April 12, 1954

BRADLEY CONTAINER CORPORATION

REPORT TO THE DIRECTORS

CONFIDENTIAL

General Historical Introduction

As this is the first report since the organization of the Company, I start with a little history, and also emphasize that this report is of an informal nature. It does not propose to cover everything that has been done, and in writing it I allow myself the privilege of prediction where I believe prediction will add to an understanding by others. This is done with the expectation that predictions so made will not be used as measuring sticks in discussing later realizations. If they are so used, future reports will be written in a more formal and conservative tone.

After the preliminary plans for financing the Company were arranged, I went to Europe from October 10 to October 22, 1953. In Paris I completed with the lawyers for the licensors (Unitubo and Tuboplast) an amendment to the original license contract providing for guarantees for delivery of pilot machines, drawings and information, and covering a few minor changes in the original license as proposed by Mr. Raymond Adams. The initial down payment was then made and the license became operative, so that we are now exclusive licensees for the United States and Canada.

About a week was spent at Vevey where I met Halbach, who had been in Germany on another job. After arranging for purchase of machinery for an initial pilot line, we then went to Italy and spent a day in Milan with Pirelli. From there we went to Germany, where we visited the German licensee, Renolit, and Vereinigte Deutsche Metallwerke A.G., the largest manufacturer of aluminum collapsible tubes in Germany, who has just become a sub-licensee of Renolit under their Tuboplast license. We also visited Herlan, and purchased from them a new type of collapsible tube printer, especially designed for Tuboplast tubes. This is arranged for automatic loading and automatic punching, and carries attachments for applying caps automatically while the tubes are being printed. From there I went to R. H. Windsor, Ltd. in England and arranged for the purchase of our first extruder. This has long since been delivered and a second will be delivered this week, with a third to come later in the spring.

Upon our return, a lease was negotiated with Maynard Industries, Inc. for two floors (each 100 x 600 feet, or a total of 126,000 square feet) of usable manufacturing space, plus about 3000 square feet of inclosed truck loading space and approximately 30,000 square feet of ten-foot clearance basement space, lighted on one side. We do not plan to use the basement space, nor do we pay rent for it, although we are privileged to use it as if it were a part of the principal space.

This lease calls for the payment of $48,000 yearly

rent for ten years. The lease carries an option for us to renew in ten years for another ten years. The lessor is to heat the building and provide fundamental watchman service. He insures the building. The lessor is obligated to turn over the first year's rent to us to spend on repairs, and we in turn agree to spend at least $26,000 on additional leasehold improvements. (As was originally planned, the total of our leasehold improvements is three times this.) As part of the lease we also have a substantial parking lot across the street, and the right to pump large amounts of cooling water from an 18-inch valve in the basement connecting with an adjacent mill pond, which gives us an ideal source of cheap cooling water.

Our option to buy the entire five-story building, of which we are renting the basement and two floors, provides for us to purchase at any time after three years for $200,000. This runs from the end of the third year to the expiration of nine years. If we desire, we can buy during the first three years by repaying the unamortized portion of the $48,000 to be spent by the lessor for repairs and improvements. Our initial plans call for the renting of only one-half of the floor space for which we are now obligated. At present there is no need for the additional space, which we originally thought was going to house Globe. Consequently, we have available for other than contemplated needs of Bradley Container Corporation, or for leasing to others, 52,000 square feet of merchandising space on the second floor. This is the residual of the 63,000 less 11,000

square feet which we have converted into space for offices and laboratories.

For the immediate present, it seems inadvisable to make serious efforts to lease this extra space, and it may be found desirable to use about one-third of it for a tube and bottle custom-filling and tube sterilizing facility. However, if a really desirable tenant is found, I shall probably recommend sub-letting about 31,000 square feet. Since the signing of the lease, a complete set of offices has been built into 6000 square feet of the second floor and 5000 square feet have been reconditioned for use as laboratories.

The old mill turbine house across the end of the building, which is about 42 feet wide and some 85 feet long, with a 42 foot height and a crane, included in our lease, has been converted into an enclosed truck entrance which will serve simultaneously two trailer-trucks and one large pick-up truck. Loading can be carried out either by modern conveyor methods direct from the storeroom and shipping room, or by fork lift truck and pallet.

Shipments from freight cars on a leased portion of the mill siding can be handled over a 20 foot ramp to a loading platform. Arrangements have been made for an employee entrance, as well as an office entrance, entirely independent of the mill property and direct from adjoining streets. About 4000 square feet of space on the lower, manufacturing floor has been reconditioned and equipped for locker rooms for men and women, and for a small

first-aid room with its own adjoining toilet. In the center portion of the first floor, and dividing the manufacturing half from that which will be used for warehousing, correlary operations, shipping, and locker rooms, two modern toilets have been installed, together with a glassed-in, open top factory office, a spiral stair to the laboratories above, a mechanical supply storeroom and a small maintenance machine shop. About one-fifth of the first floor in the manufacturing area has been replaced with a new concrete floor.

At the start of any operation such as those of Bradley Container Corporation it is impossible adequately to foresee the future. However, it is believed that the lay-out of extruders, headers, and printers, together with the factory machine shop to serve them, will be as nearly perfect as could be accomplished in a completely new building. It is our present thought that this space will be sufficient for any requirements incident to growth in Maynard, and that by the time the first floor manufacturing space is completely used, the company will want to grow in other locations, which will permit diversification of fire and labor riskes, as well as give better service and lower transportation costs to selected customers.

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Present Situation

As of today we have installed pilot equipment with which we are learning the fundamentals of the manufacturing processes we are to use, and on which we are training the first of our operating personnel. Two additional extruders, five Vevey headers and four Herlan printing presses, together with miscellaneous auxilliary equipment incident to the use of all these, and one header (a #510) which we are having built here, will be coming in within the next few weeks and should go into operation during May and June. The accompanying charts show the approximate estimated production of these units up until July 1, in terms of numbers of units per week and total cumulative production. Needless to say, the non-recurrent expenses incident to training personnel, removing mechanical kinks, eliminating wastage, etc. will more than eat up any earnings potentially realizable from sales of this contemplated production.

In addition to the above, we are designing and having built for us two headers, each of which will use the same unit operating concepts as are in the Vevey machines, but which by multiplying stations will turn out five to six times as many tubes per minute. One of these will make from the smallest tube up through 40 mm diameter tubes and bottles at speeds of from 50 (we hope for a minimum of 60) per minute to 90 or 100 of the smaller tubes. The

Present Situation -

other will only be used to make tubes and bottles from 50 mm to 100 mm in diameter, at speeds of from 15 to 30 per minute, depending upon size.

After taking into account the price ranges at which the products of these two machines will sell, it is estimated that each of them will make tubes and bottles having a sales value of from $400,000 to $600,000 per year.

It is our hope that each of these machines will be ready for initial breaking-in trials before the end of July and in effective operation in September. The operation should cross the break-even point late in the last quarter, if this hope is realized.

To arrive at the above, a number of goals must be met simultaneously. A discussion of these follows.

Goals to Be Met

The problems under consideration and which must be carried to successful conclusion in orderly fashion have been studied enough so that it seems safe to say that they are all soluble by the hard-hitting fine organization, which is already welded into an effective team. They comprise the following:

1. Design, installation, breaking-in and effective operation of three basic groups or lines of extruding and heading equipment.
2. Instilling in an adequate number of prospects

Goals to be Met -

a desire to use and a willingness to buy our products.

3. Critical study of the suitability of our tubes and bottles for the products which prospective customers wish to package, and avoiding more than a bare minimum of attempts to package products which should not be put into the tubes and bottles we now have for sale.

4. A design of the various caps, spray devices, bottle bottoms and various auxilliaries necessary for our package and arrangements with others for adequate supplies and molds for these devices.

5. The design, development, building and thorough testing of filling and sealing equipment necessary for filling and sealing of:

   a. Very small tubes with liquids and ointments.

   b. Normal (3/4" to 1 1/2" diameters) collapsible tubes with ointments, pastes, etc.

   c. Small pinhole dispensing type medium wall tubes with powders, such as sulfa powders, etc.

   d. Medium sized squeeze type, pinhole dispensing tubes and bottles up to 1 1/2" diameter with powders.

   e. Bottles from 1" up through 1 1/2" with liquids.

   f. Heavy wall bottles and thin wall

Goals to be Met -

tubes from 1 1/2" up through 4" diameter (i. e. up to three pints) with liquids.

g. Demonstration of these and sterilization procedures incidentto their use. (This later will be discussed in connection with recommendations for the installation of a custom filling station.)

Further Discussion of Problems

The preceding outlines the general nature of the problems we face. Perhaps the following will give a more graphic picture of some interesting details incident to a few of them. The order in which these are discussed is in no way related to their importance.

1. Plax have gone way beyond the Europeans in the development of atomizer devices which give a fine misting spray with a minimum of large drops. Some of these are covered by narrow design patents. We face the problem of developing alternative designs and getting them into operation as soon as possible.

2. We have had to decide whether or not to use on our containers the metric threads found on the European designs and how many turns we will provide for locking home our caps. Using a much larger neck and faced with other problems, Plax developed and concentrated on a heavy rounded special thread which is supposed to lock home with a minimum number of turns. There is little in favor of our using such a thread, and much against it.

3. Plax has developed some very clever mechanisms for dispensing single drops. One such is found in the closure used for packaging "Sweeta" in a Plax polyethylene bottle.

We may develop similar devices, but have found that a very fine, inexpensive, long capillary permits the controlled dispensing of one drop at a time at the option of

Further Discussion of Problems

the user. As developed for samples of "Sweeta", which were taken to the Packaging Exposition, this dispenser suffered from a tendency to deposit sticky syrup over the hands of other than a skilled operator. Our Mr. Root has already developed what appears to be a complete (and incidentally patentable) solution to this problem. Samples have been made and sent to Squibb. It should be inexpensive. Without the one-drop feature, this package should be in great demand for cheaper fluids such as eyedrops, oils, etc. With the Uni-Drop feature, it should be in tremendous demand for many medicinals, and products such as Sweeta, cosmetics, and so forth.

4. The organization in Vevey, Switzerland, feels very optimistic as to the possibility of making tubes of polyvinyl chloride (PVC) and have made samples. We will tackle this problem in the very near future. I have great hopes of an early solution, and feel that the company should not spend much effort on packages to hold perfumes and aromatics until we know the possibilities of this development.

Manufacturing

An analysis of questions pertaining to speed of operation shows, among other things, the following:

1. With the labor costs which seem realizable and proper for the Maynard area, and the development of high speed headers, it should be possible to realize or better the costs previously estimated. Present indications are that there is an abundance of good female labor in Maynard, but there is some uncertainty as to whether or not there is any large supply of top mechanical labor. Experience will tell the story.

Manufacturing - Sales

Before leaving this subject, the situation in regard to investment costs and profits can be summaized by saying that there is no present indication that the earnings envisioned in the initial report cannot be realized. However, the original report should have provided for about $100,000 worth of additional equipment of a general usefulness. It is my fault that it did not. The need for this, plus the loss incident to paying rent on the now unused space provided for by Globe, would be serious if it were not for the additional money provided by capital.

Sales

The establishment of sales policies and procedures will necessarily take the form of:

a. Preparing catalog matter and price sheets

b. Initial promotional and selling approaches

c. Determining how we can sell as many big packages as possible without unduly neglecting the obvious market for small tubes. (This is desirable because of the lower ratio of capital expense to dollar sales at equal profit margins found in the larger tubes).

In connection with this question of sales, we are glad to report that our packages were very well received at the Packaging Exposition in Atlantic City last week. Many prospects spent time with Griffith and his staff. Many returned with associates for further discussion. Many arranged to call on us here, or to have us call on them.

Sales - Custom Filling

All of the discussion emphasized the desirability of a filling station operation for the demonstration of the sealability of our products, and as a service to those who want to run market tests, as well as to those who may wish to have us fill and seal for them until they are equipped to do their own.

Until recently we had hoped to be able to avoid the headaches incident to the management of a custom filling station and the lower earnings per dollar of capital investment associated with such an operation. However, we now realize that we must face much of the fixed capital investment either as part of a filling station or as laboratory machines necessary to prove the filling and sealibility of our units for each of the uses listed earlier in this report.

The advantages of the proposed custom filling station are that it will not only enable us to perfect sealing machines, and test the suitability of various filling machines, but it will also permit filling sizable orders with which customers can make market survey studies, as well as filling tubes for customers while they are awaiting delivery of the machines they will ultimately use. In addition, there will unquestionably be customers who will be only too glad to use permanently the facilities of any well-run custom filling station we may set up. (We have been told that approximately 15% of all the packages used in the cosmetics industry are filled by custom filling stations.)

Custom Filling Station

Since we can make the necessary leasehold improvements incident to modernizing factory toilets, install a washable and drainable floor in four bays, put down a mastepave sanitary floor in the balance of the area, and light and wire a custom filling station for approximately $10,000, I recommend that we set up a custom filling station in space now available on the second floor and have carried the money necessary for this step in the request for appropriations to be presented later.

In addition to the above situation, we also find that in another field, High Voltage Engineering Corporation of Cambridge is in much the same position as we are. They know that they can sterilize empty packages and certain filled packages and assemblies by the use of a high voltage electron beam scanner they have developed. But to sell machines for this work (the smallest machine sells for over $55,000) they would like to have a commercially operated unit available for inspection by prospects. They also have found that for certain uses it is possible to make a handsome profit doing customer sterilization and they believe that the business they are now doing in this line will grow to be too large for them to handle conveniently in facilities which are dedicated to development work.

It would be of value to us to have one of their units easily available so that we could use it to sterilize trays of empty BRACON tubes packaged in polyethylene bags,

as well as small tubes filled with ointments and other drugs which have to be delivered fully sterilized from our filling station. Such a use by us would give an additional load to the unit and distribute over a greater volume of business the high depreciation cost necessarily incident to such an operation. Put another way, it would seem that a 50-50 owned high voltage sterilization company operating in part of the space we now control, and using jointly with us certain basic facilities, should be a powerful sales tool for both BCC and HVE and should in addition earn money by:

1. Sterilizing assemblies and treating products for others
2. Carrying our research programs of interest to HVE and paid for by them
3. Making specialties which are too small to attract the interest of large companies, but have high enough profit margins to make them worth looking at as potential additional earners

Put still another way, it is believed that the company will earn money and at the same time serve the selfish interests of both of its shareholders.

In view of the above situation it is recommended that the Directors authorize the President to enter into negotiations looking toward the formation of a company jointly owned on a 50-50 basis with HVE to carry out the purposes described. It is contemplated that each company subscribe $15,000 toward the working capital of the new company. In addition, and in return for the same number of shares of the company as would be received by HVE in return for its furnishing

a high voltage electron scanning beam unit, it is proposed that BCC subscribe $10,000 (to be used for miscellaneous fixed assets and leasehold improvements incident to the installation of a high voltage generator,) and place at the disposal of the new company, free of rent for a period of years designated, manufacturing and storage space, and joint use of specified facilities, as well as the services of the telephone operator and receptionist.

It is contemplated with such an arrangement a management contract would be entered into under which BCC would operate the unit in accordance with some plan agreed upon (presumably a percentage of billings) plus out-of-pocket costs, and that there would be an agreement permitting each company to call for up to one-third of the the of the unit, for operations incident to its own operations or development and experimental work on terms no less favorable than those offered to others. In the absence of other agreement between the parties the price of such work would call for a charge of $10 per hour to cover depreciation and obsolescence and $5 per hour to cover profit, over and above management fees and out-of-pocket expenses.

Future Product Research

All of you realize that the polyethylene tubes and bottles which we are to make suffer certain disadvantages.

1. They breathe oxygen and therefore cannot be used to hold products such as unsaturated oils, which go rancid under the influence of oxygen.

2. They transmit certain aromatic flavorings and perfumes and are thus unsuitable to hold most dental creams and many highly perfumed products.

3. Certain oils go through them.

4. They are attacked by certain aromatic solvents.

Despite the above disadvantages a tremendous field is open to them. But despite the magnitude of this field, it would be criminal to neglect any promising leads to the development of variants which, though slightly more expensive, would permit packaging a far wider range of products. Experiments have already produced PVC tubes by the Tuboplast process. Such would greatly broaden the line. It has been found that they can be sealed by the identical process and equipment used for BRACON tubes.

An expenditure of little more than the time of one man for a few months should permit introducing for long term product tests, tubes not only suitable for many industrial products, but also for holding dentifrices, food stuffs, etc. not now packageable in BRACON containers.

There is evidence that the same could be done with other plastics and if necessary with BRACON tubes lined with readily available coatings. However, such coatings would necessitate the development of quite an elaborate line of machinery and it is my present thinking that we should drive toward thorough testing of our standard tubes made from other plastics by essentially our

Future Product Research

present equipment and limit our work with coatings to that necessary to know what might be done and to be sure that no valuable patentable opportunities are overlooked.

Over and beyond the above will be an ever expanding field of product development based upon the use of our packages, methods and techniques, and accessories thereto.

Financial

Before considering figures to be presented by the Treasurer, and then taking up suggested votes incident to recommended appropriations, the following general comments may lead to a better understanding of the company's program and financial position.

Current expenses for research and development and providing of scaling equipment to aid the sales program are very much higher than was originally contemplated by me. The reasons for this lie in the fact that we have been able to put together in record time a far harder hitting, more effective mechanical research development and design unit than I had considered possible. This group under Prahl, as well as Halbach's organization in production, have carried the mechanical development program along so much faster than I had ever anticipated that it seems best to push through in the balance of this year what I had looked upon as a two to two and one-half year program. Doing this will not only make possible sales in a great many different fields at a time when blown bottle manufacturers and potential tube competition are floundering, and merchandizers are anxious to meet the only recently developed demand for "a new dress" for their products, but it will also put us in a favorable position where we will have our full energies available to meet a foreseeable snowballing of product demand.