



## Project Memo

To: Richard Hart, Planning Manager, City of Covington  
FROM: AHBL, Inc.  
Subject: Regulatory Options for Asphalt Plants  
Date: June 3, 2010 (Revised)

---

### I. Introduction

#### A. Purpose and Background

This white paper provides an overview of potential impacts of and regulatory requirements for asphalt plants. It also outlines the specific concerns the City of Covington may have in regards to asphalt plants and similar uses within the vicinity of its Downtown. Lastly, this white paper provides regulatory recommendations that are intended to inform the Downtown code update process.

The City Council adopted a temporary moratorium on the acceptance of development applications for projects in the downtown DN3 zoning district (now the General Commercial-GC-zoning district), after a public hearing on June 24, 2008. The moratorium was enacted in order to assure that new development in this district more closely reflects the City Council's vision for the downtown as it is expressed in the Downtown Element of the Comprehensive Plan. The Comprehensive Plan envisions "appropriate industrial and freeway-oriented uses" in the DN3 (GC) zone. Such uses must be compatible with the other commercial and residential uses allowed in this zone and other uses allowed in the adjacent Downtown zones. High impact industrial uses may not be compatible with the other commercial and residential uses in this zone and other uses allowed in the Downtown zones.

#### B. What are Asphalt Plants?

Asphalt plants, properly called hot-mix asphalt plants, are facilities where asphalt concrete is manufactured. The manufacturing of asphalt concrete demands the combination of aggregates, sand and a filler (such as stone dust), which is heated and finally coated with a binder such as bitumen (asphalt cement). Such facilities can use a variety of liquid or gas fuels. Recycled Asphalt Product (RAP) may also be accepted by an asphalt plant, where it is mixed with other materials and reprocessed into usable asphalt.

There are three main classes of asphalt plants: batch heater, semi-continuous, and continuous (or drum mix). Continuous plants have the highest throughput capacity (usually around 500 tons per hour) while batch heater plants have the lowest capacity and are used where short production runs are common.

### C. Summary of Current Regulatory Requirements

The regulating and permitting of asphalt plants is divided between local governments and state agencies. The Washington State Department of Ecology regulates water quality and water resources, as well as air quality, however the Puget Sound Clean Air Agency (PSCAA) has jurisdiction within King County for regulating air emissions and issuing permits. Proponents of an asphalt plant use must submit an application to the Puget Sound Clean Air Agency in order to receive an Order of Approval. The application includes details about the equipment and fuel being used, operations and maintenance, emission controls, asphalt properties, and estimated annual production. In the case of portable asphalt production facilities, which typically emit less than 100 tons of criteria pollutants per year, a Notice of Construction (NOC) is required to be submitted to the PSCAA each time the facility is relocated. The NOC registration procedure requires an accounting of all process and control equipment, but is not considered a new permit, and therefore does not require any new dispersion modeling (of pollutants) beyond what was previously done for the original Order of Approval for the facility. The NOC procedure also requires the permittee to incorporate the Best Available Control Technology to mitigate air emissions.

A proposed asphalt plant would be required to apply for a Sand and Gravel General Permit for stormwater from Department of Ecology, which limits the discharge of pollutants to surface waters under the authority of the Federal Water Pollution Control Act. The State Environmental Policy Act (SEPA) would apply to an asphalt plant to analyze and assess their cumulative impacts. A SEPA checklist would need to be completed. The checklist would need to be completed by the applicant at the time of submitting an NOC to the PSCAA.

Lastly, local governments have the ability to regulate where such facilities can be established, how the site is to be developed, as well as certain aspects of operations such as hours of operation and storage of materials.

## II. Impacts of Asphalt Plants

Asphalt plants have the potential for a variety of impacts due to the volume and type of materials handled, the heat requirements of the manufacturing process and associated emissions from burning of fuels, and the equipment used. While required Best Available Control Technologies and other regulatory requirements work to minimize impacts of asphalt plants, there may still be potential for impacts, particularly due to equipment failure or human error. Below is a discussion of potential environmental impacts followed by a discussion on how these impacts may affect development in Covington's Downtown.

## A. Air quality

Asphalt plants have the potential to emit particulate matter, polycyclic aromatic hydrocarbons (PAHs), and gaseous volatile organic compounds (VOCs). These pollutants are considered detrimental to human health (some are suspected carcinogens). The degree to which emissions are hazardous also depends on the fuel used in the production process. Natural gas or propane produce the least hazardous emissions, whereas oil or diesel may create more harmful emissions. The mixer portion of an asphalt plant is the most significant source of gaseous emissions, however fugitive emissions may be released from other sources such as bitumen tanks, skip hoists, and loading stations. The main sources of particulates include stack emissions, as well as fugitive emissions from storage piles and transport of materials. The amount of "stack dust" emitted depends on a number of production factors, including:

- The nature and the moisture content of the used mineral materials,
- The treatment of the mineral materials in the drum,
- The amount and temperature of the waste gas,
- The waste gas velocity in the drum,
- The shape of the extraction hood,
- The total output of the plant.

While technology, proper emission control systems, and periodic inspection and reporting may all help to minimize pollutants, asphalt plants are allowed to emit pollutants up to a certain level under state and federal law. These emissions could have an impact on immediate ambient air quality that can be noticeable to the general public in the vicinity of the facility. While EPA air quality standards (incorporated in WAC 173-400) would not allow an asphalt plant that causes or contributes to a violation of ambient air quality standards to be permitted, there is always some potential for the release of harmful pollutants above allowed levels. Where pollution control technologies fail, or human operators make errors, plumes of gases may be released.

Emissions from asphalt plants and associated activities also have potential for creating odor impacts. The main source of odor for asphalt plants is typically bitumen. Odor may be generated from the loading of bitumen tanks, and emptying of the mixer onto conveyors, or into trucks. While controls such as vapor condensers and baghouses are effective at reducing the everyday adverse impact of odors, the potential for offsite odors still exists.

Routine site inspection to ensure good housekeeping practices are being used for storage and on-site movement of materials, and equipment is operating as specified, may be among the steps taken to minimize air quality impacts. Siting asphalt plants downwind from residential areas and/or tightly regulating hours of operation may help to minimize odor and impacts to ambient air quality. The predominant wind patterns in the Covington

area are generally from the southwest. The majority of Covington's downtown is to the east/northeast of the proposed asphalt plant site. This means that existing and new development would at least partially be downwind from the proposed asphalt plant site, creating a potential for residents and other Downtown users to be exposed to bad odors and harmful particulates and fumes.

#### B. Visual Impacts

Visual impacts may include the plant structure itself (storage silos, stack), as well as steam being emitted from the stack, storage of materials, and light pollution from the illumination of the plant area. Visual impacts may be mitigated by choosing a neutral paint color for plant equipment, requiring vegetative buffers around the perimeter of the site, and regulating the types of lighting used. Housing the plant and associated equipment within a structure that is designed to be more consistent with surrounding development is a potential approach to mitigating visual impacts, however this would likely be economically impractical.

#### C. Noise

Noise impacts result from various components of a typical hot-mix asphalt plant, i.e. ventilators, drum, pneumatic systems, etc. Traffic noise is also generated from on-site loaders and trucks bringing materials to and from the plant. Noise impacts are directly related to the amount of activity, as well as the time of day when this activity takes place. State law (WAC 173.60.040) establishes maximum permissible environmental noise levels between noise sources and receiving sites, and asphalt plants are required to meet these requirements. Additional noise level limits are applied between the hours of 10:00 p.m. and 7:00 a.m.

#### D. Water quality

Asphalt plants have the potential to contaminate ground water and surface waters through spills and leaks of chemicals. Contaminated groundwater can migrate towards nearby streams and lakes. Possible sources of groundwater pollution are:

- Fuel tanks, pipework and fueling stations,
- Solvents,
- Other chemical agents used and stored onsite.

Asphalt plants should not be sited in flood plains.<sup>1</sup> In addition to good housekeeping and best management practices to minimize spills and leaks associated with the manufacturing and delivery process, facilities often channel stormwater to avoid contamination or remove

---

<sup>1</sup> *Siting Issues for Gravel Mines and Asphalt Plants*. Subcommittee Report to the Thurston County Planning Commission, October, 2009.

oil by skimming it off the surface or through use of oil/water separators.<sup>2</sup> All fuel storage tanks are required to have secondary containment. The Sand and Gravel General Permit requires monitoring and implementation of Best Management Practices.

#### E. Traffic

Traffic impacts would result from the hauling of materials both to and from the asphalt plant facility. This traffic would primarily consist of heavy trucks, which could impact the condition of local streets as well as result in air and noise impacts as described above. Access to the proposed asphalt plant in Covington would be provided off of Covington Way SE. Currently, there is no direct access to SR 18. Any materials coming to or leaving the plant via SR 18 would have to utilize Kent-Kangley Rd., potentially creating additional traffic impacts on an already congested corridor. In addition, the wear and tear of streets in the Downtown area associated with heavy truck traffic could also have negative impacts both in terms of safety and how the Downtown is perceived by prospective investors/developers. As part of the permitting process for any new facility or operation, an analysis of all potential traffic impacts would be conducted and mitigation options would be presented to ensure conformance with Covington's Comprehensive Plan.

#### F. Potential Impacts to Downtown Covington

The City of Covington has received pre-application materials for the potential development of an asphalt production plant on a property located to the west of Covington Way SE and adjacent to SR 18, in an area that is proposed to be rezoned to General Commercial (GC), a zoning district within Covington's Downtown area. The parcel was formerly zoned DN3. The City of Covington recently developed a plan for its Downtown and adopted associated policies in its Downtown Element and land use regulations. Among the goals and guiding principles for the Downtown is creating a healthy and livable place that attracts residents and contributes to a vibrant community, particularly within the Town Center (TC) District.

The subject property is part of the Downtown plan area and located within the proposed General Commercial (GC) District. The GC District is intended to allow a wide range of uses, coupled with more limited design standards than the rest of Downtown. Permitted uses within this District include all commercial and some light industrial uses, as well as, office, major transportation and utility facilities, and residential uses. Heavy industrial uses are prohibited in this District and all other Downtown Districts.

The subject property is in the vicinity of the other Downtown Districts, including the Town Center, where a mix of residential, commercial, and civic uses are envisioned. The site where this use is proposed is significantly constrained by a BPA right-of-way and a water pipeline easement, therefore the location of such a plant would be limited to a small

---

<sup>2</sup> Department of Ecology Fact Sheet, page 6)

TO: Richard Hart, City of Covington

FROM: AHBL, Inc

Regulatory Options for Asphalt Batch Plants

portion of the site. Given these site limitations, it is estimated that the asphalt plant and associated uses would be no more than 500 feet from the nearest residential or commercial structures that could be developed in the future within the Mixed Commercial District of the Downtown, which is located to the east of Covington Way SE and southwest of the existing Fred Meyer. The nearest existing residential structures to the proposed asphalt plant location are approximately 1,200 feet to the southeast, across Covington Way SE, in the MHO District. The nearest portion of Town Center District is approximately 1,700 feet away from where the plant could potentially be located-this area likely has the highest potential for future high density residential development. The General Commercial District allows residential uses, however, given the constraints of this portion of the District (easements, BPA facilities), it is unlikely that such uses would occur adjacent to the proposed facility.

Due to the processes involved in asphalt production, and potential impacts, as discussed previously, such a use could potentially have negative impacts on the development of a Downtown and Town Center as it is envisioned in the Downtown Plan and Downtown Element of the Comprehensive Plan. In particular, potential exposure (if control technologies do not perform properly or emission standards are not adequate) to emissions, particulate matter, and odor could pose both a nuisance and health impacts to residents within the Downtown. Noise, vibration, and traffic associated with trucks entering and leaving the plant could also have negative impacts on businesses and residences within the Downtown. Lastly, potential visual impacts of an asphalt plant within close proximity of the Town Center, could negatively affect the Town Center's market position and ability to attract new development, or tenants for new development.

Lakeside Industries operates a number of extraction, processing, and batching facilities in the region. Two plants that Lakeside has referenced in its previous discussions with City Council are located in Monroe and Seattle. The Monroe facility is located within the City's General Industrial zone, directly adjacent to the City's General Commercial zone. Residential uses are not permitted in either the General Industrial or General Commercial zones. It has a forested buffer on the north, west and east sides. The site is topographically elevated from the parking lot and backside of a commercial cinema complex to the south. There is a landscape buffer of more than 20 feet located on the site that includes a berm, layered plantings for screening and a fence. The nearest residential uses are approximately 1,500 feet to the east. The facility is an asphalt plant consisting of asphalt concrete production, recycled asphalt product (RAP) processing, stockpiling of aggregate and RAP, diesel fuel storage, and a vehicle and equipment maintenance shop. Aerial photographs of the site show stockpiled materials being stored in open piles. Since it opened in early 2009 no citizen complaints have been made.

The Seattle facility is hot-mix asphalt plant with on-site storage of aggregates. It is located within the General Industrial 2 Unlimited 65 zone within the Ballard-Interbay

Manufacturing Industrial Center adjacent to the ship canal. This zone permits light and heavy industrial uses along with a variety of other uses, including commercial. Residential uses other than artists' dwelling, which are a conditional use, are not permitted in this zone. It is intended as a transitional zone, allowing for the gradual market-driven transformation of industrial to commercial uses. It is surrounded by light industrial and/or maritime uses, and buffered from commercial and residential uses beyond the immediate commercial uses by N 36<sup>th</sup> St/Leary Way. The nearest residential uses are approximately 450 feet to the east. Material primarily arrives at the site via barge and leaves the site via truck.

### **III. Options for Regulating Asphalt Plants and Similar Industrial Uses**

#### **A. Approaches from Other Communities**

Local governments have the ability to regulate the location, operations, and site development of asphalt plants and similar industrial uses. Whereas the impacts of such uses may be mitigated through such regulation, potential for negative impacts remain due to the inherent limitations of accepted pollution control standards and technologies, human error, and inevitable dust and odor generation from the storage and hauling of materials. This section contains examples of regulations specific to asphalt plants. These examples were derived from searching eighteen municipal land use codes, including the cities of Maple Valley, Mill Creek, Monroe, Kent, Federal Way, Everett, Bothell, Bonney Lake, Auburn, Arlington, Fife, Sumner, Seattle, Renton, Vancouver, and Tukwila. In addition, two out of state examples were looked at – Miami County, KS and Moab, UT. It is worth noting that of the sixteen Washington State jurisdictions, only six specifically regulate asphalt plants in a unique manner compared to other industrial uses.

#### **1) Zoning and Development Standards**

##### **a. By right, discretionary permits and exclusions**

Monroe, WA – Asphalt plants are a conditional use within the Light Industrial Zone and permitted outright within the General Industrial Zone.

Seattle, WA – Asphalt plants are not specifically listed in use tables, but would be allowed in the city's general industrial zones.

Auburn, WA – Asphalt plants are among the uses permitted in the city's Heavy Industrial District requiring a conditional use permit. The Heavy Industrial District is typically buffered from districts allowing residential uses by light industrial and commercial districts with the exception of one area where it is directly adjacent to a R20 residential district. A portion of the Heavy Industrial District does occur approximately 300 feet from a portion of the designated Downtown area, where the mix and intensity of uses are similar to what is envisioned for Downtown Covington.

Bonney Lake, WA – asphalt manufacturing, or similar uses are not explicitly listed as a use that are permitted outright in the M-1 Manufacturing District (a heavy industrial district), therefore they are subject to a conditional use permit process. Asphalt plants are prohibited from aquifer recharge areas. The M-1 District does not occur on the City's zoning or future land use maps.

Kent, WA – Asphalt plants require a conditional use permit within the City's Limited Industrial District (M2) and General Industrial District (M3) and are not permitted in any other districts. The M2 and M3 Districts are for the most part buffered from residential uses by either a lower intensity industrial district (M1) or commercial uses with the exception of two areas where portions of the M2 district abut the Downtown Commercial Enterprise (DCE) and a multi-family district.

Fife, WA – Asphalt plants are subject to the granting of a conditional use permit by the hearing examiner and are limited to the Industrial District. There are numerous points at which the Industrial District is adjacent to residential districts.

Sumner, WA – Asphalt plants are permitted in the M-1 and M-2 industrial districts, however it may be prohibited, or may be limited in size, scope or location to minimize incompatibilities or health and safety concerns where a Planned Mixed-use Development occurs within a M-1 or M-2 industrial district. These districts make up a large portion of the City, and are adjacent to residential area in numerous locations albeit separated by street rights-of-way.

Seatac, WA – Asphalt plants are a conditional use within the industrial zone (I). The majority of the industrial zone is largely buffered from residential uses by Seatac Airport. A smaller industrial zone area in the north part of the City is buffered from residential uses by commercial uses. One industrially zoned area is directly adjacent to residential uses and the Community Business in Urban Center (CB-C).

It should be noted that based on the review of the jurisdictions listed above, asphalt plants are typically considered heavy industrial uses (are permitted in heavy industrial districts only), and that the majority of jurisdictions require a conditional use permit.

## **b. Setbacks**

Minimum setbacks from residential areas, public spaces, schools, and other public facilities are a common strategy for addressing the land use compatibility of asphalt plants and similar industrial uses. Typical setbacks for

asphalt plants range among jurisdictions and the different types of adjacent land uses. Below are several examples of setback regulations for asphalt plants:

Monroe, WA – Side and rear setbacks are per International Building Code and International Fire Code requirements. Front yard setback is 25' from an arterial and 20' from all other streets.

Seattle, WA – Setbacks from property line abutting a public right-of-way may be required along arterials in order to accommodate required street improvements, which could include pavement, curb installation, drainage, planting of street trees and other landscaping. No other setback requirements or buffers are specified.

Fife, WA – 50 feet (landscaped) buffer from all property lines adjacent to residential uses and 30 feet from commercial uses.

SeaTac, WA – 35 feet side and rear setbacks when adjacent to non-compatible uses such as residential uses, 20 feet when adjacent to similar uses. Setbacks are to be completely landscaped.

Sumner, WA – Buildings within an M-1 or M-2 zone are required to be setback 50 feet from any common boundary with a residentially zoned property, and a required landscaped setback of 25 foot and 35 foot, respectively.

Moab, UT – minimum setbacks (all sides): 600 feet from any residential zoning district or lot containing a residential use for all activity areas, including driveways and on-site roads.

Miami County, KS – asphalt or concrete plant and related materials and equipment shall be located no closer than 1,000 feet to any residence.

**c. Buffers and other approaches to address visual impacts**

Potential approaches to minimizing visual impacts may include landscaped buffers, the use of neutral paint colors for structures and equipment, and/or housing equipment within structures or underground in the case of fuel storage tanks. Requiring fuel storage tanks to be stored underground would provide some aesthetic benefits, although fuel tanks are not likely to create major visual impacts relative to the other structures associated with asphalt plants (stacks, conveyors, etc.) Furthermore, due to the potential difficulties in detecting leaks from underground tanks, consideration should be given to whether or not this would be an environmentally sound a requirement.

Monroe, WA – Side and rear yard setbacks are established per the IBC and IFC, 25 foot front yard setback from arterials and 20 foot from all other streets. Where a light industrial use is adjacent to a residential zone, a 25' landscaped setback is required.

Fife, WA – Where an industrial use is adjacent to a residential district, a minimum 50' landscaped buffer is required, containing a mixture of evergreen and deciduous trees and shrubs. Where an industrial use is adjacent to a commercial district, a minimum 20' landscape buffer is required.

Sumner, WA – Accessory outdoor storage of materials within the M-1 district shall be screened from adjacent properties by a 12-foot landscaped buffer consisting of at least 50% evergreen species.

SeaTac, WA – 20 foot landscape buffer along public right-of-way, 20 foot buffer for side and rear setbacks and 35 foot buffer for side and rear setbacks when adjacent to non-compatible uses.

**d. Minimum lot area and size thresholds**

Moab, UT – 5 acres for asphalt or concrete plant.

Monroe, WA – Minimum lot area for light and general industrial uses is 6,000 sq. ft.

Fife, WA – 1 acre for industrial uses.

Examples of minimum lot size regulations specific to asphalt plants are limited. No examples of maximum size thresholds were identified in the research.

**e. Access and transportation requirements**

Moab, UT – Site shall have frontage and access to a collector or arterial street.

Access and transportation requirements specific to asphalt plants are not common based on the reviewed municipal codes, however industrial uses are typically required to have access off of an arterial or major collector, and/or designated truck route.

**f. Site specific site plan approval**

Research did not reveal any special processes for site plan approval. Conditional use permits were common among the land use codes that were reviewed.

2) Operations

**a. Hours of operation**

No examples of regulating hours of operation specific to asphalt plants or similar uses were found in the review of land use codes. However, limiting hours of plant operation could be one strategy to minimize impacts where such an operation is within close proximity of residential uses. The City may want to consider restricting operations beyond what is currently specified in the City's noise ordinance for construction activity (the most similar specified sound source to the operations of an asphalt plant), which is between 7am to 8pm on weekdays and 9am to 6pm on Saturdays. For example, restricting hours of operation to between 8am and 5pm and allowing no, or very limited, operations on Saturdays may help to minimize negative operational impacts to residents in the vicinity of the proposed facility. However, such restrictions may be impractical for an asphalt plant, which typically produce asphalt on demand during active paving projects. Road paving projects often occur during off-peak hours or at night, which would be in direct conflict with the hours of operation limitations discussed above.

**b. Volume limits**

Research did not find any local regulations that put specific limits on the overall amount of material handled by asphalt plant facilities. Limiting volumes of production would be an indirect way to potential impacts such as emissions and number of truck trips. Kentucky administrative regulations limit batch mix plants to producing no more than 360,000 tons of asphalt during any consecutive 12 month period, and drum mix plants to 500,000 tons over the same time period.

**c. Storage of materials**

Requiring stockpiled materials to be fully enclosed in a structure, or requiring piles to be covered in some other manner may be one way to reduce fugitive dust and particulates. Research did not find any examples of local jurisdictions specifically requiring these measures. However, requiring an applicant to show measures for controlling dust in plan may include covering the material. Also see e. below.

**d. Fuel used, i.e. low emission fuels like natural gas, propane**

Regulating emissions falls under the purview of the Puget Sound Clean Air Agency. No specific standards that address fuel used by asphalt plants were identified in the review of municipal codes. The State of Kentucky has administrative regulations that include fuel restrictions. These restrictions include prohibitions on the use of waste oil unless it has been recycled and does not contain more than the specified amount of arsenic, cadmium, chromium, lead and halogens. A jurisdiction could require a specific type of low-emission fuel be used as a condition for issuing a land use permit. Demonstration that the use is downwind from residential uses based on predominant wind patterns could be an additional condition that could address odor nuisances and/or emissions that may be harmful to the health and safety of nearby residents.

**e. Performance Standards addressing dust, odor, noise, vibration, stormwater, cleaning up of spills/leaks**

The regulations of several communities we reviewed established specific performance standards for industrial uses such as asphalt plants. It should be noted that it can be difficult for local governments to monitor certain technical standards without specialized training or equipment, or the assistance of a specialized third party. In most cases, such as in Monroe, the applicant is required to submit information demonstrating compliance prior to permit issuance and occupancy. However, it is not clear how these standards are enforced through the life of the use. Local governments often focus on citizen complaints as a way to monitor code enforcement issues. Local governments may largely rely on state or federal authorities to police issues such as air quality, but this can be problematic where state and federal standards are not consistent or are less restrictive than local standards.

The City should to the extent possible make certain standards, such as odor or visible smoke, non-technical. For example, the odor threshold could be defined as the concentration in the air of gases or vapors which will just evoke a response in the average human olfactory system. The City should explicitly state in the code the authority to require that the use demonstrate compliance with performance standards through a technical report if a code enforcement issue is suspected by the City following a site visit and inspection. Alternatively, the City could require submittal of regular monitoring reports documenting compliance.

Many codes reference WAC 173.60.040, which establishes maximum permissible environmental noise levels between noise sources and receiving sites. It is the intent of this provision to establish a standard while conceding the function of noise abatement and control to local governments.

Enforcement of this provision is complaint based and is primarily the role of local government.

The NOC registration process managed by PSCAA and Sand and Gravel General Permit issued by DOE address such things as fugitive dust, emissions, and stormwater discharges, respectively, and thus those agencies would have enforcement authority.

Seattle, WA – Heated tars and asphalt are considered a “major odor source” and handling of such materials within the Industrial Buffer or Industrial Commercial zones requires a determination by the Director for appropriate measures to be taken in order to significantly reduce potential odor emissions and airborne pollutants. Such measures are to be indicated on plans, and may be required as conditions for the issuance of any permit.

Fife, WA – Performance standards address outside storage of materials for industrial uses, including limiting total area for outdoor storage (20% of lot area), requiring a fence, and setbacks when height of structure or material exceeds eight feet.

Sumner, WA – Performance standards that would be applicable to an asphalt plant include limits on outdoor storage of materials (not to exceed 40% of the building footprint or 15% of the lot area) and requiring materials to be wrapped or enclosed to prevent wind blown debris. Other performance standards address lighting, odor (no use shall be permitted which creates annoying odor in such quantities as to be readily detectable beyond the boundaries of the site), vibration, and visual quality of fencing (if chain link, then black or green coated only).

Monroe, WA – Performance standards address noise, odor, fire and explosion hazards, dust and dirt, vibration, glare and heat, and toxic gases. A copy of the performance standards from the Monroe Municipal Code are included as Attachment A. For noise the City has established its own maximum acceptable noise levels based on the relationship between frequency and sound pressure and provides specific numerical values in a table. The code section further states that it is expected that sound pressure level of noise radiated from any enterprise located in a zone will never exceed the above described [table] values in any residential district between the hours of eight p.m. and seven a.m. and not more than ten percent of the time between seven a.m. and eight p.m., except construction noise between six a.m. and ten p.m.

## IV. Recommendations

Based the above analysis, it is recommended that asphalt plants and similar uses not be permitted in the Covington Downtown Zone, including the General Commercial District, for the following reasons:

1. Asphalt plants are typically considered a general or heavy industrial/manufacturing use based on the review of municipal codes listed above. Heavy manufacturing uses are prohibited within Covington's Downtown.
2. The uses envisioned for the Downtown, and in particular the Town Center District, could be negatively impacted by an asphalt plant. Asphalt plants have the potential to generate nuisance odors and emissions that could impact the Downtown. The location of the General Commercial District to the west/southwest of the Town Center and majority of the Downtown area, and the predominant wind coming from the southwest, puts existing and future Downtown uses in the path of any potential odors, dust and emissions that may be generated by the plant and movement of materials on, to, and from the site. In addition, the potential visual impacts associated with structures and equipment, as well as stack emissions, could have a negative effect on the Downtown's market position, perceived desirability (particularly the Town Center) and ability to attract new development or tenants for new development.
3. The number of truck trips for hauling materials to and from the plant could potentially have negative traffic impacts on Covington Way SE, SE Wax Rd, and Kent-Kangley Rd due to their being no direct access to SR 18 from Covington Way SE. Added turning movements on Kent-Kangley Rd for accessing SR 18 could cause a substantial amount of additional congestion in this corridor. These are the major arterials providing primary access to the Downtown and Town Center areas. In addition to traffic impacts, substantial wear and tear on city streets can be expected from the numerous heavy truck trips associated with the facility.

If the City decides to permit asphalt plants within its General Commercial District, it should at a minimum be subject to the City's conditional use process and additional use-specific requirements should be specified to mitigate the potential for negative impacts on the development envisioned for the Downtown. The City should include adopting performance standards for industrial uses such as asphalt plants. An example of potential performance standards is included in Attachment A. Requirements should, at a minimum, include the following:

- Measures for leaks/spill containment are shown in plan;
- Measures for dust control are shown in plan;
- Measures for reducing potential odor emissions and airborne pollutants are indicated in plans;

- Measures for reducing potential noise and vibration are shown in plan;
- Measures for reducing stormwater run-off and airborne particulate matter from stockpiled materials are shown in plan;
- All on-site equipment must either be screened by vegetation or painted so as to blend in, i.e. beige or light tan color.
- Restrictions on hours of operation and/or night time operations. Note: Asphalt plant operations often need to operate outside of normal business hours in response to road construction that takes place outside of peak traffic times or at night. This fact also points to the potential incompatibility between such a facility and the mix of uses envisioned for Town Center.
- Designated truck routes of a specific operation should be established through the permitting process so as to minimize impacts to residential uses associated with noise, vibration and dust, as well as, traffic and wear and tear of streets.

In addition to the performance standards above, more restrictive development standards than are otherwise required in the General Commercial District should be applied through the conditional use process if asphalt plants were allowed, including:

- Minimum lot size, this might be set anywhere from one (1) acre to five (acres);
- Maximum site size of 20 acres within the GC zone in order to provide for and encourage other general commercial uses;
- Minimum 100 foot setback from any property line adjacent to residential use;
- Minimum 50 foot setback from any property line adjacent to a commercial use;
- Minimum street setback – existing requirement for industrial uses is 25 ft. Where such a use is across the street from residential uses, this should be increased to 50 ft.;
- Setbacks could be increased, perhaps up to 200 feet for the nearest residential use and 100 feet for all other uses through the conditional use permit process, if it is determined that such uses have a high potential for exposing individuals to harmful odors and emissions given prevailing wind patterns.
- Minimum 20 foot of full screen perimeter landscaping. , which must consist of 50% evergreen species;
- Maintain existing minimum interior setback of 20 ft.;
- Minimum 50 foot full screen vegetated buffer where adjacent to a lower intensity zone 20 foot buffer in all other cases.

## ATTACHMENT A – EXAMPLE OF PERFORMANCE STANDARDS

### City of Monroe Municipal Code – Section 18.10.270 Performance standards.

Performance standards and regulations are used to control dangerous or objectionable environmental effects in the city. Any use of a building or property within the city shall comply with these standards. Prior to issuance of any permit, license or certificate of occupancy, an applicant shall furnish the city with information regarding the environmental effects of any proposed activity as regulated by this section. The applicant may submit a report by expert consultants to supplement the required information. This information may be submitted with any environmental assessment required by this code. A certificate of occupancy, license or permit shall not be issued until such time that the zoning code administrator has determined the use as proposed will not violate any of the applicable performance standards.

A. Odor. No emissions of noxious gases or particles shall be permitted in any district so as to exceed the odor threshold as measured beyond the lot lines. The odor threshold is defined as the concentration in the air of gases or vapors which will just evoke a response in the average human olfactory system.

B. Liquid and Solid Wastes. The discharge of any materials into any natural water or drainage system shall be regulated by the State of Washington Department of Ecology and city sewer code.

C. Fire and Explosion Hazards. All activities involving flammable and explosive materials shall provide adequate safety devices against the hazard of fire and explosion and shall provide adequate fire fighting and fire suppression equipment as determined by the city.

D. Electromagnetic Radiation. No use of a process established in the city shall involve any planned or intentional source of electromagnetic radiation for such purposes as communication, experimentation, entertainment, broadcasting, hearing, navigation, therapy, vehicle velocity measurement, weather survey, aircraft detection, topographical measurement, personal pleasure or any other use directly or indirectly associated with these purposes which does not comply with the current regulations of the Federal Communications Commission (FCC) regarding such sources of electromagnetic radiation, which commission enforces these regulations within the city.

E. Noise. The following table sets forth the maximum acceptable sound pressure level or noise:

<b>Frequency Band in Cycles/Second</b>	<b>Sound Pressure Level DE RE 0.0002 Microbar</b>
Below 75	72
75 – 150	59

150 – 300	52
300 – 600	46
600 – 1200	42
1,200 – 2,400	39
2,400 – 4,800	34
Above 4,800	32

It is expected that sound pressure level of noise radiated from any enterprise located in a zone will never exceed the above described values in any residential district between the hours of eight p.m. and seven a.m. and not more than ten percent of the time between seven a.m. and eight p.m., except construction between six a.m. and ten p.m.

F. Smoke. It is expected that smoke will not be emitted from any source in a light industrial zone in greater density or shade of gray than that described as No. 1 on the Ringlemann chart, except that visible gray smoke, of a shade not darker than that described as No. 2 on the Ringlemann chart, may be emitted for not more than four minutes in any thirty minutes. These provisions applicable to visible gray smoke also apply to visible smoke of a different color with an equivalent apparent opacity.

G. Dust, Dirt. It is expected that dust, dirt, fly ash or other airborne solids will not be emitted from any source in any zone in greater density than that described as No. 1 on the Ringlemann chart.

H. Vibration. It is expected that vibrations from any machine, operation or process will not exceed three thousandths of one inch displacement applied to the frequency range of zero to five thousand cycles per second, as measured at any point off the lot on which the machine, operation, or process is located.

I. Glare and Heat. It is expected that customary operation or process which causes offensive glare or heat will be conducted in a completely enclosed building, and that any such operation or process of any 5unusual or sporadic nature will be so conducted as to be invisible beyond the lot on which it is located.

J. Toxic Gases. It is expected that toxic gases or matter will not be emitted in quantities damaging to health, animals, vegetation, or which can cause any excessive soiling beyond the lot on which they are generated. (Ord. 1177, 1999)