



Notice of Construction Application

A notice of construction permit is required before installing a new source of air pollution or modifying an existing source of air pollution. This application applies to facilities in Ecology's jurisdiction. Submit this application for review of your project. For general information about completing the application, refer to Ecology Forms ECY 070-410a-g, "Instructions for Ecology's Notice of Construction Application."

Ecology offers up to 2 hours of free pre-application help. We encourage you to schedule a pre-application meeting with the contact person specified for the location of your proposal (see below). For more help than the initial 2 free hours, submit Part 1 of the application and the application fee. You may schedule a meeting with us at any point in the process.

Completing the application, enclose it with a check for the initial fee and mail to:

WA Department of Ecology
Cashiering Unit
P.O. Box 47611
Olympia, WA 98504-7611

For Fiscal Office Use Only:
 001-NSR-216-0299-000404

Check the box for the location of your proposal. For help, call the contact listed below.		
	Ecology Permitting Office	Contact
<input type="checkbox"/>	Chelan, Douglas, Kittitas, Klickitat, or Okanogan County Ecology Central Regional Office – Air Quality Program	Lynnette Haller (509) 457-7126 lynnette.haller@ecy.wa.gov
<input checked="" type="checkbox"/>	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, or Whitman County Ecology Eastern Regional Office – Air Quality Program	Jolaine Johnson (509) 329-3452 jolaine.johnson@ecy.wa.gov
<input type="checkbox"/>	San Juan County Ecology Northwest Regional Office – Air Quality Program	Dave Adler (425) 649-7267 david.adler@ecy.wa.gov
<input type="checkbox"/>	Kraft and Sulfite Paper Mills and Aluminum Smelters Ecology Industrial Section – Waste 2 Resources Program Permit manager: _____	James DeMay (360) 407-6868 james.demay@ecy.wa.gov
<input type="checkbox"/>	U.S. Department of Energy Hanford Reservation Ecology Nuclear Waste Program	Phil Gent (509) 372-7983 phil.gent@ecy.wa.gov

To request ADA accommodation, call (360) 407-6800, 711 (relay service), or 877-833-6341 (TTY).



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Check the box for the fee that applies to your application.

New project or equipment

<input type="checkbox"/>	\$1,500: Basic project initial fee covers up to 16 hours of review
<input type="checkbox"/>	\$10,000: Complex project initial fee covers up to 106 hours of review

Change to an existing permit or equipment

<input checked="" type="checkbox"/>	\$200: Administrative or simple change initial fee covers up to 3 hours of review Ecology may determine your change is complex during completeness review of your application. If your project is complex, you must pay the additional \$675 before we will continue working on your application.
<input type="checkbox"/>	\$875: Complex change initial fee covers up to 10 hours of review
<input type="checkbox"/>	\$350 flat fee: Replace or alter control technology equipment (WAC 173-400-114) Ecology will contact you if we determine your change belongs in another fee category. You must pay the fee associated with that category before we will continue working on your application.

Read each statement, then check the box next to it to acknowledge that you agree.

<input type="checkbox"/>	The initial fee you submitted may not cover the cost of processing your application. Ecology will track the number of hours spent on your project. If the number of hours Ecology spends exceeds the hours included in your initial fee, Ecology will charge you \$95 per hour for the extra time.
<input type="checkbox"/>	You must include all information in this application. Ecology may not process your application if it does not include all the information requested.
<input type="checkbox"/>	Submittal of this application allows Ecology staff to inspect your facility.



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Part 1: General Information

I. Project, Facility, and Company Information

1. Project Name Modify IVC Approval Order	
2. Facility Name WSU Compost Facility	
3. Facility Street Address Dairy Road, Pullman WA 99164	
4. Facility Legal Description WSU Composting Facility located at the end of Dairy Road on the Washington State University Campus; NW ¼ of the SE ¼ Section 4, Township 14, Range 45	
5. Company Legal Name (if different than Facility Name) Washington State University, Environmental Health & Safety	
6. Company Mailing Address (street, city, state, zip) P.O. Box 641172, Pullman WA 99164-1172	

II. Contact Information and Certification

1. Facility Contact Name (who will be on-site) Rick Finch	
2. Facility Contact Mailing Address (if different than Company Mailing Address) P.O. Box 641101, Pullman WA 99164 - 1101	
3. Facility Contact Phone Number (509) 335-3288	4. Facility Contact Email finchr@wsu.edu
5. Billing Contact Name (who should receive billing information) Rick Finch	
6. Billing Contact Mailing Address (if different than Company Mailing Address) P.O. Box 641101, Pullman WA 99164 - 1101	
7. Billing Contact Phone Number (509) 335-3288	8. Billing Contact Email finchr@wsu.edu
9. Consultant Name (optional – if 3rd party hired to complete application)	
10. Consultant Organization/Company	
11. Consultant Mailing Address (street, city, state, zip)	
12. Consultant Phone Number	13. Consultant Email
14. Responsible Official Name and Title (person responsible for project policy or decision-making) Dwight Hagihara, Executive Director, Environmental Health & Safety	
15. Responsible Official Mailing Address P.O. Box 641172, Pullman WA 99164-1172	
16. Responsible Official Phone (509) 335-3041	17. Responsible Official Email hagihara@wsu.edu
18. Responsible Official Certification and Signature I certify that the information on this application is accurate and complete.	
Signature	Date 5.31.17



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Part 2: Technical Information

The Technical Information may be sent with this application to the Ecology Cashiering Unit, or may be sent directly to the appropriate Ecology office along with a copy of this application.

For all sections, check the box next to each item as you complete it.

III. Project Description

Please see attachment 1

Attach the following to your application:

- Description of your proposed project
- Projected construction start and completion dates
- Operating schedule and production rates
- List of all major process equipment with manufacturer and maximum rated capacity
- Process flow diagram with all emission points identified
- Plan view site map
- Manufacturer specification sheets for major process equipment components
- Manufacturer specification sheets for pollution control equipment
- Fuel specifications, including type, consumption (per hour and per year), and percent sulfur

IV. State Environmental Policy Act (SEPA) Compliance

Check the appropriate box below.

- SEPA review is complete.
Include a copy of the final SEPA checklist and SEPA determination (e.g., DNS, MDNS, EIS) with your application.
- SEPA review has not been conducted.
 - If SEPA review will be conducted by another agency, list the agency. You must provide a copy of the final SEPA checklist and SEPA determination before Ecology will issue your permit.
Agency Reviewing SEPA:

 - If SEPA review will be conducted by Ecology, fill out a SEPA checklist and submit it with your application. You can find a SEPA checklist online at <http://www.ecy.wa.gov/programs/sea/sepa/forms.htm>.



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V. Emissions Estimations of Criteria Pollutants

Does your project generate air pollutant emissions? Yes No

If yes, provide the following information about your air pollutant emissions:

- Air pollutants emitted, such as carbon monoxide (CO₂), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), and volatile organic compounds (VOC), particulate matter (PM_{2.5}, PM₁₀, TSP), sulfur dioxide (SO₂)
- Potential emissions of criteria air pollutants in tons per hour, tons per day, and tons per year (include calculations)
- Fugitive air pollutant emissions – pollutant and quantity

VI. Emissions Estimations of Toxic Air Pollutants

Does your project generate toxic air pollutant emissions? Yes No

If yes, provide the following information about your toxic air pollutant emissions:

- Toxic air pollutants emitted (specified in WAC 173-460-150¹)
- Potential emissions of toxic air pollutants in pounds per hour, pounds per day, and pounds per year (include calculations)
- Fugitive toxic air pollutant emissions - pollutant and quantity

VII. Emission Standard Compliance

Does your project comply with all applicable standards identified? Yes No

- Provide a list of all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, and emission standards adopted under the Washington Clean Air Act, Chapter 70.94 RCW.

VIII. Best Available Control Technology

- Provide a complete evaluation of Best Available Control Technology (BACT) for your proposal.

¹ <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-460-150>



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IX. Ambient Air Impacts Analyses

Does your project cause or contribute to a violation of any ambient air quality standard or acceptable source impact level? Yes No

Provide the following:

- Ambient air impacts analyses for criteria air pollutants (including fugitive emissions)
- Ambient air impacts analyses for toxic air pollutants (including fugitive emissions)
- Discharge point data for each point included in ambient air impacts analyses (include only if modeling is required)
 - Exhaust height
 - Exhaust inside dimensions (diameter or length and width)
 - Exhaust gas velocity or volumetric flow rate
 - Exhaust gas exit temperature
 - Volumetric flow rate
 - Discharge description (i.e., vertically or horizontally) and if there are any obstructions (e.g., raincap)
 - Emission unit(s) discharging from the point
 - Distance from the stack to the nearest property line
 - Emission unit building height, width, and length
 - Height of tallest building on-site or in the vicinity, and the nearest distance of that building to the exhaust
 - Facility location (urban or rural)

Modification of WSU's In-Vessel Composter

III. Project Description

- Description of proposed project
 - Unfortunately, WSU's In-Vessel Composter (IVC) has never been able to meet the operating requirements required by WSU to function properly.
 - WSU has been approached to take part in a research project with the ultimate goal of studying the composting of human remain as an alternative to cremation or burial.
 - WSU is requesting modification of Approval Order No. AQ-E471 Section 2.1 and 2.3 to allow the composting of human remains as part of a research project.
 - The IVC was approved for a through put of animal tissue and animal bedding at 200 tons per year on a continuous basis as part of the WSU Compost Facility. A HEPA filter and bio-filter control emissions from the unit. The new process maximum through put is estimated at 50 tons per year.
 - WSU proposes to change the configuration of the IVC from a single continuous unit to three interconnected batch units. There will be no changes to the emission control equipment, emissions will still be controlled with a HEPA filter and bio-filter.
 - WSU will be researching batch composting mixes (animal tissue + wood shaving + landscaping materials) to optimize compost product and animal tissue decomposition.
 - Final component of the project will be the composting of donated human remains as the animal tissue in the approved mixes.
 - Estimated length of research project: 2 – 5 years.
- Projected construction start and completion dates
 - No construction; operational change only.
- Operating schedule and production rates
 - Estimated batch process = 24 days.
 - This is a research project so production rates do not apply.
- List of all major process equipment with manufacturer and maximum rated capacity
 - Provided with the original IVC NOC application.
- Process flow diagram with all emission points identified
 - Provided with the original IVC NOC application.
- Plan view site map
 - Provided with the original IVC NOC application.
- Manufacturer specification sheets for pollution control equipment
 - Provided with the original IVC NOC application.
- Fuel specifications, including type, consumption (per hour and per year), and percent sulfur
 - Not applicable

IV. State Environmental Policy Act (SEPA) Compliance

- SEPA review
 - Provided with the original IVC NOC application.

V. Emissions Estimations of Criteria Pollutants

- Provided with the original IVC NOC application.
 - Through put estimated as 25% of the original IVC NOC application so the emissions will be 25% of the original IVC NOC application.

VI. Emissions Estimations of Toxic Air Pollutants

- Provided with the original IVC NOC application.
 - Through put estimated as 25% of the original IVC NOC application so the emissions will be 25% of the original IVC NOC application.

VII. Emissions Standard Compliance

- Provided with the original IVC NOC application.

VIII. Best Available Control Technology

- Provided with the original IVC NOC application.

IX. Ambient Air Impacts Analysis

- Provided with the original IVC NOC application.

Koster, Robert (ECY)

From: Finch, Richard W <finchr@wsu.edu>
Sent: Monday, July 24, 2017 10:36 AM
To: Koster, Robert (ECY)
Subject: RE: Composting Approval

Operational hours should be around 500 Hours/year and we screen all finished compost. I have never seen visible exhaust emissions except briefly during start up (*less than a minute*) . As far as fugitive dust goes; the screen is located on the west end of the facility and our prevailing winds are from the SW . Any light material easily stays within the facility. If wind exceeds 25 mph we shut down screening operations. I don't know if this screen could be converted to electric, I have not ever seen this model listed for sale with an electric conversion. It would possibly require us to add electrical capacity at the transformer and I'm not sure there is enough available. I know electrical capacity was a concern at our last facility upgrade.

We have had a screening operation for over 20 years and this is the 3rd different screen and they have all been diesel engines. The screen capacities have increased with each addition allowing us to reduce operating hours and hopefully emissions.

Does the preliminary approval order allow us to proceed with our research project or do we have to wait until after the comment period and resolution of any comments? Can you tell me who requested the public comment period and why ?

Rick Finch
Manager, WSU Facilities Services
Waste Management
(509) 335-3288

From: Koster, Robert (ECY) [mailto:RKOS461@ECY.WA.GOV]
Sent: Monday, July 24, 2017 7:43 AM
To: Finch, Richard W <finchr@wsu.edu>
Subject: RE: Composting Approval

Thanks Rick.

Next question is how many hours does it run in a year? Do you see visible emissions from the screen or engine when it does run? Could the diesel be replaced with an electric motor?

On a different issue for this project, I have received a request for 30 day public comment period. We have to hold it and will have to get documents into more final form before it can start. That means emissions from screen and engine, and any modeling triggered by those emissions (the reason for the question about electrifying the screen).

Robert

From: Finch, Richard W [mailto:finchr@wsu.edu]
Sent: Friday, July 21, 2017 2:06 PM
To: Koster, Robert (ECY) <RKOS461@ECY.WA.GOV>
Subject: RE: Composting Approval

Robert,

The trommel screen is a Wildcat 516- Cougar model, I believe the model year is 2005. The WSU Compost Facility purchased it used in January of 2009. The engine is a 66 HP John Deere Engine (see attached photo)

Rick Finch
Manager, WSU Facilities Services
Waste Management
(509) 335-3288

From: Koster, Robert (ECY) [<mailto:RKOS461@ECY.WA.GOV>]
Sent: Wednesday, July 12, 2017 10:36 AM
To: Finch, Richard W <finchr@wsu.edu>
Subject: RE: Composting Approval

Hi Rick,
The screen is required to be on permit. I will need specs on the diesel engine driver and to know when it was installed or brought on-site. I assume it runs some throughout the year (not a seasonal source).
Thanks,
Robert

From: Finch, Richard W [<mailto:finchr@wsu.edu>]
Sent: Tuesday, July 11, 2017 2:58 PM
To: Koster, Robert (ECY) <RKOS461@ECY.WA.GOV>
Subject: RE: Composting Approval

Robert,

The Trommel screen is a Wildcat 516, powered by a diesel engine; the screen is 5' x 16' and we screen all of our finished compost. Our annual Maximum Capacity is 18,000 TPY but our actual through put has never exceeded 12,500 tons of unprocessed feedstock in a single year, we normally process between 10,000 and 11,000 TPY. We have about a 40% loss of biomass in the process so we actually only screen between 6,000 and 7,500 TPY. We have no specific pollution controls in place except for procedures in our O&M Manual (*attached*) to prevent fugitive dust and malodors.

Rick Finch
Manager, WSU Facilities Services
Waste Management
(509) 335-3288

From: Koster, Robert (ECY) [<mailto:RKOS461@ECY.WA.GOV>]
Sent: Tuesday, July 11, 2017 1:54 PM
To: Finch, Richard W <finchr@wsu.edu>
Subject: RE: Composting Approval

Thanks Rick this helps on the stuff I wondered about. Looking at the layout, there is a trammel screen I was unaware of. Can you send me all the details, please? That would be size, how it's powered, how much of the 18,000 tons is screened, any pollution controls, ...

I think that will complete the data collection part of this.
Robert

From: Finch, Richard W [<mailto:finchr@wsu.edu>]
Sent: Tuesday, July 11, 2017 11:03 AM
To: Koster, Robert (ECY) <RKOS461@ECY.WA.GOV>
Subject: RE: Composting Approval

Robert,

There are 2 fans; the first one is the 50 HP Motor/fan for the Aerated Static Pile System. There are a maximum of 12 rows of Aerated Piles all adjacent to each other 2 of those rows are managed as "Organic" (*See Layout*).

The second fan is a 1 HP fan attached to the filter system for the In-Vessel System . This is the system we are seeking approval to modify our process and feedstocks.

If I still have you confused, give me a call and maybe we can talk our way through it

Rick Finch
Manager, WSU Facilities Services
Waste Management
(509) 335-3288

From: Koster, Robert (ECY) [<mailto:RKOS461@ECY.WA.GOV>]
Sent: Monday, July 10, 2017 7:59 AM
To: Finch, Richard W <finchr@wsu.edu>
Subject: RE: Composting Approval

Thank you Rick,
I am a bit unclear on how many blowers there are. If you would, please provide info on each. Also what is the maximum number of windrows and dimension? I will describe it in the list so that it's clear we've reviewed it.
Robert

From: Finch, Richard W [<mailto:finchr@wsu.edu>]
Sent: Thursday, July 06, 2017 4:09 PM
To: Koster, Robert (ECY) <RKOS461@ECY.WA.GOV>
Subject: RE: Composting Approval

The information you requested is in Red. Is the blower information you are requesting for the In Vessel/Hepa blower ?

I will get it for you tomorrow for whichever blower you need. It's taking some time to find the submittal so I'll just go get it off the blower.

Thanks

Rick Finch
Manager, WSU Facilities Services
Waste Management
(509) 335-3288

From: Koster, Robert (ECY) [<mailto:RKOS461@ECY.WA.GOV>]
Sent: Thursday, July 06, 2017 11:48 AM
To: Finch, Richard W <finchr@wsu.edu>
Subject: Composting Approval

Hello Rick,
Attached is a preliminary determination for the composting facility with the Urban Death Project incorporated. The order hasn't changed much, but is in our most recent format. In the preface to the Approval Conditions is an equipment description where I could stand to have your assistance. The information here is not directly enforceable but should be a

relatively accurate list of the equipment and activities on the 4.4 acre parcel. The list and the pieces unclear to me are as follows:

1. X number of windrows, of X dimension, all controlled by a biofilter cover-We only use turned windrow as a finishing process for material that has been processed in the Aerated process. No bio filter cover is used because it has already met all PFRP and Vector requirements.
2. X number of static piles, of X dimension, all controlled by the biofilter of X dimension. 12 Aerated Static Piles, 15'w X 9' h X 70'l , Biofilter for the ASP system is 37'x52' = 1924 sf
3. 3 separate but interconnected IVC, 5 ft by 22 ft, controlled with a HEPA filter followed by a biofilter (or 2 in parallel) of X dimension). 2 in parallel 8'x 20' containers 160 sf each

I believe the blower is the only remaining piece of equipment to add to the list. Please forward your additions, corrections so I can incorporate them.

Please review the draft order and send any comments within the next couple weeks. I will place a 15 day web notice on our public participation calendar at the end of which period, if I receive no request for a full 30 day comment period, I can issue this with any changes you've sent.

Thanks,
Robert Koster

WSU Compost Facility Wood Waste Acceptance Criteria

Notify Waste Management Prior to sending project material to Compost Facility

All loads must be inspected, Do Not Unload until instructed by WSU Waste Management personnel. Drivers must wait after unloading until load is inspected.

Items that are accepted

- Dimensional lumber (nails and screws are ok up to ¼" x 6")
- Pallets
- Crates
- Fencing; *Non-treated or painted*
- Decking; *Non-treated or painted*
- Tree limbs
- ****Tree rounds (under 24 inches in diameter & 15' in length)**
- Shrubs and brush
- Wood furniture (without excessive hardware, under 1/8th thickness)
- Cabinets and shelving (without excessive hardware, under 1/8th thickness)

Items that are not accepted

- ****Stumps with root balls, rounds (over 24" diameter or 15' length)**
- Grass, Dirt and sod : *These items are accepted as compost feedstocks but not as wood waste*
- Railroad ties
- Wood pieces containing; paint, laminates, bonding agents or chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate.
- Telephone pole butts
- Metal plate
- Iron rod, Rebar
- Rocks
- Landscape cloth, Silt fence
- Any Plastic
- Upholstered furniture & mattresses
- Doors with hardware attached, etc...
- Cabinets and Shelving with excessive hardware
- Any item considered to be a Physical Contaminant per WAC 173-350-100: inorganic and organic constituents that are not readily decomposed during the composting process including, but not limited to, plastics, glass, textiles, rubber, leather, metal, ceramics, polystyrene, and wood pieces containing paint, laminates, bonding agents or chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate.

Deliveries will be accepted between 7:00 am and 3:30 PM Monday-Friday.

Loads containing unacceptable materials will be rejected. The generator will be expected to remove contaminated material from the compost facility immediately. Unattended dumping is prohibited