

Mr. Eastman - Division of Pure Waters  
Mr. Stevens - Bur. of Water Quality Mgt.

Meeting on Proposed Investigation of  
Ticonderoga Sludge Beds

December 8, 1970

A meeting was held at the Department's offices on December 4 to discuss the New York State Department of Environmental Conservation's (NYSDEC) proposed investigation of the sludge beds in Lake Champlain at Ticonderoga. Present were:

Paul Eastman, Director	Division of Pure Waters DEC
Donald B. Stevens, Director	Bureau of Water Quality Management DEC
Leo Metling	Research DEC
William Albert	Department of Water Resources, Vermont
John D. Hansen	Attorney General's Office, Vermont
Herbert Pahren	FWQA, Boston, Mass.
William Bromberg	FWQA, Edison, New Jersey
A. E. Peloquin	NEINPOC, Boston, Mass.
Keith Fry	International Paper Co. New York City

The purpose of the meeting was to review a proposal to investigate various alternatives for dealing with the sludge deposits and to evaluate the potential ecological impact of each.

Mr. Eastman presided and stated that it was recognized that the waters of Lake Champlain in the area of Ticonderoga were polluted. The pollution was due to the continuing discharge of wastes from the International Paper Company plant there and the benthic deposits in the lake. A study by members of his staff was unable to uncover any data that would proportion the effects between these sources.

Also, while the studies to date on the sludge beds had produced excellent data regarding the extent and volume of the beds, and some material on their composition, there was no information as to what would happen if the beds were disturbed. This latter item went beyond the dredging operation and was concerned with the ultimate disposal of the solids and the effects on the lake of the returned water.

Mr. Stevens then reviewed briefly the scope of work as set forth in the proposed investigation and which had been mailed earlier to the participants. The purpose of this investigation was to look at the ecological impact of the three alternatives set forth to-date for coping with the problem, namely stabilization in place, covering in place or dredging and removal.

The participants readily agreed;

- 1) That there had been no attempt to isolate the effects of the benthic deposits from the total pollutional load;
- 2) There was paucity of data in this general area, and
- 3) that the investigation, as outlined, would answer the questions raised.

December 8, 1970

Those from outside New York State, however, questioned the need for this information. It was their contention that the effects of disturbing the sludge beds had never been raised at any of the Enforcement Conferences. They admitted that the matter of mercury in the sludge had been raised, investigated and laid to rest. New York State indicated that they had repeatedly raised the issue on the basis of advice from their fish biologists. It had to be admitted that the presentation at the last conference was poor but that the matter was not disposed of during the examination of the witness. It was the belief of NYSDEC that the matter of adverse ecological effects to the lake and surrounding area was further strengthened by the results of the small scale dredging operation that was performed this fall. This was not fully accepted by the others.

A Vermont representative asked how New York State would react to a request for Congress to authorize the Corps of Engineers to dredge this matter and to be paid for by Federal funds. It was indicated that the final decision on this would have to be made at a very high level but that the Division of Pure Waters would not recommend endorsement of the proposal until data, such as this investigation would reveal, was available.

Another question related to the possibility of speeding up the study by laboratory studies. The reply was that DEC did not believe that data of this type would be acceptable to the conferees or their technical staffs unless verified by the in site study. Therefore it was decided to proceed with the study on the actual beds.

Vermont also inquired about the timing of removal. It was stated that as International Paper Company had agreed to underwrite the cost of the investigation, which could be considered acknowledgment of partial responsibility for a solution. Nothing has been done as to fixing the responsibility 100%. In previous correspondence the NYSDEC had indicated that the abatement of pollution including that from residual deposits was the responsibility of the discharger. It is the intent of NYSDEC to have the proposed investigation carried out by an independent consultant and on the basis of his evaluation and recommendations the DEC would decide on a course of action to deal with the situation. If this decision results in an order against the company, the company could challenge the order in the courts. Such would influence the date on which any actual operation could start.

At the close of the meeting, the participants understood NYSDEC's position but there was no indication as to either their agreement thereto or what actions they planned to recommend to their respective agencies.

In answer to a question regarding the status of the proposal, it was indicated that it should be considered confidential until it had been formally submitted in answer to Secretary Michel's letter. However the summary of the report which had been issued as a news release was given to each person present together with a copy of Commissioner Diamond's December 1, 1970, interim reply to the Acting Secretary of Interior.

cc: Mr. Pederson  
Mr. Matzler  
Mr. Biggane  
Mr. Al Hall  
Mr. Burdick

Mr. Seebald  
Bureau Directors  
Mr. Baskous  
Mr. King  
Mrs. Spargo

DUS/SL

*International  
Paper Co.*

November 20, 1970

The Honorable Martin Johnson  
Commissioner  
Vermont State Department of Water Resources  
Montpelier, Vermont 05602

Dear Commissioner Johnson:

As has been indicated to you previously, New York State is proceeding with a program concerned with the sludge in Lake Champlain at Ticonderoga. Included is an evaluation of the effects on the waters of Lake Champlain from the various proposals that have been advanced to deal with this matter. Due to the dearth of factual information, we have proposed that an investigation be undertaken to obtain a better understanding of what might occur from implementation of the alternative solutions to the problem. The attached report sets forth a proposed scope of work.

We would appreciate it if you or your representative would review this report and meet with us at my office in Albany at 9 a.m., Friday, December 4, for the purpose of gaining technical concurrence with the scope of work. According to my telephone conversation with your office today, I understand the time and date for the meeting will be satisfactory with all concerned.

Sincerely,

Paul W. Eastman, P.E.  
Director, Division of Pure Waters

Attachment

cc: Mr. Stein  
Mr. Metzler



*File*

STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

MEMORANDUM

September 14, 1970

TO: Mr. Eastman - Director, Division of Pure Waters

FROM: Mr. Adamczyk - Industrial Facility Section

SUBJECT: Sludge Bed Removal  
Ticonderoga (T), Essex County

The following is a record of the events and commitments regarding the above project.

On September 18, 1970, the following people met at the International Paper Company office in Ticonderoga:

<u>Name</u>	<u>Organization</u>
Mr. Clarence Nichols	Assistant General Manager Norther Division International Paper Company
Mr. Robert Croket	Division Engineer Norther Division International Paper Company
Dr. Glenn Neasy	Vice President Research International Paper Company
Mr. Warren Lemky	Research International Paper Company
Mr. Paul Eastman	Director Division of Pure Waters

*Ward Arnold IP  
also present.*

Mr. Eastman  
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Mr. Donald Stevens

Director  
Bureau of Water Quality Management

Mr. Anthony Adamczyk

Industrial Facility Section  
Bureau of Industrial Wastes

The meeting was to implement within three weeks a joint communique issued by Governors' Rockefeller and Davis and Mr. Hirsman, President of International Paper. At the meeting it was agreed by the parties present that a quantity of sludge (approximately 166,000 gallons) will be removed from Lake Champlain in a manner so as to simulate an actual dredging operation and then be transported to the new International Paper Mill for analysis and processing. The State of New York will cooperate with and assist International Paper in the implementation of this project.

Due to the urgency and unusual circumstances of this operation Mr. Stevens requested that I assist in its implementation because of my familiarity of this area during my past assignment in the Albany Regional Office.

Dr. Hestry informed us that it was his understanding that he and Dr. Hetling will work together in determining an environmental monitoring program to be conducted before, during and after the dredging operation. At that time, the commitment of Dr. Hetling could not be verified. This aspect will be pursued by Mr. Eastman.

Since the construction of the new mill is a turn-key operation the delivery and handling of the sludge will be conducted jointly by International Paper personnel and the general contractor. It was determined that the sludge will be placed in the emergency lime dump pit located at the recausticizing operation. In addition make up water obtained in the vicinity of the sludge beds will be transported to a slime slurry tank adjacent to the lime pit.

The transport of the sludge will be handled by a fleet of 5,500 gallon tank trucks under the direction of Mr. Frank Cardone, of the traffic division of International Paper. This aspect was determined during a meeting with myself and Mr. Cardone on September 9, 1970. Mr. Cardone stated that he must have a minimum of a 24 hour notice to arrange the trucking operation and if possible that he be given an approximate target date.

Mr. Eastman  
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September 14, 1970

Since International Paper does not own adequate dredging equipment and will require State and Federal dredging permits it was determined that New York State will be responsible to transport the sludge to the trucks.

On September 9, 1970, I met with Mr. Joseph Stellato of the Department of Transportation, Waterways Maintenance Subdivision. After inspecting the proposed operation Mr. Stellato informed me that he can get a hydraulic dredge at Ticonderoga within two to three weeks. The dredge has a hydraulic capacity of 2,000 gallons per minute and therefore would require a discharge line with a return to the lake and a line connection with a diversion valve at the tank truck loading site. Mr. Stellato cautioned that the operation will be rather unsightly and that he could not guarantee it be conducted without the possibility of spillage. He also informed me that the dredging operation will not proceed unless a permit is issued by the Army Corps of Engineers. Mr. Eastman will pursue the matter of obtaining the Corps permit.

AA:lc

cc: Mr. Seebald  
Mr. Stevens  
Mr. Quinn  
Mr. Pagano



In the Matter of, Alleged Violations of  
Article 12 of the Public Health Law by

INTERNATIONAL PAPER COMPANY,

Respondent.

NOTICE OF HEARING

To the above named Respondent:

TAKE NOTICE THAT you are required to correct the conditions in contravention of Standards of Quality and Purity for waters of the State alleged in the Complaint herein, which is hereto annexed and made a part hereof, by reason of which you are and for many years have been violating Section 1220 of the Public Health Law, or to appear in person or by attorney at a public hearing in the above entitled proceeding before a Hearing Officer designated by the Commissioner of Environmental Conservation of the State of New York on the      day of September, 1970 in Room 620 of 50 Wolf Road, Colonie, Albany County, New York at 11:00 A.M. o'clock and answer the charges complained of, at which time and place a motion will be made to set a time and place for trial of all issues raised by and not resolved by the pleadings.

TAKE FURTHER NOTICE that the procedures to be followed on said hearing are set forth in statute and case law in such case made and provided, and particularly, but not exclusively, in Chapter 140 of the Laws of 1970 and Article 12 of the Public Health Law and in Part 76, Chapter II of Title 10 of the Official Compilation of Codes, Rules and Regulations of the State of New York.

TAKE FURTHER NOTICE that in case of your failure to appear, answer or correct the conditions in contravention of Standards complained of, an order will be issued against you granting the relief asked in the Complaint.

DATED: August      , 1970

TO: INTERNATIONAL PAPER COMPANY  
220 East 42nd Street  
New York, New York 10017

HENRY L. DIAMOND  
Commissioner of Environmental  
Conservation of the State of  
New York

In the Matter of Alleged Violations of  
Article 12 of the Public Health Law by

INTERNATIONAL PAPER COMPANY,

Respondent.  
----- X

C O M P L A I N T

The Department of Environmental Conservation, as and for  
a complaint herein, alleges:

FIRST: That the Complainant is a Department of the  
government of the State of New York and is charged by law with adminis-  
trative jurisdiction to prevent and abate pollution of the waters of  
the State.

SECOND: Upon information and belief, that International  
Paper Company was a corporation organized and existing under and by  
virtue of the laws of the State of New York from January 31, 1898 until  
September 30, 1941, upon which date, by consolidation with International  
Paper and Power Corporation, it became International Paper Company,  
the Respondent herein.

THIRD: Upon information and belief, that the Respondent  
now owns, operates and maintains and for more than 25 years last past  
has owned, operated and maintained a paper mill situated at Ticonderoga,  
Essex County, New York adjacent to Lake George Outlet a short distance  
upstream from its confluence into Lake Champlain.

FOURTH: That the Water Pollution Control Board of the  
State of New York in the year 1950, pursuant to law, duly established  
classes and standards of quality and purity for waters of the State  
including the Classes and Standards B and C and made them effective in  
that year by filing them and the order establishing them in the office  
of the Secretary of State.



FIFTH: That the best usage of waters classified B is "Bathing and any other usages except as source of water supply for drinking, culinary or food processing purposes." and the best usage of waters classified C is "Fishing and any other usages except for bathing or as source of water supply for drinking, culinary or food processing purposes." and the quality standards for waters classified B and C include the following item and specifications:

<u>Item</u>	<u>Specifications</u>
1. Floating solids; settleable solids; sludge deposits	None which are readily visible and attributable to sewage, industrial wastes or other wastes or which deleteriously increase the amounts of these constituents in receiving waters after opportunity for reasonable dilution and mixture with the wastes discharged thereto.

SIXTH: That the Water Pollution Control Board, in the manner provided by law, duly adopted and assigned the class and standards C for and to the portion of Lake Champlain within the State of New York lying south of the Lake Champlain toll bridge near Crown Point and made such adoption and assignment effective by filing them and the order making them in the Office of the Secretary of State of January 15, 1957.

SEVENTH: That the Water Resources Commission, in the manner provided by law, in the year 1969 duly adopted and assigned the Class and Standards B for and to the aforealleged portion of Lake Champlain and made said adoption and assignment effective by filing them and the order making them in the Office of the Secretary of State prior to May 31, 1969.

EIGHTH: Upon information and belief, that the Respondent since it acquired the hereinbefore alleged paper mill discharges and has discharged on a nearly continuous basis wastes from the manufacture of paper therein comprising cellulosic fibers and sundry other organic and inorganic material into Lake George Outlet, which settle

and have settled and form and have formed sludge deposits in Lake George Outlet and in the aforealleged C and B classified section of Lake Champlain in the vicinity of the confluence of said Outlet, which sludge deposits now comprise an area in Lake Champlain approximately a square mile in extent.

NINTH: Upon information and belief, that much of the sludge deposited as aforesaid is and for many years to come will be biologically and chemically active and unstable; that portions thereof undergo and are affected by a process and phenomenon known as "bulking" by and in which portions thereof, by reason of gas generated therein, change in specific gravity, water currents and wind action, break loose from the sludge bed hereinbefore alleged and float to other portions of the aforealleged C and B classified section of said Lake and into the adjoining portions of said section of said Lake Champlain within the State of Vermont, thereby damaging the waters of said Lake in both states aesthetically and impairing the use of said waters for fishing, bathing, boating and water contact sports, that said process and phenomenon has occurred for many years, and, if not corrected, will continue for many years in the future.

TENTH: That diligent efforts on the part of the Complainant and its predecessors, the New York State Department of Health and the New York State Water Pollution Control Board, extending over many years to obtain a voluntary cessation and abatement by the Respondent of the conditions hereinbefore alleged have been unsuccessful.

ELEVENTH: Upon information and belief, that the title to and right to possession of the lands under the waters of Lake Champlain on which the aforealleged sludge is deposited are and for more than 100 years have been continuously vested in the People of the State of New York, and the sludge thereon is and at all times herein alleged has been a continuing trespass thereon.



WHEREFORE, the Complainant asks that an order of the Commissioner of Environmental Conservation be issued directing the Respondent to cease and abate and keep abated the aforealleged formation of sludge deposits and the formation and dispersion of floating solids resulting therefrom as hereinbefore alleged by such means, manner and methods as to the Commissioner may seem just and proper and practicable and granting such other relief as the Commissioner may deem fit, proper and appropriate in the premises.

CHARLES J. LABELLE  
Counsel  
New York State Department of  
Environmental Conservation  
50 Wolf Road  
Albany, New York 12201

(Tel. No. 457-6695 Area Code 518)



STATE OF NEW YORK)  
COUNTY OF ALBANY )

ss

DERMOT C. REILLY, being duly sworn, deposes and says that he is an attorney in the Office of the Counsel of the Department of Environmental Conservation and is in particular charge of the above entitled proceeding; that he has read the complaint herein and the same is true to his knowledge except those matters alleged upon information and belief, and that, in respect to such matters, he believes it to be true; that the sources of his information and grounds for his belief are attendance of various conferences between representatives of the Respondent, Water Pollution Control Board and the New York State Department of Health extending over a period of ten years, conversations with employees of the New York State Departments of Health and State and publications of the Water Pollution Control Board and Secretary of State.

Deponent further avers that this verification is not made by the Complainant because it is an impersonal entity incapable of making an affidavit.

Dermot C. Reilly

Subscribed and sworn to before  
me this 25th day of August, 1970.

Richard C. Hill

Notary Public - State of New York

No. 24-3666550 Comm. expires 30 March '71

1) ~~Don Stevens~~  
2) ~~Baron Fenn~~  
3) ~~George Brown~~  
MEMORANDUM  
4) File Int Paper July 23, 1970  
Ticonderoga

Gorby

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TO: Mr. Eastman

FROM: Mr. Meizler

DM

Thanks for the progress report on developing a study plan for the sludge. I agree with you that the burden of proof for leaving the sludge untouched, if that is the alternative to be favored by New York, should be on International Paper.

When the case report is completed by the Albany Regional Office, it is my understanding that the Department will proceed with referring this to the Attorney General's office and getting a court-appointed timetable - the one we are supporting is December 1 to abate discharge of the sludge and a phased program for abatement of the mill waste between then and the following July 1, when all of the pollution is to be abated.

If you have questions about procedure, or if those getting a copy of this do, please call.

According to Billy it was referred by Diamond on July 16

cc: Commissioner Diamond  
Dr. Lawrence  
Mr. La Belle

July 17, 1973

Mr. Stevens - Bureau of Water Quality Management

Mr. Weist - Albany Regional Office

Water Pollution

Case Report for Sludge Bed at Ticonderoga

Attached is a case report which I have prepared covering the sludge beds at the mouth of Ticonderoga Creek, Lake Champlain.

The sludge beds, as indicated in the case report, are created primarily by the operations of the International Paper Company at Ticonderoga Village. It should be kept in mind, however, that the Village of Ticonderoga discharges its sewage raw to the stream and is therefore contributing to the sludge beds and the contravention of standards. In addition, a paper mill existed at the site for many years and the International Paper Company did not take over until 1925.

If any additional information is required, please let me know.

*Robert M. Weist*

Att.

cc: Mr. Garvey - Enforcement Section  
Mr. Seebald - Pure Waters Division  
Mr. Reilly - Office of Counsel  
Saranac Lake District Office



## WATER POLLUTION CASE REPORT

DATE: 7/10/70MUNICIPALPOLLUTERNON-MUNICIPAL

Name

International Paper Company

Location

Ticonderoga (V), Essex County

SANITARY WASTES

Population

Treatment

No. of Outlets

INDUSTRIAL WASTES

Type

Paper mill &amp; pulping wastes

Treatment

None

No. Outlets &amp; Vol.

RECEIVING WATERS

DRAINAGE BASIN Lake Champlain Drainage Basin

WATERS AND CLASSIFICATIONS Ticonderoga Creek -- "D"

Lake Champlain -- "B"

IDENTIFICATION NOS. AND MILEAGE

CONTRAVENTIONS, EXTENT, DETERMINATIONS (WHO, WHEN, WHERE)

VISUAL (floating solids, settleable solids, sludge deposits, color oils, etc  
 visible sludge deposits, floating solids

ANALYTICAL (coliform, pH, DO, toxic and deleterious substances, etc.)

D.O. depletion

OTHER (odor, etc.)

odors

ASSUMED EFFECTS (contravention or contribution to contravention)

## OTHER WPCL VIOLATIONS

Sec. 1222, 1230 - construction without a permit

Sec. 1225 - ineffective primary treatment

Sec. 1242 - industrial waste contributing to pollution

## ABATEMENT HISTORY AND/OR SUGGESTED TIME SCHEDULE

see attached summary

## CASE REPORT

### Water Pollution

International Paper Company

Ticonderoga (V), Essex County

In 1925, the International Paper Company took over operations of the pulp plant and paper mill located in the Village of Ticonderoga, Essex County. The plant is located on the banks of Ticonderoga Creek and all wastes are discharged raw to this stream. As a result, gross pollution occurs in the creek and at its mouth in Lake Champlain. Sludge banks, floating solids, odors, and depletion of oxygen have all been observed on a number of occasions.

In a summary report prepared in September, 1968 for the Federal Enforcement Conference on Lake Champlain, it was indicated that the Paper Co. at that time was discharging 200 tons per day of pulping wastes and 330 tons per day of paper processing wastes to the stream. This contributed about 30 tons per day of solids. At that time the sludge beds at the mouth of the creek had grown to cover an area of some 1500 acres.

As a result of the Federal Enforcement Conference on Lake Champlain, held in November, 1968, the U.S. Army Corps of Engineers was requested to conduct a sampling program of the sludge beds. Their report, dated January, 1970, indicates that there are 1,430,000 cubic yards of sludge consisting of wood chips, cinders, and other organic material in Ticonderoga Creek and Lake Champlain. The deposits range in depth from 6 inches to 12 feet. These deposits are found in the creek up to the mill and in the Lake out to a radius of approximately 600 yards from the mouth of the creek.

During warm weather, decomposition in the sludge beds results in generation of gas causing a breaking away of floating mats of sludge. These floating mats have been a source of complaint from residents of New York and Vermont for a number of years.

In 1959, the New York State Health Department initiated conferences with the Company concerning the pollution problems. The Company was legally charged in 1965 with violating the stream standard and an order was issued September 23, 1965. This order was later modified on December 7, 1966. These two orders covered the abatement of pollution from the mill itself, but did not cover sludge beds. The Company is in the process of constructing a new plant and waste treatment facilities several miles north of the Village of Ticonderoga and will abandon all operations at the existing plant by July, 1971. Even though the Company will cease operations on that date, the sludge beds will continue to exert an effect on the creek and lake for an unknown number of years to come. As was previously noted, the action of the sludge beds results in the depletion of DO in the area, visible floating solids, and objectionable odors. In addition, since in previous years mercury slimicides were used by the mill, there is a measurable amount of mercury in the existing beds which may be released in the course of the decomposition of the sludge beds.

*J. Champlain  
mt. conf*

April 7, 1970

Mr. Eastman

Mr. Stevens

MEETING - TECHNICAL COMMITTEE LAKE CHARPLAIN ENFORCEMENT  
CONFERENCE

The Technical Committee for the Lake Champlain Enforcement Conference met in Boston on April 1, 1970; present were:

Mr. Fahren - FWPCA  
Mr. Bromberg - FWPCA  
Mr. Fitzpatrick - FWPCA  
Mr. Taylor - FWPCA  
Mr. Oldaker - FWPCA  
Mr. Peloguin - MEINPOC  
Mr. Shufria - MEINPOC  
Mr. Clough - Vermont  
Mr. Stevens - New York

The subjects discussed were:

(1) CE and FWPCA reports on the sludge in Lake Ticonderoga.

Since the area under consideration was in New York State, I was asked to comment first. I indicated that we had no disagreement with the general conclusions of the report which were that sludge deposits in the lake existed and that International Paper was the principal source. Of the alternatives to dealing with the situation, I preferred (1) leaving the deposits alone, (2) covering them in place with sand, and (3) creation of an area in the lake by means of a dike to receive the wastes from the other area.

Mr. Clough stated that Vermont had no quarrel with the reports. However, Vermont favored removal from the lake of the deposits either to the suggested diked area or the



lake or to an upland site but would consider as a poor substitute the covering in place.

-Several questions were raised as to:-

1. reasonableness of cost estimates
2. stability of deposits with reference to
  - (a) dike
  - (b) cover
3. type of dredging for removal

-Telephone calls to the CE indicated:-

1. cost of diking including excavating to 10 feet below natural bottom for a firm base
2. no sand for cover in the immediate vicinity and cost including barging from a distant but unspecified area
3. no data on stability but some material dredged in another area and not necessarily comparable had not fully deteriorated in some 7 years
4. the CE had dredged some paper mill wastes from New Haven, Ct. harbor using a clam shell. This worked but did put considerable suspended material into the water at the site of the dredging. It was expected that hydraulic dredging would be used in Lake Champlain. The dredged material at New Haven was dumped into Long Island Sound.

FWPCA was asked their opinion as to how they felt on handling the sludge problem. They indicated that of the suggested methods the dumping in deep portions of the lake was unacceptable, leaving the material alone was unpopular and the use of an upland disposal area was not too acceptable. This left either the creation of a diked area to receive the dredging or covering in place.

I mentioned that my main objection to moving the sludge was that the Conservation Department had indicated to me previously that they felt that disturbing the material would release quantities of toxic material that would kill fish over a wide area. As a result the committee will recommend to the conferees that the sludge should be removed either to a diked area of the lake or to another location until it can be shown that distributing the material will create grave problems over an extensive area of the lake. In that event covering in place to eliminate the current minor problems should be resorted to.

I would suggest that we immediately contact the Conservation Department and see if they agree with the thoughts originally given me and if they will confirm these in writing so that it can be made a part of the record for the next conference.

The matter of payment for the work was touched upon. Since International Paper was the main source, the feeling was the company should bear the brunt of the cost. Next in line would be the State of New York and then finally a Federal appropriation to the CR. There was also the suggestion that if International Paper did not want to pay, the State should apply legal pressure by way of its pollution laws. Mention was also made to Governor Rockefeller's appearance on TV March 15, where this subject came up but his answer was not clear in the newspaper account of the event.

The CR report gave some figures on the estimated total volume of sludge. When it comes to paying for sludge removal it may well be that some consideration should be given to how much needs to be removed. Also what might happen to that which remains. It is currently fairly well consolidated. The question is will it so remain if it is exposed to the water interface.

## (2) Differing standards between New York and Vermont.

These included dissolved oxygen, temperature and bacteria concentrations. There was some discussion on the differences between the two states on these items but Vermont

was satisfied with our letter to them that we would meet any standards of theirs that was higher than ours at the state line. The conferees may wish to decide the form in which this policy should be expressed.

FWRCA indicated that they were not happy with our concept of measuring the temperature for thermal discharges at the surface. They felt that the maximum temperature should apply at all depths and not just at the surface. It was agreed that this point was outside the limits of this conference.

One other item was covered under this subject and that related to the disinfection practices. Since portions of Lake Champlain are classified and used as a source of drinking water, it will be recommended that sewage discharges to the lake and its tributaries be chlorinated year-round. I would imagine, in light of the classification that this would be our policy but this will have to be checked. Vermont felt that this was a good idea but thought that it was the practice in that state to only chlorinate seasonally. We probably should file with FWRCA our policy statement for disinfection practices.

(3) The committee felt that its report would be ready to present to the conferees within two months and therefore are suggesting to the conferees that they meet again on June 2 or 3. Burlington was again suggested as the location but there was some question as to the date of the University of Vermont's commencement which would put rooms at a premium. I therefore suggested that Plattsburgh be considered as a location. You might wish to suggest this when discussing time and place.

One extraneous point was that the lake south of Crown Point was naturally turbid. This is due to natural material brought in via the tributaries. It was so reported by Champlain and by others since this time. Therefore, removing these aludge beds will not result in clear water in this area.

cc: Mr. Metzler  
Mr. Haberer  
Mr. Grossman

DBS/lms



September 16, 1960

Mr. L. H. Mikalson

Mr. Metzler

F.W.P.C.A. Enforcement Conference --  
Lake ChamplainSummary

This is to supply background information relating to pollution at Ticonderoga on Lake Champlain affecting Vermont waters. The request by Vermont for an enforcement conference is attributed to adverse effects of sludge deposits in Lake Champlain. A federal enforcement conference has been called for November 13, 1960. The policy question is whether New York should participate financially in dredging the sludge, or require the International Paper Company to do so.

Problem

The International Paper Company pulp and paper mill at Ticonderoga has discharged organic and inorganic wastes into Ticonderoga Creek, causing pollution of the creek and Lake Champlain into which the creek flows. The 200 tons per day pulping and 330 tons per day paper processing operations contribute about 30 tons per day of solids into the receiving waters. The creek bed is covered with solids, and the waters are highly discolored and contain floating material.

Solids have accumulated over an area of 1500 acres in the lake. When the water is warm, decomposition of the sludge accelerates, resulting in the release of gases and the breaking away of floating mats. The floating material has been a source of nuisance complaints from residents of New York, Vermont, and other states using Lake Champlain waters for recreation.

History of Complaints

A petition was submitted to the Governor in 1961 from 98 residents from Vermont, Massachusetts and New York.

In 1962 a complaint was made to the Public Health Service regarding the water pollution problem.

In 1965 a complaint regarding air pollution was the subject of an interstate abatement conference convened by the Public Health Service.

In early 1968 the Governor of Vermont wrote to Governor Rockefeller concerning the effects of pollution in Vermont waters from wastes entering Ticonderoga Bay.

In June 1968, the Vermont Water Resources Commission directed its Commissioner to write the Federal Water Pollution Control Administration requesting an enforcement conference. The bases of the complaint were: (1) Concern regarding pollution from pulping and paper processing, (2) floating masses of sludge and interference with recreation, (3) depressed oxygen in Vermont waters, and (4) the effects of sludge deposits.

#### New York State Health Department Action

Conferences regarding pollution in Lake Champlain waters from International Paper Company were initiated in 1959. Investigation by the Health Department confirmed the presence of gross pollution in Ticonderoga Creek and Lake Champlain. The company was legally charged in 1965 with violating stream standards in the creek and the lake by causing readily visible sludge deposits, floating and settleable solids, and depletion of dissolved oxygen. The Department and the company agreed to an order containing an abatement schedule which was subsequently modified in 1965. Abatement of the pollution is required on or before July 1970. However, the company recently requested another modification to permit phasing out the existing facilities, and construction of a new plant with adequate water pollution control facilities just north of the village by 1970.

However, elimination of untreated industrial waste discharges will not resolve the residual sludge problem. The only obvious solution is dredging the material and disposing of it by land fill. Since the lake represents interstate and navigable waters, a conference with the Corps of Engineers, Federal Water Pollution Control Administration, and Vermont has been considered to discuss a joint action to remove the waste and utilize it for filling of marsh lands, development of marinas, and development of a "harbor of refuge" for pleasurecraft traveling in the lake.

cc. Dr. Ingraham  
Dr. Fleck



STATE OF VERMONT  
DEPARTMENT OF WATER RESOURCES  
MONTPELIER  
05602

August 14, 1968

Donald B. Stevens, P. E., Director  
Division of Pure Water  
State of New York Department of Health  
84 Holland Avenue  
Albany, New York 12208

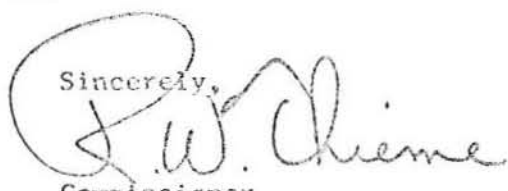
Dear Mr. Stevens:

Thank you for your letter of August 9, 1968 advising me of your interest in our proceedings with regards to the benthic deposits in Lake Champlain in the vicinity of Ticonderoga.

By way of information, the Vermont Water Resources Board has directed that I prepare a letter to the Federal Water Pollution Control Administration requesting that they hold a Federal Enforcement Conference to consider the matter of pollution of the waters of Lake Champlain resulting from the pulp and paper industry now and previously located on Ticonderoga Creek. A copy of this letter is forwarded herewith.

I greatly appreciate your advice that you will keep us informed of everything you learn or plan to do.

Sincerely,

  
Commissioner

RWT:ms  
Encl.



STATE OF VERMONT  
DEPARTMENT OF WATER RESOURCES  
MONTPELIER, VERMONT

August 12, 1968

Mr. Lester M. Klashman  
Regional Director  
Northeast Regional Office  
Federal Water Pollution Control Administration  
John F. Kennedy Federal Office Building  
Boston, Mass. 02203

Dear Mr. Klashman:

Pursuant to the provisions of Section 10 (D) Public Law 84-660, as amended, the Water Resources Board of the State of Vermont hereby requests that the Secretary of the Interior convene a conference in the matter of pollution of waters of the State of Vermont by wastes discharged into Ticonderoga Bay of Lake Champlain from the pulp and paper industry now and previously situated on Ticonderoga Creek in the vicinity of Ticonderoga, New York.

The above mentioned pollution of Vermont waters is evidenced by floating masses of sludge which originate in Ticonderoga Bay and by severely depressed dissolved oxygen levels in Vermont waters adjacent to Ticonderoga Bay. The pollution of these Vermont waters constitutes an aggravation to Vermont residents. It is also believed that the presence of these benthic deposits will prevent the complete realization of the future best uses contemplated for these waters under our Implementation Plan for Lake Champlain as submitted by Vermont and approved by Secretary Udall.

Extensive studies were made in this area during the summers of 1965 and 1966. The information obtained was submitted to your Metuchen, New Jersey office as part of the Hudson River - Lake Champlain project.

Sincerely,

RWT:ms

Commissioner

cc: Governor Philip H. Hoff

August 9, 1968

Mr. R. W. Thieme, Commissioner  
State Water Conservation Board  
State Office Bldg.  
Montpelier, Vermont

Dear Mr. Thieme:

It would be appreciated if you could keep us informed as to the steps the State of Vermont is taking with reference to requesting a Federal Enforcement Conference on Lake Champlain.

We have been in touch with the International Paper Company and indicated what could happen as the result of the benthic deposits in Lake Champlain. While we have not had a proposal from the company, I am sure they are giving this matter a lot of intensive study.

We will keep you informed of everything we learn or plan to do.

Sincerely yours,

Donald E. Stevens, P.E.  
Director

DES/cd

August 5, 1968

Mr. Metzler

Mr. Stevens

Sludge Deposits - International Paper at Ticonderoga

I telephoned Mr. Drummond of International Paper Co. regarding the matter of a possible Federal Enforcement Conference to be initiated by the State of Vermont on the basis of sludge deposits in Lake Champlain near the mouth of Ticonderoga Creek. Vermont is concerned at the prospect of the company closing this plant and just leaving the mess behind.

Mr. Drummond indicated that the company was probably responsible for a portion of the bottom deposits and that at times these could create nuisance conditions.

I indicated that Mr. Thieme was directed at the last meeting of the Vermont Water Resources Commission to request such a conference and that he had prepared a draft of such a letter. I suggested to Mr. Drummond that he discuss this situation internally and then talk to Mr. Thieme. (Time is short on this and I have to go to New York tomorrow for the meeting with Dr. Eisenbud on Wednesday. Thursday will be the meetings on thermal criteria and Friday is a staff conference.)

Mr. Drummond brought up the idea of dredging and where the material could be put. There is quite a marshy area at the mouth of Ticonderoga Creek and the question of ownership has to be resolved.

This phase was also discussed with Mr. Baskous and Mr. Reilly. It is their feeling that there is a substantial area here that would be considered as underwater lands and thus title would be vested with the State. To them it seemed possible for the company to obtain some land, either swamp or underwater, construct a dike and pump the sludge behind the dike.



There might be a chance that the Corps of Engineers would be establishing a "harbor of refuge" in this area. This would be a place that boats could put in to protect themselves from sudden storms on the lake. In this event, the Corps might contribute to the cost of dredging. This could be explored.

DES/cd

cc: Mr. Haberer

Mr. Baskous

RECEIVED  
JAN 11 1968  
OFFICE OF THE  
CHIEF OF VESSEL CONTROL  
STATION 2800  
800 - 0000  
STATION 2800  
STATION 2800

STATE OF NEW YORK  
DEPARTMENT OF HEALTH  
MEMORANDUM

July 30, 1968

To: Mr. Metzler  
From: Mr. Stevens  
Subject: Possible Federal Enforcement Conference - Lake Champlain

I talked today with Mr. Thieme of the Vermont Water Resources Department regarding the rumor of a request for a Federal Enforcement Conference on Lake Champlain.

Their concern is primarily with the deposits that have built up in the lake at this point from the operations of the International Paper Company plant at Ticonderoga. These apparently have crossed the state line and thus some of them are in Vermont. These deposits are subject to anaerobic decomposition which results in unpleasant odors and the release of floating mats which float to the Vermont shore. These deposits also exert a considerable oxygen demand as shown by the low dissolved oxygen in the waters there which is a contravention of water quality standards.

Vermont has sent us several reports on their findings and also there have been letters exchanged between Governor Hoff and Governor Rockefeller. None of this has resulted in any action or promise of action that will satisfy Vermont.

They know about the plans of I.P. to move to a new location, the requirements for secondary treatment at the new site, our enforcement order against the existing plant and, more importantly, our disinclination to do anything about the existing sludge deposits.

At the last meeting of the Board, Mr. Thieme was directed to write to the Regional Office of FWPCA and request an enforcement conference. While he hasn't done this, he must do so within the next 7-10 days. The hope is that as the result of the conference, something will be done to dredge out the deposits. There is the possibility that if New York State, within a week, can meet with Vermont, even if only by telephone, and guarantee that the deposits will be dredged out, the letter will be delayed. However, action speaks louder than words and unless it is done, we can be reasonably sure a conference will be requested.

cc: Mr. Haberer

how?

SPB

11/2/68  
Hold [unclear]  
with H.S. [unclear]  
We see no way but  
to let nature take its  
course. Do you have any  
other ideas.  
[Signature]

STATE OF NEW YORK  
DEPARTMENT OF HEALTH

MEMORANDUM

July 24, 1968

RECEIVE

JUL 31 1968

OFFICE OF DEPUTY COMMISSIONER  
ENVIRONMENTAL HEALTH SERVICES

To: Mr. Haberer  
From: Mr. Black  
Subject: Ticonderoga -- International Paper Company  
Sludge Accumulation in Ticonderoga Creek and Lake Champlain

This memorandum supplements my July 17, 1968 memorandum, same subject.

Reference is made to the telephone conversation with Tom Baskous, Tuesday morning, July 16, regarding the above subject. This sludge accumulation below the International Paper Company Pulp and Paper Mill at Ticonderoga has been discussed with Messrs. Brezner, Lyons, Hannaford and Hansen. George Hansen made a field investigation of Lake Champlain near the mouth of Ticonderoga Creek during the summer of 1966. Mr. Lyons is also familiar with this area.

International Paper Company operates a two hundred tons per day bleached kraft pulp mill and a three hundred thirty tons per day paper mill. Fiber loss from these operations is known to be significant. Actually, a paper mill has been operated at Ticonderoga since 1882. The result is an accumulation of paper mill solids along the banks of Ticonderoga Creek and extending through the delta, well into Lake Champlain. Rising temperatures in these receiving waters accelerate decomposition of these paper mill sludge deposits. Ebullition of gases floats huge mats of sludge. These floating solids respond to lake currents and wind action.

Offensive odors emanate from these decomposing solids in Ticonderoga Creek delta. These odors are noticeable at Fort Ticonderoga and are considered a nuisance to the local environment. The lower reaches (below the pulp and paper mill) of Ticonderoga Creek are grossly polluted. Floating solids and offensive odors during the summer season are further evidence of the presence of these wastes.

Inquiry was made as to the feasibility of dredging these paper mill solids from the receiving waters. The Corp of Engineers dredges streams routinely to maintain satisfactory depth in navigation channels. Dredged material is an accumulation of silt resulting from soil erosion and settleable solids from manufacturing operations. When the solids can be identified as to origin, the Corp of Engineers may assess fair charge for dredging against the offending industry.

Steel mills discharging effluents to Calumet River, South Chicago, Illinois, are now required to reimburse the Corp of Engineers on the fixed fee basis for dredging. Republic Steel is one of the companies known to pay this



MR. GARVEY

STATE OF NEW YORK  
DEPARTMENT OF HEALTH

MEMORANDUM

June 4, 1968

To: Mr. Haberer  
Mr. Stevens  
From: Incorporation of Sludge Removal in Abatement Orders

Subject:

*File International Paper Company (71)*

It is my impression that Mr. Metzler had indicated that for the present we would concentrate on getting existing pollution abated and that the matter of removal of sludge deposits as a result of past pollution would be held in abeyance.

It was further my understanding that this information would be communicated to the Field by means of your discussing it with the Regional Engineers. Attached is a copy of a memorandum from Mr. McCormick to Mr. Barlow in the Office of the Counsel requesting that this matter of sludge removal be incorporated in the order for the International Paper Company.

It is suggested that this matter be clarified with the Regional Engineers and through them to the local people.

cc: Mr. Garvey  
DBS:mek

STATE OF NEW YORK  
DEPARTMENT OF HEALTH  
MEMORANDUM

May 24, 1968

To: Mr. Barlow - Office of the Counsel  
From: Mr. McCormick - Saranac Lake District  
Subject: International Paper Company Abatement Order


It is noted that the International Paper Company has asked for a modified order of their original abatement schedule. It is specifically requested that on or before January 1, 1971 any discharges of industrial waste by Respondent into the Lake George outlet shall not contravene the standards adopted, established and assigned respectively for said waters.

As of this date, I have never received any official notice of a construction schedule, which will guarantee that the present plant will not be in operation by this date. I do not believe that the Industrial Waste Section has received any word as to what treatment facilities will be developed for the new plant location.

It was brought to the attention of the Enforcement Section sometime ago that the International Paper Company should be responsible for cleaning up Lake George outlet before they are relieved of any abatement order connected with Lake George outlet. Even without a discharge, the Lake George outlet will be unusable for many, many years to come unless it is properly dredged of the bottom material which will continue to gasify and cause problems in Lake Champlain.

It is suggested that any modified order that may be issued include the provision that the International Paper Company is responsible for the condition of Lake George outlet and must make improvements before they are relieved of their responsibility in this area.

cc. Mr. Garvey  
Mr. Bogedain  
Mr. Weist



11/3/65

----- X  
In the Matter of alleged Violations of  
Article 12 of the Public Health Law by

INTERNATIONAL PAPER COMPANY,

Respondent  
----- X

In the Matter of the Consideration of such  
Action as should be Taken in Respect to  
Continuation, Modification or Revocation of  
any and all Permits issued to the

INTERNATIONAL PAPER COMPANY,

Respondent

for the Discharge of Sewage and/or Industrial  
Wastes and Other Wastes or the Effluents thereof  
into the Waters of the State  
----- X

STIPULATION

It is hereby stipulated by and between the General Counsel  
for the Respondent and the Counsel for the New York State Department of Health  
that facts exist upon which the proposed Order attached hereto may be  
predicated and that such Order may be made, filed and served, and that the  
title of these proceedings shall be changed to conform to the title  
set forth in said proposed Order.

Dated: September 23, 1965

Paul B. Carroll  
PAUL B. CARROLL, General Counsel  
INTERNATIONAL PAPER COMPANY

Donald A. MacLennan  
DONALD A. MACLENNAN, Counsel  
STATE OF NEW YORK,  
DEPARTMENT OF HEALTH



STATE OF NEW YORK : DEPARTMENT OF HEALTH

In the Matter of Alleged Violations  
of Article 12 of the Public Health Law  
by

INTERNATIONAL PAPER COMPANY,

Respondent

In the Matter of the Consideration of  
such Action as should be Taken in Respect  
to Continuation, Modification or Revo-  
cation, of any and all Permits issued to  
the

ORDER

INTERNATIONAL PAPER COMPANY,

Respondent

for the Discharge of Sewage and/or In-  
dustrial Wastes and Other Wastes or the  
Effluents thereof into the Waters of  
Lake George Outlet.

A public hearing in the above entitled proceedings, having come on to be heard pursuant to due written notice, served in the manner provided by law, before JOHN J. BELLIZZI duly designated Hearing Officer and Representative of the Commissioner of Health of the State of New York and the New York State Department of Health having appeared generally therein by DONALD A. MACHARG, DERMOT C. REILLY, of Counsel, and the Respondent having appeared generally therein by its General Counsel, PAUL B. CARROLL of New York City, and said Counsel for the Department and the General Counsel of the Respondent having entered into a written stipulation that facts exist upon which this Order may be predicated and further stipulating that the same may be made, filed and served, and exhibits having been received on behalf of said Department, and all proceedings had upon said hearing having been stenographically transcribed,

NOW upon reading and filing said Notice of Hearing, stipulation, exhibits and the minutes of said hearing, it is Ordered:

1. THAT said stipulation be and the same is approved and the content thereof is found, ratified and adopted.

2. THAT the Respondent, on and after December 1, 1965, cease and abate, and thereafter keep abated, all discharges of industrial wastes by it into Lake George Outlet in contravention of the standards adopted for and assigned to said waters by the Water Resources Commission unless said Respondent shall:

(a) On or before December 1, 1965 submit final plans, prepared by a duly licensed professional engineer, to the New York State Department of Health through its Saranac Lake District Office showing designs for facilities to treat such wastes, which facilities shall be similar to those for which preliminary plans were filed with the New York State Department of Health on or about January 1, 1965 but with a capacity sufficient to treat in the same manner the industrial waste discharges from all the outfalls by which Respondent discharges such wastes into said Outlet.

(b) On or before the first day of May, 1966 cause construction of said facilities to treat such wastes to be initiated.

(c) On or before the first day of May, 1967 cause construction of said facilities to be completed.

3. THAT if:

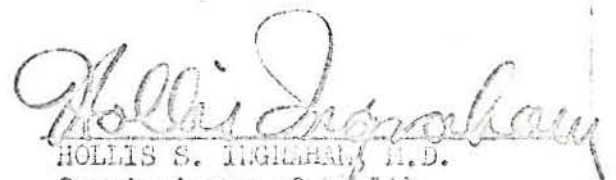
(a) the New York State Department of Health shall not approve by February 1, 1966 the final plans referred to in clause (a) of Section 2 above or said plans as revised on behalf of Respondent after consultation with said Department; or

(b) because of strike, lockout or other labor trouble, act or directive of a governmental agency, failure or delay of suppliers or any cause beyond its reasonable control, the Respondent shall fail to comply with any of the conditions in clauses (b) or (c) of Section 2, hereof by the respective dates specified therein,

then upon application of the Respondent the Commissioner shall reopen the hearing in the above-entitled proceedings and receive any evidence relevant to the substitution of a later date or dates for either or both the dates specified in said clauses (b) or (c) and this Order shall be modified to set such later date or dates as shall be reasonably indicated by such evidence to be appropriate.

4. THAT any and all permits heretofore issued to the Respondent, or its assignors or predecessors for the discharge of wastes into said Outlet by or on behalf of the New York State Department of Health, or the Commissioner of Health or the Water Pollution Control Board, be and they are modified to refer and relate to and permit only discharges of waste effluents treated in the facilities aforesaid, such modification to be effective May 1, 1967 or such later date as may be substituted for May 1, 1967 for purposes of clause (c) of Section 2 by future modification of this Order.

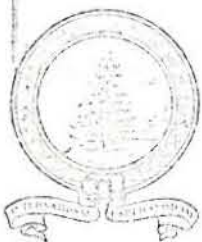
Dated: Albany, New York  
November 3, 1965

  
HOLLIS S. INGRAHAM, M.D.  
Commissioner of Health  
of the State of New York

TO: WATER RESOURCES COMMISSION  
Albany, New York

PAUL B. CARROLL,  
General Counsel  
International Paper Company  
220 East 42nd Street  
New York, N.Y. 10017





## INTERNATIONAL PAPER COMPANY

220 EAST 42ND STREET  
NEW YORK, N. Y. 10017

### LEGAL DEPARTMENT

PAUL B. CARROLL  
GENERAL COUNSEL  
BYRON E. KAROT  
CARNEY W. MIMMS  
CHARLES MYNEDER  
JOHN J. DILLON  
FRANK J. FERONY, JR.

AREA CODE 212 MU 2-7500

November 11, 1965

Dermot C. Reilly, LL.B.  
Senior Attorney  
State of New York  
Department of Health  
84 Holland Avenue  
Albany, New York 12208

Dear Mr. Reilly:

I wish to acknowledge receipt, on behalf of this Company, of a copy of the Order of the Commissioner of Health dated November 3, 1965 which was entered pursuant to the stipulation between Mr. MacHarg and myself dated September 23, 1965.

Very truly yours,

*Paul B. Carroll*

RECEIVED

NOV 12 1965

STATE DEPT. OF HEALTH  
OFFICE OF THE COUNSEL

STATE OF NEW YORK  
DEPARTMENT OF HEALTH

MEMORANDUM

November 5, 1965

To: Dr. Steward - Att: Mr. Schlickenrieder - Saranac Lake District Office  
From: Dr. McMahon - By: Mr. Wurtemberger - Albany Regional Office  
Subject: Water Pollution Abatement Program  
Lake Champlain Drainage Basin  
International Paper Company  
Ticonderoga (V), Essex County

This is in response to your memo of October 27, 1965.

The amount of oxygen depletion in Lake George Outlet could be determined by a waste assimilation study, taking into account such factors as:

1. waste load - volume and strength. If aerated flotation save-alls are used, effluent D.O. could be significant.
2. D.O. of receiving waters - above discharge. Should be high for Lake George waters and dam spillway discharges.
3. time of travel for 2 $\frac{1}{2}$  mile stretch. Should be short considering distance and gradient.
4. stream flow - should be fairly consistent considering large impoundment and regulation.
5. deoxygenation rate - of wastes. Probably slow or average for paper wastes and fast for pulp wastes.
6. other deoxygenation and reoxygenation factors.

Mr. Grossman has indicated in the attached memo that the Company be requested to remove the sludge deposits. Mr. Dappert has indicated previously to Mr. Drummond that the Water Pollution Control Law makes no provision for removing existing sludge deposits. I do not know whether they would do this voluntarily. I understand that legislation introduced recently for a similar project in Plattsburgh by Assemblyman Wolfe, was tabled until more information was presented on costs, etc.

I agree with the conclusion you reach in your last paragraph, providing we can back up your claim. Further, I think this is a matter that the Central Office should resolve.

Att:

cc: Water Pollution Control Section  
Municipal & Industrial Waste Section

PPW



STATE OF NEW YORK  
DEPARTMENT OF HEALTH  
MEMORANDUM

October 27, 1965

To: Mr. Wurtemberger - Albany Regional Office  
From: Mr. Schlickerrieder - Saranac Lake District  
Subject: Water Pollution Abatement Program - Ticonderoga Area

JED  
OCT 29 1965  
N.Y.S.  
ALBANY

In further pursuit of my memorandum of October 22 and your reply of October 26, the thought has occurred to me that stabilization of the sludge deposits in Lake George outlet and in the bay of Lake Champlain would certainly be affected by the amount of dissolved oxygen in the stream as it passes over these deposits.

In other words, if we allow dissolved oxygen depletion in Lake George outlet merely because the bay waters would have no dissolved oxygen on account of stabilization of the sludge deposits, then stabilization would take longer because of lack of available oxygen.

In view of the above it appears to me that we should require that the International Paper Company not discharge any wastes to the stream that would have an appreciable oxygen demand so that the available oxygen in the stream can be used for stabilization of the sludge deposits.

*W. L.*

cc. Municipal & Industrial Wastes Section  
Water Pollution Control Section

*Handwritten:*  
① ~~Marshall~~  
② ~~McMahon~~  
③ *file*

October 26, 1965

Dr. Steward - Attention: Mr. Schlickerlieder - Saranac Lake District Office

Dr. McMahon - by Mr. Wurtemberger - Albany Regional Office

Water Pollution Abatement Program - Lake Champlain Drainage Basin  
International Paper Company  
Ticonderoga (V), Essex County

I am replying to your memorandum of October 22, 1965.

At our first prehearing conference on September 15, 1965, Mr. Drummond admitted that they were depleting D.O. based on sampling done by the Company in previous years. The results of the three day sampling done by the State of Vermont were not received until September 21, 1965, two days before the hearing, and sufficient time was not available for proper interpretation and evaluation. These results were not brought to the attention of the Company inasmuch as their own sampling indicated some of the same conditions.

At the time of the hearing, the requirements and interpretations of the new "Program Implementation" were in the state of flux as far as I could determine from the Municipal and Industrial Waste Section. I feel that it is this Section's responsibility to inform the Company of any changes needed to modify the recently approved preliminary report.

It is my personal opinion that treatment beyond the chemical precipitation proposed would not materially change the condition of the receiving waters until the extensive sludge deposits in the two mile stretch of Lake George Outlet(classified "D") and the bay of Lake Champlain(classified "C") are stabilized or removed. As you may recall, Mr. Drummond expressed the same opinion in earlier conferences which we both attended.

*Lozano*  
In view of the above, I don't think too much would be gained at this time by sending our Water Pollution Control Laboratory out for additional information.

I am sending copies of the correspondence to the Municipal and Industrial Waste Section and Water Pollution Control Section for any action they may wish to take.

cc: Municipal and Industrial Waste Section  
Water Pollution Control Section

*Stamp:*  
OCT 27 1965  
BUREAU WATER  
SOURCE SERVICES

STATE OF NEW YORK  
DEPARTMENT OF HEALTH  
MEMORANDUM

RECEIVED

OCT 23 1965

N.Y.S.

October 22, 1965

10/22/65

To: Mr. Wurtemberger - Regional Office

From: Mr. Schlicker - Saranac Lake District

Subject: Samples at Ticonderoga, State of Vermont, Department of Water Resources

I note the contents of your letter of October 7th to Mr. A. William Albert, Director of Water Supply and Pollution Control, for the State of Vermont.

The sample results he forwarded to you indicate a lack of dissolved oxygen apparently resulting from discharge of paper wastes from the International Paper Company. You may recall that we discussed this possibility, and I recommended that this be brought to the attention of the Company at the hearing.

Was this possibility brought out at the hearing? If not, do you not feel that the sample results indicate some definite recommendation should be made to the Company at this time other than let them continue in their feelings that secondary treatment is not necessary?

Do you feel that confirmation of these samples of these water results should be made by our Water Pollution Control Mobile Laboratory? If so, I would request that this laboratory work be scheduled for the Ticonderoga area.

W. L.

RECEIVED  
OCT 23 1965



WATER POLLUTION - TICONDEROGA  
MEETING WITH NEW YORK STATE  
DECEMBER 6, 1963

December 3, 1963

30

MR. G. H. BAIRD,  
VICE PRESIDENT  
NEW YORK OFFICE

In preparation for our meeting with the New York State Water Resources Commission scheduled to be held in Albany, December 6, 1963, I am attaching some technical data and correspondence which I wish you to look at before we go to Albany.

I now have an estimate for a proposed treatment plant to remove settleable solids only for the Ticonderoga Mill. The cost shown for the required capacity of 10 million gallons per day is \$225,000. This plan uses the 8' x 16' filter from our Niagara Mill which was formerly used as the chlorination stage washer in the book stock plant, which is now shut down. If we did not use this unit an additional cost of \$55,000 for a similar filter or centrifuges should be added. If mill expansion is contemplated to say a waste volume for treatment of 16 million gallons per day then a 175 ft. diameter clarifier would be necessary instead of the 140 ft. designated. This would mean an additional cost of \$27,000 and I certainly would advocate installing the higher capacity regardless of mill expansion plans. The revised total figure, including a new filter, would then be \$307,000 and probably is the one which should be used when talking to the State authorities.


I am not clear as to what this meeting is about, but the "grape-vine" indicates that we may be asked to agree to a date for "final plans" for a treatment works and a date for "start of construction" of same. I believe removal of settleable solids will be the minimum acceptable and I am sure that this will satisfy the Class D classification now given to the Ticonderoga River. The Class C classification now given to the outlet of the creek into Lake Champlain would not be satisfied due to the accumulation in the delta over the years. This accumulation is not all ours, but some is natural silt and this delta and creek channel should be dredged. If this was done along with our removal of settleable solids then I am fairly sure the waters might meet the C classification.

Ticonderoga Creek is a navigable water as is Lake Champlain. The State has the necessary dredges and is responsible for navigation so should dredge this area for us, at least I believe this should be our contention. Mr. Johnson the assemblyman for Ticonderoga has been trying to get this done since he received a petition with 127 signatures concerning the navigation of Ticonderoga creek by motor boats in 1960. If we agree to do our part I believe we can ask that the State do theirs.

Attached also is a summary of losses from the Ticonderoga Mill for the period 1952 to 1963. This also shows the increase in production over the same period and I think gives a good picture of improvement. We should stress this and that in the future there will be further improvement, e.g., the proposed installation of a Sveen Pedersen save-all on #3 and the possible use of paper mill white water in the pulp mill.

I hope the above gives you some thoughts on the attack or defense we should pursue at this meeting. Please let me know as soon as possible when I should meet you in Albany on December 6, 1963. The meeting is scheduled for 11:00 a.m. and we should allow at least 40 minutes to get to Holland Avenue. Mr. Gwyn Thomas of Associated Industries of New York would like to meet us at the airport before the meeting with the State, if this is possible and I promised to let him know when you would arrive.

EMD:CL  
Attached

  
R. M. DRISCOLL

cc: Mr. R. C. Masterson  
Mr. J. W. Gilbert  
Mr. G. D. Hughes  
Mr. G. K. Rauscher

*Keep  
over  
1963  
to  
John Ch...*

May 13, 1963

1963

Mr. L. G. Thurston, Manager  
Ticonderoga Mill  
The International Paper Company  
Ticonderoga, New York

Dear Mr. Thurston:

I have just received your letter of May 9, 1963 relative to the industrial wastes situation at the Ticonderoga Mill of the International Paper Company.

At our meeting April 16, 1963, we pointed out that we felt at this time that the International Paper Company should take definite steps toward abatement of the pollution of Ticonderoga Creek caused by waste discharges from its pulp and paper plant. The steps leading toward abatement of the pollution problem which were stated at the meeting and confirmed by our letter of April 19th, are considered to be reasonable and we do expect compliance with this schedule.

We do realize that the highest echelon of management of the International Paper Company must make the final decision in matters of great economic import, such as this one. However, we did assume that you would bring it to the attention of the proper parties.

May we request at this time that you bring this matter to the attention of the management of the International Paper Company pointing out to them the schedule which has been arranged. We would like to request also a statement from the Company as to their intention or non-intention to conform to the schedule.

Very truly yours,

Warren Schliekewieder, P. E.  
District Sanitary Engineer



STATE OF NEW YORK  
DEPARTMENT OF HEALTH

MEMORANDUM

January 15, 1963

TO: FOR THE RECORD

FROM: Andre L. Caron

SUBJECT: Abatement Plan with relation to the International Paper Company,  
Ticonderoga (T), Essex County

On Friday, January 4, 1963, a conference was held at the International Paper Company mill in Ticonderoga for the purpose of acquainting the Water Pollution Control Section with the mill, its processes, and progress being made by this factory in abating its pollution to Ticonderoga Creek. In attendance were:

Mr. Thurston, International Paper Company

Mr. Drummond, International Paper Company

Mr. Thatcher, International Paper Company

Mr. Calden, New York State Department of Labor--Air Pollution

Mr. O'Connor, New York State Department of Health--Air Pollution

Mr. Schlickerrieder, New York State Department of Health--  
--Saranac Lake District Office

Mr. McCormack, New York State Department of Health--  
--Saranac Lake District Office

Mr. Caron, New York State Department of Health--Water Pollution  
Control

Messrs. Calden and O'Connor assisted us and inquired on progress being made on their air pollution abatement program.

In 1959 a conference was held between the Water Pollution Control Board and this industry to discuss the abatement plan. At that time it was decided that the industry would study its problem and inaugurate save-all equipment in its paper mill to lighten the solids loss and conserve water in the paper mill. The industry was to, and did, report to this Department on its industrial waste discharge during the month of June for the years 1960, 1961, and 1962. The following table shows this data:

YEAR	PULP PRODUCTION	PAPER PRODUCTION	SUSPENDED SOLIDS		B.O.D.		WASTE IN GALLONS
			Pounds Per Day	mg/l	Pounds Per Day	mg/l	
1960	175	175	44,300	370	21,200	176	14.5 mgd
1961	175	275	53,700	356	24,000	158	18.1 mgd
1962	175	303	57,700	375	31,300	208	18.5 mgd

As can be seen from the above, the polluttional load from this source has not decreased in the past three years, but has increased by one-quarter to one-third in both solids and B.O.D. On the other hand, paper production has increased by almost 100 per cent; but pulp production has remained the same. A flotation device has been installed on paper machine number 7 and reduced the solids load from this source to 60 mg/l and reduced water consumption from 30,000 to 14,000 gallons per ton. A similar save-all is being installed on machine number 4; however, this will have very little effect on the total waste volume and the solids load discharged daily.

Over the past two years this Department, our District Office, and the Governor's Office have received many complaints from this source and, in one case, a petition signed by 98 people. The Vermont authorities are also concerned with this matter. The receiving waters--namely, Ticonderoga Creek and Lake Champlain--are also under the jurisdiction of the New England Water Pollution Control Commission. Since these waters are interstate, it also puts them under the jurisdiction of the Public Health Service.

Ticonderoga Creek is small, and its flow drops to points as low as 40 cfs. Its appearance, even at the time of my inspection, was bad. Its bottom was coated with solids, it was discolored, and floating foam was sighted. The classification of this stream is "D." It is apparent that a violation exists here. On the other hand, the Village of Ticonderoga discharges its domestic waste to the stream raw. Though this domestic load does not total to more than 5 per cent of the total pollution load the stream receives, both violators should be cited.

It was learned from Mr. Schlickerrieder that the Village of Ticonderoga has requested Comprehensive Planning Funds for a survey. We should watch this application closely and insist that the engineer retained study the mill waste and the feasibility of joint treatment. I would also expect it to be economical to build a sewer direct to Lake Champlain along the banks of Ticonderoga Creek and discharge the combined wastes to Lake Champlain via a submerged outfall. The dilution available at this point is much greater, and I expect the degree of treatment required would be lower.

The paper company has been working on what they call an abatement program. However, every improvement that has been installed--namely, the two flotation units on the white water wastes--are money-making propositions. Mill officials are economy-minded as far as waste treatment is concerned. I doubt very much if the classifications of Ticonderoga Creek and

Lake Champlain can be met on this basis. I recommend that we call in the mill officials for another conference and set forth limits for their discharge of solids and B.O.D. to Ticonderoga Creek and Lake Champlain. They should be advised to retain engineering services and present this Department with a treatment scheme that will meet with our stream standards. Compliance dates should be set up for an engineering study, preliminary plans, final plans, and construction of waste treatment facilities.

ALC:iv



STATE OF NEW YORK  
DEPARTMENT OF HEALTH

MEMORANDUM

September 25, 1962

RECEIVED

SEP 26 1962

To: Mr. Riley - Albany Regional Office  
From: Mr. Schlickenrieder - Saranac Lake District  
Subject: International Paper Company - Ticonderoga (V), Essex County

On July 24, 1961, I forwarded to you two copies of a report submitted by the International Paper Company on the character of the wastes emanating from their plant at Ticonderoga. It was my feeling that the Water Pollution Control Section would review the report and come up with some recommendations regarding treatment of these wastes. We have had no further word on this.

It is my feeling that this company should be ordered to adequately treat their wastes before discharge into Lake George Outlet. It is my feeling also that whenever any report is submitted, it should receive some sort of comment from this Department, more than mere confirmation of receipt.

The International Paper Company will never undertake steps to install treatment at this plant until they are told to do so. I therefore believe that they should be told with all possible haste.

W. S.

*Bob had  
should go up to see and take  
what action required. No  
report has been submitted this  
year*

December 16, 1959

International Paper Company  
Ticonderoga  
New York

Attn.: Mr. J. J. Lawson, Manager

Gentlemen:

We wish to confirm the results of a conference held in your Ticonderoga office on December 15. The conference, of course, related to the disposal of wastes from your Ticonderoga mills and their affect upon the receiving waters and the pollution abatement program for the Lake Champlain Drainage Basin being carried forward by the Water Pollution Control Board under the provisions of Article 12 of the Public Health Law.

Present at this conference besides yourself were Messrs. Carpenter, Belden, Touchette and Lord of the Ticonderoga plant and Mr. Drummond of the Research Division of Glens Falls. The State Health Department was represented by Dr. Clayton M. Steward and Engineer Warren Schlickemrieder of the Saranac Lake District Office. The undersigned represented the Water Pollution Control Board.

The results of a previous conference held with your people in July, 1958 were reviewed and we expressed appreciation for your cooperation in submitting a report upon the quantity and character of wastes being discharged from your plant. This report was submitted in accordance with the arrangements made at our previous conference and covered the month of May, 1959. The report indicates that at the time of the analyses, there was being discharged from your Ticonderoga plants approximately 34,500 pounds per day of suspended solids and 16,400 pounds per day of B.O.D.

According to information furnished by you, there is now being installed some new building and equipment, which will modernize your operation. You report that this modernization includes recovery equipment and will, in your opinion, result in a material reduction in the amounts of wastes to be discharged. The effectiveness of this new equipment will, of course, not be definitely known until it is placed in operation. It is our understanding that operation of this equipment is scheduled for approximately September, 1960.

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It was requested by us, and agreed to by you, that another study of the wastes being discharged from the plants, including determination of quantities and concentrations of suspended solids and B.O.D., will be made for a period of approximately one week during June, 1960. The results of these studies, together with a report upon the plans and progress of your modernization as it relates to recovery of wastes will be submitted by July 1, 1960. It is our present understanding that a further study will be made to determine the effectiveness of your new recovery equipment, etc. after it has been in operation a reasonable time.

We wish to call your attention again to the fact that we are inclined to believe that recovery equipment will not be sufficiently effective as to eliminate the necessity for installation of some treatment of the final wastes discharged, particularly that discharged during times of changeovers and clean-ups. We urge, therefore, that in connection with your plans, you keep in mind the possibility of the necessity of providing such treatment.

Very truly yours,

W. H. Larkin, P. E.  
Asst. Executive Secretary

WHL:DM

Copy to: Mr. R.M. Drummond  
Research Division  
International Paper Company  
Glens Falls, New York

Saranac Lake D.O.

Albany R.O.