



79 Elm Street • Hartford, CT 06106-5127

www.ct.gov/deep

Affirmative Action/Equal Opportunity Employer

PRETREATMENT PERMIT

issued to

Inland Technologies International Limited
4000 Legato Road, Suite 1100
Fairfax, VA 22033

Location Address:

Bradley International Airport
Schoephoester Road
Windsor Locks, CT 06096

and

Connecticut Airport Authority
Administrative Offices
Terminal A, 3rd Floor
Bradley International Airport
Windsor Locks, CT 06096

Permit ID: SP0002364

Permit Expires: March 3, 2019

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 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) Inland Technologies International Limited/Connecticut Airport Authority, ("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)(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

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.
- "Batch" means the contents of the final processing/holding tank utilized prior to discharge.
- "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.

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

"NR" as a Monitoring Table abbreviation means "not required".

"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.

"Range During Month" or "RDM", as a sample type, means the lowest and the highest values of all of the monitoring data for the reporting month.

SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner has made a final determination and found that the continuance of the existing discharge will not cause pollution of the waters of the state. The Commissioner's decision is based on Application No. 201005733 for permit reissuance received on September 17, 2010 and the administrative record established in the processing of that application.
- (B) (1) From the issuance of this permit through and including March 31, 2014, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of Permit No. SP0002364, issued by the Commissioner to the Permittee on March 19, 2001, the previous application submitted by the Permittee on August 3, 1999 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. SP0002364, issued by the Commissioner to the Permittee on March 19, 2001.
- (2) From April 1, 2014 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. SP0002364 issued by the Commissioner to the Permittee on March 4, 2014, Application No. 201005733 received by the Department on September 17, 2010, 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. SP0002364, issued by the Commissioner to the Permittee on March 4, 2014.
- (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 discharge shall not exceed and shall otherwise conform to specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the table below.

Table A

Monitoring Location: 1

Discharge Serial Number: 001-1

Wastewater Description: Wastewater from on-site processing, recycling and treatment of propylene glycol based aircraft deicing fluids and contaminated stormwater.

Monitoring Location Description: Following final batch processing/holding tank

Discharge is to: The MDC Windsor/Poquonock Water Pollution Control Facility

PARAMETER	UNITS	FLOW/TIME BASED MONITORING					INSTANTANEOUS MONITORING		
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency ¹ (also see Remark 1)	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency ¹ (also see Remark 1)	Sample Type or measurement to be reported	
Biochemical Oxygen Demand (5-day)	mg/l	----	300	Weekly	Daily Composite	NA	NR	NA	
Chemical Oxygen Demand	mg/l	NA	700	Monthly	Daily Composite	NA	NR	NA	
Flow, Maximum during a 24 hour period ²	gpd	NA	192,000	Continuous	Daily Flow	NA	NR	NA	
Flow Rate, Average Daily ²	gpd	----	NA	Continuous	Daily Flow	NA	NR	NA	
Flow Rate, Instantaneous	gpm	NA	NA	NR	NA	135	Continuous	Instantaneous	
Flow (Day of Sampling)	gpd	----	192,000	Weekly	Total Flow	NA	NR	NA	
pH (Day of Sampling)	S.U.	NA	NA	NR	NA	6.0 to 10.0	Weekly	RDS	
Propylene Glycol ³ , Total	mg/l	100	200	Weekly	Daily Composite	NA	NR	NA	
Total Suspended Solids	mg/l	NA	125	Monthly	Daily Composite	NA	NR	NA	

Table A Footnotes and Remarks:

Footnotes:

¹The 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'.
²For 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 sampling month.

³In addition to the weekly testing requirement specified in this monitoring schedule, each batch discharge shall be tested for its concentration of propylene glycol by refractometer prior to discharge. The results of such testing shall be maintained in a log kept on-site by the Permittee and made available to DEEP or MDC staff upon request.

Remarks:

1. Sampling and testing of the discharge shall be conducted during any week that a discharge occurs and reported on a DMR (see Section 5C) during the months of October through April. Any discharge which occurs during the months of May through September must also comply with these limitations and be monitored in accordance with this schedule; the analytical results of such monitoring shall be reported to DEEP as an attachment to the DMR for the month of October.

- (B) All samples shall be comprised of only those wastewaters described in this schedule; 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.
- (C) In cases where limits and sample type are specified but sampling is not required, 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.

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. 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 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. 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:

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.
- (D) The Permittee is also authorized to change its processes and discharge spilled materials in accordance with the *Facility*

Modifications Screening Protocol appended as Attachment A to this permit. In addition to satisfying the notification requirements of the *protocol*, the Permittee shall provide with each DMR a summary of the quantity and type of all wastewaters discharged under its provisions. The Permittee shall accept a minor permit modification revising the monitoring requirements for such wastewaters where additional or revised monitoring is warranted as determined by the Commissioner. Expansions of, or significant modifications to, wastewater collection or treatment facilities are not authorized under this protocol. These changes require specific approval under section 22a-430-3(i)(3) of the RCSA.

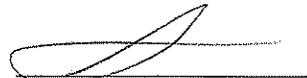
SECTION 8: COMPLIANCE CONDITIONS

In accordance with 40 CFR §403.8(f)(2)(viii), 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 that is a Significant Industrial User 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.

This permit is hereby issued on

3/9/14



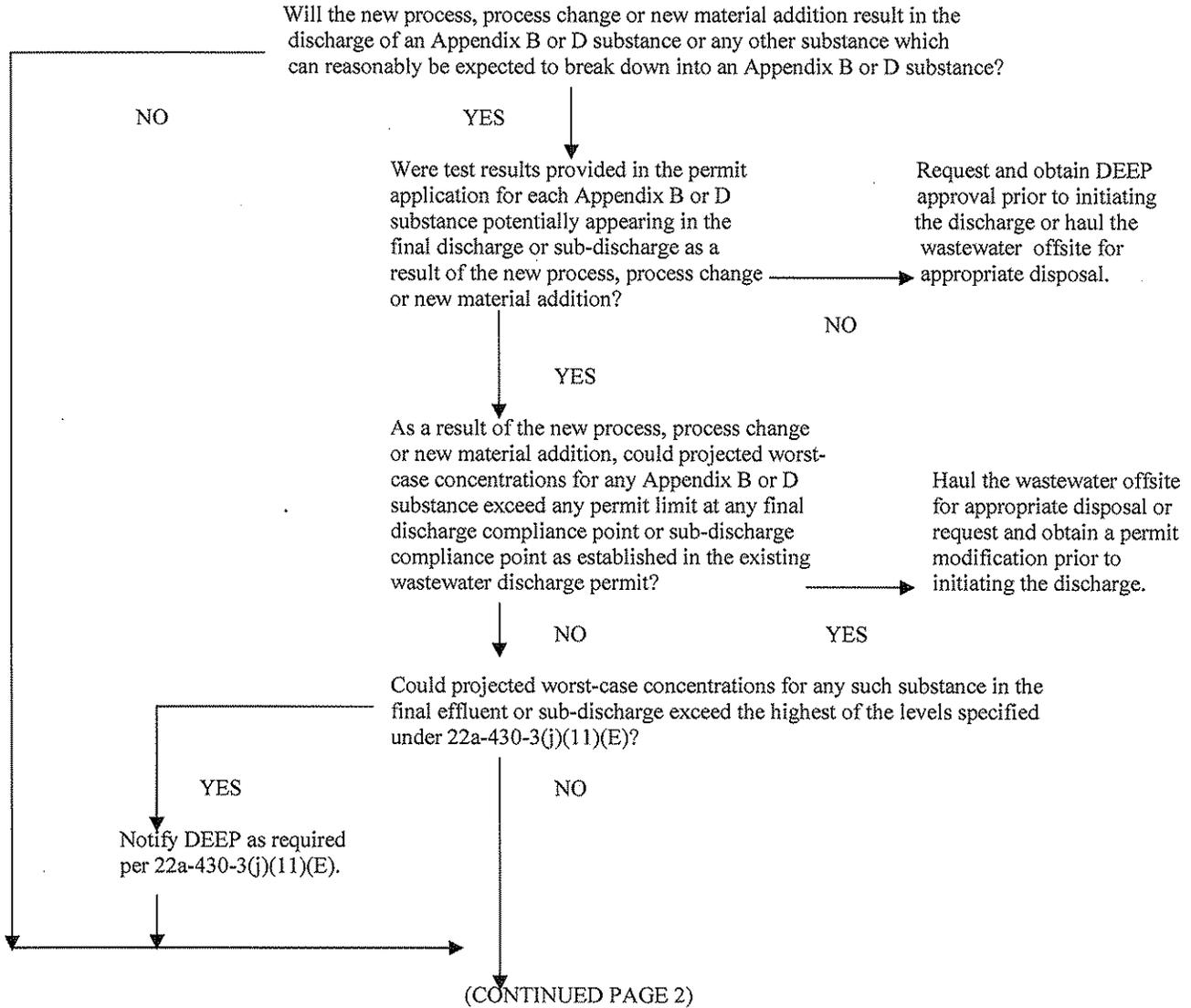
Macky McCleary
Deputy Commissioner
Department of Energy and Environmental Protection

MM/dg

cc: Metropolitan District Commission

ATTACHMENT A

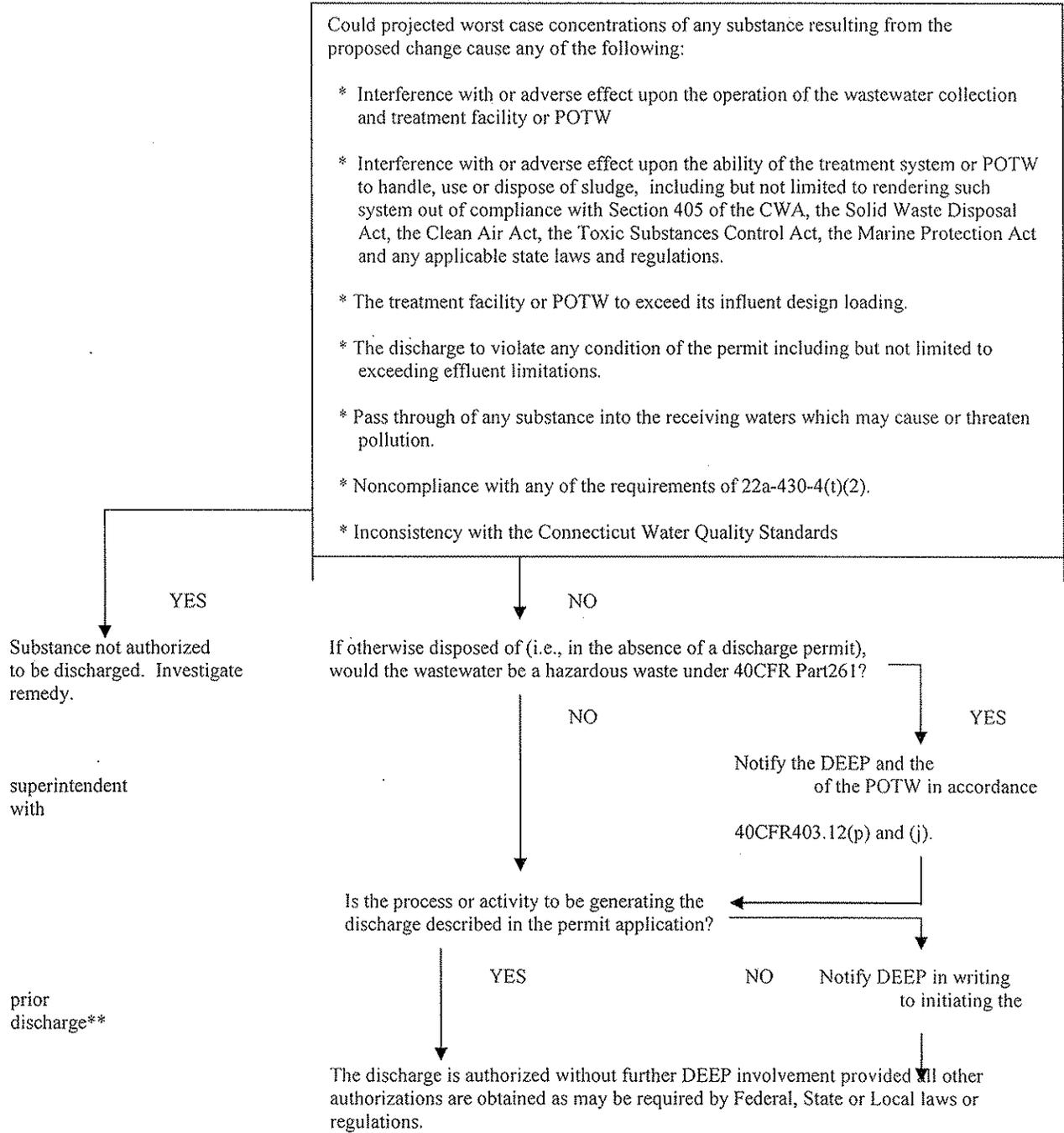
FACILITY MODIFICATIONS SCREENING PROTOCOL



This protocol also applies to the discharge of spilled materials, which, for the purposes of this protocol shall be considered a single event "process change". The Permittee is required to provide with each Discharge Monitoring Report a description of the type and quantity of spilled materials discharged under this protocol. **Spills which have bypassed a wastewater treatment system approved for the treatment of the spilled material(s) may not be discharged without prior written approval of the Director of the Bureau of Water Management, Permitting and Enforcement Division.**

NOTE: Permittees wishing to utilize this alternative to obtaining specific DEEP approval under subsection 22a-430-3(i) for new substances and/or new or modified processes must develop and follow an internal protocol to verify compliance with each step of this flow chart. The details of the protocol and documentation of specific evaluations shall be retained on-site and submitted to the Commissioner upon request.

FACILITY MODIFICATIONS SCREENING PROTOCOL (Continued from page 1)



** Notification shall include a description of the new process and wastewaters to be generated, a summary of the screening protocol results and, if anticipated to be present in the wastewater, the actual or projected concentrations of all Appendix B and D substances and other substances which can reasonably be expected to break down to an Appendix B or D substance.

Expansions of, or significant modifications to, wastewater collection or treatment facilities are not authorized under this protocol but require specific approval under section 22a-430-3(i)(3) of the RCSA.

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Co- applicant Inland Technologies International Limited and co-applicant Connecticut Airport Authority

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: SP0002364 APPLICATION #: 201005733

<u>Billing Address:</u> Street: <u>14 Queen Street</u> City: <u>Truro</u> ST: <u>NS</u> Zip: <u>B2N 2A8</u> Contact Name: <u>Denise Gill</u> Phone No.: <u>703-896-7708</u>	<u>Location Address:</u> Street: <u>Bradley International Airport, Schoephoester Road</u> City: <u>Windsor Locks</u> ST <u>CT</u> Zip: <u>06096</u> : DMR Contact <u>Sally Snyder</u> Phone No.: <u>860-254-5634</u>
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PERMIT INFORMATION

DURATION 5 YEAR X 10 YEAR ___ 30 YEAR ___
TYPE New ___ Reissuance X Modification ___
CATEGORIZATION POINT () NON-POINT () GIS #
NPDES () PRETREAT X() GROUND WATER(UIC) () GROUND WATER (OTHER) ()
NPDES MAJOR(MA) ___
NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI) X
NPDES or PRETREATMENT MINOR (MI) ___
PRETREAT SIGNIFICANT INDUS USER(SIU) X
PRETREAT CATEGORICAL (CIU) ___
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 ___ Federal ___ State X Municipal (town only) ___ Other public

DEEP STAFF ENGINEER/ANALYST Don Gonyea

PERMIT FEES

<i>Discharge Code</i>	<i>DSN Number</i>	<i>Annual Fee</i>
5080000	001-1	\$2,912.50

FOR SEWER DISCHARGES

Discharge is directed to the MDC Windsor/Poquonock WPCF via its collection system.

NATURE OF BUSINESS GENERATING DISCHARGE

Inland Technologies International Limited and Connecticut Airport Authority propose to continue to discharge 192,000 gallons per day of combined aircraft deicing wastewaters and stormwater to the MDC Windsor/Poquonock WPCF from operations at Bradley International Airport.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

During frost and winter weather conditions, aircraft deicing fluid is applied to aircraft surfaces at Bradley International Airport. Spent aircraft deicing fluid becomes mixed with stormwater and is collected and recycled in order to prevent contaminated discharges to Rainbow and Seymour Hollow Brook watersheds. The combined wastewater is collected into both a mobile and a passive collection system that is managed manually by Bradley International Airport personnel. Wastewater containing any concentration of propylene glycol (tested with a refractometer) is diverted to collection sumps and pumped to two on-site, one million gallon storage tanks. The collected wastewater, containing propylene glycol, is treated and processed by Inland Technologies International through filtration, reverse osmosis, and distillation to generate recycled propylene glycol. The end products of the treatment system are concentrated propylene glycol, the "concentrate," and the remaining by-product wastewater, the "distillate." The concentrate, typically a 50/50 mix of propylene glycol and water, is stored in two 20,000 gallon tanks to be shipped off-site for further processing and recycling. The distillate wastewater streams from both reverse osmosis and distillation processes and are finish treated by a second "polishing" reverse osmosis system prior to discharge to the MDC Windsor/Poquonock WPCF.

RESOURCES USED TO DRAFT PERMIT

- X *Performance Standards*
- X *Department File Information*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

- X *Best Available Technology (BAT)*
- X *Best Professional Judgement (See Other Comments)*

- X *Secondary Treatment*
- X *Case-by-Case Determination (See Other Comments)*

GENERAL COMMENTS

The previous permit issued in 2001 included two co-applicants, Connecticut Department of Transportation (CT DOT) and A.R. Plus Site Services Inc. In 2006, the permit was modified and issued to CT DOT and a new co-applicant, Inland Technologies International Limited (ITI). As of 2013, CT DOT will no longer be a co-applicant as a new state agency, the Connecticut Airport Authority (CAA), will take over CT DOT's role for the property and facility. Therefore, this permit is issued to the co-applicants, CAA and ITI.

As part of the 2006 permit modification, the glycol recovery system was updated and modified by ITI in response to high stormwater volumes of 300,000-500,000 gallons per storm. Three glycol concentrators were installed as well as a new filtration system and the reverse osmosis system was reconfigured for enhanced operation. The new glycol concentrators produce a 50/50 propylene glycol and water mixture while the reverse osmosis phase consists of two sides; one side for processing a high concentration of propylene glycol and a second side for polishing the remaining by-product wastewater prior to discharge to sanitary sewer. In 2009, ITI installed a fourth glycol concentrator and additional filtration unit.

The new permit reduces the maximum flow from 288,000 gpd to 192,000 gpd, however, the effluent is more concentrated. Therefore, the effluent limits of following parameters have been proportionately adjusted from the previous permit issuance: biological oxygen demand, chemical oxygen demand, propylene glycol, and total suspended solids. Although the instantaneous and total flows have been adjusted, ITI will continue to meet the 480 pounds per day BOD limit set by MDC Windsor/Poquonock WPCF.

The reduction in volume of deicing fluid is also influenced by other factors including a general reduction of the number of flights to the airport, and that air carriers are becoming less willing to fly during severe weather. This combined with new technology that blows ice off prior to applying fluid significantly reduces the amount of fluid used.

The limits for maximum flow rate (135 gpm), maximum daily flow (192,000 gpd), propylene glycol, 5-day BOD, etc. were established in consultation with the Metropolitan District staff in consideration of existing available reserve capacity in the MDC Windsor/Poquonock WPCF.