BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AUTHORIZING THE CHIEF OPERATING OFFICER TO ISSUE A NON-SYSTEM LICENSE JOINTLY TO ALLIED WASTE OF CLACKAMAS AND WASHINGTON COUNTIES AND WILLAMETTE RESOURCES, INC. FOR DELIVERY OF SOURCE-SEPARATED PRE-AND POST-CONSUMER FOOD WASTE TO THE PROCESSING AND RECOVERY CENTER FACILITY FOR COMPOSTING	)	RESOLUTION NO. 09-4081 Introduced by Michael Jordan, Chief Operating Officer, with the concurrence of David Bragdon, Council President

WHEREAS, the Metro Code requires a non-system license of any person that delivers putrescible solid waste generated from within the Metro boundary to a non-system disposal facility; and

WHEREAS, Allied Waste of Clackamas and Washington Counties and Willamette Resources, Inc. have applied for a non-system license to deliver source separated, pre-and post-consumer food waste from its customers to the Processing and Recovery Center composting facility under the provisions of Metro Code Chapter 5.05, "Solid Waste Flow Control"; and

WHEREAS, the non-system license application conforms with the requirements of Chapter 5.05 of the Code; and,

WHEREAS, the Chief Operating Officer has analyzed the application and recommended approval of the applicant's request for a non-system license with the conditions and in the form attached to this resolution as Exhibit A; now therefore,

BE IT RESOLVED that the Metro Council authorizes the Chief Operating Officer to issue a non-system license jointly to Allied Waste of Clackamas and Washington Counties and Willamette Resources, Inc. in a form substantially similar to the license attached as Exhibit A.

ADOPTED by the Metro Council this 5 day of NOV, 2009.

David Bragdon, Council President

Approved as to Form:

Daniel B. Cooper, Metro Attorney

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Officially Approved — Approvato Ufficialmente — Consiglio Metropolitano — Metro Council — METRO COUNCIL

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1650 | FAX 503 813 7544

METRO

METRO SOLID WASTE FACILITY
NON-SYSTEM LICENSE

No. N-005-09(4)

LICENSEE:	
Allied Waste of Clackamas and Washington Counties 10295 SW Ridder Road Wilsonville, OR 97070	Willamette Resources, Inc. 10295 SW Ridder Road Wilsonville, OR 97070

CONTACT PERSON:			
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MAILING ADDRESS:	
Allied Waste of Clackamas and Washington Counties 10295 SW Ridder Road Wilsonville, OR 97070	Willamette Resources, Inc. 10295 SW Ridder Road Wilsonville, OR 97070

ISSUED BY METRO

Michael Jordan, Chief Operating Officer _____ Date

1	NATURE OF WASTE COVERED BY LICENSE
	Source-separated, pre-and post-consumer food waste (including meat and cheese) generated by customers of Allied Waste of Clackamas and Washington Counties within the Metro region.

2	CALENDAR YEAR TONNAGE LIMITATION
	Licensee is authorized to deliver to the non-system facility listed in Section 3 of this license up to 12,000 tons per calendar year of the waste described in Section 1 of this license.

3	NON-SYSTEM FACILITY
	The Licensee hereunder may deliver the waste described in Section 1, above, only to the following non-system facility for the purpose of processing and composting: Processing and Recovery Center 29969 Camp Adair Road Monmouth, OR 97361 This license is issued on the condition that the non-system facility listed in this section is authorized to accept the type of waste described in Section 1. If Metro receives notice from the Oregon Department of Environmental Quality that this non-system facility is not authorized to accept such waste, Metro may immediately terminate this license pursuant to Section 10 of this license.

4	TERM OF LICENSE
	The term of this license will commence on November 1, 2009 and expire at midnight on December 31, 2011, unless terminated sooner under Section 10 of this license.

5	COVERED LOADS
	The Licensee shall suitably contain and cover, on all sides, all loads of source-separated pre-and post-consumer food that are delivered under authority of this license to prevent spillage of waste while in transit to the non-system facility listed in Section 3 of this license.

6	**MATERIAL MANAGEMENT**
	The Licensee is authorized to deliver the waste described in Section 1 of this license to the non-system facility listed in Section 3 under the following conditions: (a) The non-system facility shall accept all solid waste that is delivered under authority of this license for the sole purpose of processing and composting on site. The licensee shall not dispose of any source-separated recyclable material, except as provided in Section 7; (b) The non-system facility shall receive, manage, process, and compost all solid waste that is delivered under authority of this license in accordance with all applicable local, state and federal laws, rules, regulations, ordinances, orders, and permits.

7	**REGIONAL SYSTEM FEE AND EXCISE TAX**
	The Licensee shall be subject to the following conditions: (a) Source-separated, pre-and post-consumer food waste that is delivered under authority of this license and is accepted and composted, in accordance with all applicable regulations, at the non-system facility listed in Section 3 is exempt from Regional System Fees and Excise Tax. (b) If the Licensee delivers waste under this license to the non-system facility but the material does not meet the facility's acceptance criteria (e.g., too contaminated for processing or composting) or the non-system facility fails to process and compost the material as required as a condition of this license, the Licensee shall pay to Metro an amount equal to the Regional System Fee, as provided in Metro Code Section 5.02.045, for each ton of waste delivered to the non-system facility that is ultimately disposed of at a solid waste disposal facility. (c) If the Licensee delivers waste under this license to the non-system facility but the material does not meet the facility's acceptance criteria (e.g., too contaminated for processing or composting) or the non-system facility fails to process and compost the material as required as a condition of this license, the Licensee shall pay to Metro an amount equal to the Excise Tax, as provided in Metro Code Section 7.01.020, for each ton of waste delivered to the non-system facility that is ultimately disposed of at a solid waste disposal facility.

8	REPORTING OF ACCIDENTS AND CITATIONS
	Licensee shall report to Metro any significant incidents (such as fires, off-site odor complaints), accidents, and citations involving vehicles transporting the solid waste authorized by this license.

9	RECORD KEEPING AND REPORTING
	(a) The Licensee shall keep and maintain accurate records of the amount of all solid wastes that the Licensee delivers to the non-system facility described in Section 3 of this license. The Licensee shall keep and maintain complete and accurate records of the following for all transactions with the authorized non-system facility: i. Ticket or weight slip number from the non-system facility; ii. Material category designating the type of material transferred to the non-system facility; iii. Date the load was transferred to the non-system facility; iv. Time the load was transferred to the non-system facility; v. Net weight of the load; and vi. Fee charged by the non-system facility (b) No later than the fifteenth (15th) day of each month, beginning with the first month following the commencement date of this license, Licensee shall transmit the records required under Section 9(a) above, that covers the preceding month, to Metro's Finance and Regulatory Services in an electronic format prescribed by Metro. (c) Licensee shall make all records from which Section 9(a) above are derived available to Metro (or Metro's designated agent) for its inspection or copying, as long as Metro provides no less than three (3) calendar days written notice of an intent to inspect or copy documents. Licensee shall, in addition, sign or otherwise provide to Metro any consent or waiver necessary for Metro to obtain information or data from a third party, including the non-system facility listed in Section 3, above.

10	ADDITIONAL LICENSE CONDITIONS
	This license shall be subject to the following conditions: (a) The permissive transfer of solid waste to the non-system facility, listed in Section 3, authorized by this license shall be subordinate to any subsequent decision by Metro to direct the solid waste described in this license to any other facility.

	(b) This license shall be subject to amendment, modification or termination by Metro's Chief Operating Officer (the "COO") in the event that the COO determines that: (i) There has been sufficient change in any circumstances under which Metro issued this license, or in the event that Metro amends or modifies its Regional Solid Waste Management Plan in a manner that justifies modification or termination of this license; (ii) The provisions of this license are actually or potentially in conflict with any provision in Metro's disposal contract with Oregon Waste Systems; (iii) Metro's solid waste system or the public will benefit from, and will be better served by, an order directing that the waste described in Section 1 of this license be transferred to, and disposed of at, a facility other than the facility listed in Section 3; or (iv) The non-system facility listed in Section 3 fails to manage the waste subject to this license in accordance with the material management requirements described in Section 6. (c) This license shall, in addition to subsections (b)(i) through (iv), above, be subject to amendment, modification, termination, or suspension pursuant to the Metro Code. (d) Licensee shall not transfer or assign any right or interest in this license without prior written notification to, and approval of, Metro. (e) This license shall terminate upon the execution of a designated facility agreement with the facility listed in Section 3. (f) This license authorizes delivery of solid waste to the facility listed in Section 3. Transfer of waste generated from within the Metro boundary to any non-system facility other than that specified in this license is prohibited unless authorized in writing by Metro.

11	**COMPLIANCE WITH LAW**
	Licensee shall fully comply with all applicable local, regional, state and federal laws, rules, regulations, ordinances, orders, and permits pertaining in any manner to this license, including all applicable Metro Code provisions and administrative procedures adopted pursuant to Chapter 5.05 whether or not those provisions have been specifically mentioned or cited herein. All conditions imposed on the collection and hauling of the Licensee's solid waste by federal, state, regional or local governments or agencies having jurisdiction over solid waste generated by the Licensee shall be deemed part of this license as if specifically set forth herein.

12	**INDEMNIFICATION**
	Licensee shall defend, indemnify and hold harmless Metro, its elected officials, officers, employees, agents and representatives from any and all claims, demands, damages, causes of action, or losses and expenses, or including all attorneys' fees, whether incurred before any litigation is commenced, during any litigation or on appeal, arising out of or related in any way to the issuance or administration of this non-system license or the transport and disposal of the solid waste covered by this license.

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STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 09-4081 FOR THE PURPOSE OF AUTHORIZING THE CHIEF OPERATING OFFICER TO ISSUE A NON-SYSTEM LICENSE JOINTLY TO ALLIED WASTE OF CLACKAMAS AND WASHINGTON COUNTIES AND WILLAMETTE RESOURCES, INC. FOR DELIVERY OF SOURCE-SEPARATED PRE-AND POST-CONSUMER FOOD WASTE TO THE PROCESSING AND RECOVERY CENTER FACILITY FOR COMPOSTING

October 12, 2009 Prepared by: Bill Metzler

BACKGROUND

Description of the Resolution

Approval of Resolution No. 09-4081will authorize the Chief Operating Officer to issue a new non-system license ("NSL") jointly to Allied Waste of Clackamas and Washington Counties and Willamette Resources, Inc. to annually deliver a maximum of 12,000 tons of source-separated, pre-and post-consumer food waste that will include meat and cheese ("mixed food waste"), generated by its commercial customers to the Processing and Recovery Center ("PRC") facility located at 29969 Camp Adair Road in Monmouth, Oregon.

PRC is an established yard debris composting facility and the mixed food waste will be accepted and composted as part of a pilot study project, approved by the Oregon Department of Environmental Quality (DEQ) that could last for up to twelve months. Upon successful completion of the pilot study, PRC intends to obtain the required DEQ composting permit and apply for a Metro designated facility agreement that would authorize its acceptance of mixed food waste from the region on an ongoing basis. The term of the proposed NSL is through December 31, 2011, which would provide the applicant with sufficient time to apply to Metro for designated facility status - without an interruption in mixed food waste deliveries.

During the pilot study, PRC will accept mixed food waste generated in the Metro region from commercial food retail outlets such as delicatessens, restaurants, and retail food stores. The applicant intends to collect and haul the mixed food waste direct from the site of the retail outlet to PRC. For additional flexibility and potential cost savings, the mixed food waste may be delivered first to the Willamette Resources, Inc. (WRI) transfer station in Wilsonville for consolidation and reload to the PRC facility.

Because PRC is a composting facility, the waste covered under this proposed NSL will not implicate Metro's obligations under its disposal contract and the waste is exempt from Metro fees and taxes.

ANALYSIS/INFORMATION

1. Known Opposition

There is no known opposition to the proposed non-system license.

2. Legal Antecedents

Metro Code Section 5.05.035 provides that a waste hauler may transport solid waste generated within Metro to any non-system facility only by obtaining an NSL. Metro Code further provides that

applications for non-system licenses for putrescible waste shall be reviewed by the Chief Operating Officer and are subject to approval or denial by the Metro Council. Under Metro Code Subsection 5.05.035(c), the Council shall consider the following factors when determining whether to approve an NSL application:

(1) The degree to which prior users of the non-system facility and waste types accepted at the non-system facility are known and the degree to which such wastes pose a future risk of environmental contamination;

The non-system facility identified in this proposed license is an established yard debris composting facility rather than a landfill and thus does not pose the same potential environmental risk from wastes delivered from prior users. Since the facility has accepted only yard debris for composting and wood waste, staff is not aware of any other wastes accepted at PRC that could pose a risk of environmental contamination.

(2) The record of regulatory compliance of the non-system facility's owner and operator with federal, state and local requirements including, but not limited to, public health, safety and environmental rules and regulations;

PRC is the non-system facility and is owned and operated by Valley Landfills, Inc. located at 28972 Coffin Butte Road in Corvallis Oregon. Valley Landfills, Inc. is owned by Allied Waste Industries, Inc. which is a wholly-owned subsidiary of Republic Services, Inc. headquartered at 18500 N. Allied Way in Phoenix Arizona.

Allied Waste Industries, Inc. also owns and operates Willamette Resources, Inc. ("WRI") a Metro franchised transfer station located at 10295 SW Ridder Road in Wilsonville Oregon , Allied Waste of Clackamas & Washington Counties (a solid waste hauling company), and the Coffin Butte Landfill a Metro Designated Facility located at 28972 Coffin Butte Road in Corvallis Oregon.

WRI has had no violations related to public health, safety or environmental regulations in the past three years. In 2007, WRI was issued a Metro Notice of Violation (NOV-182-07) for exceeding a tonnage authorization in Non-System License No. N-005-05(3). However, WRI took action and abated the violation to prevent recurrence. This violation is not related to the activities performed at PRC. PRC accepts a different waste stream and, based on communication with the DEQ, the facility operates in compliance with all federal, state, and local requirements, rules and regulations and has had no violations related to public health, safety or environmental regulations in the past three years.

(3) The adequacy of operational practices and management controls at the non-system facility;

PRC will accept and compost the mixed food waste as part of a pilot study under authority of a Solid Waste Letter of Authorization issued by the Oregon DEQ. The DEQ pilot study authorization is valid until February 11, 2010; however PRC has an option to extend the pilot study for an additional 6 months.

The PRC food waste pilot study area will be operational and ready to accept mixed food waste on November 16, 2009. The main goal of the PRC composting pilot study is to demonstrate that the PRC facility can receive and compost mixed food waste from a variety of sources without creating off-site odor nuisances, without attracting vectors, and will result in a pathogen-free product. The area designated for

the mixed food waste compost pilot study is located near the middle of the property and includes an area approximately 500' x 200' (2.3 acres).

PRC is an existing yard debris composting facility - operating since the early 1990's - that encompasses approximately 39 acres. More detailed information on the PRC composting pilot study is contained in the *Compost Facility Pilot Study Design and Operations Manual* prepared by Vector Engineering, Inc. (**Attachment 1**)

PRC will receive mixed food waste at the existing PRC scale house. All weights will be recorded. Loads will be inspected for contaminants at the scale house and again as they are unloaded. An existing paved tipping area will be dedicated to the mixed food waste. The mixed food waste is then mixed with processed yard trimmings to get an optimal carbon-nitrogen ratio. This mixture of materials is then used to construct compost piles in approximate dimensions of 8' high by 15' wide by 80' long. Each pile will contain about 200 cubic yards of compost with about 50 tons of that consisting of mixed food waste.

PRC is proposing to use an aerated static pile ("ASP") technology for the pilot project. As soon as the compost piles are constructed they are put on negative air suction to prevent the piles from going anaerobic. The piles will also be covered with perforated plastic tarps to help maintain moisture levels and shed stormwater. During composting, air is drawn through the piles which sit atop perforated pipes attached to blowers that provide the aeration. After approximately 25-35 days the piles will be turned once, put back on negative air, covered and composted for an additional 20-30 days.

Temperature in the piles will be monitored to assure compliance with the DEQ pathogen reduction standards. The piles will achieve temperatures in excess of 131 degrees Fahrenheit for a minimum of three consecutive days. Compost samples will be sent to a lab for verification of pathogen reduction. This will test for fecal coliform and/or Salmonella. Materials that do not meet the pathogen standards must be composted again or disposed.

The primary stormwater management technique in the rainy season (October through May) will be the covered ASP process. This will ensure that only incidental stormwater comes into contact with materials containing mixed food waste. Stormwater will be monitored by the site's existing DEQ stormwater permit. DEQ staff has deemed the operational practices and management controls to be adequate. When the pilot study is complete, PRC intends to apply for a Metro designated facility agreement once the DEQ issues PRC a permanent permit to compost mixed food waste. Metro staff will monitor the progress and results of the food waste pilot study throughout completion.

If the mixed food waste delivered to the non-system facility does not meet the facility's acceptance criteria or the non-system facility fails to process and compost the material, then the provisions in the proposed non-system license will require the licensee to pay Metro the Regional System Fee and Excise Tax on each ton of waste delivered to the non-system facility that is ultimately disposed.

(4) The expected impact on the region's recycling and waste reduction efforts;

Approval of the proposed NSL is likely to have a positive impact on the region's recycling and waste reduction efforts even though some of the waste subject to the proposed license is currently being delivered to the Cedar Grove composting facility in Washington. However, if the food waste pilot project is successful, and PRC obtains a Metro designated facility agreement to accept mixed food waste from the region for composting, it would result in additional organics processing capacity for the region, providing a benefit to the regional organics recovery program.

(5) The consistency of the designation with Metro's existing contractual arrangements;

The waste subject to the proposed license will be delivered to a composting facility rather than disposed at a general-purpose landfill. Thus, approval of the requested license does not implicate Metro's disposal contract or any other of its existing contractual arrangements.

(6) The record of the applicant regarding compliance with Metro ordinances and agreements or assistance to Metro in Metro ordinance enforcement and with federal, state and local requirements including, but not limited to, public health, safety and environmental rules and regulations; and

Allied Waste of Clackamas & Washington Counties is a solid waste hauler and has not received any written warnings or citations from Metro. WRI has had no violations related to public health, safety or environmental regulations in the past three years, is in compliance with Metro ordinances and it very cooperative with Metro regarding ordinance enforcement.

(7) Such other factors as the Chief Operating Officer deems appropriate for purposes of making such determination.

The Benton County Solid Waste Advisory Council ("SWAC") met on August 25, 2009 to discuss the PRC food waste composting pilot study. According to Benton County staff, the SWAC members are very enthusiastic about the food waste composting pilot and are looking forward to a more permanent program pending outcome of the study in 2010.

If the PRC food waste pilot study is successful, it would result in additional organics transfer and processing capacity for the region, providing a benefit to the regional organics recovery program. In addition, mixed food waste collected for composting from the Metro region is currently transported 167 miles to the Cedar Grove composting facility in Maple Valley, Washington. In contrast, the PRC composting facility is located only 55 miles from the Metro region near Corvallis, Oregon.

Conclusion

The Chief Operating Officer finds that the NSL application satisfies the requirements of Metro Code Section 5.05.035, License to Use Non-System Facility.

3. Anticipated Effects

The effect of Resolution No. 09-4081will be to issue an NSL for delivery of up to 12,000 tons per calendar year of source-separated, pre-and post-consumer food waste to the PRC facility.

4. Budget Impacts

The waste delivered under authority of the proposed NSL is exempt from regional system fee and excise tax. Therefore, the budget impact, to the extent that it is discernable for 12,000 tons annually, has already been factored into the budget.

RECOMMENDED ACTION

The Chief Operating Officer recommends approval of Resolution No. 09-4081, and issuance of an NSL substantially similar to the NSL attached to the Resolution as Exhibit A.

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COMPOST FACILITY PILOT STUDY DESIGN AND OPERATIONS MANUAL

For DEQ Solid Waste Letter of Authorization (SWLA)

PROCESSING AND RECOVERY CENTER

Benton County, Oregon

Prepared for

Valley Landfills, Inc.

July 2009

Prepared by

VECTOR ENGINEERING, INC.

143 E Spring Hill Drive, Grass Valley, CA 95945

PRC COMPOSTING PROJECT

Purpose

This plan is being submitted as part of an application for the Processing and Recovery Center (PRC) requesting a DEQ Solid Waste Letter Authorization (SWLA) approval to conduct a pilot study that adds Type III feedstock (food waste that includes meats and cheeses) as an acceptable feedstock to the existing composting operation. Within 6 months to one year after the pilot study, the PRC proposes to apply for a "Full" compost permit incorporating Type III material as an acceptable feedstock to replace its existing composting permit at the site.

The main goal of the PRC Composting Pilot Project is to demonstrate that the PRC can receive and compost Type III feedstock from a variety of sources without creating off-site odor nuisances, without attracting vectors, and result in a pathogen-free product. The pilot will also demonstrate that Type III material can be received and composted at the PRC without generating food-waste leachate. The PRC will be demonstrating an aerated static pile (ASP) technology.

Facility Description

The PRC site currently encompasses approximately 38.8 acres and is located at 29969 Camp Adair Road, on the north side of the road, approximately 1 mile east of Highway 99W in Section 17, Township 103, Range 4W of the Willamette Meridian. The site is jurisdictionally located in an unincorporated area of Benton County and is adjacent to property owned by the City of Adair Village. In fact, part of the current PRC operations occurs on property leased from the City of Adair Village.

The north 12.4 acres of the site is leased from the City of Adair Village, and the south 26.4 acres are owned by Valley Landfills, Inc. The PRC has been composting yard debris at this location since the early 1990' s. The site received an industrial plan review from the County in 1990 at which time it received approval to establish a processing and recovery area. In 1999 the site obtained a Land Use Compatibility Statement (LUCS) from the County for this operation, and then used this LUCS to obtain a DEQ Composting Permit. In addition to composting yard waste, the site has also processed wood waste for use as hog fuel. The site also has a stormwater general National Pollutant Discharge Elimination System (NPDES) permit.

The PRC and its sister companies are being asked to receive and process Type III feedstock from a variety of sources. In the new proposed program, various haulers may

deliver Type III feedstock to the PRC in addition to the yard debris. Although volumes are uncertain at this point, the facility expects it will initially receive 5 to 10 tons per day of Type III feedstock (100-200 tons per month), which may ramp up to 50 tons per day, or 1000 tons per month, during the course of the pilot. The area designated for the food waste pilot project composting is located near the middle of the property and encompass an area approximately 500' x 200' (2.3 acres), plus the receiving and mixing area (see attached Plan).

Site Operations Plan

Receiving. All Type III feedstock materials will be received at the existing PRC scalehouse. All weights will be recorded as received. Each load will be inspected for contaminants (e.g. plastic materials) at the scalehouse and again as it is unloaded. Ideally most of the contamination will be removed prior to being received at the PRC. PRC staff (or their contractors) will provide additional contaminant removal, predominantly through manual sorting at the tipping area. Additional contaminant removal will take place during screening. Plastic removal devices (e.g. air-separators) may be used to provide additional contaminant removal. All contaminants will be disposed of at the Coffin Butte landfill.

Tipping Area. For the pilot operation, a separate, dedicated tipping area for Type III materials will be developed. The tipping area will be conducted on an existing paved surface. Surplus quantities of high carbon material (processed yard trimmings and/or compost "overs") will be stockpiled near the tipping area to provide a receiving area for the Type III material. A tipping pad of processed yard trimmings will be maintained on a daily basis. At the end of every day that Type III feedstocks are collected, the new piles containing Type III feedstocks will be covered with additional stockpiled processed yard trimmings. Covering the material will serve several purposes. First, it will reduce potential vector attraction (flies, birds, rodents, etc.). Secondly, receiving the food scrap on a bed of high carbon materials will serve to absorb any of the potential free liquid that may be generated. Any additional free liquid that is not immediately absorbed will be absorbed daily using fine sawdust or other absorbent. Materials with absorbed liquids will be added to an active compost pile. Finally, covering the pile with additional processed yard trimmings will help initiate the composting process and provide odor control.

Mixing. Once the Type III feedstocks are received and combined with the processed yard trimmings, they may be further mixed using a front-end loader, a mixing truck or by another method. Additional bulking agent (processed yard trimmings or compost overs) may be added to provide additional porosity. In general a mixture of approximately one

part Type III feedstock to three parts yard debris by volume is expected to provide the optimum mixture.

Composting. The PRC is proposing to use an aerated static pile (ASP) technology for the pilot project. ASP systems have been used successfully to compost all Types of feedstocks for many years. Numerous facilities in Washington and California use the ASP composting technology. There are several benefits to using the ASP technology for Type III feedstock. First, the ASP system allows for emissions from the composting process to be captured and controlled, either by a special membrane or by a biofilter. ASP systems also typically require a smaller footprint than windrow composting. A reduced footprint allows for reduced volumes of potential stormwater runoff that would need to be controlled.

The PRC is continuing to investigate ASP technology options. At this point, the details of the specific system have not been finalized, as this is part of the objective of the pilot study. The process is currently envisioned as follows:

1. Compost piles will be constructed in approximate dimensions of 8' high by 15' wide by 80' long. Each pile will contain approximately 200 cubic yards (cy) of compost, which we estimate will contain approximately 50 tons of food scrap material.
2. At the end of each day that Type III feedstock is received, it will be mixed with processed yard trimmings, compost overs, or wood chips to provide the proper C:N ratio and porosity. The mixed material will immediately be placed in a compost pile location over an aeration pipe.
3. The aeration pipes will be thick-walled HDPE perforated pipes laid on the existing base grade. Each pile will have two 40' long pipe sections that are loosely coupled together in the middle. For the pilot, a simple system consisting of on-grade pipes leading to small blowers will provide aeration. The blowers will be on a timer and may be able to use a temperature feedback system (initially manual feedback) to control airflow to maximize composting conditions.
4. As soon as the compost piles are constructed they will be put on air suction to prevent the piles from going anaerobic. The piles will also be covered with perforated plastic tarps. The tarps served to maintain the moisture that exists within the piles, and also to shed stormwater.
5. After approximately 25-35 days the piles will be turned once, put back on negative air, covered, and composted for an additional 20-30 days.
6. After this second phase, the material will be moved to a non-covered static curing pile.

Curing. The compost piles containing Type III feedstock may be moved to a dedicated area for curing, or they may be cured in place. In general the curing process may last between one and three months.

Screening. After curing, the composted material may be screened to meet market specifications. The existing PRC screening equipment will be used. "Overs" from the screening may be used to "re-inoculate" new batches of compost feedstock. Any waste generated during the screening phase will be disposed in the Coffin Butte landfill.

Monitoring and testing. Temperature in the composting piles will be monitored to assure compliance with the pathogen reduction standards contained in 40 CFR Part 503. In addition to temperature monitoring, pathogens will be analyzed via lab testing prior to any material being moved off-site. Temperatures will be monitored daily either using hand-held temperature probes or embedded temperature sensors. Either way, temperatures will be recorded at least once per day. The operators will assure that the piles will achieve temperatures in excess of 55° C (131° F) for a minimum of three consecutive days. A composite sample from each "batch" of compost will be sent to a lab for verification of pathogen reduction. This will include a test for fecal coliform, consistent with 40 CFR part 503 regulations (The density of fecal coliform will be less than 1,000 MPN of fecal coliform per gram of total solids on a dry weight basis). All lab results will be kept onsite at the facility administration office (at the nearby Coffin Butte Landfill) for review by regulatory agencies.

Compost Pilot Study Layout. At the high-end estimate of 1,000 tons of Type III feedstock per month of the pilot program, the flow-through volume may be as much as 4,000 cubic yards of compost per month. Thus a compost process time of approximately 60 days would require a compost storage volume of approximately 8,000 cubic yards, after which time the compost piles would sequentially be moved to a curing and screening area. The proposed pilot area of 500' x 200' would allow two flanks of compost rows, with each flank containing up to 25 compost piles containing 225 cubic yards of compost each (see attached Plan). This would be more than enough space to manage 8,000 cubic yards, and allow the compost piles to be sequentially turned one time during their compost cycle.

Each flank of compost piles would have its base grade slope to the middle of the pilot study area. The middle would drain north to an existing culvert that runs through a clay road dam at the north end of the pilot area. A stormwater settling basin would be located just in front of the culvert to allow debris to settle out. During the winter months,

the settling basin would be cleaned out by an excavator or loader, with the debris incorporated into the fresh compost piles.
The main suction line(s) for the aeration system would run along the central flow line, with laterals coming off the main line(s) to feed each separate compost pile. Laterals not being used would be disconnected from the headers, and the header connections capped. The blower will discharge the suction air through a biofilter on the north side of the clay road. The biofilter will consist of coarse finished compost and "overs" contained within an Ecology-block bunker. The life of a biofilter is expected to be approximately 2 years before the material needs to be changed out.

Condensate will form in the header suction lines as they draw moist air through the compost piles and the air cools on its way to the biofilter. A condensate drop-out will be designed into the suction lines at the point that the cross the clay road. The condensate will be collected in a 500-gallon poly-tank and applied to the fresh compost piles.

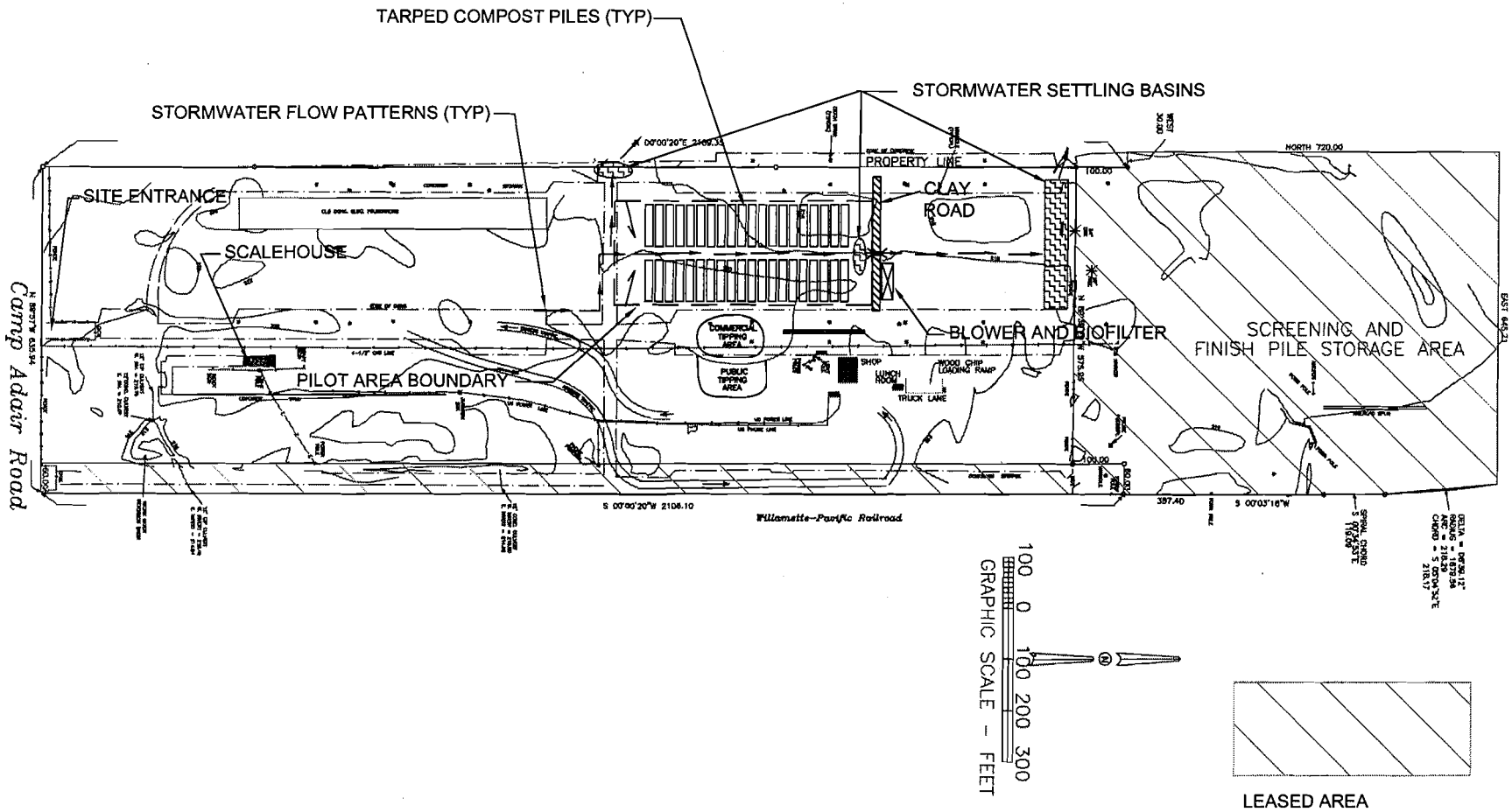
Schedule. The PRC Composting Pilot project will commence in July 2009 and will conclude Spring 2010. During that period several aspects of the proposed program are expected to come into focus, including feedstock sources, types, aeration and equipment management, and market acceptance of the final product. Experience with the pilot program will allow application for a full composting permit to allow Type III feedstock.

Vector control. During the pilot study, vectors are not expected to be a problem. This is predominantly due to the relatively small amount of Type III feedstock being accepted and the ASP composting technology which promotes a quick start to the compost process and generates enough heat to deter vectors. Other sites in Washington and California have demonstrated the effectiveness of the ASP method in deterring vectors. However, should vectors (birds, insects, rodents, etc) become a problem additional Best Management Practices Approaches will be utilized, such as minimizing standing water to deter fly breeding, covering Type III feedstock expeditiously (upon receipt) to avoid attracting flies; and using traps to deter rodents.

Odor Minimization. A site specific odor control and mitigation plan will be developed for the Type III feedstock composting pilot project and will be the basis for a more detailed odor control plan for the entire compost site. The focus of the odor control plan will be a written protocol for handling odor events, preventing, mitigating and treating odors as necessary. The odor control plan will use an iterative Best Management Practices approach. The ASP system itself will be the primary BMP for odor control because of its active and continual aeration control of the compost piles, as has been demonstrated at other sites. Additional odor minimization techniques include rapid

incorporation of feedstocks with bulking agents; building initial piles on top of wood overs to increase airflow; removing standing water to avoid generating odors; receiving Type III feedstock onto a bed of wood chips to absorb free liquids; assuring the compost is thoroughly composted before moving to curing; and assuring an adequate ratio of bulking agent to Type III feedstock.

Stormwater Management. The primary stormwater management technique in the wet season (October through May) will be the covered ASP process. This will ensure that only incidental stormwater comes into contact with materials containing Type III feedstock, which will readily be absorbed. The bulk of the rainwater will run off of the tarps. Type III feedstock materials destined for composting will be mixed with high carbon materials, such as processed yard trimmings, on the day that they are received. The mixed materials will be rapidly incorporated into the composting system. Other improvements to the PRC stormwater management system will include a settling ponds; strategic berms/wattles/compost filter berms to minimize run-on to the pilot study area; good housekeeping measures to minimize floating trash; and regular scraping or sweeping of the site to minimize stray particulates that could be entrained in stormwater. Stormwater will continue to be monitored by the site' s existing general NPDES permit.



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VECTOR ENGINEERING, INC.
An Aubanel Group Company

VALLEY LANDFILLS, INC.
COFFIN BUTTE LANDFILL
BENTON COUNTY, OREGON
PRC
TYPE_III_FEEDSTOCK_PILOT

DRAWING NO. 1
PROJECT NO.

0 1" MEASURES ONE INCH ON ORIGINAL DRAWING.