

DR. RUTH PATRICK'S REPORT TO THE GOOSE POND RECLAMATION
COMMITTEE, JULY 30, 1971

I have read many articles concerning the effects of strip mining in general in the environs of Cape Rosier and particularly of the Callahan Mining Company. These have included the following reports: (the acute toxicity evaluation of wastes from the mine by S.C. Dewick; the report of Robert Dow on toxic metals in the marine environment); the report on the probable composition of the tailing wastes; the August 1970 report of the Department of the Interior on the effect of Strip-Mine Discharges on the Marine Environment.

I have spent one day examining the fresh water pond, the dump pond, Goose Cove and the general environs of the mine.

I understand the mine is to close as of December 31, 1971, and that they will be given or have been given certain exemptions under the stripmining law or the law about to be enacted.

Because I have so little data that I or my staff have developed it is impossible for me to make any exhaustive statement. However, certain things are evident.

1. The shellfish in the area and particularly those from the vicinity of Goose Cove exceed the amounts of heavy metals which will probably be allowable according to Federal Standards. Dr. Mount of Duluth tells me they are recommending concentrations in food similar to those in drinking water. These standards I believe are now being developed. Therefore in view of natural releases of heavy metals all releases from mining activities should be strictly controlled.

2. I believe it is the moral responsibility of the mine if not the legal responsibility to leave the mine pit and the mine waste piles in such a condition that they cannot continue to degrade the environment. As conditions are now the pit if left unguarded is a great hazard and the appearance of the waste piles will forever degrade the value of the area for recreation and living. Therefore I would recommend the following:

1. The mine veins be sealed and the lower part of the mine be sealed to best extent possible so they will not leach mine minerals into the water. The mine pit should be so managed that it will not be a hazard to human life. If a lake is developed, shallow areas should be developed so that anyone who falls in can get out. Perhaps it would be better to fill it with mud or to partially fill it and develop paths so one could walk down to a bog garden.

2. The waste heaps should be regraded and covered in a method to support vegetation. Pennsylvania has developed extensive data on how to do this and it is being done at the present time. When this is done the area becomes attractive for living and recreational use.

As of the present time I have not been able to make extensive enough studies to determine the amount of degradation that has occurred to Goose Cove. But from the Dept. of Interior report and from talking with others it would appear some damage has been done and the accumulation of heavy metals in sea weeds and mollusks is high. I would strongly recommend that waste discharge to Weir Cove be stopped so as to confine or localize any effects as much as possible.

The mine is to be commended for having developed a method for recycling most of their waste water.

Dr. Ruth Patrick

The Academy of Natural Sciences
Nineteenth and the Parkway
Philadelphia, Pennsylvania 19103

RP/JS

Return to John Gray

GOOSE POND RECLAMATION COMMITTEE

- Minutes -

Date: July 30, 1971

Present:

from Brooksville: Albert Sandecki - Chairman
John Gray
from the State: Robert Dow
Paul Venno
Spencer Apollonio
John Hurst
from the County: Carl Rogers
from Callahan: B. C. Scott

The meeting was called to order by the Chairman in the offices of Callahan Mining Corporation at 10:10 AM. At the request of the Chairman, Dr. Ruth Patrick of the Academy of Natural Sciences of Philadelphia stated her qualifications to study the problems of Goose Pond rehabilitation as they relate to marine life for the committee, but also stated that she could not expect to know all about the marine environment after only one day's study.

Robert Dow told the committee that the Maine Department of Sea and Shore Fisheries had collected the marine data used in the reports on Goose Cove published to date. He went on to say that copper in undetermined amounts are toxic to lobsters. He stated that bait worms are also sensitive to metal poisoning, and that the lead content in clams is worrisome to S&S.

Dr. Patrick observed that copper and zinc combinations were shown to be toxic to several marine forms. She said that Federal standards for heavy metals content in marine foods have not yet been established, but should come out in about 6 months.

Mr. Scott asked Mr. Dow if there had been any samples of shellfish tested for metal content prior to Callahan's activities, to serve as a base for comparison. Mr. Dow replied that there had not, but that there had been mining activity in the area earlier, so there was heavy metal around earlier.

The Chairman then asked Mr. Dow if he had recommendations for the reclamation of Goose Pond to be presented to the Committee. Mr. Dow presented the following recommendations (copy appended) by the Department of Sea and Shore Fisheries:

- 1) Drainage to Wier Cove should be closed
- 2) The dam under the reversing falls bridge should be retained so there is no intrusion of tide water. The pit would then serve as a settling pond for

ionic action in the water. The dam should be retained until the testing of marine life is completed.

Mr. Sandeckl then asked if Mr. Dow knew of any reports that would show the amount of drainage into the pond, that is, would there be enough drainage to offset evaporation, etc. so the pond would not become stagnant. Mr. Dow replied that there might be such reports, but that he did not definitely know of them.

At the request of the Chairman, John Gray stated the position of the Town of Brooksville:

- 1) The Town is interested in the best solution to the question of Goose Pond reclamation
- 2) The Town would like to have the pond returned to salt water if possible
- 3) The Town would like to keep employment available in the area.

The Chairman told the committee that the Maine Department of Parks and Recreation had stated an interest in cooperating with Callahan in developing picnicing, etc. on the Callahan side of the pit. Unfortunately, there was no representative of that department present at the meeting.

Mr. Dow stated that the Maine Department of Sea and Shore Fisheries had spent \$10,000 on shellfish monitoring in the area since 1967, and that the U. S. government had spent \$46,000 in the same period. He did not state exactly what this testing had yielded. He said that he had recommended to the Maine Mining Bureau that the royalties paid to the Mining Bureau by Callahan be used to purchase an Atomic Absorption unit to be used for testing at the Northeast Shellfish Sanitation laboratory, but that the Mining Bureau had turned down his request.

At the request of the Chairman, Mr. Carl Rogers stated the interest of the County Extension Service in the project. Mr. Rogers stated that:

- 1) The Extension Service's interest is in the people of the area, and in educational benefits. He said that he had worked with the Callahan group and the local residents, serving as a middle man with recommendations for action through the county Technical Action Panel.
- 2) Extension wants to foster cooperative action by Callahan, the State, County and Town.
- 3) He recommended that funds from all sources, State, Callahan, Brooksville and surrounding towns, etc. be used in the reclamation project. Extension funds might be available if their use leads to employment opportunities for Town residents.

Mr. Venno suggested that a rehabilitation program be laid out and started as soon as possible.

Mr. Apollonio suggested that it would take a great deal of money to make the pit area safe for recreational purposes.

Mr. Dow stated that he felt the greatest employment opportunities in the project lay in the research and monitoring associated with it.

Mr. Rogers stated that it might be possible to get an EDA technical assistance grant for study of the rehabilitation to serve as a guide for salt water mining projects elsewhere in the U.S. He also stated that moneys were available for setting up employment.

At the request of the Chairman, Mr. Scott stated that Callahan is interested in reclamation of the mined area; that its funds for such work were limited but that it had men and equipment available for such work if it is done while the operation is still in existence, and that it was consulting with firms and individuals experienced in similar rehabilitation programs.

The Chairman then asked Dr. Patrick to present her recommendations to the committee. Dr. Patrick started her statement by observing that federal funds were available for such projects as this; that the recycling system used in the Callahan mill was a good one for controlling metal ions; and that ion exchange systems should be used for precipitation of metal ions whenever possible. Dr. Patrick then presented the following recommendations:

- 1) The drainage to Wier Cove should be closed
- 2) The dam under the bridge should not be removed until study shows that there will be no damage to marine life by water coming from the mine area
- 3) The mine dumps and tailing pond should be re-vegetated, with contours changed where necessary to prevent erosion
- 4) Marine mud should be allowed to slide into the pit to seal and cover the pit bottom
- 5) The pit as it now exists would be dangerous as a recreation area
- 6) Salt water would be better than fresh water for precipitation of harmful metal ions.

Mr. Sandecki suggested the possibility of allowing salt water to move in above the dike separating the pond area from the pit. This would require removal of the dam under the bridge, or at least opening it to allow inflow of salt water.

Mr. Dow suggested that to meet Dr. Patrick's recommendation for salt water in the pit to help control metal ions, salt water could be pumped into the pit first, then the pit be

allowed to become fresh, rather than salt water, as a result of natural runoff. Dr. Patrick then restated her recommendation that marine muds be allowed to move into the pit, adding that this should be done before any water is allowed in.

Mr. Sandocki told the committee that there were two legal obligations to removal of the dam under the bridge, these being Callahan's agreement with the Grays, and the legislative requirements for its removal. Mr. Venno stated that the dam would have to be altered in any case, so the legal requirements could be met as a consequence.

Dr. Patrick suggested that the committee contact Dr. William Cowley, Chief of the Federal Grants of the Federal Water Quality Administration, requesting funds for a rehabilitation study. Mr. Scott asked Dr. Patrick if her recommendations on sources of available funds would be presented in writing to the committee--Dr. Patrick replied that she would be happy to orally give these recommendations to the Chairman.

Mr. Gray asked that part of the mud available to the pit be retained for hydro-sealing of the tailing dumps.

At Mr. Scott's request that Dr. Patrick present her recommendations to the committee in writing, Dr. Patrick agreed to give her recommendations orally to the Chairman.

Mr. Venno stated that he felt that Callahan should be asked to start immediately on a rehabilitation program. Mr. Scott replied for Callahan that such a program could not be started without a detailed work plan. Mr. Sandocki stated that Mr. Beck would be working on such a plan within two weeks.

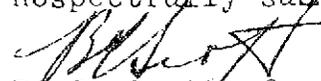
The Chairman presented to the committee the recommendations of Mr. Harold B. Staley, specialist in water treatment (attached). The chairman observed that Mr. Staley's recommendations were not in accord with those of Dr. Patrick and Mr. Dow.

The Chairman stated that the recommendations would be given to Mr. Beck for study and inclusion in his rehabilitation work plan.

The Chairman had invited members of the press and public to meet with the committee at the close of the meeting, and asked members to cooperate in answering questions put to the committee.

Meeting adjourned at 12:20 PM.

Respectfully submitted,


B. C. Scott, for
Frederick M. Beck, Secretary

understanding of the problems may be summarized as follows:

(1) The report from the Colorado School of Mines dated October 22, 1965 concerns the toxicity of the tailings from the proposed (?) mine. Assuming that they (Callahan) used the process outlined, their study indicated that sodium cyanide would be the only chemical present in toxic concentration and that it could be treated by dilution or by an alkaline coloring treatment. I cannot find fault with their conclusion.

(2) Since the mine has (or will) close the above to ocean supplies and the question now appears to be whether to pump the surface water which will fill the open pit and discharge over the dam, or to allow sea water to enter and flow periodically with the tide.

There is some little doubt but that fairly high concentrations of copper and zinc will be leached out of the ore remaining in the pit for some time to come by either fresh or salt water. For this reason, it would seem more desirable to pump the water, attempting to keep the concentration of water localized, if we assume for the moment that this water could be kept stagnant, eventually the concentration of copper and zinc will reach an equilibrium and remain fairly constant (probably too high for potable water). The sea water (if it enters) will overflow and will carry some of the chemicals out of the pond. If the water fluctuates and flows over the surface it is possible that it will overflow without causing too much mixing and leach chemicals in the pond. In any case the outflow should be sampled frequently to determine whether it should be allowed to run into the sea untreated. If your state has a water laboratory they should run such tests periodically. The sea water should be sampled at various depths and various intervals to determine what happens there. I cannot think of any possible process which would precipitate the metals in the pond.

(3) The other question which has been raised is whether to allow to the wells in the vicinity, when the pit is filled with water? Will the water flow from the pit to the wells and contaminate them with metals. Inasmuch as the water has already appeared in wells, it is quite possible that if the pit fills with water, the pressure will be maintained and prevent sea water from entering the wells. On the other hand, water from the pit may find its way into the wells. Obviously these wells should be tested frequently for copper and zinc. These metals can be removed or sold from the water by Zeolite softeners which are leased or sold from the Callahan and Permutit and other firms specializing in water services. Such softeners will not remove the sea water salts found in sea water and make it potable.

To return to the specific questions raised in your letter (a) I am unaware of any naturally occurring salt in fresh water or salt water which would precipitate the metals significantly. The salts of copper and zinc are quite soluble but can be precipitated in the laboratory under certain conditions. They can be removed by Zeolite softeners. It seems to me that impounding of fresh water in the pit would be safer than to allow sea water to flow into the pit, for reasons discussed above.

Perhaps my recommendations can best be summarized by suggesting frequent analysis of the water in the pond, the ocean effluent and the several wells, in order to get the necessary information. Secondly, pump the well water into a Zeolite softener, (assuming sea water no longer enters the well). I am quite sure analytical methods are available for copper and zinc, which might be suitable for household use. I would be glad to look up such methods if you wish. I would also suggest that you look into the availability of appropriate laboratories for testing these waters.

Harold B. Stanley
New Hartlandville

GOOSE POND RECLAMATION COMMITTEE

Amended Minutes

Date: July 30, 1971

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from the State:	Robert Dow Paul Venno Spencer Apollonio John Hurst
from the County:	Carl Rogers
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At the request of the Chairman, John Gray stated the position of the Town of Brooksville:

The people in town who have talked with me are interested in the best solution to the question of Goose Pond reclamation.

These people would like to have the pond returned to salt water if possible.

These people would like to keep employment available in the area.

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Mr. Dow stated that the Maine Department of Sea and Shore Fisheries had spent \$10,000 on shellfish monitoring in the area since 1967, and that the U. S. government had spent \$47,000 in the same period. He stated that the testing yielded a report issued by the Department of the Interior. He said that he had recommended to the Maine Mining Bureau that the royalties paid to the Mining Bureau by Callahan be used to purchase an Atomic Absorption unit to be used for testing at the Northeast Shellfish Sanitation Laboratory, but that the Mining Bureau had turned down his request.

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- 2) Extension wants to foster cooperative action by Callahan, the State, County and Town.
- 3) He recommended that funds from all sources, State, Callahan, Brooksville and surrounding towns, etc. be used in the reclamation project. No Extension Service funds are available for the work.

Mr. Venno suggested that a rehabilitation program be laid out and started as soon as possible.

Mr. Apollonio suggested that it would take a great deal of money to make the pit area safe for recreational purposes.

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The Chairman had invited members of the press and public to meet with the committee at the close of the meeting, and asked members to cooperate in answering questions put to the committee.

Meeting adjourned at 12:20 PM.

Respectfully submitted,

B. C. Scott, for
Frederick M. Beck, Secretary

CALLAHAN MINING CORPORATION

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TO: A. Sandecki, J. Gray
R. Dow, R. Doyle

DATE: July 19, 1971

FROM: F. M. Beck

COPIES:

SUBJECT: July Meeting - Goose Pond Reclamation Committee

The next meeting of the Goose Pond Reclamation Committee is scheduled for 10:00 a.m. on July 30 at the offices of Callahan Mining Corporation.

If this time is inconvenient, please let Mr. Sandecki know His number is 326-4675 in Harborside.

The agenda will include a review by Dr. Patrick of what she feels she or her group might be able to accomplish in regards to the potential water problems accompanying Goose Pond rehabilitation. Also, a representative from the County will be available to discuss possible Federal assistance for rehabilitation.

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326-4518

CALLAHAN MINING CORPORATION

TO: Goose Pond Reclamation DATE: June 24, 1971
Committee

FROM: Frederick M. Beck, Sec'y COPIES:

SUBJECT: Possible meeting date for July

Attached is a letter from Albert Sandecki and a copy of a letter written by him to Dr. Patrick. In this letter he suggests the possibility of the date of July 23 for a meeting to allow the committee to meet with Dr. Patrick. Unfortunately, I will be unable to attend any meetings during this week, since I will be out of town the entire week. However, I would solicit your opinions as to this date for a meeting. I will be able to find another Callahan representative should this meeting date be chosen.

50 Tanner Street
Haddonfield, N.J.
June 15, 1971

Mr. Fred Beck
c/o Callahan Mining Corporation
Northeast Dist. Exploration Office
41 Union Wharf, Portland, Maine

Dear Fred:

I had a conference sooner than expected with Dr. Ruth Patrick, today as a matter of fact and lasting from 9:30am until 4:30 pm. There were a few interruptions as she is a rather busy individual.

Dr. Patrick will be in Harborside on or about the 22nd of July, for a preliminary survey of the situation lasting about one or two days. She will then make her recommendations to the committee, if they are convened on the 23rd, if not she will send a written recommendation.

On this point of time, she is busy and has an unbelievably full schedule. If the meeting could be held at this time (23rd) it would be I think very worthwhile for all concerned.

I noticed in your minutes that Mr. Doyle's appointees will "set the date of the next meeting at a time convenient to them." I would think if they were advised of Dr. Patrick's visit as soon as possible it would be most convenient and considerate to hear her recommendations at that time. Just a suggestion, what do you think?

I have deliberately separated Dr. Patrick's preliminary survey from the possibility of an in depth study in consideration of Mr. Doyle's specifying in writing the exact type of information required and that which your firm might require. With the desire to allow you both more time to develop these questions and to hear from Dr. Patrick the cost of answering the type of questions that might develop, when she is in Harborside.

Enclosed is a copy of the letter sent to her today at her request in the way of a formal commitment. I have guaranteed her preliminary study fee, and only hope that by this time you may have some idea if Callahan is willing to contribute, if there is any problem on this point I will cover her fee on her recommendations arrived at by her preliminary observations.

Sincerely,

Albert Sandecki
Albert Sandecki

cc:

John Gray Selectman

50 Tanner Street
Haddonfield, N.J.
June 15, 1971

Department of Limnology
The Academy of Natural Sciences
19th & the Parkway
Philadelphia, Pennsylvania

Dr. Ruth Patrick, Ph.D.
Curator of Limnology

Dear Dr. Patrick:

In reference to our conference earlier today on the reclamation of the Callahan Mining Corporation's mine-site at Harborside, Maine, I wish to formally request your coming to the open-pit operations this July to assess the environmental situation as it is, making any recommendations towards proper procedures of restoring the pond areas you think necessary.

As chairman of the Goose Pond Reclamation Committee I personally guarantee your fee as outlined at your office today.

I will contact the Callahan firm's representative Mr. Fred Beck advising of your visit to the mine area on or about the 22nd of July for an on site evaluation of the problems we discussed.

If the Callahan Corporation or the Maine Mining Bureau would like to retain your department for an in depth survey with extended monitoring of the area, I will have to leave that as their decision in the future.

As a committee of an advisory capacity, your recommendations would be appreciated and I'm sure helpful in our work.

Thank you again for your time and consideration of the situation.

Sincerely,

Albert E. Sandecki
Chairman

cc:

Mr. Fred Beck, C.M.C.
Mr. John Gray, Selectman

50 Tanner Street
Haddonfield, N.J.
June 19, 1971

Mr. John Gray
2nd Selectman
Brooksville,
Maine 04617

Dear John:

Received a letter from Sherm Greene yesterday, he had occasion to talk to Hugh Bowden concerning Jerry Durnbaugh's editorial. Possibly he has a little better understanding of the situation.

What would you think of extending an invitation to the public as well as the press on the future meetings?

I am under the impression our group is a working committee in search of answers to technical problems. I'm not against public attendance, but prior to any learning of the feasible courses of reclamation there could be confusion. Another consideration might be that the State officials may resent this approach as they seem to be pressed for time, or unable to attend.

The press invitation is, I think proper and was always my intention (still is). Well, I thought I would write to you and Fred Beck on this point and so you could give it some thought.

We will be at Harborside on the 24th, please stop over any time if you have some suggestions about the above.

Sincerely,



Albert E. Sandeck

CALLAHAN MINING CORPORATION

277 PARK AVENUE · NEW YORK, N.Y. 10017
TELEPHONE: (212) 826-2950

PLEASE ADDRESS REPLY TO:

41 UNION WHARF
PORTLAND, MAINE 04111
TEL: (207) 772-3789

Mr. Albert Sandecki
50 Tanner Street
Haddonfield, New Jersey 08033

June 17, 1971

Dear Albert:

Thanks for your note and copy of the press release. It is unfortunate that we got the bad press coverage. Perhaps Jerry Durnbaugh was in a bad mood that day. In any case, it points up the obvious fact that we've got to improve our "image" with the news media if we hope to have the general reading public sympathetic to our efforts.

I would agree with your suggestion that we notify the appropriate newspapers in advance. This will give each paper an equal chance to interview any of us, if they desire, after the meeting. Also, we can tell them, in the meeting notice, that a press release will be forwarded to all of them soon after the meeting. This method should serve the purpose of equal opportunity for all papers, without creating the effect of "secretive" discussions and "gagged" committee members.

If you and the other committee members are agreeable to this, I will get out appropriate meeting notices when so advised.

I have discussed the matter of funding for Dr. Patrick's study with our staff, and it is Callahan's feeling that a clear-cut agreement should be written up stating the objectives and scope of her proposed study before we would be willing to help pay for her services. This is standard procedure for the hiring of consultants, and there is no difference in this case. It helps clarify what we can expect for our money, and would prevent possible future misunderstandings. I would suggest that she provide us (and perhaps the Maine Mining Bureau) with a proposal stating the objectives and scope of her study. If she would contact us in this regard, it may be that we could help her with numerous details prior to her visit.

Very truly yours,

Frederick M. Beck

/jh

cc: R. Doyle
P. Venno
J. Gray

15 June 1971

Mr. John Gray
Selectman
Brooksville,
Maine 04617

Dear John :

Enclosed are copys of some recent correspondence
in regard to the committment made with Dr. Patrick
at the Limnology Dept. of the Academy of Natural
Sciences.

Sincerely,

Albert

12 June 1971

Mr. John Gray
Selectman
Brooksville,
Maine. 04617

John:

Enclosed is a copy of the release sent to the newspapers serving the area, the release had a covering letter to each editor requesting publication and telling of notice of future meetings.

For your information the release was drawn on the 10th when I returned to New Jersey edited by an attorney to avoid antagonizing any of the new or prospective members of the newly formed committee. The format was advised by a local newspaper editor here in New Jersey.

Unfortunately Mr. Durnbaugh's editorial was at the least rather premature (I think) in the respect that the committee was and still is in a formative stage, I only hope this will not cause the committee members or any prospective members from doing their best to see the Goose Pond area restored.

Mr. Beck called from Portland and read me the text of the editorial and I called Durnbaugh trying to explain the formative nature of the committee. It was a waste of time and money on my part I'm sorry to say.

Sincerely,



Albert Sandecki

P.S.

We will be returning to Harborside on the 24th.

Albert E. Sandeck
 50 Tanner Street
 Haddonfield, N.J. 08033
 Tel. 609 429 1310

(Immediate or
 earliest con

THE NEWLY FORMED GOOSE POND RECLAMATION COMMITTEE HAD ITS FIRST MEETING AT THE CALLAHAN MINING CORPORATION OFFICES ON JUNE 8th. THERE ARE FIVE MEMBERS ON THE COMMITTEE AS FOLLOWS:

- MR. JOHN GRAY, BROOKSVILLE SELECTMAN
- MR. FRED BECK, GEOLOGIST FOR CALLAHAN MINING
- MR. ROBERT DOW, BIOLOGIST SEA & SHORE FISHERIES
- MR. ROBERT DOYLE, MAINE MINING BUREAU
- MR. ALBERT SANDECKI, RESIDENT REPRESENTATIVE

THE COMMITTEE IS SET UP WITH MR. SANDECKI AS CHAIRMAN, MR. GRAY AS VICE CHAIRMAN AND MR. BECK AS SECRETARY.

MR. GRAY AS SELECTMAN WOULD LIKE TO SEE A VIABLE SOURCE OF EXTENDED EMPLOYMENT AND TAX RATABLE LAND IN THE RECLAMATION OF THE AREA.

MR. BECK AS CALLAHAN'S REPRESENTATIVE EXPRESSED THE COMPANY'S INTENTIONS TO COOPERATE IN CARRYING OUT THE RESTORATION WITH AVAILABLE MANPOWER AND MACHINERY AT THE MINE.

MR. PAUL VENNO REPRESENTING MR. DOW AND THE DEPARTMENT OF SEA & SHORE FISHERIES POINTED OUT THE NEED IN CONSIDERING THE MARINE ENVIRONMENT IN THE REFLOODING OF THE POND BEDS.

MR. DOYLE OF THE MAINE MINING BUREAU WILL LOOK INTO THE POSSIBILITY OF FUNDING TO HELP IN THE RESTORATION OF THE OPEN-PIT MINE AREA.

THE BASIC PROBLEM SEEMS TO CENTER ON WHETHER THE MINE'S OPEN-PIT SHOULD BE REFLOODED WITH SALT OR FRESH WATER, THIS ALONG WITH THE ADDED PROBLEM OF TOXIC METAL IONS CREATES MANY QUESTIONS.

MR. SANDECKI AT THE DIRECTION OF THE COMMITTEE MEMBERS WILL ARRANGE FOR A FIELD STUDY TEAM FROM THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA TO COME TO THE MINE-SITE IN JULY. THE ACADEMY'S DEPARTMENT OF LIMNOLOGY HEADED BY DR. RUTH PATRICK HAS FOR TWO DECADES CARRIED ON BASIC RESEARCH IN THE ECOLOGY OF STREAMS, LAKES AND ESTUARIES. THE SURVEY TEAM WILL OFFER THEIR RECOMMENDATIONS AT THE END OF THEIR STUDY.

* *Albert E. Sandeck*
 Committee Chairman

GOOSE POND RECLAMATION COMMITTEE

- Minutes -

Date: June 8, 1971; 1:00 p.m.

Present:

from Brooksville: Albert Sandecki
John Gray
from the State: Robert Doyle
Paul Venno
from Callahan: Fred Beck

The meeting was convened in the offices of Callahan Mining Corporation. It was pointed out that the Mining Bureau had not had a chance to meet due to legislative pressures, and hence had not had an opportunity to choose two representatives from the State.

There was considerable discussion of the salt water-fresh water problem relating to the filling of Goose Falls Pond. Mr. Venno stated that the Department of Sea and Shore Fisheries had had a meeting on this subject, and that they are very concerned about the possibility of heavy metal contamination of the ocean by the flushing action of salt water over the freshly mined rock.

Mr. Sandecki pointed out that it would be possible to remove the dam under the bridge and to use the second dam which divides the upper from the lower Goose Ponds. In this manner there would be some flushing action of salt water under the bridge and hence through Goose Cove, and a semblance of the old falls might be returned. There was discussion of the feasibility of this, and Mr. Beck pointed out the possibility of flooding the Stink Cove area with salt water and yet not allowing the salt water to get into the open pit area. It was finally decided that more detailed information was necessary, and the mine would be asked to provide engineering drawings of the dam and to present a firm estimate of what it would cost to remove the dam. Also, the mine would be asked to estimate what would be involved in making the retaining dike between the upper and lower ponds waterproof. Mr. Beck volunteered to attend to this matter. It was suggested by Mr. Sandecki that the Soil Conservation Service would have expertise in the matter of dams, and should perhaps be consulted on this subject.

The discussion of the necessity for a chairman was raised, and Mr. Albert Sandecki was nominated by Mr. Beck, seconded by John Gray, and approved by all present as the chairman. Mr. John Gray was also nominated and elected vice-chairman with all the powers given to the chairman in Mr. Sandecki's absence. Mr. Beck volunteered to act as secretary and take the minutes.

Mr. Doyle then discussed a problem of concern to him which had not been mentioned previously. This was the matter of the tailings pond. Mr. Doyle felt that the long range effects of contamination by the tailings is a far more serious potential problem than the possibility of contamination from the rock walls of the pit. Some of the engineering problems of the tailings pond were discussed by Mr. Beck, and the fact that the foot of the tailings pond is well above sea level was mentioned. Also, the probability of stabilizing the tailings pond through planting was mentioned. However, the possibility of seepage from rain water through the tailings pond and into the Goose Pond area remains a serious problem worth future study.

Further to the tailings pond problem, Mr. Sandecki mentioned that John C. Bjorkbom of the University of Maine Forestry Experimental Station had offered to give advice free of charge on the reseeding of the mined areas including the tailings pond. Mr. Sandecki will contact Dr. Bjorkbom, who will in turn contact Mr. Beck regarding obtaining samples etc.

The subject of committee objectives and committee authority was raised by Mr. Beck. Possible objectives were mentioned including the following:

- a) provide continuing local employment;
- b) carry some of the town's tax load;
- c) return the pond and adjacent land to something as unobjectionable as possible and aesthetically pleasing;
- d) provide that Goose Cove will not become useless as a harbor;
- e) change to a use and condition which will be as complimentary as possible to adjacent landowners (including sanctuary) and the town;
- f) provide as little pollution or contamination of the ground water or the ocean as possible.

In the matter of committee authority, it was questioned whether or not the committee had authority to hire consultants, to do actual reclamation, to hire contractors, to raise funds, or to recommend actions to specific parties. There was some discussion of the above points, but no consensus as to objectives or authority.

Mr. Sandecki presented ten questions which concerned individuals of the Harborside are have presented to him for answers from the committee. These questions are appended to the minutes, and the answers were arrived at by the committee as follows:

- question 1: yes.
- question 2: yes, or perhaps something even more desirable.
- question 3: yes.
- question 4: yes, but this depends again on the eventual disposition of Goose Pond.
- question 5: unable to answer at this time.
- question 6: unable to answer at this time.
- question 7: unable to answer at this time. However, it was agreed by those present that some form of monitoring is certainly desirable and should be required.
- question 8: yes.
- question 9: Monitoring should be required, but the Sea and Shore Fisheries pointed out that they were unable to provide monitoring services due to severe budget limitations. This will have to be a subject for continuing discussion.
- question 10: this is too complicated a question for a simple answer. There would probably be many agencies authority in various matters. It was pointed out that the Mining Commission has no authority in this regard.

Mr. Sandecki pointed out that Dr. Ruth Patrick of the Academy of Natural Sciences of Philadelphia had been contacted regarding ten points, which are also appended to the minutes as Appendix II. He reported that Dr. Patrick had said that a visit to the mine area was necessary in order to answer the questions presented by Mr. Sandecki. The cost involved would not exceed \$1,000 and might possibly be less. There was discussion by the committee of the usefulness of having Dr. Patrick look at the situation, and there was a consensus that the report presented by Dr. Patrick would be useful. Mr. Doyle pointed out that it was very important to specify in writing the exact type of information required from Dr. Patrick in order that her information be as useful to our committee as possible. The matter of obtaining funds for Dr. Patrick was discussed, and Mr. Beck suggested that the Maine Mining Bureau might consider contributing \$500 towards the endeavor, while he would enquire whether or not Callahan Mining Corporation would contribute \$500, making a pool of \$1000 with which to hire Dr. Patrick. Mr. Doyle pointed out that in order to present this to the Mining Bureau, he would have to have some specific objectives for Dr. Patrick before the Bureau would consent to this. Mr. Beck said that his company would require the same, and the objectives are to be written up by Mr. Beck in the near future.

The matter of the next meeting was raised, and Mr. Doyle requested that more time be provided as advance notice for the next meeting. He mentioned that on June 15 the Mining Bureau will meet and be able to choose two state representatives. These two representatives will set the date of the next meeting at a time convenient to them and hopefully convenient to the other members of the committee. This probably would not be until early in July.

The matter of press releases was discussed, and Mr. Sandeckı felt that all area newspapers should be given committee news simultaneously. It was agreed that Mr. Sandeckı would henceforth release all news items in order to simplify and make consistent the news of the proceedings of the committee to the media.

The meeting adjourned at approximately 4:30.

Respectfully submitted,



Frederick M. Beck
Secretary

RECLAMATION OF GOOSE POND MAY25th

1. IF THE POND AREA IS TO IMPOUNDED AND TURNED TO FRESH WATER, WILL PROVISIONS BE MADE FOR RESTORING IN THE FUTURE FOR THE RETURN OF SALT WATER TIDAL FLOW AT SUCH TIME AS THE TOXIC METAL IONS SITUATION WOULD PERMIT ?
2. WILL GOOSE FALLS BE RECONSTRUCTED UP TO THE ORIGINAL FALLS LEVEL, PROVIDING A FALLS IF AND WHEN THE SALT WATER IS PERMITTED TO RETURN TO THE PONDS ?
3. WILL THE DITCH NOW DRAINING TOWARDS WEIR COVE BE FILLED OR PERMANENTLY BLOCKED AT A POINT AND LEVEL THAT WILL RESTORE THE FULL NATURAL RUN-OFF FROM THE AREA INTO GOOSE POND ?
4. WILL A SLUICeway BE PROVIDED THROUGH THE BARRIER OF WASTE ROCK NOW BETWEEN THE UPPER AND LOWER PONDS FOR RUN-OFF OF EXCESS FRESH WATER OR RISE AND FALL OF SALT WATER IN THE FUTURE ?
5. WILL ROCK AND FILL NOW IN THE POND BEDS BE PUSHED BACK INTO THE PIT TO SOME REASONABLE LEVEL BELOW THE NORMAL LOW TIDE LEVEL IN ALL AREAS OF THE POND ?
6. WILL THE POND BEDS BE FILLED TO HIGH TIDE LEVEL WHETHER FRESH OR SALT WATER IS INTRODUCED ?
7. WILL THERE BE AN AGREED ON BENCHMARK TO MONITOR WATER AS WELL AS WASTE LEVELS IN THE POND BEDS ?
8. IF THE PONDS WILL CONTAIN FRESH WATER WILL THE DIVERSION OF THE NATURAL WATERSHED RUN-OFF WEST OF DYER'S HILL BE REMOVED AT THE ROAD DRAIN WHICH WASHED OUT TWICE IN 1969 ?
9. WILL THE POND AREAS WHEN FILLED BE MONITORED TO DETERMINE WHEN THE TOXIC METAL ION SITUATION HAS REACHED AN EQUILIBRIUM ? BY WHO ?
10. WHAT AGENCY WILL PROVIDE ENGINEERING FACTORS IN REGARD TO RECLAMATION AND WILL HAVE FINAL AUTHORITY TO CHECK ON AGREED RECLAMATION PROCEDURES ?

A.E.S. 5/18/71

FRANK H. BORING, Ph.D.
18 SKYLINE DRIVE
WILLESLEY ~~MASS.~~ MASS. 02101
617/235-8783

19 May 1971

Mr. Frederick M. Beck
Callahan Mining Corporation
41 Union Wharf
Portland, Maine 04111

Dear Fred:

That is a nice aerial photo you gave us showing the winter beauty on the Cape - and the industrial not-quite-so-beauty. You have also done quite a bit of thinking about the water supply problem. I am pleased that Callahan is taking its responsibility seriously. My mother, who is the property owner, is studying your proposal and will be writing you officially. In the meantime I would like to offer the following comments and questions for your consideration and reply.

There are, of course, other alternatives to the three you present. First, would it be practical to consider drilling on the Sanctuary property? Since the State now owns it and has an indirect responsibility for solving the water problem, it might be receptive to an easement. The pipe would have to be laid across Goose Pond before reflooding.

Second, what does your divining rod say about the feasibility of alternate sites on the Boring property between Howard Adman's house and the affected property owners? The distance and disturbance would be much less. Your proposed site implies a rather far-reaching impact of the mining effort on the underground water system.

Two kinds of information would help us understand your thinking as to alternate well-sites. First, what has been the experience of all the wells northeast of us since Callahan started digging? Smith? Greene? Bartelman? Eliot Cuskegg? Malcolm Gray? Did Sandecki have a separate well? Aside from those near Leach's store have any other wells turned salty or lost volume since the digging started?

Second, we could better appreciate your thinking if you would explain some of the cost factors, e.g. the cost (per foot) to drill a well-hole, e.g. the other costs of installing a pump and housing it, e.g. the cost (perfoot) to dig a trench and lay a pipe, assuming not much ledge. Or, how much is the loss if Callahan drills a well that does not work out?

You state that the real cause of the problem is that the open pit is draining off fresh water and thus allowing encroachment of salt water. Ideally, Callahan should fill the pit back up, hoping to return the underground water supply system to its original condition. Would it be possible to seal up the openings in the walls and floor of the pit when Callahan stops digging? If the pit were filled with fresh water, would the problem solve itself? If the pit were filled with salt water, would the situation be further aggravated?

Does the Town also show an interest in ^{local} the water supply problem?

Sincerely yours,

(ORIGINAL WELL)

STATE OF MAINE
DEPARTMENT OF HEALTH AND WELFARE
AUGUSTA, MAINE

PLEASE CAREFULLY FILL OUT THIS INFORMATION FORM, AS IT WILL BE USED AS PART OF YOUR REPORT.

Bottle Number N 77 Date of Collection July 25, 1964 Time of Collection 4:30 P.
Source of Water Well, Spring, Other drilled well Located on Property of Brookside Hotel
Well or spring, how lined? rock, concrete, tile, other _____ How covered? boards, other _____
 other _____ top elevated above ground? Yes, No

FILL IN BOX WITH NAME & ADDRESS TO WHOM REPORT IS TO BE SENT

PLEASE PRINT

Name BRAINYARD L. FARMHAM
Street or RFD P.O. HARBORSIDE
City or Town BROOKSVILLE State MAINE

Kind of pipe used plastic galvanized
 copper lead other _____
Length 60 ft.
If a well, was it dug, driven, drilled
How long ago? 18 years
Depth? 60 ft.

Distance from nearest privy None ft.; stable None ft.; barnyard None ft.; sinkdrain 150 ft.; public or private sewer 150 ft.; septic tank & laterals 150 ft.; garden None ft.; manure pile None ft.; cesspool None ft.; other _____ ft. Nature of soil clay sand gravel other _____ Does the water have an unpleasant odor or taste? Yes No How is water drawn pail faucet other _____
Method of purification boiling chlorination other None Is water used by city or town? Yes No
If yes, give name of water company _____ Any change to supply since last analysis? Yes No If Yes what? _____
Is water used by a School Private home Other _____ or by a licensed establishment such as:
 Boarding Home Eating Place Lodging Place Motel Rec. Camp (Adults) Rec. Camp (Boys' & Girls') Nursing Home Located in city or town of Brooksville

DO NOT WRITE BELOW THIS LINE

314487

WATER ANALYSIS REPORT

Date JUN 11 1964

Serial Number _____

Satisfactory

Questionable

Unsatisfactory

(Indicates sample unsafe at time of collection. The supply is considered capable of being made safe with proper corrections.)

(Indicates continuing unsafe conditions.)

An X in the respective squares furnishes an interpretation of this analysis.

1. The bacteriological examination showed the presence of a small, large, number of dangerous bacteria. (Coliform Group)
2. This is apparently a naturally good water, but the supply needs proper protection and sterilization. After the supply is protected, another sample may be submitted for analysis. Carefully follow directions to prevent contamination of the sample. (See paragraph No. 2 on reverse side)
3. If the supply is protected with a tight metal or concrete cover and wall so that water, light or dust may not enter, as shown on the reverse side, we suggest that another sample be submitted for analysis, carefully following collection directions to prevent contamination of the sample.
4. The chemical examination showed a higher salt content than normal for the section of the State in which the supply is located.
5. The chemical examination indicates a small, a large amount of decomposing organic matter, which may be caused by contact with drainage from a sewer, cesspool, privy, septic tank system or similar type, stable, garden, heavily fertilized land, or similar source of pollution.
6. Location and removal of the sources of pollution, listed in 1, 4 and/or 5, and adequate protection of the supply may correct the unfavorable condition. The amount of the above pollution although abnormal and therefore somewhat detrimental does not appear at this time to be in sufficient amounts to completely prohibit the use of this water. There is a possibility however, as long as the sources of pollution remain, that this pollution may increase sufficiently to make the water unsafe for use. For this reason, if the water is to be used for domestic purposes, samples should be submitted at intervals of not more than six months to determine whether or not the water is deteriorating or improving in quality.
7. Locating and removing the sources of pollution, listed in 4 and/or 5, and adequate protection of the supply may correct the unfavorable condition. After the sources of pollution are eliminated a considerable period of time, estimated from 2-5 years, will elapse before the ground surrounding this water supply may be expected to return to normal and the water become safe for domestic consumption.
8. This water is not satisfactory for use in a School, a Boarding Home, or a Licensed Establishment until necessary corrections have been made and additional tests indicate that it is safe.
9. Lake, pond or stream water used for drinking or cooking purposes needs to be constantly and efficiently sterilized at all times.
10. The examination for lead (use of lead pipe having been declared) showed the presence of a trace, small, large amount. (See lead paragraph on reverse side)

E. W. Campbell

E. W. Campbell, Dr. P.H., Director
Division of Sanitary Engineering

Coliform Bacteria Group						
Chemist	10ml	BG LB	1.0ml	BG LB	0.1ml	BG LB
DDJ						
1						
2						
3						
4						
5						

DO NOT WRITE ON THIS SIDE

Serial No. 314487
 Start of Analysis MAY 26 1964
 Bottle No. N97
 Sequence No. 3
 Truck No. 7

Laboratory Analyses

Results in parts per million

Turbidity	Color	Nitrites	Nitrates	Sediment	Odor	pH	Iron
Chemist L	Chemist L	Chemist L	Chemist DS	Chemist M	Chemist MM	Chemist MM	Chemist
Result 0	Result 0	Result 4	Result 10	Result	Result	Result 7.2	Result

Chlorides	Hardness	Free Ammonia	A. Ammonia	Copper				
Chemist R	Chemist R	Chemist S	Chemist S	Chemist 18-10	Chemist	Chemist	Chemist	Chemist
7.6	10.1	2	0	1009				
6.5	8.7	0	0					
1.1	1.4	2	0					
Result 9.	Result 29.	Result 004	Result 0	Result 18	Result	Result	Result	Result

STATE OF MAINE

Inter-Departmental Memorandum Date April 27, 1971

To Members of the Maine Mining Bureau Dept. _____
From Robert L. Dow, Marine Research Director Dept. Sea and Shore Fisheries
Subject Rehabilitation of the Goose Pond Cove strip mining site

Rehabilitation of this area poses an important heavy metal toxicity problem. Some heavy metals are acutely toxic to marine organisms at various levels above background. Significant and substantial increases in the heavy metal content of soft shell clams in Goose Pond Cove have occurred since the operation of the separation plant at Harborside. The enclosed table shows the levels in soft shell clams before and after operation of the separation plant.

By retaining the dam which excludes sea water, the pit created by extraction of the ore body can serve as a settling basin comparable in many respects to a large-scale tailings pond. Such retention should appreciably reduce the amount of toxic ions being carried directly into sea water by tidal flushing after termination of the mining operation.

Should the dam be removed and free flow of tidewater in and out of the area permitted, it is probable that the level of toxic metals would increase above the levels indicated by 1968 and 1969 monitoring samples.

It can be anticipated that in the near future the Federal Government, through the F.D.A., will establish heavy metal limits for human foods and that the levels of some metals found in Goose Pond Cove will likely exceed these tolerances.

* MEETING *

INTRODUCE THE MEMBERS PRESENT OF THE GOOSE POND RECLAMATION COMM.

THE COMMITTEE WAS FORMED ON THE INITIATIVE OF THE TOWN OF BROOKSVILLE, CALLAHAN MINING CORPORATION AND THE STATE OF MAINE WITH THE PURPOSE TO ASSEMBLE INFORMATION ON THE PROPER METHOD OF RECLAMATION OF THE OPEN-PIT OPERATION, SPECIFICALLY THE OPEN-PITS AND WASTE AREAS, AS SUBJECT TO THE STATUTE RELATING TO CALLAHAN CORPORATION AND SECTION 23, WHICH STATES, "LESSOR SHALL COOPERATE WITH LESSOR, ITS VARIOUS AGENTS AND THE OFFICERS OF THE TOWN OF BROOKSVILLE, HANCOCK COUNTY, MAINE, IN THE PLANNING, FUNDING AND IMPLEMENTATION OF A PROGRAM FOR THE RECLAMATION OF SAID LANDS UPON COMPLETION OF MINING ACTIVITIES HEREON. THE DETAILS OF SUCH PROGRAM, INCLUDING THE FUNDING AND ADMINISTRATION OF SAME AND THE SOURCE OF FUNDS TO ACCOMPLISH THE PROGRAM SHALL BE THE SUBJECT OF FURTHER DISCUSSION AND NEGOTIATION BETWEEN THE PARTIES."

MEMBERS OF THE COMMITTEE ARE:

MR. ROBERT SANDECKI, AS CHAIRMAN

MR. JOHN CHAY, AS VICE CHAIRMAN AND BROOKSVILLE SUPERVISOR

MR. ROBERT L. DOW, MARINE RESEARCH DIRECTOR FOR THE DEPT. OF SEA & SHORE FISHERIES

MR. ROBERT G. DOYLE, ADMINISTRATOR OF THE MAINE MINING BUREAU

MR. FRED BECK, AS SECRETARY AND GEOLOGIST FOR CALLAHAN MINING CORPORATION

THIS COMMITTEE SOUGHT THE ADVICE OF; MR. ROBERT DOW, WHO IS CONSIDERED

AN EXPERT IN BIOLOGY / MR. ROBERT DOYLE, ON INVESTIGATING THE STATUS

OF THE STATE PARKS / MR. FRED BECK, AS CONSULTANT FROM THE CALLAHAN

MINING CORPORATION AND MAINE MINING COMMISSION / MR. JOHN CHAY, SUPERVISOR

OF BROOKSVILLE AND CONTINUING ECONOMIC USES IN THE AREA / MR. ROBERT

DOYLE, ON THE ECOLOGY OF WATERS AND WETLANDS

THE DEPARTMENT OF LIMNOLOGY AT THE ACADEMY OF NATURAL SCIENCES./
BY MR. HAROLD B. STALEY, CONSULTANT ON WATER TREATMENT FORMERLY
OF THE MONSANTO CORPORATION/

BEFORE THE COMMITTEE HEARD THE RECOMENDATIONS OF THE
COMMITTEE and CONSIDERING THE INVOLVED NATURE OF THE PROBLEM
THE COMMITTEE WISHES TO EMPHASIZE THAT THIS MEETING BE CONSIDERED
AS AN INTERIM REPORT TO THE TOWNSPEOPLE AND IS NOT TO BE RECORDED
AS A FINAL REPORT.

AFTER THE BUSINESS SESSION OF THE MEETING IS COMPLETED I WILL
OUTLINE THE RECOMENDATIONS OF THOSE CONSULTED TO DATE. THE MINUTES
AND THE RECOMENDATIONS OF THOSE CONSULTED TO DATE DO NOT CONSTITUTE A
COMPLETED SET OF RECOMENDATIONS.

MR. JOHN GRAY WILL THEN ACT AS MODERATOR FOR QUESTIONS YOU
MAY HAVE FOR THE COMMITTEE.

MR. BECK, WOULD YOU READ THE MINUTES PLEASE :---

DOES THE COMMITTEE APPROVE THE MINUTES OR ARE THERE ANY SUGGESTED
ADDITIONS OR AMENDMENTS TO THE MINUTES ? -----

IS THE COMMITTEE READY TO ACCEPT THE MINUTES AS AMENDED ? --

I WILL NOW READ THE RECOMENDATIONS GATHERED TO DATE BY THE
COMMITTEE ON THE SUGGESTED RECLAMATION PROCUDURES : ---

* RECOMENDATIONS *

* RECOMMENDATIONS *

TO FILL AND SEAL AS MUCH OF THE OPEN-PIT BY MUD AND ROCK WASTE NOW EXISTING IN THE POND BED BEFORE FLOODING THE PIT AREA. TO EMPLOY NATURALLY EXISTING MATERIAL TO ACT ON THE TOXIC METALS, IRON AND EXPOSED SULFIDES WHEN THE WATER ENTERS THE PIT AREA. TO BRING MUD AND WASTE ROCK IN THE POND BED TO SOME CONNECTED APPROVED LEVEL BELOW NORMAL SALT WATER LOW TIDE LEVEL. THE TIDE AND HIGH WATER BENCHMARKS PRIOR TO THE MINING ACTIVITY ARE ON FILE WITH THE CALLAHAN CORPORATION. THE PURPOSE WOULD BE TO ELIMINATE FUTURE NAVIGATIONAL HAZARDS.

THE PRESENT CONCRETE DAM TO BE RETAINED UNTIL A BALANCE OF NORMAL LEVEL IS REACHED WITHIN THE PIT AREA'S WATERS AND WATERS OF GOOSE COVE. THIS WILL REQUIRE CAREFUL MONITORING. A STATION FOR THE MONITORING MAY HAVE TO BE OBTAINED FROM AN UNAFFECTED AREA SIMILAR TO THAT OF GOOSE COVE BEFORE DRAINING OPERATION BEGAN.

POSSIBLE REINFORCING ^{OF} THE SECONDARY DYKE IN THE LOWER POND BED AND INSTALLATION OF A FLOOD CONTROL GATE TO ALLOW SAFE WATER INTO THE PIT AREA AND TO CONTROL OUTFLOW OF THE PIT WATERS IN THE EVENT OF HEAVY RAINS. AN ALTERNATE METHOD TO FLOOD THE PIT WOULD BE THE USE OF PUMPS.

DAMMING OF THE WEIR COVE OUTLET TO A PROPER LEVEL TO ^{prevent} SOUTHERLY FLOW OF ANY DRAINAGE. TO PREVENT CONTAMINATION OF THE WEIR COVE AREA.

REPAIRING OF THE WESTERNLY WALL OF THE PIT FROM MAIN DAM TO FACILITATE AN IRREGULAR AS OPPOSED TO A SMOOTH SURFACE. SAFETY CONSIDERATION FOR ANYONE FALLING INTO THE PIT AREA.

GRADE THE WASTE ROCK DUMP AREA TO A COMBINATION OF SLOPE AND TERRACES TO FACILITATE REVEGETATION AND PREVENT EROSION. DEGREES OF SLOPE SHOULD CONFORM TO THOSE RESEARCHED BY THE U.S. DEPARTMENT OF AGRICULTURE.

ACROSS THE TAILINGS POND TO STABILIZE DOING NECESSARY GRADING TO PERMIT DRAINAGE AND VEGETATIVE COVER.

THESE EIGHT RECOMENDATIONS REPRESENTS THOSE GATHERED BY THE COMMITTEE TO DATE. THE COMMITTEE WILL ARRIVE AT A SET OF FIVE RECOMMENDATIONS AT A MEETING IN THE NEAR FUTURE (HOPEFULLY)

ALL OF THESE RECOMMENDATIONS ARE SUBJECT TO AVAILABILITY OF FUNDS:

CALLAHAN MINING, HAS EXPRESSED AN INTEREST IN RECLAMATION OF THE MINED AREA. THEIR FUNDS ARE LIMITED, BUT THEY HAVE MEN AND EQUIPMENT AVAILABLE FOR SUCH WORK. MR. RECK AS A MEMBER OF THE MAINE MINING COMMISSION IS LOOKING INTO FUNDS FOR RECLAMATION EXISTING WITH THE MAINE MINING COMMISSION.

MR. ROBERT DON, ^{1978 CONTRACT} DR. CAWLEY, DIRECTOR OF THE FEDERAL WATER QUALITY ADMINISTRATION AND THE OFFICE OF WATER RESOURCES IN REGARD TO BASIC RESEARCH GRANTS, UNDER EITHER TITLE 1 (no matching funds) or TITLE 2 (matching funds).

MR. CARL ROGERS, ON A COUNTY LEVEL IS TO SEEK FUNDS THROUGH THE E.D.A. AS TECHNICAL ASSISTANCE GRANTS ON THE DEVELOPMENT OF COASTAL MINING RESEARCH DATA.

WHAT HAS BEEN DONE TO DATE BY THE GOOSE POND RECLAMATION ^{SELECTED} MR. JOHN GRAY, BROOKSVILLE WILL ACT AS

FOR ANY QUESTIONS YOU MAY HAVE FOR THE COMMITTEE.

March 11, 1971

Mr. Joseph T. Hall, President
Callahan Mining Corporation
277 Park Avenue
New York, New York 10017

Dear Mr. Hall:

As Fred Beck has told you, we are extremely interested in the eventual disposition of the open pit operation at Harborside. As architects, we are interested both because reclamation of the area represents a potentially interesting job, and because it could be a valuable demonstration by industry for environmental interests. The unique characteristics of the property might well lend themselves to an economic and aesthetic utilization of the property when your mining operation ceases.

Having visited the mine with Fred and talked with him about it, it seems clear that there is precedent for some of the problems which will be encountered when the present operation ceases, but that there is little precedent for some of the solutions to those problems such as salt water encroachment and tailings precipitate.

It occurs to us that since you have an interest in doing something in this field, you may need the help and ideas of someone involved with the land use industry. We have given some thought to the general scope of the problem and feel that the following outline represents a necessary and realistic course of planning by phases. Each phase should be approached separately and in view of the information provided by the preceding phase. Each phase listed indicates a very generalized task and goal, and the actual work required by succeeding phases is not predictable until those phases are reached.

- 1) INPUT PHASE to include compilation and evaluation of all pertinent statistics and data with a listing of possible alternative uses.
- 2) EVALUATION PHASE to include research and evaluation of the listed alternatives chosen by the company and contact with selected parties to determine interest. Initial decision on course of action.
- 3) PROGRAM PHASE to include coordination with interested parties (possibly Callahan) and listing of their requirements to insure ultimate practical and economic feasibility. Repeat with another party if necessary.
- 4) PLANNING PHASE to include actual technical development and planning of the project.

More specifically, we would recommend the following work for the INPUT PHASE.

- 1) The gathering of statistics and data on the following general levels:
 - a) Regional- Penobscot Bay, Hancock County area including transportation, population, education, industry, climate, recreation and physical features.
 - b) Local- Cape Rosier, town of Brooksville area including the headings under (a) as well as local government, labor force, and financial resources.
 - c) Specific- The property owned or leased by Callahan Mining Corporation, including physical characteristics and description of the dynamic physical systems involved, micro-climate, uniqueness, and nearby neighbors.
- 2) The evaluation of this data as it relates to regional, local or specific areas.
- 3) A listing of all possible alternative uses as the first step in a process of elimination.

We propose to assist you by assembling this information and issuing a report which will give you a basis for moving ahead with the evaluation phase. Our fee for this service is not completely determinate, because the amount of work necessary is unknown until the work is actually done. Consequently, professional time would be charged at the rate of \$25 per hour plus expenses, not to exceed an upset limit of \$4,000.

We feel that a preliminary time estimate should allow two months for the preparation of the report.

We are looking forward to working with you on this project which we feel has great potential, but requires careful planning. If you have any questions regarding this proposal, please contact me at your convenience.

Very truly yours,

Paul S. Stevens, A.I.A.
Architect