

**PRETREATMENT PERMIT**  
issued to

Bedoukian Research, Inc.  
21 Finance Drive  
Danbury, Connecticut 06810

**Location Address:**

21 Finance Drive & 27 Augusta Drive  
Danbury, Connecticut 06810

Facility ID: 034-104

Permit ID: SP0000004

Permit Expires **March 21, 2018**

**SECTION 1: GENERAL PROVISIONS**

- (A) This permit is re-issued 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 a modified Memorandum of Agreement (“MOA”) dated June 3, 1981, by the Administrator of the United States Environmental Protection Agency which authorizes the State of Connecticut to administer a Pretreatment Program pursuant to 40 CFR Part 403.
- (B) **BEDOUKIAN RESEARCH, 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 subsections (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(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
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- (j) Monitoring, Records and Reporting Requirements
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- (m) Effluent Limitation Violations (Upsets)
- (n) Enforcement
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- (q) Instrumentation, Alarms, Flow Recorders
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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. Specifically, civil penalties of up to twenty-five thousand dollars may be assessed per violation per day.
- (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 Energy and Environmental Protection ("the 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) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- (G) 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 22a-423 of the CGS and Section 22a-430-3(a) and 22a-430-6 of the RCSA.
- (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.

"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.

“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 generated during an operating 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.

“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.

“Range During Sampling” or “RDS”, as a sample type, means the maximum and minimum of all values recorded as a result of analyzing each grab sample of: 1) a Composite Sample, or 2) a Grab Sample Average. For those permittees with continuous monitoring and recording pH meters, Range During Sampling shall mean the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

“Semi-annual” when used as a “Sample/Reporting Frequency” shall mean in the months of “June” and “December”.

### SECTION 3: COMMISSIONER'S FINAL DETERMINATION

- (A) The Commissioner has made a final determination and found that the discharge will not cause pollution of the waters of the state. The Commissioner's final determination is based on Application No. 200903763 for permit reissuance received on November 10, 2009 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 as follows:
  - (1) From the issuance of this permit through and including March 31, 2013, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of Permit No. SP0000004, issued by the Commissioner to the Permittee on May 5, 2005, the previous application submitted by the Permittee on August 22, 2000, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent for the discharge and/or activities authorized by, or associated with, Permit No. SP0000004, issued by the Commissioner to the Permittee on May 5, 2005.
  - (2) From April 1, 2013 until this permit expires or is modified or revoked, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of Permit No. SP0000004, issued by the Commissioner to the Permittee on the issuance date noted on the signature page of this permit, Application No. 200903763 received by the Department on November 10, 2009, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent for the discharge and/or activities authorized by, or associated with Permit No. SP0000004, issued by the Commissioner to the Permittee on the issuance date noted on the signature page of 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 that may be authorized under the Federal Clean Water Act or the Connecticut General Statutes 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 Connecticut General Statutes or regulations adopted thereunder which are then applicable.

#### **SECTION 4: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- (A) The discharges shall not exceed and shall otherwise conform to specific terms and conditions listed below. The discharges are restricted by, and shall be monitored in accordance with, the tables below.
- (B) All samples shall be comprised of only those wastewaters identified in the tables. Therefore, samples shall be taken prior to combination with wastewaters of any other type and after all approved treatment units, if applicable. All samples taken shall be representative of the discharge during standard operating conditions. Dilution shall not be used to achieve compliance with the limitations in Table A.
- (C) In cases where limits and sample type are specified but sampling is identified as "NR", the limits specified shall apply to all samples which may be collected and analyzed by, the Department of Energy and Environmental Protection personnel, the Permittee, or other parties.

**Table A**

Discharge Serial Number: 201-1		Monitoring Location: 1						
Wastewater Description: <i>Laboratory Wastewaters; Handwashing Wastewater; Ice Machine Wastewater; Emergency Discharge of Non-Contact Cooling Water</i>								
Monitoring Location Description: In the manhole located in the southwest corner of Building 1								
Discharge is to: City of Danbury Water Pollution Control Facility								
PARAMETER	UNITS	Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported	INSTANTANEOUS MONITORING		
						Instantaneous Limit or Required Range	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported
Acenaphthene <sup>3</sup>	µg/l	2	6	Semi-annual	Grab	6	NR	Grab
Acetone	µg/l	---	---	Semi-annual	Grab	NA	NR	NA
Anthracene <sup>3</sup>	µg/l	2	6	Semi-annual	Grab	6	NR	Grab
Benzene <sup>3</sup>	µg/l	7	17	Semi-annual	Grab	17	NR	Grab
Bis(2-ethylhexyl)phthalate	µg/l	12	33	Semi-annual	Grab	33	NR	Grab
Carbon tetrachloride <sup>3</sup>	µg/l	18	49	Semi-annual	Grab	49	NR	Grab
Chlorobenzene <sup>3</sup>	µg/l	18	49	Semi-annual	Grab	49	NR	Grab
Chloroethane <sup>3</sup>	µg/l	14	38	Semi-annual	Grab	38	NR	Grab
Chloroform <sup>3</sup>	µg/l	14	42	Semi-annual	Grab	42	NR	Grab
Di-n-butyl phthalate	µg/l	3	6	Semi-annual	Grab	6	NR	Grab
Di-n-octyl phthalate	µg/l	---	---	Semi-annual	Grab	NA	NR	NA
1,2-Dichlorobenzene <sup>3</sup>	µg/l	25	102	Semi-annual	Grab	102	NR	Grab
1,3-Dichlorobenzene <sup>3</sup>	µg/l	18	49	Semi-annual	Grab	49	NR	Grab
1,4-Dichlorobenzene <sup>3</sup>	µg/l	18	49	Semi-annual	Grab	49	NR	Grab
1,1-Dichloroethane <sup>3</sup>	µg/l	3	8	Semi-annual	Grab	8	NR	Grab
1,2-Dichloroethane	µg/l	23	74	Semi-annual	Grab	74	NR	Grab
1,1-Dichloroethylene	µg/l	3	8	Semi-annual	Grab	8	NR	Grab
1,2-trans-Dichloroethylene <sup>3</sup>	µg/l	3	9	Semi-annual	Grab	9	NR	Grab
1,2-Dichloropropane <sup>3</sup>	µg/l	25	102	Semi-annual	Grab	102	NR	Grab
1,3-Dichloropropylene <sup>3</sup>	µg/l	25	102	Semi-annual	Grab	102	NR	Grab
Diethyl phthalate	µg/l	6	15	Semi-annual	Grab	15	NR	Grab
Dimethyl phthalate	µg/l	2	6	Semi-annual	Grab	6	NR	Grab
4,6-Dinitro-o-cresol <sup>3</sup>	µg/l	10	36	Semi-annual	Grab	36	NR	Grab
Ethylbenzene	µg/l	18	49	Semi-annual	Grab	49	NR	Grab
Flow, Average Daily <sup>1</sup>	gpd	---	NA	Continuous <sup>1</sup>	Daily Flow	NA	NR	NA
Flow, Maximum <sup>1</sup>	gpd	NA	40,000	Continuous <sup>1</sup>	Daily Flow	NA	NR	NA
Flow (Day of Sampling)	gpd	---	40,000	Semi-annual	Daily Flow	NA	NR	NA
Fluoranthene <sup>3</sup>	µg/l	3	7	Semi-annual	Grab	7	NR	Grab
Fluorene <sup>3</sup>	µg/l	2	6	Semi-annual	Grab	6	NR	Grab
Hexachlorobenzene <sup>3</sup>	µg/l	25	102	Semi-annual	Grab	102	NR	Grab
Hexachlorobutadiene <sup>3</sup>	µg/l	18	49	Semi-annual	Grab	49	NR	Grab

**Table A**

Discharge Serial Number: 201-1		Monitoring Location: 1						
Wastewater Description: <i>Laboratory Wastewaters; Handwashing Wastewater; Ice Machine Wastewater; Emergency Discharge of Non-Contact Cooling Water</i>								
Monitoring Location Description: In the manhole located in the southwest corner of Building 1								
Discharge is to: City of Danbury Water Pollution Control Facility								
PARAMETER	UNITS	Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported	INSTANTANEOUS MONITORING		
						Instantaneous Limit or Required Range	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported
Hexachloroethane <sup>3</sup>	µg/l	25	102	Semi-annual	Grab	102	NR	Grab
Methyl chloride <sup>3</sup>	µg/l	14	38	Semi-annual	Grab	38	NR	Grab
Methylene chloride	µg/l	5	22	Semi-annual	Grab	22	NR	Grab
Naphthalene <sup>3</sup>	µg/l	2	6	Semi-annual	Grab	6	NR	Grab
Nitrobenzene <sup>3</sup>	µg/l	289	826	Semi-annual	Grab	826	NR	Grab
2-Nitrophenol <sup>3</sup>	µg/l	8	30	Semi-annual	Grab	30	NR	Grab
4-Nitrophenol <sup>3</sup>	µg/l	21	74	Semi-annual	Grab	74	NR	Grab
pH, Day of Sampling	SU	NA	NA	NR	NA	6.0 to 10.0	Semi-Annual	RDS
Phenanthrene <sup>3</sup>	µg/l	2	6	Semi-annual	Grab	6	NR	Grab
Pyrene <sup>3</sup>	µg/l	3	6	Semi-annual	Grab	6	NR	Grab
Tetrachloroethylene <sup>3</sup>	µg/l	7	21	Semi-annual	Grab	21	NR	Grab
Tetrahydrofuran	µg/l	---	---	Semi-annual	Grab	NA	NR	NA
Toluene	µg/l	4	10	Semi-annual	Grab	10	NR	Grab
Total Cyanide	µg/l	54	155	Semi-annual	Grab	155	NR	Grab
Total Lead	µg/l	41	89	Semi-annual	Grab	89	NR	Grab
Total Zinc	µg/l	135	337	Semi-annual	Grab	337	NR	Grab
1,2,4-Trichlorobenzene <sup>3</sup>	µg/l	25	102	Semi-annual	Grab	102	NR	Grab
1,1,1-Trichloroethane	µg/l	3	8	Semi-annual	Grab	8	NR	Grab
1,1,2-Trichloroethane	µg/l	4	16	Semi-annual	Grab	16	NR	Grab
Trichloroethylene	µg/l	3	9	Semi-annual	Grab	9	NR	Grab
Vinyl chloride	µg/l	13	22	Semi-annual	Grab	22	NR	Grab

**TABLE A FOOTNOTES AND REMARKS**

**Footnotes:**

- <sup>1</sup> 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. Total flow shall be measured by estimating the flow from each of four authorized wastewater sources. If a flow meter is added to any of the four sources, the total flow shall be measured by the flow meter on the metered sources and by an estimate on the unmetered sources.
- <sup>2</sup> The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' 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'.
- <sup>3</sup> The Permittee has applied for and has been granted a monitoring waiver for these noted pollutants ("waived pollutants"). The Permittee has certified that these pollutants are neither present nor expected to be present in the discharge or are present only at background levels from intake water and without any increase in the pollutant due to the activities of the Permittee. The Permittee must certify semi-annually (June and December) that there has been no increase in any waived pollutant in the wastewater as a result of the Permittee's activities. In the event that a waived pollutant is found to be present or is expected to be present in the wastewater based on changes in the Permittee's operations, the Permittee must immediately notify the Department and shall also immediately comply with the monitoring provisions for the subject waived pollutant(s) as set forth in this table. The monitoring waiver is valid for the effective term of the permit only. The Permittee shall use the "Monitoring Waiver Certification" attached to this permit.

**Remarks:**

1. Abbreviations used for units are as follows: µg/l means micrograms per day; gpd means gallons per day; SU means Standard Units. Other abbreviations are as follows: NA means "Not Applicable"; NR means "Not Reportable" (unless monitoring is conducted under Paragraph 4(C) of this permit); RDS means "Range During Sampling".
2. Boiler blowdown is also discharged via DSN 201-1. However, this wastestream is covered by a general permit.
3. Sampling for DSN 201-1 shall occur when there is no boiler blowdown comprising the discharge.

**Table B**

Discharge Serial Number: 203-1		Monitoring Location: 1						
Wastewater Description: <i>Emergency Discharge of Non-Contact Cooling Water</i>								
Monitoring Location Description: In the manhole located in the southwest corner of Building 1								
Discharge is to: City of Danbury Water Pollution Control Facility								
PARAMETER	UNITS	Average Monthly Limit	Maximum Daily Limit	Sample// Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample// Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported
Copper, Total	mg/L	---	---	Monthly	Grab	NA	NR	NA
Duration of Discharge	hrs/day	---	---	Monthly	Daily Flow	NA	NR	NA
Flow, Average Daily <sup>1</sup>	gpd	---	NA	Continuous	Daily Flow	NA	NR	NA
Flow, Maximum <sup>1</sup>	gpd	NA	---	Continuous	Daily Flow	NA	NR	NA
Lead, Total	mg/L	---	---	Monthly	Grab	NA	NR	NA
pH, Minimum	SU	NA	NA	NR	NA	6.0	Monthly	Minimum
pH, Maximum	SU	NA	NA	NR	NA	10.0	Monthly	Maximum
Temperature	°F	NA	NA	NR	NA	---	Grab	Monthly
Zinc, Total	mg/L	---	---	Monthly	Grab	NA	NR	NA

**TABLE B FOOTNOTES AND REMARKS**

**Footnotes:**

<sup>1</sup> If there is a discharge, the flow shall be estimated. If a flow meter is added, the flow shall be measured by the flow meter.

<sup>2</sup> The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' 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'.

**Remarks:**

1. Abbreviations used for units are as follows: mg/L means milligrams per liter; hrs/day means hours per day; gpd means gallons per day; SU means Standard Units; °F means degrees Fahrenheit. Other abbreviations are as follows: NA means "Not Applicable"; NR means "Not Reportable" (unless monitoring is conducted under Paragraph 4(C) of this permit).

2. Sampling for DSN 203-1 shall only be required when there is a discharge.



**SECTION 5: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES AND REPORTING REQUIREMENTS**

- (A) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 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.
- (B) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136 unless otherwise specified.
- (C) The results of chemical analysis 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 at the following address. The "Monitoring Waiver Certification" shall also be submitted along with the DMR. Except for continuous monitoring, any monitoring required more frequently than monthly shall be reported on an attachment to the DMR, and any additional monitoring conducted in accordance with 40 CFR 136 or other methods approved by the Commissioner shall also be included on the DMR, or as an attachment, if necessary. 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 taken.

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

- (D) 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 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.

(E) NetDMR Reporting Requirements

1. Prior to one-hundred and eighty (180) days after the issuance of this permit, the Permittee may either submit monitoring data and other reports to the Department in hard copy form or electronically using NetDMR, a web-based tool that allows Permittees to electronically submit discharge monitoring reports (DMRs) and other required reports through a secure internet connection. Unless otherwise approved in writing by the Commissioner, no later than one-hundred and eighty (180) days after the issuance of this permit the Permittee shall begin reporting electronically using NetDMR. Specific requirements regarding subscription to NetDMR and submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

a. Submittal of *NetDMR Subscriber Agreement*

On or before fifteen (15) days after the issuance of this permit, the Permittee and/or the person authorized to sign the Permittee's discharge monitoring reports ("Signatory Authority") as described in RCSA Section 22a-430-3(b)(2) shall contact the Department at [deep.netdmr@ct.gov](mailto:deep.netdmr@ct.gov) and initiate the NetDMR subscription process for electronic submission of Discharge Monitoring Report (DMR) information. Information on NetDMR is available on the Department's website at [www.ct.gov/deep/netdmr](http://www.ct.gov/deep/netdmr). On or before ninety (90) days after issuance of this permit the Permittee shall submit a signed and notarized copy of the *Connecticut DEEP NetDMR Subscriber Agreement* to the Department.

b. Submittal of Reports Using NetDMR

Unless otherwise approved by the Commissioner, on or before one-hundred and eighty (180) days after issuance of this permit, the Permittee and/or the Signatory Authority shall electronically submit DMRs and reports required under this permit to the Department using NetDMR in satisfaction of the DMR submission requirement of Section 5(C) of this permit.

DMRs shall be submitted electronically to the Department no later than the 30th day of the month following the completed reporting period. All reports required under the permit, including any monitoring conducted more frequently than monthly or any additional monitoring conducted in accordance with 40 CFR 136, shall be submitted to the Department as an electronic attachment to the DMR in NetDMR. Once a Permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to the Department. The Permittee shall also electronically file any written report of non-compliance described in Section 6 of this permit as an attachment in NetDMR. NetDMR is accessed from: <http://www.epa.gov/netdmr>.

c. Submittal of NetDMR Opt-Out Requests

If the Permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for electronically submitting DMRs and reports, the Commissioner may approve the submission of DMRs and other required reports in hard copy form ("opt-out request"). Opt-out requests must be submitted in writing to the Department for written approval on or before fifteen (15) days prior to the date a Permittee would be required under this permit to begin filing DMRs and other reports using NetDMR. This demonstration shall be valid for twelve (12) months from the date of the Department's approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to the Department using NetDMR unless the Permittee submits a renewed opt-out request and such request is approved by the Department.

All opt-out requests and requests for the NetDMR subscriber form should be sent to the following address or by email at [deep.netdmr@ct.gov](mailto:deep.netdmr@ct.gov):

Attn: NetDMR Coordinator  
Connecticut Department of Energy and Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

- (F) Copies of all DMRs shall be submitted concurrently to the local Water Pollution Control Authority(ies) ("WPCA") involved in the treatment and collection of the permitted discharge.

**SECTION 6: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS**

- (A) If any sample analysis indicates that an effluent limitation specified in Section 4 of this permit has been exceeded, a second sample of the effluent shall be collected and analyzed for the parameter(s) in question and the results reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing) within 30 days of the exceedance.
- (B) The Permittee shall immediately notify the Bureau of Materials Management and Compliance Assurance and the local WPCA of all discharges that could cause problems to the Publicly Owned Treatment Works ("POTW"), including but not limited to slug loadings of pollutants which may cause a violation of the POTW's NPDES permit, or which may inhibit or disrupt the POTW, its treatment processes or operations, or its sludge processes, use or disposal.
- (C) In addition to the notification requirements specified in Section 1B of this permit, if any sampling and analysis of the discharge performed by the Permittee indicates a violation of limits specified in Section 4 of this permit, the Permittee shall notify the Bureau of Materials Management and Compliance Assurance within 24 hours of becoming aware of the violation.

## SECTION 7: COMPLIANCE CONDITIONS

The Commissioner may provide public notification, in a newspaper of general circulation in the area of the respective POTW, of permittees that at any time in the previous twelve months were in significant noncompliance with the provisions of this permit. For the purposes of this provision, a Permittee is in significant noncompliance if its violation(s) meet(s) one or more of the following criteria:

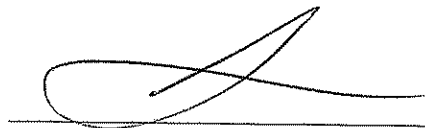
- **Chronic violations:** Those in which sixty-six (66%) percent or more of all measurements taken for the same pollutant parameter during a six-month period exceed (by any magnitude) the Average Monthly, Maximum Daily, or Maximum Instantaneous Limit(s).
- **Technical Review Criteria violations:** Those in which thirty-three (33%) or more of all of the measurements taken for the same pollutant parameter during a six-month period equal or exceed the Average Monthly, Maximum Daily, or Maximum Instantaneous Limit(s) multiplied by 1.4 for BOD, TSS, fats, oil, and grease, or 1.2 for all other pollutants except pH.
- **Monitoring Reports:** Failure to provide, within 45 days after the due date, required reports such as DMRs.
- **Compliance Schedule:** Failure to meet within 90 days after the schedule date, a compliance schedule milestone contained in or linked to a respective permit for starting construction, completing construction, or attaining final compliance.
- **Noncompliance Reporting:** Failure to accurately report noncompliance in accordance with provisions identified in Section 6 of this permit.
- **Discretionary:** Any other violation of an effluent limit that the Department determines has caused, alone or in combination with other discharges, a violation of the POTW's NPDES permit, inhibition or disruption of the POTW, its treatment processes or operations, or its sludge processes, use or disposal.
- **Imminent Endangerment:** Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment, or has resulted in the Department's exercise of its emergency authority under 40 CFR §403.8(f)(1)(vi)(B) to halt or prevent such a discharge.
- **BMPs:** Any other violation or group of violations, which may include a violation of Best Management Practices, which the Department determines will adversely affect the operation or implementation of the pretreatment program.

## SECTION 8: SPECIAL CONDITION

The Permittee shall maintain compliance with its "Best Management Plan for Sinks", June 2011, or any updated versions approved by the Department.

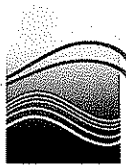
This permit is hereby issued on

3/22/13



MACKY MCCLEARY  
Deputy Commissioner

MM:CMG  
copy: Danbury WPCF



### MONITORING WAIVER CERTIFICATION

Based on my inquiry of the person or persons directly responsible for managing compliance with the Pretreatment Standard for 40 CFR 414, I certify that, to the best of my knowledge and belief, there has been no increase in the level of:

- Acenaphthene
- Anthracene
- Benzene
- Carbon Tetrachloride
- Chlorobenzene
- Chloroethane
- Chloroform
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- 1,1-Dichloroethane
- 1,2-trans-Dichloroethylene
- 1,2-Dichloropropane
- 1,3-Dichloropropylene
- 4,6-Dinitro-o-cresol
- Fluoranthene
- Fluorene
- Hexachlorobenzene
- Hexachlorobutadiene
- Hexachloroethane
- Methyl chloride
- Naphthalene
- Nitrobenzene
- 2-Nitrophenol
- 4-Nitrophenol
- Phenanthrene
- Pyrene
- Tetrachloroethylene
- 1,2,4-Trichlorobenzene

in the wastewaters due to the activities at the facility since filing of the last periodic report under 40 CFR 403.12(e)(i).

Authorized Official (Print Name): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**FACT SHEET**  
**SPDES PERMIT RENEWAL**  
**MARCH 19, 2013**

<b>APPLICANT</b>	BEDOUKIAN RESEARCH, INC.
<b>SPDES PERMIT NO.</b>	SP0000004
<b>APPLICATION NO.</b>	200903763
<b>DATE APPLICATION RECEIVED</b>	November 10, 2009
<b>FACILITY ID.</b>	034-104
<b>LOCATION ADDRESS</b>	21 Finance Drive Danbury, Connecticut 06180
<b>FACILITY CONTACT</b>	Joseph Bania, Regulatory Affairs Manager Office Phone: 203-830-4000 x 432 FAX: 203-830-4010 <a href="mailto:jbania@bedoukian.com">jbania@bedoukian.com</a>
<b>MAILING ADDRESS</b>	21 Finance Drive Danbury, Connecticut 06810
<b>DMR CONTACT</b>	Joseph Bania
<b>BILLING CONTACT</b>	Robert H. Bedoukian
<b>PERMIT TERM</b>	5 years
<b>PERMIT CATEGORY</b>	Significant Industrial User: <input checked="" type="checkbox"/> Subject to Categorical Pretreatment Standards: <u>40 CFR 414</u> OR <input type="checkbox"/> Discharges an average of 25,000 gpd or more of process wastewater <input type="checkbox"/> Contributes 5% or more of the hydraulic/organic capacity of the POTW <input type="checkbox"/> Designated as SIU on the basis of its operations
<b>SIC CODES</b>	2869 (Industrial Organic Chemicals, NEC) 2899 (Chemicals and Chemical Preparations, NEC)
<b>PERMIT TYPE</b>	Renewal
<b>OWNERSHIP</b>	Private
<b>POTW THAT RECEIVES THE DISCHARGE</b>	City of Danbury Water Pollution Control Facility [Still River]
<b>DEP STAFF ENGINEER</b>	Christine Gleason (860/424-3278) <a href="mailto:christine.gleason@ct.gov">christine.gleason@ct.gov</a>

**PERMIT FEES**

*Application Filing Fee: \$1,300. Paid on November 10, 2009*

*Application Processing Fee: \$7,600.00 (Invoice 209933). Paid on July 23, 2012*

***Annual Fee:***

DISCHARGE CODE	WASTEWATER CATEGORY (per 22a-430-7)	MAXIMUM GPD or CATEGORY	DSN	ANNUAL FEE (per 22a-430-7)
501042Y	<i>Organic Chemicals Manufacturing</i> (Laboratory glassware/container wastewater)	0-50,000	201	4,337.50
502000b	<i>Non-contact Cooling Water</i> (Non-contact cooling water, Handwashing wastewater, Ice machine wastewater)	0-100,000	201/203	660.00
<b>TOTAL</b>				<b>\$4,997.50</b>

## I. APPLICANT

Bedoukian Research, Inc. ("Bedoukian") is seeking a renewal of its SPDES permit (SP0000004) for authorization of the discharge of wastewater from certain ancillary operations associated with its chemical manufacturing/formulating operations in Danbury. On November 10, 2009, the Department received Application No. 200903763 for the subject SPDES permit. This application was noticed in *The News-Times* on April 30, 2010. On May 25, 2010, the application was determined to be timely and administratively sufficient.

The applicant seeks authorization for the following:

DSN	PROPOSED AVERAGE MONTHLY FLOW (gpd)	PROPOSED MAXIMUM DAILY FLOW (gpd)	PROPOSED WASTESTREAMS	TREATMENT TYPE	DISCHARGE TO
201-1	760	40,000	Laboratory glassware/container wastewater; Handwashing wastewater; Ice machine wastewater; Non-contact cooling water associated with the failure of cooling system	None	City of Danbury WPCF
203-1	---	---	Non-contact cooling water associated with the failure of the cooling system	None	City of Danbury WPCF

DSN 202-1 was eliminated in November 2011.

## II. BACKGROUND

Bedoukian is engaged in the manufacture and formulation of various chemicals at its facility in Danbury. The wastewater associated with these operations was historically treated and discharged into the sewer (via DSN 202-1). However, the treatment system went through closure in the fall of 2011; the wastewaters that had been treated in the on-site wastewater treatment system are now containerized and shipped off-site to a treatment, storage, and disposal facility (TSDF). The remaining discharges at the site (DSN 201-1 and DSN 203-1) consist of wastewater associated with ancillary activities related to the chemical manufacturing/formulating operations (e.g., wastewater from cleaning the glassware/containers, non-contact cooling water, etc.). This wastewater is discharged to the City of Danbury's Water Pollution Control Facility by way of permit SP0000004.

## III. ISSUES RELATED TO THE APPLICATION

### A. FEDERALLY-RECOGNIZED INDIAN LAND

As provided in the permit application, the site is not located on federally-recognized Indian land.

### B. COASTAL AREA/COASTAL BOUNDARY

The subject site is not located in a coastal area/coastal boundary.

### C. ENDANGERED SPECIES

The subject site is located within an area identified as a habitat for endangered, threatened, or special-concern species (December 2011 map). However, this activity involves the renewal of a sewer discharge permit and would therefore, not be expected to be an impact.

### D. AQUIFER PROTECTION AREAS

The project site is located within a town required to establish Aquifer Protection Areas, but the site is not within a protected area identified on a Level A or Level B map.

#### **IV. NATURE OF THE BUSINESS GENERATING THE DISCHARGE**

Bedoukian is in the business of manufacturing aroma chemicals, insect pheromones (semiochemicals), and other miscellaneous chemicals. The SIC codes, as provided by the applicant, are 2869 (Industrial Organic Chemicals, NEC) and 2899 (Chemicals and Chemical Preparations, NEC).

#### **V. FACILITY DESCRIPTION**

Bedoukian is in the business of manufacturing/formulating chemicals. It has been in operation since 1972. The facility is located in a mixed commercial/industrial area in Danbury. Bedoukian occupies two buildings on-site; one building is located at 21 Finance Drive ("Building 2") and is used primarily for administrative functions; another building is located at 27 Augusta Drive ("Building 1") and is used primarily to manufacture/formulate the chemicals. Bedoukian makes over 1,200 specialty organic chemicals ranging in size from 1 gram to 300 gallons. These chemicals include: aroma chemicals (50%), insect pheromones/semiochemicals (20%); internal chemical intermediaries (28%); and miscellaneous specialty chemicals (2%). Large scale orders are made in assorted-sized reactors in the reactor room; small scale orders are filled in the laboratory using flasks or small reactors. The wastewater from the reactor room had historically been treated on-site and discharged into the sewer (via DSN 202-1). However, these wastewaters are now containerized and shipped off-site for management at a TSDF. The only remaining discharge points are DSN 201-1 and DSN 203-1. The DSN 201-1 discharge point receives wastewater generated from the third rinsing of glassware/containers associated with the chemical manufacturing/formulating operations, as well as handwashing wastewater, ice machine wastewater, and non-contact cooling water if there is a failure of the chiller. [Boiler blowdown is also discharged via DSN 201-1. However, this wastestream is covered by a general permit]. The DSN 203-1 discharge point receives wastewater generated as the result of the failure of the non-contact cooling water system. Both DSN 201-1 and DSN 203-1 are conveyed to the City of Danbury's Water Pollution Control Facility. [See Attachment 1 for the plan view of Building 1; Attachment 2 for the Line Diagram; and Attachment 3 for Bedoukian's "Best Management Plan for Sinks"].

#### **VI. THE ON-SITE WASTEWATER TREATMENT SYSTEM**

There is no longer a wastewater treatment system on-site. The wastestreams discharged via DSN 201-1 and DSN 203-1 are not treated. The discharge from DSN 201-1 occurs intermittently; the discharge from DSN 203-1 only occurs in the event of a failure of the chiller.

#### **VII. EFFLUENT QUALITY DATA**

The effluent has not been routinely monitored; one sample is provided with the permit application.

#### **VIII. EFFLUENT & REPORTING VIOLATIONS**

See below.

#### **IX. OUTSTANDING ENFORCEMENT (RELATED TO WASTEWATER DISCHARGES):**

NOV WR IN 12 002 was issued to Bedoukian on February 21, 2012 for the following: 1) Failure to sample DSN 201-1 since 2009; 2) Failure to accurately report the maximum daily flow for DSN 201-1. NOV WR IN 12 002 was closed on May 8, 2012.

#### **X. SPILL HISTORY**

No spills in the last five years.

**XI. EFFLUENT GUIDELINES**

Bedoukian is in the business of manufacturing/formulating chemicals. Discharge DSN 203-1 is a non-contact cooling water discharge and would not be subject to any categorical. The following effluent limitation guidelines were examined to determine whether Bedoukian's discharge, DSN 201-1, is a categorical discharge:

- 40 CFR 414 (*Organic Chemicals, Plastics, and Synthetic Fibers*): Based on the evaluation conducted by Bedoukian staff, nearly all of the chemicals manufactured at the facility (aroma chemicals, insect pheromones, chemical intermediates, and specialty chemicals) are subject to 40 CFR 414, Subpart H. The basis for this review was EPA's *Product and Product Group Discharges Subject to Effluent Limitations and Standards for the Organic Chemicals, Plastics, and Synthetic Fibers Point Source Category – 40 CFR 414*, April 2005. Therefore, any process wastewater associated with this operation would be subject to 40 CFR 414. The laboratory wastewater has been determined to be a process wastewater subject to 40 CFR 414. The OCPSF operations were initiated before March 21, 1983, therefore, the Pretreatment Standards for Existing Sources (PSES) at 40 CFR 414, Subpart H (40 CFR 414.85) apply to the discharge.
- 40 CFR 455 (*Pesticide Chemicals*): Bedoukian does manufacture, formulate, and package chemicals designated by EPA as pesticides (for registration purposes). However, it does not manufacture pesticides with active ingredients identified in Table 1 of 40 CFR 455; therefore, Subpart A of 40 CFR 455 (Organic Pesticide Chemicals Manufacturing Subcategory) does not apply. Bedoukian's operations do appear to be subject to 40 CFR 455, Subpart C (Pesticide Chemicals Formulating and Packaging Subcategory). However, the only wastestream that has the potential to be subject to this subpart is the wastewater that is generated from cleaning the glassware/containers associated with the chemical formulating operations and this wastestream is specifically excluded by way of 40 CFR 455.40(c).
- 40 CFR 454 (*Gum and Wood Chemicals Industry*): Bedoukian does re-distill certain oils. However, the two "essential oils" identified in 40 CFR 454, Subpart E concern cedarwood oil and pine scent. Neither of these two oils are manufactured or re-distilled on-site.

**XII. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

RESOURCES USED TO DRAFT PERMIT			DISCHARGE POINT(S)
<input checked="" type="checkbox"/>	Federal Effluent Limitation Guideline (ELG)	40 CFR 414, Subpart H 40 CFR 414, Subpart K	DSN 201-1
<input type="checkbox"/>	Performance Standards		
<input type="checkbox"/>	Federal Development Document		
<input type="checkbox"/>	Treatability Manual		
<input type="checkbox"/>	Department File Information		
<input checked="" type="checkbox"/>	Other	<i>Product and Product Group Discharges Subject to Effluent Limitations and Standards for the Organic Chemicals, Plastics, and Synthetic Fibers Point Source Category – 40 CFR 414, April 2005</i>	DSN 201-1

BASIS FOR LIMITS, STANDARDS OR CONDITIONS		REGULATION	DISCHARGE POINT(S)
<input checked="" type="checkbox"/>	Pretreatment Standards for Existing Sources (PSES)	40 CFR 414, Subpart K	DSN 201-1
<input type="checkbox"/>	Pretreatment Standards for New Sources (PSNS)		
<input checked="" type="checkbox"/>	Case-by-Case Determination using Best Professional Judgment (BPJ)	40 CFR 403 RCSA 22a-430-4(m)	DSN 201-1 DSN 203-1



**DSN 201-1:**

- A. **WASTESTREAMS AUTHORIZED FOR DISCHARGE UNDER DSN 201-1:** Laboratory glassware/container wastewater; Handwashing wastewater; Ice machine wastewater; Non-contact cooling water associated with the failure of cooling system.
- B. **POLLUTANTS OF CONCERN:** The pollutants of concern for the laboratory wastewater include the OCPSF pollutants at 40 CFR 414, Subpart K. In addition, acetone, tetrahydrofuran, and di-n-octylphthalate can be expected to be present in the laboratory wastewater and are therefore also pollutants of concern. No additional pollutants need to be monitored in order to address the remaining wastestreams that comprise DSN 201-1.
- C. **MONITORING PARAMETERS & LIMITS:** The laboratory glassware/container wastewater would be classified as an OCPSF process water; the remaining wastestreams that comprise DSN 201-1 are dilution wastestreams. Therefore, the ratio of process wastewater to total discharge flow is used to determine the effluent limits. This ratio is 40:310. [Note: Limits in the existing permit were based on a ratio of 720:1020]. The derivation of the permit limits is located on Attachment 4.
- D. **EXPRESSION OF LIMITS:** Section 40 CFR 414, Subpart K requires that mass-based limitations be applied to the discharge. However, the "Pretreatment Streamlining Rule" now allows for flexibility to control OCPSF discharges through equivalent concentration-based limits in lieu of flow-based mass limits (40 CFR 403.6(c)(6)). Use of concentration-based limits in lieu of mass-based limits is contingent upon dilution not being used to meet the limits. The permit will now only include concentration-based limits; a condition in Section 4(B) of the permit prohibits the use of dilution to meet the limits. Documentation as to how the equivalent limits were derived is described on Attachment 4.
- E. **MONITORING FREQUENCY:** The *Monitoring Schedule* set forth in RCSA Section 22a-430-3 prescribes a frequency of monthly for DSN 201-1. Given the nature of the discharge semi-annually is more appropriate.
- F. **MONITORING WAIVER:** Consistent with the requirements at 40 CFR 403.12(e)(2), Bedoukian has submitted certified documentation demonstrating that through sampling and other technical factors certain categorical pollutants regulated under 40 CFR 414, Subpart K are either: 1) neither present nor expected to be present in the discharge or 2) are present only at background levels from intake water and without any increase in the pollutant due to activities of the Permittee. [Note: Bedoukian's intake water is from a public water supply system and contaminant levels are below federal drinking water standards]. Bedoukian has made that demonstration for the following pollutants: Acenaphthalene, Anthracene, Benzene, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,1-Dichloroethane, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, 4,6-Dinitro-o-cresol, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Methyl chloride, Naphthalene, Nitrobenzene, 2-Nitrophenol, 4-Nitrophenol, Phenanthrene, Pyrene, Tetrachloroethylene, 1,2,4-Trichlorobenzene. Based on the representations made by Bedoukian, the Department has granted the request for a monitoring waiver for the subject pollutants. Bedoukian will now be able to forgo sampling with respect to these pollutants provided that it submits to the Department, on a semi-annual basis, a certification statement consistent with the requirements of 40 CFR 403.12(e)(2)(v). The monitoring waiver is valid for the effective term of the permit only. The terms and conditions of the monitoring waiver have been incorporated into the permit (i.e., Footnote 3 of Table A).

**DSN 203-1:**

- G. **WASTESTREAMS AUTHORIZED FOR DISCHARGE UNDER DSN 203-1:** Non-contact cooling water associated with the failure of cooling system.
- H. **MONITORING PARAMETERS & LIMITS:** The monitoring parameters were determined based on the constituents that would be in non-contact cooling water.

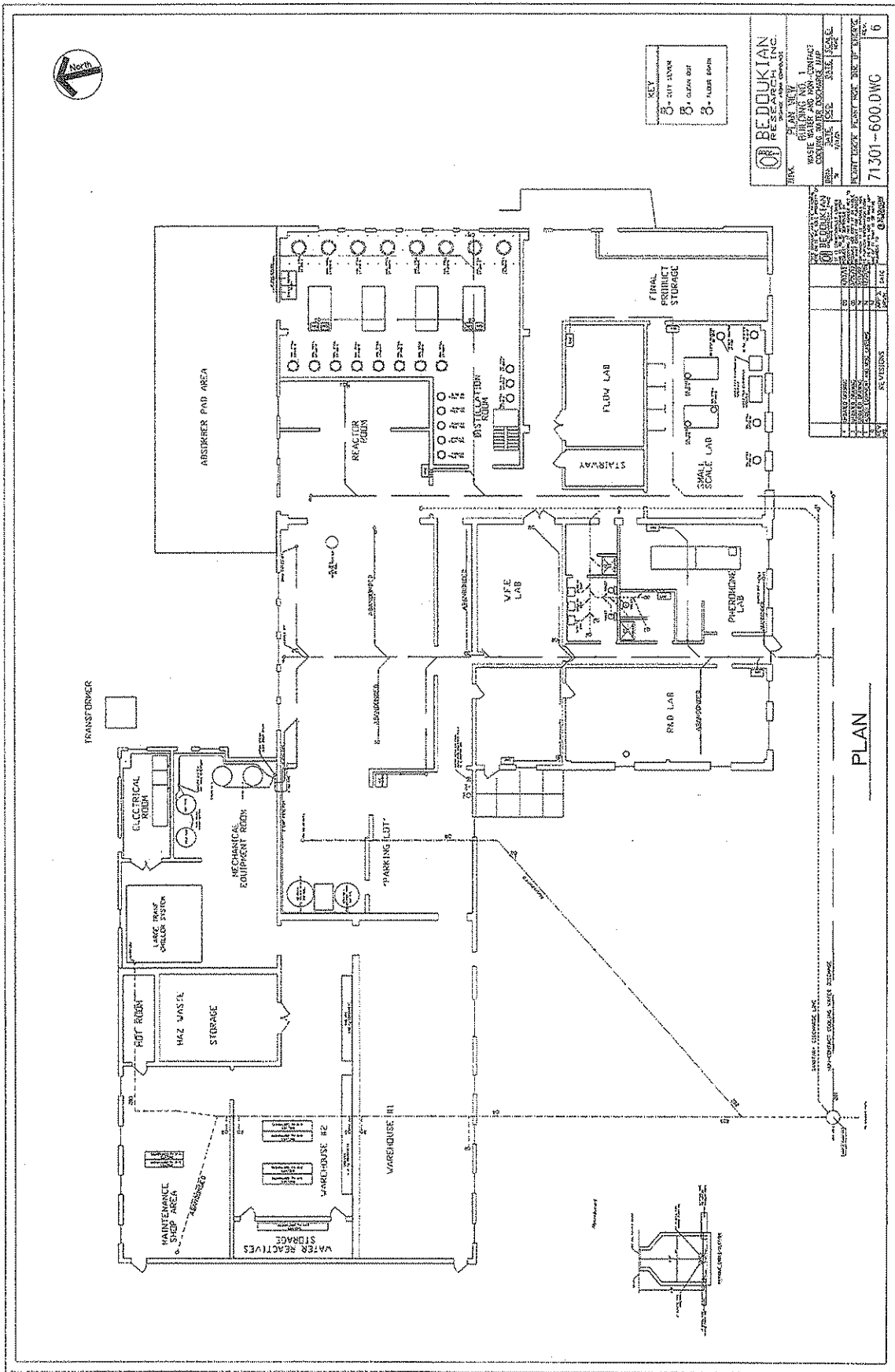
- I. **MONITORING FREQUENCY:** Since this discharge will only occur when there is a failure of the chiller system, sampling shall only be required during a failure.

**XIII. NOTICE OF TENTATIVE DETERMINATION AND RESPONSE TO COMMENTS**

A notice of tentative determination to re-issue the subject permit was published in the *Danbury News-Times* on February 7, 2013. The duration of the comment period was from February 7, 2013 to March 7, 2013. No comments were received on the proposed permit re-issuance.

Document	Date	Revision Notes
Revision 1	March 19, 2013	- Added Section XIII -Added Note in Section XII(F)
Original	February 5, 2013	N/A: Original Fact Sheet

ATTACHMENT 1



KEY  
 3 = 211' DOWN  
 3 = CLEAN OUT  
 3 = FLOOR GOIN

**BEDDOUKIAN**  
 ARCHITECTS  
 1000 W. 10TH AVENUE, SUITE 100  
 DENVER, CO 80202  
 TEL: 303.733.1111  
 FAX: 303.733.1112  
 WWW.BEDDOUKIAN.COM

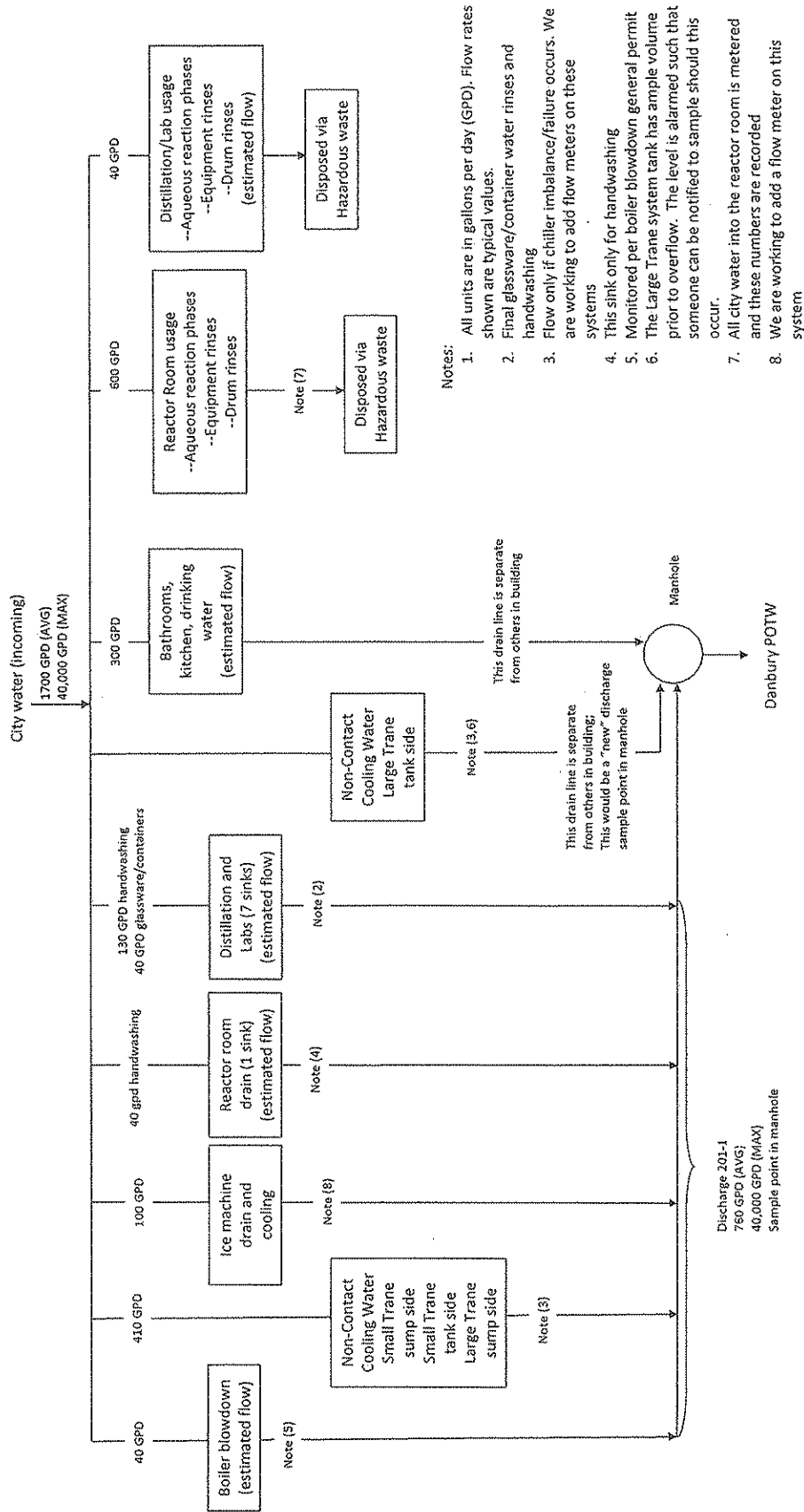
NO.	DATE	DESCRIPTION	BY	CHK
1	08/11/03	ISSUED FOR PERMITS	MM	MM
2	08/11/03	ISSUED FOR PERMITS	MM	MM
3	08/11/03	ISSUED FOR PERMITS	MM	MM
4	08/11/03	ISSUED FOR PERMITS	MM	MM
5	08/11/03	ISSUED FOR PERMITS	MM	MM
6	08/11/03	ISSUED FOR PERMITS	MM	MM

PLAN

71301-600.DWG

6

# ATTACHMENT 2



## ATTACHMENT 3

Revised 6/01; 6/05; 6/09; 6/11

### BEDOUKIAN RESEARCH, INC. BEST MANAGEMENT PLAN FOR SINKS

#### PLAN GOAL:

To outline control measures to prevent, eliminate, or reduce contaminants in the sink waste stream.

#### GOOD HOUSEKEEPING:

All sink areas shall be kept clear and unobstructed. The primary function of sinks shall be for the personal hygiene of employees i.e. hand washing. A secondary use of the sinks is as a source of City water. Dirty glassware should not congregate around the sink area, but should be addressed in a timely manner. Keep the work area clean and uncluttered, with chemicals and equipment being properly labeled and stored. Clean up the work area on completion of an operation or at the end of each day.

#### PREVENTIVE MAINTENANCE:

Signs: Located over/around sink area, and in good readable condition:

**NO SOLVENTS, NO CHEMICALS, NO FUELS/OILS IN THIS DRAIN**

The discharge of wastewater or other materials to the drain is regulated under the CLEAN WATER ACT. Convictions for improper waste disposal may result in fines or imprisonment. Contact the Regulatory Affairs Manager for any questions you may have.

Glassware drying racks shall **NOT** be located over sinks. This shall prevent cleaning solvents from dripping into the sinks from glassware.

Where possible, Satellite Hazardous Waste storage containers shall not be located near the sinks. This is an additional measure beyond sink shields to further prevent chemical/solvents from potentially splashing into the sinks.

Acetone/solvent spray bottles shall not be stored in the sink back splash area or near the sinks where thermal expansion of the solvent may cause it to spray or drip into the sink.

#### INSPECTIONS:

Sinks shall be inspected periodically to ensure Good housekeeping and evaluate any other potential sources of contaminants that may be introduced into the sinks.

#### SPILL PREVENTION AND RESPONSE PROCEDURES:

The primary method for preventing spills to the sink drains shall be in keeping chemicals away from the sink drains.

Sinks shall be side shielded to prevent chemicals on adjacent bench areas from spilling into sink.

Spill response procedures and spill reporting shall follow spill response as outlined in the Integrated Contingency Plan (Emergency Response Plan).

## BEDOUKIAN RESEARCH, INC. BEST MANAGEMENT PLAN FOR SINKS

### PROPER MATERIAL AND WASTE HANDLING AND STORAGE PROCEDURES:

#### Storage of Laboratory Chemicals:

- Flammable solvents shall be stored in safety cans.
- Chemicals should not be stored on floors, or on shelves in high traffic areas.
- Chemicals should not be stored in fume hoods as it may interfere with the proper operation of the hood. After use, chemicals should be returned to the warehouse storage area.

#### Waste Handling:

##### Satellite storage:

- Less than 55 Gallons
- Container in good condition
- Labeled and closed except when in use
  - Label: "Hazardous Waste" with date waste began to be collected
- Situated so that splashes into sinks will not occur
- Moved to central storage when full
- Not stored more than 90 days from the date of the START of accumulation
- No more than one 55 gallon "Hazardous Waste" drum per accumulation area
  - Certain departments may have 2 smaller containers not totaling more than 55 gallons to accommodate aqueous waste and solvent based waste streams

##### Clean Up Rags & Paper:

- Regulations presently require that rags, paper towels, etc. that possibly have been contaminated with hazardous waste under go tests (TCLP) to determine whether or not the rags themselves be considered as hazardous waste and therefore banned from landfills as regular trash.
- Use of oil Sorbent pads for small spill considered to be incidental releases as per 29 CFR 1910.120.
- In an effort to alleviate the burden of segregating and testing all our cleanup rags, reduce any objectionable odors, and in general maintain a sound environmental policy we will as a matter of operating policy put all "contaminated" cleanup rags in kiln packs for disposal as hazardous waste.
- At present we will utilize the 55 gallon open top drums with hinged lids to collect the used rags, paper towels, etc.
- Preprinted labels specifically prepared for use with the kiln packs are to be applied in the same manner as the labels for solvent wastes although there is no need to apply any other "flammable" labels, etc.
- When full, the kiln packs should be sealed with the locking ring supplied and placed in the "Hazardous waste" room, again making sure the labels are easily accessible.

##### Other Spent Materials:

- Other materials used in lab and production to be disposed of as Hazardous wastes (i.e. alumina, spent MnO<sub>2</sub>, etc.) will be dealt with on an individual basis. UNDER NO CIRCUMSTANCES SHOULD ANY CHEMICAL BE DISPOSED OF WITH REGULAR TRASH FOR LANDFILL OR DISPOSED OF DOWN THE SINK DRAIN.

## BEDOUKIAN RESEARCH, INC. BEST MANAGEMENT PLAN FOR SINKS

- Residues (still bottoms) will be handled as hazardous waste.
- Per CTDEP all process waters from the labs and distillation and the first aqueous glassware rinse shall not be sent to our wastewater treatment system and are to be disposed of as hazardous waste. This is due to corrosion of the spark arresting funnels leaching lead and zinc into the process water container, ultimately being very difficult to remove from our wastewater treatment system.
- Solid wastes - filter paper, towels, etc are added to a kiln pack for disposal as hazardous waste.

### GLASSWARE CLEANING PROCEDURE:

1. Solvent rinse (Acetone, Methanol, Arcosolv, etc.):  
Rinse material goes to Hazardous waste.
2. Water rinse to remove remaining solvent  
Rinse water goes to hazardous waste.
3. If needed, soak glassware in soapy water to remove last traces of odor.  
Water discharged down drain to POTW.
4. Final water rinse of glassware  
Water discharged down drain to POTW.

### EMPLOYEE TRAINING:

Employees shall be trained at initial assignment regarding proper use of sinks.

All chemical handling employees shall be trained in proper sink usage.

ALL lab and distillation wash waters and the first aqueous glassware rinses MUST go to hazardous waste.

Solvent rinses of glassware MUST go to hazardous waste.

Chemically "contaminated" equipment must not be placed in sinks at any time.

**ATTACHMENT 4**  
FEDERAL LIMITS: 40 CFR 414

WASTESTREAMS (DSN 201)	Average Process Wastewater Flow (gpd)	Average Non-Process Wastewater Flow (gpd)
Laboratory glassware/container wastewater	40	
Handwash wastewater, ice machine wastewater		270
	40	270

PROCESS FLOW: 40 gpd  
TOTAL FLOW: 310 gpd

PARAMETER	40 CFR 414.111 EFFLUENT LIMITATION GUIDELINE (ELG)		FLOWS		CONCENTRATION-BASED LIMITATIONS			LONG-TERM ANNUAL FLOW (gallons)	MASS-BASED LIMITATIONS	
	AVERAGE MONTHLY LIMIT (µg/L)	MAXIMUM DAILY LIMIT (µg/L)	PROCESS WASTE WATERS	TOTAL FLOW (PROCESS + NON-PROCESS FLOWS)	AVERAGE MONTHLY LIMIT (µg/L)	MAXIMUM DAILY LIMIT (µg/L)	INSTANTANEOUS LIMIT (µg/L)		AVERAGE MONTHLY LIMIT (g/d)	MAXIMUM DAILY LIMIT (g/d)
Acenaphthene	19	47	40	310	2	6	6	760	0.007	0.017
Anthracene	19	47	40	310	2	6	6	760	0.007	0.017
Benzene	57	134	40	310	7	17	17	760	0.021	0.050
Bis(2-ethylhexyl)phthalate	95	258	40	310	12	33	33	760	0.035	0.096
Carbon Tetrachloride	142	380	40	310	18	49	49	760	0.053	0.141
Chlorobenzene	142	380	40	310	18	49	49	760	0.053	0.141
Chloroethane	110	295	40	310	14	38	38	760	0.041	0.110
Chloroform	111	325	40	310	14	42	42	760	0.041	0.121
Di-n-butyl phthalate	20	43	40	310	3	6	6	760	0.007	0.016
1,2-Dichlorobenzene	196	794	40	310	25	102	102	760	0.073	0.295
1,3-Dichlorobenzene	142	380	40	310	18	49	49	760	0.053	0.141
1,4-Dichlorobenzene	142	380	40	310	18	49	49	760	0.053	0.141
1,1-Dichloroethane	22	59	40	310	3	8	8	760	0.008	0.022
1,2-Dichloroethane	180	574	40	310	23	74	74	760	0.067	0.213
1,1-Dichloroethylene	22	60	40	310	3	8	8	760	0.008	0.022
1,2-trans-Dichloroethylene	25	66	40	310	3	9	9	760	0.009	0.025
1,2-Dichloropropane	196	794	40	310	25	102	102	760	0.073	0.295
1,3-Dichloropropylene	196	794	40	310	25	102	102	760	0.073	0.295
Diethyl phthalate	46	113	40	310	6	15	15	760	0.017	0.042
Dimethyl phthalate	19	47	40	310	2	6	6	760	0.007	0.017
4,6-Dinitro-o-cresol	78	277	40	310	10	36	36	760	0.029	0.103
Ethylbenzene	142	380	40	310	18	49	49	760	0.053	0.141
Fluoranthene	22	54	40	310	3	7	7	760	0.008	0.020
Fluorene	19	47	40	310	2	6	6	760	0.007	0.017
Hexachlorobenzene	196	794	40	310	25	102	102	760	0.073	0.295
Hexachlorobutadiene	142	380	40	310	18	49	49	760	0.053	0.141
Hexachloroethane	196	794	40	310	25	102	102	760	0.073	0.295
Methyl chloride	110	295	40	310	14	38	38	760	0.041	0.110
Methylene chloride	36	170	40	310	5	22	22	760	0.013	0.063
Naphthalene	19	47	40	310	2	6	6	760	0.007	0.017
Nitrobenzene	2,237	6,402	40	310	289	826	826	760	0.831	2.378
2-Nitrophenol	65	231	40	310	8	30	30	760	0.024	0.086
4-Nitrophenol	162	576	40	310	21	74	74	760	0.060	0.214
Phenanthrene	19	47	40	310	2	6	6	760	0.007	0.017
Pyrene	20	48	40	310	3	6	6	760	0.007	0.018
Tetrachloroethylene	52	164	40	310	7	21	21	760	0.019	0.061
Toluene	28	74	40	310	4	10	10	760	0.010	0.027
Total Cyanide	420	1,200	40	310	54	155	155	760	0.156	0.446
Total Lead	320	690	40	310	41	89	89	760	0.119	0.256
Total Zinc	1,050	2,610	40	310	135	337	337	760	0.390	0.970
1,2,4-Trichlorobenzene	196	794	40	310	25	102	102	760	0.073	0.295
1,1,1-Trichloroethane	22	59	40	310	3	8	8	760	0.008	0.022
1,1,2-Trichloroethane	32	127	40	310	4	16	16	760	0.012	0.047
Trichloroethylene	26	69	40	310	3	9	9	760	0.010	0.026
Vinyl chloride	97	172	40	310	13	22	22	760	0.036	0.064

**Concentration-Based Limits:**

$$\text{Average Monthly} = \text{ELG} * \frac{\text{Process Wastewaters}}{\text{Total Flow}}$$

$$\text{Maximum Daily} = \text{ELG} * \frac{\text{Process Wastewaters}}{\text{Total Flow}}$$

**Mass-Based Limits:**

$$\text{Average Monthly} = \text{Average Concentration Limit} * \text{Long Term Flow} * \text{Conversion Factor}$$

$$\text{Maximum Daily} = \text{Maximum Concentration Limit} * \text{Long Term Flow} * \text{Conversion Factor}$$