Q10 flow data, taken from the USGS Gage Station, a more accurate calculation of the ZOI was performed. Therefore, a new ZOI of 57,320 gallons per hour was incorporated in this permit cycle and was used to calculate the need for water quality limits.