



METRO

2000 S.W. First Avenue
Portland, OR 97201-5398
503/221-1646

Agenda

Meeting: Solid Waste Technical Committee

Day: Thursday

Date: July 23, 1992

Time: 9:00 AM to 10:30 AM

Place: Metro Council Chamber
Metro Center
2000 SW First Avenue
Portland, Oregon 97201

- I. Approval of May 28 Meeting Minutes
Approval of June 26 Meeting Minutes **Bob Martin**
- II. Updates **Bob Martin**
- III. Discussion of the 1992-93 Metro Challenge Grant Program **Steve Kraten**
- IV. Review and Comment on the Model Zoning Ordinance for Mixed Solid Waste and Recyclables Storage Areas in New Multi-Unit and Non-Residential Buildings **Mark Buscher**
- V. Update of Progress made in Establishing Clear and Objective standards for Siting Solid waste Facilities in the Region **Mark Buscher**
- VI. Adjourn: Next Meeting - Thursday, August 28.

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Solid Waste Technical Committee
May 28, 1992
(Revised)

Members Present:

Estle Harlan, OSSI - Tri-County Council
James Cozzetto, Jr., Metropolitan Disposal & Recycling
Merle Irvine, Willamette Resources, Inc.
Tom Miller, Washington County Haulers Association
Steve Schwab, Clackamas Co. Refuse Disposal Assn.
John Drew, Far West Fibers
Lynne Storz, alternate, Washington County

Metro Participants

Bob Martin, SW Director
Mark Buscher, SW Department
Ron Nagy, SW Department

Guests Present

Pat Vernon, DEQ
Ken Spiegle, Clackamas County

Chair Bob Martin brought the meeting to order.

Updates

Chair Martin reported that he has received the formal resignation of SW Technical Committee member Jim Rapp. Mr. Martin announced that Megan Steele, City of Portland's Director of Solid Waste will take the place of Al Smith.

Mr. Martin, responding to a request of Ms. Harlan with regard to an organizational chart for the Solid Waste Department, said it would be forthcoming. Because the department is going through a reorganization he might not be able to furnish it before the next meeting, however. Mr. Martin noted there would be no new positions created other than those positions budgeted.

Mr. Martin announced that Mr. Gardner would not be taking up the matter of the Washington County Transfer fee at the Council Solid Waste Meeting scheduled for this evening. Mr. Martin also said that Yamhill County would defer until late June the Yamhill County initiative.

Approval of Minutes from the April 23 Committee Meeting.

John Drew moved for approval of the minutes of April 23, 1992. Merle Irvine seconded the motion. The minutes were approved unanimously.

Discussion of the 1992-93 Regional Tip-Fee Rate

Mr. Martin said he has been attending several local government council meetings to explain Metro's rate increase, why it necessitates an increase in franchise rates, what is behind the increase and when it goes into effect.

Mr. Martin distributed two handouts to help illustrate some of the reasons for the new rate. Mr. Martin explained that these illustrations were meant to categorize what the new rate of \$75/ton is allocated to on a per-ton basis. Mr. Martin said Metro expected to raise approximately \$61,000,000.00 of revenue out of the rate from which over half will go to the direct cost of transportation and disposal of solid waste. 17% will go toward facility operation which include the direct operating cost of the two transfer stations and direct operating cost of the MSW compost plant which is presumed to be back on line approximately February, 1993.

Mr. Martin explained the next biggest cost would be "pass-throughs" (costs to DEQ and host communities) and contingency. 8% goes toward overhead and administration -- transfers to other Metro department, personal service contracts and materials and services for the Solid Waste Department.

Mr. Martin said that Mr. Drew had asked him to discuss how the new rate compares with the current rate and what caused the rate to be raised.

Mr. Martin explained that it was necessary to make a tonnage adjustment to reflect the lower tonnage figures the region is experiencing. Mr. Martin said Metro has used all of its contingency and unappropriated funds for the current fiscal year because of an error in the tonnage forecast for the current year. Mr. Martin said it was necessary to reestablish that contingency reserve and the cost would be approximately \$2.50 dollar-per-ton. Mr. Martin stressed this would be a one-time adjustment.

Ms. Harlan said she was unclear as to why the excise tax increased to 6%.

Mr. Martin acknowledged that Metro would realize more dollars out of the excise tax because of the rate increase, but that they would be applying that excise tax to fewer tons than what was previously expected. Mr. Martin said that because of lower solid waste tonnage Metro had to utilize several cost cutting measures, such as laying off personnel and deferring some expenses to the next fiscal year. Mr. Martin said excise tax essentially went to fund general government

services in which Metro is increasingly being called upon to perform for the various local governments.

Ms. Harlan asked if it was appropriate to fund these services with disposal fees.

Mr. Martin said the Council has determined that it is. Mr. Martin reminded the committee that Metro's budget process is accomplished with very few citizens in attendance.

John Drew asked that of the approximately \$61,000,000.00 to be raised through the rate allocation, what is the total budget for Metro in 92-93 -- does this represent half of the budget or two-thirds.

Mr. Martin said his recollection was that the total Metro budget was in the \$250,000,000 to \$300,000,000 - but that figures includes reserves such as St. Johns reserve account which Oregon Budget Law requires local jurisdictions to include as revenue. Mr. Martin said the Solid Waste Department budget is proposed to be \$92,000,000, substantially down from the \$115,000,000 budgeted for the current fiscal year.

Lynne Storz asked what the difference was between the excise tax and the transfers to other departments.

Mr. Martin said the transfers to other departments were for direct services provided by other departments to the Solid Waste Department, and the excise tax goes for general government expenses having nothing directly to do with the Solid Waste Department. Mr. Martin illustrated indirect costs with an overhead illustration of the current year vs. FY 92-93.

Discussion of the Region's Strategy for Managing Petroleum-Contaminated-Soils

Mr. Martin explained that there were currently 4 soil processors which have been granted franchises to process petroleum contaminated soils. Mr. Martin said they were now examining what additional work needed to be done to make sure those soils were handled in the most appropriate fashion.

Mr. Buscher continued the discussion on contaminated soils describing the program LUST "Leaking Underground Storage Tank" which largely contain petroleum products. Mr. Buscher said that DEQ has currently identified 800 active sites within the Metro region and it is estimated there are an additional 10,000 to 15,000 unidentified underground storage tanks, many of which have some degree of leakage. Mr. Buscher said that in addition to treatment of the soils through one of the four franchised soils processors, the contaminated soil may be taken to the Hillsboro Landfill. He said there was some concern that contaminated soils are not being directed to the right place for proper management and Metro is working cooperatively with DEQ to visit the

sites and catalogue the volumes of materials which are being removed from the sites and to determine how and where they are being managed.

Mr. Buscher described the ways soils can be managed as: landfilling, on-site bioremediation, thermal desorption (burning the material on-site), and on or off-site aeration. Mr. Buscher said the costs involved with each of these remedies are about equal. He said that on the management side, a ban on landfilling might be entertained due to the fact that once the soil is treated it can be used whereas once it is landfilled, it is contributing pollutants. The bottom line is to see that materials being excavated are diverted and managed properly which may mean regulation at either at the state, local or regional level.

Mr. Martin added that the Council has asked for an ordinance to be drafted which would ban all management of contaminated soils except at franchised treatment facilities. Mr. Martin suggested that the issue at hand is whether to ban everything except processing or find out what is really happening to that waste and put more effort into making sure the waste goes to the already licensed facilities.

Merle Irvine asked whether the contaminated soils could be used as cover for the landfill, or did it have to be treated first.

Mr. Martin said it had to be treated before it could be used in any capacity.

Mr. Buscher said that the materials currently being landfilled were untreated soils and had to be treated as waste which is why the Council is considering placing a ban on that alternative. Mr. Buscher added that after soil is treated it may be used if it is placed under an impervious surface.

Mr. Martin explained that if soils were required to be treated at one of the four franchise facilities the problem of monitoring would be greatly reduced whereas with 800 areas being treated on-site the monitoring becomes more complicated. Mr. Martin said his preference would be to develop a better and more effective mechanism to monitor the way the soil is being dealt with rather than to ban certain kinds of alternatives.

Steve Schwab asked if DEQ was responsible for locating the contaminated soil site and then turn it over to regional government to follow-up, and why is Metro involved with this process? And where will the money come from to do this, will it come out of the excise tax, through the tipping fee, will Metro create another department, or does the money come from the petroleum industry?

Estle Harlan asked whether the franchise fees for contaminated soil processors covered costs, or what was it for? Ms. Harlan added that the franchise fees needed to be revisited when Metro starts dealing with the franchise holders and Metro begins to enforce and controlling the rules under which they must operate, and that she did not want to see any transfers made from tipping fees to the operation of that function.

Solid Waste Technical Committee

Meeting of 5/28/92

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Mr. Martin said he believed the franchise fee was in the amount of \$500.00, which covers the cost of writing the document and Metro did not collect any fees off the tonnage that goes to franchised processors. We spend very little time or effort with the issue of petroleum contaminated soil, and the only issue we are exploring at this time is whether to extend our control of it to ban it from every alternative but those which we have licensed or franchised. Mr. Martin said that DEQ was regulating the underground storage tank clean-up and they are the ones who are identifying the sites which need to be cleaned up, and the techniques which need to be employed to accomplish that task, etc.

Mr. Drew said that before Metro considers a ban on the use of landfills as one of many options to satisfy the environmental issue, there should be absolute confidence in the franchisers to be able to handle the volume which might potentially be made available.

Mr. Martin said that before granting a franchise a complete review of the technology and exact details of their processing is conducted by DEQ (a DEQ permit is required) and Metro is not proposing to duplicate that process. Mr. Martin said there appears to be more than adequate capacity with the existing soil processors franchised through Metro.

Tom Miller said that heretofore locations of underground storage tanks had been conducted on a strictly voluntary basis and asked what efforts might be made in the future to locate those sites not reported.

Pat Vernon with DEQ said she did not work in that area and had no information to offer the Committee, but she said she would try to get the answer and report to Mr. Buscher her finding.

Mr. Martin acknowledged that if Metro were to take on a role in the monitoring of franchised soil processors, Metro would indeed have to address a stronger fee structure for franchising those operators.

Mr. Schwab said that since Metro has not yet begun to monitor the contaminated soil processing, and since that area is already regulated by EPA and DEQ, it was his feeling that Metro should not include itself as one more bureaucracy dealing in the same thing.

Mr. Martin said Metro had no intention of duplicating the regulatory control that DEQ currently exercises in the area of soil processors.

Discussion of the Region's Proposed Strategy for Franchising Yard Debris Processors

Mr. Buscher said they were considering whether to amend the franchise code in order to franchise yard debris processors as a result of recommendations presented in the yard debris plan. This would put into place regulatory standards to apply standardization of the product available to the consumer, as well as maintain an adequate level of material available to processors, and assures local governments that a facility is not creating an adverse impact on the communities they serve, and to maintain stability in establishing rates charged for incoming loads and material. Mr. Buscher went on to explain that the processors of yard debris have indicated a need for product quality standards. Mr. Buscher said that the concern is that as yard debris composting becomes a more important activity within the region, more processors will come on-line, and the material may become contaminated with plant viruses, weeds, etc.

Mr. Buscher said through the process of franchising, the processors would have to submit materials to independent laboratories for analysis. Mr. Buscher added that processors are currently doing this on their own but their concern is that as the number of processors increase, this self-governing may not continue.

Merle Irvine said he thought there may be difficulty in excluding other processors that take yard debris that do not manufacture a compost, for instance those who manufacture hogged fuel. He said that in other words, he felt you should regulate the process, not the end use.

Mr. Buscher said that two of the major compost facilities did in fact have a dual purpose, and they made different grades of products. Mr. Buscher said they are considering regulating the process of composting itself, by establishing operational standards for the facility and a product quality for the compost. Mr. Buscher said those to be affected would be the facilities that take yard debris from a commercial hauling system, assuring that it would go to a regulated facility and those facilities that produce yard debris compost.

Estle Harlan said The River Cities was proposing to take yard debris collected from Gladstone, West Linn and Oregon City and turn it into hogged fuel. Ms. Harlan said that was material which had been calculated as meeting the goals of the yard debris plan recovery program.

Mr. Martin said the Committee had brought up some interesting thoughts for review, and he said they needed to sort out some of these ideas. He felt we may be trying to accomplish a basically environmental quality purpose in order to make sure that compost products get used in an appropriate fashion so they do not create pollution problems wherever they are used, which more appropriately may be a state regulatory function. The second regulatory purpose might be to protect markets by regulating the various classes of yard debris compost products. And the third regulatory issue might be a hierarchy question -- i.e., all else being equal we would prefer it being composted as opposed to burned.

Ms. Harlan said as long as it is a principal recyclable material and it is going to be counted in meeting the region's recycling goal, then whether it is Metro's role or DEQ's role, someone needs to be watching it.

Mr. Drew asked that if Metro has a seal of approval on types of organic material, what about organic material that competes on the market and sold commercially through the store chains.

Mr. Martin said in other words you are asking are we disadvantaging local producers in favor of imported products from maybe outside?

Mr. Drew went on to say that the evolution of the yard debris plan has always been based on the marketability of the product and processing capacity and are we trying to work backwards to make sure that we are able to haul the material and provide the weekly curb side service, and by making that our standard -- is the only way to assure the availability of the product regulation of the industry, itself.

Mr. Buscher said there is no doubt that the market is there, the material is being sold. But because it is attractive for more people to get into the business of making the product, there is a need for some standard for what is entering the market place to ensure that market does not go away.

The meeting was adjourned at 10:30.

Solid Waste Technical Committee
June 26, 1992

Members Present:

Estle Harlan, OSSI - Tri-County Council
Merle Irvine, Willamette Resources, Inc.
Steve Schwab, Clackamas Co. Refuse Disposal Assn.
John Drew, Far West Fibers
Lynne Storz, alternate, Washington County
Dave Phillips, Clackamas County
Meganne Steele, City of Portland

Metro Participants

Bob Martin, SW Director
Mark Buscher, SW Department
Dennis O'Neil, SW Department
Bill Metzler, SW Department
Terry Petersen, SW Department

Guests Present

Rod Grimm, Grimm's Fuel
Fred Coccodrilli, Bogle & Gates

Bob Martin, Chair, brought the meeting to order.

Mr. Martin welcomed Meganne Steele, Director of Solid Waste for the City of Portland as the newest member of the Technical Committee.

Mr. Martin ascertained there were not enough committee members present to constitute a quorum and therefore Approval of the May 28, 1992 Minutes was deferred to a later time.

Estle Harlan stated that at the bottom of page 4, with regard to a question re franchise fees, she would like the record to reflect that she had stated: that the franchise fees needed to be revisited when Metro starts dealing with the franchise holders and Metro begins to enforce and controlling the rules under which they must operate, and that she did not want to see any transfers made from tipping fees to the operation of that function.
[Note: this has been completed]

Overview of Solid Waste Department Reorganization

Mr. Martin announced to the Committee that a Planning and Technical Services Division had been formed in the Solid Waste Department and introduced Dr. Terry Petersen to the members as the Manager in charge of that division. Mr. Martin stressed to the committee that in forming this new division he was utilizing existing persons/positions and restructured them into a new division within the Solid Waste Department.

Mr. Petersen gave the committee an overview of some of the functions of the new division. The three main functions will be: 1) Planning; 2) Policy Evaluation and 3), Technical Services.

Mr. Petersen said the Planning function will mostly involve maintaining and updating the Regional Solid Waste Management Plan. He said there are chapters yet to be written and they will make a revision of the Waste Reduction Chapter. Mr. Petersen said they would attempt to make the Plan a more readable, functioning document.

Mr. Petersen said in the Policy Evaluation function they might be addressing a wide range of issues from franchise policies to rate setting policies. Mr. Petersen said they would not be setting policy but to do an analysis for the policy makers.

Mr. Petersen said for the Technical Services function, the department would be moving all of the current "system measurement" into the new division which would include the "Waste Characterization Study," which is done every three years; "Recycling Survey" conducted every year; and some of the on-going studies with local haulers, and local governments to determine waste generation rates, etc., along with the solid waste forecasting and information management such as the "SWIS Report," which is produced quarterly.

Mr. Petersen said the division is comprised of six persons and currently there are two vacant positions which he hopes to fill before the end of July. Mr. Petersen stressed his intention to provide the best service possible, to our clients, i.e., Metro staff (in terms of rate setters), local government, haulers, etc. Mr. Petersen summed it all up by saying the Planning and Technical Services Division is the smallest division in the Solid Waste Department but the most important one.

Mr. Drew asked Mr. Petersen if this would change the manner in which Metro relates to the Technical Committee and would he become more involved with the Committee.

Mr. Petersen said his division would be bringing forth a lot of work to the Technical Committee for review and recommendations.

Mr. Martin added that the new division would be a much needed consolidation to the problem of multiple answers to questions concerning statistics on forecasting and accumulated data on comprehensive, system-wide activities.

Mr. Martin told the Committee that in response to Estle Harlan's request for an organizational chart, now that this division has been formed he should be able to provide that document at the next meeting.

Update of the MSW Vendor Selection Process

Mr. Martin said the Compost Facility is still completely shut down, although there is a small maintenance crew keeping the equipment in good order so it is not deteriorating or losing value. Credit Suisse owns the facility and have hired a group called Skulley Services, a consulting firm which is helping them go through a process of review of potential new owner/operators for the facility. They have solicited throughout the world for interest in acquiring the facility and make it a successful operation. They have received at least 30 applicants which they have evaluated and pared down to a total of about 12 groups with which they have been conducting tours and after this initial round is complete, they will begin the second stage and put out a request for proposal from the interested parties. They estimate they will receive 5 or 6 responses ranging across the board in terms of how they want to operate and what they want to do to the facility. They will then pare that list down to 1 or two proposal responses and begin a negotiation process to settle the details of how they finance the capital improvements, how they will operate, what changes they propose to make to the plant, etc.

Mr. Martin said Metro has been "sitting in" on these interviews as an interested party in that they have a service agreement which was formerly with Reidel and now Credit Suisse but have no direct involvement. Mr. Martin said it is entirely possible that Metro could be asked to make some changes to the service agreement which Metro will entertain depending on the Council's response and how reasonable the request was.

Mr. Martin said the possibility that the facility would come back on-line this year was out of the question and he would not expect it to open before the middle part of 1993.

Ms. Harlan stated she understood the rate was set based on the assumption that the facility would begin operation in February.

Mr. Martin said the rate was set assuming (optimistically) that the facility could go back into operation as early as February, 1993, but he did not feel it would detrimentally effect the budget.

Mr. Drew asked Mr. Martin if they were thinking of changing the scope, i.e., the type of materials received, volumes, and fundamental change in size or design.

Mr. Martin said Credit Suisse was simply saying, here is the contractual agreement we have with Metro and tell us how you would fulfill it. They are also inviting the responders to tell them what they might take exception to in the agreement or what they would propose to change, what would it cost so they could evaluate it.

Ms. Harlan responded saying that Metro had "dipped a ways" into Clackamas County and if he was talking about dipping a little further, she said some of the haulers costs would really go up.

Mr. Martin said he did not expect to go any further and in fact would probably not go as far.

Mr. Drew wanted to know at what point the interested parties would become public.

Mr. Martin said some had already been made known, but that was really up to Credit Suisse. Mr. Martin said the one thing Metro wanted to be extremely careful was to alter the current relationship with regard to risk on the facility, but they were committed to do as much as was reasonably possible without compromising the finances of the system to bring that facility back into some kind of reasonable operation because it would divert a lot of waste from the landfill.

Mr. Rod Grimm, Grimm's Fuel Company, a yard debris composter in Southwest Portland asked to speak to the Committee. He said that the Reidel operation had produced great concerns for his company because of their odor problem. He went on to say his company had been in operation for 11 years and have never had an odor problem, but because of the recent poor publicity with the Reidel facility, local government and citizens had an awareness and were skeptical as to the company's future in their neighborhood. Mr. Grimm asked Metro and the Committee to consider evaluating compost facilities in order to bring standardization to compost products. Mr. Grimm suggested that even McFarlane's operation could be brought up to standards in terms of odor problems.

Mr. Martin said he agreed that compost has an enormous potential, but that it needed to be approached very carefully. Mr. Martin said it would not come back into operation with the same problems that it had before, and that we lost an opportunity for recycling if this facility could not come back on-line.

Mr. Phillips said he agreed with Mr. Grimm, that McFarlanes did have a problem with odor and that they would be forced to close that facility if the problem could not be solved. Mr. Phillips said that an odor problem had blocked a land use approval on another facility in South County that was dealing with other forms of waste.

Mr. Martin said that he had been encouraged because Credit Suisse has been interviewing some groups which already operate facilities in the United States in other jurisdictions successfully without odors, and they think they can do the same thing here. Whether or not they can do the same thing economically and within the constraints that have been placed on the project is the real question.

Overview of the St. Johns Landfill Closure Project

Mr. Martin said the landfill closure project is the largest capital project the Solid Waste Department has ever undertaken, and it has been on-going for the past two years relatively quiet and smoothly. Mr. Martin introduced Dr. Dennis O'Neil who is overseeing the closure.

Mr. O'Neil stated Metro was closing the landfill subject to a 1989 St. John's Closure & Financial Assurance Plan approved by Council. Displaying a large aerial map, he described it as being located in North Portland in the Rivergate area, just south of the Columbia River in a wetland area which was originally a natural lake and filled with solid waste. Mr. O'Neil said the landfill was surrounded on three sides by Smith and Bybee Lakes, relatively shallow marshy lakes. Mr. O'Neil said the lakes have been designated a natural area and Metro holds the endowment fund which will be used to manage the area. Mr. O'Neil continued to describe the area surrounding the landfill.

Mr. O'Neil said that even though the landfill has stopped taking waste they are inviting clean fill dirt, because they are trying to build-up Sub-Area 4. He said the overall objective was to manage the short and long-term impacts on health, safety and the environment. First they are trying to close the landfill and secondly they are trying to integrate it into the Smith & Bybee Lake wetland area in a positive manner. They are also trying to provide an opportunity for research about landfill closure methods as well as provide an opportunity to recycle waste.

Mr. O'Neil described how the waste inside the landfill behaves: he said the area receives approximately 36" per year rainfall, most of it running off, but a certain percentage filters into the solid waste, further contaminating the waste, and ultimately building a mound of liquid inside. Mr. O'Neil continued saying that the mound is a rather contaminated liquid (leachate) and as it builds up, its weight forces it into the underlying soils or into the surrounding soils toward the surrounding Slough and lakes. The recommended way to manage that problem is to completely eliminate all further rain water from filtering down (basically placing a roof over the landfill). The expectation is that the existing contaminated water will slowly seep out through the silt with some pollutants being filtered out. The roof will need to be of an impermeable material and sloped to encourage runoff.

Mr. O'Neil then showed a graph delineating the layers of materials that will be make up the improved cover. When the cover is completed, it should blend into the surrounding wetland areas. To that end Metro has hired a consultant team to look at what types of vegetation would best grow on the landfill. The cover will be comprised of: 1 foot of topsoil (mixture of compost and soil), under that, 18" of Type 1 sand which has improved drainage characteristics, below that will be a Geonet plastic diamond shaped fabric with filter blankets on each side, and beneath that a Geomembrane, which is a low-density polyethylene plastic membrane (a sample of which he showed the committee) about 40 mil

plastic. Below that is about 1 foot (six inches on the sides) of a moderately low permeability soil as a second barrier to water.

Merle Irvine asked if this cover went over the existing current cover.

Mr. O'Neil answered that you had the existing cover: 18" clay, 6" of topsoil. After stripping 6" of the topsoil (laid aside to be recycled), then strip off as much of the clay off the flatter portions as is possible. When the slopes are built up with what is termed subgrade embankment, then take as much of the removed clay as and can, and place that back on the landfill and compact it before laying the geomembrane.

Mr. Phillips asked if they were re-using the existing top soil.

Mr. O'Neil said yes, but in addition 6" additional mixture of topsoil and compost.

Estle Harlan asked Mr. O'Neil if all of this work was to be funded out of existing funds or would additional funds need to be generated out of the tipping fees.

Mr. Martin said the reserve account probably did not provide enough funds for the complete closure project with the additional regulatory changes which have occurred since the project was originally commenced. Mr. Martin said Metro was still dealing with that due to the design changes in the new regulations. Mr. Martin did say, however, that he thought they would have continuing modest contributions.

Ms. Harlan urged Mr. Martin to broadcast the fact that regulatory laws were causing him to seek additional funds.

Mr. O'Neil said that because the landfill continues to sink, DEQ requires a 5% slope, after settlement, which will require that we purchase dirt to build up the slopes and consequently we will incur additional costs. Mr. O'Neil said one of the first tasks accomplished with the closure was to purchase and stockpile part of the needed materials - subgrade embankment and sand. Mr. O'Neil said the construction progress is very weather dependent and having the material on-site is a definite advantage. More importantly, the weight of the stockpiled material is helpful in keeping pressure on the underlying solid waste and causing settlement to occur faster before the improved cover is laid down.

Mr. O'Neil said that in 1992 we have actually begun to install the cover to one subarea of the landfill, and that contract was awarded to: L & H Grading for \$4.4 million dollars.

Mr. O'Neil then provided a slide show to demonstrate exactly how the layers of material are put into place on the landfill.

Mr. Drew asked what the optimal elevation of the landfill was.

Mr. O'Neil said that the initial elevation of the highest of seven mounds was about 100 ft mean sea level. There is 236 total acres of which 220 will receive membrane cover. Mr. O'Neil said the gatehouse at the landfill is still operating in order to weigh in the dump trucks to determine volumes of material (dirt) used.

Mr. Phillips asked if Metro was buying the sand from the Port of Portland.

Mr. O'Neil said the Port is renting its property to John L. Jersey & Son, Inc. to store the sand. The sand was dredged out of the river by the Riedel subsidiary, working with John L. Jersey. It is allowed to dry out on Port property and then trucks it to the landfill. Mr. O'Neil said the Port's permit was used (their sand allocation) to dredge the sand.

Mr. O'Neil described Sub-Area 1 (the area now being closed and covered) as an area encompassing 35 acres. He said they picked the smallest, easiest one to start with in order to "look for the bugs" and "go to school." Mr. O'Neil continued through the slides and describing how the layers of material were applied.

Mr. Drew asked how the geomembrane at St. Johns Landfill compares to the one being used in Arlington and are the fill materials above the membrane in Arlington similar to those at St. Johns Landfill.

Mr. O'Neil said he was not positive but believed the geomembrane used under the solid waste at Arlington was called High Density Polyethylene, 60-mil, a little thicker than at St. Johns Landfill. Mr. O'Neil said the reason SJL was using a low-density material is that it is more rubbery, and will take the stress of pulling and differential settlement in the landfill better than a high-density material.

Mr. O'Neil explained they must remove the gas from the landfill or it could expand the geomembrane like a balloon, so they will suck the gas from under it and utilize it in a gas energy recovery project.

Mr. O'Neil showed a slide of a leachate detention pond. Stormwater runoff must be detained in detention ponds to remove any sediment which will occur the first several years and this particular case the garbage from the landfill was actually exposed and it had to be redesigned slightly.

Mr. O'Neil said that in the future they will be closing Sub-area 2 and 3 in 1993 and 1994. In '95, possibly '96 dependent on the weather the Sub-area's now settling rapidly will be closed last. They will continue to build those areas up with free fill dirt until it is time to apply the cover.

Mr. O'Neil said some of the other things happening with the landfill is the possibility of contracting with a gas transporter (pipeline company) with the idea that they may be able to hook on to the gas and pipe it to one or more users. The transporter is negotiating with companies like Ashgrove cement and other possible users of the gas within the Rivergate

Industrial area. Mr. O'Neil said they do not expect the revenue to be high from the recaptured gas but it is better used than wasted. He said the impact of the St. Johns Landfill on the environment is a continuing concern and in that regard they will continue to monitor wells and keep an eye on the sideways movement of leachate from the landfill into the surrounding surface water.

Mr. O'Neil said that in terms of "risks", there could be increased regulatory pressure in the future to install a perimeter leachate collection system which would be a huge French drain all the way around the landfill. It would have to collect the leachate and pump it to the sewage treatment plant. We are continually conducting tests to estimate what the flow and contamination level might be and whether or not it is significant enough to justify this action. Mr. O'Neil said some other requirements of the closure plan include improving the monitoring capabilities, i.e., abandoning wells, drilling new wells, maintaining the wells we currently have and more chemical monitoring, fish tissue monitoring, sediment monitoring.

Mr. O'Neil said that as of June 30, 1991, we have \$26.6 million in the St. Johns Landfill Closure Fund, (9/10 of a million in interest). As of March 31, 1992, we have disbursed \$3 million dollars.

Mr. Martin added that the cost of closing the St. Johns Landfill is almost exactly twice the cost of opening the Columbia Ridge Landfill and believes that the cost of closing landfills is expensive if you place them in swamps. Mr. Martin said it was originally thought that the St. Johns Landfill, once closed would be immediately converted into some beneficial uses, but have come to realize that is not realistic at any point in the near future. Gas collection will continue for at least the next several years, settlement will be occurring, there will be a need to continue to go back and correct for that settlement so this will continue to be a "construction project" for a few years to come. It will have a use as habitat, open space, and the monitoring scheme associated with the landfill will have benefits to the overall management of the Smith & Bybee Lakes area.

Ms. Harlan asked if there was any continuing monitoring of the Duniway Park "mini-landfill" for gases, or sink holes, etc.

Mr. Martin said that they were subject to the same State regulations that Metro is so he felt they were keeping an eye on that.

Mr. Phillips said that Duniway had been closed for at least 30 years and that what happened at Bend was not a closure to the magnitude that Duniway was closed but was a demolition type site which contained a lot of stumps and some sand sort of pushed over it that created the situation. Mr. Phillips said we have many landfills which have been closed and are now in-use. We have a motorhome, RV service center on one, a trailer park sitting on one (which is being watched), plus shops for a garbage company, etc.

Mr. Martin said Metro wanted to do a very good job of regulatory compliance during the process of closure. Mr. Martin said Metro was conducting active research on the facility

to help not only ourselves but DEQ and EPA in the future better understand how to approach a large-scale closure project of this type.

Mr. Drew thanked Mr. O'Neil for a very complete and comprehensive report on the closure process and agreed on behalf of the committee that they wanted to see the closure completed properly and to expend whatever expense was necessary. Mr. Drew said he agreed with Ms. Harlan that we should anticipate additional costs and make it very clear to the rate payers early in the process about what to expect in terms of the impact on the rate payer.

There were no more questions, and Mr. Martin announced the next meeting would be July 23, 1992. The meeting was adjourned.

DRAFT 7/16/92

**Model Zoning Ordinance for Mixed Solid Waste and Recyclables Storage in
New Multi-unit Residential and Non-residential Buildings**

I. PURPOSE

This ordinance establishes standards for centralized mixed solid waste storage, which includes source separated recyclables and residual mixed solid waste destined for a disposal facility. The purpose of the ordinance is to ensure that new construction incorporates functional and adequate space for on-site storage of source separated recyclables and residual mixed solid waste prior to pick-up and removal by haulers.

II. APPLICABILITY

The mixed solid waste and source separated recyclables storage standards shall apply to all new multi-unit residential and non-residential construction that is subject to full site development plan review.

III. DEFINITIONS

"Mixed Solid Waste" means solid waste that contains recoverable or recyclable materials, and materials that are not capable of being recycled or recovered for further use.

"Source Separated Recyclables" means, at a minimum, recyclable materials designated "principle recyclable materials" by the State Environmental Quality Commission under ORS 495A.025, with the exception of yard debris. Currently these materials include newspaper, ferrous and non-ferrous scrap metal, used motor oil, corrugated cardboard, aluminum, container glass, office paper, and tin cans (OAR 340-60-030).

"Residual Mixed Solid Waste" means useless or discarded material commonly disposed of by residential and non-residential generators after some level of source separation and recycling has occurred.

"Storage Area" means the space necessary to store residual mixed solid waste and source separated recyclables that accumulate between collection days.

"Multi-unit residential building" means a structure that contains five or more dwelling units that share common walls or floors/ceilings with one or more units.

"Non-residential building" means a structure that is used for any non-residential function, including but not limited to office, retail, wholesale/warehouse/industrial, educational, and institutional uses.

IV. MATERIALS ACCEPTED

The storage area must be designed and managed to accommodate a multi-material system. The list of source separated recyclables accepted shall conform to the most current state law or local government requirements, whichever is most inclusive. Separate and appropriate methods of containing source separated recyclables and residual mixed solid waste must be provided in the storage area, based on the volume of materials accumulated between collection days.

V. METHODS OF DEMONSTRATING COMPLIANCE

To provide for flexibility in designing functional storage areas, this model ordinance outlines four methods to meet the overall objective of improving the efficiency of collection by providing adequate on-site areas for material storage. An applicant can choose any one of the following four methods to demonstrate compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; or 4) franchised hauler review and sign-off.

Section VI of this ordinance (Location, Design and Access Standards) applies to all four methods of demonstrating compliance listed below. In addition, the following provisions are applicable to all four methods:

1. When compliance with this ordinance requires the development of an interior or exterior storage area, the storage area shall be excluded from the calculation of lot coverage in the base zone.
2. When computing required storage area, the building floor area used for source separated recyclables/residual solid waste storage shall not be counted.

A. Minimum Standards Method

Description of Method: This method specifies a minimum storage area requirement based on the size and general use category of the new construction.

Application of Method: This method is most appropriate when the specific use of a new building is not known. It provides standards for the appropriate size of storage areas. The minimum standards can be efficiently incorporated into site plans and building design.

Review Procedure: The size and location of the storage area(s) shall be indicated on the site plan for new multi-unit residential or non-residential buildings. Through the plan check review process, compliance with the general and specific requirements set forth below is verified.

General Requirements:

1. When there are two or more separate uses on a site, the storage area requirement for the site shall be the sum of the required storage area(s) for the individual uses. Storage areas for multiple uses on a single site may be combined and shared.
2. The storage area requirement shall be based on the predominant functional use of the building. When a building has more than 20 percent of its floor area in a distinct function (i.e., office, warehouse, or retail), the storage area requirement shall be calculated separately for each function.

Specific Requirements:

1. Multi-unit residential buildings containing 5-10 units shall provide a minimum storage area of 50 square feet. Buildings containing more than 10 residential units shall provide an additional 5 square feet per unit for each unit above 10.

2. Non-residential buildings shall provide a minimum storage area of 10 square feet, plus:

Office: 4 square feet/1,000 square feet gross floor area (GFA)

Retail: 10 square feet/1,000 square feet GFA

Wholesale/Warehouse/Manufacturing: 6 square feet/1,000 square feet GFA

Educational and Institutional: 4 square feet/1,000 square feet GFA

Other: 4 square feet/1,000 square feet GFA

B. Waste Assessment Method

Description of Method: This method tailors the storage area size to a waste assessment and management program for the specific user of a new building. The waste assessment form is to be used when the applicant does not have a comprehensive recycling plan.

Application of Method: This method is most appropriate when the specific user of a building is known and the type and volume of mixed solid waste to be generated can be estimated. A waste assessment form shall be used to estimate the volumes of source separated recyclables/residual mixed solid waste generated. From this information, the applicant can design a specific management, storage and collection system. Techniques

such as a compactor, cardboard baler or frequent collection may be implemented to minimize the square footage of the site which must be set aside for a storage area.

Review Procedure: A pre-application conference with the solid waste coordinator/plan check staff is required if the waste assessment method is proposed. The applicant shall obtain a waste assessment form from the local jurisdiction (Note: A sample form will be provided as an appendix to this ordinance). The form shall be completed and submitted with site plans/building plans required by the local jurisdiction. The plans must identify the size and location of interior or exterior storage area(s), specialized equipment, collection schedule, etc. required to accommodate the volumes projected in the waste assessment.

Specific Requirement: The site plan drawings and descriptions of storage containers, equipment and collection service shall demonstrate that the residual mixed solid waste and recyclables volumes expected to be generated can be stored on less space than is required by the minimum standards method. The solid waste coordinator for the local jurisdiction shall review and approve the waste assessment as part of the plan check process.

C. Comprehensive Recycling Plan Method

Description of Method: This method recognizes that many large industrial, institutional or other uses have comprehensive recycling plans and programs in place which go far beyond the minimum standards of this model ordinance. These businesses are also frequently expanding and renovating their facilities. It is appropriate to recognize and use these existing plans to satisfy compliance with this model ordinance.

Application of Method: This method can be used when a comprehensive recycling plan has been implemented for a specific facility. This method is most suited to large non-residential uses such as hospitals, schools and industrial facilities. The comprehensive recycling plan method can be used for new construction or expansion that is subject to full site plan review.

Review Procedure: The comprehensive recycling plan shall be submitted to the local solid waste coordinator at the same time site and building plans are submitted for full site plan review. For the new construction proposed, the comprehensive recycling plan shall be referenced and a brief description provided by the applicant to note how the new building will be served and integrated into the overall comprehensive recycling program.

The location, design and access standards set forth in Section VI shall not apply to expansion or renovation of existing storage areas.

D. Franchised Hauler Review Method

Description of Method: This method provides for coordinated review of the proposed site plan/building plan by the franchised hauler serving the subject property.

Application of Method: This method is only available in jurisdictions which franchise collection service areas because there is a guarantee that a specific level of service will be provided, whether or not the specific use of the building changes. This method is most appropriate when there are unique conditions associated with the site, use or waste stream that can be matched with a specific hauler program (types of equipment, frequency of collection, etc.).

Review Procedure: The applicant shall work with the franchised hauler to develop a plan for storage and collection of source separated recyclables and residual mixed solid waste expected to be generated from the new building. The size and location of storage area(s) required to accommodate anticipated volumes shall be identified on site plans/building plans. A letter from the franchised hauler shall be submitted with the site plans/building plans to describe the level of service to be provided by the hauler, including any special equipment and collection frequency, which will keep the storage area from exceeding its capacity.

VI. LOCATION, DESIGN AND ACCESS STANDARDS FOR STORAGE AREA(S)

The following location, design and access standards for storage areas are applicable to all four methods of compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; and 4) franchised hauler review and sign-off.

A. Location Standards

1. To encourage its use, the storage area for source separated recyclables shall be co-located with the storage area for residual mixed solid waste.
2. Storage area(s) can be located inside or outside of proposed buildings. If located inside, storage area(s) shall comply with Building and Fire Code requirements.
3. Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.
4. Exterior storage areas can be located within interior side yard or rear yard areas. Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public street.

5. Exterior storage areas shall be located in central and visible locations on a site to enhance security for users.
6. Exterior storage areas can be located in a parking area, if appropriately screened according to the provisions in Section B, Design Standards.
7. Where a site is served by an alley with adequate width for collection vehicles, all exterior storage area(s) shall be directly accessible to such alley.
8. The storage area shall be accessible for collection vehicles and located so that collection vehicles will not obstruct pedestrian or vehicle traffic movement on the site or on public streets adjacent to the site.

B. Design Standards

1. The dimensions of the storage area shall accommodate containers consistent with current methods of local collection.
2. To ensure efficient collection and avoid unsightly storage areas and litter, storage containers shall be weatherproof. This can be accomplished either by using weatherproof containers with lids or by providing a covered storage area.
3. Exterior storage areas shall be enclosed by a sight obscuring fence, wall, or hedge at least six feet in height. Gate openings which allow access to users and haulers shall be provided. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position.
4. Storage area(s) and containers shall be clearly labeled to indicate the type of materials accepted.

C. Access Standards

1. Access to storage areas can be limited for security reasons. However, the storage area shall be accessible to users at convenient times of the day, and to collection service personnel on the day and approximate time they are scheduled to provide collection service.
2. The storage area shall be designed to be easily accessible to collection trucks and equipment, considering paving, grade and vehicle access. A minimum of 10 feet horizontal clearance and 8 feet of vertical clearance is required if the storage area is covered.

3. The storage area shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow collection vehicles to safely exit the site in a forward motion.