#### May 7, 1984

A special Town Council meeting was held on May 7, 1984 for the purpose of:

- (1) Appointment of a committee to research more cost effective measures regarding town owned vehicles. Page 1.
- (2) Appointment of liaison committee to The Wallingford Board of Independent Insurance Agents. Page 1.
- (3) Approval of minutes of 4/24/84 and budget workshop minutes of 4/11/84 to 5/2/84 which was tabled until 5/8/84. Page 2.
- (4) Discussion and possible authorization for Mayor to negotiate with ORFA, a resource recovery system. Pages 2 to 16.

Chairman Robert Parisi called the meeting to order at 7:35 p.m. The roll was called by Rosemary Rascati, Town Clerk, and the following Council members were present: Bergamini, Diana, Gessert, Killen, Krupp, Parisi, Polanski and Rys. Mrs. Papale was not present. Mayor Dickinson was also present for the meeting. Following roll call, the pledge of allegiance was given to the flag. Present from ORFA, 800 Kings Highway, Suite 216, Cherry Hill, NJ 08034 were Harvey Kaye, President and J. Ronald Denney, Vice President of Sales and Marketing.

Mr. Walter J. Mordarski, 46 High Hill Road was present at the invitation of the Town Council.

Mr. Parisi appointed Marie B. Bergamini, Raymond J. Rys, Sr., Albert E. Killen, Kevin E. Gannon of Roberts Chrysler Plymouth, Inc., and Mr. Fred A. Valenti, Jr., Valenti Auto Sales, Inc. to research more cost effective measures regarding town owned vehicles.

Mr. Gessert moved appointment of the above committee, seconded by Mr. Polanski.

Vote: Unanimous ayes; motion duly carried.

Mr. Diana asked how the selection of the auto dealers was made and Mr. Parisi stated he picked them because of their expertise and the fact that someone from the private sector would be beneficial. Mr. Gessert pointed out that Messrs. Gannon and Valenti would best be able to evaluate trade in values of vehicles.

Mr. Parisi appointed Iris F. Papale, James A.G. Krupp and Edward G. Polanski as liaison committee to The Wallingford Board of Independent Insurance Agents.

Mr. Gessert moved establishment of the above committee, seconded by Mr. Rys.

<u>Vote</u>: Unanimous ayes; motion duly carried. Mr. Gessert moved to table acceptance of minutes of 4/24/84 and budget workshop minutes of 4/11/84 to 5/2/84 until the meeting of 5/8/84 due to the fact that the entire Council had not completed reading them. This motion was seconded by Mr. Rys.

Vote: Unanimous ayes; motion duly carried.

Mr. Gessert read and Mrs. Bergamini moved the following resolution:

WHEREAS, the Wallingford Landfill is nearing capacity, and

WHEREAS, the cost to transport our refuse to an out-of-town site would be a prohibitive burden on our taxpayers, and

WHEREAS, the town should look at all available and practical methods of disposal, and

WHEREAS, the ORFA process has been tested, produces no emissions, results in a useable by-product, and is ecologically sound, , **b**.,

RESOLVED, that the Wallingford Town Council authorizes the Mayor and his designee, along with three members of the Council, appointed by the Council Chairman, to negotiate with ORFA and any other communities to develop a plan to handle Wallingford solid wastes.

Mr. Gessert seconded the motion.

Mr. Gessert introduced Mr. Harvey Kaye, President of ORFA Corporation of America and Mr. J. Ronald Denney, Vice President, Sales and Marketing.

Mr. Harvey Kaye presented the Council with some background on ORFA. ORFA Corporation of America is a public company that trades over-the-counter with an excess of 3,000 shareholders in the United States. ORFA owns the exclusive sales, marketing and licensing rights to a technology for waste treatment and conversion called the ORFA system. The ORFA system was created over a 13 year period of time by a company called Chemische Fabrik Uetikon and ORFA, particularly Uetikon, is a 166 year old company, considered world class, that operates facilities throughout Switzerland and operates plants in many parts of the world, was a contractor to the U. S. space shuttle program and have been called in as consultants to some of the major chemical corporations in the world in terms of developing processes and technologies for handling specific problems. What we present to you today has been in the development and research stage for approximately 13 years. Mr. Kaye (continued):

The ORFA system started with the understanding of what was wrong and the problems involved with all of the other waste technology systems that had been promulgated up until that time. The European community has been very concerned with waste technology and particularly concerned with their environment because of limited land masses, etc.

The Swiss technology was developed with three things in mind:

- To develop a process that would recognize the fact that the resources of the earth are finite rather than infinite. There is much that is good and valuable in the trash stream.
- (2) To do it in such a way that it would be friendly to the environment. Destroying the atmosphere and ground water with pollutants was something the Swiss could not tolerate.
- (3) The system had to be economically viable.

After 13 years, all of the goals have been accomplished by the Swiss. Mr. Kaye has been to Europe in excess of 5 times, once with Senator John Donley, State Senator from Colorado, who is by training a pesticide attorney and extremely concerned with environmental issues. We have letters from him which we would be happy to leave behind.

Incidentally, Mr. Kaye indicated he did have to make a brief caveat and that is to say that perhaps some things discussed tonight are things that have not been disclosed to the public as of yet. There may be occasion to discuss these things because you may have a need to know certain facts. As a public company, I have to tell you that that may be considered inside information and you must be very cautious as in terms of how you handle information that you may come about.

The realities are that the ORFA system is today state-of-theart. During the course of time that ORFA has been marketing its process which is approximately 9 months, we have signed letters of intent and agreements for in excess of \$150,000,000 of ORFA facilities, to be built in many parts of the country. We have purchased a parcel of land in the City of Philadelphia, a 7 acre parcel of land with the intention of building a 300 metric ton a day ORFA facility. We are now in the process of going through a complete DER (Department of Environmental Resources) similar to DEP requirements. We have also announced an agreement to build 150 ton facility inVoorhees, New Jersey, South Jersey, and are currently filing all the appropriate documentation with DEP. There have been many projects that have been announced, all in various stages of completion prior to beginning of construction.

Mr. Kaye noted that landfill capacity in Connecticut is at a premium and pointed out that the entire gross national product of this country will ultimately become trash and garbage and this trash and garbage is being disposed of the same way today as was done 4,000 years ago. Mr. Kaye (continued):

Details were presented of the ORFA method of trash disposal, all of which are included in the 24 page attachment to these minutes.

Mr. Kaye further stated that ORFA is prepared to invest its own money and its own financial resources behind this process. The ORFA system requires a time of 12 to 14 months from the time of permitting until the time a plant is up and operating and processing trash. If an existing building is used, it can probably be built sooner. Major incineration systems require 3 years to be built and use a regionalized system with trash from everywhere and this regionalized approach is failing everywhere in the U.S. Broward County, Florida has tabled their regionalized incineration approach. The reason this approach is failing is two-fold: (1) NIMBY which means not in my back yard--don't dispose of the trash here; do it over there and (2) it's very difficult for elected officials to face the reality of a 150 foot smokestack with many aspects of long-term effects not yet known.

ORFA is suggesting that they are willing to finance the plan totally and in order to do that, there are certain things ORFA must have. The first is a commitment of a trash stream at a mutually agreed upon and negotiated tipping fee. Second of all, the contract for the sale of end product must be secured. The realities are that this is totally ORFA's responsibility because that is necessary for the financing of an ORFA plant. There have been substantive conversations with a great many Fortune 500 companies and other companies and the sale of the end ORFA derived product is the easiest situation faced as far as ORFA is concerned. It is made clear that that is totally ORFA's responsibility to supply the contracts for the sale of the end product. ORFA will undertake all the requirements necessary to satisfy the State of Connecticut DEP. All of the documentation put forth for the state will be provided for your review and consultation.

Once the first 3 or 4 plants are on site and functioning, the reality is that ORFA will not be financing its own plants because the municipalities that will require an ORFA plant will pay for them. At this time, ORFA feels it is incumbent upon them to assume whatever financial risk required to make sure the process is here.

Mr. Kaye read portions of page 24, attachment to these minutes and a portion of page 23 of attachment stating that Zurich Insurance Company is prepared to give its full insurance coverage to ORFA plants anywhere in the world. It was noted that the Swiss EPA and environmental standards are far greater than anything in the United States.

J. Ronald Denney, Vice President of Sales & Marketing, ORFA -As we began to market the process here in the United States, in the very early stages we received a call from a gentleman in Hartford who in fact is married to a Swiss person who is familiar with many people involved with Swiss companies and suggested that we should know more about municipal solid waste in Connecticut. In particular, there were accounts of a crisis situation in the North Haven-Hamden area and it might be well to visit this area.

Approximately 4 months ago, we became knowledgeable about the North Haven Landfill situation and the bulk site at the Hamden tire disposal area. We kept coming back at the request of the townspeople and made a presentation to the Town of North Haven where there was great interest. We received a letter from the First Selectman of North Haven stating if at all possible, he would like to see an ORFA process be his solution to the problem.

This led to discussions with CRRA, DEP and we've received calls from many others in the state. We have attempted to honor those calls and meet with selectmen, mayors, etc. in places such as Windsor Locks and the mid Connecticut project, and so forth. We have been received very well and realize we have a lot of work to do before completion of all documents. 339:

One thing I absolutely want to clarify is that we are not attempting in any way to compete with or alter the course of CRRA plans. The CRRA is attempting to implement the plans as originally drawn by DEP. I've had a chance to talk with David Brown and John Anderson and these people are committed to resolving the solid waste situation in Connecticut. They have said outright that if ORFA can do what it says it can do, there is no reason it can't be a part of the plan. They are anxious to see us move ahead and identify projects that we can comfortably handle and become known and tested and accepted in the State of Connecticut.

Meanwhile, we have the exact same situation going in New Jersey and in Pennsylvania with the DER and DEP there. We've been called upon by the State of California and City of San Francisco who are now paying \$38+ per ton for disposal of their waste. We realize we cannot, in any way, at this point in time really respond to all these requests. So, we had to make a management decision and that management decision has been that we want to concentrate our efforts in this region called Southeast Connecticut because we've spent a lot of time here and feel we have a lot of support and are very comfortable with the people we've met and we feel that there is a very fine opportunity to put one of the first plants in the United States here.

We will only be able to build a certain number of plants and cannot supply the State of Connecticut with the plants they need within the next 2, 3, 4 years but we would certainly like to supply one and think of supplying 2 more in a year from then and on down the line for Connecticut. Where the first plant is going to be we don't know for sure. J. Ronald Denney (continued):

Let me tell you exactly where we stand in this area. We have looked at several sites and I'll name some of them. I'm naming them strictly from my view, not because I've talked or met with DEP or anybody else and said, "this is the right site." But, conceptually, here's where they could be--your own landfill is a possible site because we want to locate our plants on a landfill site or at a transfer station if we can. We find that is the quickest way to get a plant into operation. Because we are not burning and aren't in fact an incineration operation, in fact we are a recycling operation; we are very readily classified and New Jersey asked us to classify ourselves as a recyclers. Another possible site might be the steel plant and we haven't looked at it in detail yet and it could also possibly save the State of Connecticut from carrying this burden of what was apparently a bankrupt situation. We have not made a formal approach to the state. Another area is in Hamden at the salvage company. ORFA plants do not handle bulk waste.

However, because we think it's the right thing to do, we want to identify a backup landfill.

Mr. Denney described the ORFA process which is documented on pages 8 and 9 of attachment and samples of organic ORFA fiber and inorganic granules were passed around for viewing.

The main product, 50% to 55% at the very end is organic fiber which is highly useable. Let's look at the four end products:

The moisture is driven off in the form of vapor.

The heavy materials, inorganic, is an aggregate for fill, for concrete or building products.

The third is a fiber and this fibrous material is cellulose which can be used to make fiberboard, flakeboard or cardboard type products, simply a matter of recycling paper back into paper products. In the case of the Swiss process, they now take the main materials coming out of their plant and mix it with municipal sludge directly from municipal sewage treatment plants on about a 50/50 basis, compost it for about 25 days and come up with fertilizer. This fertilizer in Switzerland is then directly sold to the open market, such as A&P's and garden stores in 50 pound bags, sold for home use on all sorts of crops. In the United States, we have to overcome the problem of heavy metals and we know that is a very important element with the EPA and DEP. The Swiss have in fact developed a process which removes the heavy metals from sewage sludge and will bring it down to the tolerances to be used for crop fertilization. Mr. Harvey Kaye: There is a company in Switzerland called MIGROS 344 which is the largest supermarket chain and farm growing cooperative in Switzerland. They do \$4.2 million of business in a country that only has 6,000,000 residents. MIGROS takes the ORFA fertilizer with the sludge mix and sells it in their stores. MIGROS grows approximately 22% of the entire agricultural output of the country of Switzerland, using ORFA fertilizer which they call Humifertilizer. This is a very high grade biodegradable fertilizer. At this time, we have had substantive meetings with some of the major agricultural companies in the United States who believe that ORFA fiber is superior to anything they've ever seen as a medium. Remember, anything that is pure cellulose is the building block of nature.

Mr. Denney passed around a sample of refuse derived fuel pellets, described on page 3 of attachment which burns with about 1/10th the sulfer content of coal. A sample of RDF fuel was also shown.

Mr. Kaye mentioned that he was aware of the power station in Wallingford which is shut down and that it was originally coal burning and converted to oil. ORFA fibers can be combined with coal fines into the 12,000 BTU range, to a high degree of purity and if it possible to address the issue of the power plant, it would be interesting to create a taxpaying, job creating facility to take care of the trash and take the product from taking care of the trash to power the power station which sells its power and completing the circle. It should be investigated to determine if it is applicable.

Mr. Krupp referred to page 14 of attachment, "i.e., approximately 1 ton of ORFA fiber can be expected to be produced from each 2 tons of trash processed in an ORFA facility." 25% to 28% moisture is referenced; where does the rest of the mass go?

Mr. Denney: You start with 100% input. 25% to 28% is driven off in the form of moisture in the drying process. The balance is in 3 products: 5% to 7% steel, 10% to 15% aggregate and the other 50% to 55% is the cellulose fiber.

The last time I was here, Mr. Phil Hamel asked some very good questions to which I still owe specific answers. I do want to make a point about the drying process--we do not burn any of the ORFA fiber, in fact, we have a combustion chamber which will run probably on natural gas and I might point out it could run on the methane gas from the landfill. It certainly could run on oil or any other basic home-used product. It can even run on ORFA fiber but for purposes of this discussion, we will run that dryer on natural gas. There is an exhaust of the heat but the heat and process emits nothing that is in fact harmful and would fly past a DEP or EPA standard.

Mr. Kaye stated that the combustion chamber is a heat unit and this should not be confused with the incineration process of a high intensity burning of raw garbage and trash as it comes in. All that is done is evaporation of moisture.

Mr. Denney stated that they have been working very closely with the Town of North Haven and are very anxious to reach an agreement with North Haven and realize the onus is on ORFA to resolve the issues such as financing and end product. The Town of North Haven has a trash stream of approximately 80 tons a day and ORFA's most efficient plant is about 150 to 160 tons a day. Also, ORFA wants to have a backup landfill for those periods of time when the plant might be shut down either on an emergency basis or for routine maintenance, etc. It is much more astute to have a backup landfill than not to have any at all and end up with a big crisis on their hands and that is true with any resource recovery system. What they are looking for, if you will, is the other half of that trash stream. However, things have gone so well with North Haven and with other towns in the area that it is not impossible that an 80 ton unit might be put into one municipality. Before this is done, ORFA would like to explore with the Town of Hamden, Town of Wallingford, City of Meriden, Town of Branford and within the next 30 days, we will talk with them to find out who would be most interested in being part of this project. We will identify the best site suitable to everyone involved, identifying the backup landfill, determining where the tax authority might come from which could be CRRA; we want to work in concert with CRRA, not in opposition to them. It is your choice in terms of what you want to do in terms of the Wallingford CRRA proposal. If you are not going to go with that, we'd certainly like to be something you'd consider as an alternate but we don't want to interfere and get in the middle of all that. We hope that between 1 or 2 towns in the area, we can develop the best possible situation for an ORFA plant and do not expect you to sign anything in contractual form until we have found the proper financing, end product and all those things which go along with it and that onus is on us.

What we would like to have as soon as we can have it is some sort of a commitment in writing, not a formal agreement--a commitment, that lays the foundation from which we could then negotiate a contract, negotiate end product and reach a conclusion on the entire arrangement. We have turned down invitations from many other areas of the state because we just think this is the area which we started and this is the area in which we want to create the first ORFA plant, somewhere in this greater southern Connecticut area.

Dr. Arthur Ross, Vice Chairman of The Conservation Committee in the North Haven area went to Switzerland and visited the ORFA plant. He is a retired physicist from the Department of Science at Yale University. Mr. Denney read the last paragraph from a report written by Dr. Ross, "In the light of this plant visit and on the assumptions that, (1) a favorable fee can be negotiated, (2) that the protection offered by Uetikon's guarantee, performance bond and insurance is satisfactory to the municipality and, (3) that Connecticut's DEP is persuaded to take a favorable view of and possibly to participate in this plant, less North Haven lose its standing in the Connecticut plan, etc. . .I would recommend that we proceed and negotiate forthwith. A need for prompt action on our part seems indicated on the basis that ORFA of America is a small firm and might be hard pressed to cope with the building of several plants simultaneously." Mr. Denney left this document with the Council.

Mr. Diana referred to the comment made that regional centers do not work. Mr. Denney replied that the larger, the more difficult. ORFA is very willing to build an 80 to 90 ton plant; the economics work out a little better with a 150 ton plant. Often, one of two towns has the landfill as the backup and the other doesn't. Mr. Diana commented that this company is approximately 10 months old to which Mr. Denney replied ORFA in the United States is, only as a separate marketing company. ORFA has been in operation in Switzerland for 20 months and the plant was created 13 years ago, in terms of development. Mr. Diana asked where in New Jersey they were located and Mr. Kaye stated Voorhees. Mr. John Purvis is head of solid waste management in Camden County, New Jersey, an attorney, former EPA and DEPA enforcement attorney for the State of New Jersey. He and a group of engineers from Camden County visited the facility and ORFA Corporation of America has been invited to be a part of the Camden County plan which is a plan that is being mandated by the county for the solution of their trash problem as a result of that trip, according to Mr. Kaye. Mr. Kaye further stated that ORFA has been assigned a site and has committed about \$100,000 of their own money to do all the various permitting and zoning and right now, there are about 3 or 4 specific towns in South Jersey that have an interest. However, because Voorhees is a host community, Voorhees has passed a resolution that has offered ORFA its site and will be the home for the facility. The reality is that it is a signed deal, so to speak.

Mr. Diana asked about contracts for the end products and Mr. Kaye stated the end products will be done as part of the financing package for each individual area. For example, in Colorado, the end products will be fertilizer or a fertilizer extender because that is the product within that field. There is another area in New England which I cannot disclose because it has not been announced to the public yet where there is a signed deal which will be disclosed shortly. In that case, the sale of the end product will be to a major utility in New England who will use the fuel pellets as a power source. In the Philadelphia-South Jersey region right now, there are 4 or 5 particular uses for the product, one being paperboard and ORFA has reached substantive agreements with some of the major paper manufacturers in the United States for the end product. If something were to be done in this area, an economic study would be done to understand what the best use of the end product would be considering transportation and freight and use within this area. It is ORFA's total responsibility for the end product. Mr. Diana asked if ORFA would put up a performance bond. Mr. Kaye stated this was a very important threshold question and he wanted to make the following statement very clear. ORFA Corporation is a public company, well capitalized. However, ORFA Corporation of America cannot use its own funds to finance every ORFA plant because if 5 or 6 plants were sold in a very short time, that is \$150,000,000 or \$200,000,000 and by the time you blink, it could be a billion dollars. No corporation, no matter how big, could finance a billion dollars of its own facilities.

Mr. Kaye (continued):

Therefore, there are several ways that we finance facilities. Two in particular are--some of the major banks and some of the major investment banking firms and several are interested in financing ORFA plants which will shortly be disclosed in the newspaper.

Assume ORFA is going to build a \$15,000,000 facility. ORFA will supply to a lending institution or brokerage firm a credit support system (a bona fide contract for the sale of end product and a guaranteed trash stream) because anybody that is going to finance the facility has to know that you have trash. The sale of the end product contract is put with the trash stream and the lending institution puts up a Letter of Credit based upon this. Because the end products are valuable, ORFA can afford to have a very competitive tipping fee. From that point, \$15,000,000 is borrowed. In all cases, ORFA will invest equity in those projects and generally \$3,000,000 to \$4,000,000 will be invested in a \$15,000,000 project and the rest is financed.

It is very important to understand what we mean by a tax authority. There are two kinds of tax authorities. Three-quarters of the overhead of the operations of an ORFA plant is debt service, payback of the principal and interest borrowed. If your interest is at 8% vs. 14% or 15%, then obviously your costs are lower. If you pass a tax authority which grants a tax exempt status to a bond, either it's secured by the taxing authority of the city or it's merely the granting of authority which CRRA can do or any Economic Development authority can do or any number of authorities can do. That does not obligate anyone to paying off those bonds. All it does is give you a tax exempt status which means your costs are less and your fees can be less which ORFA passes back.

Consequently, ORFA asks that two things be very crystal clear in this meeting. If we prove unquestionably to every authority that the technology is good, valuable and bona fide, then we are saying to Wallingford, give us your trash for a period of time. ORFA can and will do all of those things and, therefore, it is our investment bankers or bankers total financial risk in terms of this project. You will receive all of the benefits when that plant is up and running with a guaranteed tipping fee for lengthy periods of time and your disposal costs can't go up 400% like they are doing in South Jersey once this deal is set. The tipping fees will be written into the contract, a projected and a predictable disposal cost for the town.

We come to you and say, when and if we satisfy everyone that has to be satisfied in terms of the technology and when and if we finance our facility, that you assign us your trash stream. That is really all we are asking for because we know that we can do all the other things and you will know in a very short time that you have a bona fide project to handle the trash of Wallingford. We are hopeful that we can put North Haven's 80 ton a day trash stream together with Wallingford to make 150. Mr. Kaye (continued)

In order to go forward and spend the monies that are required for DEP approvals, they want to know where the plant will be built to do environmental studies and they are going to want to know you have a trash stream.

Mr. Gessert asked if the tax exempt status would be required for the bonds only and Mr. Kaye stated absolutely, bonds only. The completed project would pay taxes to the community, supply jobs to the community, etc. 343 <u>j</u>:

Mr. Diana asked about the long-term effects of the by-products. Presuming 10 years down the line, something did come out of that, whose responsibility would that be? Mr. Kaye responded that the answer to that question is totally, totally ORFA. A bank or a lending institution wants a long-term contract, the length of the financing of the facility, 15, 20, 30 years so the realities are that a contract put forth for the sale of end product will be a very long-term contract that will go on ad infinitum. The realities are that with inflation, the value of the raw materials go up so we give up a little in order to get a little. We give up escalation in order to get the security of a 20 year contract. Mr. Denney could not see at all how Wallingford could be liable for the end product and was sure that could be a part of the contract.

Mr. Diana noted that he was 100% open minded and ORFA is coming to Wallingford with the possibility of taking care of the Yale Steel plant, taking care of the methane and landfill problems, providing the possibility of power for the generating station. Mr. Kaye stated this is a great question and opens up an area which is very important. You must understand one thing--ORFA Corporation is a public company. As a public company, ORFA not only has the responsibility to build plants but has the responsibility to earn a profit for the shareholders who have invested and taken the risks, etc. Make no mistake, an ORFA plant is a profitable, and very profitable operation. That is the reason ORFA is willing to invest \$15,000,000 or the bank's \$15,000,000 because there is a profit. That is why their stock has been performing well. People understand ORFA solves the crisis trash problems in a given area but looking beyond that, they realize that it really is a manufacturing plant that, instead of having the cost of raw materials, gets paid for its raw materials which is a tipping fee to take the trash which is processed in a manufacturing pollution free way to create an end product sold at a profit. I also want to make clear to you that there are things that have to be explored, whether or not we can do something with the Steel Plant, whether we can or cannot do something in terms of the generating power station, but I am aware that these possibilities exist and these are things that we should certainly explore together to see if they can work.

Mr. Parisi asked if plants would be built on a first-come, first-served basis to which Mr. Denney responded yes but they do not know yet what will be the best combination of the first facilities in this area. Mr. Kaye stated that they would like a commitment from Wallingford for their trash stream at a mutually agreed upon tipping fee. The next day Wallingford would be sent a letter outlining this good faith commitment and if this stream could be put together with someone you are comfortable with to make 150 tons, fine; if not, a plant would be built specifically for Wallingford. Mr. Parisi wanted to make clear that this does not supersede any resolutions such as the one authorizing the Mayor's office to negotiate with CRRA.

Mr. Parisi acknowledged Mr. Gessert's efforts in this area and noted that he has worked long and hard on this project. Mr. Parisi is in favor of the resolution and upon passage of the resolution, Mr. Gessert will choose the committee.

Mr. Diana, with all due respect to Mr. Gessert, took exception to the fourth paragraph of the resolution with ORFA named and suggested it be rewritten. Mr. Parisi felt the ORFA name should remain to eliminate authorizing anybody and everybody to get involved. Mr. Diana felt the word negotiate could be changed to speak and Mayor Dickinson stated that the word negotiate does not bind you to anything.

Mr. Polanski asked if the materials presently buried in the landfill could be used to which Mr. Kaye answered no. Mr. Denne: still offered the suggestion of a methane recovery system. Mr. Kaye stated that the residual ash is 40% by volume of what goes in to an incineration system and this must be landfilled. The only thing that has to be landfilled with ORFA is something such as a washing machine. Mr. Polanski asked what happens to the old refrigerators, tv sets, etc. which will go into the ORFA plant and Mr. Kaye stated these items would be put into a landfill which is the reason a backup landfill is needed. Those goods would be combined with ferrous metal and sent to a scrap dealer, by the ton and the funds obtained would belong to ORFA.

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Mr. Rys asked if the process uses any type of chemicals and Mr. Kaye stated the process is basically mechanical rather than heat and the only chemical is ozone and this is created with a reaction between electricity and oxygen so, in reality, there is no chemical being used. It is a process created within a closed piece of machinery which will be shown in the film tonight. The ozone is used after the dryer and this ozone sterilizes the fatty acids, viruses, bacteria, etc. Oxygen is charged with electricity in a closed drum and this is part of the patented aspects of the process. The actual machinery has been in existence for many years. What the Swiss have developed over 13 years is the processes themselves--how to handle the trash stream, when to separate it, when to put it together, how to sterilize it, etc. For example, the paper is dried in a chamber in such a matter that it evaporates the surface water without charring the paper. It is the processes that are patented throughout the world.

Mr. Rys asked if a Wallingford taxpayer would still be able to take his trash and Mr. Kay assured him this would be available.

Mr. Killen asked when the company went public and how many shares are outstanding. Mr. Kaye stated the company went public 9 months ago and the total capitalization of the company is 8,000,000 shares of which 2,000,000 shares trade in the hands of the public. A total of 14,000,000 shares are owned by insiders, none of which are saleable for quite a while. Mr. Kaye stated that the ORFA process is the most exciting thing he has ever seen in his life.

Mr. Killen asked if a prospectus by the underwriter is available and Mr. Kaye stated that a 10-K is available.

Mr. Krupp referred to the question of the tipping fees which come directly from the consumer in this community. Mr. Kaye stated that the tipping fees will be comparable to alternative sources of disposal at the time the plant is commissioned, say a year down the road, in the \$25 range. In Southern New Jersey, they were running \$8 to \$12 and were just increased 400% to \$30+ this year. Tipping fees throughout the country are going to the moon, projected at \$40 to \$50 a ton. Tipping fees in Europe are in the \$50 to \$60 range. The realities are that the days of cheap energy are over, in 1973 with the oil embargo, and the realities of cheap trash disposal are pretty much over as our landfill capacity runs out and alternative sources of disposal become more difficult and more time consuming. Mr. Krupp stated that it is important for the public to recognize that we are talking about tripling our current tipping fees and that must be an acknowledged aspect of this project.

Mrs. Bergamini asked about the Philadelphia project and asked if a guaranteed tipping fee was agreed upon and how long it is for. Mr. Kaye stated that rather than Philadelphia, let's talk about Voorhees because that is purely a municipal project and Philadelphia is half private and half public. The tipping fees in Voorhees now are \$30 and they tell us what the tipping fees are. The tipping fees are established by the Bureau of Public Utilities for every technology, whether it be incineration or ORFA or whatever, and this fee is set up by an index. There may be ways whereby ORFA could establish a minimum price for the sale of an end product and work out some kind of arrangement with the community to defer tipping fees on the basis of increases in the sale of end products over and above a certain amount. For example, if we get \$40 a ton for ORFA fiber, we make work out some sort of arrangement on the project, if we could get some kind of tax abatement for a year or so. As we can get higher prices for the sale of ORFA fiber or products, a percentage of that can be given back to the community to help defer tipping fees, etc. These are all issues that we would want to discuss with your appointed representatives and this is slightly out of the province of my own area of expertise because our financial people would happily discuss that. Mr. Polanski stated that many Wallingford residents go to the landfill on a Saturday to drop their trash--on what basis will they be charged? Mr. Kaye noted that a methodology of setting up dumpsters to be weighed would be used. Mr. Polanski asked how the residents would be charged for this and Mr. Kaye stated the municipality would be charged. Mr. Denney stated they would do just what is done at the resource recovery plant--they charge people per car load, per barrel, etc. according to a schedule, say \$1, \$3, \$4 and this is dumped into one large dumpster which is just a holding point while it fills up.

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Mr. Krupp asked what guarantee the taxpayer had against sudden acceleration of the tipping fee to \$40 or \$50 a ton. Mr. Kaye stated that is locked in, up front, on the basis of the tipping fee and the basis of the sale of end product which ORFA would provide for their credit source. This would be locked in by contract.

A brief film was shown describing the ORFA process.

Mr. Krupp mentioned that he noticed some plastic in the cellulose samples passed around earlier and dioxins are created when plastic burns and produce noxious effects. Mr. Kaye stated the ORFA process separates the plastic, glass, etc. so that what you get in terms of purity is something that is 98-1/2% pure. There is no such thing as 100% in anything. The ORFA fiber itself is all but about 1% pure fiber--that other 1% mostly is chewing gum wrappers. The plastics, glass and metal are out of the fiber. Mr. Krupp stated there was a piece of wire insulation in the sample which was passed around and Mr. Kaye said it may be possible in that 1% that there is some infinitely small piece of wire insulation that may get into it but, by test, it is 98% to 99% pure. It is sterilized and processed so you will not get a dioxin.

Mr. Diana wanted to reiterate that the responsibility would not be the Town of Wallingford's and Mr. Kaye stated exactly--ORFA will pass every and any air emissions test in any way, shape or form. Natural gas is not as readily available in Europe as it is in America and in Europe, ORFA fiber is burned to create the heat.

Mr. Gessert stated that the chair would entertain an amendment from Mr. Diana to include that any plan would be brought back to the Council for approval. Mr. Diana said he would vote against the resolution simply because of the wording and not because of the intent by Mr. Gessert or the gentlemen from ORFA.

Marie asked for any comments Mayor Dickinson or Phil Hamel may have and Mayor Dickinson stated that he had no problem with the resolution as long as it doesn't limit the town to ORFA. Ultimately, the commitment of the community is going to depend upon the bottom line dollar figures, one tipping fee versus another, what are construction costs of one versus another and the guarantees of one period of time versus another. It must be a comparison of economic impact in town. Mr. Krupp pointed out that there must also be a comparison of state-of-the art technology.

Mayor Dickinson also pointed out that dependability and track record enter into it. Mr. Killen is concerned about the track record since only one plant exists. Mayor Dickinson noted that the representatives from ORFA need a commitment from Wallingford for all of the trash in order to proceed on their end. At this point, we can't be sure what the tipping fee ultimately will be. Mr. Kaye addressed that issue and made the following statement. He would ask Wallingford to commit if DEP approvals are obtained and he would supply all the ifs and the tipping fee would be spelled out. ORFA doesn't want to spend \$100,000 to \$150,000 going through the approvals, etc. since the location of where the plant is to be must be included. Mr. Kaye stated that \$25 is about the right number. Mrs. Bergamini felt that \$25 is out of Wallingford's ballpark.

Mr. Kave stated that the tipping fee can be made \$20 by changing the financing of the plant. Say for example a plant would cost \$150,000,000 and \$200,000,000 is raised--\$50,000,000 is put in the bank and the arbitrage is taken on it to offset the tipping fees for a period of time and 3 or 4 years the tipping fees go to the moon. We are trying to be very candid with you.

Mr. Killen asked if North Haven has given ORFA a firm commitment 347. and Mr. Kaye said the answer to that is yes--they have a commitment of their trash stream and are using a \$25 tipping fee. Mr. Gessert stated that it would be out of place for anybody to ask for a firm commitment or for Wallingford to give one. All we are doing is determining if this is an avenue we would like to pursue and if so, then it would come back to the Council. Mr. Killen suggested that if Wallingford had the benefit of North Haven's information, the Council would be a step ahead. Mr. Gessert noted that this is included in the resolution indicating authorization to negotiate with any other communities.

Mr. Denney understands that the resolution would set in motion a group of people who could reach an agreement in principle as to what the tipping fees would be, what the contingencies would be, what the conditions of the contract would be and if all these things fell in place, this is what a contract would look like. That would be brought back to Council for Council's approval. ORFA has in fact done that with North Haven--the contract in possession of the town for about a month and one-half. That agreement was written by the Mayor and Mr. Gawrych signed it.

Mr. Diana mentioned that one of the reasons CRRA was considered was because of obtaining steam from waste and there is an obligation because this would directly benefit American Cyanamid, one of our taxpayers, and an employer in town. These are the things that must be looked into. Mr. Kaye pointed out that the technology is readily available to create steam from the ORFA process because ORFA fiber is very easily gasified and creates very high grade steam. It may very well be that the best use of the ORFA fiber is to use it to create steam to sell to American Cyanamid which solves the same problem and does it in a pollution free way since emissions are almost non-existent. ORFA can meet with Cyanamid and their technical people.

Mr. Kaye agrees with the Council that there is a lot of give and take information which must be put forth in order to go forward. What they are trying to accomplish is simply to authorize the committee to begin discussions.

Mr. Hamel pointed out that he was present at the Council meeting when the Mayor was authorized to negotiate with CRRA and the Council indicated that alternatives must be researched as well. He would be opposed to a decision making a commitment at this time but certainly alternatives should be investigated and there is a great deal to learn about this alternative.

As a final word, Mr. Kaye expressed his appreciation of the Council's forbearance for the time this evening and stated they would like to begin the dialogue and meet with the appointed committee to supply as much information as possible and invited the Council to visit the facility in Zurich and meet the people who have designed the system and see it in operation and then make a decision as to whether it is something that meets the community needs or not. Mr. Gessert thanked Mr. Kaye and Mr. Denney for an excellent presentation.

Vote: (Resolution on page 2) Council members Bergamini, Gessert, Krupp, Polanski and Rys voted aye; Diana and Killen voted no; Parisi and Papale were not present; motion duly carried.

Mr. Gessert stated that the committee to research the ORFA system will consist of Mr. Parisi, Mrs. Papale and himself and the committee will be ready to meet with Mayor Dickinson.

A motion to adjourn was duly made, seconded and carried and the 348 meeting adjourned at 10:15 p.m.

> Please note that Mr. Parisi excused Mrs. Rascati shortly after roll was called and Mr. Parisi left the meeting at 9:00 p.m.; therefore, these minutes will be signed by the Chairman and Vice Chairman.

Delores B. Fetta Council Secretary e. Approved Parisi, Council Chairman Roh F ert Date Ó David A. Gessert, Vice Chairman

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ATTACHMENT TO TOWN COUNCIL MINUTES MAY 7, 1984

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ORFA CORPORATION OF AMERICA 11

800 Kings Highway

Suite 216 Cherry Hill, NJ 08034 609-482-2300

CORPORATE PROFILE

Waste Technology of Tomorrow - Today!

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An Introduction to ORFA Corporation of America

ORFA Corporation of America ("ORFA") owns the exclusive sales and marketing rights in the United States and Canada to the "ORFA System", a Municipal Solid Waste Treatment and Recovery System developed by a subsidiary of Chemische Fabrik Uetikon, a Swiss chemical company established in 1818. ORFA was incorporated in July 1983, and became a wholly-owned subsidiary of ORFA Corp. of America in September 1983. The executive and administrative offices of ORFA and its parent corporation are located at 800 Kings Highway, Suite 216, Cherry Hill, New Jersey 08034. The common stock of ORFA Corp. of America is publicly traded in the over-the-counter market. An Overview of the MSW Problem

Municipal Solid Waste ("MSW") Treatment and disposal is an enormous problem, national in scope. Current disposal techniques involve the widespread use of landfills which normally are located at a distance from the municipality served. Increasingly, state and local government regulations intended to prevent ground water pollution and alleviate other environmental concerns, and community resistance to the siting of new landfills and expansion of existing facilities, make reliance on landfills an uncertain and expensive solution to MSW disposal problems. Incinceration, the second most commonly used method of MSW disposal, involves burning to dispose of the trash and to create a byproduct of heat or steam which may be used directly or to create electrical energy. New incineration installations, however, generally are limited by economic factors to large installations. In addition, use of incinerators involves environmental and political factors which often make it difficult and time consuming to obtain community and local government support and approval. Furthermore, although the "end product" of the incineration process, i.e., heat, steam or electrical energy, can result in significant energy savings to the user when used directly, the situations in which it can be utilized directly are limited.

The advantages of the ORFA System over landfills and incineration are as follows:

FIRSTLY - The ORFA System is a closed system which produces no dust, smoke, noxious gas or waste water of any kind.

<u>SECONDLY</u> - The ORFA System can be housed in a building that looks no different than the buildings found in any Industrial Park in America.

<u>THIRDLY</u> - The ORFA System results in 100% recycling except for large metal objects (i.e., refrigerators, washers, dryers, etc.) with no harm to the environment.

<u>FOURTH</u> - The ORFA System produces end products which are higher on the economic scale than those of alternative recovery systems.

End Products of the ORFA Process

The ORFA Process takes a stream of ordinary MSW and, through a process of disintegration, separation, granulation, drying and sterilization, removes ferrous metals and inorganic matter and produces a fiber that is approximately 82% cellulose. From this fiber, a variety of products can be made by adding processing capability to the end of the waste conversion and recovery process. The following are the three general categories of products that can be made from ORFA fibers:

<u>Farticle Board</u>. Particle board composed principally of ORFA fiber has been shown to have substantially the same qualities (e.g., strength, machinability, finishing capability, etc.) as commercial fiber board composed principally of wood chips, and can be used in building, furniture manufacturing, interiors, etc.

<u>Fuel Pellets and Briquettes</u>. ORFA fibers can be compressed into fuel pellets or briquettes which have a high BTU value and unlimited shelf life. This fuel can be used for industrial heating, private heating, thermal power stations, and many other applications in which the use of steam coal would be appropriate.

<u>Humi-Fertilizer</u>. ORFA fiber is a perfect medium for the manufacture of a highgrade organic fertilizer. The fibers can be treated with up to 12 elements permitting the custom blending of fertilizer to suit the needs of an end user.

There is little doubt that the waste disposal, treatment and recovery industry will be one of the most rapidly growing segments of the American economy for the rest of this century. The leaders of this industry will be companies with ecologically and psychologically acceptable, and economically viable, technologies to meet society's needs. ORFA Corporation of America believes it has such a technology.

Chemische Fabrik Uetikon

Chemische Fabrik Uetikon was founded in 1818 in Uetikon, Switzerland on Lake Zurich. The Company's executive and main administrative offices, main works and principal research and development facilities and engineering staffs and are still located there. The Company's initial products were sulphuric acid, iron sulphate and copper sulphate, hydrochloric acid and nitric acid; sodium sulphate and soda were added later. These chemical products initially were supplied mainly to a burgeoning local textile industry. Uetikon became a limited company in 1899. Thereafter, the production facilities were steadily enlarged and the production program expanded.

All the available land at the established site on Lake Zurich was utilized after the Second World War, and a modern sulphuric acid plant was built at Full, Switzerland, near Koblenz on the Rhine River, in 1949. A majority holding in the "Electrochemical Works Turgi" was acquired by Uetikon in 1973. This led to a considerable expansion in the number of products manufactured by Uetikon, although its main product still is sulphuric acid. Uetikon also owns interests in paper manufacturing plants in Switzerland and, through a wholly-owned subsidiary, a 50% interest in a chemical production facility in Lexington, Kentucky.

ORFA AG, the developer of the ORFA Process, is a Swiss limited company which is owned 65% by Uetikon, and 35% by four individuals who participated in the early development of certain waste recycling techniques which eventually were modified, improved upon and refined to become part of the ORFA Process. ORFA AG's administrative offices are at Killwangen, Switzerland, and it also operates the prototype ORFA Facility at Liebstadt, Switzerland. ORFA AG has no business other than the marketing and construction of ORFA facilities and sale of end-products of the ORFA Process. Research and Development is one of Uetikon's principal concerns. Research at present is concerned primarily with the specific fields of absorption and drying agents, electrolysis, isotopic and organic fine chemistry, agrochemical products, water

treatment and waste water purification chemicals. Modern laboratories with a well equipped analytical department, pilot plants and a library are at the disposal of chemists and laboratory technicians.

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Thirty different professions are represented within Uetikon. Besides chemists, laboratory technicians, engineers, draftsmen and commercial staff, there is a variety of other jobs ranging from those plumbers to engine-drivers, from roofers to vine-dressers. An apprenticeship at Uetikon guarantees a thorough professional training. Each year, young people successfully conclude their apprenticeship as laboratory technicians, chemists, electricians and tradesmen.

Uetikon attempts to keep employees well informed and this is the basis of an atmosphere of trust which characterizes its personnel relations. Although Uetikon is a private company, an annual report and a quarterly bulletin are prepared and distributed to all personnel. The so-called "Forum" and the "Company Committee" also play important parts in fostering good relations with employees. The latter has been active for nearly 60 years. Representatives are chosen from all levels and sections of Uetikon to discuss internal and external questions as well as managerial decisions and measures. Uetikon has provided health insurance to its staff on favorable terms since 1864. A super-annuation fund, a forerunner of today's pension plans, was introduced in 1918, one of the first arrangements of its kind in Switzerland.

WHAT IS "TRASH AND GARBAGE"? WHAT ARE THE PROBLEMS ASSOCIATED WITH TRASH AND GARBAGE DISPOSAL AND TREATMENT, AND HOW CAN WE SOLVE THEM?

#### What is "Trash and Garbage"?

The simplest answer is: "Trash and garbage are any kinds of material that cannot be used anymore". This answer, however, is a superficial one which does not take into account the fact that trash and garbage represent immeasurable quantities of processed raw materials which still have value. To understand the dimension of the problem, one must understand that America's entire gross national product of manufactured goods ultimately will become trash, garbage and scrap. Techniques such as landfills and incineration deals imperfectly with the disposal problems presented by trash and garbage, while simultaneously ignoring that genuinely valuable materials are being destroyed.

The world's supply of raw materials is not inexhaustible. Recognizing this, and the enormous value represented by a modern society's trash and garbage, it is imperative to consider alternatives to incineration and landfills in dealing with the disposal problem. How can we solve this problem?

The first step in solving the trash and garbage problem is to recognize that it is two fold: first, precious raw materials must be recycled; next, the disposal and recycling technique must be "friendly" to the environment. WHEN IT IS POSSIBLE TO RECYCLE THE VALUABLE RAW MATERIALS CONTAINED IN TRASH AND GARBAGE WITHOUT CAUSING POLLUTION OF ANY KIND, THE PROBLEM OF WASTE <u>DISPOSAL</u> WILL DISAPPEAR! A prototype ORFA plant in Liebstadt, Switzerland has demonstrated the economics and efficiency of the ORFA System. Developed after more than 10 years of research in Switzerland, the ORFA System is the ecologically and psychologically acceptable, and economically viable, solution to the trash and garbage disposal problem.

#### DESCRIPTION OF THE ORFA SYSTEM

## Description of the ORFA Process

Trash and garbage trucks, after weighing, dump the waste directly into a waste pit. A mobile graberane conducts the waste to the first crusher (pos. 1) to be reduced to small pieces.

From the first crusher, the product is conveyed through an electromagnetic metal separator (pos. 2) for extraction of ferrous metals. These are transported by discharge belt to a baling press (pos. 3).

A first sifter (pos. 4) separates light materials (paper, cardboard, textiles, etc.) from heavy waste (stones, plastic, wood, compact waste, etc.).

Heavy waste is fed into a hammermill (pos. 5) and light waste is run through a cutting mill (pos. 6) for reduction to the desired particle size.

These two fractions are brought together again and fed into a dryer--sterilization drum (pos. 7). The dryer is heated by a combustion chamber which uses ORFA fiber as fuel.

Steam, waste gases and odorous air are led by ventilator to a gas and air cleaner (pos. 8).

In the combustion chamber (pos. 9), outgoing air is burned at 650° C to 750° C. A heat exchanger reclaims the heat which is recycled to the dryer to preheat secondary air. The cleaned, cooled air is expelled.

The dry material now is fed directly into an ozonization drum (pos. 10) for stabilization. The main function of ozonizing is biological stabilization through the destruction of fat and butyric acids, and to eliminate any remaining odors. Ozone is continuously produced by a reaction of electricity on oxygen.

The materials, which now are dry, sterile, clean and biologically stabilized, are fed into a 3-fraction sifter (pos. 11) to be separated into coarse, medium and fine particles.

The 3 fractions then are fed into the corresponding air shifter (pos. 12) and separated into organic fibrous material and inorganic granules.

Fibers and granules then are pumped into their respective storage silos to await recycling.

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The inorganic granules (pos. 14) can be reused in the manufacture of cement blocks, tiles or as road fill.

The compacted blocks of ferrous metals are palletized (pos. 15) for shipment.

The organic fiber can be used for fuel, a fertilizer carrier, or to manufacture a number of cellulose-based products alone or in combination with other substances.

#### **Patents**

An application was filed in the United States Patent Office on December 22, 1981 by ORFA AG covering certain aspects of the ORFA System. Similar applications were filed at or about the same time in 22 other countries. At present, patents have been issued in Belgium, South Africa and Spain; applications are pending in the remaining countries.

## THE RECYCLING OF ORGANIC ORFA FIBERS

The Recycling of the Organic ORFA Fibers

1. Manufacture of Humifertilizer (HUM-OR)

From the fiber silo (pos. 1), fibrous matter is conveyed directly into a weighing unit (pos. 4).

From a sewage tank (pos. 2), sludge is pumped into a reactor (pos. 3) for prefermentation and hygienization. The treated and solidified sludge then is conveyed into a mixer (pos. 5), brought together with the ORFA fibers and water, and pumped into a fermentation tank (pos. 6).

After fermentation the ORFA Humifertilizer is conveyed to the loading station for bulk delivery (pos. 7) or bagging (pos. 8) and palletizing (pos. 9).

SPECIAL NOTE: Humifertilizer also can be made without sludge by custom blending ORFA fiber with one or more basic fertilization elements in any desired combination.

2. Manufacture of Particle Board (PRESS-OR)

From the fiber silo (pos. 1), fibrous matter is conveyed directly to a weighing unit (pos. 2).

Fine and coarse fibers then are separately mixed with binding materials (pos. 3) and spread (pos. 4) to form the actual particle board. The fine grade fibers constitute the external layers and the coarse fibers the central layer of the boards.

The boards then are compacted to the desired density under high pressure and temperature (pos. 5) and stacked (pos. 6) for cooling.

The boards then are cut to size (pos. 7), stacked (pos. 8), sanded (pos. 9) and finally stored in the warehouse (pos. 10).

3. Manufacture of Pellets or Briquettes (PEL-OR)

(a) <u>Briquettes</u>: From the fiber silo (pos. 1), fibrous material is conveyed directly into a weighing unit (pos. 2). It then is mixed with water, pressed into briquettes (pos. 3) and sent to the storage area (pos. 5).

(b) <u>Pellets</u>: From the fiber silo (pos. 1), fibrous material is conveyed directly into a weighing unit (pos. 6), mixed with water and compressed into pellets (pos. 7).

After weighing (pos. 8), the pellets are either loaded on trucks for bulk delivery or bagged (pos. 9) and palletized. Briquettes and pellets can be burned in any boiler equipped for combustion of solid fuels or transformed into gas in a pyrolitic reactor (pos. 10). Thus, briquettes and pellets can be used as an energy source in central heating systems, heating plants, for private homes, offices and industrial complexes.

# ADVANTAGES OF THE ORFA SYSTEM

# Advantages of the ORFA System

# 1. Emission-free trash and garbage disposal

A decisive fact is that the ORFA System does not cause air pollution nor any contamination of water or soil.

2. Perfect trash and garbage disposal

Perfect, because:

--all the collected trash and garbage goes straight into the fiber plant for 100% recycling.

- --the new raw material, i.e., ORFA fiber, opens new methods of application in various industries.
- -- the production as well as the use of ORFA fiber is "FRIENDLY TO THE
  - ENVIRONMENT".
- 3. Low cost trash and garbage disposal

-relatively low investment costs.

- -low process costs thanks to minimal personnel and energy charges.
- --complete recycling capability means lower costs for the public and--if viewed as
  - a manufacturing facility—and ORFA plant is a low-cost producer of a valuable commodity, i.e., ORFA fiber.

4. Practical, economic and ecological safety achieved by the ORFA System

--What is Practical Safety?

The ORFA System does not use experimental equipment which may present unforeseen problems in industrial applications, but a system of commercially available, well-known and perfected machinery.

--What is economic safety?

From the gross input of trash and garbage, ORFA fiber is obtained with an efficiency of approximately 50%, i.e., approximately 1 ton of ORFA fiber can be expected to be produced from each 2 tons of trash processed in an ORFA

facility. The sale of ORFA fiber, or products manufactured using ORFA fibers, 355 together with tipping fees generated from the "disposal" function, make possible an extremely favorable return on investment with relative safety.

-What is ecological safety?

The ORFA System is friendly to our environment in every respect. Whereas alternative disposal methods encounter serious difficulties in meeting environmental standards, the ORFA System has no noxious emissions or effluents.

#### MANAGEMENT

## ORFA Management

ORFA has established a team of marketing and financial professionals to lead its surge into a position of leadership in the waste disposal and recycling industry. The key members of this team are as follows:

Robert A. Hutchison, Chief Executive Officer and Chairman of the Board of Directors, is a graduate of Texas A&M with a Bachelors Degree in Business Administration. In the past five years he has served a Managing Director of Tawfik-Palarck Company, Tehran, Iran, a commission agent representing approximately 100 foreign companies doing business in Iran and neighboring countries. Approximately three years ago, Mr. Hutchison relocated to Switzerland where he represents Lummus Industries, Columbus, Georgia for the Middle East, Far East and Asia. Mr. Hutchison was one of the founders of ORFA Corporation of America and has devoted substantially full time to business of the Company since July 1983.

Harvey Kaye, President, Chief Operating Officer and a Director, was President of Handy Hardware Centers, Inc., a hardware distributor located in Trevose, Pennsylvania, from 1974 to November 1981. From November 1981 to November 1983, Mr. Kaye was President and owner of Marketing Research Group, Inc., a financial and marketing consulting firm located in Cherry Hill, New Jersey. In this capacity, Mr. Kaye helped to form ORFA Corporation of America and acted as a consultant to the Company from July 1983 to November 1983 when he assumed his present duties. From June 1982 to March 1984, Mr. Kaye had devoted a portion of his time to Executive Coach Builders, Inc., Springfield, Missouri, which Mr. Kaye represented in the sale and lease of custom limousines.

Robert D. Kohn, Executive Vice President, Secretary/Treasurer and a Director, is a certified public accountant and the Chief Financial Officer of the Company. Mr. Kohn served as a tax specialist at Touche Ross & Co. during the period 1973 to 1975, engaged in business as a CPA and tax accounting consultant during the period September 1975 to

356 June 1983, and served as Chief Financial Officer of Coastal Valve Service Corp., Philadelphia, Pennsylvania from May 1982 to November 1983. Mr. Kohn no longer is engaged in the active practice of accounting and has devoted substantially full time to the Company since July 1983. Mr. Kohn also is a member of the Board of Directors of Tioga Franklin Savings and Loan Association in Philadelphia.

Alan G. Moore, Vice President and a Director, is a naturalized American citizen who attended Sir William Turners Cadet School, Yorkshire, England and the Naval College, Portsmouth, England. Mr. Moore has been an international sales specialist and consultant in agricultural, chemical and technical areas for a number of years. Since July 1983, Mr. Moore has devoted substantially full time to the business of the Company.

J. Ronald Denney, Marketing Director, became a full time employee of the Company in January 1984. Mr. Denney recently completed an appointment as Principal Deputy Assistant Secretary of the Navy, a post assumed in August 1981. Prior thereto, Mr. Denney for more than ten years was the President of Arbonite Corporation, a manufacturer of corrosive resistant materials located in Doylestown, Pennsylvania.

Robert P. Carter, Controller, also became a full time employee of the Company in January 1984. Mr. Carter, a certified public accountant, was employed by Coopers & Lybrand in its Philadelphia office from September 1980 to January 1984.

Marc D. Clair, Director Architecture Engineering, became a full time employee of the Company in January 1984. Mr. Clair was employed by Ewing, Cole, Cherry, Parsky of Philadelphia as a Senior Project Manager/Architect from April 1980 to January 1984.

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ORFA

Store and

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The Naturnal Be Weekly Newspaper for Stocks Under \$5

This Issue's Buy ORFA proves there's cash in trash

## By James Cash

"America has a very large, expensive and serious trash problem. The short-term prospect is that the situation will only get worse," said Harvey Kaye, president of ORFA Corporation of America (S3B, S3.50A). Indeed, this country produces a mountain of garbage every day. In the past, disposing of trash was not difficult. But today, cities and municipalities are running out of both time and space.

Landfills and incineration have been the traditional trash disposal methods. And while each solves one problem, they both create others. Consequently, landfills have been shut down all over the country. And with incinerators being implicated in part for acid rain, their usage is becoming less and less viable. Further, "opening a new landfill or building an expensive incinerator is not a popular political action these days," claims Kaye.

Well, if that isn't enough to scare you, consider this. In 1985 the EPA will begin enforcing strict landfill rules so that landfills will either have to comply with the regulations or close. If they choose to close, cities and municipalities will have even fewer options in disposing of trash. Should the landfills remain open they will certain pass their higher operating costs on to the public.

The white knight in this critical situation may very well be ORFA. The company has obtained the U.S. and Canadian marketing rights to a unique trash recycling process developed and patented by Chemische Fabrik Uetikon-a private Swiss chemical firm.

"Chemische's recycling process is simply remarkable. It can recycle nearly everything found in a typical garbage can," according to Kaye.

A stonishingly enough, the recycling system is 100 percent "closed," that is, the process creates no form of pollution either air, water or solid that is expelled from the plant. The reing on the take is that ordinary gurbage is crushed, sifted and oxidized into a useful cellulose fiber that has tremendous economic potential

In order to comprehend the significance and value of ORFA and its process it is important to have two perspectives, a city's and ORFA's.

For a city with a garbage disposal system, ORFA offers many advantages. First, since the plant creates no pollution it can be located just about anywhete-meaning close to the city's population center. This saves the city a tremenduus amount of money in garbage collection operating expenses. An ORFA plant will in effect help increase the productivity of the city's collection activities for various reasons—among them: lower fuel costs, less wear and tear on trucks, and a work force that has more time to collect trash. More importantly, the city will have long-term trash dispersal sites. Finally, the plant can either be leased or twopht from ORFA with a variety of finance options.

From ORFA's perspective, it stands ready to profit in a manner that is both socially acceptable and economically horrarive. In fact, National Geographic recently wrote that Municipal Trash Dispensional Pressery will soon be one of this country's fastest growing new major industries.

"The really intriguing aspect of ORFA is that it will earn revenue from all aspects of an ORFA plant." boasted Kaye. First, the company will be paid a commission from Chemische for each plant that it sells. For instance if a plant costs \$15 million, ORFA can earn up to \$3 million. But this is only the beginning For every ton of garbage that an ORFA plan accepts, it is revers what is known in the indus by as a "topping fee." Currently, some entireare paying landfills more than \$25 per ton o trash. And these topping fees can add up fast One major cits last year spent \$25 million or such frees.

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# <sup>358</sup> ORFA values proposed projects at \$70 million

Another revenue source for ORFA is that it will manage the recycling plant for the cities for a fixed per-ton fee. Finally, and probably the most exciting aspect of ORFA, is that the company can sell the end-product of the recycling process—the ORFA fiber—as it has a multitude of applications.

ORFA fiber is composed primarily of cellulose. It is odorless, colorless and 98 percent sterile. The company is actively exploring products that can use ORFA fiber. To date, the company has come up with several possibilities. "First, since ORFA fiber is similar to wood

"First, since ORFA fiber is similar to wood in its chemical structure, particle board and similar wood products have already been manufactured using the fiber as a base," explained Kaye. To demonstrate the practicality of using this fiber as a wood substitute, Chemische built a house in Switzerland with ORFA's fiberboard. And when one considers all of the different fiberboard products, the potential for ORFA's fiberboard is tremendous.

Early on, Chemische discovered that ORFA fiber, when compressed, had the BTU value of soft coal. It is interesting to note that an ORFA plant, after the initial start-up is complete, is powered by fuel pellets made up almost exclusively of ORFA fiber. It is not difficult to imagine the enormous potential of this product. The company also has discovered that ORFA fiber makes an extraordinary fertilizer. First, various numbers and quantities of organic components can be mixed with the fiber-this is in effect a "custom blended" fertilizer. Second, not only is the fertilizer biodegradable, but it has an extremely small grain size. The significance of these two facts is that this fertilizer's nutrients are time released over a period of up to two years. With all of its properties, ORFA's fertilizer has a number of advantages over fertilizers that are currently on the market.

Though ORFA seems to have a promising future, there are several relevant facts that must also be considered. First, ORFA is a development stage company so it does not have current revenue sources. However, the company has signed three leners of intent totaling \$70 million to build ORFA plants in various locales. And even though it takes nearly a year and a half to construct a plant, the company could receive "construction-in-progress" payments by early next year.

All things considered, ORFA has a tremendous service with vast potential in a rapidly expanding industry. Thus, the company seems well on its way to achieving long-term success.

For more information contact ORFA Corp. of America, 800 Kings Highway, Suite 216, Cherry Hill, N.J. 08034: (609) 482-2300.



Bruce Henderson and Associates, Consulting Engineers TO:

Transmittal to the hon. members of the waitemata city council, waitemata FOR: city, new zealand

FROM: Prof. Karl-Heinz Engel, Institute for Environmental Planning, Macro and Structural Research, 6277 Bad Camberg, West Germany

#### Dear Sirs:

It is my pleasure to state herewith my opinion on the ORFA refuse technology for your perusal.

As head of the Institute of Environmental Planning I have been called to STUDY ALL OF THE KNOWN REFUSE DISPOSAL methods known today. I have made in-depth studies on the subject on a world-wide basis.

My conclusions have been submitted to the Federal Ministry of Environmental Protection, and the Ministry of Economic Affairs, Bonn, as well as to several West German municipal governments.

These conclusions have served the Ministry of Economic Affairs and the Ministry of Environmental Protection, Development and Research, to present the ORFA system to

the Energy Commission of the European Community in Brussels. Furthermore, within the program of the West German Economic Cooperation with developing countries I have been called to advise the municipal councils of the cities of Teheran, Iran (2'000 tons refuse/day) and Istambul, Turkey (6'000 tons refuse/day).

In all instances we highly recommended the ORFA refuse treatment and recycling system. I can state officially and without any hesitation that the ORFA concept REPRESENTS TODAY THE OPTIMAL SOLUTION TO THE REFUSE PROBLEM.

There are certainly a number of other valuable systems under study, but none are yet beyond the laboratory testing stage. Basically, our appreciation is based on the following principal advantages we

have found to be attributable to the ORFA concept:

1. Depending on local market conditions for the recycled end-products, ORFA presents a definitely viable economic proposition.

2. Also the mechanical concept is sound. The upgrading of the pilot plant to an industrial size production unit up to 560 tons per day refuse throughput should not present a major problem. All plant components are produced by renown manufacturers and have been used since many years in various industries. It seems that a major german industrial concern has asked ORFA to act as their prime or major sub-contractor for the installation of plants world-wide.

3. BUT OF PARAMOUNT IMPORTANCE TO OUR INSTITUTE ARE THE ENVIRONMENTAL IMPLICATIONS OF SUCH INSTALLATIONS. OUR EXHAUSTIVE TESTS AND EXAMINATIONS HAVE SHOWN THAT THE ORFA PROCESS IS ECOLOGICALLY THE BEST SOLUTION AVAILABLE TODAY. ALL OF THE REFUSE IS RECYCLED, THERE ARE NO EMISSIONS, NO NOXIOUS WASTE-WATERS ARE PRODUCED, THE END-PRODUCTS - INORGANIC GRANULES AS WELL AS THE ORGANIC FIBERS - ARE CLEAN, DRY, STERILE AND THEIR BIOLOGICAL STABILIZATION CAN BE CONSIDERED AS HIGHLY SATISFACTORY. THESE END-PRODUCTS CAN BE RECYCLED TOTALLY WITHOUT NEGATIVE INFLUENCE ON PRODUCTS CAN BE RECYCLED TOTALLY WITHOUT NEGATIVE INFLUENCE ON OUR ENVIRONMENT.

DECEMBER 1983

T R A N S L A 1 I <u>O N</u> ZURICH INSURANCE TECHNICAL INSURANCE

# REFUSE REVALORIZATION PLANTS EVALUATION "ORFA" SYSTEM

Orfa Refuse Revalorization Plants Evaluation

#### CLOSING REMARKS

As can be seen from this report, the specialists and experts of the Zurich Insurance Company have closely examined and tested the pertinent factors, such as:

- THE SYSTEM
- THE MACHINERY SELECTED
- THE CAPACITY OF THE MACHINERY
- THE RELIABILITY
- THE POSSIBLE SOURCES OF ERROR
- THE CONSTRUCTION OF A MAJOR INDUSTRIAL PLANT
- THE FUNCTIONING OF THE EXISTING PILOT PLANT

FURTHERMORE, WE EXAMINED THE PRODUCTION CAPACITY AND THE PURITY OF THE PRODUCTS BASED ON TESTS AT THE PILOT PLANT AND TEST AND EXAMINATION REPORTS OF THE EAWAG AND EMPA. TOGETHER WITH ORFA AG WE DETERMINED THE PRODUCTION TOLERANCES.

WE HAVE COME TO THE CONCLUSION THAT WITH ORFA PLANTS OF THE MENTIONED STANDARD SIZES ONE HAS TO FORESEE ONLY NORMAL AND KNOWN RISKS AS IS QUITE USUAL FOR INDUSTRIAL PLANTS. THESE RISKS ARE MINOR AND, ACCORDING TO OUR OPINION, EASILY CONTROLLABLE.

WE ARE PREPARED TO GIVE OUR FULL INSURANCE COVERAGE TO THESE ORFA PLANTS ANYWHERE IN THE WORLD. WE ARE DELIGHTED THAT A FIRST ORFA PLANT WILL SOON BE OPERATIONAL.

THE REFUSE REVALORIZATION ACCORDING TO THE ORFA SYSTEM PRESENT, AS MENTIONED ALREADY IN THE INTRODUCTION, A REAL AND ENVIRONMENTALLY FRIENDLY ALTERNATIVE SOLUTION TO THE COMMON METHODS OF REFUSE ELIMINATION

## ZUBICH\_INSUBANCE\_COMPANY

- 132/AS/CD -5. 11. 1983 -/orla/A/-14 TO: Bruce Henderson and Associates, Consulting Engineers

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