AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Olin Corporation

is authorized to discharge from the facility located at

51 Eames Street
Wilmington, MA 01887

to receiving waters named Halls Brook via a tributary named East Ditch

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective when discharge commences.

This permit and the authorization to discharge expire at midnight, five(5) years from the date of signature.

This permit supercedes the permit issued on January 17, 1983.

This permit consists of 8 pages in Part I including effluent limitations, monitoring requirements, etc., and 19 pages in Part II including General Conditions and Definitions.

Signed this 9th day of March, 1987

David A. Fiske
Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA

Thomas C. McMahon
Director, Division of Water
Pollution Control
Department of Environmental
Quality Engineering
Commonwealth of Massachusetts

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to discharge from outfall serial number 002, treated groundwater.

a. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic		Discharge Limitations Other Units(Specify) Avg. Monthly	Max. Daily	Monitoring Requirements Measurement Frequency	Sample Type
Flow - GPD		7,200	11,150	Continuous	Total Daily
Temperature - °C		-	28.3	2/Monthly	Grab
Oil & Grease - mg/l		-	15.0	2/Monthly	Grab
Di-N-Butylphthalate - ug/l		-	<10.0	2/Monthly	Grab
N-Nitrosdiphenylamine - ug/l		-	<10.0	2/Monthly	Grab
Benzene - ug/l		-	<10.0	2/Monthly	Grab
1,2 Dichloroethane - ug/l		-	<10.0	2/Monthly	Grab
Ethylbenzene - ug/l		-	<10.0	2/Monthly	Grab
Methyl Chloride - ug/l		-	<10.0	2/Monthly	Grab
Methylene Chloride - ug/l		-	<10.0	2/Monthly	Grab
Toluene - ug/l		-	<10.0	2/Monthly	Grab
Bis(2-Ethylhexyl)phthalate - ug/l		-	<10.0	2/Monthly	Grab
Di-N-Octylphthalate - ug/l		-	<10.0	2/Monthly	Grab
Ammonia (as N)- mg/l	June 1 - August 31:	0.85	13.5	1/Weekly	Grab
	September 1 - May 31:	1.7	18.9	1/Weekly	Grab
*Toxicity-NOAEL		-	≥90%	1/Quarterly	Grab
NOCEL		monitor	only	1/Quarterly	Grab

b. The pH shall not be less than 6.5 standard units nor greater than 8.0 standard units or not more than 0.2 su outside of the naturally occuring range and shall be monitored once a week by a grab sample, report minimum and maximum values.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: outfall 002, prior to discharging.

* See page 4 of 8 for a description of the requested toxicity test. After a minimum of one year of monitoring, if the effluent is determined to be acutely and chronically non-toxic, the permittee may request a modification to reduce the monitoring requirement.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).

b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) Five hundred micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R. §122.44(f).

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

3. Toxicity Tests and Chemical Analyses

Once a quarter, during the months of February, June, August and November, acute and chronic toxicity tests will be performed with a grab sample of the effluent. Water from Halls Brook, taken at the New Boston Street crossing shown schematically on page 6 of 8 shall be used as the dilution water. The toxicity tests will be performed according to the procedures outlined below.

a. Description of Required Toxicity Testing:

Acute

Acute toxicity testing is used to determine the effluent concentration, by volume, that is lethal to 50 percent of the test organisms within a prescribed period of time, usually 96 hours or less. Death is the effect measured. Effluent toxicity thus measured is expressed as the median lethal concentration in percent effluent by volume, or LC50. The No Observed Acute Effect Level (NOAEL) is the effluent concentration at which 90% or more test organisms survive.

Test Protocol

Duration:	48 hours
Fresh Water Species:	Daphnid *Daphnia pulex*
	Fathead Minnow *Pimphales promelas*
End Point:	LC50 and No Observed Acute Effect Level (NOAEL)

Chronic

Chronic toxicity testing is used to determine the effluent concentration by volume that effects the survival, growth and reproduction of the test organisms within a prescribed period of time, usually seven days. Effluent toxicity thus measured is expressed as the No Observed Chronic Effect Level (NOCEL).

Test Protocol

Duration:	7 days
Fresh Water Species:	Daphnid *Ceriodaphnia dubia* (test to measure reproduction and survival)
	Fathead Minnow *Pimephales promelas* (test to measure growth and survival)
End Point:	No Observed Chronic Effect Level (NOCEL)

The testing procedures must be reviewed and approved in advance by the EPA's Environmental Services Division.

b. Chemical Analyses:

A portion of the dilution water from Halls Brook shall be chemically analyzed for all the priority pollutants, ammonia(as N), hardness, alkalinity, acidity and pH. A portion of the effluent sample shall be chemically analyzed for all of the parameters

limited in A.1 on page 2 of 8 as well as hardness, alkalinity, acidity and pH. The results from this sample may also be used as one of the two monthly samples required on page 2 of 8.

c. References:

- Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA/600/4-85/014

- Methods for Measuring the Acute Toxicity of Effluents to Fresh-Water and Marine Organisms, EPA/600/4-85/013

Results from both the toxicity tests and the chemical analysis shall be reported in accordance with Section B, Monitoring and Reporting on page 7 of 8. The results may be submitted on the 15th day of the second month following the month of sampling (i.e. January's results may be submitted no later than March 15th) with the Discharge Monitoring Report Forms submitted for that month.

4. Instream Monitoring

For two years, during the months of February, June, August and November, grab samples of the receiving stream shall be taken and analyzed for ammonia at the five locations listed below and shown schematically on page 6 of 8. The results of this monitoring shall be reported in accordance with Section B, of the permit.

(1) East Drainage Ditch, Olin's property, prior to combining with South Drainage Ditch

(2) South Drainage Ditch, Olin's property, prior to combining with East Drainage Ditch

(3) East Drainage Ditch, downstream from Olin's property, at the point just before the flow in the ditch is routed underground

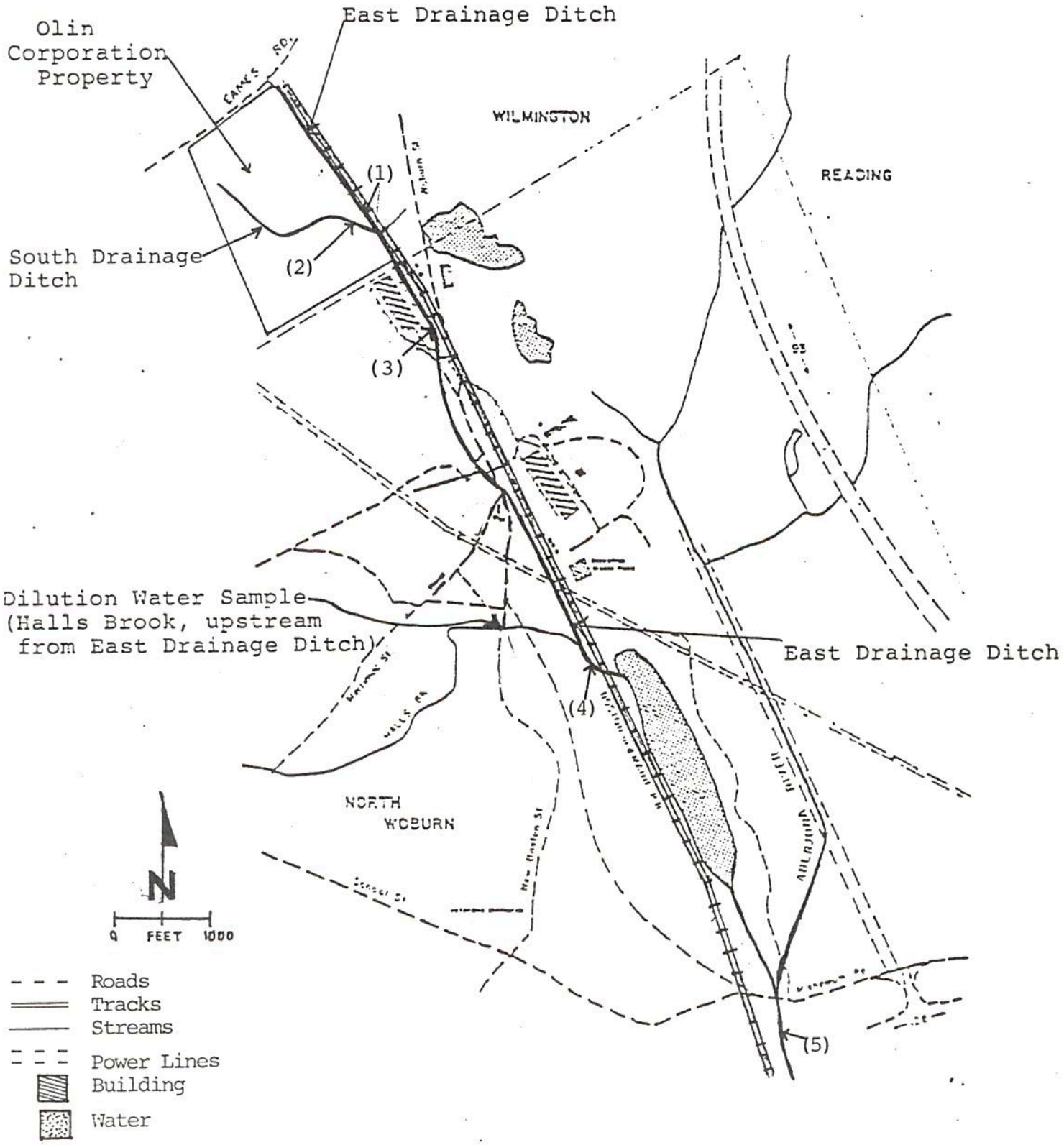
(4) Halls Brook, downstream from combining with the East Drainage Ditch

(5) Aberjona River, downstream from combining with Halls Brook, at the point accessible from the restaurant named the Ninety-nine off of Mishawum Road.

5. The issuance of this permit shall not relieve the permittee of any past or future responsibilities or liabilities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or the Resource Conservation and Recovery Act (RCRA).

6. This permit may be modified, or alternatively, revoked and reissued, to incorporate any new information developed as a result of the toxicity tests, chemical analyses and/or instream monitoring.

Toxicity Testing Dilution Water and
Instream Monitoring Sample Locations



C. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Division of Water Pollution Control under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Director of the Massachusetts Division of Water Pollution Control pursuant to M.G.L. Chap. 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U. S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.