

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

## GENERAL ORDER OF APPROVAL FOR CONCRETE BATCH PLANTS

General Order No. 08-AQG-002  
Issued June 18, 2008

**Table 1: Applicability Criteria for this General Order of Approval**

Criterion	Limitation
Location in Washington	Any jurisdiction within which New Source Review requirements are regulated by the Department of Ecology's Air Quality Program. At the time of issuance of this general order, this includes: Adams, Asotin, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, San Juan, Stevens, Walla Walla, and Whitman counties.
Facility description	<p>Facilities that manufacture concrete from cement, cement supplement, fine aggregate, coarse aggregate, and water.<sup>1</sup> The ingredients are gravity fed through a weigh hopper.</p> <p><u>In-transit mixing plant:</u> The weigh hopper drops the ingredients into mixer trucks (in-transit mixing).</p> <p><u>Central mix plant:</u> The weigh hopper drops the ingredients into a mixer that dumps the pre-mixed concrete into transit trucks (central mix).</p> <p><u>Portable concrete batch plant:</u> Although a plant may be designed to be "portable," to be considered portable under this general order, the plant must be located temporarily. Ecology defines "temporary" as one year or less at the same location. This general order is valid for any location within the jurisdiction described in "Location in Washington."</p> <p><u>Stationary concrete batch plant:</u> A plant that is located at the same site for over one year. This general order is valid only for the location specified in the Coverage Order.</p> <p>The concrete batch plant is not part of a new major stationary source or major modification to a major stationary source, which is subject to review under the Prevention of Significant Deterioration Program, and the addition of the concrete batch plant to an existing source does not make the source subject to the Air Operating Permit (AOP) program or require a modification in an existing AOP permit.</p>

<sup>1</sup> Cement supplement: Fly ash, ground granulated blast furnace slag, natural pozzolans, silica fume

Fine aggregate: Sand

Coarse aggregate: Gravel, crushed stone, or iron blast furnace slag.

Heavyweight aggregate: Barite, magnetite, limonite, ilmenite, iron, or steel.

Lightweight aggregate: Sintered clay, shale, slate, diatomaceous shale, perlite, vermiculate, slag pumice, cinders, or sintered fly ash.

Criterion	Limitation
Size	<u>In-transit mix</u> : Not greater than 150,000 tons of concrete mixed in any consecutive 12 month period (74,500 cubic yards).
	<u>Central mix</u> : Not greater than 495,000 tons of concrete mixed in any consecutive 12 month period (246,000 cubic yards).
Design	Facility may either produce truck-mixed or central-mixed concrete.
	May be permanent or portable.
Equipment	Mobile and stationary conveying equipment for loading sand, aggregate, and cementitious material bins and silos, weigh hopper, mixer (central mix), and truck charging station.
SEPA Requirements	<u>Portable concrete batch plant</u> : Individual SEPA review is not required at any temporary location.
	<u>Stationary concrete batch plant</u> : SEPA review is required.
Portable plant: Special provisions	<p>Must notify Ecology not less than 10 calendar days prior to operating at a new temporary location.</p> <p>A plant that has been operating under “stationary” status may move and convert to “portable” status under this general order as long as it thereafter follows the time-in-location limitations and reporting requirements of a portable plant. A new Coverage Order is not required.</p> <p>A plant that has been operating under “portable” status must obtain a new Coverage Order and undergo SEPA review before converting to “stationary” status at its current or a new location.</p>

### Process to apply for coverage

Submit:

1. The appropriate application forms: Contact the Ecology office that covers the location of your proposed concrete batch plant installation for copies (see Table 2, below). The application forms must be completely filled out before Ecology can grant the Coverage Order.

**Table 2: Ecology Permit Issuing Offices**

Air Quality Program Central Regional Office 15 West Yakima Ave - Suite 200 Yakima, WA 98902-3452 Tel. No (509) 575-2490	Industrial Section PO Box 47600 Olympia, WA 98504-7600 Tel. No. (360) 407-6945
Air Quality Program Eastern Regional Office N. 4601 Monroe Street Spokane, WA 99205-1295 Tel. No (509) 329-3400	Nuclear Waste Program Hanford Unit 3100 Port of Benton Blvd. Richland, WA 99354 Tel. No. (509) 372-7950
On the internet at : <a href="http://www.ecy.wa.gov/programs/air/airhome.html">www.ecy.wa.gov/programs/air/airhome.html</a>	

2. The application/coverage fee of \$500. This fee must be paid before the Coverage Order can be issued.
3. Documentation of SEPA review (required for all stationary concrete batch plants covered under this general order).
  - If SEPA review for this project has been done by another agency, submit copies of the SEPA threshold determination (such as a Determination of Nonsignificance) and the SEPA checklist prepared for the project.
  - If SEPA review has not been done by another agency, submit a completed SEPA checklist. The checklist is available from the above contacts or on the internet at [www.ecy.wa.gov/biblio/ecy05045.html](http://www.ecy.wa.gov/biblio/ecy05045.html)

### Granting of Coverage

For those units that qualify for coverage, the applicant will receive a Coverage Order within 30 days after the complete application has been received. Granting of the Coverage Order requires that the applicant comply with the terms of this General Order.

For those units that do not qualify for coverage, the applicant will receive a letter from Ecology within 30 days after the application has been received. The letter will state why the unit does not qualify for coverage under this General Order of Approval.

### Approval Conditions

#### 1. General and siting criteria

No.	Parameter	Requirement or limitation
(a)(1)	Size	In-transit mix: Not greater than 150,000 tons of concrete mixed in any consecutive 12 month period (74,500 cubic yards).
(a)(2)		Central mix: Not greater than 495,000 tons of concrete mixed in any consecutive 12 month period (246,000 cubic yards).
(b)(1)	Siting	Located on not less than one acre that is restricted from access by the general public.
(b)(2)		If the plant remains at the same operating site for fewer than 366 days following the initial start of operations, it is a "temporary source" under WAC 173-400-035.
(b)(3)		Stationary concrete batch plants must use line power

2. Emission limitations, monitoring, recordkeeping and reporting requirements

No.	Pollutant or parameter	Limitation(s)	Monitoring	Recordkeeping
(a)(1)	Cement transfer to silo	Emissions during filling of the silo shall be controlled by a baghouse.	None	Record date, time, duration, and cause of any periods baghouse(s) are out-of-service.
(a)(2)		Cement silo(s) filling may not overflow into the baghouse.	Level indicator and/or alarm, and operator training.	None
(b)	Weigh hopper	Enclosed and vented with forced air draft to a baghouse.	None	None
(c)(1)	All in-transit mixing operations	Truck charging shall use a flexible boot or other flexible containment system that fits into or around the truck mixer.	None	None
(c)(2)		Adequately wet aggregate and sand to minimize dust emissions on truck-filling	Observe truck filling for visible emissions.	None
(c)(3)	Stationary in-transit mixing operations producing greater than 50,000 cubic yards of concrete in any 12 consecutive months	Shrouded and vented to dust collection baghouse. Truck filling is prohibited if the baghouse is not in operation.	None	Record each calendar month's, and 12 month total concrete production.
(c)(4)	Stationary in-transit mixing operations producing greater than 300 tons per hour capacity	Shrouded and vented to dust collection baghouse. Truck filling is prohibited if the baghouse is not in operation.	None	None
(d)	Central mix operations: Mixer	Enclosed and vented to a dust collection baghouse. Mixer filling is prohibited if the dust collection baghouse is not in operation.	None	None

No.	Pollutant or parameter	Limitation(s)	Monitoring	Recordkeeping
(e)	Fugitive emissions	Must comply with the attached Fugitive Dust Control Plan (FDCP), (Attachment 1)	See Attachment 1	See Attachment 1
(f)(1)	Particulate emissions (TSP) from baghouse exhaust(s)	Not less than 99.9% TSP removal effectiveness. Shall not exceed 0.01 grains per dry standard cubic foot (gr/dscf).	Inspect periodically to assure proper operation. TSP removal effectiveness shall be verified by bag supplier's specification and baghouse suppliers operating & maintenance instructions.	None
(f)(2)		All baghouses shall be equipped with a pressure differential gauge to indicate pressure drop across the bags.	Periodic pressure differential readings.	Record pressure differential at least once each week.
(f)(3)		Opacity shall not exceed five (5) percent.	When required or performed by Ecology: EPA Method 9 (40 CFR Part 60, Appendix A).	Record any occurrence of visible emissions
(g)	Opacity at property line	No visible emissions at property line	Inspect periodically for visible emissions at property boundary	Record any occurrence of visible emissions

**Other Conditions of Approval**

3. Reporting: No regular reporting is required by this permit. Periodic emissions inventory information, required records, and other information may be requested by Ecology. Information requested by Ecology shall be submitted within 30 days of receiving the request unless otherwise specified. Ecology will supply the necessary forms to use for periodic emission inventory.
4. The concrete batch plant installed shall be as described in the application and Order issued granting coverage under this General Order of Approval.

5. A portable source as described in Table 1, may be transferred from one location to another within any Ecology regional jurisdiction (see Table 1, "Location in Washington) provided the owner or operator completely fills-out and submits to Ecology, the Air Quality Notification Form for Portable Concrete Batch Plants, at least 10-days prior to the start of operations at each temporary location. The plant shall be installed in the location identified in the permit application and/or most recent Portable Concrete Batch Plant Notification to Ecology.
6. Fuel-fired water-heaters or boilers must use natural gas, propane, liquefied petroleum gas (LPG), or on-road quality diesel fuel. The total heating capacity of the related combustion device(s) must be smaller than the following:
  - (a) Four million Btu/hr for natural gas, propane, and LPG,
  - (b) 1,000,000 Btu/hr for on-road quality diesel.
7. The permittee shall submit to Ecology the dates the installation of the concrete batch plant is started and completed<sup>1</sup>.
  - (a) This Order shall become invalid if installation of the concrete batch plant is not begun within 18 months after receipt of final approval or if construction is not complete in a period of time deemed reasonable by Ecology.
  - (b) Ecology may extend these deadlines upon a satisfactory showing that an extension is justified. The extension request must be received by Ecology prior to expiration of the Order.
8. Operation and Maintenance.
  - (a) The permittee is to follow all recommended operation and equipment maintenance provisions supplied by the equipment manufacturers.
  - (b) Site specific Operations & Maintenance (O&M) manuals for all equipment that have the potential to affect emissions to the atmosphere shall be developed, kept updated, and followed. As a minimum, the O&M manual(s) shall include:
    - (i) Maintenance schedule.
    - (ii) Monitoring and recordkeeping requirements. Maintenance records shall be kept at the facility for a minimum of two years.
    - (iii) Monitoring procedures.
    - (iv) Actions for potential malfunctions.
  - (c) If the visual inspection for opacity indicates that anything can be seen exiting the baghouse exhaust stack(s) or beyond the plant's property line, the permittee is to take immediate steps to correct any related problem.
9. Legible copies of this General Order of Approval, the Coverage Order, and the Operations and Maintenance manual(s) shall be displayed onsite and available to employees in direct operation of the facility.

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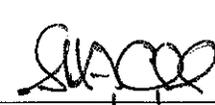
<sup>1</sup> Electronic mail submittals of the notifications to the approving office are encouraged to reduce paperwork

10. Annual/Periodic Registration or Air Operating Permit fees. The applicant will pay the required registration fees within the deadline date specified on the invoice from Ecology.
11. Access to the source for the purpose of determining compliance with the terms of this General Order of Approval by Ecology staff shall be permitted during normal business hours. Failure to allow such access is grounds for an enforcement action under the Washington State Clean Air Act.
12. The applicant is required to comply with applicable rules and regulations pertaining to air quality, and conditions of operation imposed upon issuance of this order. Any violation of applicable state and/or federal air quality rules and regulations or of the terms of this approval shall be subject to the sanctions provided in Chapter 70.94 RCW. Authorization under this Order may be modified, suspended, or revoked in whole or part for cause including, but not limited to, the following:
  - (a) Violation of any terms or conditions of this authorization;
  - (b) Obtaining this authorization by misrepresentation or failure to disclose fully all relevant facts.
13. The provisions of this General Order of Approval are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

### Legal Basis to Issue This General Order of Approval

The Department of Ecology Air Quality Program is issuing this General Order of Approval as allowed under Washington Administrative Code (WAC) 173-400-560. Receipt of a Coverage Order for installation of a specific unit under this approval satisfies the requirements of WAC 173-400-110.

### Approvals

PREPARED BY:	APPROVED BY:
	
Date: June 18, 2008	Date: 6/18/2008
Bernard Brady, PE	Stuart A. Clark, Program Manager
Air Quality Program	Air Quality Program
Department of Ecology	Department of Ecology

3-20-07

## Attachment 1

### Concrete Batch Plant Fugitive Dust Control Plan (FDCP)

The Ecology Air Quality Program (AQP) has developed fugitive emission control guidelines to supplement General Order No 08-AQG-002. The guidance provided below identifies emission points from fugitive sources and provides a menu of options to control these emissions from a concrete batch plant operation.

#### I. FUGITIVE EMISSION POINTS

##### A. Materials handling

1. Aggregate being added to and/or removed from stockpiles
2. Front-end loader dumping into aggregate bins

##### B. Wind erosion from exposed surfaces

##### C. Site vehicle traffic areas

##### D. Paved roads (carryout, spillage)

#### II. FUGITIVE EMISSION CONTROL OPTIONS

A. **REQUIRED:** Adequately wet aggregate and sand to minimize dust emissions when transferring to storage and aggregate bins.

B. **REQUIRED:** Locate stockpiles to minimize front-end loader travel.

C. **REQUIRED:** Pave, chemically treat, and/or use water-spray on site vehicle traffic areas.

The following factors should be considered when applying water and/or dust suppressants to on-site vehicle traffic areas:

1. Application rate: Amount of water and/or type and amount of suppressant applied per unit area of roadway (gals/square foot)
2. Frequency of application (time between applications)
3. Traffic volumes (vehicles per hour)
4. Weather conditions

D. **REQUIRED:** Speed limitations for site vehicles with procedures to maintain and enforce speed restrictions

E. **RECOMMENDED:** Location, size, and configuration of stockpiles to reduce wind erosion

F. **AS NECESSARY:** Apply water spray to stockpiles to minimize fugitive emissions.

G. **AS NECESSARY:** Mechanical cleaning (sweeping) of paved surfaces and removal of vehicle track-out from the site.

The fugitive emission points and control options described above pertain to concrete batch plants and associated activities. Unless otherwise specified in this general order, the Ecology Air Quality Program requires that visible particulate matter emissions be controlled to less than 10 percent opacity. Any changes to this FDCP must be approved in advance by Ecology.