AGENDA
UMATILLA COUNTY BOARD OF COMMISSIONERS
Meeting of Tuesday, December 17, 2013, 9:00 a.m.

Umatilla County Courthouse, 216 SE 4th St. Room 316, Pendleton, OR

** **

A. CALL TO ORDER

B. NEW HEARING:

- APPEAL OF CONDITIONAL USE PERMIT, #C-1226-13; A Notice of Appeal of a County Planning Commission decision has been submitted by ROBERT R. BERRY and HELEN RESER BAKKENSEN TRUST. The application requests a conditional use permit to establish an Asphalt Batch Plant by HUMBERT ASPHALT on Assessor Map 6N 36 tax lot 4600 with rural addresses of 57445 and 57491 Birch Creek RD, Milton-Freewater, OR 97862. The conditional use permit was APPROVED by the County Planning Director on September 18, 2013 and AFFIRMED by the County Planning Commission at a public hearing on October 24, 2013. Subsequently, a NOTICE OF APPEAL was received from Robert R. Berry and Helen Reser Bakkensen Trust, John Reser Bakkensen Trustee on November 19, 2013. The reasons for the appeal are outlined in the Notice of Appeal. The standards of review for the conditional use permit are found in the Umatilla County Development Code, Section 152.060 (B) (3), 152.061, 152.615 and 152.617 (I) (A) *Asphalt Plant*.

C. ADJOURN

H2013\agendas\december2013bcc

MEMO TO

BOARD OF COMMISSIONERS

Umatilla County

Department of Land Use Planning

DIRECTOR
TAMRA MABBOTT

LAND USE
PLANNING,
ZONING AND
PERMITTING

CODE
ENFORCEMENT

SOLID WASTE
COMMITTEE

SMOKE
MANAGEMENT

GIS AND
MAPPING

RURAL
ADDRESSING

LIAISON, NATURAL
RESOURCES &
ENVIRONMENT

December 10, 2013

MEMO

TO: County Board of Commissioners

FROM: Richard H. Jennings, Senior Planner

RE: Appeal submitted by Robert Berry and Helen Reser Bakkensen Trust of the Conditional Use Permit, #C-1226-13, Humbert Asphalt, INC. requesting to establish an Asphalt Batch Plant

---

An application to establish an asphalt batch plant was received from Humbert Asphalt INC. July 31, 2013. The asphalt batch plant is proposed to be placed in an existing rock pit along Birch Creek Road some 6.5 miles east of Milton-Freewater.

The conditional use permit was reviewed administratively and sent out for comment on August 7, 2013 to adjacent property owners and affected governmental agencies. The end of the comment period was August 28, 2013. A comment letter was received from Robert Berry on August 27, 2013. In this comment letter he outlined several points that were concerning to him. At that time, he did not ask for a public hearing. Subsequently, the preliminary decision was made to approve the application.

It is important to understand that the conditions placed on any permit issued by the County have to be connected to either an adopted standard or policy or to reasonable and rational evidence[1].

The appellants (Mr. Berry and Mr. Bakkensen) continuously express their opinion that the planning staff did not provide any evidence to support conclusions or conditions. The findings do show evidence to support the

[1] 1 Oregon State Bar Legal Publication, Land Use 2010 Edition,(§ 14.114) Limits on Conditions of Approval "It has long been held that when the evidentiary basis for a condition is challenged, the reviewing authority must find that "evidence in the record could lead a reasonable person to conclude that considering the impacts of the proposed development there is a need for the condition to further a legitimate planning purpose." *Sherwood Baptist Church v. City of Sherwood*, LUBA No. 92-207, 24 Or LUBA 502, 505 (1993). Similarly, the local government must adopt fmdings addressing its legal authority to impose a condition if a legitimate issue about such authority is raised. (*mmins v. Washington County*, LUBA No. 91-068,22 Or LUBA 129, 131-133 (1991), *affd on other grounds*, 110 Or ~Jp 468 (1992); *Pac West II, Inc. v. City of Madras*, LUBA No. 2006-169, 53 Or LUBA 241, 245-246 (2007)."

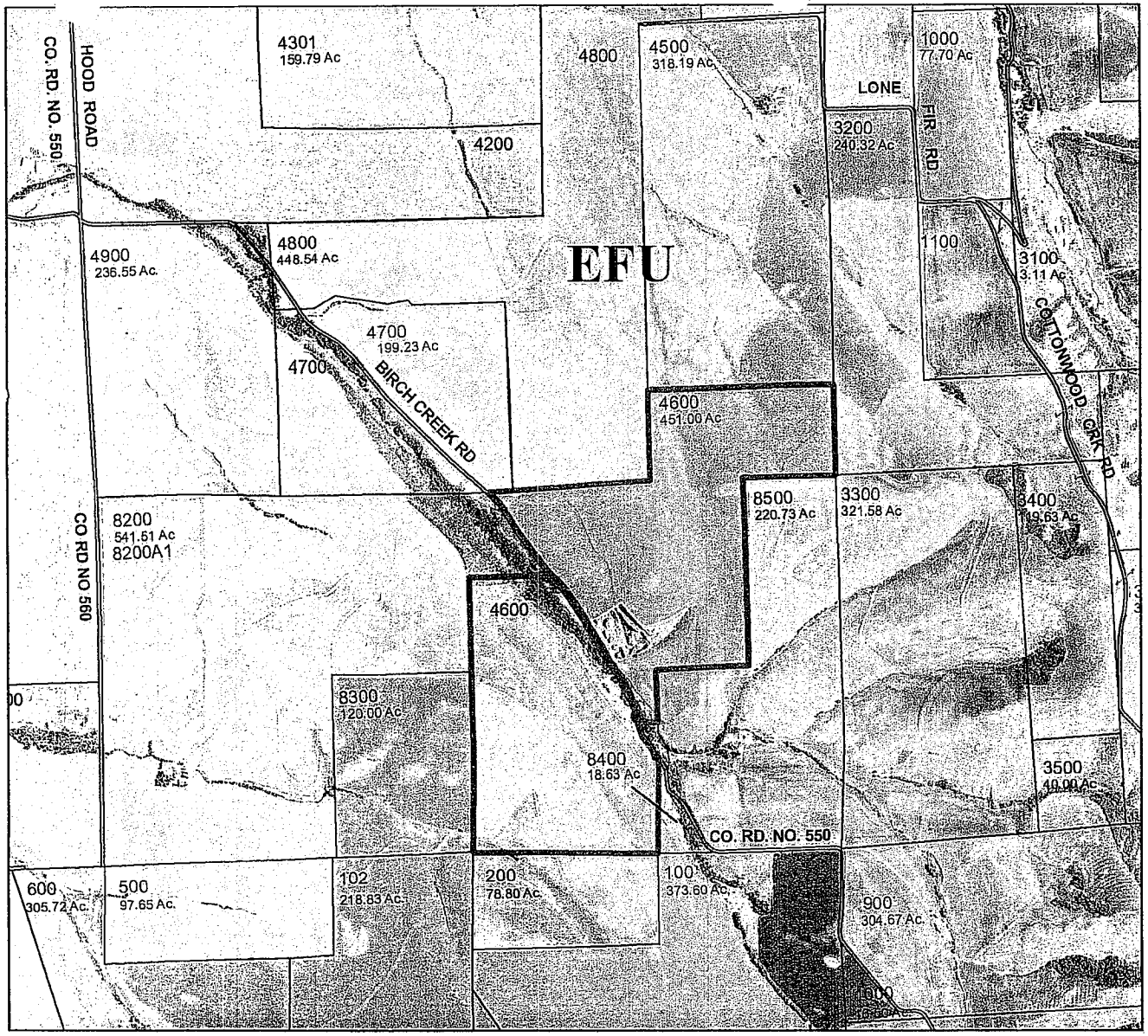
conclusion and conditions with available information. Certainly more data and information could have been utilized, but were not found to be necessary to support the findings.

The Notice of Appeal to the Planning Commission was then received on October 3, 2013 from Mr. Berry and Mr. Bakkensen outlining their objections. The Appeal lists five main points. Planning staff did not respond to each point, but each point was discussed during the hearing held on Thursday, October 24, 2013. The Planning Commission Approved the application to allow the Asphalt Batch Plant project to move forward.

Subsequently, on November 19, 2013 Mr. Berry and Mr. Bakkensen appealed the Planning Commission decision. The hearing to be held on Tuesday, December 17, 2013 will provide another opportunity for the appellants to voice their concerns. The public hearing will mainly include a discussion on the points of their appeal. Representatives from the appellants and the applicant will be in attendance to present their points of view.

If I can help to clarify any issues prior to the hearing please let me know.

MAPS



CONDITIONAL USE REQUEST #C-1226-13
HUMBERT ASPHALT, APPLICANT
KENNEY FARMS, OWNER
MAP 6N36 TAX LOT 4600

SUBJECT PARCEL

2012 AERIAL PHOTO

PROPERTY OWNERS WITHIN 750'
NOTICE OF SUBJECT PARCEL

MAP 5N36

100	DODGE LAND & CATTLE INC 1/2 ETAL 1/2
102	REA AG CORP
200	KENNEY BARBARA ETAL C/O KENNEY FARMS INC

MAP 6N36

4500	MARUM MICHAEL J (TRUSTEE)
4600	**KENNEY BARBARA ETAL** **C/O KENNEY FARMS INC**
4700	LEAHY EDWARD P & CARRINE M & WILLIAM J
4800	TINKER TAMI JO C/O ROBERT TINKER
8200A1	BISHOP JOYCE RESER
8200U1	BISHOP JOYCE RESER 2/3 ETAL 1/3
8200U2	BAKKENSEN JOHN R (TRS) 1/3 ETAL 2/3
8200U3	BERRY ROBERT 1/6 ETAL 5/6
8200U4	BISHOP JOYCE R (TRS) 1/6 ETAL 5/6
8300	REA AG CORP
8400	DODGE LAND & CATTLE INC
8500U1	REA LAURA B, TRS REA DENNIS
8500U2	MCQUEEN MARILYN RAE 1/4 ETAL 3/4
8500U3	REA BONNIE J 1/4 ETAL 3/4
8500U4	REA DENNIS C (REA HT (TRS) 1/4 ETAL 3/4 C/O REA DENNIS C
8500U5	REA NATHAN H & ETAL REA DENNIS

MAP 6N37

3200	MARUM MICHAEL J (TRUSTEE)
3300U1	REA LAURA B, TRS REA DENNIS
3300U2	MCQUEEN MARILYN RAE 1/4 ETAL 3/4
3300U3	REA BONNIE J 25% ETAL 75%
3300U4	REA DENNIS C & REA H T (TR) 25% ETAL 75% C/O REA H T TRUSTEE
3300U5	REA NATHAN H & ETAL REA DENNIS

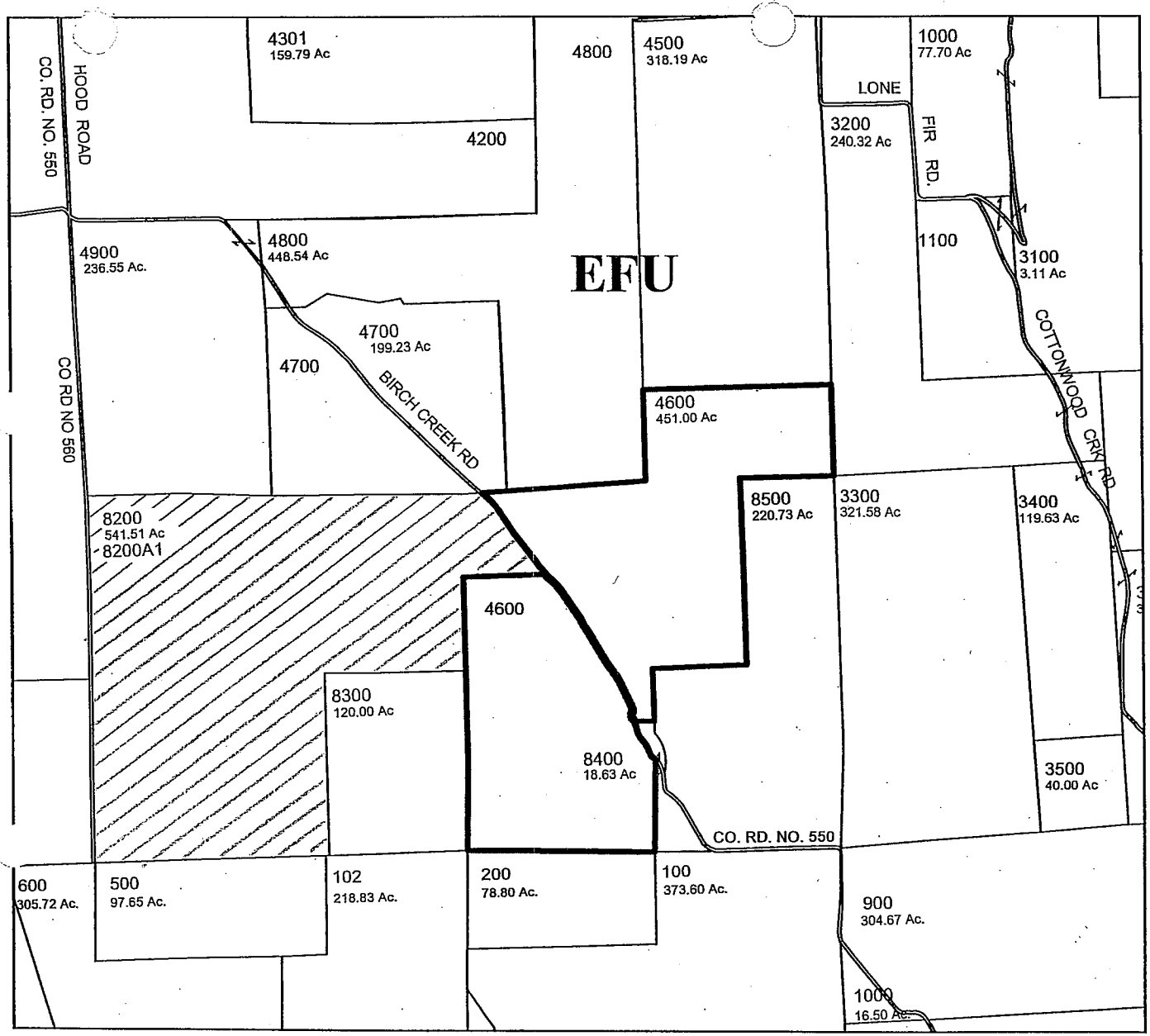
N
W E
S

0 1000 2000 3000
Feet

DATE: 8/1/13

MAP DISCLAIMER: No warranty is made by Umatilla County as to the accuracy, reliability or completeness of this data. Parcel data should be used for reference purposes only. Created by J.Alford, Umatilla County Planning Dept. 8/1/13

y:workspace/planning/vicinity maps/E-H/Humbert_C_1226_13.gws



PROPERTY OWNERS WITHIN 7
NOTICE OF SUBJECT PARCEL

MAP 5N36

100	DODGE LAND & CATTLE INC 1/2 ETAL 1/2
102	REA AG CORP
200	KENNEY BARBARA ETAL C/O KENNEY FARMS INC

MAP 6N36

4500	MARUM MICHAEL J (TRUSTEE)
4600	**KENNEY BARBARA ETAL** **C/O KENNEY FARMS INC**
4700	LEAHY EDWARD P & CARRINE M & WILLIAM J
4800	TINKER TAMI JO C/O ROBERT TINKER
8200A1	BISHOP JOYCE RESER
8200U1	BISHOP JOYCE RESER 2/3 ETAL 1/3
8200U2	BAKKENSEN JOHN R (TRS) 1/3 ETAL 2/3
8200U3	BERRY ROBERT 1/6 ETAL 5/6
8200U4	BISHOP JOYCE R (TRS) 1/6 ETAL 5/6
8300	REA AG CORP
8400	DODGE LAND & CATTLE INC
8500U1	REA LAURA B, TRS REA DENNIS
8500U2	MCQUEEN MARILYN RAE 1/4 ETAL 3/4
8500U3	REA BONNIE J 1/4 ETAL 3/4
8500U4	REA DENNIS C (REA HT (TRS) 1/4 ETAL 3/4 C/O REA DENNIS C
8500U5	REA NATHAN H & ETAL REA DENNIS

MAP 6N37

3200	MARUM MICHAEL J (TRUSTEE)
3300U1	REA LAURA B, TRS REA DENNIS
3300U2	MCQUEEN MARILYN RAE 1/4 ETAL 3/4
3300U3	REA BONNIE J 25% ETAL 75%
3300U4	REA DENNIS C & REA H T (TR) 25% ETAL 75% C/O REA H T TRUSTEE
3300U5	REA NATHAN H & ETAL REA DENNIS

N
W E
S

0 1000 2000 3000
Feet

CONDITIONAL USE REQUEST #C-1226-13
HUMBERT ASPHALT, APPLICANT
KENNEY FARMS, OWNER
MAP 6N36 TAX LOT 4600

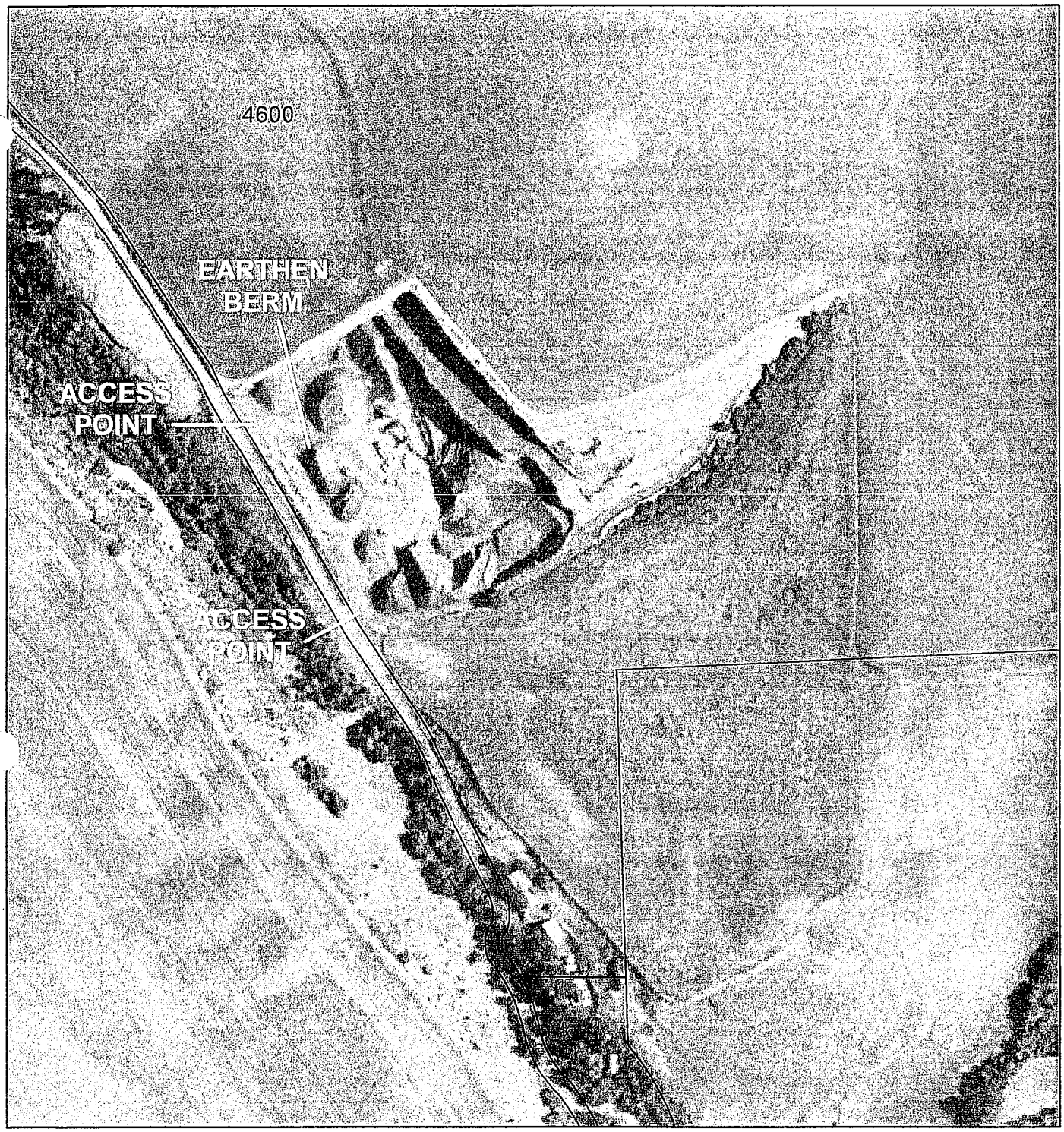
SUBJECT PARCEL

Bakkensen Property

DATE: 8/1/13

MAP DISCLAIMER: No warranty is made by Umatilla County as to the accuracy, reliability or completeness of this data. Parcel data should be used for reference purposes only. Created by J.Alford, Umatilla County Planning Dept. 8/1/13

y:workspace/planning/vicinity maps/E-H/Humbert_C_1226_13.gws



2012 AERIAL PHOTO

0 200 400 600
Feet

N
W E
S

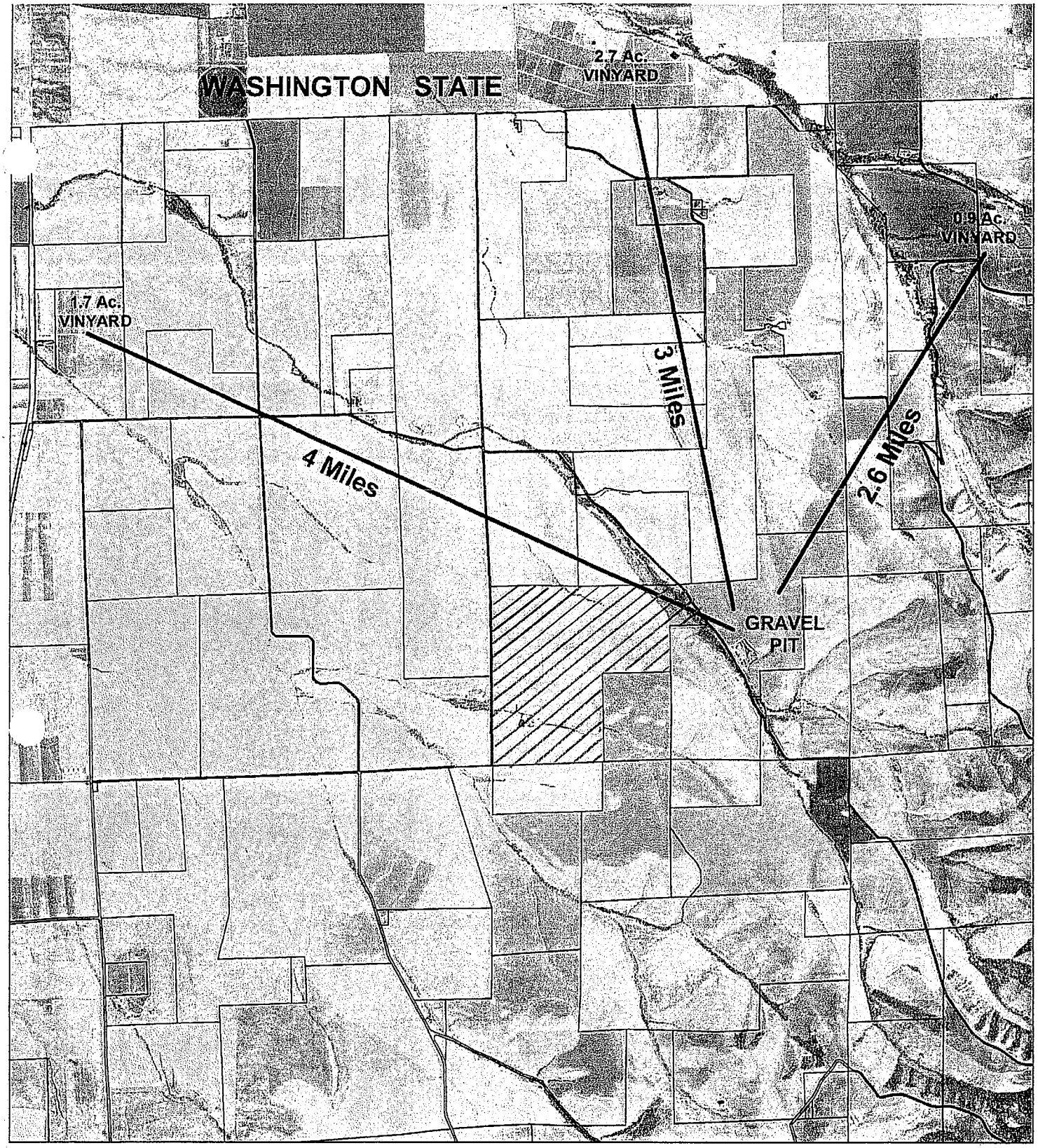
CONDITIONAL USE REQUEST #C-1226-13
HUMBERT ASPHALT, APPLICANT
KENNEY FARMS, OWNER
MAP 6N36 TAX LOT 4600

DETAIL - GRAVEL PIT

DATE: 10/23/13

MAP DISCLAIMER: No warranty is made by Umatilla County as to the accuracy, reliability or completeness of this data. Parcel data should be used for reference purposes only. Created by J.Alford, Umatilla County Planning Dept. 8/1/13

y:workspace/planning/vicinity maps/E-H/Humbert_C_1226_13.gws

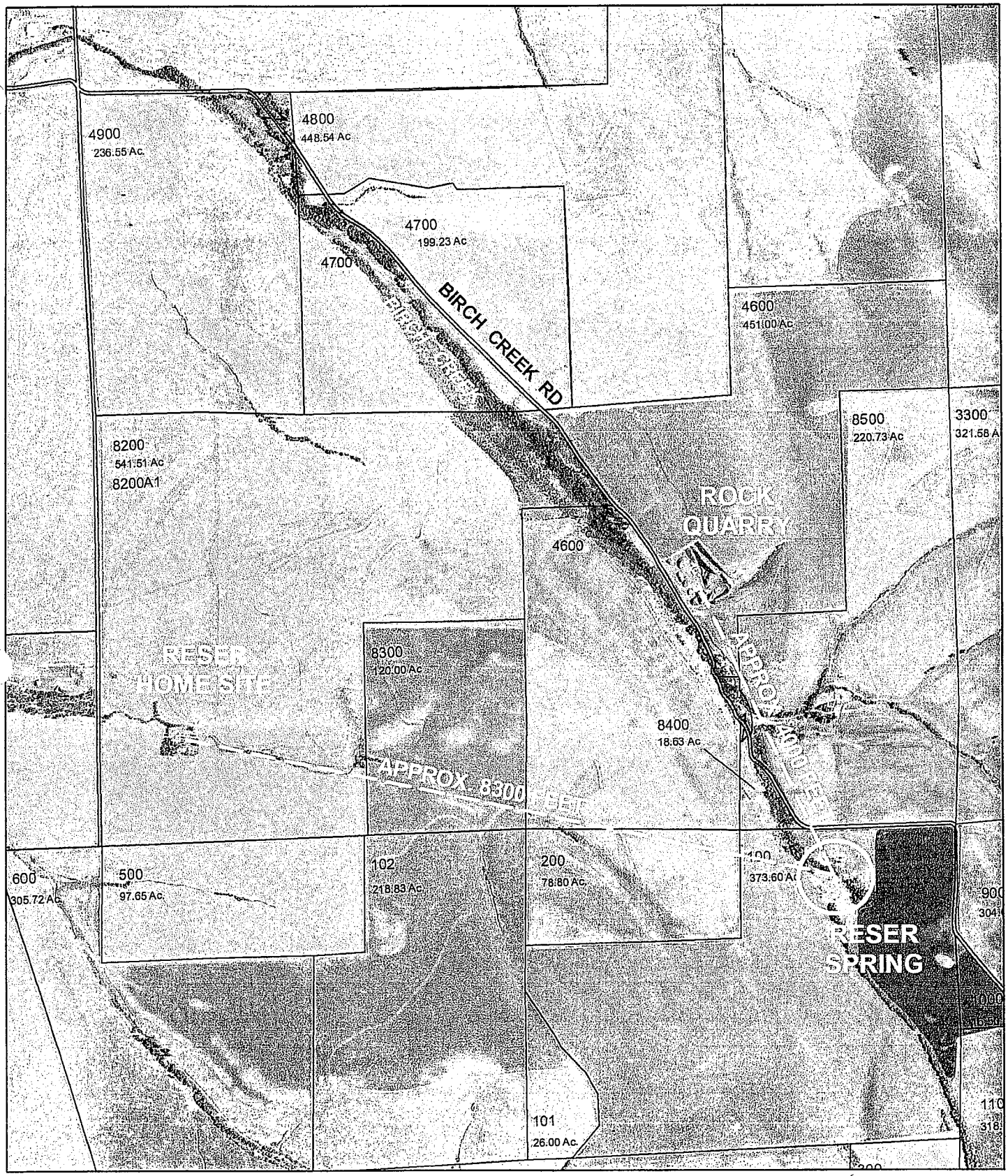


0.0 0.5 1.0 1.5
Miles

2012 AERIAL PHOTO
UMATILLA COUNTY, OREGON
HUMBERT CONDITIONAL USE REQUEST #C-1226-13
MAP 6N36 TAX LOT 4600

N
W E
S

Bakkensen Property



2012 AERIAL PHOTO, UMATILLA COUNTY, OREGON
CONDITIONAL USE REQUEST #C-1226-13
IUMBERT ASPHALT, APPLICANT
MAP 6N36 TAX LOT 4600

0 1000 2000 3000
Feet

MAP DISCLAIMER: No warranty is made by Umatilla County as to the accuracy, reliability or completeness of this data. Parcel data should be used for reference purposes only. Created by J.Alford, Umatilla County Planning Dept. 11/22/13
y:workspace/planning/vicinity maps/E-H/Humbert_C_1226_13.gws

UMATILLA COUNTY
BOARD OF COMMISSIONERS

TUESDAY,
DECEMBER 17, 2013

APPEAL OF PLANNING COMMISSION DECISION OF #C-1226-13, HUMBERT ASPHALT

Section 1: Request and Description of Application

This information deals with the Land Use Request Application that an Appeal is being filed against.

THE REQUEST IS FOR... *(Check the one that applies)*

☐ an Appeal to the Planning Commission from a decision of the Planning Department
☒ an Appeal to the Board of Commissioners from a decision of the Planning Commission

DESCRIPTION OF THE LAND USE REQUEST APPLICATION IN QUESTION:

- Land Use Request Application File Number: Request C 1226-13
- Type of Land Use Request Application: Conditional Use Permit Request
- Decision-Making Body: ☐ Planning Director or ☒ Planning Commission
- Date of Decision (date on Findings): October 31, 2013
- Date you received notice of the decision or learned of the decision: November 5, 2013

Section 2: Contact Information

Name of Appellant(s): John Reser Bakkensen, Trustee for Helen Reser Bakkensen Trust

Address: 1141 S.W. Mitchell Lane

City, State, Zip: Portland, Oregon 97239-2822

Telephone Number & Email Address: 503-245-0385 jrbakken@aol.com

Date of Submittal for the Appeal: November 18, 2013

RECEIVED

NOV 19 2013

UMATILLA COUNTY
PLANNING DEPARTMENT

Section 3: Basis of Appeal

Complete only when appealing a decision made by the Planning Department or Planning Commission.

The Appeal is based on the belief that certain policies and/or procedures of the Comprehensive Plan and/or provisions of the Development Code were not properly administered or followed. Please specify the chapter, section and page numbers of the Comprehensive Plan and/or Development Code where the policies and/or procedures are found; as well as a narrative explaining the issues that the Appeal is based upon *(use additional pages if necessary)*:

Please see attached document.

Section 4: Certification

I/We, the undersigned, swear under penalty of perjury that the above responses are made truthfully and to the best of my knowledge.

John Reser Bakkensen, Trustee

X Helen Reser Bakkensen Trust — Nov. 18, 2013

Signature of Appellant — Date

John Reser Bakkensen, Trustee, Helen Reser Bakkensen Trust

Printed Name of Applicant

X Robert R. Berry — Nov. 18, 2013

Signature of Appellant — Date

Robert R. Berry

Printed Name of Applicant

X _____ — _____

Signature of Appellant — Date

_____

Printed Name of Applicant

X _____ — _____

Signature of Appellant — Date

_____

Printed Name of Applicant

Office Use Only

Date this paperwork was received: _____

Accepted by: _____

Signature of Planning Staff & Printed Name

Fee Paid? ☐ Yes ☐ No Receipt Number: _____

This is an Appeal to the Umatilla County Board of Commissioners from a decision of the Umatilla County Planning Commission dated October 31, 2013 and sent to the parties on November 5, 2013. The Planning Commission denied Appellants' Appeal of a decision by the County Planning Director that approved Conditional Use Permit Request #C 1226-13 to establish an asphalt plant in an existing aggregate site (Map #6N 36, Tax Lot #4600). The proposed site is located approximately 6.5 miles east of State Highway 11 on Birch Creek Road with a site address of 57445 and 57491 Birch Creek Road, Milton-Freewater, Oregon.

Applicant for Conditional Use Permit:

The Applicant is Humbert Asphalt, Inc., of 84899 Highway 11, Milton-Freewater, Oregon. The Owner of the aggregate site is Barbara Kenney et al., c/o Kenney Farms, Inc. of 3629 Braden Road, Walla Walla, Washington.

Appellants:

Appellants, Robert R. Berry and the Helen Reser Bakkensen Trust, are co-owners of an undivided one-half interest in the abutting farmland located at 84205 Hood Road, Milton-Freewater, Oregon (Tax Lot Nos. 5N 3600-00-00500U2 and 6N 3600-00-08200U2).

Respondent:

Respondent is the Umatilla County Planning Commission (referred to below as the "Planning Commission").

Oregon Statutes and Umatilla County Code Sections Cited:

Umatilla County Code Sections: 152.055; 152.060; 152.061; 152.615; 152.616; 152.617; ORS 215.283 and ORS 215.301.

Preliminary Statement:

Robert R. Berry and the Helen Reser Bakkensen Trust ("Appellants") appeal from the decision of the Umatilla County Planning Commission dated October 31, 2013, which allows an asphalt plant to be located in an Exclusive Farm Use Zone on property that is immediately adjacent to: (a) Appellants' wheat ranch, (b) Birch Creek, a natural waterway that is protected by the federal Clean Water Act, and (c) a natural spring at the head of Birch Creek from which Appellants' ranch draws its sole source of domestic water. The decision of the Planning

Commission fails to protect the wheat fields in the vicinity of the proposed asphalt plant from environmental contamination as well as the flowing waters of Birch Creek, located less than one hundred feet away, and the natural spring at the head of Birch Creek, thereby creating a serious public health risk.

The Final Findings and Conclusions of the Planning Commission acknowledge that the *"proposed asphalt plant will produce a certain level of noise, vibration and particulate and gaseous emissions."* (See page 9 of 15 of Final Findings.) No consideration was given, however, to the nature of the asphalt plant's emissions, some of which are known carcinogens. In December 2000, the United States Environmental Protection Agency issued a comprehensive report entitled *Hot Mix Asphalt Plants: Emission Assessment Report, EPA-454/R-00-019 ("EPA Report"),* which identified and quantified the gaseous and particulate emissions from both drum mix and batch mix asphalt plants.

Humbert Asphalt, Inc. has begun to assemble a drum mix asphalt plant at the Birch Creek location in anticipation of its conditional use permit. Table 8 of the EPA Report contains estimated annual emissions for a typical drum mix asphalt plant, which include: (a) Criteria Pollutants such as carbon monoxide and sulfur dioxide, (b) Polycyclic Aromatic Hydrocarbons ("PAHs") such as naphthalene and 2-methylnaphthalene, (c) Volatile Hazardous Air Pollutants ("HAPs") such as benzene, a known carcinogen, and (d) Metal Hazardous Air Pollutants such as mercury and lead.

According to the EPA Report, a typical drum mix asphalt plant will annually emit 130 pounds of naphthalene as well as 34 pounds of 2-methylnaphthalene. It will also emit 78 pounds of benzene and 620 pounds of formaldehyde. See Table 8 of EPA Report on page 22. These emissions will occur even with environmental emission controls or mitigation systems such as a "bag house." The output of a "typical" plant is larger than the projected output shown on Humbert's permit application but Humbert's permit only includes projections of output and hours of operation so Humbert's actual production will vary. Regardless of actual production, the bottom line is that Humbert's plant will produce very harmful emissions.

In 1912 Ralph Reser acquired the wheat ranch in which Appellants hold an undivided one-half interest that is immediately adjacent to the proposed asphalt plant. Ralph Reser farmed this ground until his death in 1976. Robert R. Berry is a grandson of Ralph Reser and holds an undivided one-sixth interest in the Reser ranch. The Helen Reser Bakkensen Trust owns an undivided one-third interest in the Reser ranch. Helen Reser Bakkensen was a daughter of Ralph Reser and died in 2000. Her interest in the ranch was placed into a testamentary trust, of which John Reser Bakkensen serves as sole trustee. Joyce Reser Bishop, the sole surviving daughter of Ralph Reser, holds an undivided one-half interest in the Reser ranch. She will be 88 in January 2014 and is not directly involved in this appeal.

For over 100 years wheat has been continuously grown on the Reser ranch. In prior years a portion of the Reser property was planted in green peas as a rotational crop but this practice ended in 2010. A limited portion of the ranch has been used for wintering a small herd of cattle.

Recent research undertaken by Reiko Kobayashi with the Department of Environmental Toxicology at the University of California in Davis and the California EPA, Air Resources Board, has demonstrated that wheat will take up Polycyclic Aromatic Hydrocarbons such as naphthalene and 2-methylnaphthalene, the types of hydrocarbons that will be emitted in quantity by the asphalt plant near Birch Creek. See Kobayashi, et al., "Polycyclic aromatic hydrocarbons in edible grain: A pilot study of agricultural crops as a human exposure pathway for environmental contaminants using wheat as a model crop," *Environmental Research*, 2008, vol. 107, pages 145-151.

Naphthalene's structure is a double benzene ring with a molecular formula of C10H8—ten carbon atoms in two conjoined hexagonal rings with eight hydrogen atoms bonded to the perimeter carbon atoms. Naphthalene has been designated as a carcinogen. Source: *California Department of Toxic Substances Control.*

"Polycyclic aromatic hydrocarbons (PAHs) are emitted primarily from combustion sources. A number of PAHs are mutagenic and/or carcinogenic to mammals, and PAHs can be absorbed into the blood through inhalation, ingestion, and dermal contact, and elicit systemic effects....According to the studies on PAH exposure through diets, diet is a major source of human exposure to these contaminants." Kobayashi at page 145.

"In summary, PAHs in California grain were mainly 2- to 4- [benzene] ring relatively volatile PAHs with naphthalene the most abundant PAH....Field wheat grain may serve as an environmental indicator for airborne PAHs." Kobayashi at page 150.

As noted above, a typical drum mix asphalt plant will emit 130 pounds of naphthalene annually plus an additional 34 pounds of 2-methylnaphthalene. The conditional use permit to be issued to Humbert Asphalt, Inc. is essentially a perpetual license by the County to operate the asphalt plant so long as the conditions of the permit are met. But from the perspective of public health, the carcinogenic and mutagenic PAHs will continue to accumulate in the agricultural fields and water surrounding the asphalt plant—annually increasing the risk of adverse health outcomes.

Benzene's structure is a single hexagonal ring consisting of one carbon atom located at each vertex (of the hexagon) with one hydrogen atom bonded to each carbon atom [C6H6]. The asphalt plant near Birch Creek will produce a

significant quantity of benzene annually. According to the EPA Report, a typical drum mix asphalt plant will produce 78 pounds of benzene annually. Benzene is water soluble. The United States Environmental Protection Agency classifies benzene as a known human carcinogen.

According to the EPA Report, a typical drum mix asphalt plant will also produce 620 pounds of formaldehyde annually. Formaldehyde is a relatively simple hydrocarbon molecule consisting of one carbon atom, one oxygen atom and two hydrogen atoms [CH2O]. Formaldehyde has been proven scientifically to cause cancer in humans. *Source: Agency for Toxic Substances and Disease Registry, United States Department of Health and Human Services National Toxicology Program.*

When Oregon DEQ issued its General Air Contaminant Discharge Permit to Humbert Asphalt, Inc. in August 2013 for the operation of a "portable asphalt plant," it did not make any determination as to whether the specific location of the asphalt plant was "compatible" with the surrounding area. This land use decision regarding compatibility rests solely with Umatilla County.

See Thomas Hack's letter to Richard Jennings, Senior Planner, Umatilla County Planning Department dated October 17, 2013: *"However, it is not DEQ's function to make land use compatibility determinations."* Thomas Hack is employed by DEQ's Air Quality Program for the Eastern Region and works in Pendleton.

The policy issues are clear: Does Umatilla County wish to expose its historic wheat fields to environmental contamination with Hazardous Air Pollutants (HAPs) and Polycyclic Aromatic Hydrocarbons (PAHs) emitted by an asphalt plant, when it is certain that each annual wheat crop will take up these contaminants in their stalks and grains, thereby facilitating a human exposure pathway to carcinogens? Can Umatilla County represent to the public that an asphalt plant is "compatible" with historic wheat fields in light of current scientific findings that indicate contamination and environmental harm will result? Likewise, does Umatilla County wish to expose Birch Creek, a federally protected waterway, to environmental pollution? Polluting a waterway such as Birch Creek is unlawful under the federal Clean Water Act.

Partial Summary of Appeal:

The Approval of the Conditional Use Permit by Umatilla County's Planning Commission (referred to below as the "Planning Commission Permit Approval") contains errors of fact and law as well as unsupported findings and conclusions in the analysis of Sections 152.060 and 152.061 of Umatilla County's Land Development Ordinance. Appellants submitted several Assignments of Error in their Appeal of the Umatilla County Planning Department's "Tentative Final Approval" dated September 18, 2013, and the Planning Commission either did

not address these Assignments of Error or offered little or no support for their conclusions.

The Planning Commission Permit Approval for the location of an asphalt plant abutting agricultural land does not give due consideration to and indeed directly conflicts with Umatilla County's stated objectives in Code Section 152.055 to "preserve and maintain agricultural lands for farm use, including range and grazing uses, consistent with existing and future needs for agricultural products, forest and open spaces; to conserve and protect scenic resources; to maintain and improve the quality of air, water and land resources of the county...." (Emphasis Added.)

Moreover, the injunction in Section 152.055 *"to maintain and improve the quality of air, water and land resources of the county"* does not merely proclaim an "aspirational" goal but instead requires planning within an Exclusive Farm Use Zone that will avoid or minimize environmental harm. These are clearly distinguishable objectives. See, for example, *Freeland v. City of Bend, 45 Or LUBA 125 (2003): "In other cases, however, purpose statements can impose additional affirmative duties upon the local governments that must be fulfilled."*

Detrimental Environmental Effects on Domestic Water Source for Ranch of Adjoining Property Owners: Appellants not only own abutting farm land which the proposed plant will pollute but also own an historic water right to a natural spring at the head of Birch Creek less than one mile from the plant location, which the plant will also pollute. Appellants object to the proposed siting of a hot mix asphalt batch plant along Birch Creek Road, because of the potentially dire environmental consequences on Birch Creek and more particularly to the spring located at the head of Birch Creek from which the domestic water is obtained for the adjacent ranch property owned by Appellants. It is uncontroverted that hot mix asphalt plants emit carcinogenic hazardous air pollutants (HAPs) and polycyclic aromatic hydrocarbons (a subclass of HAPs) and metallic HAPs such as arsenic, lead, and mercury. The natural spring from which the domestic water is taken for the adjacent ranch is located only about 4,500 feet from the proposed asphalt batch plant. The water right, which Appellants wish to have fully protected from environmental contamination, dates to 1894. The water right was judicially confirmed by a Decree dated May 16, 1932 and signed by Judge Calvin L. Sweek of the Circuit Court of Umatilla County, Oregon. A Certificate of Water Right was also issued by the State Engineer on April 5, 1940 and recorded in Volume 11, page 13150 of the State's Record of Water Right Certificates. This water right may be reviewed at the following State of Oregon Internet link:

http://apps.wrd.state.or.us/apps/wr/wrinfo/wr_folder_image.aspx?snp_id=65539

Detrimental Environmental Effects on Birch Creek: The Findings and Conclusions of Umatilla County's Planning Commission acknowledge that Birch Creek is only 100 to 125 feet away from Birch Creek Road (page 12 of 15). Birch

Creek is located down slope from Birch Creek Road, and Birch Creek Road is located down slope from the proposed hot mix asphalt plant site with its two large access haul roads cut into the rock outcropping. The topography of the area is a natural canyon with Birch Creek at the low point and the proposed hot mix asphalt plant to be located on higher ground. Pollutants from the plant will diffuse and disperse through the air and deposit in Birch Creek. Moreover, it is clear beyond doubt that carcinogenic emissions from the batch plant initially deposited on the ground at the site of the quarry will become waterborne in each heavy rain event or "cloudburst" and find transport by gravity to Birch Creek. Appellants' concern is not limited to the harmful solids and liquid materials that the asphalt batch plant will produce and that will seep into the surrounding grounds but some of the noxious chemical molecules produced by the asphalt plant have high vapor pressures and will easily evaporate and condense around the cold flowing waters of nearby Birch Creek. The Umatilla County Board of Commissioners need to protect the quality of Birch Creek waters that originate in the depths of the Blue Mountains, and join the Walla Walla River as a tributary, and then onto the Columbia River. Birch Creek as a tributary of a navigable stream is subject to the federal Clean Water Act and all of its considerable protections. See, for example, *Rapanos v. United States, 547 US 715 (2006),* which held that the federal Clean Water Act applies to all surface waters of the United States that are connected, directly or indirectly, to navigable waters.

Detrimental Environmental Effects on Agricultural Land: The science is clear that wheat can be environmentally contaminated by polycyclic aromatic hydrocarbons (PAHs). Many PAHs are mutagenic and carcinogenic to mammals. Hot mix asphalt plants are a point source for PAHs. Can siting a smoking hot mix asphalt plant next to historic wheat fields in the foothills of the Blue Mountains be considered good and enlightened land use policy? Umatilla County has already spoken to this issue in its policy statement defining the purposes of the Exclusive Farm Use Zone [Section 152.055]: "to preserve and maintain agricultural lands for farm use..." and "to maintain and improve the quality of air, water and land resources of the county...." Does Umatilla County wish to be known as the sole source of genetically modified wheat resistant to Roundup® weed killer as well as wheat contaminated with PAHs? How will Japanese, Korean or other international wheat buyers react when they learn of this new variety of environmentally contaminated wheat?

The Planning Commission Permit Approval at several points passes the entire responsibility for the oversight of hazardous air pollutants (HAPs), including polycyclic aromatic hydrocarbons to the Oregon Department of Environmental Quality (DEQ). While DEQ does have statutory authority over HAPs, it certainly does not have authority over the siting of point sources (such as an asphalt plant), which emit HAPs. The County retains that siting authority through its land use decision making process. Indeed the County is required to determine land use compatibility—not DEQ. As noted above, Thomas Hack with DEQ in

Pendleton stated that "it is not DEQ's function to make land use compatibility determinations."

Appeal—Specific Assignments of Error in Planning Commission Decision:

1.0 Appellants contend that the Planning Commission Permit Approval errs in its analysis and interpretation of Umatilla County Code Section 152.060, entitled "Conditional Uses Permitted". (See page 6 of 15 in "Findings and Conclusions" of the Planning Commission Permit Approval.)

1.1 Summary of Error

The Planning Commission Permit Approval errs by restricting its analysis to Section 152.060 and by not considering Section 152.060 within the context of Section 152.055, which states that one of the purposes of an Exclusive Farm Use Zone (EFU) is "to maintain and improve the quality of air, water and land resources of the county".

Detailed Analysis:

Section 152.056 lists a number of "Uses Permitted Outright" in an EFU, and Section 152.060 lists "Conditional Uses Permitted" in an EFU. Under both ORS 215.283 (2)(b)(C) and Umatilla County Code Section 152.060, an asphalt plant is only potentially permissible as a conditional use within an Exclusive Farm Use (EFU) Zone after administrative review by the governing body. By strictly limiting the number and types of uses, the Oregon Revised Statutes and Umatilla County Land Development Ordinance clearly do not favor the location of such conditional uses within an EFU. As disfavored uses, they deserve stricter scrutiny by the local governing body, and ORS 215.283 (2)(b)(C) is explicit on this point when it states that "The following nonfarm uses may be established, subject to the approval of the governing body...."

The phrase "subject to the approval of the governing body" and the distinction in the Code between "Uses Permitted Outright" and "Conditional Uses Permitted" clearly imply a careful consideration by the County of the impact of the specific conditional use requested. However, the decision of the Planning Commission errs by omitting such a discussion and analysis of the impact of the proposed Humbert asphalt plant next to Birch Creek. Such careful consideration reveals that the proposed asphalt plant is incompatible with the surrounding agricultural fields as well as Birch Creek. As demonstrated in this Appeal, the proposed plant will have a significant negative impact on this area.

Moreover, ORS 215.301 and Section 152.060 prohibit the location of an asphalt plant within two miles of a planted vineyard, which implies that there is a legal

presumption that the asphalt plant inflicts harm on the grapes of a vineyard, at least within that radius.

An asphalt plant generates hazardous air pollutants (HAPs). (EPA *Hot Mix Asphalt Plants: Emission Assessment Report*, EPA-4-454/R-00-019; December 2000). These HAPs include polycyclic aromatic hydrocarbons (PAHs), which are known carcinogens. (Environmental Protection Agency, "Evaluation and Estimation of Potential Carcinogenic Risks of Polynuclear Aromatic Hydrocarbons" 1985; K. Srogi, "Monitoring of Environmental Exposure to Polycyclic Aromatic Hydrocarbons: a Review," *Environmental Chemical Letters*, 2007, vol. 5, p. 169).

EPA characterizes the emissions from asphalt plants in this way: *"The HAPs emitted from these source categories (controlled under the final rule) are associated with a variety of adverse health effects. These adverse health effects include both chronic health disorders (e.g., irritation of the lung, skin, and mucous membranes, effects on the central nervous system, and damage to the blood and liver) and acute health disorders (e.g., respiratory irritation and central nervous system effects such as drowsiness, headache and nausea). The EPA has classified two of the HAPs (formaldehyde and POM) as probable human carcinogens." (40 CFR Part 63, Federal Register, vol. 68, no. 88; Wednesday May 7, 2003; p. 24564; "National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing.")*

Moreover, Polycyclic Aromatic Hydrocarbons (PAHs), a subclass of HAPs do accumulate in the soil and are present in crops, with wheat crops as one example. (Kobayashi, et al., "Polycyclic aromatic hydrocarbons in edible grain: A pilot study of agricultural crops as a human exposure pathway for environmental contaminants using wheat as a model crop," *Environmental Research*, 2008, vol. 107, pages 145-151).

As stated, an asphalt plant is only a potential conditional use within an EFU Zone subject to administrative review and scrutiny by the governing body. As noted above, Section 152.055 states that "The purposes of an EFU, Exclusive Farm Use Zone, are to preserve and maintain agricultural lands for farm use...to conserve and protect scenic resources; to maintain and improve the quality of air, water and land resources of the county...." Clearly, the presence of an asphalt plant <u>will degrade</u>, and <u>not improve</u>, the air quality in an EFU Zone.

Section 152.060 of the Umatilla County Land Development Ordinance lists the potential conditional uses within an EFU and this list includes an asphalt plant in Subsection (B)(3). Either the County Land Development Ordinance contains mutually inconsistent provisions (as shown above) or the County must apply additional scrutiny to the location of an activity which emits environmentally harmful, carcinogenic contaminants in an EFU Zone.

Another reasonable option which the Planning Commission did not consider is simply requiring Humbert Asphalt, Inc. to continue its asphalt production operation at its existing location on Highway 11. Both the County and DEQ have approved the location and operation of the asphalt plant at this site. Humbert Asphalt, Inc. has operated at this location for many years. The current DEQ permit issued to Humbert Asphalt, Inc. does not expire until 2017, according to DEQ. Furthermore, DEQ is unaware of anyone who objects to the continued operation of the asphalt plant at its current location. At the Planning Commission hearing, several letters in support of Humbert Asphalt, Inc. were received in evidence from property owners in close proximity to the existing asphalt plant next to Highway 11. None of these letters requested that the asphalt production operation of Humbert Asphalt, Inc. be terminated or the location changed. Accordingly, there is no reason to believe that DEQ would not reissue the permit to Humbert Asphalt, Inc. in 2017.

As demonstrated in this Appeal, approving the location of the proposed plant near Birch Creek will have a clear and significant negative impact and as such will impose costs on Appellants and others but generate only speculative cost savings at best for Humbert Asphalt, Inc.

1.2 Summary of Error

The Planning Commission Permit Approval further errs in its analysis and interpretation of Umatilla County Code Section 152.060, entitled "Conditional Uses Permitted". (See page 6 of 15 in "Findings and Conclusions" of the Planning Commission Permit Approval.) The Planning Commission Permit Approval errs by applying an overly narrow interpretation of the Code Section which prohibits an asphalt plant within two miles of a vineyard.

Detailed Analysis:

In its interpretation and application of Section 152.060 entitled "Conditional Uses Permitted", the Planning Commission Permit Approval states that "Processing, as defined by ORS 517.750, of aggregate into asphalt or Portland cement as provided in § 152.617 (I)(A). New uses that batch and blend mineral and aggregate into asphalt cement may not be authorized within two miles of a planted vineyard. Planted vineyard means one or more vineyards totaling 40 acres or more that are planted as of the date the application for batching and blending is filed; and The Umatilla County Planning Department finds that the proposal is for an asphalt batch plant. The existing pit covers some 3-4 acres and material will be extracted, crushed and batched into asphalt within the existing site. The closest vineyard to the proposed asphalt plant location is more than four miles away (Telephone Pole Road area). Thus, there are no vineyards located within two miles of the proposed asphalt plant location. The applicable criteria for an asphalt plant are provided in UCDC 617 (I) (A) and will be reviewed below. The application complies with this standard."

The Planning Commission Permit Approval cites Umatilla County Code Section 152.060 (B)(3) which states in relevant part: "New uses that batch and blend mineral and aggregate into asphalt cement may not be authorized within two miles of a planted vineyard. Planted vineyard means one or more vineyards totaling 40 acres or more that are planted as of the date the application for batching and blending is filed."

The Planning Commission Permit Approval errs in its interpretation of this Code Section. The Planning Commission Permit Approval interprets this Code Section as implicitly authorizing the location of an asphalt plant which is not within two miles of planted vineyards totaling 40 acres, but this Section only prohibits authorizing a plant within two miles, nothing more. This Code Section is silent on authorizing an asphalt plant in other cases; this Section neither authorizes nor prohibits asphalt plants in other cases. Moreover, this Section reinforces the disfavored status of asphalt plants by specifically prohibiting an asphalt plant within two miles of a planted vineyard.

1.3 Summary of Error

Appellants contend the Planning Commission Permit Approval commits a factual error in stating that the closest vineyard is over four miles away. The closest vineyard to the proposed asphalt batch plant is less distant.

Detailed Analysis:

The Planning Commission Permit Approval states that the nearest vineyard is over four miles away in the Telephone Pole Road area. This is factually incorrect. Based upon information supplied by a local rancher and belief, one planted vineyard is located about three miles away on Hood Road on the Washington side of the state line and another vineyard within Umatilla County identified as DeWitts is situated about 2 ½ miles from the proposed asphalt plant site. Moreover, Appellants note that for many years, the farming area around Walla Walla and Milton-Freewater has evolved and expanded into a major wine growing region.

1.4 Summary of Error

The Planning Commission Permit Approval further errs by failing to perform a factual analysis as required by Umatilla County Code Section 152.060. Like ORS 215.301, although seemingly explicit, the language of Umatilla County Code Section 152.060 does not contain a "bright line" test. Instead, this Code Section requires analyzing the individual fact situation. The Planning Commission Permit Approval errs by omitting a factual analysis of the impact of the proposed plant on nearby vineyards although these vineyards are not within

the two mile radius but are quite close to the proposed asphalt batch plant and will be affected by the environmental contaminants carried by air currents.

Detailed Analysis:

Appellants note that Umatilla County Code Section 152.060 (B)(3) is nearly identical to ORS 215.301 entitled "Blending materials for cement prohibited near vineyards," which prohibits the siting of an asphalt plant within two miles of a planted vineyard. As stated above, Oregon land use law requires local planning authorities to enact land development codes consistent with State law and County Section 152.060 (B)(3) is nearly identical to ORS 215.301. Thus, the typical appellate court deference given to local interpretations of local code is not apposite where the local code is directly derived from a State statute; in that circumstance the State has an interest in uniform interpretation.

Moreover, according to a representative of the State Archives, there is no legislative history of committee hearings pertaining to the development of the language contained in ORS 215.301, which means there is no legislative history of intent and no support for either a narrow or broad interpretation. In this case, interpretation must rely solely on the language of the statute. Like ORS 215.301, Code Section 152.060 (B)(3) references a specific activity, vineyards, and a specific radius, two miles, which taken together could imply a "bright line" test. However, some examples show that this Section cannot be reasonably applied without consideration of the specific factual situation. As noted above, this Section prohibits the location of an asphalt plant within two miles of a planted vineyard, which implies that there is a legal presumption that the asphalt plant inflicts harm on the grapes of a vineyard, at least within that radius.

Consider the case of an asphalt plant proposed within two miles of a 40 acre or larger vineyard but where only 20 acres of the vineyard lie within two miles. Permitting a conditional use for an asphalt plant in such a case would result in substantial harm to the portion of the vineyard within the two mile radius and diminution in the economic value of the farming operation. Such a result surely conflicts with the purposes of the EFU Zone and Code Section 152.055 that encourage and support agricultural uses.

Next consider two contrasting cases: (a) an asphalt plant is proposed within two miles of a 40 acre or larger vineyard, but in a deep valley which isolates the asphalt plant from the vineyard with the prevailing wind blowing away from the vineyard; and (b) an asphalt plant is proposed at slightly more than two miles distant from a vineyard but in a valley upwind of the vineyard. In applying Section 152.060, should the difference between these fact situations be ignored?

Finally, consider the case where an asphalt plant is proposed within two miles of a 40 acre field containing a crop which is at least as environmentally sensitive as

a grape vineyard. Does Section 152.060, or more generally Umatilla County's Land Development Ordinance, say nothing in such a case?

2.0 Appellants contend that the Planning Commission Permit Approval errs in its analysis and interpretation of Umatilla County Code Section 152.061, entitled "Standards for All Conditional Uses". (See pages 7-9 of 15 in "Findings and Conclusions" of the Planning Commission Permit Approval.) The Planning Commission Permit Approval errs in not presenting analysis or facts to support its conclusion that the proposed asphalt plant will not force a significant change in accepted farming practices and will not significantly increase the cost of accepted farm practices. The Permit Approval merely states conclusions without supporting facts. The Planning Commission Permit Approval also errs in adopting a narrow definition of the word "practices" and not presenting an analysis of the impact of the plant on future agricultural practices or activities in the nearby fields where Code Section 152.055 supports such an analysis of "future needs".

2.1 The Planning Commission Permit Approval errs in not presenting analysis or facts to support its conclusion that the proposed asphalt plant will not force a significant change in accepted farming practices. Moreover, the Planning Commission Permit Approval errs in adopting a narrow definition of the word "practices" and in not recognizing the impact of "future" uses for nearby fields within the EFU Zone, which could include a vineyard.

In its interpretation and application of Section 152.061 entitled "Standards for All Conditional Uses", the Planning Commission Permit Approval states that "The following limitations shall apply to all conditional uses in an EFU zone. Uses may be approved only where such uses:

(A) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and the Umatilla County Planning Commission finds that the batching of asphalt will not force a significant change in accepted farm practices on surrounding lands devoted to farm use. As previously described, the property contiguous to the mining site is farmed in dry land wheat. Dry land peas and beans have also been grown in the general area as well as the grazing of livestock. The site is located in an area on the parcel that has never been farmed and is a rocky outcropping of surface rock. The location of the rock pit is in a valley or gulley where there are steep slopes along both sides of the roadway. Thus, farming of land around the rock pit takes place more than 800-1,000 feet from the development site. Farming practices of the adjacent farmland have been in place for decades and no change to farming practices (i.e., crop patterns, crop rotation, farm equipment movement, etc.) will occur because of the proposed processing—asphalt plant. There will be no change to how the farming will occur on the adjacent farm fields because the site for the asphalt plant has direct access to Birch Creek Road and will not cause a disruption to any existing farm field. The road is a county road and is a paved

roadway that is constructed to handle large truck traffic and since it is paved will not create additional dust from the movement of large trucks on the roadway."

"Other effects from the asphalt plant (noise, dust and odor and emissions) will be monitored by the Department of Environmental Quality through the Air Quality program. Therefore, insofar as the plant operates in compliance with the DEQ ACD Permit, the County recognizes the air quality will not impact farming practices in the area. Copies of these permits must be provided to the County Planning Department. Other State and Federal permits necessary for the operation of an asphalt plant are also required to be obtained and copies of such permits and restrictions provided to the County Planning Department."

2.1.1 The Planning Commission Permit Approval errs in advancing a conclusion and providing no evidence for its statement that "The Umatilla County Planning Department finds that the batching of asphalt will not force a significant change in accepted farm practices on surrounding lands devoted to farm use."

2.1.2 The Planning Commission Permit Approval errs in its statement that "The site is located in an area on the parcel that has never been farmed and is a rocky outcropping of surface rock. The location of the rock pit is in a valley or gulley where there are steep slopes along both sides of the roadway. Thus, farming of land around the rock pit takes place more than 800-1,000 feet from the development site." These statements conflate the alleged lack of farming history on the proposed site with the farming activity on abutting sites. The Planning Commission Permit Approval simply repeats the conclusion that no change in farming practices will occur without presenting evidence or analysis in support.

2.1.3 The Planning Commission Permit Approval errs in providing an illogical condition subsequent when it states that "Farming practices of the adjacent farmland have been in place for decades and no change to farming practices (i.e., crop patterns, crop rotation, farm equipment movement, etc.) will occur because of the proposed processing—asphalt plant." The fact that the history of farm activity has allegedly been stable has no necessary implication for any future change in farm practices in general or in response to the proposed location of the asphalt plant. The Planning Commission Permit Approval provides no analysis to support its conclusion that there will not be a significant change in farming practices in response to the location of the plant. Moreover, this statement is factually incorrect because farming practices have recently changed. Given the decline in the demand for green peas, some farms in the area including the farm in which the Appellants have an interest have changed their practices from a wheat-green pea rotation to a wheat-recrop-fallow rotation. This is a significant change in operation.

Moreover, other significant changes have occurred in the agricultural business in Milton-Freewater and the Walla Walla Valley. For example, over many years, a well recognized wine growing business has developed in Milton-Freewater and

the Walla Walla Valley, and planting of grape vineyards has often meant a change in crops. The presence of these vineyards has clearly changed the practices of nearby farmers.

2.1.4 The Planning Commission Permit Approval errs in analyzing farm practices in terms of traffic patterns when its states that "There will be no change to how farming will occur on the adjacent farm fields because the site for the asphalt plant has direct access to Birch Creek Road and will not cause a disruption to any existing farm field." However, if the Planning Commission Permit Approval intends to comment only on traffic impacts, then the Planning Commission Permit Approval errs by not providing a projected traffic analysis to support its conclusion which states "The road is a county road and is a paved roadway that is constructed to handle large truck traffic and since it is paved will not create additional dust from the movement of large trucks on the roadway." (Page 7 of 15)

2.1.5 The Planning Commission Permit Approval errs in the statement "Other effects from the asphalt plant (noise, dust and odor and emissions) will be monitored by the Department of Environmental Quality through the Air Quality program. Therefore, insofar as the plant operates in compliance with the DEQ ACD permit, the County recognizes the air quality will not impact farm practices in the area." (Page 7 of 15) This statement errs in at least two ways. First, it relinquishes to DEQ the County's authority for air quality impacts on the County's land and water without any analysis. Second, it does not acknowledge that the DEQ adopts an EPA standard which does not control for local impacts to sensitive areas. Moreover, the Planning Commission Permit Approval seriously errs by implying that DEQ oversight protects farm practices: neither EPA nor DEQ performs such an analysis. By relinquishing authority to DEQ in the case of one activity, the Planning Commission Permit Approval errs in not separating those activities where the County can relinquish authority from those activities where it should not such as the location of an asphalt plant adjacent to a school or a hospital or a valuable domestic water source for a ranch (as in this Appeal).

2.1.6. The Planning Commission Permit Approval errs in not considering Umatilla County Code Section 152.055 in the context of Section 152.061. As noted above, Section 152.055 includes the objectives of the County with respect to the creation of an EFU Zone: "to preserve and maintain agricultural land for farm use, including range and grazing uses, consistent with existing and future needs for agricultural products, forest and open spaces; to conserve and protect scenic resources; to maintain and improve the quality of air, water and land resources of the county...." (Emphasis Added.) This Section explicitly considers "future" needs.

In 1973, Oregon embarked on a path to conserve farmland with the passage of SB100 which created the Land Conservation and Development Commission, whose function was to develop statewide planning goals (Edward Sullivan, "The

Long and Winding Road: Farmland Protection in Oregon 1961-2009", *San Joaquin Agricultural Law Review*, 2009, vol. 18, pages 1 to 69). There are now over 50 uses allowed in an EFU zone and while "Many are directly supportive of agriculture", "One of the more controversial uses, mining was allowed in 1973 and has been the subject of intense debate between farm and mining interests ever since." (Sullivan, *ibid,* p.26).

The history of Oregon land use legislation since 1973 expresses a preference to adopt policies which encourage designated farmland to continue in agricultural use and to avoid policies which would discourage farm use. This preference appears in the goal setting activity of LCDC. Such goal setting is inherently forward looking. This forward looking perspective must inform the interpretation of the two prong test, particularly the interpretation of the phrase "accepted farm or forest practices". Certainly, "accepted" means at least current farm practices but to work in a dynamic market environment the term must also include the "future."

Consider, for example, the farmer who faces a decline in demand for a crop and who must find a substitute crop to continue to make the farm economically viable. Should the interpretation of the term "accepted farm practice" ignore this possibility? Or should the interpretation include not only the crops raised historically on a given farm but also include other crops, raised on nearby farms with similar soil, rainfall and temperature? With a production history, these nearby crops are demonstrated, not speculative, substitutes.

This approach implies a two step test: first, the farmer shows that the historical crops are no longer economically viable; and second, the farmer identifies an alternative crop on farms with similar soil, temperature and rainfall with a declining weight placed on farms which are increasingly remote. However, applying this test can be simpler if it merely extends the definition of "surrounding" land from abutting to the boundary of the EFU Zone. To summarize, this test modifies "accepted farm practice" on the specific farm land in question to an "accepted farm practice" within the EFU. Moreover, the application of this test can be limited to those cases where the "accepted farm practice" within the EFU occurred only in transition from the "accepted farm practice" on the specific farm in question to the "accepted farm practice" in the EFU. For example, assume that an "accepted farm practice" in the EFU is a vineyard and the "accepted farm practice" on the specific farm in question is wheat, then the proposed test applies only if at least one vineyard in the EFU made the transition to a vineyard from a wheat farm. This test extends the flexibility of the test in *Dierking,* in which the Land Use Board of Appeals noted both the abandonment of a plan and development of alternative plans (Dierking v. Clackamas County, 38 Or LUBA 106 (2000)). Instead, the proposed test here only evaluates the impact of the conditional use on crops raised in a wider ambit of surrounding lands.

If the County were to approve the requested conditional use for the asphalt batch plant, Appellants' farm land would be effectively foreclosed from ever growing grapes, which at present is a viable alternative crop in this region. Accordingly, the County's action could potentially reduce the economic value of Appellants' farm land resulting in damages.

2.2 The Planning Commission Permit Approval errs in not presenting analysis or facts to support its conclusion that the proposed asphalt plant will not significantly increase the cost of accepted farm practices. Moreover, the Planning Commission Permit Approval errs in adopting a narrow definition of the word "practices" and in not recognizing the impact of future uses for nearby fields within the EFU, which could include a vineyard.

In its interpretation and application of Section 152.061 entitled "Standards for all Conditional Uses," the Planning Commission Permit Approval continues to state that

"(B) Will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use. The Umatilla County Planning Commission finds that the farming practices (crop patterns, crop rotation, equipment movement during planting and harvesting) will not change because of the placement of the asphalt plant. The cost of farming may include the fuel required to cultivate, plant and harvest the crop, the seed necessary to plant the crop and the time it takes to complete these task throughout the year. The placement of the asphalt plant will not alter or modify the farming patterns on adjacent farm land where additional time, seed and fuel are required to accommodate the asphalt plant. Thus, there will be no disturbance of any adjacent farm field from the placement of the asphalt plant. No new access roads or site clearing will be required that would take additional land out of production. The proposed site has been a rocky non-productive area where the aggregate site has been operating since 1992. There will be no increase in the cost of farming practices since there is no disturbance of any farm field from the placement of the asphalt plant structure. Therefore, the farming patterns will not be altered that could increase the time taken, fuel required or material (seed, fertilizer, etc.) necessary to continue to farm the adjacent farm fields."

2.2.1 The Planning Commission Permit Approval errs by advancing a conclusion without providing any evidence to support the statement, "The Umatilla County Planning Commission finds that the farming practices (crop patterns, crop rotation, equipment movement during planting and harvesting) will not change because of the placement of the asphalt plant."

2.2.2 The Planning Commission Permit Approval again errs by advancing a conclusion without providing any evidence to support the statement "The placement of the asphalt plant will not alter or modify the farming patterns on adjacent farm land where additional time, seed and fuel are required to

accommodate the asphalt plant." The Planning Commission Permit Approval repeats this pattern of advancing a conclusion without providing any evidence to support its statement "Thus, there will be no disturbance of any adjacent farm field from the placement of the asphalt plant." And this pattern continues with the statement, "There will be no increase in the cost of farming practices since there is no disturbance of any farm field from the placement of the asphalt plant structure. Therefore, the farming patterns will not be altered that could increase the time taken, fuel required or material (seed, fertilizer, etc.) necessary to continue to farm the adjacent farm fields."

2.3 The Planning Commission Permit Approval errs in not providing any evidence that crop practices will not change and costs will not significantly increase due to the presence of an asphalt plant. Such evidence is available from a "sample" which gathers data on the impact on similar farms before and after the location of asphalt plants. The analysis of data from such a sample is the proper way that the County can reach the conclusions which it offers under Section 152.061.

2.4 The Planning Commission Permit Approval states that "Emissions of particulate and gaseous material from the asphalt plant will be addressed by the Air Contaminant Discharge (ACD) Permit, Air Quality program of the Oregon Department of Environmental Quality (DEQ). The reduction in these emissions is the main emphasis for the permitting process through the DEQ." (Pages 8-9 of 15) The Planning Commission Permit Approval seriously errs when it characterizes the DEQ oversight process as intending a "reduction in these emissions", which implies an active DEQ policing of emissions. In point of fact, the DEQ permit does not establish "upper bound limits" for emissions from asphalt plants such as Humbert's. Therefore, DEQ's oversight is not active in the way implied by Permit Approval.

The Applicant submits a permit application to DEQ with estimates of its emissions which are almost always consistent with EPA's AP-42 Emission Factors. EPA publishes AP-42 Emission Factors based on a sample of representative asphalt plants. In its description of AP-42 factors, EPA states: "An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant." EPA continues: "Emission factors in AP-42 are neither EPA recommended emission limits (e.g., best available technology or BACT, or lowest achievable emission rate or LAER) nor standards (e.g., National Emission Standard for Hazardous Air Pollutants or NESHAP, or New Source Performance Standards or NSPS)." In this case, the Applicant's emission estimates are consistent with EPA Emission Factors (although the Applicant has apparently not characterized its plant fuel source correctly).

Appellants have directly asked DEQ whether the emission values shown in Humbert's application are "upper bound limits" set by EPA or DEQ—that is to say emission values that may not be exceeded by Humbert. The Pendleton office of

DEQ replied: "The emission factors are not upper bound limits. They are expected values based on the average test results of other sources."

These emission factors initially appeared in EPA's Hot Mix Asphalt Plants: Emission Assessment Report (December 2000) referenced above with updates at this web site: http://www.epa.gov/ttnchie1/ap42/ch11/related/c11s01.html with an explanation of the source and use of EPA AP-42 factors appearing at this web site: http://www.epa.gov/ttn/chief/ap42/c00s00.pdf .

2.5 The Planning Commission Permit Approval errs in not acknowledging the scope of the land use authority which the County has in stating that "The County does have a great deal of interest to ensure the environment is protected from hazardous substances, however, the DEQ Air Quality program is relied upon to institute the environmental protection program to protect from harmful levels of emissions." (Page 9 of 15) The County can and should use its land use planning process to effectively isolate or prohibit activities which emit harmful pollutants which DEQ regulates. The County cannot relinquish its land use planning authority to DEQ.

3.0 Appellants contend that the Planning Commission Permit Approval errs in its analysis and interpretation of Umatilla County Code Section 152.615.

3.1 Pursuant to Code Section 152.615 (A), Umatilla County has an affirmative duty to impose conditions and restrictions to limit and "minimize" environmental effects such as "noise, vibration, air pollution, water pollution, glare or odor." (Emphasis Added.) Likewise, Umatilla County has an affirmative duty pursuant to Code Section 152.616 (C)(4) [specifically dealing with asphalt plants] to assure that "The operation complies with all applicable air, noise, and dust regulations of all county, state or federal jurisdictions; and all state and federal permits are obtained before the activity begins."

This Appeal relates to three extremely sensitive natural resources: (a) a natural spring at the head of Birch Creek to which Appellants have judicially recognized rights to draw water for domestic use and other purposes; (b) Birch Creek itself, a year-around waterway that is a tributary of the Walla Walla River and the Columbia River and thereby subject to the federal Clean Water Act; and (c) agricultural lands that have been continuously devoted to the production of wheat and other crops for over a century by the Reser family.

It is uncontroverted that hot mix asphalt plants emit carcinogenic hazardous air pollutants (HAPs) and polycyclic aromatic hydrocarbons (a subclass of HAPs) and metallic HAPs such as arsenic, lead, and mercury. The natural spring from which the domestic water is taken for the adjacent ranch is located only about 4,500 feet from the proposed asphalt batch plant. The water right, which Appellants wish to have fully protected from environmental contamination, dates to 1894. The water right was judicially confirmed by a Decree dated May 16,

1932 and signed by Judge Calvin L. Sweek of the Circuit Court of Umatilla County, Oregon. A Certificate of Water Right was also issued by the State Engineer on April 5, 1940 and recorded in Volume 11, page 13150 of the State's Record of Water Right Certificates. This water right may be reviewed at the following State of Oregon Internet link:

http://apps.wrd.state.or.us/apps/wr/wrinfo/wr_folder_image.aspx?snp_id=65539

The Planning Commission Permit Approval acknowledges that Birch Creek is only 100 to 125 feet away from Birch Creek Road (page 12 of 15). Birch Creek is located down slope from Birch Creek Road, and Birch Creek Road is located down slope from the proposed hot mix asphalt plant site with its two large access haul roads cut into the rock outcropping. The topography of the area is a natural canyon with Birch Creek at the low point and the proposed hot mix asphalt plant to be located on higher ground. It is clear beyond doubt that carcinogenic emissions from the batch plant initially deposited on the ground at the site of the quarry will become waterborne in each heavy rain event or "cloudburst" and find transport by gravity to Birch Creek. Appellants' concern is not limited to the harmful solids and liquid materials that the asphalt batch plant will produce and that will seep into the surrounding grounds but some of the noxious chemical molecules produced by the asphalt plant have high vapor pressures and will easily evaporate and condense around the cold flowing waters of nearby Birch Creek. The Planning Commission needs to protect the quality of Birch Creek waters that originate in the depths of the Blue Mountains, and join the Walla Walla River as a tributary, and then onto the Columbia River. Birch Creek as a tributary of a navigable stream is subject to the federal Clean Water Act and all of its considerable protections.

The science is clear that wheat can be environmentally contaminated by polycyclic aromatic hydrocarbons (PAHs). Many PAHs are mutagenic and carcinogenic to mammals. Hot mix asphalt plants are a point source for PAHs. Can siting a smoking hot mix asphalt plant next to historic wheat fields in the foothills of the Blue Mountains be considered good and enlightened land use policy? Umatilla County has already spoken to this issue in its policy statement defining the purposes of the Exclusive Farm Use Zone [Section 152.055]: "to preserve and maintain agricultural lands for farm use..." and "to maintain and improve the quality of air, water and land resources of the county...."

4.0 The Planning Commission Permit Approval errs in the statement that "The question is not whether persons in the general area will see, hear or smell the asphalt plant, but rather the standard above seeks to minimize the environmental effects." (Page 9 of 15) The Planning Commission Permit Approval provides no statutory or code authority to support the adoption of the explicit standard to "minimize the environmental effects". Moreover, Appellants noted above that DEQ oversight is effectively passive.

5.0 The Planning Commission Permit Approval errs in providing no evidence to support its conclusion in the statement "Protecting Birch Creek which is located along the west side of Birch Creek Road is also important to address. It is not presumed that the asphalt plant will adversely impact the stream without adequate proof." (Page 12 of 15) This phrase "without adequate proof" is undefined, but if it means demonstrating an actual (or ex post facto) effect from the operation of Applicant's plant, then it fails to address the issue. As noted above, EPA itself concludes that asphalt plants emit HAPs, many of which are carcinogenic, and an ex post facto test will only allow the pollution to have occurred. The Decision continues to state that "Another concern to impacts to the stream would be possible effects from air quality emissions. Monitoring of emission discharge will take place through the required DEQ Air Contaminate Discharge Permit program." (Page 12 of 15) Under current regulations, DEQ monitors point source emissions, not nearby depositions. Moreover, simple monitoring is not an effective response to harm which has already occurred.

Conclusion:

Appellants respectively urge the Board of Commissioners to remand the Decision of the Planning Commission with directions to deny the issuance of the Conditional Use Permit to Humbert Asphalt, Inc. or for such other relief as may be appropriate to protect (a) Birch Creek, (b) the spring at the head of Birch Creek from which Appellants draw their domestic water, and (c) the surrounding farm land including the wheat fields of the Reser ranch.

Dated November 18, 2013

Robert R. Berry

Robert R. Berry

Helen Reser Bakkensen Trust

John Reser Bakkensen

John Reser Bakkensen, Trustee

Umatilla County

Department of Land Use Planning

216 S.E. 4th Street • Pendleton, OR 97801
Ph: 541-278-6252 • Fax: 541-278-5480

Receipt

Fee Receipt Number: 14203 Permit Number: C-1226-13
Transaction Date: 11/19/2013
Transaction Time: 11:44:12 AM
Payor: JOHN R BAKKENSEN
Paid in Cash: $0.00
Paid via Check: $800.00 Check# Bank#
Paid via EFT: $0.00
Comments:
APPEAL OF 10/24/13 PC DECISION ON HUMBERT ASPHALT #C-1226-13

Fee Description	Quantity	Fee	Total
Appeal	1	$800.00	$800.00

Total:	$800.00
Amount Received:	$800.00
Amount Paid:	$800.00
Change:	$0.00
Amount Left Owing:	$0.00

PLANNING COMMISSION FINAL FINDINGS AND CONCLUSIONS

APPROVAL OF #C-1226-13

Umatilla County

Department of Land Use Planning

DIRECTOR
TAMRA MABBOTT

LAND USE
PLANNING,
ZONING AND
PERMITTING

CODE
ENFORCEMENT

SOLID WASTE
COMMITTEE

SMOKE
MANAGEMENT

GIS AND
MAPPING

RURAL
ADDRESSING

LIAISON, NATURAL
RESOURCES &
ENVIRONMENT

November 5, 2013

Humbert Asphalt, INC
84899 HWY 11, Milton-Freewater, OR 97862

Kenney Barbara etal, c/o Kenney Farms INC
3629 Braden RD, Walla Walla, WA 99362

Re: "Tentative" Final Approval – Appeal
CONDITIONAL USE PERMIT REQUEST, #C 1226-13
MAP #6N 36, TAX LOT #4600, Account # 110617

Dear Mr. Humbert;

An Appeal of the decision of the Planning Director was received on October 3, 2013 from Robert R. Berry and the Helen Reser Bakkensen Trust (represented by John R. Bakkensen). Subsequently, a public hearing was held on Thursday, October 24, 2013 before the Umatilla County Planning Commission, which resulted in a decision to APPROVE the Conditional Use Permit. Conditions were placed on the permit as outlined in the final findings and conclusions document for the application.

The Final Findings and Conclusions document was signed by the Planning Commission Chair, Randy Randall, on Thursday, October 31, 2013, signifying formal APPROVAL for the conditional use permit with CONDITIONS TO BE MET (see below).

Technically, a statutory 15-day appeal period commenced the date the Findings were mailed (November 5, 2013); this appeal period will end on November 20, 2013. You as the applicant/property owner or others may appeal this decision as well as those who commented during the 21-day comment period and/or during the public hearing held on October 24, 2013. An appeal must be filed in writing on a form available at the Planning Department Office. There is a $800 fee to process an appeal.

The CONDITIONS placed on this approval are as follows:

Precedent Conditions: The following precedent conditions must be fulfilled prior to final approval of this request:

1. Obtain all other federal and state permits necessary for development. Provide copies of these permit approvals and evaluation reports to the County Planning Department.

    a. Obtain all applicable permits for the asphalt plant from DOGAMI before the activity begins.

    b. Obtain all applicable permits for the asphalt plant from DEQ (air, noise, and water quality issues) before the activity begins.

    c. Obtain State Fire Marshall permits necessary for the asphalt batch plant.

2. Pay notice costs as invoiced by the County Planning Department.

Subsequent Conditions: The following subsequent conditions must be fulfilled following final approval of this request by Umatilla County:

3. Obtain a Zoning Permit from the Umatilla County Planning Department for the asphalt plant. The zoning permit should include an approved site plan showing existing structures, setbacks, etc.

4. Any lighting used for the asphalt batch plant must be shielded to prevent glare onto adjacent property.

5. The applicant shall be required to provide dust control on the project site and on all haul roads.

6. The standards of the required federal and state permits must be met on a continual basis for the conditional use permit to be valid. Additional review by the Planning Commission will be conducted if the standards of the required federal and state permits are not met.

7. If the asphalt plant is removed from the property for more than one year then this conditional use permit becomes void per UCDC 152.613 (D).

8. A review of the asphalt plant will be completed one year from the approval date to ensure that the conditions listed above and the criteria for establishing this use in the EFU Zone are being met with subsequent yearly reviews. Conditional use permits are valid as long as the conditions are met.

9. Annual review fees will be assessed.

Permit Expiration The approval for the Conditional Use Permit will EXPIRE on the following date, one (1) year from issuance of this approval unless the conditions are met as outlined.

October 31, 2014 unless a zoning permit is obtained.

NOTE: If the deadline is not met then you will have to reapply through our office, and be subject to all review procedures and standards in effect at that time.

If you have any questions, please do not hesitate to call me, at (541) 278-6249. Thank you for your cooperation.

Cordially,

Richard H. Jennings, *Senior Planner*
Umatilla County Department of Land Use Planning

cc: Paul Chalmers, County Assessor
Robert R. Berry and Helen Reser Bakkensen Trust, P.O. Box 335, Barnstable, MA 02630
John Reser Bakkensen, 1141 SW Mitchell Lane, Portland, OR 97239-2822

Enclosures: Copy of Final Findings and Conclusion

UMATILLA COUNTY PLANNING COMMISSION
FINAL FINDINGS AND CONCLUSIONS
CONDITIONAL USE PERMIT REQUEST, #C-1226-13
MAP #6N 36, TAX LOT #4600, Account # 110617

1. APPLICANT: Humbert Asphalt, INC, 84899 HWY 11, Milton-Freewater, OR 97862

2. OWNER: Kenney Barbara etal, c/o Kenney Farms INC, 3629 Braden RD, Walla Walla, WA 99362

3. REQUEST: The request is to establish an Asphalt Batch Plant in an existing aggregate site. The aggregate site was permitted via Conditional Use Permit #C-630-91 which did authorize an asphalt plant at that time. The asphalt plant was never set up at the aggregate site at that time and so will be reviewed during this process.

4. LOCATION: The subject property is located approximately 6.5 miles east of State Highway 11 on Birch Creek Road, about 2 miles southeast of the Hood Road/Birch Creek Road intersection and 3 miles south of Stateline Road.

5. SITUS: The site address for this parcel is 57445 and 57491 Birch Creek RD, Milton-Freewater, OR 97862.

6. ACREAGE: Tax Lot 4600 is 451 acres. The aggregate site was established on some 30 acres via #C-630-91.

7. PROP CLASS: Property Codes are assigned by the County Assessor as to what type of use present on the property. The Property Code 551 is assigned to this property, which means "Farm, Farm Zoned, Farm Deferred, Improved."

8. TAX CODE: The Tax Code is assigned by the County Assessor. Each Code Area has various taxing rates depending upon the services provided. The property has Tax Code of 07-12, which has the following taxing definition: General County, Umatilla Co Bond, School District #7 Milton Freewater, Intermountain ESD, BMCC, BMCC Bond, Port Of Umatilla, County Radio District, Umatilla Special Library District

9. PERMITS: Permits have been issued on this property:

Conditional Use Permit, #C-630-91 issued on 3-4-1992 for a DEV OF ROCK PIT, ESTABLISH A QUARRY SITE TO OPERATE A ROCK CRUSHER FF SIGNED 3/4/92 WITH CONDITIONS IN FILE
Plan Amendment, #P-054 issued 3-4-1992 for a DEVELOP ROCK PIT, ESTABLISH QUARRY SITE & OPERATE A ROCK CRUSHER FF SIGNED 3/4/92 WITH CONDITIONS IN FILE
Zoning Permit, #ZP-92-062 issued on 4-15-1992 for a ROCK PIT/CRUSHER SITE, ASPHALT PLANT SITE

10. COMP PLAN: North/South Agricultural Region Designation

11. ZONING: Exclusive Farm Use Zone (EFU, 160 acre minimum)

12. ACCESS: The parcel has direct access to Birch Creek Road (Co. Rd. No 573), a two-lane, paved road.

13. ROAD TYPE: Birch Creek Road (#573) is a two-lane, paved roadway. The roadway is paved past the project site.

14. EASEMENTS: There are no access easements on this parcel.

15. LAND USE: The majority of the parcel is currently farmed with dry land wheat. The site for the quarry is non-farmable, rock outcropping land. There are two dwellings on the parcel, located approximately 1,000 feet southeast from the quarry. The dwellings are inhabited by the landowner who leases the quarry to the applicants.

16. ADJACENT USE: Surrounding property is similar EFU zoned farm land and is primarily in dry land type farming – wheat, peas, pasture. There is one dwelling located approximately 1/2 mile southeast of the site, and another 1.5 miles northwest along Birch Creek Road.

17. LAND FORM: Blue Mountains

18. SOIL TYPES: The subject property contains Non-High Value soil types. High Value Soils are defined in UCDC 152.003 as Land Capability Class I and II. The soils on the subject property are non-high value.

Soil Name, Unit Number, Description	Land Capability Class	
	Dry	Irrigated
8C: Athena silt loam, 7 to 12 percent slopes	3e	3e
11F: Bowlus-Buckcreek association, 40 to 70 perc	7e	----
64D: Palouse silt loam, 12 to 20 percent slopes	4e	---
64E: Palouse silt loam, 20 to 35 percent slopes	6e	---
112D: Waha silty clay loam, 12 to 25 percent slo	4e	---

Soil Survey of Umatilla County Area, 1989, NRCS. The suffix on the Land Capability Class designations are defined as "e" – erosion prone, "c" – climate limitations, "s" soil limitations and "w" – water (*Survey*, page. 172).

19. BUILDINGS: There is a home site and outbuildings on this property along with the aggregate site and machinery – rock crusher, scale.

20. UTILITIES: The parcel is within the service area of Columbia Rural Electric.

21. WATER/SEWER: There are no ground water rights on this property. The established home site does have a domestic water source and a sanitary disposal system.

22. FIRE SERVICE: The subject property is not served by a rural fire district.

23. IRRIGATION: The property is not within an irrigation district

24. FLOODPLAIN: This property is NOT in a floodplain. The property is found in Zone D "Undetermined Flooding") which is not a special flood hazard zone. The Community Number for Umatilla County is #41059C and the Panel Number that covers this area is #0586-G with an effective date of September 3, 2010.

25. NOTICES SENT: Notices were sent on Wednesday, August 7, 2013.

26. CLOSING DATE: Comments were due back on Wednesday, August 28, 2013.

27. AGENCIES: Umatilla County Assessor, Umatilla County Public Works, Oregon Water Resources Department, Oregon Department of Geology & Mineral Industries, Oregon Department of Land Conservation and Development, Oregon Department of Environmental Quality

28. PUBLIC HEARING: A public hearing was held before the County Planning Commission on Thursday, October 24, 2013 at the Umatilla County Justice Center, 4700 NW Pioneer Place, Pendleton, OR 97801.

29. COMMENTS & EXHIBITS: Comment letters and exhibits were received on the application.

Exhibits were provided by John R. Bakkensen during the County Planning Commission public hearing held on October 24, 2013. These exhibits are as follows:

1. Certificate of Water Right issued to Ralph Reser on April 5, 1940 with respect to spring at the head of Birch Creek for irrigation, domestic use and stock.
2. General Air Contaminant Discharge Permit issued to Humbert Asphalt, Inc. for a portable asphalt plant dated August 16, 2013, together with Humbert Asphalt, Inc.'s application for permit with representations to DEQ.
3. Letter from Thomas Hack, DEQ, to Richard Jennings dated October 17, 2013.
4. EPA Hot Mix Asphalt Plants Emission Assessment Report December 2000.
5. Petition for Reconsideration by Robert Berry and Helen Reser Bakkensen Trust to DEQ dated October 11, 2013.
6. Polycyclic aromatic hydrocarbons in edible grains: A pilot study of

agricultural crops as a human exposure pathway for environmental contaminants using wheat as a model crop by Reiko Kobayashi and others (2008).

7. Map depicting proposed asphalt plant site, Reser spring on Birch Creek, and nearby vineyards.

Two maps and two photos were presented during the County Planning Commission public hearing by the Planning Staff illustrating the property and current aggregate site. The maps were entitled "2012 Aerial Photos" and "2012 Aerial Photos, Detail – Gravel Pit". The two photos were of the existing rock pit taken from Birch Creek Road in October 2013 by Planning Staff.

Letters were received via an email attachment sent from Humber Asphalt on October 24, 2013 from a number of persons residing or conducting business near the Humber Asphalt plant on Highway 11. The names of the individuals that wrote and signed letters are:

Tim S. Werhan, Smiley RV Sales and Service, Inc.
Ryan Mathwich
Ken and Tami Sloan
Mike Potts
David Morris, Morris Orchards
Suzanne A. Morris
Jeffrey and Erikka Siegel
Jenny Zitterkopf
Allen Key

Letters were received via an email attachment sent from Humber Asphalt on October 23, 2013 from a number of persons residing or conducting business near the Humber Asphalt plant on Highway 11. The names of the individuals that wrote and signed letters are:

Grace B. Sallee
Joyce Rudd
Scott Karrels
Richard and Janice Dodge, Dodge Land and Cattle, Inc.
Terry and Sharrie Copeland

Letter from Oregon Department of Environmental Quality, Thomas G. Hack, Air Quality Program, received October 18, 2013 explaining the authority granted the DEQ and the programs instituted by DEQ.

Letter from David Shannon, Attorney for Humbert Asphalt, dated October 18, 2013 discussing briefly the points of the Notice of Appeal

Notice of Appeal received from Robert R. Berry and Helen Reser Bakkensen Trust on October 3, 2013 outlining the reasons for the Appeal, which in summary dealt with the possible environmental impacts from the asphalt plant on water quality, Birch Creek, and agriculture.

Letter from Robert R. Berry dated August 27, 2013 expressing concern on a number of issues related to the application was received. The comment letter was broken up into thirteen main topics:

1. Summary of Request including Permit Number
2. Status of Respondents.
3. Summary of Response in Opposition.
4. Umatilla County Code Sections and Oregon Revised Statutes
5. The Public Notice presents unsupported conclusions in its analysis under Section 152.061.
6. The Public Notice presents unsupported conclusions in its analysis under Section 152.615.
7. An Asphalt Plant is not a favored conditional use within an EFU.
8. The siting of an Asphalt Plant within an EFU requires more scrutiny.
9. The Asphalt Plant will generate Hazardous Air Pollutants.
10. Analysis of the Impact of an Asphalt Plant on the adjacent waterway, Birch Creek.
11. The County provides no evidence to support its conclusion under Section 152.061 and unnecessarily restricts the interpretation.
12. The Asphalt Plant will deposit contaminants which could make the crops from the surrounding land unmarketable.
13. Proposed conditions if the County approves the permit.

An email was received from John Reser Bakkensen on August 30, 2013 requesting to be a part of the comments made by Mr. Berry. This email was received after the comment period ended.

29. STANDARDS OF THE UMATILLA COUNTY DEVELOPMENT CODE FOR CONDITIONAL USE PERMITS to establish an ASPHALT BATCH PLANT are found in Section 152.060 (B) (3), 152.061, 152.615 and 152.617 (I) (A) Asphalt Plant. The following standards of approval are underlined and the findings are in normal text.

§ 152.060 CONDITIONAL USES PERMITTED.

In an EFU zone the following uses may be permitted conditionally via administrative review (§ 152.769), subject to the requirements of this section, the applicable criteria in §§ 152.610 through 152.617 and §§ 152.545 through 152.562. A zoning permit is required following the approval of a conditional use pursuant to § 152.025. Existing uses classified as conditional uses and listed in this section may be expanded subject to administrative review and subject to the requirements listed Oregon Administrative Rules, Chapter 660, Division 033.

(B) Operations conducted for:

(3) Processing, as defined by ORS 517.750, of aggregate into asphalt or portland cement as provided in § 152.617 (I) (A). New uses that batch and blend mineral and aggregate into asphalt cement may not be authorized within two miles of a planted vineyard. Planted vineyard means one or more vineyards totaling 40 acres or more that are planted as of the date the application for batching and blending is filed; and The Umatilla County Planning Commission finds that the proposal is for an asphalt batch plant. The existing pit covers some 3-4 acres and material will be extracted, crushed and batched into asphalt within the existing site. The closest planted vineyard to the proposed asphalt plant location is more than four miles away (Telephone Pole Road area). Thus, there are no vineyards located within two miles of the proposed asphalt plant location. The applicable criteria for an asphalt batch plant are provided in UCDC 617 (I) (A) and will be reviewed below. The application complies with this standard.

The current aggregate site on Birch Creek is the source rock for Humbert Asphalt. Thus, semi tucks pulling trailers frequent the site to haul gravel back to the current asphalt plant operated by Humbert Asphalt located along Highway 11, north of Milton-Freewater. Constructing an asphalt plant at the desired location will not create additional truck traffic on Birch Creek Road as these same trucks already travel to and from the site to pick up gravel for processing elsewhere.

The proposed amount of asphalt that will be produced on the site located along Birch Creek will vary. Testimony at the public hearing on October 24, 2013 from Troy Humbert indicates that the projected amount is between 20,000 – 40,000 tons. Also, during project production the operating hours are typically 6 AM – 6 PM. Mr. Humbert went on to explain that the operation does not operate during winter months (November – March).

§ 152.061 STANDARDS FOR ALL CONDITIONAL USES.

The following limitations shall apply to all conditional uses in an EFU zone. Uses may be approved only where such uses:

(A) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and The Umatilla County Planning Commission finds that the batching of asphalt will not force a significant change in accepted farm practices on surrounding lands devoted to farm use. As previously described, the property contiguous to the mining site is farmed in dry land wheat. Dry land peas and beans have also been grown in the general area as well as the grazing of livestock. The site is located in an area on the parcel that has never been farmed and is a rocky outcropping of surface rock. The location of the rock pit is in a valley or gulley where there are steep slopes along both sides of the roadway. Thus, farming of land around the rock pit takes place more than 800 – 1,000 feet from the development site. Farming practices of the adjacent farmland have been in place for decades and no change to farming practices (i.e. crop patterns, crop rotation, farm equipment movement, etc.) will occur because of the proposed processing – asphalt plant. There will be no change to how the farming will occur on the adjacent farm fields because the site for the asphalt plant has direct access to Birch Creek Road and will not cause a disruption to any existing farm field. The road is a county road and is a paved roadway that is constructed to handle large truck traffic and since it is paved will not create additional dust from the movement of large trucks on the roadway.

Other effects from the asphalt plant (noise, dust and odor and emissions) will be monitored by the Department of Environmental Quality through the Air Quality program. Therefore, insofar as the plant operates in compliance with the DEQ ACD Permit, the County recognizes the air quality will not impact farming practices in the area. Copies of these permits must be provided to the County Planning Department. Other State and Federal permits necessary for the operation of an asphalt plant are also required to be obtained and copies of such permits and restrictions provided to the County Planning Department.

(B) Will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use. The Umatilla County Planning Commission finds that the farming practices (crop patterns, crop rotation, equipment movement during planting and harvesting) will not change because of the placement of the asphalt plant. The cost of farming may include the fuel required to cultivate, plant and harvest the crop, the seed necessary to plant the crop and the time it takes to complete these tasks throughout the year. The placement of the asphalt plant will not alter or modify the farming patterns on adjacent farm land where additional time, seed and fuel are required to accommodate the asphalt plant. Thus, there will be no disturbance of any adjacent farm field from the placement of the asphalt plant. No new access roads or site clearing will be required that would take additional land out of production. The proposed site has been a rocky, non-productive area where the aggregate site has been operating since 1992. There will be no increase in the cost of farming practices since there is no disturbance of any farm field from the placement of the

asphalt plant structure. Therefore, the farming patterns will not be altered that could increase the time taken, fuel required or material (seed, fertilizer, etc.) necessary to continue to farm the adjacent farm fields.

It should be noted that adjacent farm fields are mainly addressed since the possible impacts from the development should be greater on nearby property if adverse impacts are produced by the development. Subsequently, if there are minor impacts to adjacent property it would be reasonable to conclude that the impacts to property further away from the development should be even less. Therefore, the effects caused by the proposed development are more of a concern on adjacent property than distant property.

Currently, there are large trucks that frequent the site hauling gavel and rock out of the pit. Additional truck traffic will be experienced on Birch Creek Road during times when the applicant has projects requiring asphalt. Area farmers and residents may notice the increased traffic and it could necessitate some adjustment in the movement of large farm equipment on Birch Creek Road and other auxiliary roadways. The standard clearly states the use "will not *significantly* increase the cost of farming practices…" The word significantly or significant is an important qualifier in this standard. The effects of additional truck traffic may change the movement of farm equipment on the roadway to some degree, but will it *significantly* increase the cost of farming (i.e. time and fuel used by the farmer moving farm equipment or livestock from one field to the other)? The word *significant* is generally defined as "fairly large in amount or quantity."[1] Thus, to qualify as a significant increase in additional time or fuel the farmer would have to spend a large amount of additional time and fuel on the road by waiting for trucks to pass until the farm equipment or livestock could move from one field to another on the roadway. Of course, the trucks hauling asphalt would not take precedence and may have to wait if the roadway is impassable because of the travel of large farm equipment or the movement of a large number of livestock. As stated earlier, the typical crops grown in the area is dry land wheat and/or peas and beans, which requires use of farm equipment in the spring to cultivate, fertilize and plant the crop and summer harvesting. In any event, the possible interference of truck traffic with intermittent movement of farm equipment or livestock would not cause a large amount or a significant increase in the cost of farming practices on adjacent farm operations.

Emissions[2] of particulate and gaseous material from the asphalt plant will be addressed by

---

1 The word "significant" as defined by http://www.thefreedictionary.com/significant is as follows:

sig·nif·i·cant (sĭg-nĭf'ĭ-kənt) *adj.*
1. Having or expressing a meaning; meaningful.
2. Having or expressing a covert meaning; suggestive: *a significant glance.* See Synonyms at expressive.
3. Having or likely to have a major effect; important: *a significant change in the tax laws.*
4. Fairly large in amount or quantity: ***significant casualties; no significant opposition.***
5. *Statistics* Of or relating to observations or occurrences that are too closely correlated to be attributed to chance and therefore indicate a systematic relationship.

2 *EPA Hot Mix Asphalt Plants: Emission Assessment Report, EPA-4-4541R-00-019; December 2000).* Page 1. The primary emission sources associated with HMA [Hot Mix Asphalt] production are the dryers, hot bins, and mixers,

the Air Contaminate Discharge (ACD) Permit, Air Quality Program of the Oregon Department of Environmental Quality (DEQ). The reduction in these emissions is the main emphasis for the permitting process through the DEQ. The applicant is required to obtain all State permits necessary to operate the asphalt plant and maintain the permits each year. The County requires such permits to be obtained and maintained. The County does have a great deal of interest to ensure the environment is protected from hazardous substances, however, the DEQ Air Quality program is relied upon to institute the environmental protection program to protect from harmful levels of emissions. Copies of all DEQ permits and relevant correspondence such as emission reports generated by third party consultants dealing with the asphalt plant must be provided the County Planning Department.

§ 152.615 ADDITIONAL CONDITIONAL USE PERMIT RESTRICTIONS.

In addition to the requirements and criteria listed in this subchapter, the Hearings Officer, Planning Director or the appropriate planning authority may impose the following conditions upon a finding that circumstances warrant such additional restrictions:

(A) Limiting the manner in which the use is conducted, including restricting hours of operation and restraints to minimize such an environmental effects as noise, vibration, air pollution, glare or odor; The Umatilla County Planning Commission finds that there are limitations outlined for this proposal in terms of required environmental permits from State agencies. The proposed asphalt plant will produce a certain level of noise, vibration and particulate and gaseous emissions. The question is not whether persons in the general area will see, hear, or smell the asphalt plant, but rather the standard above seeks to *minimize* the environmental effects. This is the reason why air quality permits are necessary to monitor emissions through the Oregon Department of Environmental Quality Air Program. Other permits may be necessary to minimize environmental impacts. DEQ staff in the Pendleton field office indicated to Planning staff that the Water Pollution Control Facility (WPCF) and/or the National Pollutant Discharge Elimination System (NPDES) permits are not required because of lack of discharge water from the asphalt plant. These permits may be necessary to obtain if the features of this development change.

At this time, it is presumed that the impact to the nearby residents will be minimal because of the distance the project site is from the dwellings. The closest off-site dwelling is greater than ½ mile away from the aggregate site where the asphalt plant will be located. The landscape along Birch Creek Road is a series of hills and gullies, which will shield to some degree, the nearby residents from most of the issues listed in this standard. Therefore,

---

which emit particulate matter (PM) and a variety of gaseous pollutants. Other emission sources found at HMA plants include storage silos, which temporarily hold the HMA; truck load-out operations, in which the HMA is loaded into trucks for hauling to the job site; liquid asphalt storage tanks; hot oil heaters, which are used to heat the asphalt storage tanks; and yard emissions, which consist of fugitive emissions from the HMA in truck beds. Emissions also result from vehicular traffic on paved and unpaved roads, aggregate storage and handling operations, and vehicle exhaust.

nearby residents cannot see the asphalt plant and the terrain will lessen the noise that is produced. Birch Creek Road is paved, which does lessen the amount of dust created by the movement of trucks and other large vehicles on the roadway.

Additionally, asphalt plants generally do not run continuously for weeks on end, which also should lessen the impact on the surrounding property. The applicant will be required to obtain State permits that deal with air pollution. The Air Contaminate Discharge Permit (ACD) through the DEQ provides oversight for particulate and gaseous emissions. A third party consultant is called in to monitor emissions periodically and reports to the DEQ and the plant owner. If emission levels are not within regulated tolerances then actions are taken to bring the asphalt plant into compliance. The intent of the ACD Permit is to minimize emissions to State standards. Copies of the State permits and reports are required to be provided the Planning Department.

Concerns were raised during the public hearing held before the County Planning Commission on October 24, 2013 that the main drinking water source for the property owned by the Helen Reser Bakkensen Trust would be contaminated by the emissions of the asphalt plant. Information was offered by the appellant to support this conclusion. The drinking water source, which is an artesian-type spring, is located some 1,000 feet southeast from the development site. The spring water flows into a holding box, which could be sealed but as indicated from testimony by the appellant is not at this time, and then is gravity fed to the farm house via a PVC pipe a distance of some 4,000 feet. The location of the spring is up stream of the development site. The Planning Commission finds that there was insufficient evidence presented at the hearing to support denial or even to place restricting conditions on the permit more than what is already required.

(B) Establishing a special yard, other open space or lot area or dimension; The Umatilla County Planning Commission finds that there is no need to establish a special yard or open space in relation to this use. The standard setbacks will apply.

(C) Limiting the height, size or location of a building or other structure; The Umatilla County Planning Commission finds that no new buildings are proposed with this development. Different pieces of equipment will be placed on the site that are a part of the asphalt plant, but will not be limited to size, height or location besides required setbacks. The required front yard setback from Birch Creek Road is 60 feet from the middle of the roadway. Also, the structures are to be a minimum of 100 feet from Birch Creek. The site plan submitted by the applicant shows these setback requirements will be met.

(D) Designating the size, number, location and nature of vehicle access points; The Umatilla County Planning Commission finds that access points are already established and has been since at least 1992.

(E) Increasing the required street dedication, roadway width or improvements within the street right of way; The Umatilla County Planning Commission finds that there is no

requirement to improve the roadway width or other improvement to the road. Birch Creek Road is a county maintained roadway and has been paved to County Road standards past the development site. It should be noted that in the early 1990's Humbert Asphalt voluntarily paved the 2 mile stretch of Birch Creek from the intersection of Hood Road down to and past the rock pit. This criterion is not applicable.

(F) Designating the size, location, screening, drainage, surfacing or other improvement of a parking or loading area; The Umatilla County Planning Commission finds that the area around the existing pit is large enough to accommodate parking and maneuvering of equipment. The site slopes into the pit away from the Birch Creek Road. Additionally, there is a tall earthen berm (some 10-20 feet in height) that prevents runoff from the site onto the roadway. The only area where the earthen berm does not create the physical barrier to prevent water from running off site onto the roadway are the two driveways off of Birch Creek Road. However, the elevation of the access points does slope away from the roadway such that any water on site will not run off site. It has been found that water pounds in the rock pit site catching any possible spring run off or large rain event on site.

(G) Limiting or otherwise designating the number, size, location, height and lighting of signs; The Umatilla County Planning Commission finds that no signs were proposed with this request.

(H) Limiting the location and intensity of outdoor lighting and requiring its shielding; The Umatilla County Planning Commission finds that any outdoor lighting in relation to this project must be shielded to prevent glare onto nearby and adjacent properties.

(I) Requiring diking, screening, landscaping or other methods to protect adjacent or nearby property and designating standards for installation and maintenance. The Umatilla County Planning Commission finds that there is no requirement for diking, screening, landscaping or other similar activities. The intent of this criterion is to "protect" adjacent property from the visual impact of the development through diking, screening, landscaping etc. The earthen berm was constructed in 1992 to screen the rock pit from the roadway. The asphalt plant is tall and no amount of screening will limit the view of the equipment from nearby property. As pointed out early in this document, the geography of the area naturally screens this project from the general view because of the valley area with relatively steep slopes along the roadway. Thus, until someone enters the immediate area of the development site the asphalt plant cannot be seen. There are no dwellings that are closer than ½ mile that would be impacted by the view of the asphalt plant. Consequently, the asphalt plant cannot be seen from the closest off site dwelling because of the natural geography. The other standards will bring out other methods to protect adjacent property from other possible impacts such as dust, odor, etc.

(J) Designating the size, height, location and materials for a fence; The Umatilla County Planning Commission finds that there is no requirement for adding fencing as part of this

project at this time. There are gates at the two entrance points to the rock pit. The earthen berm does provide a natural barrier that a fence would typically serve.

(K) Protecting and preserving existing trees, vegetation, water resources, wildlife habitat, or other significant natural resources; The Umatilla County Planning Commission finds that the subject property does not contain any trees or other notable landscaping features that will be removed because of the development. The proposed location of the asphalt plant will be located in the existing aggregate site which has been established since 1992. Thus, the project area is rocky and does not have any notable vegetation. Additionally, the site has been a rocky area which is why the site has been used for extraction and crushing of rock. Since there is little vegetation or natural ground cover the area has not been a significant wildlife habitat area for large game such as deer and elk. Wildlife habitat will not be impacted because of the establishment of the asphalt plant being located on the project site. The noise and movement of large trucks has been occurring in this area for over 20 years and so wildlife has most likely acclimated or become accustomed to the effects of truck traffic.

Protecting Birch Creek which is located along the west side of Birch Creek Road is also important to address. It is not presumed that the asphalt plant will adversely impact the stream without adequate proof. Water runoff from large quantities of rain or snow melt does occur at times. Water runoff from the development site has been a question of concern. An earthen berm some 15 – 20 feet in height was constructed in 1992 along the current project site (east of Birch Creek Road) with the elevation of the project site sloping away from the roadway. The constructed earthen berm and slope of the development site and the roadway itself does provide a barrier preventing water runoff between the asphalt plant and the stream. The stream is some 100-125 feet west of the roadway, which also provides additional open space to absorb any runoff from the road surface.

Another concern to impacts to the stream would be possible effects from air quality emissions. Monitoring of emission discharge will take place through the required DEQ Air Contaminate Discharge Permit program. A third party consultant will provide on-site emissions evaluation and report the findings to DEQ as required by the permit process. Non-compliance with required emission levels will be handled through that ACD program. All reporting and permit correspondence must be provided the County Planning Department.

(L) Parking area requirements as listed in §§ 152.560 through 152.562 of this chapter. The Umatilla County Planning Commission finds that the area around the aggregate pit can accommodate parking of equipment and work trucks necessary for the development.

§ 152.617 STANDARDS FOR REVIEW: CONDITIONAL USES AND LAND USE DECISIONS ON EFU ZONED LANDS.

(I) EFU CONDITIONAL USES

(A) *Asphalt plants.*

(1) Access roads shall be arranged in such a manner as to minimize traffic danger and nuisance to surrounding properties; The Umatilla County Planning Commission finds that the project site has direct access from Birch Creek Road. Access roads on the site are minimal with access points arranged such as to make traffic movement safe. Birch Creek Road is a paved roadway, but in this area of the county has minimal traffic. The applicant indicated that Humbert Asphalt worked with Umatilla County Road Department to widen and pave Birch Creek Road in the early 1990s to allow better movement of vehicles.

(2) Processing equipment shall not be located or operated within 500 feet from a residential dwelling; The Umatilla County Planning Commission finds that the closest house is approximately ½ mile (2,500 feet +/-) from the project site. The homes that are on the subject parcel are more than 1,000 feet away from the development site. This criterion is not applicable.

(3) Haul roads shall be constructed to a standard approved by the Public Works Director to reduce noise, dust and vibration; The Umatilla County Planning Commission finds that there are no new haul roads that will be constructed in relation to the asphalt plant.

(4) The operation complies with all applicable air, noise, and dust regulations of all county, state or federal jurisdictions; and all state and federal permits are obtained before the activity begins; The Umatilla County Planning Commission finds that Humbert Asphalt has indicated that they have applied for Federal and State permits dealing with the establishment of an asphalt plant. Approvals are pending and copies of the permits are to be provided the Planning Department. These permits must be obtained prior to the asphalt plant beginning production.

(5) New plants proposed on EFU zoned lands. Plants that batch and blend mineral and aggregate into asphalt cement may not be authorized within two miles of a planted Vineyard totaling 40 acres or more that are planted as of the date the application for batching and blending is filed. The Umatilla County Planning Commission finds that there are vineyards east of Milton-Freewater. The closest planted vineyard, 40 acre in total size, to the subject project site is some 4-5 miles northwest near Telephone Pole Road.

(6) Complies with other conditions deemed necessary. The Umatilla County Planning Commission finds that there are no other conditions that are deemed necessary at this time.

FINAL DECISION: THIS CONDITIONAL USE PERMIT REQUEST TO ESTABLISH AN ASPHALT PLANT COMPILES WITH THE STANDARDS OF THE UMATILLA COUNTY DEVELOPMENT CODE, SUBJECT TO THE FOLLOWING CONDITIONS:

Precedent Conditions: The following precedent conditions must be fulfilled prior to final approval of this request:

1. Obtain all other federal and state permits necessary for development. Provide copies of these permit approvals and evaluation reports to the County Planning Department.

    a. Obtain all applicable permits for the asphalt plant from DOGAMI before the activity begins.

    b. Obtain all applicable permits for the asphalt plant from DEQ (air, noise, and water quality issues) before the activity begins.

    c. Obtain State Fire Marshall permits necessary for the asphalt batch plant.

2. Pay notice costs as invoiced by the County Planning Department.

Subsequent Conditions: The following subsequent conditions must be fulfilled following final approval of this request by Umatilla County:

3. Obtain a Zoning Permit from the Umatilla County Planning Department for the asphalt plant. The zoning permit should include an approved site plan showing existing structures, setbacks, etc.

4. Any lighting used for the asphalt batch plant must be shielded to prevent glare onto adjacent property.

5. The applicant shall be required to provide dust control on the project site and on all haul roads.

6. The standards of the required federal and state permits must be met on a continual basis for the conditional use permit to be valid. Additional review by the Planning Commission will be conducted if the standards of the required federal and state permits are not met.

7. If the asphalt plant is removed from the property for more than one year then this conditional use permit becomes void per UCDC 152.613 (D).

8. A review of the asphalt plant will be completed one year from the approval date to ensure that the conditions listed above and the criteria for establishing this use in the

EFU Zone are being met with subsequent yearly reviews. Conditional use permits are valid as long as the conditions are met.

9. Annual review fees will be assessed.

UMATILLA COUNTY PLANNING COMMISSION

Randy Randall

Randy Randall, *Planning Commission Chair*

10-31-13

Date

DEPARTMENT OF ENVIRONMENTAL QUALITY

RESPONSE TO ROBERTY BERRY REGARDING PETITION FOR RECONSIDERATION

Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Eastern Region Bend Office
475 NE Bellevue Drive, Suite 110
Bend, OR 97701
(541) 388-6146
FAX (541) 388-8283
TTY 711

November 19, 2013

Robert R. Berry
P.O. Box 335
Barnstable, MA 02630

John Reser Bakkensen, Trustee
Helen Reser Bakkensen Trust
1141 SW Mitchell Lane
Portland, OR 97239-2822

Re: DEQ Denial of **Petition for Reconsideration**
Humbert Asphalt, Inc,
General ACDP AQGP-007
Source No. 37-0176

Mr. Berry:

Thank you for your interest in the air quality permitting process for Humbert Asphalt. DEQ received your Petition for Reconsideration on October 15, 2013. The petition asserts that Humbert Asphalt's permit application was incomplete because it did not provide information regarding where it intended to operate its asphalt batch plant. The petition also stated that two (2) actions could be taken by DEQ that would provide relief to the petitioners: (1) reissue the permit and include a condition that prohibits operation at the Birch Creek site; or (2) require Humbert Asphalt to apply for an NPDES water discharge permit. These options are addressed below in order.

Location Where Plant Will Operate:

DEQ has one General Air Contaminant Discharge Permit (ACDP) applicable to stationary or portable asphalt paving plants, ACDP AQGP-007. As a permit for a portable plant, an application for assignment to this General ACDP is not required to indicate the specific location(s) where it will be located. Section 1.4 of the permit clearly provides that, "It is the permittee's sole responsibility to obtain local land use approvals as, or where, applicable before operating this facility at any location." Hence, Humbert Asphalt's failure to indicate the location where it intends to begin operating its plant did not render its application incomplete, because it was not required to provide such information.

Reissue ACDP:

In review of the permitting requirements and Humbert Asphalt's permit application, DEQ has determined that Humbert Asphalt has met all applicable air quality requirements and that it is appropriate for DEQ to assign Humbert Asphalt to General ACDP AQGP-007. In addition, DEQ does not have regulatory authority to determine compatible land use between neighboring properties, so DEQ will not modify the ACDP to include siting conditions like those you have requested.

Water Discharge Permit:

DEQ's air and water divisions work very closely together to regulate asphalt plants. However, water quality compliance is not a function of the ACDP. Therefore, portable asphalt plants such as Humbert Asphalt are not required to include stormwater or wastewater information within their ACDP application.

However, in consideration of your water quality concerns, DEQ staff recently visited the site where Humbert Asphalt is proposing to operate. DEQ staff also conferred with the Oregon Department of Geology and Mineral Industries (DOGAMI), who have regulatory authority over the mining activities at this site and are an authorized agent of DEQ administering stormwater permitting. A stormwater permit is required if there is a potential for stormwater to flow from the site and reach surface waters. DOGAMI informed DEQ that, "*Off-site discharges have not been documented at this site, and best management practices have been implemented to maintain internal drainage.*" DEQ concurs with DOGAMI's assessment that a water quality permit is not required at the site near Birch Creek.

The Petition for Reconsideration did not provide any new information that demonstrates the ACDP application submitted by Humbert Asphalt was misleading or in error, or that Humbert Asphalt does not qualify for assignment to General ACDP AQG-007. Based on these findings, DEQ denies the requests of the petitioner.

If you have any questions regarding these findings, please contact Mark Bailey, Eastern Region Air Quality Manager at (541) 633-2006 or by email at bailey.mark@deq.state.or.us.

If you have questions regarding air quality, please contact Tom Hack at (541) 278-4626 or by email at hack.tom@deq.state.or.us.

If you have questions regarding water quality, please contact Krista Ratliff at (541) 633-2033 or by email at Ratliff.krista@deq.state.or.us .

Sincerely,

Mark Bailey
Oregon DEQ
Eastern Region Air Quality Manager

cc: Dick Pedersen, Director, DEQ
Linda Hayes-Gorman, Eastern Region Administrator, DEQ
Paul Garrahan, Assistant Attorney General , Dept. of Justice
Tom Hack, Air Quality Specialist, DEQ
Krista Ratliff, Stormwater Coordinator, DEQ

DRAFT MINUTES OF PLANNING COMMISSION HEARING ON OCTOBER 24, 2013

#C-1226-13
HUMBERT ASPHALT

UMATILLA COUNTY PLANNING COMMISSION
Meeting of Thursday, October 24, 2013
6:30 p.m., Umatilla County Justice Center, Media Room
Pendleton, Oregon

** **

COMMISSIONERS: Randy Randall (Chair), John Standley, Tammie Williams, David Lee, Don Marlatt, Suni Danforth.

ABSENT: Gary Rhinhart (Vice Chair), Don Wysocki.

STAFF: Richard Jennings, Carol Johnson, Connie Hendrickson

** **

NOTE: THE FOLLOWING IS A SUMMARY OF THE MEETING. A RECORDING OF THE MEETING IS AVAILABLE AT THE PLANNING DEPARTMENT OFFICE.

CALL TO ORDER:

Chairman Randall called the meeting to order at 6:30 p.m.

Approval of Minutes: Commissioner Standley made a motion to approve the minutes of the September 26, 2013 hearing as presented. The motion was seconded by Commissioner Lee and passed unanimously.

New Hearing: Chairman Randall identified the hearing as Conditional Use Permit #C-1226-13 and read the opening statement. There was no bias, conflict of interest, declaration of ex parte contact or objection to jurisdiction from the Commissioners.

Staff Report: Senior Planner Richard Jennings said the Humbert's submitted a Conditional Use Permit application for an asphalt batch plant in July of this year. A public notice along with the findings were sent to the adjacent property owners. Comments were received from Mr. Robert Berry and Mr. John Bakkensen of the Helen Reser Bakkensen Trust. An administrative decision to permit the asphalt batch plant was made by the Planning Department staff and during the appeal period which ended on October 3rd, a request for an appeal of that decision was received from Mr. Berry and Mr. Bakkensen.

Mr. Jennings stated that although this is an appeal of a decision made administratively by the Planning Staff, it is a first evidentiary hearing so it is the responsibility of the Planning Commission to make a decision on whether or not to approve the Humbert's Conditional Use permit application.

Aerial maps of Humbert's existing aggregate pit were displayed on the overhead screen showing the proposed location of the batch plant within the site. Mr. Jennings referred to those maps as he explained that the pit was 6.5 miles east of Milton-Freewater on Birch Creek Road and was established in the early 1990's. At the time the aggregate site was

originally permitted Humbert Asphalt received authorization for a rock crusher and an asphalt batch plant but the asphalt plant was not established at that time, voiding that portion of the conditional use permit. This made it necessary for them to reapply at this time for a permit to operate an asphalt batch plant in this location.

Mr. Jennings referred to another map showing a closer view of the aggregate pit pointing out the entrances to the site and the area where the asphalt plant would be located. Mr. Jennings said he had visited the site and explained that the pit sloped to the east, away from the road. There is a 15 ft. earthen berm which would divert any runoff from going onto the road or into Birch Creek.

In addressing possible concerns regarding increased truck traffic in the area, Mr. Jennings said that Mr. Humbert currently extracts gravel from this aggregate pit for his existing asphalt plant located on Hwy 11. The amount of truck traffic would remain the same because trucks already visit this site to get the gravel for the asphalt.

Mr. Jennings described the area around the aggregate site as mostly dry land wheat fields and a small amount of cattle. To the northeast there is a ½ acre vineyard approximately 2.6 miles from the pit. Another vineyard located across the state line in Washington is 3 miles away. There are several vineyards towards Telephone Pole Road about 4 miles away. Thus, there are no "planted vineyards" within 2 miles of the aggregate pit where the asphalt plant is proposed to be located. The aggregate site is located on a parcel of land owned by Kenny Farms and leased to Humbert Asphalt.

The asphalt plant requires a conditional use permit in the EFU (Exclusive Farm Use) zone. The criteria for conditional uses in the EFU zone are found in the Umatilla County Development Code (UCDC) Section 152.060 which comes from ORS 215.283 (Sub 2). The state has determined that asphalt plants are allowed in this zone if the proposal meets the standards set forth in state statute and what has been adopted locally.

Mr. Jennings referred to Section 152.061 which is identical to ORS 215.296 and said that the criteria found in Section 152.615 which lists additional standards for conditional use permits and the criteria found in Section 152.617 (I) (Item A) which lists the standards for an asphalt plant were used when the Planning Department staff approved this permit.

Mr. Jennings noted that the description in Section 152.060 (B) (Item 3) specifically states that an asphalt batch plant may not be authorized if there is a planted vineyard within 2 miles of the proposed site. The definition of a planted vineyard is one or more vineyards that equal 40 acres. These vineyards must exist prior to the asphalt batch plant site being proposed. By this definition the only planted vineyard is 4 miles away to the northwest. The other closest vineyard, while smaller than 40 acres, is 2.6 miles from the pit and other vineyards are more than 3 miles away.

Section 152.061 of the Development Code deals with standards for the conditional uses in the EFU zone and their effect on the cost of farming and farming practices. Mr. Jennings said that the aggregate pit has been in that location for decades and the asphalt

batch plant would be placed within the boundary of the pit so farming practices would not be disrupted or disturbed. There may be some changes to tractor movement on the road due to truck traffic but it would not be significant and one would not take precedence over the other.

There is no scientific evidence to prove that emissions from an asphalt plant would have a detrimental effect on crops. Mr. Jennings said it was his understanding the reason a planted vineyard was to be 2 miles from an aggregate site was due to dust particulates in the air. After doing research for this application and visiting the aggregate site he did not believe that an asphalt plant would affect either the way the farming was taking place or the movement of farm equipment. Mr. Jennings added that Birch Creek Road where the aggregate site is located is a paved road so dust from truck traffic will not be an issue.

The language in Chapter 152.615 (Item A) of the UCDC deals with limiting development due to environmental factors such as noise and air pollutants. Emissions from asphalt batch plants are regulated by the Department of Environmental Quality (DEQ) through their air contaminant discharge permit. A third party is contracted to periodically monitor the asphalt plant according to DEQ standards. State statute puts the onus on DEQ to operate that program.

Mr. Jennings said one of the conditions of approval for the Humbert's permit is that they are in compliance with the State of Oregon by having all of their required permits. Additional subsequent conditions would require that the lighting be shielded and that this mobile batch plant remains on site or the conditional use permit becomes void. If they take it off site for a period of more than a year they would have to go through this permitting process again. This permit is subject to an annual review which includes an onsite visit conducted by the Code Enforcement division of the Land Use Planning Department. This ensures that the proper permits are in place and the operation is in compliance with the conditions of the permit.

Commissioner Danforth asked if the state had issued the permits for the batch plant yet and Mr. Jennings said it was in process. The Humbert's could get permits from the state conditionally upon approval of the plant by the county. This Conditional Use Permit is the first step in the process and all of the precedent conditions must be met before the final zoning permit will be issued by the county.

Applicant Testimony: Troy Humbert, 1364 Watson Loop, Touchet, WA stated that they have an asphalt plant on Hwy 11 in Milton-Freewater which neighbors orchards and other businesses. There is an existing asphalt plant at that site but they have purchased another newer asphalt plant and would like to place it at the Birch Creek site. As the economy grows they would like to be a supplier for the county and the state. The aggregate is already being extracted from this site so truck traffic will remain about the same.

Commissioner Standley asked Mr. Humbert to share a little bit about the process of mixing asphalt. Mr. Humbert said the first step is to crush the aggregate in the pit and

then it's loaded into bunkers where it is fed into the asphalt plant. The asphalt comes out at about 300 degrees. It goes through a large drum where it is mixed with oil and then dumped into trucks and hauled to where it is needed. Asphalt is very thick so if any of it spills it is easy to clean up. It solidifies when it is out of the hot temperature environment.

Commissioner Danforth commented that an asphalt plant produces far less dust than the extraction of aggregate and Mr. Humbert agreed. Commissioner Danforth asked how often, on average, the asphalt plant operated and Mr. Humbert said it varies depending on the jobs they have. Sometimes the plant will run for a week straight and sometimes it might be two or three days a week. They start operating anywhere from March to May, depending on the weather and continue through late November or early December.

Commissioner Danforth asked about the hours of operation and Mr. Humbert said they start about 6:00 a.m. at the earliest and stop anywhere from 5:00 to 6:00 p.m. Commissioner Danforth asked how often emissions from the plant are monitored and Mr. Humbert said if there is a complaint DEQ responds to it but other than that it depends on the asphalt plant. The last time their plant was tested the results were so good they were told they would not need to be tested for another 10 years; prior to that it was tested every 5 years.

Applicant Testimony: Dan Humbert, 84899 Hwy 11, Milton-Freewater, OR said they have never had any problems and according to DEQ representatives their plant is one of the cleanest in the area. He referenced a letter of support for Humbert Asphalt written by a business which is 200 feet from their asphalt plant on Hwy 11. An orchardist who also has property close to theirs has never had problems with their fruit due to the asphalt plant. There are vineyards within 500 feet of the plant and they have not had any problems with their grapes. There is a home 250 feet to the east of the plant and the people living there wrote a letter of support for the plant, as well.

Commissioner Williams asked if the new plant would meet the quality and the criteria of the old plant and Mr. Dan Humbert said it would be even better. Mr. Troy Humbert stated that the new plant was purchased from a company in northern California where regulations are far more restrictive than they are here so the new plant would exceed the regulations required in Oregon. Discussion followed.

Mr. Dan Humbert said the new plant has an enclosed bag house which filters all of the dust through the bags and the air pressure blows the dirt off the bags making the dirt fall where it is augured back into the mix. Commissioner Danforth asked Mr. Humbert if he had been cited at any time by the DEQ and Mr. Humbert said he had not. He said in the 18 years since their plant had been in operation he had one complaint from a neighbor who at the time lived across Hwy 11 from the plant. The neighbor called DEQ but Mr. Humbert had already discovered that there was a problem because of the noise and vibration from the machine. They shut the machine down and found the problem and repaired it.

Mr. John Bakkensen, one of the appellants said he read the DEQ permit application that Humbert Asphalt submitted and it said the asphalt batch plant they had purchased was manufactured in 1998 making it 15 years old. He asked Mr. Humbert if the machine was used for the entire 15 years and Mr. Humbert said that it had only been used for 8 years.

Proponent Testimony: Dave Dunkelburg, 57445 Birch Creek Road, Milton-Freewater, OR said he was the President of Kenney Farms, Inc. and he pointed out the house he lived in on one of the maps showing the aggregate site. Kenney Farms has much of the land around the site and he has been involved with the Humberts for 18 years since the aggregate pit was established and they have never had a complaint against the Humbert's site. There have not been any conflicts with the farm equipment and the trucks traveling the same road. There are some blind spots and hills on that road but all of the farmers and truck drivers are aware and move slowly and cautiously. The foliage is kept cleared from the road improving visibility.

Commissioner Lee asked Mr. Dunkelburg to comment on the noise level from the quarry. Mr. Dunkelburg said the majority of the time the wind blows from the south so they don't hear the noise from the pit. When the wind comes from the north they hear the noise which he compared to the sounds from a metropolitan area and said it becomes white noise so it isn't a problem.

Commissioner Lee asked Mr. Dunkelburg when the last time it flooded in that area and if he had any problems due to the aggregate site. Mr. Dunkelburg said the last flood there was less than ten years ago. The land above their house is in CRP (Conservation Reserve Program) but prior to that there was storm that dropped six inches of rain in one day. Twelve inches of water was running through his front and back yard. Runoff from the rain storm was going into the pit and staying confined there. There was no runoff from the pit. Discussion followed.

Proponent Testimony: Mary Dunkelburg, 57445 Birch Creek Road, Milton-Freewater, OR said she and her husband had lived in their home for 22 years. She stated that she is retired and is home all day but rarely hears the rock crusher or the truck traffic. The pit doesn't operate at night and they always inform them in advance when they are going to be blasting in the pit.

Appellant Testimony: John Reser Bakkensen, 1141 SW Mitchell Lane, Portland, OR gave a copy of some exhibits to the Commissioners and said he was appearing on behalf of his cousin, Robert Berry and the trust of Helen Reser Bakkensen for which he is the trustee. He said he and his cousin together own an undivided one half interest in the Reser Ranch and the other half is owned by his aunt, Joyce Reser Bishop who is 88 years old and not in good health.

Mr. Bakkensen asked the Commissioners to look at Exhibit 7 in the notebook he had given them and explained the markings that he had made on that map pointing out Birch Creek Road, the Reser Ranch location and the Reser Spring.

Mr. Bakkensen said his grandfather, Ralph Reser, acquired the ranch in 1912 and farmed it with his brother, Ray Reser, until his grandfather's death in 1976. It is now operated by his cousin, Larry Bishop, Joyce Bishop's son, along with other cousins through an entity called the Bar-Ten Partnership. It has primarily been a wheat ranch but they also have grown peas as the rotational crop until about three years ago. Commissioner Standley asked about the domestic water source serving the residence on the site. Mr. Bakkensen referred to the map and pointed out the Reser Ranch spring and the ranch house that it serves. He said the spring is about 4000 feet from the quarry. Discussion followed.

Mr. Bakkensen noted that the findings written by the Planning Department state that Birch Creek Road is about thirty to fifty feet from Birch Creek. He also said that Birch Creek is protected by the Federal Clean Water Act which states that any body of surface water that is connected to a navigable body of water, such as the Columbia River, is within the scope of the Federal Clean Water Act. Mr. Bakkensen said that DEQ had not dealt with the clean water issue because when Humbert's applied in early August for a portable asphalt batch plant permit they were not dealing with any particular site.

Mr. Bakkensen said the water right for Reser Ranch dates back to 1894. When his grandfather bought the property he was deeded rights to draw water from that spring. He said this is the sole water source for the Reser Ranch and their concern is for the possible contamination of that water. The water is a natural spring coming from the ground and they have a pipe connected at the spring point. Commissioner Williams asked if they had that water tested annually and if there had been any contamination? He said he has not had the water tested and as far as he knows there has not been any contamination but there had never been an asphalt plant at that location before. Commissioner Danforth noted that according to the topographical map he had given them the water from the spring had to run uphill. Mr. Bakkensen said that was correct. The grading does go up but the water is forced by gravity and its ultimate destination is lower so the water is still forced downhill.

Mr. Bakkensen referred to the criteria of the UCDC in section 152.055 which requires the county to maintain and improve the quality of air, water and land resources stating that the requirement comes from the State of Oregon's Goal 6. He said another policy mandated by the Federal Clean Water Act is an anti-degradation policy which is intended to guide decisions that affect water quality and prevent the waterways from pollutants.

Mr. Bakkensen said there is a National Pollutant Discharge Elimination System permit (NPDES). Permit number 1200A issued by DEQ states that mobile asphalt batch plants are required to obtain coverage under the national permit. He also said that DEQ is required to coordinate with local land use regulations in obtaining a Land Use Compatibility Statement from the applicant which has not yet been provided.

Mr. Bakkensen said that because the required permits have not been submitted they filed a petition on October 14, 2013 with DEQ to have them reconsider the issuance of their permit to Humbert. DEQ has 60 days from that date to act on the petition. He said he had received an email from DEQ stating that they were reviewing the matter.

Mr. Bakkensen asked the Commissioners to refer to a table in the Exhibit notebook he had given them which showed a compilation of an EPA study released in 2000 on a typical drum mix plant. The study shows what is released from the plant after it has gone through the filtering system and he named some possible carcinogens that could be emitted from the exhaust stack. His concern was that those emissions would contaminate Birch Creek and potentially the spring where they draw their water.

Mr. Bakkensen said studies of wheat fields were done at the University of California in Davis showing that wheat is susceptible to PAH's (Polycyclic Aromatic Hydrocarbons) which are emitted primarily from combustion sources. He said that their wheat field is above the canyon wall of the quarry. Commissioner Danforth pointed out that the source of the PAH's were not known in the study done in California. She also asked Mr. Bakkensen if he had tested their water and he said he had not and to his knowledge his cousin Larry Bishop had not either. When asked if there was an operable well on the property he said there was a well at one time but it had not operated for decades.

Commissioner Danforth asked if farming practices such as spraying of fertilizers and applications of pesticides could affect their spring and Mr. Bakkensen said that they do not apply anything near the spring. Chairman Randall pointed out that their water source is on someone else's land and they have no control over any spraying the neighbors may be doing and Mr. Bakkensen agreed.

Commissioner Williams asked Mr. Bakkensen how large the Reser Ranch was and he answered that is was about 640 acres.

Mr. Jennings clarified that the Land Use Compatibility Statement is a form which will be signed by the Planning Department stating that the land use being requested is compatible with land use law. Land Use Compatibility Statements are signed by the planning department for a list of permits issued by DEQ. When a conditional use permit is issued a planner will then sign the Land Use Compatibility Statement and attach findings or explain to DEQ the conditions placed on the permit.

Mr. Bakkensen read from the Umatilla County Development Code Section.152.055, which refers to Exclusive Farm Use zones. He said it was the duty of the Commissioners to help to preserve and maintain the land for farm use. He said that it was his belief that the Reser farm lands will not be preserved if contaminants are allowed to accumulate in the wheat and the soil due to the proximity of the asphalt plant.

Mr. Bakkensen went on to say the county is required to consider the current and future needs for agricultural products. If the plant is allowed to operate in perpetuity their ranch would never be able to consider grapes as a viable alternative crop because they are sensitive to the emissions from an asphalt plant.

Mr. Jennings said Section 152.055 is not a standard of approval, rather it is the purpose for the EFU zone. A person would not be precluded from growing grapes as a crop

within two miles of a batch plant. The standard is if you have an existing planted vineyard the asphalt plant is not to be placed within two miles of it. It does not mean that you could not grow grapes at a later time. If this was a Goal 5 site where the site or adjacent uses would need protection that might be a consideration but this is not a Goal 5 significant site.

Mr. Bakkensen referred to chapter 152.061 which deals with forcing a significant change in accepted farming practices in surrounding lands. He said it was his opinion that siting the asphalt plant in that location would prevent the ability of the Reser Ranch to grow grapes in the future. He added that in 1989 farmers with grape vineyards went before the legislature and requested a two mile exception which was granted so the law was changed allowing counties to consider the siting of asphalt plants in Exclusive Farm Use zones. He said there must have been some scientific basis for making that change.

Mr. Bakkensen referred to chapter 152.615 dealing with additional use permit restrictions which he believes applies to the Humbert request. The county is required to consider limiting the manner in which the use is conducted including restrictions and restraints that minimize environmental effects such as air and water pollution. Another section of that code requires the county to protect and preserve water and air resources among other natural resources. He said he believed the county has an obligation to maintain air and water quality and that the same criteria which applies to protecting open reservoirs should apply to domestic water sources such as the Reser water source.

Commissioner Standley asked Mr. Bakkensen if his water source was an open reservoir or a spring block with artesian driven water. Mr. Bakkensen said they had a very old stone spring box with an artesian spring. Commissioner Standley said if the water source was an open reservoir it might be cause for concern but being a closed system it was a different matter. Mr. Bakkensen said that the box is not sealed and is exposed to the air that is in the canyon.

Commissioner Danforth asked if Mr. Bakkensen would have the right to drill a well on his property if something happened to contaminate the spring and he said he did not know if that was included in their water rights. The wording of the deed describes it as having the right to draw water from the head of Birch Creek. Commissioner Standley inquired as to the type of pipe that is being used for the spring and Mr. Bakkensen said the pipe was PVC.

Mr. Bakkensen stated that siting an asphalt batch plant next to Birch Creek, which is federally protected, and next to historic wheat fields should not be justified under the land development ordinance mentioned earlier and without a Land Use Compatibility Statement. He requested that the Planning Commission deny the Conditional Use Permit. As an alternative to a denial, he suggested that this be continued until DEQ had responded to their petition for reconsideration which would determine if any further permitting would be needed to meet their requirements.

Chairman Randall asked if there was a possible scenario in which the asphalt plant would be acceptable. Mr. Bakkensen said that at this point he opposes the plant but if it is allowed to go forward he believes that it should be restricted and the NPDES (National Pollutant Discharge Elimination System) permit should be obtained.

Commissioner Lee asked if the pollution chart they had been shown was for our area and Mr. Bakkensen said it was a chart that was created after the EPA (Environmental Protection Agency) surveyed over 200 plants and the chart is a summary of that survey.

Chairman Randall said he and sees a lot of numbers and information on the chart and based on that information we should not have asphalt plants but we do have them and it is the job of land use planners to determine where they will be placed.

Chairman Randall asked Mr. Bakkensen if he thought the plant would be better suited at the site on Hwy 11 and he replied that since they have been hauling rock from that pit for years it could be hauled to another site for batching so it would not need to be on Hwy 11. Chairman Randall asked Mr. Bakkensen if he had any trouble with the rock crushing at the Birch Creek site and he answered that he had not. He added that he and his family just didn't want the asphalt plant sited next to Reser Ranch. He said hopefully there will be another site near Milton-Freewater that would be compatible with their operation.

There were no other opponents nor were there government agencies to give testimony. Mr. Jennings stated that the only agency comment was the letter from DEQ which had been included in the Commissioners' packets.

Applicant rebuttal testimony: Troy Humbert asked how far the point of diversion for the Reser Ranch spring was from the Humbert Aggregate site. Mr. Bakkensen said it was around 4000 feet up stream from the pit. Mr. Humbert said the prevailing winds are predominantly from the south. Mr. Bakkensen added that the canyon runs in a northwesterly direction and air becomes trapped there.

Mr. Humbert said there is a vineyard located in the Couse Creek area that was planted in the 1950's. It is 700 feet from Konen Rock products which operates an asphalt plant and there has never been a problem with the grapes grown there. He said there is another asphalt plant, one of the largest in the area, about 2,900-3,000 feet from that same vineyard and there has never been an issue because of their operation.

Commissioner Lee verified that Humbert's were currently producing about 20,000-30,000 tons of asphalt per year and Mr. Humbert said they were but were hoping to increase production with the larger plant. Mr. Humbert added that the asphalt plant they have in use now is on Hwy 11 and the Walla Walla River is approximately a ½ mile away and they have never had a problem.

Proponent rebuttal testimony: Dave Dunkelburg said his water comes from Birch Creek out of the spring box ¾ mile above his house. His water was tested within the last 5 years and is good water. His spring box is ¾ mile below where the Reser Ranch spring

box is located and his water right is dated 1912 the same as Reser Ranch. Commissioner Standley asked if Mr. Dunkelburg he thought that airborne pollutants would affect his water supply and he said no. He added that when the wind does come from the north during the winter time the plant is not in operation.

Proponent rebuttal testimony: Mary Dunkelburg said their water supply comes out of the ground into a spring box which has a full cover that they built to protect it from rocks and the whole thing is located underground so the batch plant would have no effect on their water.

Commissioner Danforth asked Mr. Bakkensen if it was his intent to have a vineyard. Mr. Bakkensen answered that he had discussed that possibility with his children. He said they had expressed an interest in looking into that possibility. Chairman Randall asked if there was an adequate water supply to support a vineyard and he answered that the water supply might be an issue.

Commissioner Danforth asked Mr. Bakkensen if he or his family had any opposition when the Humbert's applied initially in 1992 for the quarry and the asphalt plant and he answered that he did not become involved with this until the year 2000 when his mother passed away and she had not discussed any notices she may have received regarding the aggregate pit with him.

Commissioner Marlatt said the environmental concerns are a matter of EPA governance and not something that the Planning Commission needs to consider. He added that if the batch plant does produce the chemicals and carcinogens named by Mr. Bakkensen then the EPA would need to contact the operator of the plant. Commissioner Standley said he concurred with Commissioner Marlatt. Commissioner Williams said she appreciates the information presented by Mr. Bakkensen but she cannot see a reason to disapprove the Conditional Use Permit based on that information. Commissioner Lee said there was nothing he heard that should prevent them from approving the permit.

Chairman Randall said with regard to Chapter 152.055, preserving and improving the air quality for the county, for the Humbert's to continue to operate the old diesel-run asphalt plant for a long period of time would not be preserving the county's air quality. A new plant in a new location away from orchards, vineyards and businesses is an improvement.

Commissioner Standley made a motion to accept the decision made by the Umatilla County Planning staff for approval of Conditional Use Permit #C-1226-13 along with all the precedent and subsequent conditions, the exhibits submitted and the findings by staff.

The motion was seconded by Commissioner Marlatt and passed unanimously.

Senior planner Carol Johnson informed the Commissioners that the rezone application submitted earlier in the year by Sam Humbert had been withdrawn.

Chairman Randall adjourned the hearing at 8:48 p.m.

Respectfully Submitted,

Connie Hendrickson
Administrative Assistant

PROPONENT EXHIBITS FROM PLANNING COMMISSION HEARING ON 10/24/13

Law Office of
DAVID S. SHANNON
1500 Catherine 402D
Walla Walla, WA 99362

TELEPHONE 503-861-7975
TELECOPIER 509-526-5548
sjlaw@teleport.com

October 17, 2013

Umatilla County Planning Commission
Umatilla County Courthouse
216 S.E. 4th Street
Pendleton, OR 97801

Re Appeal of Helen Reser Bakkensen Trust
Tentative Final Approve CONDITIONAL USE PERMIT REQUEST # C 1226-13
Humbert Asphalt

This submission is in support of Planning Staff's granting of a conditional Use Permit #C 1226-13 and in opposition to the Appeal of the Helen Reser Bakkensen Trust.

I represent Humbert Asphalt. The company and its owners have served Umatilla County for over fifty years. Humbert Asphalt prides itself in doing an honest and clean professional job. Humbert Asphalt has operated an asphalt plant without a violaton for more than twenty years. Humbert has operated a rock quarry and crushing operation at the subject site for more than twenty years without a complaint . In 1992 Humbert received a conditional use permit for the asphalt plant and only out of caution re-applied because it did not build the plant in 1992.

The closest house to the proposed plant (1000 ft away) is occupied by Kenny Barbara , Humbert's landlord who has no objection to an asphalt plant . Larry and Joyce Bishop who are co owners of the Bakkensen property and live on the property have not joined this appeal or objected to the establishment of the plant.

The county has been very thorough and very cautious in placing conditions on the operation to protect the surrounding area. In addition, Humbert must comply with Oregon Department of Enviromental Quality air quality which requires yearly monitoring and imposes very strict standards (Section 2 of DEQ Permit).

I will not repeat what the Staff of Umatilla has so thoroughly outlined in its findings and in response to the Appeal, except to point out appellant simply speculates about improbable events, major floods in an area that is not in a flood zone . Appellant wishes to scare you about the emissions from an asphalt plant by inferring that any amount of polycyclic aromatic hydrocarbons are carcinogenic . This is not true. PAH are

now found on farms in acceptable quantities. Perhaps more PAH can be associated in farm tractors and equipment, fertilizers and pesticides than in an asphalt plant. PAH is also in certain food preparation such as BBQ meat. The point is that there are very conservative quantity standards for particulates and PAH. For instance, the limit on particulate is less than one grain for every cubic yard. In other words the standard is a box three feet by three feet with only one invisible grain (.04).

Applicants speculate that some time in the unknown future somebody might want to put in a vineyard. The statute prohibits placing an asphalt plant within two miles of vineyard specifically relates already planted vineyards.

Appellant suggests conditional uses are to disfavored Farm use area. Parks, fishing camps, utility facilities, agritourism, personal airports, food stands require conditional uses, but I would not consider them disfavored activities.

Respectfully Submitted

David S. Shannon
Attorney for Humbert Asphalt

Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Eastern Region - Pendleton Office
700 SE Emigrant Ave, Suite 330
Pendleton, OR 97801
Phone: (541) 276-4063
Fax: (541) 278-0168
Relay Service: 711

October 17, 2013

Umatilla County Planning Department
Attn: Richard Jennings, Senior Planner
216 SE 4th Ave.
Pendleton, OR 97801

RE: Appeal of Conditional Use Permit No. #C 1226-13
Humbert Asphalt's Portable Asphalt Plant
General ACDP No. 37-0176-G-01
AQ – Umatilla County

Dear Mr. Jennings:

Thank you for sending me the Appeal Notice for the referenced Conditional Use Permit for the DEQ-permitted portable asphalt plant anticipating operation near the Birch Creek Road/Reeser Road intersection near Milton-Freewater. You pointed out several areas in the document referring to Umatilla County, in lieu of DEQ, as being the primary regulatory authority for air quality and water quality issues and concerns. You requested clarification from me that DEQ is the primary regulatory authority.

Oregon Revised Statutes (ORS) 468.035 defines the functions of DEQ. Although the functions of DEQ are numerous, the ORS defines DEQ as the primary regulatory authority for air and water quality issues that could transpire from the operation of an asphalt plant. However, it is not DEQ's function to make land use compatibility determinations.

As you may be aware, local authorities may request and may be approved delegation of certain DEQ Programs. A good example of this is the creation and operation of the Lane County Regional Air Pollution Agency (LRAPA). Additionally, many of Oregon counties including Wasco, Sherman, Lake, and Harney Counties have negotiated contracts with DEQ and are presently operating their own septic system regulatory programs. To date Umatilla County has not requested any contract or delegation from DEQ to implement and operate any of our programs.

If I can be of further assistance, please feel free to call me at (541) 278-4626. As always, it is a pleasure working with you. We strive to assist you in any way we can.

Sincerely,

Thomas G. Hack

Thomas G. Hack
Air Quality Program
Eastern Region – Pendleton

cc (e-copy only): Mr. Mark Bailey, AQ Manager, ER-Bend
Mr. Dan Humbert
Mr. Robert Berry

10/23/2013

Richard Jennings
Senior Planner
Umatilla County
Department of Land Use Planning
216 SE 4th St
Pendleton, OR 97801

Dear Mr. Jennings:

My name is Grace B. Sallee and I have lived at 85036 Tum-A-Lum Road for 28 years. I have had nothing but positive experiences with Humbert Asphalt Inc. and the people who work for them. They obey the speed limits and try to keep as low a profile as possible in my area. Umatilla County and specifically the Milton-Freewater area could use more tax-paying companies like them!

Sincerely,

Grace B. Sallee

Grace B. Sallee
85036 Tum-A-Lum Road
Milton-Freewater, OR 97862

10/23/13

Richard Jennings
Senior Planner
Umatilla County
Department of Land Use Planning
216 S.E. 4th Street
Pendleton, Oregon 97801

Dear Mr. Jennings:

I am writing to you on behalf of Humbert Asphalt, Inc. My name is Joyce Rudd and I live at 53947 E. Crocket Rd. in Milton Freewater, Oregon. I have lived here for almost 10 years and have had no problems with their plant on highway 11.

They have been a convenience for me; I had some rock delivered to my home. Their entire operation of Humbert Asphalt has been very respectful of me and my property over the years.

Sincerely,

Joyce Rudd

Joyce Rudd

10/23/2013

TO:
Richard Jennings
Senior Planner
Umatilla County
Department of Land Use Planning
216 S.E. 4th Street
Pendleton, Or 97801

Dear Mr. Jennings:

I am writing to you on behalf of Humbert Asphaly, Inc.

This is Scott Karrels, Owner of Alexander Motors LLC. We have been across the highway from Humbert Asphalt for 9 years. In the time we have never had an issue or complaint about there business. Ther employees and trucks are very conscientious of our customers and our business. And in this dusty and windy bowl that we reside in they go over and above to keep the dust down as well. I couldn't ask for a better business neighbor.

Sincerely,

Scott Karrels

Richard & Janie Dodge
78888 Walters Rd
Maupin, OR 97037

October 23, 2013

Umatilla Planning Department

RE: Humbert Asphalt, Inc

To Whom It May Concern:

We are responding to your notice in regards to Humbert Asphalts request to put in a hot plant at an existing crusher site on Birch Creek Rd.

We do not feel it would have an adverse impact on our properties in Umatilla County, so we fully support their endeavors to put in the hot plant.

Our location closest to the site is 57584 Birch Creek Rd. This parcel has an existing dwelling which we use as needed. It is also used for pasture for our cattle. We also have other farm ground and a dwelling on 85584 Buchanan Lane.

Sincerely,

Richard & Janie Dodge

Dodge Land & Cattle, Inc

10/22/2013

TO:
Richard Jennings
Senior Planner
Umatilla County
Department of Land Use Planning
216 S.E. 4th Street
Pendleton, Oregon 97801

Dear Mr. Jennings:

I am writing to you on behalf of Humbert Asphalt, Inc.

Our names are Terry & Sharrie Copeland we live to the north of Humbert Asphalt. We have resided at 53924 E Ferndale Rd MF for 25+ years. During the past 25 plus years we have seen many companies go and come one of them being Humbert Asphalt this company has been a true good neighbor to us and to the community. Sharrie and I being area farmers and raising cattle on property to north & South sides of the Asphalt plant. Our kids have been born raised here at this address and there is lots of traffic in the area coming and going. We to date have never had an issue with Humbert Asphalt company and its employees or Drivers of their fleet of trucks. Dan Humbert has always been one to watch his employees and caution them against traveling on the county roads the pay great attention to the speed. The asphalt plant on Highway 11 has always followed the rules of noise and emissions coming from its operation in my opinion. The Humber Asphalt Plant has been a great help to us and to the community providing Rock and Asphalt to the area without going out of Umatilla county or to another state.

Sincerely,

Terry & Sharrie Copeland

Terry Copeland
Sharrie Copeland

Smiley RV Sales & Service, Inc.
53816 W. Crockett Rd.
Milton Freewater, OR 97862
541-938-6562

October 23, 2013

Richard Jennings
Senior Planner
Umatilla County
Dept. of Land Use Planning
216 S.E. 4th Street
Pendleton, OR 97801

Dear Mr. Jennings,

I am writing to you on behalf of Humbert Asphalt, Inc. My name is Tim Werhan and I currently own a business on the corner of Crockett Rd. & Hwy. 11, which is very close to the asphalt plant. I've owned and operated my business at this location for over thirty years.

I am very much in favor of the plant being in existence. The Humbert family and their employees have always run the business in a very professional manner; they are also very involved with the community. In such tough economic times, it is nice to have a family owned and operated business that is conscientious of it's neighbors.

Sincerely,

Tim S. Werhan

To:

Richard Jennings

Senior Planner, Umatilla County

10/23/13

Mr. Jennings,

I am writing in behalf of Humbert Ashphalt.

My name is Ryan Mathwich, I live within a quarter mile of Humbert Asphalt's plant. This company has been no nuisance what so ever to me, they have been very respectful to us as neighbors as well as being very helpful and convenient in providing rock and asphalt. Noise is minimal and all Humbert Asphalt trucks our very courteous and atentative to their speed. Overall I have no complaints and value the local service they provide.

Thankyou,

Ryan Mathwich

Ken & Tami Sloan
84907 Humbert Lane
Milton Freewater, OR 97862
October 24, 2013

Dan Humbert
Owner
Humbert Asphalt
Highway 11
Milton Freewater, OR 97862

Dan:

I am writing in regards to you request for a new asphalt plant to be installed in your quarry up Birch Creek Road.

The purpose of this letter is to let me express how it has been to live within close proximity to your asphalt plant located at your yard along Highway 11. We live less than ½ mile from this location and lived at this location before you had this plant installed. At the time of your request for the plant at the Highway 11 location we wrote a letter stating we had no problem with the impact it may create. After living within this close proximity there has been no impact on the conditions in our area. Yea once in a while we can hear the equipment running but it is no different than the farming equipment that runs in the area. In fact the farming equipment runs 24 hours at times and we have never heard your plant run before 6 am except maybe on a rare occasion and usually no later than 4 pm.

We are in favor of the plant installation of a plant in your existing rock quarry on Birch Creek road. We will probably have less traffic as you would not be required to haul your rock from the quarry to the facility on the highway. This will probably also cut down on the truck entrance on and off Highway 11 as there are alternate routes to Walla Walla that are closer for you. Even with the truck traffic we have had no impact as far as our entrance on and off Birch Creek Road.

Ken & Tami Sloan

Ken Sloan

Tami Sloan

October 24, 2013

Mike Potts
84925 Tum A Lum Rd
Milton Freewater, OR 97862

Umatilla County
Department of Land Use Planning
216 S.E. 4th Street
Pendleton, Oregon 97801

To whom it may concern:

I am writing to you in regards to my neighbor Humbert Asphalt, Inc.

My name is Mike Potts I live to the east of Humbert Asphalt current asphalt plant. I live at 84925 Tum A Lum Rd MF for 12+ years. I have been a Honey Bee Keeper/Raiser for the past 10 years, which puts me working from my home during the day a lot, plus out of town. The days that I am home, I see Humbert Asphalt conduct their daily business and I have watched there asphalt plant run. Humbert asphalt daily business and asphalt plant when running has not been any inconvenience to me, my family or my bee business. Humbert Asphalt truck driver have always seem to take extreme caution and safety to the area due to the kids and traffic on the road. As a neighbor for 12 plus years, I feel Humbert Asphalt has always complied with DEQ Air Quality emissions, all rules and regulations. I feel this asphalt plant has not caused any adverse health issues in this area.

Sincerely,

Mike Potts

David M. Morris

84170 Eastside Road

Milton-Freewater, Oregon 97862

509-520-6011

DATE: October 21, 2013

TO: Richard Jennings

Senior Planner, Umatilla County

Department of Lane Use Planning

216 S.E. 4th Street

Pendleton, Oregon 97801

RE: Humbert Asphalt Plant... Highway 11... North of Milton-Freewater, Oregon

I am writing to you in regard to Humbert Asphalt Plant that is located on Highway 11, Milton-Freewater, Oregon. I currently manage 26 acres of Prunes and Apples located to the back and south of this Asphalt Plant. I have been managing this orchard for the last 9 years since the death of my Dad, Mike Morris.

During this time of managing this orchard, I have had absolutely no problems with the personnel, trucks, noise, or anything dealing this this plant. The orchard belongs to my Mother and has seen NO ill effects of neighboring this Asphalt Plant. Humbert trucks have operated on the North and West of this property from the inception of this plant.

I encourage you to endorse Humbert Asphalt Inc. on their future endeavors wherever they are located.

Thank You,

David Morris

DATE: October 20, 2013

TO: Richard Jennings

Senior Planner, Umatilla County

Department of Lane Use Planning

216 S.E. 4th Street

Pendleton, Oregon 97801

FROM: Suzanne A. Morris... 84785 Tum-A-Lum Road... Milton-Freewater, OR 97862

541-938-5256

RE: Humbert Asphalt Plant... Highway 11... North of Milton-Freewater, Oregon

I am writing to you in regard to the Humbert Asphalt Plant that is located on Highway 11, Milton-Freewater, Oregon.

I face the intersection of Crockett Road and Tum-A-Lum Road. My property consists of 26 acres. It is bordered on the West by Tum-A-Lum Road and the North by Birch Creek Road. I currently have Prunes and Apples in full production on this property. My deceased Husband (Mike Morris.... Passed away November 2004) and I moved into this property on December 18, 1967. During these (almost) 46 years, I have seen many people come and goin this neighborhood. Lots of changes have taken place.

Humbert Asphalt set up their plant on Highway 11 and many of our friends and fellow farmers asked how we felt. We were apprehensive probably at first. But..... I tell you today.... We have **NEVER** had any problems or repercussions from having that Asphalt Plant set there. The owners, employees and everything associated with them has always been positive. Our fruit has continued to flourish as it did before the plant was there.

I support Humbert Asphalt in wherever they operate their business. They are great neighbors. Their trucks exiting their property on the East has stopped the traffic from coming around in front of my house.

Thank You Very Much,

Suzanne A. Morris

Suzanne A. Morris

October 24, 2013

Richard Jennings
Senior Planner
Umatilla County
Department of Land Use Planning
216 S.E. 4th Street
Pendleton, Oregon 97801

Dear Mr. Jennings:

We are writing to you on behalf of Humbert Asphalt, Inc. Our name is Jeffrey and Erikka Siegel and we live at 85030 Tum A Lum Rd, MF. We have lived here for 8+ years and have had no issues with their existing asphalt plant on Highway 11. As neighbors of Humbert Asphalt we have never been inconvienced by the plant in any way. We have had our driveway asphalted by them and have also bought several loads of gravel. The truck drivers have been very respectful of our property and have had prompt service. The drivers also take care when driving down Tum A Lum Rd with all the kids and animals in the area. We have not had any issues reguarding air quality to our kids and animals. We feel the plant doesn't pose any adverse health issues to the area and are not at all bothered living by the plant.

Sincerely,

Jeffrey and Erikka Siegel

Jeffrey and Erikka Siegel

October 23, 2013

Richard Jennings
Senior Planning
Umatilla County
Department of Land Use Planning
216 SE 4th Street
Pendleton, OR 97801

Dear Mr. Jennings,

I am writing to you on behalf of Humbert Asphalt, Inc. My name is Jenny Zitterkopf and I live at 84772 Tum-a-Lum Road, Milton-Freewater, OR 97862. I have lived here for 11 years and have not had ANY issues with Humbert's existing asphalt plant on Highway 11. My interactions with Humbert's employees have been nothing but professional and courteous. They have been respectful to my family as well as my property and they have worked very hard at maintaining a good neighbor policy.

Sincerely,

Jenny Zitterkopf

A. KEY
EXCAVATING, INC.

ALLEN KEY

53876 E. FERNDALE ROAD • MILTON-FREEWATER, OR 97862 • (541) 938-7013 • CELL (509) 520-4811

October 24, 2013

TO: Umatilla County Planning Department

Dear Sirs: I own the property directly North West of Humbert Asphalt's asphalt plant. During the years that it has been in operation, I have not had any adverse effects on my property from its operation. The asphalt plant's operation has not caused any unreasonable noise or any other adverse effects that would make me wish that it was not there.

Sincerely,

Allen Key

ROBERT BERRY & HELEN RESER BAKKENSEN TRUST

REQUEST FOR PLANNING COMMISSION HEARING FOR #C-1226-13

UMATILLA COUNTY PLANNING COMMISSION

APPEAL OF CONDITIONAL USE PERMIT

C-1226-13

HUMBERT ASPHALT, INC.

OCTOBER 24, 2013

HEARING EXHIBITS OF ROBERT R. BERRY AND HELEN RESER BAKKENSEN TRUST

UMATILLA COUNTY PLANNING COMMISSION

APPEAL OF CONDITIONAL USE PERMIT

C-1226-13

HUMBERT ASPHALT, INC.

OCTOBER 24, 2013

HEARING EXHIBITS OF ROBERT R. BERRY AND HELEN RESER BAKKENSEN TRUST

EXHIBIT LIST

1. Certificate of Water Right issued to Ralph Reser on April 5, 1940 with respect to spring at the head of Birch Creek for irrigation, domestic use and stock.

2. General Air Contaminant Discharge Permit issued to Humbert Asphalt, Inc. for a portable asphalt plant dated August 16, 2013, together with Humbert Asphalt, Inc.'s application for permit with representations to DEQ.

3. Letter from Thomas Hack, DEQ, to Richard Jennings dated October 17, 2013.

4. EPA Hot Mix Asphalt Plants Emission Assessment Report December 2000.

5. Petition for Reconsideration by Robert Berry and Helen Reser Bakkensen Trust to DEQ dated October 11, 2013.

6. Polycyclic aromatic hydrocarbons in edible grains: A pilot study of agricultural crops as a human exposure pathway for environmental contaminants using wheat as a model crop by Reiko Kobayashi and others (2008).

7. Map depicting proposed asphalt plant site, Reser spring on Birch Creek, and nearby vineyards.

STATE OF OREGON

COUNTY OF UMATILLA

CERTIFICATE OF WATER RIGHT

This Is to Certify, That RAYMOND and RALPH HESER

of R.#3, Walla Walla, State of Washington, has a right to the use of the waters of Birch Creek, and Unnamed Spring at head of Birch Creek for the purpose of Irrigation, domestic and stock and that said right has been confirmed by decree of the Circuit Court of the State of Oregon for Umatilla County, and the said decree entered of record at Salem, in the Order Record of the STATE ENGINEER, in Volume 12, at page 9; that the priority of the right thereby confirmed dates from 1894;

that the amount of water to which such right is entitled, for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed one miner's inch measured at the point of diversion.

A description of the lands irrigated under such right, and to which the water is appurtenant (or, if for other purposes, the place where such water is put to beneficial use), is as follows:

0.5 acre in SW¼SW¼
Section 35,
T. 6 N., R. 36 E. W. M.

AND said right shall be subject to all other conditions and limitations contained in said decree.

The right to the use of the water for irrigation purposes is restricted to the lands or place of use herein described.

WITNESS the signature of the State Engineer, affixed this 5th day of April, 1940.

CHAS. E. STRICKLIN
State Engineer.

Recorded in State Record of Water Right Certificates, Volume 11, page 13150

ASSIGNMENT

to

GENERAL AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
541-388-6146

PERMITTEE:

Humbert Asphalt, Inc.
84899 Hwy. 11
Milton-Freewater, OR 97862

PLANT SITE LOCATION:

Portable

INFORMATION RELIED UPON:

Application No.: 27430
Date Received: 08/14/2013

LAND USE COMPATABILITY STATEMENT:

Approving Authority: Not applicable for portable sources

ASSIGNMENT: The permittee identified above is assigned by the Department of Environmental Quality to the General ACDP listed below in accordance with ORS 468A.040, OAR 340-216-0060(2) and based on the land use compatibility findings included in the permit record (note: land use compatibility statements are not applicable to portable sources).

Mark W. Bailey, Eastern Region Air Quality Manager — AUG 16 2013 Dated

General Air Contaminant Discharge Permit Issued in Accordance with OAR 340-216-0060:

General ACDP Number	Expiration Date	Source Category Description	SIC	NAICS
AQGP-007	10/01/2017	Asphaltic Concrete Paving Plants both stationary and portable (OAR 340-216-0020, Table 1, Part B, 8)	2951	324121

DEQ
Oregon Department of Environmental Quality

FORM AQGP-100
APPLICATION FOR GENERAL AIR CONTAMINANT DISCHARGE PERMITS AND PERMIT ATTACHMENTS

FOR DEQ USE ONLY		
Source Number: 37-0196	Regional Office: ER	Initial assignment
Application No: 29430	Check number: 7777	Re-assignment
Date Received: AUG 08 2013	Amount ($): 3,079.75	

8/14/2013

1. Company Information:

Legal Name: Humbert Asphalt, Inc.	Other company name (if different than legal name):
Mailing Address: 84899 Hwy 11	Site Address (if different than mailing address):
City, State, Zip Code: Milton Freewater, OR 97862	City, County, Zip Code:
Standard Industrial Classification (SIC): 2951 / 324121	Number of employees: 25

2. Site Contact Person:

Name: Troy Humbert	Telephone number: 541-938-3174
Title: Vice-President	E-mail address: humbertasphalt@hotmail.com

3. General permit assignment (select the permit you are applying for):

	General Air Contaminant Discharge Permit	Fee Class		General Air Contaminant Discharge Permit	Fee Class
☐	AQGP-001 hard chrome plating	3	☐	AQGP-016 coffee roasters	1
☐	AQGP-002 decorative chrome plating	2	☐	AQGP-017 bulk gasoline plants	1
☐	AQGP-003 cold batch degreasers	2	☐	AQGP-018 electric power generators	2
☐	AQGP-004 batch vapor/in-line degreasers	2	☐	AQGP-019 clay ceramics	1
☐	AQGP-005 combined degreasers	2	☐	AQGP-020 hospital sterilizers	4
☐	AQGP-006 dry cleaners	6	☐	AQGP-021 secondary nonferrous metals	1
☑	AQGP-007 asphalt plants	3	☐	AQGP-022 gasoline dispensing – stage I	5
☐	AQGP-008 rock crushers	2	☐	AQGP-023 gasoline dispensing – stage II	4
☐	AQGP-009 cement ready-mix plants	1	☐	AQGP-024 wood preserving	4
☐	AQGP-010 sawmills/millwork	3	☐	AQGP-025 large metal fabrication and finishing	1 or 2
☐	AQGP-011 boilers	2	☐	AQGP-026 plating and polishing	1
☐	AQGP-012 crematories	2	☐	AQGP-027 surface coating	1
☐	AQGP-013 grain elevators	1	☐	AQGP-028 paint stripping	1
☐	AQGP-014 flour, cereal & prepared feeds	1	☐	AQGP-029 small metal fabrication and finishing	4
☐	AQGP-015 seed cleaning	1			

RECEIVED
AUG 14 2013
DEQ
Eastern Region Bend

FORM AQGP-100
APPLICATION FOR GENERAL AIR CONTAMINANT DISCHARGE PERMITS AND PERMIT ATTACHMENTS

4. General permit attachment assignment (select the permit attachment(s) you are applying for):

General Air Contaminant Discharge Permit Attachment		General Air Contaminant Discharge Permit Attachment	
☐	AQGP-018a electric power generators	☐	AQGP-025a large metal fabrication and finishing
☐	AQGP-020a hospital sterilizers	☐	AQGP-026a plating and polishing
☐	AQGP-022a gasoline dispensing – stage I	☐	AQGP-027a surface coating
☐	AQGP-023a gasoline dispensing – stage II	☐	AQGP-028a paint stripping
☐	AQGP-024a wood preserving	☐	AQGP-029a small metal fabrication and finishing

5. General Permit Fees:

Fee category	Fee	Total Fee
General Permit Fees (include assignment fee*)		
Initial Permit Assignment Fee	$1200.00*	$1,200.00
Class 1 Annual Fee	$720.00	
Class 2 Annual Fee	$1296.00	
Class 3 Annual Fee	$1872.00	$1,872.00
Class 4 Annual Fee	$360.00	
Class 5 Annual Fee	$120.00	
Class 6 Annual Fee	$240.00	
General Permit Attachment Fees		
Attachment Fee	$120.00 x (number of attachments)	
Total Fees		$3,072.00

*DEQ may waive the assignment fee for an existing source requesting to be assigned to a General ACDP because the source is subject to a newly adopted area source NESHAP as long as the existing source requests assignment within 90 days of notification by DEQ.

6. Signature

I hereby apply for permission to discharge air contaminants in the State of Oregon, as stated or described in this application, and certify that the information contained in this application and the schedules and exhibits appended hereto, are true and correct to the best of my knowledge and belief.

Name of official (Printed or Typed):	Title of official and phone number:
Jennifer Humbert	Treasurer
Signature of official: Jennifer Humbert	Date: 8-7-13

Print Form

ASPHALT PLANTS
ASSIGNMENT TO GENERAL AIR CONTAMINANT DISCHARGE PERMITS

FORM AQGP-107
ANSWER SHEET

Source Category Description:

Asphaltic concrete paving plant, stationary or portable, and associated ancillary activities, including power generators.

1. Qualifications: For each qualification statement listed below, answer "yes" or "no" in the far right column.

a.	Do the operations meet the description provided above?	Yes
b.	Are there any other activities identified in OAR 340-216-0020, Table 1?	Yes-Rock Crusher Permit#37-0368
c.	Are there any other activities not described above that cause air pollutant emissions?	Yes-Rock Crusher
d.	Is the facility currently in compliance with DEQ regulations?	Yes
e.	Have there been any violations in the last 5 years?	No
f.	If there have been violations, have they been resolved?	N/A
g.	Does the facility have the proper land use approvals? (For new sources, a Land Use Compatibility Statement (LUCS) must be attached to the application.)	Yes-On File
h.	Will the actual emissions be less than the permit limits?	Yes

2. Plant Information:

a.	Type of plant (batch mix or drum mix)?	Drum Mix
b.	Portable plant (yes or no)?	Yes
c.	Manufacturer of plant	Gencor
d.	Date the plant was manufactured	1998
e.	Date the plant began or will begin operations	August 30, 2013
f.	Design production capacity (tons/hr)	150tons/hr
g.	Maximum projected annual production (tons/yr)	40,000 tons/yr
h.	Type of pollution control device (i.e., baghouse, wet scrubber, venturi scrubber)	Baghouse
i.	Rated pollution control device efficiency (%)	
j.	Projected operating schedule (hours per day)	10 hrs/per day
k.	Projected operating schedule (days per week)	5 days/per week
l.	Projected operating schedule (weeks per year)	40 Weeks/per year
m.	Projected operating schedule (hours per year) .	2000 hrs/per year
n.	Will recycled asphalt (RAP) be used as a component of hot mix production (yes or no)?	Yes
o.	If RAP is used, what will be the maximum amount used as a percentage of asphalt production (%)?	20 %
p.	Will power generators be used at any time to run the plant (yes or no)? If yes, complete section 3.	Yes

3. Power Generator Information:

	Generator 1	Generator 2	Generator 3
Manufacturer			
Model number			
Serial number			
Rated design output (kWh)	650 KWH	100 KWH	
Installation Date	2013	2013	
Season or year-round?	Season	Season	
Months per year	9	9	
Projected hours/day	10 hrs/day	10hrs/day	
Projected maximum days/week	5 days/Week	5 days/Week	
Projected maximum weeks/year	40 Weeks/Yr	40 Weeks/Yr	
Primary fuel	Diesel	Diesel	
Back-up fuel	Propane	Propane	

4. Fuel Information:

Generator Fuel Usage Information	Primary Fuel	Back-up Fuel
Type/grade of fuel	Diesel	Liquid Propane
Average sulfur content (% by wt.)	Less than .5%	N/A
Hourly fuel usage at maximum plant production capacity (specify units/hr)	200 Gallons/per hour	200 Gallons/per hour
Projected maximum annual fuel usage (units/yr)	50,000 Gallons/per hr	50,000 Gallons/per hr

5. Permit Requirements:

All conditions of the General ACDP apply to stationary and portable plants, unless they are listed below. These permit conditions apply only to plants located in certain areas of the state and new plants. For each permit condition listed below, indicate whether the condition applies to your plant by writing "yes" or "no" in the appropriate column. Your answers should be based on the plant's current location. The applicability of these permit conditions may change when the plant moves to a new location. The permittee must comply with all location-specific permit conditions, regardless of the answers indicated below.

Permit condition	Applicability question:	Applies? (yes/no)
2.1.a	Were any of the equipment or processes installed on or before June 1, 1970 and is the plant operated outside of all special control areas at all times? (yes/no)	No
2.1.b	Were any of the equipment or processes installed after June 1, 1970 or could the plant be operated inside of a special control area at any time? (yes/no)	Yes
2.1.c	Is the plant operated in Clackamas, Columbia, Multnomah, or Washington Counties at any time? (yes/no)	No
2.2.a	Were any of the equipment or processes installed on or before June 1, 1970? (yes/no)	No
2.2.b	Were any of the equipment or processes installed after June 1, 1970? (yes/no)	Yes
2.2.c & 7.9	Was the asphalt plant constructed, modified, or reconstructed after June 11, 1973? (yes/no)	Yes
2.2.d	Is the plant operated outside of all special control areas? (yes/no)	Yes
2.2.e	Is the plant operated inside of a special control area? (yes/no)	No
2.6.a.i	Is ASTM Grade 1 distillate oil burned in any of the equipment? (yes/no)	No
2.6.a.ii	Is ASTM Grade 2 distillate oil burned in any of the equipment? (yes/no)	No
2.6.b	Could used oil be burned in any of the equipment? (yes/no)	No
2.7	Is recycled asphalt (RAP) used? (yes/no)	Yes
3.2, 3.3, 4.2, and 5.5	Is the plant operated in the Medford-Ashland AQMA? (yes/no)	No
5.1.a	Is this a new or existing plant beginning operations in Oregon? (yes/no)	Yes
5.1.b.i	Has there been a compliance source test performed within the last 5 years? (yes/no)	No
5.1.b.ii	Is the answer to 5.1.b.i "no"? (yes/no)	Yes 0
5.2	Is the answer to 2.6.a.i, 2.6.a.ii, or 2.6.b "yes"? (yes/no)	No
7.4	Is this a new plant? (yes/no)	No
7.5	Is this a portable plant? (yes/no)	Yes

4. Maximum Projected Pollutant Emissions: Determine the maximum projected annual pollutant emissions for the equipment used at the plant.

a. Batch Plants: N/A

Emissions device type or activity	Maximum Projected Annual Production	Pollutant	Emission Factor (EF)	Emission factor units	Emissions (tons/yr)
natural gas fired		PM – w/baghouse	0.042	lb/ton of production	0
		PM_{10} – w/baghouse	0.027	lb/ton of production	0
		PM – w/scrubber	0.14	lb/ton of production	0
		PM_{10} – w/scrubber	0.034	lb/ton of production	0
		SO_2	0.0046	lb/ton of production	0
		NO_X	0.025	lb/ton of production	0
		CO	0.14	lb/ton of production	0
		VOC	0.0082	lb/ton of production	0
oil fired		PM – w/baghouse	0.042	lb/ton of production	0
		PM_{10} – w/baghouse	0.027	lb/ton of production	0
		PM – w/scrubber	0.14	lb/ton of production	0
		PM_{10} – w/scrubber	0.034	lb/ton of production	0
		SO_2	0.088	lb/ton of production	0
		NO_X	0.12	lb/ton of production	0
		CO	0.14	lb/ton of production	0
		VOC	0.0082	lb/ton of production	0

b. Drum Plants

Emissions device type or activity	Maximum Projected Annual Production	Pollutant	Emission Factor (EF)	Emission factor units	Emissions (tons/yr)
natural gas fired	40,000 Tons	PM – w/baghouse	0.033	lb/ton of production	0 .66
		PM_{10} – w/baghouse	0.023	lb/ton of production	0 .46
		PM – w/scrubber	0.045	lb/ton of production	0 N/A
		PM_{10} – w/scrubber	0.027	lb/ton of production	0 N/A
		SO_2	0.0034	lb/ton of production	0 .07
		NO_X	0.026	lb/ton of production	0 .52
		CO	0.07	lb/ton of production	0 1.40
		VOC	0.032	lb/ton of production	0 .64
oil fired		PM – w/baghouse	0.033	lb/ton of production	0
		PM_{10} – w/baghouse	0.023	lb/ton of production	0
		PM – w/scrubber	0.045	lb/ton of production	0
		PM_{10} – w/scrubber	0.027	lb/ton of production	0
		SO_2	0.011	lb/ton of production	0
		NO_X	0.055	lb/ton of production	0
		CO	0.07	lb/ton of production	0
		VOC	0.032	lb/ton of production	0

c. Power Generators:

Emissions device type or activity	Maximum Projected Annual Fuel Usage	Pollutant	Emission Factor (EF)	Emission factor units	Emissions (tons/yr)
Generator(s)	50,000 Gallons	PM/PM_{10}	42.5	lb/1000 gallon of fuel burned	0 1.06
		SO_2	39.7	lb/1000 gallon of fuel burned	0 .99
		NO_x	604	lb/1000 gallon of fuel burned	0 15.10
		CO	130	lb/1000 gallon of fuel burned	0 3.25
		VOC	49.3	lb/1000 gallon of fuel burned	0 1.23

Print Form

ASPHALT PLANTS
ASSIGNMENT TO GENERAL AIR CONTAMINANT DISCHARGE PERMITS

FORM AQGP-107
ANSWER SHEET

Source Category Description:

Asphaltic concrete paving plant, stationary or portable, and associated ancillary activities, including power generators.

1. Qualifications: For each qualification statement listed below, answer "yes" or "no" in the far right column.

a.	Do the operations meet the description provided above?	Yes
b.	Are there any other activities identified in OAR 340-216-0020, Table 1?	Yes-Rock Crusher Permit#37-0361
c.	Are there any other activities not described above that cause air pollutant emissions?	Yes-Rock Crusher
d.	Is the facility currently in compliance with DEQ regulations?	Yes
e.	Have there been any violations in the last 5 years?	No
f.	If there have been violations, have they been resolved?	N/A
g.	Does the facility have the proper land use approvals? (For new sources, a Land Use Compatibility Statement (LUCS) must be attached to the application.)	Yes-On File
h.	Will the actual emissions be less than the permit limits?	Yes

2. Plant Information:

a.	Type of plant (batch mix or drum mix)?	Drum Mix
b.	Portable plant (yes or no)?	Yes
c.	Manufacturer of plant	Gencor
d.	Date the plant was manufactured	1998
e.	Date the plant began or will begin operations	August 30, 2013
f.	Design production capacity (tons/hr)	150 tons/hr
g.	Maximum projected annual production (tons/yr)	40,000 tons/yr
h.	Type of pollution control device (i.e., baghouse, wet scrubber, venturi scrubber)	Baghouse
i.	Rated pollution control device efficiency (%)	
j.	Projected operating schedule (hours per day)	10 hrs/per day
k.	Projected operating schedule (days per week)	5 days/per week
l.	Projected operating schedule (weeks per year)	40 weeks/per year
m.	Projected operating schedule (hours per year)	2000 hrs/per year
n.	Will recycled asphalt (RAP) be used as a component of hot mix production (yes or no)?	Yes
o.	If RAP is used, what will be the maximum amount used as a percentage of asphalt production (%)?	20%
p.	Will power generators be used at any time to run the plant (yes or no)? If yes, complete section 3.	Yes

3. Power Generator Information:

	Generator 1	Generator 2	Generator 3
Manufacturer			
Model number			
Serial number			
Rated design output (kWh)	650 KWH	100 KWH	
Installation Date	2013	2013	
Season or year-round?	Season	Season	
Months per year	9	9	
Projected hours/day	10hrs/day	10 hrs/day	
Projected maximum days/week	5 days/Week	5 days/Week	
Projected maximum weeks/year	40 Weeks/Yr	40 Weeks/Yr	
Primary fuel	Diesel	Diesel	
Back-up fuel	Propane	Propane	

4. Fuel Information:

Generator Fuel Usage Information	Primary Fuel	Back-up Fuel
Type/grade of fuel	Diesel	Liquid Propane
Average sulfur content (% by wt.)	Less .5 %	N/A
Hourly fuel usage at maximum plant production capacity (specify units/hr)	200 Gallons	200 Gallons
Projected maximum annual fuel usage (units/yr)	50,000 Gallons	50,000 Gallons

5. Permit Requirements:

All conditions of the General ACDP apply to stationary and portable plants, unless they are listed below. These permit conditions apply only to plants located in certain areas of the state and new plants. For each permit condition listed below, indicate whether the condition applies to your plant by writing "yes" or "no" in the appropriate column. Your answers should be based on the plant's current location. The applicability of these permit conditions may change when the plant moves to a new location. The permittee must comply with all location-specific permit conditions, regardless of the answers indicated below.

Permit condition	Applicability question:	Applies? (yes/no)
2.1.a	Were any of the equipment or processes installed on or before June 1, 1970 and is the plant operated outside of all special control areas at all times? (yes/no)	No
2.1.b	Were any of the equipment or processes installed after June 1, 1970 or could the plant be operated inside of a special control area at any time? (yes/no)	Yes
2.1.c	Is the plant operated in Clackamas, Columbia, Multnomah, or Washington Counties at any time? (yes/no)	No
2.2.a	Were any of the equipment or processes installed on or before June 1, 1970? (yes/no)	No
2.2.b	Were any of the equipment or processes installed after June 1, 1970? (yes/no)	Yes
2.2.c & 7.9	Was the asphalt plant constructed, modified, or reconstructed after June 11, 1973? (yes/no)	Yes
2.2.d	Is the plant operated outside of all special control areas? (yes/no)	Yes
2.2.e	Is the plant operated inside of a special control area? (yes/no)	No
2.6.a.i	Is ASTM Grade 1 distillate oil burned in any of the equipment? (yes/no)	No
2.6.a.ii	Is ASTM Grade 2 distillate oil burned in any of the equipment? (yes/no)	No
2.6.b	Could used oil be burned in any of the equipment? (yes/no)	No
2.7	Is recycled asphalt (RAP) used? (yes/no)	Yes
3.2, 3.3, 4.2, and 5.5	Is the plant operated in the Medford-Ashland AQMA? (yes/no)	No
5.1.a	Is this a new or existing plant beginning operations in Oregon? (yes/no)	Yes
5.1.b.i	Has there been a compliance source test performed within the last 5 years? (yes/no)	No
5.1.b.ii	Is the answer to 5.1.b.i "no"? (yes/no)	Yes 0
5.2	Is the answer to 2.6.a.i, 2.6.a.ii, or 2.6.b "yes"? (yes/no)	No
7.4	Is this a new plant? (yes/no)	No
7.5	Is this a portable plant? (yes/no)	Yes

4. Maximum Projected Pollutant Emissions: Determine the maximum projected annual pollutant emissions for the equipment used at the plant.

a. Batch Plants: N/A

Emissions device type or activity	Maximum Projected Annual Production	Pollutant	Emission Factor (EF)	Emission factor units	Emissions (tons/yr)
natural gas fired		PM – w/baghouse	0.042	lb/ton of production	0
		PM_{10} – w/baghouse	0.027	lb/ton of production	0
		PM – w/scrubber	0.14	lb/ton of production	0
		PM_{10} – w/scrubber	0.034	lb/ton of production	0
		SO_2	0.0046	lb/ton of production	0
		NO_X	0.025	lb/ton of production	0
		CO	0.14	lb/ton of production	0
		VOC	0.0082	lb/ton of production	0
oil fired		PM – w/baghouse	0.042	lb/ton of production	0
		PM_{10} – w/baghouse	0.027	lb/ton of production	0
		PM – w/scrubber	0.14	lb/ton of production	0
		PM_{10} – w/scrubber	0.034	lb/ton of production	0
		SO_2	0.088	lb/ton of production	0
		NO_X	0.12	lb/ton of production	0
		CO	0.14	lb/ton of production	0
		VOC	0.0082	lb/ton of production	0

ASPHALT PLANT INFORMATION

Facility Name: Humbert Asphalt, Inc. Permit Number:

Plant Information

1.	Portable plant? (yes/no)	Yes
2.	Date installed at current location	August 30th, 2013
3.	Manufacturer and date manufactured	Gencor 1998
4.	Type of plant (e.g, batch plant or drum mixer):	Drum Mixer
5.	Recycled asphalt used? (yes/no) If "yes", give %	Yes 20%
6.	Plant electrical power supply (e.g., on-site generator or electric service company). If generators are used, complete form AQ211.	Generator

Projected Operating Schedule

7. Hours of operation:

	Hours/day	Days/week	Weeks/year	Total hours/year
Primary schedule	10 hrs/Day	5 days/Week	40 weeks/Year	2,000
Secondary schedule	8 hrs/Day	5 days/Week	40 weeks/Year	

Production Information

8.	Design capacity (tons/hour):	150 tons/hour
9.	Projected maximum tons/hour	150 tons/hour
10.	Projected maximum tons/year	40,000 tons/year

Fuel Usage Information

11. Fuel usage

	Primary Fuel	Backup Fuel
a. Type/grade of fuel	Liquid Propane	Diesel
b. Capacity hourly consumption (specify units)	200 gallons/hour	200 gallons/hour
c. Projected maximum annual consumption	50,000 gallons/year	50,000 gallons/Year

Dust Control Information

12. You will be required to control dust at the plant site, including dust from asphalt manufacture, receipt, movement, and loading of materials, and dust from interior and access roads. Describe how you will accomplish this.

By using a water truck

Waste Process Water

13.	A permit to discharge and/or store process wastewater may be required. Do you have, or have you applied for such a permit from DEQ? (yes/no)	N/A
	If "no", have you contacted your Region's water quality section? (yes/no)	Yes

BAGHOUSE
CONTROL DEVICE INFORMATION

AQ304
ANSWER SHEET

Facility Name: Humbert Asphalt, Inc.

Permit Number:

1.	Control Device ID			
2.	Process/Device(s) Controlled			
3.	Year installed			
4.	Manufacturer/Model No.			
5.	Control Efficiency(%)			
6.	Type of cleaning mechanism and frequency			
7.	Design inlet gas flow rate (acfm)			
8.	Number of bags			
9.	Design air-to-cloth ratio			
10.	Design pressure drop (inches of water)			
11.	Inlet gas pretreatment? (yes/no) If yes, list control device ID and complete a separate control device form			

1.) Serial # 150 Tons/30K 66440-98-3A

2.) Asphalt Plant Exhaust Gas

3.) 2013

4.) Gencor 330-BCS

5.) 99.96 % (Measured n parts per million)
Particle size (4) microns + larger/ 15% Opacity)

6.) Pulse jetted filter bags with compressed air @ (100 PSI) Intermittently every 40 sec by timer.

7.) 30,000 CFM / 900 FPM Velocity

8.) 432 bags

9.) 7 to 1 Air to Cloth

10.) 3" / 12 At Inlet - 9" At Outlet

11.) None

State of Oregon Department of Environmental Quality

Plant Site Emissions Detail Sheet
Current/Future Operations

Form AQ402
Answer Sheet

Print Form

Complete one form to describe emissions from all emissions points at the facility during the pending permit term. Emissions data provided in the form may be used by DEQ to establish the pollutant-specific Plant Site Emission Limits (PSELs) for the facility. The owner/operator should estimate the annual emissions reported on this form by taking into consideration the *highest annual emissions* likely to be reached during the coming permit term, given any increases in production/operation that might take place during that period. If additional space is required complete as many copies of the answer sheet as needed.

Use the first table below to calculate the PSEL for all pollutants, except $PM_{2.5}$. Use the second table to calculate the PSEL for $PM_{2.5}$. To calculate a PSEL for GHGs, see the greenhouse gas calculator at http://www.deq.state.or.us/aq/permit/acdp/simple.htm.

Instructions for the first Table:

For *each* emissions point at the facility provide the following information. If the owner/operator indicated in a Device/Process form that a new device or process will be brought on-line during the pending permit term, then include the associated emissions on this form. Identify the new emissions point(s) on this form and estimate the associated emissions.

1. Identify the emissions point.
2. Provide the short-term production rate for the emissions point. The short-term production rate should reflect the highest anticipated production rate for the upcoming permit term for the emissions point. Usually, an *hourly* time period is specified on which to base the production rate (e.g., pounds per hour). An alternate time period (e.g., daily production) may be used if the longer time period is more appropriate to the operation of the emissions point in question. Be sure to specify the appropriate unit of measure (e.g., pounds per day) for the short-term production rate.
3. Provide the projected maximum annual production rate for the emissions point. Specify the unit of measure (e.g., tons per year).
4. Identify the pollutant(s) emitted by this emissions point. List the pollutants under column 4 on the answer sheet—one pollutant per row. (If, for example, the emissions point in column 1 emitted three pollutants, then the emissions point overall would require three rows of the table.
5. Provide the short-term emission factor, for the pollutant in column 4 from the emissions point in column 1. Specify the appropriate unit of measure as per the time period specified in column 2. If emissions are calculated using a mass balance procedure, leave this column blank and attach all supporting documentation for the material balance calculation, including accounting for pollutants retained in the product, disposed of as waste, or captured and collected or destroyed by a pollution control device.
6. Provide the annual emission factor. If emissions are calculated using a mass balance procedure, see item 5 above.
7. Identify the references for the emission factors identified in columns 5 and 6 (e.g., AP-42, DEQ). Use MB for material balance procedures.
8. Calculate the total short-term emissions in *pounds per unit of time*, as per the time period identified in column 2. If emissions are estimated using a material balance procedure, just enter the total here.
9. Calculate the total annual emissions, in *tons per year*. If emissions are estimated using a material balance procedure, just enter the total here.

If the owner/operator has identified more than one emissions point on this form for a given pollutant, then *summarize* the data *by pollutant*, by adding a category of TOTAL in column 1, and completing columns 4, 8, and 9.

The example at the bottom of the first form is for a rock crusher that has a design capacity of 200 tons per hour and a projected maximum annual production of 400,000 tons per year. Particulate matter (PM) emissions are calculated using the DEQ emission factor on a short term (hourly) and annual basis.
$PM_{2.5}$ PSEL

Instructions for the second Table:

See "Instructions for Determining the $PM_{2.5}$ Plant Site Emission Limit and Netting Basis" at http://www.deq.state.or.us/aq/permit/acdp/series400.htm for more detail on calculating the $PM_{2.5}$ PSEL. The second Table applies to existing sources of $PM_{2.5}$ emissions as of 05/01/11 and should be included in the first permit application required after 05/01/11. Subsequent changes to the $PM_{2.5}$ PSEL should be requested using the first Table.

For *each* emissions point at the facility provide the following information.

1. Enter a device or process in the first column.
2. Enter the PM_{10} PSEL in the second column.
3. Enter the $PM_{2.5}$ fraction of PM_{10} emissions in the third column
4. Provide the reference for the $PM_{2.5}$ fraction (e.g., AP-42, DEQ, Source Test, etc.). Provide further explanation if the factor was not obtained from documents readily available to DEQ.
5. Calculate the annual emissions by multiplying the PM_{10} PSEL by the $PM_{2.5}$ fraction.
6. Enter the next device or process and repeat the steps for devices/processes outlined above.
7. Total the PM_{10} and $PM_{2.5}$ PSELs at the bottom of columns 2 and 5.

Facility Name: Humbert Asphalt, Inc. *Permit Number:* _____

1. Emissions Point	Production Rates: 2. Short-term (Specify units)	Production Rates: 3. Annual (Specify units)	4. Pollutant	Emissions Factors: 5. Short-term	Emissions Factors: 6. Long-term	Emissions Factors: 7. Reference(s)	Emissions: 8. Short-term (Specify units)	Emissions: 9. Annual (tons/year)
Asphalt Plant-Stack		40,000 tons	PM		.33	DEQ		.66
		40,000 tons	PM10		.23	DEQ		.46
		40,000 tons	SO2		.0034	DEQ		.07
		40,000 tons	NOx		.026	DEQ		.52
		40,000 tons	CO		.07	DEQ		1.40
		40,000 tons	VOC		.032	DEQ		.64
Generator Diesel		50,000 Gal	PM/PM10		4.25	DEQ		1.06
		50,000 Gal	SO2		39.7	DEQ		.99
		50,000 Gal	NOx		604	DEQ		15.10
		50,000 Gal	CO		130	DEQ		3.25
		50,000 Gal	VOC		49.3	DEQ		1.23
Generator Porpane		50,000 Gal	PM/PM10		10	DEQ		.25
		50,000 Gal	SO2		0.6	DEQ		.02
		50,000 Gal	NOx		2840	DEQ		71.00
		50,000 Gal	CO		399	DEQ		9.98
		50,000 Gal	VOC		116	DEQ		2.90
Example	200 tons of rock/hr	400,000 tons	PM	0.04 lb/ton	0.04 lb/ton	DEQ	8.0 lb/hr	8.0

Facility: Humbert Asphalt, Inc.

1. Device/process ID	2. PM10 PSEL (tons/year)	3. PM2.5 fraction (f)	4. Reference	5. PM2.5 PSEL (tons/yr)
Asphalt Plant	14 tons/Yr	100%	DEQ	9 tons/Yr
Generator Diesel	14 tons/Yr	100%	DEQ	9 tons/Yr
Generator Propane	14 tons/Yr	100%	DEQ	9 tons/Yr
TOTAL				

All PM10 & PM 2.5 are Identical

Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Eastern Region - Pendleton Office
700 SE Emigrant Ave, Suite 330
Pendleton, OR 97801
Phone: (541) 276-4063
Fax: (541) 278-0168
Relay Service: 711

October 17, 2013

Umatilla County Planning Department
Attn: Richard Jennings, Senior Planner
216 SE 4th Ave.
Pendleton, OR 97801

RE: Appeal of Conditional Use Permit No. #C 1226-13
Humbert Asphalt's Portable Asphalt Plant
General ACDP No. 37-0176-G-01
AQ – Umatilla County

Dear Mr. Jennings:

Thank you for sending me the Appeal Notice for the referenced Conditional Use Permit for the DEQ-permitted portable asphalt plant anticipating operation near the Birch Creek Road/Reeser Road Intersection near Milton-Freewater. You pointed out several areas in the document referring to Umatilla County, in lieu of DEQ, as being the primary regulatory authority for air quality and water quality issues and concerns. You requested clarification from me that DEQ is the primary regulatory authority.

Oregon Revised Statutes (ORS) 468.035 defines the functions of DEQ. Although the functions of DEQ are numerous, the ORS defines DEQ as the primary regulatory authority for air and water quality issues that could transpire from the operation of an asphalt plant. However, it is not DEQ's function to make land use compatibility determinations.

As you may be aware, local authorities may request and may be approved delegation of certain DEQ Programs. A good example of this is the creation and operation of the Lane County Regional Air Pollution Agency (LRAPA). Additionally, many of Oregon counties including Wasco, Sherman, Lake, and Harney Counties have negotiated contracts with DEQ and are presently operating their own septic system regulatory programs. To date Umatilla County has not requested any contract or delegation from DEQ to implement and operate any of our programs.

If I can be of further assistance, please feel free to call me at (541) 278-4626. As always, it is a pleasure working with you. We strive to assist you in any way we can.

Sincerely,

Thomas G. Hack

Thomas G. Hack
Air Quality Program
Eastern Region – Pendleton

cc (e-copy only): Mr. Mark Bailey, AQ Manager, ER-Bend
Mr. Dan Humbert
Mr. Robert Berry

United States
Environmental Protection
Agency

Office Of Air Quality
Planning And Standards
Research Triangle Park, NC 27711

EPA-454/R-00-019
December 2000

Air

EPA

HOT MIX ASPHALT PLANTS

EMISSION ASSESSMENT REPORT

This page intentionally left blank.

EPA 454/R-00-019

HOT MIX ASPHALT PLANTS

EMISSION ASSESSMENT REPORT

This document was prepared by:

Emissions Monitoring and Analysis Division
Office of Air Quality Planning and Standards
United States Environmental Protection Agency
Research Triangle Park, NC

and under contract, by:

Midwest Research Institute
Kansas City, MO and Cary, NC
EPA Contract Number 68D-98-027

and

Eastern Research Group, Inc.
1600 Perimeter Park
P.O. Box 2010
Moorisville, NC
EPA Contract Number 68-D7-0068

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

December 2000

This page intentionally left blank.

DISCLAIMER

The information in this document has been funded by the Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency (EPA) under contract 68-D-98-027 to Midwest Research Institute and under contract 68-D-70-068 to Eastern Research Group, Inc. The EPA has made additions and revisions to the information submitted by the contractors. This final report has been subjected to the Agency's review, and it has been approved for publication as an EPA document. Mention of trade names or commercial products is not intended to constitute endorsement or recommendation for use.

PREFACE

This report was produced by the Source Measurement Technology Group of EPA's Emissions Measurement Center located in Research Triangle Park, NC. It is one of a series of twelve reports prepared to document an EPA program to characterize emissions to the air from hot mix asphalt plants. These twelve reports and their associated EPA document numbers and publication dates are:

Document Title	EPA Document Number	Publication Date
Hot Mix Asphalt Plants Emission Assessment Report	EPA 454/R-00-019	December 2000
Hot Mix Asphalt Plants Kiln Dryer Stack Instrumental Methods Testing Asphalt Plant A, Cary, North Carolina	EPA 454/R-00-020	April 2000
Hot Mix Asphalt Plants Kiln Dryer Stack Manual Methods Testing Asphalt Plant A, Cary, North Carolina		
Volume 1 of 2	EPA 454/R-00-021a	April 2000
Volume 2 of 2	EPA 454/R-00-021b	April 2000
Hot Mix Asphalt Plants Kiln Dryer Stack Instrumental Methods Testing Asphalt Plant B, Clayton, North Carolina	EPA 454/R-00-022	April 2000
Hot Mix Asphalt Plants Kiln Dryer Stack Manual Methods Testing Asphalt Plant B, Clayton, North Carolina		
Volume 1 of 2	EPA 454/R-00-023a	April 2000
Volume 2 of 2	EPA 454/R-00-023b	April 2000
Hot Mix Asphalt Plants Truck Loading and Silo Filling Instrumental Methods Testing Asphalt Plant C, Los Angeles, California	EPA 454/R-00-024	May 2000
Hot Mix Asphalt Plants Truck Loading and Silo Filling Manual Methods Testing Asphalt Plant C, Los Angeles, California		
Volume 1 of 8	EPA 454/R-00-025a	May 2000
Volume 2 of 8	EPA 454/R-00-025b	May 2000
Volume 3 of 8	EPA 454/R-00-025c	May 2000
Volume 4 of 8	EPA 454/R-00-025d	May 2000
Volume 5 of 8	EPA 454/R-00-025e	May 2000
Volume 6 of 8	EPA 454/R-00-025f	May 2000
Volume 7 of 8	EPA 454/R-00-025g	May 2000
Volume 8 of 8	EPA 454/R-00-025h	May 2000
Hot Mix Asphalt Plants Technical Systems Audit of Testing at Asphalt Plant C Asphalt Plant C, Los Angeles, California	EPA 454/R-00-026	May 2000

Document Title	EPA Document Number	Publication Date
Hot Mix Asphalt Plants Truck Loading Instrumental Methods Testing Asphalt Plant D, Barre, Massachusetts	EPA 454/R-00-027	May 2000
Hot Mix Asphalt Plants Truck Loading Manual Methods Testing Asphalt Plant D, Barre, Massachusetts	EPA 454/R-00-028	May 2000
Hot Mix Asphalt Plants Response to Comments on Testing Program for Asphalt Plants C and D	EPA 454/R-00-029	May 2000
Hot Mix Asphalt Plants Stakeholders Opinions Report	EPA 454/R-00-030	

These documents, including this Emissions Assessment Report document, are available for downloading, on CD-ROM and in paper.

Downloads can be made from:

http//www.epa.gov/ttn/emc/asphalt.html

Copies of the CD ROM can be requested by mail at:

Emission Measurement Center, MD-19
US Environmental Protection Agency
Research Triangle Park, NC 27711

Paper copies of the reports can be obtained from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Phone orders 1-800-553-6847 or (703) 605-6000; FAX orders (703) 605-6900
http://www.ntis.gov/products/environment.htm

ACKNOWLEDGMENTS

Many individuals contributed to the development of this report. Ron Myers of the Emission Measurement Center's Source Measurement Technology Group (SMTG), Brian Shrager, Scott Klamm, Richard Marinshaw, and Amy Marshall of Midwest Research Institute (MRI), are the primary authors of the report. Bob McConnell of EPA's Region I office, David Mobley, Acting Director of EPA's Emissions Monitoring and Analysis Division, Bill Lamason, Mike Toney, Gary McAlister, and Candace Sorrell of EPA's Emission Measurement Center, Ron Ryan and Dennis Beauregard of EPA's Emission Factor and Inventory Group, Laura Autry of EPA's Air Quality Trends Analysis Group, participated in the review. We also acknowledge the contributions of numerous reviewers and advisors from PES, MRI and EPA.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

ASTM	American Society of Testing and Materials
Btu	British thermal unit
CH_4	methane
CO	carbon monoxide (as measured by EPA Method 10)
CO_2	carbon dioxide (as measured by EPA Method 3)
EPA	Environmental Protection Agency
HAP	hazardous air pollutant (listed in or pursuant to section 112(b) of the 1990 Clean Air Act Amendments)
HMA	hot mix asphalt
NO_x	nitrogen oxides (as measured by EPA Method 7)
PAH	polycyclic aromatic hydrocarbon (a class of HAPs)
PM	particulate matter (as measured by EPA Methods 5 or 17)
PM-10	particulate matter less than 10 microns in diameter
PM-2.5	particulate matter less than 2.5 microns in diameter
RAP	reclaimed asphalt pavement
RTFOT	rolling thin film oven test (ASTM Method D2872-88)
SCC	source classification code
SO_2	sulfur dioxide (as measured by EPA Methods 6 or 8)
SO_x	sulfur oxides
TOC	total organic compounds (as measured by EPA Method 25A)
VOC	volatile organic compound (refer to 40 CFR 51.100); VOC is TOC plus formaldehyde, less methane, ethane, acetone, and other chemicals listed as negligibly photochemically reactive.

This page intentionally left blank.

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

This report presents an assessment of emissions from hot mix asphalt (HMA) manufacturing facilities. Included in the report is a description of the manufacturing process and the emissions associated with HMA production; the procedures for developing emission factors and emission inventories for the HMA industry; and estimated annual emissions for typical HMA facilities.

1.2 OVERVIEW OF HMA INDUSTRY

Hot mix asphalt is used primarily as paving material and consists of a mixture of aggregate and liquid asphalt cement, which are heated and mixed in measured quantities. Hot mix asphalt facilities can be broadly classified as either drum mix plants or batch mix plants, according to the process by which the raw materials are mixed. In a batch mix plant, the aggregate is dried first, then transferred to a mixer where it is mixed with the liquid asphalt. In a drum mix plant, a rotary dryer serves to dry the aggregate and mix it with the liquid asphalt cement. After mixing, the HMA generally is transferred to a storage bin or silo, where it is stored temporarily. From the silo, the HMA is emptied into haul trucks, which transport the material to the job site. Figure 1 presents a diagram of a typical batch mix HMA plant; a typical drum mix HMA plant is depicted in Figure 2.

In 1996, approximately 500 million tons of HMA were produced at the 3,600 (estimated) active asphalt plants in the United States. Of these 3,600 plants, approximately 2,300 are batch plants, and 1,300 are drum mix plants. The total 1996 HMA production from batch and drum mix plants is estimated at about 240 million tons and 260 million tons, respectively. Based on these figures, an average batch mix plant produces approximately 100,000 tons of HMA annually, and an average drum mix plant produces about 200,000 tons of HMA per year. Natural gas fuel is used to produce 70 to 90 percent of the HMA. The remainder of the HMA is produced using oil, propane, waste oil, or other fuels.

The primary emission sources associated with HMA production are the dryers, hot bins, and mixers, which emit particulate matter (PM) and a variety of gaseous pollutants. Other emission sources found at HMA plants include storage silos, which temporarily hold the HMA; truck load-out operations, in which the HMA is loaded into trucks for hauling to the job site; liquid asphalt storage tanks; hot oil heaters, which are used to heat the asphalt storage tanks; and yard emissions, which consist of fugitive emissions from the HMA in truck beds. Emissions also result from vehicular traffic on paved and unpaved roads, aggregate storage and handling operations, and vehicle exhaust.

The PM emissions associated with HMA production include the criteria pollutants PM-10 (PM less than 10 micrometers in aerodynamic diameter) and PM-2.5, hazardous air pollutant (HAP) metals, and HAP organic compounds. The gaseous emissions associated with HMA production include the criteria pollutants sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC), as well as volatile HAP organic compounds.

1.3 DEVELOPMENT AND USE OF EMISSION FACTORS FOR HMA FACILITIES

An emission factor relates the quantity (weight) of pollutants emitted to a unit of activity of the source. Emission factors for the HMA industry are generally determined in units of pounds of pollutant emitted per ton of HMA produced. These emission factors typically are used to estimate area-wide

emissions for a large number of facilities and emissions for specific facilities where source-specific emissions data are not available or where source testing is cost prohibitive.

To develop emission factors for the HMA industry, data from more than 390 emission test reports and other documents on the industry were compiled and reviewed. Through a careful screening process, the documents that were determined to be unusable for emission factor development were excluded from further evaluation. The remaining reports were compiled by plant type, emission source, pollutant, and emission control. For each emission test, emission factors were calculated by dividing the measured emission rates by the HMA production rate measured at the time of the emission test. These emission factors were then grouped by source, pollutant, and control device, and an average emission factor was calculated for each group.

Emission factors can be used to estimate emissions from one or more HMA facilities by multiplying the emission factor by the HMA production rate. For example, the emission factor for CO emissions from a natural gas-fired drum mix dryer is 0.13 pounds per ton (lb/ton). If the dryer produces 200,000 tons per year (ton/yr), the estimated CO emissions during that period would be: 200,000 ton/yr × 0.13 lb/ton = 26,000 lb/yr or 13 tons/yr.

1.4 ESTIMATED ANNUAL EMISSIONS FROM TYPICAL HMA FACILITIES

Annual emissions for a facility can be estimated by summing up the emissions from each emission source over the course of a year. Annual emissions for a specific source can be estimated by multiplying the annual throughput or production rate for that source by its corresponding emission factors. For an HMA facility, annual emissions can be estimated by multiplying the annual HMA production rate by the emission factors for each type of source at the facility. Table 1 summarizes annual emissions for a typical HMA batch mix plant, and Table 2 summarizes annual emissions for a typical drum mix HMA plant. The estimates presented in these tables account for all of the identified emission sources at each type of facility. For both batch mix plants (Table 1) and drum mix plants (Table 2), the estimate includes emissions from the dryer/mixer, load-out operations, asphalt storage, yard (fugitive emissions from loaded trucks), diesel exhaust, paved and unpaved road dust, and aggregate processing (screening, conveyor transfer, and reclaimed asphalt pavement [RAP] crushing). Additionally, for the drum mix plant (Table 2), the estimate includes emissions from silo filling operations. Estimates are presented for criteria pollutants (pollutants for which national ambient air quality standards have been developed) and hazardous air pollutants (HAPs, as defined in section 112(b) of the 1990 Clean Air Act Amendments). Criteria pollutants include PM-10, VOC, CO, SO_2, and NO_x. Emissions for three classes of HAPs are presented in Tables 1 and 2: polycyclic aromatic hydrocarbons (PAHs), volatile organic HAPs, and metal HAPs. The emissions were estimated using the emission factors developed for the HMA industry and the following assumptions:

- Dryers are fueled with natural gas or No. 2 fuel oil (estimates are presented for both types). It is estimated that between 70 and 90 percent of HMA plants use natural gas, although some HMA plants use fuel oil as an alternative to natural gas.
- Dryer emissions are controlled with fabric filters.
- PM emissions from load-out and silo filling are entirely PM-10.
- Annual HMA production rate for a typical batch mix plant is 100,000 ton/yr.
- Annual HMA production rate for a typical drum mix plant is 200,000 ton/yr.
- The typical HMA plant has two 18,000-gallon asphalt storage tanks.

As indicated in Table 1, a typical batch mix plant using a No. 2 fuel oil-fired dryer emits over 74,000 lb/yr of criteria pollutants, and a typical batch mix plant using a natural gas-fired dryer emits over

56,000 lb/yr of criteria pollutants, of which approximately 41,000 lb/yr are CO and approximately 10,700 lb/yr are PM-10; emissions of other criteria pollutants range from about 500 to about 12,000 lb/yr. The same plant would emit about 770 lb/yr of HAPs. A typical drum mix plant using a No. 2 fuel oil-fired dryer emits about 83,000 lb/yr of criteria pollutants, and a typical drum mix plant using a natural gas-fired dryer emits around 75,000 lb/yr of criteria pollutants, of which approximately 28,000 lb/yr are CO, about 10,000 lb/yr are VOC, and around 31,000 lb/yr are PM-10. A typical drum mix plant emits from 1,300 to 2,000 lb/yr of HAPs, depending on the fuel used in the dryer.

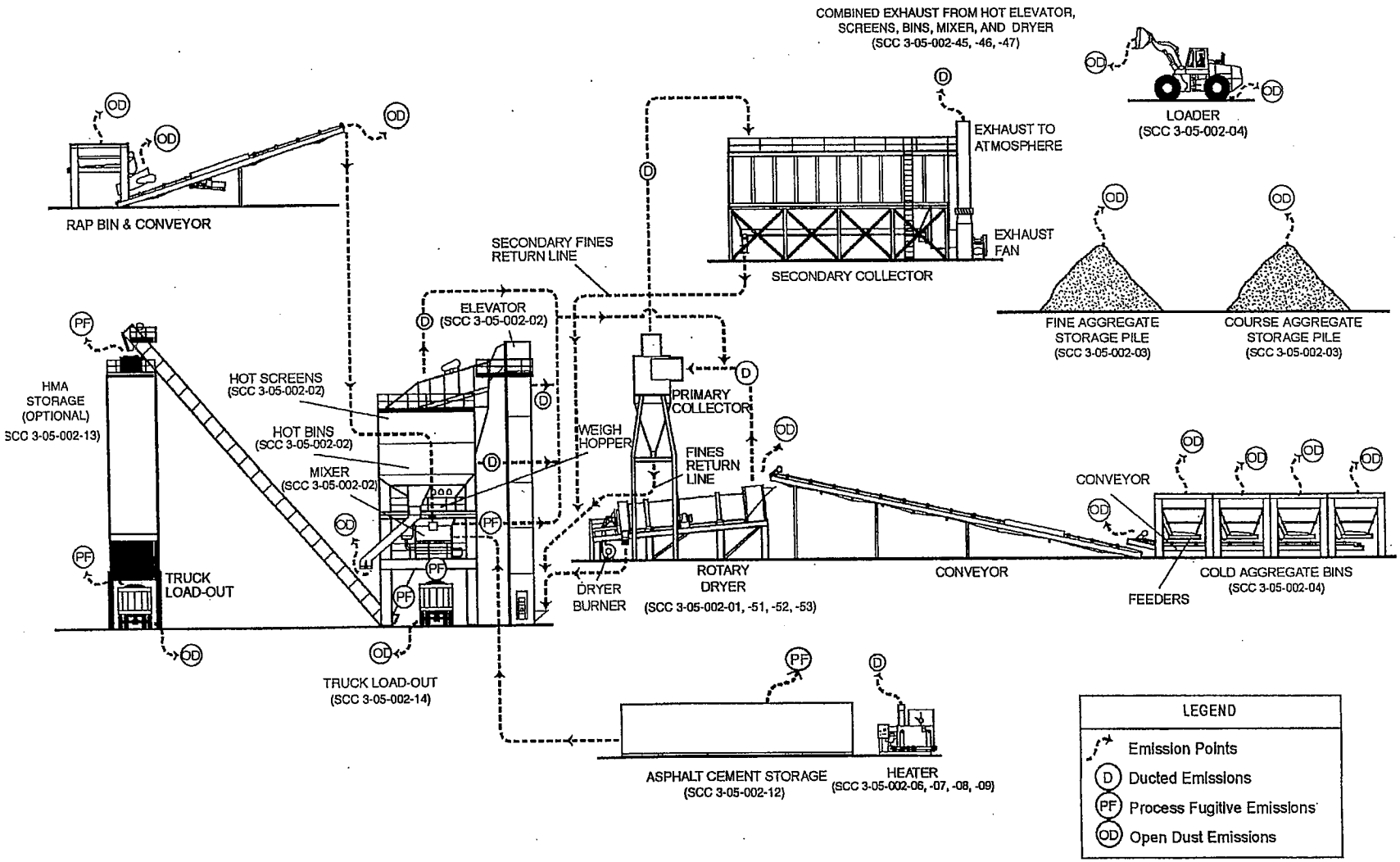


Figure 1. General process flow diagram for batch mix asphalt plants (source classification codes in parentheses).

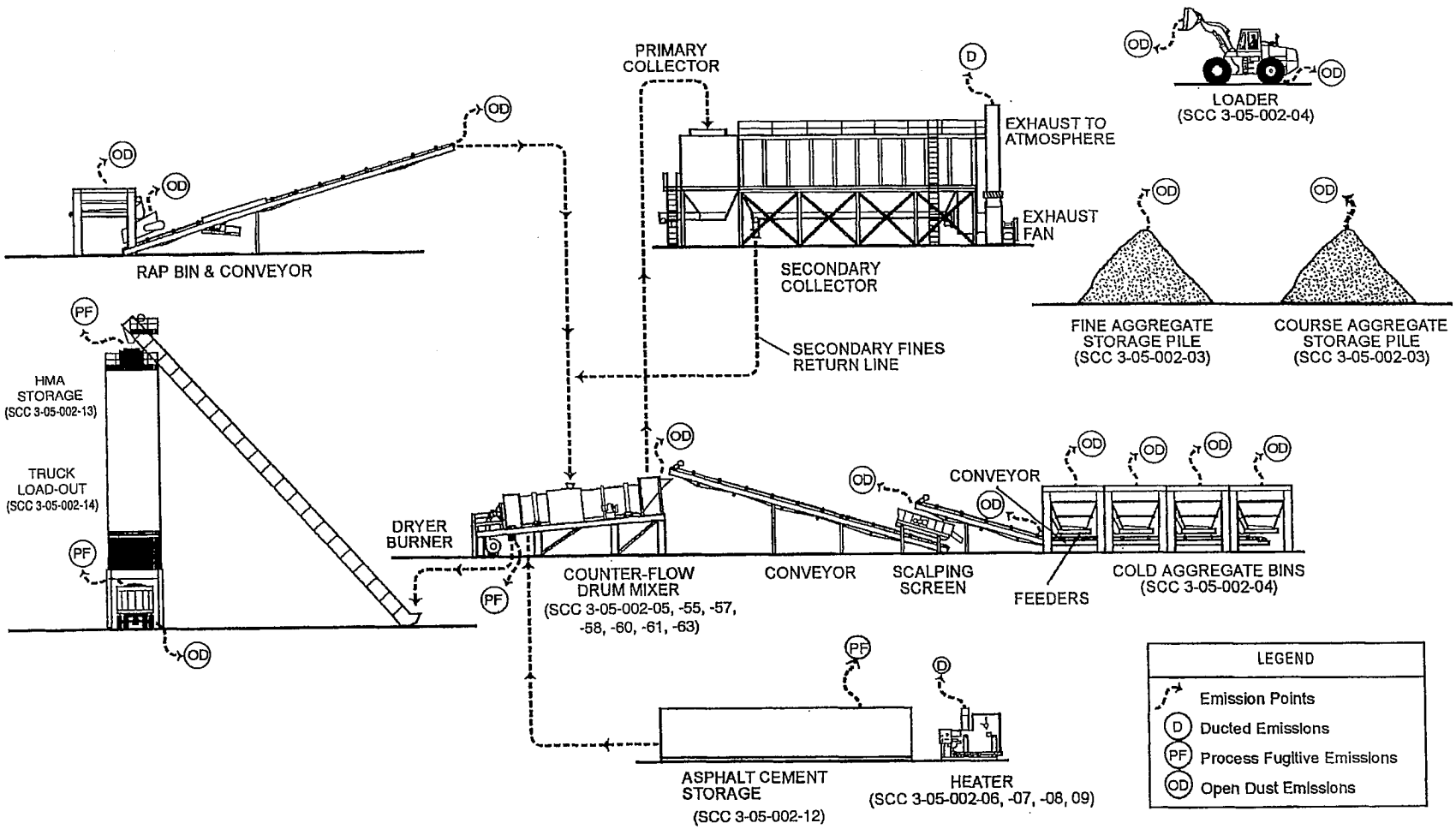


Figure 2. General process flow diagram for counter-flow drum mix asphalt plants (source classification codes in parentheses).

TABLE 1. ESTIMATED ANNUAL EMISSIONS FOR A TYPICAL BATCH MIX HMA FACILITY[a]

Pollutant	Annual emissions by source, pounds per year								
	Mobile sources (diesel exhaust)	Material handling and road dust	No. 2 fuel oil-fired dryer, hot screens, and mixer[b]	Natural gas-fired dryer, hot screens, and mixer[c]	Load-out[d]	Asphalt Storage[e]	Yard[f]	Total[g] (oil-fired)	Total[g] (gas-fired)
Criteria air pollutants									
Particulate matter less than 10 micrometers (PM-10)	46	7,900	2,700	2,700	52			10,700	10,700
Volatile organic compounds (VOC)	100		820	820	391	32	110	1,500	1,500
Carbon monoxide (CO)	700		40,000	40,000	135	3	35	41,000	41,000
Sulfur dioxide (SO_2)	22		8,800	460				8,800	480
Nitrogen oxides (NO_x)	380		12,000	2,500				12,400	2,900
Hazardous air pollutants (HAPs)									
Polycyclic aromatic hydrocarbons (PAHs)	0.035		11	11	2.0	0.12		13	13
Phenol					0.40			0.40	0.40
Volatile HAPs	1.9		751	751	6.2	140	1.6	760	760
Metal HAPs			1.4	1.4				1.4	1.4
Total HAPs[g]	1.9		760	760	8.6	140	1.6	770	770

[a] Based on an annual HMA production rate of 100,000 tons per year.
[b] Between 10 and 30 percent of the HMA is produced using fuel oil.
[c] Between 70 and 90 percent of the HMA is produced using natural gas.
[d] Loading of HMA into haul trucks.
[e] Includes emissions from oil-fired hot oil heaters.
[f] Fugitive emissions from loaded trucks prior to departure to the job site.
[g] Total expressed using two significant figures.

TABLE 2. ESTIMATED ANNUAL EMISSIONS FOR A TYPICAL DRUM MIX HMA FACILITY[a]

Pollutant	Annual emissions by source, pounds per year									
	Mobile sources (diesel exhaust)	Material handling and road dust	No. 2 fuel oil-fired dryer[b]	Natural gas-fired dryer[c]	Load-out[d]	Silo filling[e]	Asphalt storage[f]	Yard[g]	Total[h] (oil-fired)	Total[h] (gas-fired)
Criteria air pollutants										
Particulate matter less than 10 micrometers (PM-10)	220	26,000	4,600	4,600	104	117			31,000	31,000
Volatile organic compounds (VOC)	190		6,400	6,400	782	2,440	64	220	10,000	10,000
Carbon monoxide (CO)	1,200		26,000	26,000	270	236	6	72	28,000	28,000
Sulfur dioxide (SO_2)	26		2,200	680					2,200	710
Nitrogen oxides (NO_x)	560		11,000	5,200					12,000	5,800
Hazardous air pollutants (HAPs)										
Polycyclic aromatic hydrocarbons (PAHs)	0.13		176	37	4.0	5.8	0.12		190	50
Phenol					0.80				0.80	0.80
Volatile HAPs	6.6		1,560	1,020	12.4	31	140	3.3	1,800	1,200
Metal HAPs			19	16					19	16
Total HAPs[h]	6.7		1,800	1,100	17	37	140	3.3	2,000	1,300

[a] Based on an annual HMA production rate of 200,000 tons per year.
[b] Between 10 and 30 percent of the HMA is produced using fuel oil.
[c] Between 70 and 90 percent of the HMA is produced using natural gas.
[d] Loading of HMA into haul trucks
[e] Filling of temporary storage silo prior to load-out.
[f] Includes emissions from oil-fired hot oil heaters.
[g] Fugitive emissions from loaded trucks prior to departure to the job site.
[h] Total expressed using two significant figures.

This page intentionally left blank.

2. ASSESSMENT OF HOT MIX ASPHALT EMISSIONS

This section presents the results of an assessment of emissions from HMA manufacturing. An overview of the HMA industry and process operations is provided first (Section 2.1). Section 2.2 summarizes the methodology used to develop emission factors for the HMA industry. Section 2.3 identifies other sections of AP-42 that apply to HMA plants. An overview of the process for conducting an emission inventory is presented in Section 2.4, and Section 2.5 presents estimates of annual emissions from typical HMA facilities.

2.1 INDUSTRY OVERVIEW AND PROCESS DESCRIPTION[1]

Hot mix asphalt paving materials are a mixture of well-graded, high-quality aggregate and liquid asphalt cement, which is heated and mixed in measured quantities. The aggregate often includes RAP. Aggregate and RAP (if used) constitute over 92 percent by weight of the total mixture. Aside from the amount and grade of asphalt cement used, mix characteristics are determined by the relative amounts and types of aggregate and RAP used. A certain percentage of fine aggregate (less than 74 micrometers [μm] in physical diameter) is required for the production of good quality HMA.

Hot mix asphalt plants can be classified by their mixing operation as one of the following: (1) batch mix plants, (2) continuous mix (mix outside dryer drum) plants, (3) parallel flow drum mix plants, and (4) counterflow drum mix plants. An HMA plant can be constructed as a permanent plant, a skid-mounted (easily relocated) plant, or a portable plant. All plants can have RAP processing capabilities.

In 1996, approximately 500 million tons of HMA were produced at the 3,600 (estimated) active asphalt plants in the United States. Of these 3,600 plants, approximately 2,300 are batch plants, 1,000 are parallel flow drum mix plants, and 300 are counterflow drum mix plants. The total 1996 HMA production from batch and drum mix plants is estimated at about 250 million tons and 260 million tons, respectively. About 85 percent of new plants being constructed today are of the counterflow drum mix design, while batch plants and parallel flow drum mix plants account for 10 percent and 5 percent respectively. Continuous mix plants represent a very small fraction of the plants in use ($\leq$0.5 percent) and, therefore, are not discussed further. While most HMA plants have the capability to use both fuel oil and natural gas, it is estimated that between 70 and 90 percent of the HMA in the U. S. is produced using natural gas. The process operations at typical batch mix and drum mix plants are described in the following paragraphs.

2.1.1 Batch Mix Plants[2]

Processing begins as the aggregate is hauled from onsite storage piles and is placed in the appropriate hoppers of the cold feed unit. The material is metered from the hoppers onto a conveyer belt and is transported into a rotary dryer (typically gas- or oil-fired). As the hot aggregate leaves the dryer, it drops into a bucket elevator, is transferred to a set of vibrating screens, then separated into as many as four different grades (sizes), and dropped into "hot" bins according to size. At newer facilities, RAP may be transferred to a separate heated storage bin. At the same time, liquid asphalt cement is pumped from a heated storage tank to an asphalt bucket, where it is weighed to achieve the desired aggregate-to-asphalt cement ratio in the final mix. To control the aggregate size distribution in the final batch mix, the operator transfers material from various hot bins (and RAP bins, if used) to a weigh hopper until the desired mix

---

[1] See Appendix A, Section 11.1.1, and Appendix B, Section 2.1, for more detailed information.

[2] See Appendix A, Section 11.1.1.1, and Appendix B, Section 2.2.1, for more detailed information.

and weight are obtained. The aggregate from the weigh hopper is dropped into the mixer (pug mill) and dry-mixed for 6 to 10 seconds. The liquid asphalt is then dropped into the pug mill where it is mixed for an additional period of time. At older plants, RAP typically is conveyed directly to the pug mill from a storage hopper and combined with the hot aggregate. Total mixing time usually is less than 60 seconds. Then, the hot mix is conveyed to a hot storage silo or is dropped directly into a truck and hauled to the job site. Figure 1 depicts a typical batch mix plant.

2.1.2 Drum Mix Plants[3]

This process is a continuous mixing type process. The major difference between this process and the batch process is that the dryer is used not only to dry the material but also to mix the heated and dried aggregates with the liquid asphalt cement. In a parallel flow drum mixer, the aggregate is introduced to the drum at the burner end. As the drum rotates, the aggregate, as well as the combustion products from the burner, move toward the other end of the drum in parallel. Liquid asphalt cement is introduced in the mixing zone midway down the drum in a lower temperature zone, along with any RAP and PM from collectors. In a counterflow drum mixer, the material flow in the drum is opposite or counterflow to the direction of exhaust gases. In addition, the liquid asphalt cement mixing zone is located behind the burner flame zone so as to remove the materials from direct contact with hot exhaust gases. After mixing, the mixture is discharged at the end of the drum and is conveyed to either a surge bin or HMA storage silos. Figure 2 illustrates a counterflow drum mix plant.

In a parallel flow mixer, the exhaust gases also exit the end of the drum and pass on to the collection system. Parallel flow drum mixers have an advantage, in that mixing in the discharge end of the drum captures a substantial portion of the aggregate dust, therefore lowering the load on the downstream PM collection equipment. For this reason, most parallel flow drum mixers are followed only by primary collection equipment (usually a baghouse or venturi scrubber). However, because the mixing of aggregate and liquid asphalt cement occurs in the hot combustion product flow, organic emissions (gaseous and liquid aerosol) may be greater than in other processes.

Counterflow drum mix plants likely will have organic stack emissions (gaseous and liquid aerosol) that are lower than parallel flow drum mix plants because the liquid asphalt cement, virgin aggregate, and RAP are mixed in a zone removed from the exhaust gas stream. A counterflow drum mix plant normally can process RAP at ratios up to 50 percent with little or no observed effect upon emissions.

2.1.3 Recycle Processes[4]

Reclaimed asphalt pavement significantly reduces the amount of new aggregate and asphalt cement needed to produce HMA. In the reclamation process, old asphalt pavement is removed from the road base. This material is then transported to the plant, and is crushed and screened to the appropriate size for further processing. The paving material then is heated and mixed with new aggregate (if applicable), and the proper amount of new asphalt cement is added to produce HMA that meets the quality requirements of the customer.

---

[3] See Appendix A, Sections 11.1.1.2 and 11.1.1.3, and Appendix B, Sections 2.2.2 and 2.2.3, for more detailed information.

[4] See Appendix A, Section 11.1.1.4, and Appendix B, Section 2.2.4, for more detailed information.

2.1.4 Emissions and Controls[5]

Hot mix asphalt plants have two major categories of emissions: ducted sources (those vented to the atmosphere through some type of stack, vent, or pipe), and fugitive sources (those not confined to ducts and vents but emitted directly from the source to the ambient air). Dryers are the most significant ducted sources of emissions from both batch mix and drum mix HMA plants. Emissions from these sources consist of water (as steam evaporated from the aggregate); PM; products of combustion (carbon dioxide [CO_2], NO_x, and sulfur oxides [SO_x]); CO; and small amounts of organic compounds of various species (including VOC, methane [CH_4], and HAPs). The CO and organic compound emissions result from incomplete combustion of the fuel and also are released from the heated asphalt.

At batch mix plants, other potential process sources include the hot-side conveying, classifying, and mixing equipment, which are vented to either the primary dust collector (along with the dryer gas) or to a separate dust collection system. These emissions are mostly aggregate dust, but they also may contain gaseous organic compounds, CO, and a fine aerosol of condensed organic particles. This organic aerosol is created by the condensation of gas into particles during cooling of organic vapors volatilized from the asphalt cement in the mixer. The amount of organic aerosol produced depends to a large extent on the temperature of the asphalt cement and aggregate entering the mixer. Organic vapor and its associated aerosol also are emitted directly to the atmosphere as process fugitives during truck load-out, from the bed of the truck itself during transport to the job site, and from the asphalt storage tank. Both the low molecular weight organic compounds and the higher weight organic aerosol may contain small amounts of HAP. The ducted emissions from the heated asphalt storage tanks may include gaseous and aerosol organic compounds and combustion products from the tank heater.

At most HMA facilities, fabric filters are used to control emissions from dryers. Other controls used include mechanical collectors and scrubbers. Emissions from aggregate handling and transfer typically are controlled with fabric filters or scrubbers. Large diameter cyclones and settling chambers also are used as product recovery devices. The material collected in those devices is recycled back into the process.

There also are a number of fugitive dust sources associated with batch mix HMA plants, including vehicular traffic generating fugitive dust on paved and unpaved roads, aggregate material handling, and other aggregate processing operations.

2.2 EMISSION FACTOR DEVELOPMENT FOR AP-42 SECTION 11.1, HOT MIX ASPHALT PLANTS

A detailed description of how the emission factors were developed for the HMA industry is provided in Section 4 of Appendix B. The following paragraphs summarize the methodology used.

To develop emission factors for the HMA industry, data from about 390 emission test reports and other documents on the industry were compiled and reviewed (a complete list of these references is provided following Section 4 of Appendix B). The majority of these reports documented measurements of emissions from batch plant dryer/mixers and drum plant dryers. Through a careful screening process, 35 of the reports were determined to be unusable for emission factor development and were excluded from further evaluation. About 350 reports remained and were compiled by plant type, emission source, pollutant, and emission control. These emission factors were then grouped by source, pollutant, and

---

[5] See Appendix A, Section 11.1.2, and Appendix B, Section 2.3, for more detailed information.

control device, and an average emission factor was calculated for each group. Table 3 presents a matrix of all of the sources and pollutants for which emission factors are presented in AP-42 (Appendix A).

While the particulate, CO_2, CO, and TOC emission factors are based on over 100 tests, most of the remaining criteria pollutant emission factors are based on between 5 and 10 tests. A few HAP emission factors are based on more than 5 tests, although the majority are based on between 2 and 5 tests. Information on the supporting data for specific emission factors and the quality rating assigned to the emission factor is included in the section or table in Appendices A and B as indicated in Table 4. Column four of Table 4 references the tables in Appendix A that present the emission factors and quality ratings. Column five of Table 4 references the paragraphs in Appendix B that discuss the basis for the emission factors developed for all of the sources and pollutants. Column six of Table 4 references the tables in Appendix B that present the emission factors and the individual data used to develop the emission factors. Generally, the amount of supporting data is typical of many AP-42 sections. However, the amount of data supporting the particulate, CO_2, CO, and TOC emission factors is greater than most AP-42 sections. The following paragraphs summarize the procedures followed to develop the emission factors for HMA facilities.

2.2.1 Batch Mix and Drum Mix Dryers

The usable data on batch mix and drum mix plant dryer emissions were compiled according to source type, emission control, and pollutant. Data on fuel types, the percentage of RAP used in the mix, and the process operating rate (e.g., dryer production rate) also were recorded. The quality of the emission data was evaluated with respect to the level of documentation in the report, the test methods used, the number of test runs, and any reported problems with the sampling procedures or the operation of the source during the test period. On the basis of this evaluation, data ratings of A, B, C, or D were assigned to each data set. Specific procedures used to evaluate the data are specified in *Procedures for Preparing Emission Factor Documents* (EPA-454/R-95-015).

For each emission test, an emission factor also was calculated for each pollutant sampled. These test-specific emission factors then were grouped according to source type, emission control device, pollutant, and, in the case of combustion sources, fuel type. At this stage in the process, D-rated data sets were discarded, provided there were higher quality data available for that particular group (i.e., that specific combination of source, control, fuel, and pollutant). In addition, where there were data from multiple tests on the same specific emission source, the test-specific emission factors were averaged to yield a source-specific emission factor. In subsequent calculations, this source-specific emission factor was used.

A statistical analysis of the data for batch and drum mix dryers was performed to determine the effects of RAP content, fuel type, production rate on emissions of several pollutants. The analysis showed no strong correlation between these parameters and emission factors. Details on the statistical analysis can be found in Section 4.3 of Appendix B.

To develop emission factors, the mean of the test-specific emission factors was calculated for each of the emission factor groups discussed above. In some cases, the data for two or more groups were combined and an overall mean emission factor was calculated. For example, if the data indicated that fuel type had no apparent effect on emissions of a specific pollutant, fuel type was ignored and all of the data for that source type and pollutant were combined. The final step in developing emission factors is to assign a quality rating of A, B, C, D, or E. Quality ratings are a function primarily of the number of data points

from which a specific emission factor is calculated. Additional information on the rating system used is discussed in Section 3 of Appendix B.

2.2.2 Hot Oil Heaters

For hot oil heaters, only a single test report for an oil-fired hot oil heater was available. The report was reviewed and the emission factors compiled using the procedures described previously. Appendix B, Section 4.2.4.2, provides a detailed description of how these emission factors were developed. It should be noted that most hot oil heaters are gas-fired, and the emission factors developed from the available data would not necessarily be representative of gas-fired heaters.

2.2.3 Truck Load-Out

Truck load-out emissions were developed from two emission tests sponsored by the U. S. Environmental Protection Agency (EPA) (Appendix B References 355 and 356). In designing, performing and evaluating these two tests, EPA was involved with a number of groups. The groups included citizens, State and local health agencies, State and local air pollution control agencies, and industry associations. These different groups provided input on the selection of facilities for emissions testing, the design of the test program, reviewed the individual site-specific test plans, observed emissions testing, commented on the draft test reports and provided suggestions for analysis of the data to develop emission factors. The procedures used to develop emission factors generally were the same as those described above. However, additional steps were taken to ensure the quality and consistency of the data and the representativeness and universality of the emission factors developed from the data. For example, two quality assurance scientists from Research Triangle Institute were employed to independently audit the test. These additional steps are summarized below. Detailed explanations of the methodology used are provided in Section 4.4 of Appendix B.

At one of the facilities the sampling area was enclosed but did not meet EPA requirements for a total enclosure. Consequently, the capture efficiency was quantitatively estimated and the data were corrected for capture efficiency.

At one facility, emissions due to diesel truck operation could not be segregated from emissions due to truck load-out. Therefore, background concentrations also were sampled. To account for background levels of various pollutants emitted from truck operation, the as-measured background concentrations were subtracted from the capture efficiency corrected load-out emission concentrations. For the most part, values were treated as zero if the background concentration exceeded the capture-efficiency-adjusted run concentration.

Because the asphalt types and temperatures for the two facilities differed, adjustments also were made to normalize the emission data. To account for differences in the volatility of the liquid asphalts used, samples of asphalt were collected during the emission tests and analyzed by ASTM Method D 2872-88, *Effects of Heat and Air on a Moving Film of Asphalt (Rolling Thin Film Oven Test - RTFOT)* to determine the "loss-on-heating" values for the asphalts. Additional loss-on-heating data also were obtained from several State departments of transportation laboratories in order to determine a common RTFOT value to use as a default in those situations where no historical information is available. Based upon the RTFOT data collected and the desire to select a default which encourages the use of site-specific data, a default of -0.5 percent was selected as a default value for use in the predictive emission factor equations developed from the data.

To account for differences in the load-out temperatures of the two facilities the data were adjusted using the Clausius-Clapeyron equation, which relates vapor pressure and temperature of a substance. This equation and the asphalt laboratory data provide a mechanism to normalize the emissions to a temperature of 325°F, which is the maximum midpoint load-out temperature recommended by the Asphalt Pavement Environmental Council's Best Practices Guide dated March 2000.

Using the adjusted data and the temperature and volatility relationship described above, separate predictive emission factor equations were developed for emissions of total PM, organic PM, total organic compounds (TOC), and CO from drum mix and batch mix load-out operations. Additionally, adjusted data for a variety of HAP's were used to develop ratios of the HAP pollutant to either organic PM or TOC (speciation profiles). These speciation profiles are applicable to load-out emissions and yard emissions.

2.2.4 Silo Filling

Silo filling emission factors were developed from one of the emission tests described in the previous paragraphs for load-out emissions (Appendix B Reference 355). These data also were collected and evaluated with stakeholder involvement. Additionally, the same basic methodology described in the previous paragraphs for load-out emissions was used to adjust the data on emissions from silo filling operations. Predictive emission factor equations also were developed for total PM, organic PM, TOC, and CO. A detailed explanation of the methodology used to develop these equations is provided in Section 4.4.4 of Appendix B. Speciation profiles for silo filling emissions were also developed using the methodology described for load-out emissions. The speciation profiles from silo filling are applicable to asphalt storage tank emissions.

2.2.5 Asphalt Storage Tanks

To estimate emissions from heated organic liquid storage tanks, the methodologies described in Chapter 7 of AP-42 and the TANKS software are generally used. The emissions from these types of tanks depend on the contents of the tank, the volume of gas vented, and the operating temperature range of the liquid in the tank. Emissions during the filling of these tanks (working loss) are governed by the saturation concentration of the liquid stored in the tank and the volume of gas displaced by the addition of liquid to the tank. Emissions during other periods (breathing losses) are governed by the saturation concentration of the liquid stored in the tank and the changes in the volume of the gas caused by temperature variations. Although vapor pressure information on paving asphalt is not available to allow the use of the TANKS program without additional information, information was available from the silo filling test report to infer emissions during the filling of the asphalt storage tank and, by extension, the vapor pressure characteristics of paving asphalt at the typical operating temperatures. Using these data, input values for Antoine's equation and liquid and vapor molecular weight were developed for use with the TANKS program to calculate working and breathing losses for asphalt storage tanks. A detailed explanation of the methodology used to develop these values is presented in Section 4.4.5 of Appendix B.

2.2.6 Yard Emissions

At one of the EPA-sponsored emission tests described in the previous paragraphs for load-out emissions (Appendix B Reference 355), data also were collected on fugitive emissions from loaded trucks as they sat in the yard prior to departure for the job site. As with the other data from this reference, these data were evaluated with stakeholder involvement. The data obtained were fitted to a power function in order to develop an equation for these yard emissions as a function of time. A specific emission factor for cumulative emissions over an 8-minute period (which represents the maximum time represented by the

data) was calculated using the power function equation developed from the emission data. A detailed explanation of the methodology used to develop the equations and the emission factor is provided in Section 4.4.6 of Appendix B.

2.3 OTHER APPLICABLE AP-42 SECTIONS

Emission factors for other generic sources associated with HMA facilities can be found in other sections of AP-42 (http://www.epa.gov/ttn/chief/ap42/index.html). As discussed above, methodologies for estimating emissions from asphalt storage tanks can be found in Chapter 7 of AP-42. Methods for estimating fugitive dust emissions from vehicular traffic are presented in AP-42 Chapter 13 (Sections 13.2.1 and 13.2.2). Material handling emissions and storage pile emissions are addressed in AP-42 Chapter 11 (Section 11.19.2) and Chapter 13 (Section 13.2.4). Emission factors for truck exhaust are provided in AP-42 Volume II: Mobile Sources (http://www.epa.gov/oms/ap42.htm).

To calculate the material handling and mobile source emission estimates presented in Tables 1 and 2 of this report, suitable emission factors for these material handling and mobile sources were determined. The following paragraphs describe the basis for the emission factors that were used:

- Receipt of new aggregate – Used equation from AP-42 Section 13.2.4, assuming an average moisture content of 1.5 percent and an average wind speed of 10 miles per hour (mph). The resulting PM-10 emission factor is 0.0041 lb/ton of new aggregate. The resulting PM-2.5 emission factor is 0.0013 lb/ton of new aggregate.
- Transfer of aggregate from storage to conveyor belt or between conveyor belts – Used controlled emission factor from AP-42 Section 11.19.2. The PM-10 emission factor is 0.000048 lb/ton of new aggregate.
- Screening of aggregate – Used controlled emission factor from AP-42 Section 11.19.2. PM-10 emission factor is 0.00084 lb/ton of new aggregate.
- RAP crushing – Used controlled tertiary crushing emission factor from AP-42 Section 11.19.2. PM-10 emission factor is 0.00059 lb/ton of new aggregate.
- Paved road dust emissions – Used paved roads equation from AP-42 Section 13.2.1, assuming an average vehicle weight of 22 tons and a road silt content of 3 grams per square meter. The resulting PM-10 emission factor is 0.016 lb per vehicle mile traveled. The resulting PM-2.5 emission factor is 0.0040 lb per vehicle mile traveled.
- Unpaved road dust emissions – Used unpaved roads equation from AP-42 Section 13.2.2, assuming an average vehicle weight of 6 tons, a road silt percentage of 10 percent, a surface moisture content of 0.7 percent. The resulting PM-10 emission factor is 2.04 lb per vehicle mile traveled. The resulting PM-2.5 emission factor is 0.29 lb per vehicle mile traveled.
- Diesel exhaust emissions – Used heavy duty diesel truck emission factors for idling and for an average speed of 10 mph with a 250 brake horsepower engine. The diesel engines get 10 miles per gallon at 10 mph and burn 1 gallon per hour (gal/hr) of fuel at idle. The sulfur content of diesel fuel is 0.05 percent. At idle, the emissions factors for diesel engines are: VOC - 0.208 grams per minute (g/min) (0.00046 pound per minute [lb/min]), CO - 1.57 g/min (0.0035 lb/min), NO_x - 0.917 g/min (0.0020 lb/ min), SO_2 - 0.157s pounds per gallon of fuel (lb/gal) (where s is fuel sulfur content) and PM - 0.043 g/min (0.000095 lb/min). When traveling at an average speed of 10 mph, the emission factors for diesel engines are: VOC - 3.18 grams per mile (g/mile) (0.0070 pounds per mile [lb/mile]), CO - 18.82 g/mile (0.041 lb/mile), NO_x - 8.50 g/mile (0.019 lb/mile), SO_2 - 0.157s lb/gal fuel (where s is fuel sulfur content), and PM - 0.1011 grams per brake horsepower hour (0.00022 pounds per horsepower hour). For organic HAP emissions - Used medium duty diesel truck emission

factors from article by Schauer, et. al., in Environmental Science & Technology of May 15, 1999. The volatile HAP emission factors presented were 0.084 grams per kilometer (g/km) (0.00030 lb/mile) and 0.0016 g/km (0.0000057 lb/mile) for PAHs.

The ducted and process fugitive emissions estimates presented in Tables 1, 2, 7, and 11 are based on the following additional assumptions:

- 84,800 ton/yr of new aggregate for batch mix plant.
- 10,000 ton/yr of recycled pavement for batch plant.
- 1.25 million gallons (5,200 tons) of asphalt for batch plant.
- 150,900 ton/yr of new aggregate for drum mix plant.
- 40,000 ton/yr of recycled pavement for drum mix plant.
- 2.5 million gallons (10,400 tons) of asphalt for drum mix plant.
- Two 18,000-gallon asphalt storage tanks.
- Five open conveyor transfer points for new aggregate.
- Front end loader travel over unpaved roads of 0.25 mile per ton of RAP used.
- Vehicle travel over paved roads of 1.5 miles per 25 tons of HMA produced.
- Vehicle idling time of 128,000 min (an average of 4 trucks in line during the average 8-minute load-out time) for batch plant.
- Vehicle idling time of 72,000 min (an average of 6 trucks in line during the average 1.5-minute load-out time) for drum mix plant.

2.4 EMISSION INVENTORY FOR TYPICAL HOT MIX ASPHALT PLANTS

To perform an emission inventory for a typical HMA plant, the first step is to identify the types of emission sources and to count the total number of each type of source. The next step is to identify the best emission estimation tools, which include: (1) facility-specific emissions test data; (2) source-specific emission factors; (3) other types of source-specific data, such as mass balance data; (4) emission factors for similar sources; (5) emission factors for sources that are believed to be somewhat similar to the source being considered; and (6) engineering estimates. After selecting appropriate emission estimation tools, activity factors, such as production rates, should be determined for each source so that emissions can be estimated for a specified period of time. The emissions over the specified period of time for each source and pollutant then are summed to complete the emission inventory. Appendix C provides more detailed information on procedures for performing an emission inventory at an HMA plant.

2.5 EMISSION ESTIMATES FOR TYPICAL HOT MIX ASPHALT PLANTS

Tables 1 and 2 present annual estimates of emissions of criteria pollutants and HAPs for typical batch mix and drum mix HMA plants, respectively. The estimates presented in these tables account for the most significant emission sources at each type of facility. Tables 5 through 12 present more detailed annual emission estimates for typical batch and drum mix HMA plants. Table 5 summarizes the estimated emissions from a typical batch mix plant dryer, hot screens, and mixer. Included in the table are estimates for criteria pollutants as well as specific PAHs, volatile HAPs, and metal HAPs for which emission factors were developed. Estimated annual criteria pollutant, PAH and volatile HAP emissions from typical batch mix plant load-out operations and asphalt storage tank are summarized in Tables 6 and 7. Tables 8, 9, 10, and 11 summarize the estimated annual emissions from a typical drum mix plant dryer, load-out operations, silo filling operations, and asphalt storage tank respectively. These tables includes estimates for criteria pollutants, PAHs, volatile HAPs, and metal HAPs for which emission factors were developed. Finally, Table 12 presents estimates of fugitive emissions from loaded trucks (yard emissions) for a typical

batch mix and drum mix plant. The emissions estimates presented in Tables 5 through 12 are based on the emission factors developed for the HMA industry and the following assumptions:

- Batch mix plant and drum mix plant dryers are fueled with either natural gas or fuel oil. It is estimated that between 70 and 90 percent of HMA plants use natural gas, although some HMA plants use fuel oil as an alternative to natural gas. As shown in Tables 5 and 8, fuel oil-fired mixers and dryers have higher emissions of SO_2, NO_x, and some HAPs.
- Batch mix plant dryer, hot screens, and mixer and drum mix plant dryer emissions are controlled with fabric filters.
- PM emissions from load-out and silo filling are entirely PM-10. (However, the organic portion of these emissions also can be assumed to be PM-2.5. Information is available in AP-42 Appendix B.1, Particle Size Distribution Data and Sized Emission Factors for Selected Sources, for categorizing the inorganic or filterable PM into PM-10 and PM-2.5 fractions.)
- Average asphalt loss on heating is -0.5 percent (asphalt volatility).
- Average HMA load-out temperature is 325°F.
- The typical HMA plant has two asphalt storage tanks that are 50 feet long and 8 feet in diameter. It is estimated that these storage tanks require a total heating capacity of about 200,000 Btu/hr, based on a heat loss of 60 Btu/ft^2 of tank surface area. The asphalt storage tanks are kept at 325°F continuously for the five months the HMA plant operates. As a result, 720 million Btu are used to maintain the temperature of the asphalt in the storage tank. For a gas-fired hot oil heater, 720,000 ft^3 of gas is combusted. For an oil-fired hot oil heater, 5,100 gallons of fuel oil are combusted. It should be noted that this fuel usage is about 3 percent of the fuel used in a typical batch mix plant and 1.6 percent of the fuel used in a typical drum mix plant.

TABLE 3. MATRIX OF EMISSION FACTORS DEVELOPED FOR HMA SOURCES

Plant type	Source	Criteria pollutants	HAPs	Other pollutants
Batch mix	Dryer, hot screens, and mixer	PM-10, NO_x, CO, SO_2, VOC	24 organic HAPs 9 metal HAPs	CO_2 4 other organics 3 other metals
	Hot oil heaters		22 organic HAPs	
	Load-out	PM, CO, VOC,	41 organic HAPs	3 other organics
	Yard emissions	VOC	19 organic HAPs	
Drum mix	Dryer	PM-10, NO_x, CO, SO_2, VOC	58 organic HAPs 11 metal HAPs	CO_2 15 other organics, 6 other metals
	Hot oil heaters		22 organic HAPs	
	Load-out	PM, CO, VOC	41 organic HAPs	3 other organics
	Silo filling	PM, CO, VOC	28 organic HAPs	3 other organics
	Yard emissions	VOC	19 organic HAPs	

TABLE 4. LOCATIONS OF SUPPORTING DATA FOR EMISSION FACTORS

Plant Type	Source	Pollutant	Appendix A Table	Appendix B Section	Appendix B Table
Batch Mix	Dryer, hot screens, mixer	PM-10	11.1-1, 11.1-2	4.2.4.3.1-4.2.4.3.6	4-19
		CO	11.1-5	4.2.4.3.7	4-20
		CO_2	11.1-5	4.2.4.3.8	4-20
		NO_x	11.1-5	4.2.4.3.9	4-20
		SO_2	11.1-5	4.2.4.3.10	4-20
		TOC/VOC/methane	11.1-6	4.2.4.3.11, 4.2.4.3.12	4-20
		Speciated organics	11.1-9	4.2.4.3.12-4.2.4.3.15	4-22
		Trace metals	11.1-11	4.2.4.3.16	4-21
Drum Mix	Dryer/mixer	PM-10	11.1-3, 11.1-4	4.2.4.1.1-4.2.4.1.6	4-14
		CO	11.1-7	4.2.4.1.7	4-15
		CO_2	11.1-7	4.2.4.1.8	4-15
		NO_x	11.1-7	4.2.4.1.9	4-15
		SO_2	11.1-7	4.2.4.1.10	4-15
		TOC/VOC/methane	11.1-8	4.2.4.1.11	4-15
		HCl	11.1-8	4.2.4.1.18	4-17
		Speciated organics	11.1-10	4.2.4.1.12-4.2.4.1.15, 4.2.4.1.19	4-17
		Dioxin/furans	11.1-10	4.2.4.1.17	4-17
		Trace metals	11.1-12	4.2.4.1.16	4-16
Batch or Drum Mix	Hot oil heater	Organic pollutants	11.1-13	4.2.4.2	4-18
	Load-out	PM, organic PM, TOC, CO, speciated organics	11.1-14 11.1-15 11.1-16	4.4.4	4-27 to 4-37, 4-43, 4-44
	Silo filling	PM, organic PM, TOC, CO, speciated organics	11.1-14 11.1-15 11.1-16	4.4.4	4-38 to 4-44
	Asphalt storage	Speciated organics	11.1-15 11.1-16	4.4.5	4-43, 4-44
	Yard emissions	Speciated organics	11.1-15 11.1-16	4.4.6	4-45, 4-46

TABLE 5. ESTIMATED ANNUAL EMISSIONS FOR A TYPICAL BATCH MIX PLANT DRYER, HOT SCREENS, AND MIXER[a]

Pollutant	Oil-fired dryer	Natural gas-fired dryer
	Emissions, lb/yr	
Criteria Pollutants		
PM-10	2,700	2,700
VOC	820	820
CO	40,000	40,000
SO_2	8,800	460
NO_x	12,000	2,500
PAHs (semi-volatile HAPs)		
Naphthalene	3.6	3.6
2-Methylnaphthalene	7.1	7.1
Acenaphthene	0.090	0.090
Acenaphthylene	0.058	0.058
Anthracene	0.021	0.021
Benzo(a)anthracene	0.00046	0.00046
Benzo(a)pyrene	0.000031	0.000031
Benzo(b)fluoranthene	0.00094	0.00094
Benzo(g,h,i)perylene	0.00005	0.00005
Benzo(k)fluoranthene	0.0013	0.0013
Chrysene	0.00038	0.00038
Dibenz(a,h)anthracene	0.0000095	0.0000095
Fluoranthene	0.016	0.016
Fluorene	0.16	0.16
Indendo(1,2,3-cd)pyrene	0.00003	0.00003
Phenanthrene	0.26	0.26
Pyrene	0.0062	0.0062
Total PAHs	11	11
Volatile HAPs		
Acetaldehyde	32	32
Benzene	28	28
Ethylbenzene	220	220
Formaldehyde	74	74
Quinone	27	27
Toluene	100	100
Xylene	270	270
Total Volatile HAPs	751	751
Metal HAPs		
Arsenic	0.046	0.046
Beryllium	0.015	0.015
Cadmium	0.061	0.061
Chromium	0.057	0.057
Lead	0.089	0.089
Manganese	0.69	0.69
Mercury	0.041	0.041
Nickel	0.3	0.3
Selenium	0.049	0.049
Total metal HAPs	1.35	1.35

[a] Dryer, hot screens, and mixer controlled by fabric filter producing 100,000 tons of hot mix asphalt per year. Between 70 and 90 percent of HMA is produced using natural gas; most of the remaining HMA is produced using fuel oil.

TABLE 6. ESTIMATED ANNUAL EMISSIONS FOR TYPICAL BATCH MIX PLANT LOAD-OUT OPERATIONS[a]

Pollutant	Emissions, lb/yr
Criteria Pollutants	
PM-10	52
VOC	391
CO	135
PAHs (semi-volatile HAPs)	
Acenaphthene	0.089
Acenaphthylene	0.0095
Anthracene	0.0239
Benzo(a)anthracene	0.0065
Benzo(b)fluoranthene	0.0026
Benzo(k)fluoranthene	0.00075
Benzo(g,h,i)perylene	0.00065
Benzo(a)pyrene	0.00078
Benzo(e)pyrene	0.0027
Chrysene	0.035
Dibenz(a,h)anthracene	0.00013
Fluoranthene	0.017
Fluorene	0.26
Indeno(1,2,3-cd)pyrene	0.00016
2-Methylnaphthalene	0.81
Naphthalene	0.43
Perylene	0.0075
Phenanthrene	0.28
Pyrene	0.051
Total PAHs	2.02
Other semi-volatile HAPs	
Phenol	0.40
Volatile HAPs	
Benzene	0.22
Bromomethane	0.040
2-Butanone	0.20
Carbon disulfide	0.054
Chloroethane	0.00087
Chloromethane	0.062
Cumene	0.46
Ethylbenzene	1.16
Formaldehyde	0.37
n-Hexane	0.62
Isooctane	0.0075
Methylene chloride	0.00
Methyl tert-butyl ether	0.00
Styrene	0.030
Tetrachloroethene	0.032
Toluene	0.87
1,1,1-Trichloroethane	0.00
Trichloroethene	0.00
Trichlorofluoromethane	0.0054
m-/p-Xylene	1.70
o-Xylene	0.33
Total volatile HAPs	6.18

[a] Uncontrolled emissions from 100,000 tons of hot mix asphalt per year.

TABLE 7. ESTIMATED ANNUAL EMISSIONS FOR TYPICAL BATCH MIX PLANT ASPHALT STORAGE TANK[a]

Pollutant	Emissions, lb/yr
Criteria Pollutants	
PM-10	ND
VOC	32
CO	3
PAHs (semi-volatile HAPs)	
Acenaphthene	0.0027
Acenaphthylene	0.0010
Anthracene	0.00092
Benzo(b)fluoranthene	0.00051
Fluoranthene	0.00022
Fluorene	0.00016
Naphthalene	0.087
Phenanthrene	0.025
Pyrene	0.00016
Total PAHs	0.12
Volatile HAPs	
Benzene	0.010
Bromomethane	0.0016
2-Butanone	0.012
Carbon disulfide	0.0051
Chloroethane	0.0012
Chloromethane	0.0074
Ethylbenzene	0.012
Formaldehyde	140
n-Hexane	0.032
Isooctane	0.000099
Methylene chloride	0.000086
Phenol	0.00
Styrene	0.0017
Toluene	0.020
m-/p-Xylene	0.061
o-Xylene	0.018
Total volatile HAPs	140

[a] Uncontrolled emissions from plant producing 100,000 tons of hot mix asphalt per year. Includes emissions from oil-fired hot oil heaters. All calculated PAH emissions and almost all of the formaldehyde emissions are from the oil-fired hot oil heater.

TABLE 8. ESTIMATED ANNUAL EMISSIONS FOR A TYPICAL DRUM MIX DRYER[a]

Pollutant	No. 2 fuel oil-fired dryer	Natural gas-fired dryer
	Emissions, lb/yr	
Criteria Pollutants		
PM-10	4,600	4,600
VOC	6,400	6,400
CO	26,000	26,000
SO_2	2,200	680
NO_x	11,000	5,200
PAHs (semi-volatile HAPs)		
2-Methylnaphthalene	34	15
Acenaphthene	0.28	0.28
Acenaphthylene	4.4	1.7
Anthracene	0.62	0.044
Benzo(a)anthracene	0.042	0.042
Benzo(a)pyrene	0.0020	0.0020
Benzo(b)fluoranthene	0.020	0.020
Benzo(e)pyrene	0.022	0.022
Benzo(g,h,i)perylene	0.0080	0.0080
Benzo(k)fluoranthene	0.0082	0.0082
Chrysene	0.036	0.036
Fluoranthene	0.12	0.12
Fluorene	2.2	0.76
Indeno(1,2,3-cd)pyrene	0.0014	0.0014
Naphthalene	130	18
Perylene	0.0018	0.0018
Phenanthrene	4.6	1.5
Pyrene	0.60	0.11
Total PAHs	180	37
Volatile HAPs		
Isooctane	8.0	8.0
Hexane	184	180
Benzene	78	78
Ethylbenzene	48	48
Formaldehyde	620	620
Methyl chloroform	9.6	9.6
Toluene	580	30
Xylene	40	40
Total volatile HAPs	1,568	1,020
Metal HAPs		
Lead	3	0.12
Mercury	0.52	0.048
Antimony	0.036	0.036
Arsenic	0.11	0.11
Beryllium	0.000	0.000
Cadmium	0.082	0.082
Chromium	1.1	1.1
Manganese	1.5	1.5
Nickel	12.6	12.6
Selenium	0.070	0.070
Total metal HAPs	19	16

[a] Dryer controlled by fabric filter producing 200,000 tons of hot mix asphalt per year. Between 70 and 90 percent of HMA is produced using natural gas; most of the remaining HMA is produced using fuel oil.

TABLE 9. ESTIMATED ANNUAL EMISSIONS FOR TYPICAL DRUM MIX PLANT LOAD-OUT OPERATIONS[a]

Pollutant	Emissions, lb/yr
Criteria Pollutants	
PM-10	104
VOC	780
CO	270
PAHs (semi-volatile HAPs)	
Acenaphthene	0.177
Acenaphthylene	0.0191
Anthracene	0.0477
Benzo(a)anthracene	0.013
Benzo(b)fluoranthene	0.0052
Benzo(k)fluoranthene	0.0015
Benzo(g,h,i)perylene	0.0013
Benzo(a)pyrene	0.00157
Benzo(e)pyrene	0.0053
Chrysene	0.070
Dibenz(a,h)anthracene	0.00025
Fluoranthene	0.034
Fluorene	0.53
Indeno(1,2,3-cd)pyrene	0.00032
2-Methylnaphthalene	1.62
Naphthalene	0.85
Perylene	0.015
Phenanthrene	0.55
Pyrene	0.10
Total PAHs	4.05
Other semi-volatile HAPs	
Phenol	0.80
Volatile HAPs	
Benzene	0.43
Bromomethane	0.080
2-Butanone	0.41
Carbon disulfide	0.11
Chloroethane	0.0017
Chloromethane	0.12
Cumene	0.91
Ethylbenzene	2.3
Formaldehyde	0.73
n-Hexane	1.25
Isooctane	0.015
Methylene chloride	0.00
Methyl tert-butyl ether	0.00
Styrene	0.06
Tetrachloroethene	0.064
Toluene	1.74
1,1,1-Trichloroethane	0.00
Trichloroethene	0.00
Trichlorofluoromethane	0.011
m-/p-Xylene	3.40
o-Xylene	0.66
Total volatile HAPs	12.35

[a] Uncontrolled emissions from 200,000 tons of hot mix asphalt per year.

TABLE 10. ESTIMATED ANNUAL EMISSIONS FOR TYPICAL DRUM MIX PLANT SILO FILLING OPERATIONS[a]

Pollutant	Emissions, lb/yr
Criteria Pollutants	
PM-10	120
VOC	2,400
CO	240
PAHs (semi-volatile HAPs)	
Acenaphthene	0.24
Acenaphthylene	0.0071
Anthracene	0.066
Benzo(a)anthracene	0.028
Benzo(e)pyrene	0.0048
Chrysene	0.11
Fluoranthene	0.076
Fluorene	0.51
2-Methylnaphthalene	2.7
Naphthalene	0.92
Perylene	0.015
Phenanthrene	0.91
Pyrene	0.22
Total PAHs	5.8
Other semi-volatile HAPs	
Phenol	0.00
Volatile HAPs	
Benzene	0.78
Bromomethane	0.12
2-Butanone	0.95
Carbon disulfide	0.39
Chloroethane	0.095
Chloromethane	0.56
Ethylbenzene	0.93
Formaldehyde	17
n-Hexane	2.4
Isooctane	0.0076
Methylene chloride	0.0066
Styrene	0.13
Toluene	1.5
m-/p-Xylene	4.6
o-Xylene	1.4
Total volatile HAPs	31

[a] Uncontrolled emissions from 200,000 tons of hot mix asphalt per year.

TABLE 11. ESTIMATED ANNUAL EMISSIONS FOR TYPICAL DRUM MIX PLANT ASPHALT STORAGE TANK[a]

Pollutant	Emissions, lb/yr
Criteria Pollutants	
PM-10	ND
VOC	64
CO	6
PAHs (semi-volatile HAPs)	
Acenaphthene	0.0027
Acenaphthylene	0.0010
Anthracene	0.00092
Benzo(b)fluoranthene	0.00051
Fluoranthene	0.00022
Fluorene	0.00016
Naphthalene	0.087
Phenanthrene	0.025
Pyrene	0.00016
Total PAHs	0.12
Volatile HAPs	
Benzene	0.020
Bromomethane	0.0031
2-Butanone	0.025
Carbon disulfide	0.010
Chloroethane	0.0025
Chloromethane	0.015
Ethylbenzene	0.024
Formaldehyde	140
n-Hexane	0.064
Isooctane	0.00020
Methylene chloride	0.00017
Phenol	0.00
Styrene	0.0035
Toluene	0.040
m-/p-Xylene	0.12
o-Xylene	0.036
Total volatile HAPs	140

[a] Uncontrolled emissions from plant producing 200,000 tons of hot mix asphalt per year. Includes emissions from an oil-fired hot oil heater. All of the calculated PAH emissions and almost all of the formaldehyde emissions are from the oil-fired hot oil heater.

TABLE 12. ESTIMATED ANNUAL YARD VOC EMISSIONS FOR TYPICAL BATCH MIX AND DRUM MIX HMA PLANTS[a]

	Batch mix[b]	Drum mix[c]
Pollutant	Emissions, lb/yr	
Criteria Pollutants		
PM-10	ND	ND
VOC	110	220
CO	36	72
PAHs (semi-volatile HAPs)	ND	ND
Other semi-volatile HAPs		
Phenol	0.00	0.00
Volatile HAPs		
Benzene	0.057	0.11
Bromomethane	0.011	0.021
2-Butanone	0.054	0.11
Carbon disulfide	0.014	0.029
Chloroethane	0.00023	0.0046
Chloromethane	0.017	0.033
Cumene	0.12	0.24
Ethylbenzene	0.31	0.62
Formaldehyde	0.10	0.19
n-Hexane	0.17	0.33
Isooctane	0.0020	0.0040
Methylene chloride	0.00	0.00
Styrene	0.0080	0.016
Tetrachloroethene	0.0085	0.017
Toluene	0.23	0.46
Trichlorofluoromethane	0.0014	0.0029
m-/p-Xylene	0.45	0.90
o-Xylene	0.088	0.18
Total volatile HAPs	1.6	3.3

[a] Fugitive VOC emissions from loaded haul truck for eight minutes after completion of load-out.
[b] Uncontrolled emissions from plant producing 100,000 tons of hot mix asphalt per year.
[c] Uncontrolled emissions from plant producing 200,000 tons of hot mix asphalt per year.

APPENDIX A

AP-42 Section 11.1
Hot Mix Asphalt Plants

This page intentionally left blank.

APPENDIX B

Emission Factor Documentation for AP-42 Section 11.1
Hot Mix Asphalt Production

This page intentionally left blank.

APPENDIX C

Chapter 3:
Preferred and Alternative Methods for Estimating
Air Emissions from Hot Mix Asphalt Plants
Emission Inventory Improvement Program (EIIP)
July 1996

This page intentionally left blank.

TECHNICAL REPORT DATA

(Please read Instructions on reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
EPA-454/R-00-019		

4. TITLE AND SUBTITLE	5. REPORT DATE
Hot Mix Asphalt Plants Emission Assessment Report	December 2000
	6. PERFORMING ORGANIZATION CODE

7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
Ron Myers (EPA) Brian Shrager (MRI) Gary Brooks (ERG)	

9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT NO.
U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Research Triangle Park, NC 27711	11. CONTRACT/GRANT NO. 68D-98-027 (MRI) 68-D7-0068 (ERG)

12. SPONSORING AGENCY NAME AND ADDRESS	13. TYPE OF REPORT AND PERIOD COVERED
Office of Air Quality Planning and Standards Office of Air and Radiation U.S. Environmental Protection Agency Research Triangle Park, NC 27711	14. SPONSORING AGENCY CODE EPA/200/04

15. SUPPLEMENTARY NOTES

16. ABSTRACT The United States Environmental Protection Agency (EPA) Emission Factors and Inventory Group (EFIG) is investigating the Hot Mix Asphalt industry to identify and quantify criteria and hazardous air pollutants (HAP's) emitted from kiln stacks, transport truck loading and silo filling. EFIG obtained over 300 emission tests from kiln stacks that characterize emissions of criteria pollutants and hazardous air pollutants' emissions. EFIG requested that EPA's Emission Measurement Center (EMC) conduct the required testing of the transport truck and silo filling operations. Under separate EPA contracts, Midwest Research Institute (MRI) and Pacific Environmental Services (PES) performed two emissions tests. The primary objective of the testing program was to characterize uncontrolled emissions of the criteria pollutants particulate matter (PM) and total hydrocarbons (THC) and emissions of volatile and semi-volatile organic HAP's including polycyclic organic matter, phenol, benzene, toluene, xylene, ethyl benzene, 2-butanone, cumene, formaldehyde, hexane, isooctane and others. The results of the two test reports and responses to comments on these test reports are covered in separate EPA reports (EPA 454/R-00-024, EPA 454/R-00-025 (a through h), EPA 454/R-00-026, EPA 454/R-00-027, EPA 454/R-00-028 and EPA 454/R-00-029). This document characterizes hot mix asphalt plant operations, summarizes emissions from the typical batch mix and drum mix plants, presents emission factors specifically developed for hot mix asphalt plants and presents analyses used to develop the emission factors developed and presents information needed to inventory the emissions at hot mix asphalt plants.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
	Air Pollution control	

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(Report)*	21. NO. OF PAGES
Release Unlimited	Unclassified	592
	20. SECURITY CLASS *(Page)*	22. PRICE
	Unclassified	

This page intentionally left blank.

AT THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Robert R. Berry, an individual and John R. Bakkensen as Trustee for Helen Reser Bakkensen Trust, Petitioners	)	
v.	)	State of Oregon Department of Environmental Quality Permit No. AQGP-007 Application No. 27430 Source No. 37-0176-07-01
Department of Environmental Quality, Richard Pedersen as Director of the Department of Environmental Quality and Mark W. Bailey Eastern Region Air Quality Manager, Respondents	)	

PETITON FOR RECONSIDERATION

Petition to Reconsider Granting of Permit No. AQGP-007 to Humbert Asphalt, Inc. in Application No. 27430 on August 16, 2013 by the Department of Environmental Quality Mark W. Bailey Eastern Region Air Quality Manager

Pursuant to ORS 183.484(2) and OAR 137-004-0080, Petitioners seek reconsideration by the State of Oregon Department of Environmental Quality ("DEQ") of the issuance of a General Air Contaminant Discharge Permit No. AQGP-007 on August 16, 2013. DEQ issued this Permit in response to Application No. 27430 (dated August 7, 2013) for a General Air Contaminant Discharge Permit submitted by Humbert Asphalt, Inc. ("Applicant Humbert") of Milton-Freewater, Oregon for operation of a portable asphalt plant.

Statement of the Petition

Nature of Relief Sought

In its DEQ Application, Applicant Humbert requested a permit to operate a portable drum mix asphalt plant. Petitioners are informed and believe that Applicant Humbert intends to operate this portable asphalt plant at a rock quarry located in Umatilla County on Birch Creek Road ("Birch Creek Site"). The site address is 57445 and 57491 Birch Creek Road, Milton-Freewater, Oregon. The quarry is located about 6.5 miles east of State Highway 11 and about two miles east of the intersection of Birch Creek Road and Hood Road. This Petition for Reconsideration seeks alternative relief: (a) reissuing the subject permit to Applicant Humbert and forever prohibiting the use of the portable asphalt plant at the Birch Creek Site; or (b) requiring Applicant Humbert to submit a National Pollutant Discharge Elimination System Permit (NPDES) pursuant to the Federal Water Pollution Control Act and OAR Chapter 340, Division 045. If either of these remedies is not approved by DEQ upon reconsideration, there is a substantial risk that the operation of Applicant Humbert's portable asphalt plant will result in environmental contamination of nearby Birch Creek, thereby violating both Oregon and federal law including the anti-degradation provisions of OAR 340-041-004. Birch Creek is a tributary of the Walla Walla River, which in turn is a tributary of the Columbia River, and therefore subject to the full protections of the federal Clean Water Act. The Birch Creek Site is immediately adjacent to Birch Creek Road, and federally protected Birch Creek is located approximately 30 to 50 feet from Birch Creek Road.

Basis of Petition

Petitioners seek reconsideration by DEQ of the issuance of the permit to Applicant Humbert in accordance with ORS 183.484(2) and OAR 137-004-0080.

Effective Date of Petition for Reconsideration

The permit was issued to Applicant Humbert on August 16, 2013. This Petition for Reconsideration is submitted on October 14, 2013, within 60 days of the granting of the permit as required under OAR 340-011-0580, and therefore the Petition for Reconsideration is timely. Petitioners did not previously submit written comments to DEQ regarding the permit, because they did not learn of Applicant Humbert's permit until October 4, 2013.

Standing of Petitioners

Petitioners are co-owners of an undivided one-half interest in the farm land which borders a portion of Birch Creek Road and is immediately adjacent to the proposed site of the asphalt plant. The address of the adjacent farm is 84205 Hood Road, Milton-Freewater, Oregon (Tax Lot Nos. 5N 3600-00-00500U2 and 6N 3600-

00-08200U2). Petitioners not only own abutting farm land which the proposed asphalt plant will pollute but also own an historic water right to a natural spring at the head of Birch Creek less than one mile from the plant's location, which the plant will also pollute. The natural spring from which the domestic water is taken for the adjacent ranch is located only about 4,500 feet from the proposed asphalt plant. The water right, which Petitioners wish to have fully protected from environmental contamination, dates to 1894. The water right was judicially confirmed by a Decree dated May 16, 1932 and signed by Judge Calvin L. Sweek of the Circuit Court of Umatilla County, Oregon. A Certificate of Water Right was also issued by the State Engineer on April 5, 1940 and recorded in Volume 11, page 13150 of the State's Record of Water Right Certificates. This water right may be reviewed at the following State of Oregon Internet link:

http://apps.wrd.state.or.us/apps/wr/wrinfo/wr_folder_image.aspx?snp_id=65539

Summary of Jurisdiction

Petitioners submit their Petition for Reconsideration based upon the impact of the plant's air emission pollutants on the nearby waterway, Birch Creek. Petitioners note that DEQ has jurisdiction over both air and water quality as delegated from the United States Environmental Protection Agency (EPA). Birch Creek, as a tributary of the Walla Walla River, which in turn is a tributary of the Columbia River, is subject to oversight under the federal Clean Water Act (CWA) as interpreted by the United States Supreme Court's plurality opinion, which extends CWA's jurisdiction to "relatively permanent" bodies of surface water that are "connected to" traditionally navigable waters. *Rapanos v. United States,* 547 US 715 (2006). OAR 340-045-010 (13) defines "Navigable Waters" as "all navigable waters of the United States and their tributaries; interstate waters; and intrastate lakes, rivers, and streams that are used by interstate travelers for recreation or other purposes or from which fish or shellfish are taken and sold in interstate commerce or that are used for industrial purposes by industries in interstate commerce."

Statement of Facts

In its DEQ Application, Applicant Humbert requested from DEQ a General Air Contaminant Discharge Permit to operate a portable asphalt plant. On page 5 of its Form AQGP-107 Answer Sheet, Applicant Humbert presents a table which lists the expected criteria pollutant emissions. There is no indication in Applicant Humbert's application to DEQ that it intends to operate the proposed portable asphalt plant next to Birch Creek, a protected waterway. But Applicant Humbert is in the process of obtaining a conditional use permit from Umatilla County to operate an asphalt plant at the Birch Creek site. See Umatilla County Conditional Use Permit Request #C 1226-13 to establish an Asphalt Batch plant in an existing aggregate site.

Birch Creek is located down slope from Birch Creek Road, and Birch Creek Road is located down slope from the proposed hot mix asphalt plant site with its two large access haul roads cut into the rock outcropping. The topography of the area is a natural canyon with Birch Creek at the low point and the proposed hot mix asphalt plant to be located on higher ground. It is clear beyond doubt that carcinogenic emissions from the batch plant initially deposited on the ground at the site of the quarry will become waterborne in each heavy rain event or "cloudburst" and find transport by gravity to Birch Creek. Petitioners' concern is not limited to the harmful solids and liquids that the asphalt batch plant will produce and that will seep into the surrounding grounds but many of the noxious chemical molecules produced by the asphalt plant have high vapor pressures and will easily evaporate and condense around the cold flowing waters of nearby Birch Creek. DEQ needs to protect the quality of Birch Creek waters that originate in the depths of the Blue Mountains, and join the Walla Walla River as a tributary, and then onto the Columbia River. Birch Creek as a tributary of a navigable stream is subject to the federal Clean Water Act and all of its considerable protections.

Basis of Reconsideration

Petitioners allege that the DEQ erred in granting to Applicant Humbert the permit to operate a portable asphalt plant, because Applicant Humbert did not reveal to DEQ the impact of its emission discharges into the Birch Creek waterway. Production of asphalt should be prohibited in the immediate vicinity of protected Birch Creek, and Applicant Humbert's Permit should be so limited and restricted.

Argument

The State of Oregon has stated its interest in maintaining and enforcing water quality standards under its jurisdiction and has an affirmative duty to do so. These standards can exceed those under CWA in accordance with 33 USC §1370.

The State of Oregon as part its Statewide Narrative Criteria has promulgated objectives for maintaining water quality in OAR 340-041-0007, which provides in part:

> (1) Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels. (2) Where a less stringent natural condition of a water of the State exceeds the numeric criteria set out in this Division, the natural condition supersedes the numeric criteria and becomes the standard for that water body. However, there are special restrictions, described in OAR 340-041-0004(9)(a)(D)(iii), that may apply to discharges that affect dissolved oxygen. (3) For any new waste sources, alternatives that utilize reuse or disposal with no discharge to public waters must be given highest priority for use wherever practicable. New source discharges may be approved subject to the criteria in OAR 340-041-0004(9).

The State of Oregon has also promulgated standards for anti-degradation with respect to maintaining water quality under OAR 340-041-004:

> The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary further degradation from new or increased point and nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. The standards and policies set forth in OAR 340-041-0007 through 340-041-0350 are intended to supplement the Antidegradation Policy.

The anti-degradation provision does allow for exceptions but requires that the DEQ must make certain findings which were not made in granting this Permit:

> The Commission or Department may grant exceptions to this rule so long as the following procedures are met: (a) In allowing new or increased discharged loads, the Commission or Department must make the following findings: (A) The new or increased discharged load will not cause water quality standards to be violated; (B) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference."

The State of Oregon requires the submission of an NPDES Permit under OAR 340-045-0015 before a person may "(a) Discharge any wastes into the waters of the state from any industrial or commercial establishment or activity or any disposal system". OAR 340-045-0010(5) defines "discharge" as meaning "the placement of wastes into public waters, on land, or otherwise into the environment in a manner that affects or may tend to affect the quality of public waters".

The State of Oregon under OAR 340-040-0020 establishes "mandatory minimum groundwater quality protection requirements," which state in part:

> (1) Groundwater is a critical natural resource providing domestic, industrial, and agricultural water supply; and other legitimate beneficial uses; and also providing base flow for rivers, lakes, streams, and wetlands.
>
> (2) Groundwater, once polluted, is difficult and sometimes impossible to clean up. Therefore, the EQC shall employ an anti-degradation policy to emphasize the prevention of groundwater pollution, and to control waste discharges to groundwater so that the highest possible water quality is maintained.
>
> (3) All groundwaters of the state shall be protected from pollution that could impair existing or potential beneficial uses for which the natural water quality of the groundwater is adequate. Among the recognized beneficial uses of groundwater, domestic water supply is recognized as being the use that would usually require the highest level of water quality. Existing high quality groundwaters which exceed those levels necessary to support recognized and legitimate beneficial uses shall be maintained except as provided for in these rules.

WHEREFORE Petitioners respectfully request DEQ to reconsider this matter and either to (a) reissue the subject permit to Applicant Humbert Asphalt, Inc. but prohibit forever the operation of the portable asphalt plant at the Birch Creek Site or (b) require Applicant Humbert Asphalt, Inc. to submit a National Pollutant Discharge Elimination System Permit (NPDES) pursuant to the federal Water Pollution Control Act, ORS 468B.050, and OAR Chapter 340, Division 045. Petitioners also request

DEQ to exercise its jurisdiction in any other appropriate manner to protect and preserve the water quality of Birch Creek and Petitioners' legally established Water Rights for domestic water consumption purposes at the head of Birch Creek.

Dated this 11th day of October, 2013

/s/ Robert R. Berry
Robert R. Berry
P.O. Box 335
Barnstable, MA 02630
(508) 362-3419

Helen Reser Bakkensen Trust

/s/ John Reser Bakkensen, Trustee
John Reser Bakkensen, Trustee
1141 SW Mitchell Lane
Portland, OR 97239-2822
(503) 245-0385

CERTIFICATE OF FILING AND SERVICE

I hereby certify that I filed the original Petition for Reconsideration on October 11, 2013, by Federal Express shipment to:

Oregon Department of Environmental Quality

Dick Pedersen
Director
DEQ Headquarters
811 S.W. Sixth Ave.
Portland, Oregon 97204

Mark Bailey
DEQ Eastern Region
475 N.E. Bellevue
Suite 110
Bend, Oregon 97701

_____

Robert R. Berry

Available online at www.sciencedirect.com
ScienceDirect
Environmental Research 107 (2008) 145–151
Environmental Research
www.elsevier.com/locate/envres

Polycyclic aromatic hydrocarbons in edible grain: A pilot study of agricultural crops as a human exposure pathway for environmental contaminants using wheat as a model crop

Reiko Kobayashi[a,*], Robert A. Okamoto[b], Randy L. Maddalena[c], Norman Y. Kado[a,b]

[a]*Department of Environmental Toxicology, University of California, One Shields Avenue, Davis, CA 95616, USA*
[b]*California EPA, Air Resources Board, 1001 I Street, Sacramento, CA 95812, USA*
[c]*Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory, One Cyclotron Road, Berkeley, CA 94720, USA*

Received 13 April 2007; received in revised form 23 October 2007; accepted 5 November 2007
Available online 4 March 2008

Abstract

The concentrations of polycyclic aromatic hydrocarbons (PAHs) were investigated in a pilot study of field wheat grain as a model indicator for environmental contamination. The edible grain would serve as a portal for human exposure. Wheat grain was initially studied since it is one of the major food crops consumed internationally by many including infants and children. Wheat grain samples from five different geographical growing locations in California that span approximately 450 km were collected during the same growing season. The same variety of grain was harvested and analyzed for PAHs that ranged from 2- to 6-rings. PAHs were detected in all grain samples and were mainly 2- to 4-ring PAHs with naphthalene the most abundant among them. There were geographical differences in the levels of PAHs in the grain. The sources of the PAHs were not known in this pilot study, but the principal component analysis indicates that the major source is similar in all locations except for naphthalene. Grain naphthalene concentrations may reflect local naphthalene emissions. Diesel-fueled harvesting operations did not appear to contribute to the observed PAH concentrations in the grain. An estimate of naphthalene intake from eating grain compared to inhalation intake demonstrated the potential importance of field contamination of grain as a possible portal of human exposure. The relationship between PAH concentrations in grain and air should be quantitatively investigated to better quantitate exposure and to identify effective measures to lower the risk from PAH exposure through eating grain.

Keywords: Naphthalene; PAHs; GC–MS; Dietary exposure; Cancer risk

1. Introduction

Polycyclic aromatic hydrocarbons (PAHs) are emitted primarily from combustion sources. A number of PAHs are mutagenic and/or carcinogenic to mammals, and PAHs can be absorbed into the blood through inhalation, ingestion, and dermal contact, and elicit systemic toxic effects (ATSDR, 1995; Boström et al., 2002; ATSDR, 2005; OEHHA, 2004; Ramesh et al., 2004). According to the studies on PAH exposure through diets, diet is the major source of human exposure to these contaminants (Phillips, 1999). The major dietary sources are grain and vegetables except where there is high consumption of meat cooked over an open flame (Phillips, 1999). Since biosynthesis of PAHs in plants is considered to be minor contributor to these levels (Wickström et al., 1986), accumulation of PAHs from the environment in agricultural crops appears to be important for human exposure. The contamination is hypothesized to be mainly from air rather than soil because of the hydrophobic nature of these compounds (Briggs et al., 1982; Ryan et al., 1988; Wild et al., 1992). Although many studies have been published on uptake of airborne semivolatile organic compounds by non-edible plant leaves (Bacci et al., 1990; Simonich and Hites, 1995; McLachlan, 1999; Smith et al., 2001; Maddalena et al., 2002), less attention has been given to agricultural crops. Several studies have measured the

*Corresponding author. Fax: +1 530 752 3394.
E-mail address: rkobayashi@ucdavis.edu (R. Kobayashi).

0013-9351/$ - see front matter © 2007 Elsevier Inc. All rights reserved.
doi:10.1016/j.envres.2007.11.002

profile of PAHs ranging from 2- to 6-rings in agricultural crops (Briggs et al., 1982; Wild et al., 1992; Voutsa and Samara, 1998; Kipopoulou et al., 1999; Falcó et al., 2003) and one study measured the profile ranging from 4- to 7-rings in historical archived wheat grain (Jones et al., 1989). However, to our knowledge the profile that includes 2- and 3-ring PAHs has not been published for field wheat grain. Studying the profile including 2-ring PAHs, such as naphthalene, is thought to be important since the carcinogenicity of naphthalene (ATSDR, 2005; OEHHA, 2004), 1-methylnaphthalene and 2-methylnaphthalene (ATSDR, 2005) has been recently recognized. Wheat grain directly obtained from the field is important to study because wheat constitutes a large part of the average diet, PAHs are present in wheat flour (Tuominen et al., 1988; Dennis et al., 1991), and because the drying process of grain using heating oil is reported to be insignificant as a PAH source (Tuominen et al., 1988). Possible major contamination sources of grain in the field include the ambient air and the diesel-fueled farming equipment used to harvest and thresh wheat.

The objective of this pilot research was to initially investigate the level and profile of PAHs in field wheat grain that range from 2- to 6-rings. First, to investigate the diesel-fueled combine harvester as a possible PAH source, wheat grains harvested and threshed by combine and by hand were analyzed. Second, wheat grains harvested by combine from different geographical wheat growing regions in California were analyzed to see if there were any differences between locations and any general relation to local atmospheric conditions. Third, intake of naphthalene from eating grain was estimated.

2. Materials and methods

A hard red spring wheat (cultivar Yolo) harvested in June 2001 in Chico and Davis (cities located in the Sacramento Valley), as well as Stockton, Madera and Corcoran (cities located in the San Joaquin Valley) (Fig. 1 and Table 1) was used for this study. The Sacramento and the San Joaquin Valleys collectively define a vast agricultural region in an airshed that is heavily impacted by continued urban development. Significant sources of reactive organic gases include mobile sources in the Sacramento Valley, and both mobile sources and the production of oil and gas in the San Joaquin Valley (ARB, 2003). The San Joaquin Valley is also known as one of the most severe particulate air quality problems in the United States (ARB, 2003).

Grain was obtained from individual farms where wheat was harvested and threshed by a diesel-fueled plot combine (Wintersteiger GmbH, Austria). In addition, wheat plants that were harvested by hand using a sickle were obtained from the same Davis farm. Samples were stored in amber glass bottles with Teflon lined caps at −20 °C until extraction. For the hand-harvested wheat, grains were removed from the husk by gently crushing the wheat with a Teflon pestle.

The analytical methods for PAHs in plant leaves (Kaupp and Sklorz, 1996; Smith et al., 2001) were modified to analyze grain. Briefly, target compounds included naphthalene, 2-methylnaphthalene, 1-methylnaphthalene, 2,6-dimethylnaphthalene, and 2,3,5-trimethylnaphthalene (2-ring PAHs), and acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, and 1-methylphenanthrene (3-ring PAHs), and fluoranthene, pyrene, benz(a)anthracene, and chrysene (4-ring PAHs), and benzo(b)-fluoranthene, benzo(k)fluoranthene, benzo(e)pyrene, benzo(a)pyrene,

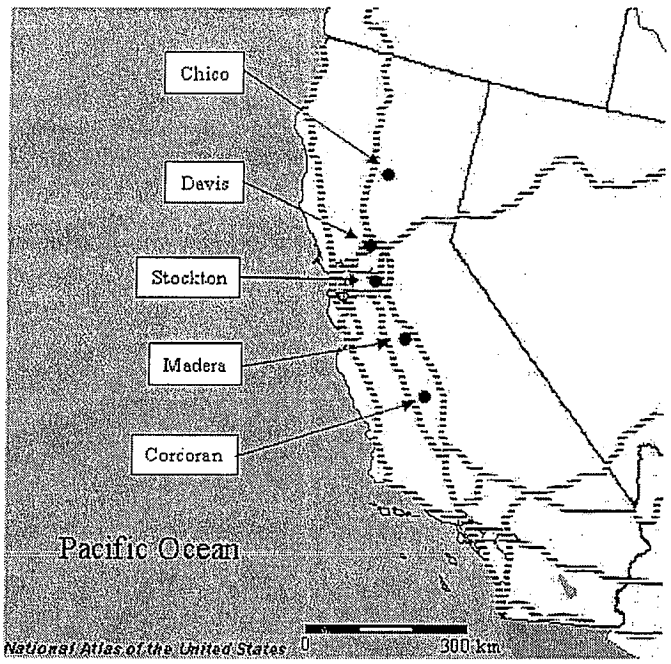


Fig. 1. Sampling locations. Major highways within the state are presented as hatched lines.

perylene, and dibenz(a,h)anthracene (5-ring PAHs), and indeno(1,2,3-c,d)pyrene and benzo(g,h,i)perylene (6-ring PAHs), and biphenyl. A mixture of deuterated PAHs (*d*-PAHs), namely naphthalene-d_8, acenaphthylene-d_8, acenaphthene-d_{10}, fluorene-d_{10}, phenanthrene-d_{10}, anthracene-d_{10}, fluoranthene-d_{10}, pyrene-d_{10}, benz(a)anthracene-d_{12}, chrysene-d_{12}, benzo(b)fluoranthene-d_{12}, benzo(k)fluoranthene-d_{12}, benzo(a)pyrene-d_{12}, dibenz(a,h)anthracene-d_{14}, indeno(1,2,3-c,d)pyrene-d_{12}, and benzo(g,h,i)perylene-d_{12} (Cambridge Isotope Laboratories Inc., Andover, MA) was used to make an internal standard solution (1 ng/μL) to quantitate their corresponding native PAHs. Compounds that did not have a deuterated analog were quantified by using internal standards that had similar responses to these target PAHs.

Fifty grams of wheat grain were ground using a grinder (Waring, New Hartford, CT) and spiked with 15 μL of the internal standard solution. Extraction was performed by sonication (Branson Ultrasonics, Danbury, CT) for 30 min in 100 mL dichloromethane. The extract was separated from the grain using filter paper and the grain was extracted a second time for another 30 min. The filtrate from the first and second extraction was further filtered through layers of sodium sulfate (anhydrous, 10–60 mesh), Celite (diatomaceous earth), two layers of glass microfiber filters (2.7 and 1.0 μm), and PTFE membrane filter (0.5 μm), and concentrated under a nitrogen stream (TurboVap II, Zymark, Hopkinton, MA). The extract was purified by gel permeation chromatography where it was loaded onto a glass column (2.5 cm i.d. × 15 cm length) filled with Bio-Beads S-X3 (Bio-Rad Laboratories, Hercules, CA) and eluted with a mixture of hexane and dichloromethane (1:1, v/v). The first 57.5 mL was discarded, and the next 55 mL collected. The PAH fraction was concentrated and the solvent was exchanged into hexane, and concentrated further to 0.5 mL. The extract was added to a column of 10 g silica (100–200 mesh nominal) saturated with hexane. The column was first eluted with 50 mL hexane. The PAH fraction was eluted in a 50 mL mixture of hexane and dichloromethane (9:2, v/v) and was concentrated to approximately 50–100 μL using toluene as a keeper solvent. There were at least three extraction replicates for all samples and process blanks for which only the solvent was used.

Analysis was conducted by gas chromatography/mass spectrometry (GC–MS) using a Hewlett-Packard (HP) Model 5890 Series II Gas Chromatograph interfaced to an HP5972 mass selective detector (MSD). The injector was run in splitless mode. The GC was equipped with a

Table 1
Description of locations

Cities (population)	Counties (population)	Major freeways[a] (distance from the sampling site)	VMT[b]	Naphthalene emission from listed facilities (kg yr^{-1})[c]
Chico (60,000)	Butte (207,000)	(D) State highway 99 (3 km)	4,570,000	137.8
Davis (60,000)	Yolo (164,000)	(U) Interstate 80 (3 km) (D) Interstate 5 (14 km) (D) State highway 113 (1 km)	4,690,000	1.5
Stockton (244,000)	San Joaquin (580,000)	(U) Interstate 205 (18 km) (U) Interstate 580 (18 km) (D) Interstate 5 (20 km)	15,216,000	666.3
Madera (43,000)	Madera (126,000)	(D) State highway 99 (10 km)	3,719,000	286.9
Corcoran (14,000)	Kings (127,000)	None	3,189,000	68.0

(U)—Upwind location.
(D)—Downwind location.
[a]Freeways with more than 50,000 annual average traffic in 2001 (Caltrans, 2001) and located <25 km from the wheat farms.
[b]VMT—average daily vehicle miles traveled per county (ARB, 2003).
[c]Sum of estimated naphthalene emissions from facilities listed in the naphthalene emission inventory by the California EPA, Air Resources Board (ARB, 2001).

DB-5 ms fused silica capillary column (30 m × 0.25 mm i.d., 0.25 μm film thickness). The MSD was run in selective ion monitoring mode. PAH Standard Reference Material (National Institute of Standards and Technology, Gaithersburg, MD) was used to prepare two sets of 5-point calibration solutions where one was with 6.25, 12.5, 25, 50 and 100 pg/μL, and the other was 100, 200, 400, 800 and 1600 pg/μL.

Just prior to GC–MS analysis biphenyl-d_{10} and p-terphenyl-d_{14} were added to measure recoveries of internal standards for quality control purposes. Recoveries of d-PAHs were used to estimate recoveries of the native PAHs since the d-PAHs undergo the same sample preparation as the native PAHs. Average recoveries for 2-ring, 3-ring, 4-ring, and larger d-PAHs were approximately 40%, 60%, 70–90% and 70–100%, respectively. Lower recoveries for lighter molecular weight d-PAHs are thought to be from evaporative losses occurring when concentrating the sample. The results were corrected for recoveries by using an internal standard method assuming that PAHs and corresponding d-PAHs behave similarly in extraction and analysis. Concentrations were reported on a weight basis of field-dried grain. Concentrations of 18 ng kg^{-1} in grain (0.018 ppb) or higher were quantified for all compounds.

Student's t-test was performed between samples and the blanks. The principal component analysis was conducted using SPSS (SPSS 13.0, SPSS Inc., Chicago IL) to evaluate differences in the PAH profiles in grain from different geographical locations.

3. Results and discussion

The PAH profile in all grain samples including hand-harvested grain had similar patterns. The concentrations of PAHs with 4-rings or less were statistically different from the blank in all samples. No statistically significant differences were observed for PAHs with 5-rings or larger except that benzo(b+j+k)fluoranthene (isomers not fully separated in chromatography) was statistically higher in the Chico sample compared to the blank ($p = 0.05$). Among the PAHs present in grain, naphthalene, phenanthrene, 2-methylnaphthalene and 1-methylnaphthalene were major compounds (Fig. 2).

Compared to concentrations reported in the literature for wheat grain and flour, California grain may contain lower levels of PAHs. For example, PAHs with 5-rings or more have been detected in wheat flour in the UK (Dennis et al., 1991) and in Finland (Tuominen et al., 1988), and also in archived wheat grain from 1979–1984 in UK (Jones et al., 1989). Average concentrations of fluoranthene and pyrene measured in California grain were 3.6 and 2.7 times lower than the concentrations in archived grain collected in UK during 1979–1984 (Jones et al., 1989). Compared to white wheat flour, fluoranthene and pyrene in California grain were 2.9 and 3.3 times lower than the concentrations measured in the UK samples (Dennis et al., 1991) and 19 and 39 times lower than the concentrations measured in samples from Finland (Tuominen et al., 1988).

No increase in PAH concentrations in grain harvested by combine was observed compared to the one harvested by hand (Fig. 2). Although diesel exhaust is known to be a major anthropogenic source of PAHs, particularly the lower molecular weight PAHs (Boström et al., 2002), it appears that the near-source and short-term emissions from the diesel-fueled combine operation did not have significant contributions to PAHs in grain. Grain uptake of PAHs is thought to occur mainly from longer exposure times to the ambient air, suggesting that the uptake of airborne PAHs into grain is a diffusion-limited process. Naphthalene in the hand-harvested grain was higher than in the combine-harvested grain, which may have been caused by contamination of grain by husk material when grain was manually removed from the husk.

The principal component analysis was conducted for 2- to 4-ring PAHs in the combine-harvested grain from five locations to extract factors that explain the pattern of correlations in observed PAH profiles. Grain concentrations used for the analysis were corrected for blank values. In the principal component analysis, the first component (or factor) has maximum variance and successive components explain progressively smaller portions of the

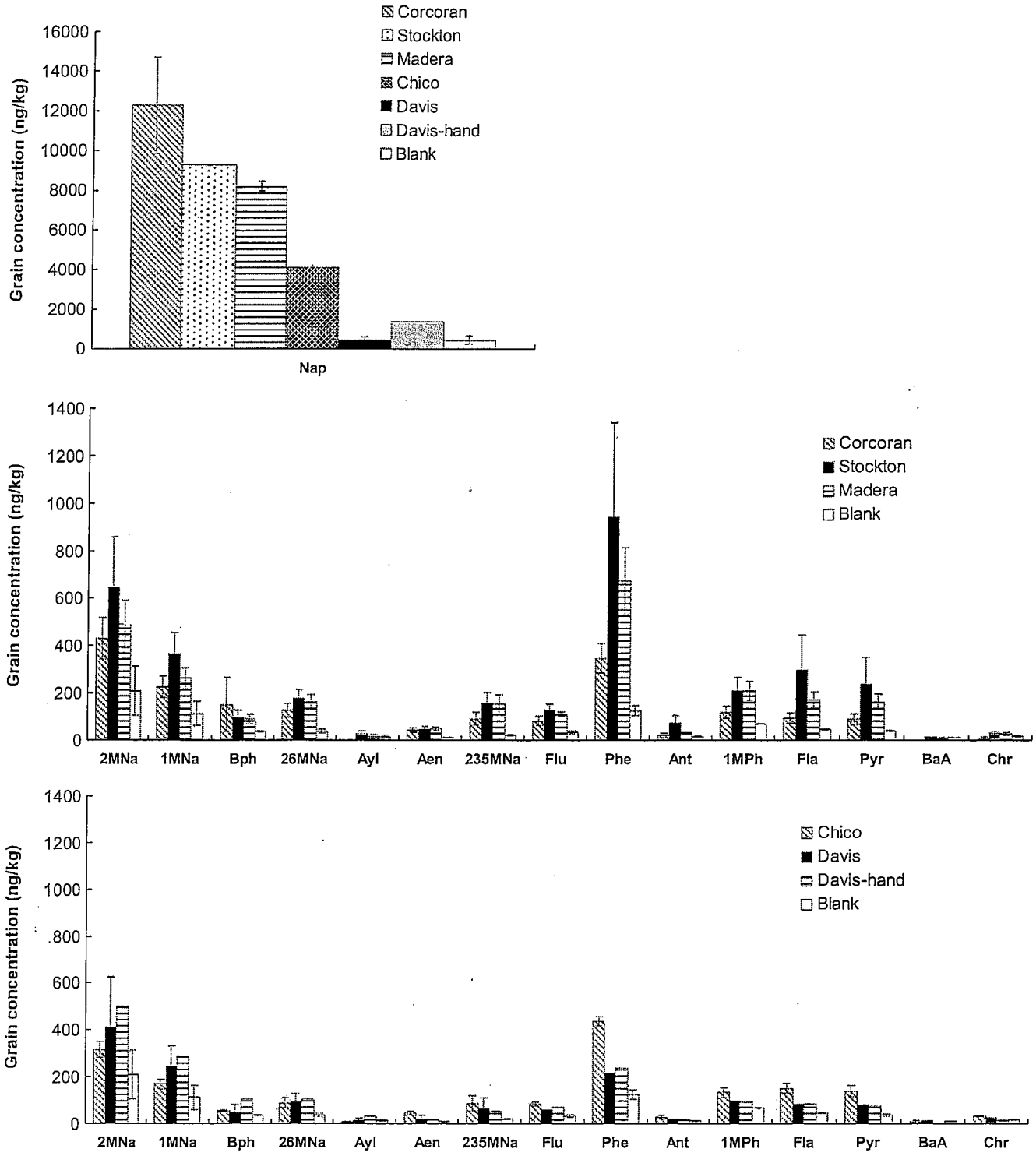


Fig. 2. PAH profile in California grain harvested by combine from five locations in Sacramento and San Joaquin Valleys for naphthalene (Nap), 2-methylnaphthalene (2MNa), 1-methylnaphthalene (1MNa), biphenyl (Bph), 2,6-dimethylnaphthalene (26MNa), acenaphthylene (Ayl), acenaphthene (Aen), 2,3,5-trimethylnaphthalene (235MNa), fluorene (Flu), phenanthrene (Phe), anthracene (Ant), 1-methylphenanthrene (1MPh), fluoranthene (Fla), pyrene (Pyr), benz(a)anthracene (BaA), and chrysene (Chr). The results were reported without blank corrections. Error bars represent ±1 standard deviation. The Davis grain was also harvested by hand. Blank also indicated.

riance. The first, the second, and the third components explained 57%, 19% and 8.9% of the total variance of grain PAHs in all samples, respectively. Compounds with factor loading higher than 0.8, which shows the correlation between the compound and the component, were 2-methylnaphthalene, 1-methylnaphthalene, anthracene, phenanthrene, fluoranthene and pyrene for the first component, 2,3,5-trimethylnaphthalene, acenaphthene and fluorene for

the second component, and chrysene and naphthalene for the third component. Although naphthalene was the dominant species in all locations and highly variable between locations, the component it associates with explained only a small portion of the total variance. This was because concentrations of naphthalene did not significantly correlate with other compounds except for chrysene, which was a minor contributor to the total variance, whereas 2-methylnaphthalene, 1-methylnaphthalene, anthracene, phenanthrene, fluoranthene and pyrene that are associated with the first component strongly correlate with each other ($p<0.001$). Significant correlations were also observed between compounds for the second component ($p\leqslant 0.001$).

The principal component plot in Fig. 3 shows the third component separates samples from Sacramento and San Joaquin Valleys. Naphthalene that associates with the third component is thought to be a key compound for the separation because of its large variance between locations where the concentrations were higher in grain from San Joaquin Valley (Fig. 2). The fact that regional difference was seen only on the third component but not on the first and the second components may indicate major contamination sources for grain PAHs are similar across the locations except for naphthalene.

Previous studies that conducted principal component analysis on vehicular emissions have suggested the high factor loading of fluoranthene and pyrene for gasoline-powered vehicles and the high factor loading for fluoranthene, phenanthrene, anthracene and pyrene for diesel emission (Ravindra et al., 2006). These compounds have also been reported to overlap between the profiles from different emission source categories such as coal combustion, coke production, incinerators, wood combustion and oil burning (Ravindra et al., 2006). The first component for the grain PAHs that is highly associated with these compounds may be related to these sources but the major contributor is thought to be vehicular sources. This is because regional differences are not observed on this component (Fig. 3), and also the sampling locations were all distributed along a major highway in California (Fig. 1). This may indicate traffic has a major influence on PAH concentrations in California grain. Significant correlations for 1-methylnaphthalene and 2-methylnaphthalene to anthracene, phenanthrene, fluoranthene and pyrene indicate 1-methyl and 2-methlnaphthalenes are from the same source. However, the major source for naphthalene is thought to be different since naphthalene constitutes a different component.

Although a major source of PAHs is known to be vehicle exhaust (ATSDR, 1995; Boström et al., 2002) and the principal component analysis indicates the major source for grain contamination may be related to traffic, relationships were not observed between grain PAH levels and proximity to major highways (Table 1). One possibility is that the locations of grain fields were not close enough to highways to discern any relationships. For example,

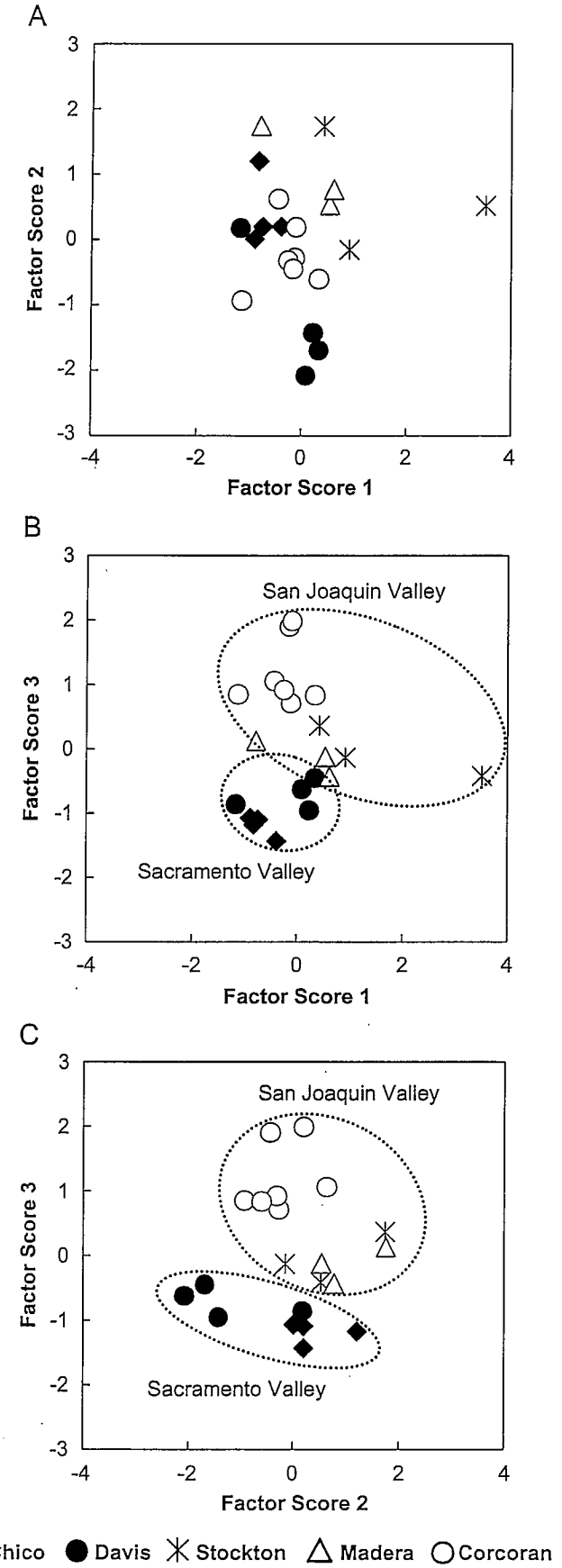


Fig. 3. Factor score plot for the first and second components (A), the first and third (B), and the second and third components (C) for PAHs in grain shown in the orthogonally rotated space.

concentration gradient in PAHs in leafy vegetables has been found in 25 m or less from the nearby highways (Larsson, 1985; Wickström et al., 1986).

Large variance in naphthalene between locations may partly reflect differences in regional scale emission sources. There were no apparent relationships between grain naphthalene concentrations and local population (city or county) or vehicle miles traveled each day per county. However, rank in grain naphthalene concentration by location generally coincides with countywide annual naphthalene emissions from facilities reporting under the Air Toxics Hot Spots Act in California (ARB, 2001) except for Kings County (Table 1). There may be some significant naphthalene sources present in Kings County that are not included in the facility list. For example, oil and gas wells, oil seeps, wildfire and agricultural burning are thought to be possible naphthalene sources (Kerr et al., 2001; ATSDR, 2005), but these are not included in the facility list for naphthalene emissions. Although there appears to be a relationship between naphthalene in the grain and local emissions, distribution of atmospheric naphthalene concentrations in Sacramento and San Joaquin Valleys is not available in the literature to confirm this. Parallel ambient air sampling during the growing season is needed to determine the grain/air relationship for PAHs. Although naphthalene was present in the highest concentrations among all compounds investigated in California grain naphthalene concentrations in field wheat grain have not been reported previously in the peer-reviewed literature.

The potential daily dose of naphthalene from California grain was calculated from the measured grain concentrations by assuming that the per capita daily consumption of grain is 0.230 kg (ERS/USDA, 2004) and that the measured concentration of naphthalene in grain is retained in the final grain products consumed. Per capita potential daily naphthalene doses estimated from the five regions were 0.85 μg for eating grain from Chico, 0.0090 μg from Davis, 2.0 μg from Stockton, 1.8 μg from Madera, and 2.7 μg from Corcoran. Personal inhalation exposure from air that accounts for indoor sources and in-vehicle exposures has been estimated to be 270 and 430 $ng\,m^{-3}$ for the Southern California population in summer and winter, respectively (Lu et al., 2005). Using 13.3 $m^3\,day^{-1}$ as the average inhalation rate (USEPA, 1997), daily inhalation intake is calculated to be 3.6–5.7 $\mu g\,person^{-1}$. The estimate of inhalation intake from ambient air presented by Agency for Toxic Substances and Disease Registry (ATSDR) is 19 $\mu g\,person^{-1}$ (ATSDR, 2005). The ATSDR estimate is higher since it uses 20 $m^3\,day^{-1}$ as the inhalation rate and also is based on the study from 1980s when the naphthalene concentration in air was thought to be higher. Compared to the ATSDR estimate, the potential daily dose from eating California wheat grain is approximately 0.05% (Davis grain) to 14% (Corcoran grain) of the inhalation intake. However, compared to the estimates by the Southern California study, it is 0.3% (Davis grain) to 76% (Corcoran grain) of the summer inhalation intake and 0.2% (Davis grain) to 48% (Corcoran grain) of the winter inhalation intake. Dietary intake from eating wheat grain can be significant depending on the levels of field contamination because this represents only one food. Unlike heavier PAHs such as benzo(a)pyrene, naphthalene intake from food has received less attention because emissions of naphthalene occur primarily into the air; naphthalene is highly volatile; and evidence for carcinogenicity of naphthalene are based primarily on inhalation studies (ATSDR, 2005; OEHHA, 2004). However, estimate of potential dietary intake of naphthalene from our current study shows that food may be a substantial source for even such volatile PAH. Although this calculation does not account for any changes in naphthalene concentration in grain during storage, processing or cooking, it shows the potential importance of field contamination of grain as a portal of human exposure through agricultural crops.

In summary, PAHs in California grain were mainly 2- to 4-ring relatively volatile PAHs with naphthalene the most abundant PAH. The diesel fueled harvester did not seem to contribute to the PAH concentrations in grain. PAH profile was similar in all samples except for naphthalene where higher naphthalene concentrations were observed in grain from San Joaquin Valley than in grain from Sacramento Valley. The contamination source is unknown in this pilot study but the principal component analysis indicates the major source is similar in all locations for grain PAHs except for naphthalene. The major source for naphthalene is thought to be different and naphthalene concentrations in grain may reflect local naphthalene emissions. Field wheat grain may serve as an environmental indicator for airborne PAHs. Comparison of potential daily intake estimated for naphthalene through eating California grain to inhalation exposure indicates that dietary exposure may be important for even volatile PAHs as naphthalene. We have recently reported the uptake and clearance of relatively volatile PAHs by wheat grain that demonstrate slow kinetics of these processes and, therefore, there is the possibility of long time retention of field contamination of PAHs in grain (Kobayashi et al., 2007). Since wheat is a major component of foods for humans, further research on the fate of more volatile PAHs present in grain during storage, processing and cooking is needed to examine retention of these compounds in the final food products.

Acknowledgments

We thank Dr. Lee Jackson in the Department of Plant Sciences at UC Davis for wheat grain samples. We thank Dr. Kevin Jones of Lancaster University for discussion of their chemical analytical method. We thank Dr. William Vance for discussion on statistical analysis. We are grateful to the UC Davis Ecotoxicology Program, UC Toxic Substances Research and Teaching Program for their financial support. We thank Annie Zhu and Paul Kuzmicky for their laboratory assistance. The views expressed in this paper are

those of the authors, and do not represent those of the California Air Resources Board, University of California, or Lawrence Berkeley National Laboratory.

References

ARB, California EPA Air Resources Board, 2001, Emission inventory data, Data base year 2001. ⟨http://www.arb.ca.gov/ei/emissiondata.htm⟩.

ARB, California EPA Air Resources Board, 2003. The 2003 California almanac of emissions and air quality ⟨http://www.arb.ca.gov/aqd/almanac/almanac03/almanac03.htm⟩.

ATSDR, Agency for Toxic Substances and Disease Registry, 1995. Toxicological profile for polycyclic aromatic hydrocarbons (PAHs) ⟨http://www.atsdr.cdc.gov/toxprofiles/tp69.html⟩.

ATSDR, Agency for Toxic Substances and Disease Registry, 2005. Toxicological profile for naphthalene, 1-methylnaphthalene, 2-methylnaphthalene ⟨http://www.atsdr.cdc.gov/toxprofiles/tp67.html⟩.

Bacci, E., Cerejeira, M.J., Gaggi, C., Chemello, G., Calamari, D., Vighi, M., 1990. Bioconcentration of organic chemical vapours in plant leaves: the azalea model. Chemosphere 21, 525–535.

Boström, C.E., Gerde, P., Hanberg, A., Jernström, B., Johansson, C., Kyrklund, T., Rannug, A., Törnqvist, M., Victorin, K., Westerholm, R., 2002. Cancer risk assessment, indicators, and guidelines for polycyclic aromatic hydrocarbons in the ambient air. Environ. Health Perspect. 110 (Suppl. 3), 451–488.

Briggs, G.G., Bromilow, R.H., Evans, A.A., 1982. Relationships between lipophilicity and root uptake and translocation of non-ionised chemicals by barley. Pestic. Sci. 13, 495–504.

Caltrans, California Department of Transportation, 2001, The traffic and vehicle data systems unit, Data base year 2001. ⟨http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/⟩.

Dennis, M.J., Massey, R.C., Cripps, G., Venn, I., Howarth, N., Lee, G., 1991. Factors affecting the polycyclic aromatic hydrocarbon content of cereals, fats and other food products. Food Addit. Contam. 8, 517–530.

ERS/USDA, Economic Research Service, United States Department of Agriculture, 2004. ⟨http://www.ers.usda.gov/data/FoodConsumption/FoodAvailSpreadsheets.htm#grains⟩.

Falcó, G., Domingo, J.L., Llobet, J.M., Teixidó, A., Casas, C., Müller, L., 2003. Polycyclic aromatic hydrocarbons in foods: human exposure through the diet in Catalonia, Spain. J. Food Prot. 66, 2325–2331.

Jones, K.C., Grimmer, G., Jacob, J., Johnston, A.E., 1989. Changes in the polynuclear aromatic hydrocarbon content of wheat grain and pasture grassland over the last century from one site in the UK. Sci. Total Environ. 78, 117–130.

Kaupp, H., Sklorz, M., 1996. A method for analysing polycyclic aromatic hydrocarbons (PAHs) in plant samples. Chemosphere 32, 849–854.

Kerr, J.M., McMillen, S.J., Magaw, R.I., Melton, H.R., Naughton, G., 2001. Risk-based soil screening levels for crude oil: the role of polyaromatic hydrocarbons. In: McMillen, S.J., Magaw, R.I., Carovillano, R.L. (Eds.), Risk-based decision-making for assessing petroleum impacts at exploration and production sites. United States Department of Energy.

Kipopoulou, A.M., Manoli, E., Samara, C., 1999. Bioconcentration of polycyclic aromatic hydrocarbons in vegetables grown in an industrial area. Environ. Pollut. 106, 369–380.

Kobayashi, R., Cahill, T.M., Okamoto, R.A., Maddalena, R.L., Kado, N.Y., 2007. Controlled exposure chamber study of uptake and clearance of airborne polycyclic aromatic hydrocarbons by wheat grain. Environ. Sci. Technol. 41, 7934–7940.

Larsson, B.K., 1985. Polycyclic aromatic hydrocarbons and lead in roadside lettuce and rye grain. J. Sci. Food Agric. 36, 463–470.

Lu, R., Wu, J., Turco, R.P., Winer, A.M., Atkinson, R., Arey, J., Paulson, S.E., Lurmann, F.W., Miguel, A.H., Eiguren-Fernandez, A., 2005. Naphthalene distributions and human exposure in Southern California. Atmos. Environ. 39, 489–507.

Maddalena, R.L., Mckone, T.E., Kado, N.Y., 2002. Exposure chamber measurements of mass transfer and partitioning at the plant/air interface. Environ. Sci. Technol. 36, 3577–3585.

McLachlan, M.S., 1999. Framework for the interpretation of measurements of SOCs in plants. Environ. Sci. Technol. 33, 1799–1804.

OEHHA, California EPA Office of Environmental Health Hazard Assessment, Air toxic hot spots: adoption of a unit risk value for naphthalene ⟨http://www.oehha.ca.gov/air/hot_spots/naphth.html⟩.

Phillips, D.H., 1999. Polycyclic aromatic hydrocarbons in the diet. Mutat. Res. 443, 139–147.

Ramesh, A., Walker, S.A., Hood, D.B., Guillén, M.D., Schneider, K., Weyand, E.H., 2004. Bioavailability and risk assessment of orally ingested polycyclic aromatic hydrocarbons. Int. J. Toxicol. 23, 301–333.

Ravindra, K., Bencs, L., Wauters, E., de Hoog, J., Deutsch, F., Roekens, E., Bleux, N., Berghmans, P., Van Grieken, R., 2006. Seasonal and site-specific variation in vapour and aerosol phase PAHs over Flanders (Belgium) and their relation with anthropogenic activities. Atmos. Environ. 40, 771–785.

Ryan, J.A., Bell, R.M., Davidson, J.M., O'Connor, G.A., 1988. Plant uptake of non-ionic organic chemicals from soils. Chemosphere 17, 2299–2323.

Simonich, S.L., Hites, R.A., 1995. Organic pollutant accumulation in vegetation. Environ. Sci. Technol. 29, 2905–2914.

Smith, K.E.C., Thomas, G.O., Jones, K.C., 2001. Seasonal and species differences in the air-pasture transfer of PAHs. Environ. Sci. Technol. 35, 2156–2165.

Tuominen, J.P., Pyysalo, H.S., Sauri, M., 1988. Cereal products as a source of polycyclic aromatic hydrocarbons. J. Agric. Food Chem. 36, 118–120.

USEPA, United States Environmental Protection Agency, 1997. The exposure factors handbook ⟨http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12464#moj⟩.

Voutsa, D., Samara, C., 1998. Dietary intake of trace elements and polycyclic aromatic hydrocarbons via vegetables grown in an industrial Greek area. Sci. Total Environ. 218, 203–216.

Wickström, K., Pyysalo, H., Plaami-Heikkilä, S., Tuominen, J., 1986. Polycyclic aromatic compounds (PAC) in leaf lettuce. Z. Lebensm. Unsters. Forsch. 183, 182–185.

Wild, S.R., Berrow, M.L., McGrath, S.P., Jones, K.C., 1992. Polynuclear aromatic hydrocarbons in crops from long-term field experiments amended with sewage sludge. Environ. Pollut. 76, 25–32.


Google earth
VINEYARD
VINEYARD
BIRCH CREEK ROAD
ROCK QUARRY
RESER RANCH
BIRCH CREEK
RESER SPRING
© 2013 Google

To see all the details that are visible on the screen, use the "Print" link next to the map.

Google

ADMINISTRATIVE REVIEW BY PLANNING DEPARTMENT

FINDINGS AND CONCLUSIONS

UMATILLA COUNTY PLANNING DEPARTMENT
FINAL FINDINGS AND CONCLUSIONS
CONDITIONAL USE PERMIT REQUEST, #C-1226-13
MAP #6N 36, TAX LOT #4600, Account # 110617

1. APPLICANT: Humbert Asphalt, INC, 84899 HWY 11, Milton-Freewater, OR 97862

2. OWNER: Kenney Barbara etal, c/o Kenney Farms INC, 3629 Braden RD, Walla Walla, WA 99362

3. REQUEST: The request is to establish an Asphalt Batch Plant in an existing aggregate site. The aggregate site was permitted via Conditional Use Permit #C-630-91 which did authorize an asphalt plant at that time. The asphalt plant was never set up at the aggregate siteat that time and so will be reviewed during this process.

4. LOCATION: The subject property is located approximately 6.5 miles east of State Highway 11 on Birch Creek Road, about 2 miles southeast of the Hood Road/Birch Creek Road intersection and 3 miles south of Stateline Road.

5. SITUS: The site address for this parcel is 57445 and 57491 Birch Creek RD, Milton-Freewater, OR 97862.

6. ACREAGE: Tax Lot 4600 is 451 acres. The aggregate site was established on some 30 acres via #C-630-91.

7. PROP CLASS: Property Codes are assigned by the County Assessor as to what type of use present on the property. The Property Code 551 is assigned to this property, which means "Farm, Farm Zoned, Farm Deferred, Improved."

8. TAX CODE: The Tax Code is assigned by the County Assessor. Each Code Area has various taxing rates depending upon the services provided. The property has Tax Code of 07-12, which has the following taxing definition: General County, Umatilla Co Bond, School District #7 Milton Freewater, Intermountain ESD, BMCC, BMCC Bond, Port Of Umatilla, County Radio District, Umatilla Special Library District

9. PERMITS: Permits have been issued on this property:

Conditional Use Permit, #C-630-91 issued on 3-4-1992 for a DEV OF ROCK PIT, ESTABLISH A QUARRY SITE TO OPERATE A ROCK CRUSHER FF SIGNED 3/4/92 WITH CONDITIONS IN FILE
Plan Amendment, #P-054 issued 3-4-1992 for a DEVELOP ROCK PIT, ESTABLISH QUARRY SITE & OPERATE A ROCK CRUSHER FF SIGNED 3/4/92 WITH CONDITIONS IN FILE
Zoning Permit, #ZP-92-062 issued on 4-15-1992 for a ROCK PIT/CRUSHER SITE, ASPHALT PLANT SITE

10. COMP PLAN: North/South Agricultural Region Designation

11. ZONING: Exclusive Farm Use Zone (EFU, 160 acre minimum)

12. ACCESS: The parcel has direct access to Birch Creek Road (Co. Rd. No 573), a two-lane, paved road.

13. ROAD TYPE: Birch Creek Road (#573) is a two-lane, paved roadway. The roadway is paved past the project site.

14. EASEMENTS: There are no access easements on this parcel.

15. LAND USE: The majority of the parcel is currently farmed with dry land wheat. The site for the quarry is non-farmable, rock outcropping land. There are two dwellings on the parcel, located approximately 1,000 feet southeast from the quarry. The dwellings are inhabited by the landowner who leases the quarry to the applicants.

16. ADJACENT USE: Surrounding property is similar EFU zoned farm land and is primarily in dry land type farming – wheat, peas, pasture. There is one dwelling located approximately 1/2 mile southeast of the site, and another 1.5 miles northwest along Birch Creek Road.

17. LAND FORM: Blue Mountains

18. SOIL TYPES: The subject property contains Non-High Value soil types. High Value Soils are defined in UCDC 152.003 as Land Capability Class I and II. The soils on the subject property are non-high value.

Soil Name, Unit Number, Description	Land Capability Class	
	Dry	Irrigated
8C: Athena silt loam, 7 to 12 percent slopes	3e	3e
11F: Bowlus-Buckcreek association, 40 to 70 perc	7e	----
64D: Palouse silt loam, 12 to 20 percent slopes	4e	---
64E: Palouse silt loam, 20 to 35 percent slopes	6e	---
112D: Waha silty clay loam, 12 to 25 percent slo	4e	---

Soil Survey of Umatilla County Area, 1989, NRCS. The suffix on the Land Capability Class designations are defined as "e" – erosion prone, "c" – climate limitations, "s" soil limitations and "w" – water (*Survey*, page. 172).

19. BUILDINGS: There is a home site and outbuildings on this property along with the aggregate site and machinery – rock crusher, scale.

20. UTILITIES: The parcel is within the service area of Columbia Rural Electric.

21. WATER/SEWER: There are no ground water rights on this property. The established home site does have a domestic water source and a sanitary disposal system.

22. FIRE SERVICE: The subject property is not served by a rural fire district.

23. IRRIGATION: The property is not within an irrigation district

24. FLOODPLAIN: This property is NOT in a floodplain. The property is found in Zone D "Undetermined Flooding") which is not a special flood hazard zone. The Community Number for Umatilla County is #41059C and the Panel Number that covers this area is #0586-G with an effective date of September 3, 2010.

25. NOTICES SENT: Notices were sent on Wednesday, August 7, 2013.

26. CLOSING DATE: Comments were due back on Wednesday, August 28, 2013.

27. AGENCIES: Umatilla County Assessor, Umatilla County Public Works, Oregon Water Resources Department, Oregon Department of Geology & Mineral Industries, Oregon Department of Land Conservation and Development, Oregon Department of Environmental Quality

28. COMMENTS: Comment letters were received on the application.

A letter from Robert R. Berry dated August 27, 2013 expressing concern on a number of issues related to the application was received. The comment letter was broken up into eleven main topics:

1. Summary of Request including Permit Number
2. Status of Respondents.
3. Summary of Response in Opposition.
4. Umatilla County Code Sections and Oregon Revised Statutes
5. The Public Notice presents unsupported conclusions in its analysis under Section 152.061.
6. The Public Notice presents unsupported conclusions in its analysis under Section 152.615.
7. An Asphalt Plant is not a favored conditional use within an EFU.
8. The siting of an Asphalt Plant within an EFU requires more scrutiny.
9. The Asphalt Plant will generate Hazardous Air Pollutants.
10. Analysis of the Impact of an Asphalt Plant on the adjacent waterway, Birch Creek.
11. The County provides no evidence to support its conclusion under Section 152.061 and unnecessarily restricts the interpretation.
12. The Asphalt Plant will deposit contaminants which could make the crops from the surrounding land unmarketable.
13. Proposed conditions if the County approves the permit.

An email was received from John Reser Bakkensen on August 30, 2013 requesting to be a part of the comments made by Mr. Berry. This email was received after the comment period ended.

29. STANDARDS OF THE UMATILLA COUNTY DEVELOPMENT CODE FOR CONDITIONAL USE PERMITS to establish an ASPHALT BATCH PLANT are found in Section 152.060 (B) (3), 152.061, 152.615 and 152.617 (I) (A) Asphalt Plant. The following standards of approval are underlined and the findings are in normal text.

§ 152.060 CONDITIONAL USES PERMITTED.

In an EFU zone the following uses may be permitted conditionally via administrative review (§ 152.769), subject to the requirements of this section, the applicable criteria in §§ 152.610 through 152.617 and §§ 152.545 through 152.562. A zoning permit is required following the approval of a conditional use pursuant to § 152.025. Existing uses classified as conditional uses and listed in this section may be expanded subject to administrative review and subject to the requirements listed Oregon Administrative Rules, Chapter 660, Division 033.

(B) Operations conducted for:

(3) Processing, as defined by ORS 517.750, of aggregate into asphalt or portland cement as provided in § 152.617 (I) (A). New uses that batch and blend mineral and aggregate into asphalt cement may not be authorized within two miles of a planted vineyard. Planted vineyard means one or more vineyards totaling 40 acres or more that are planted as of the date the application for batching and blending is filed; and The Umatilla County Planning Department finds that the proposal is for an asphalt batch plant. The existing pit covers some 3-4 acres and material will be extracted, crushed and batched into asphalt within the existing site. The closest vineyard to the proposed asphalt plant location is more than four miles away (Telephone Pole Road area). Thus, there are no vineyards located within two miles of the proposed asphalt plant location. The applicable criteria for an asphalt batch plant are provided in UCDC 617 (I) (A) and will be reviewed below. The application complies with this standard.

§ 152.061 STANDARDS FOR ALL CONDITIONAL USES.

The following limitations shall apply to all conditional uses in an EFU zone. Uses may be approved only where such uses:

(A) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and The Umatilla County Planning Department finds that the batching of asphalt will not force a significant change in accepted farm practices on surrounding lands devoted to farm use. As previously described, the property contiguous to the mining site is farmed in dry land wheat. Dry land peas and beans have also been grown in the general area as well as the grazing of livestock. The site is located in an area on the parcel that has never been farmed and is a rocky outcropping of surface rock. The location of the rock pit is in a valley or gulley where there are steep slopes along both sides of the roadway. Thus, farming of land around the rock pit takes place far away from the development site. Farming practices of the adjacent farmland have been in place for decades

and no change to farming practices (i.e. crop patterns, crop rotation, farm equipment movement, etc.) will occur because of the proposed processing – asphalt plant. There will be no change to how the farming will occur on the adjacent farm fields because the site for the asphalt plant has direct access to Birch Creek Road and will not cause a disruption to any existing farm field. The road is a county road and is a paved roadway that is constructed to handle large truck traffic and since it is paved will not create additional dust from the movement of large trucks on the roadway. Other effects from the asphalt plant (noise, dust and odor and emissions) will be monitored by the Department of Environmental Quality through the Air Quality program. Therefore, insofar as the plant operates in compliance with the DEQ ACD Permit, the County recognizes the air quality will not impact farming practices in the area. Copies of these permits must be provided to the County Planning Department. Other State and Federal permits necessary for the operation of an asphalt plant are also required to be obtained and copies of such permits and restrictions provided to the County Planning Department.

(B) Will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use. The Umatilla County Planning Department finds that the farming practices (crop patterns, crop rotation, equipment movement during planting and harvesting) will not change because of the placement of the asphalt plant. The cost of farming may include the fuel required to cultivate, plant and harvest the crop, the seed necessary to plant the crop and the time it takes to complete these tasks throughout the year. The placement of the asphalt plant will not alter or modify the farming patterns on adjacent farm land where additional time, seed and fuel are required to accommodate the asphalt plant. Thus, there will be no disturbance of any adjacent farm field from the placement of the asphalt plant. No new access roads or site clearing will be required that would take additional land out of production. The proposed site has been a rocky, non-productive area where the aggregate site has been operating since 1992. There will be no increase in the cost of farming practices since there is no disturbance of any farm field from the placement of the asphalt plant structure. Therefore, the farming patterns will not be altered that could increase the time taken, fuel required or material (seed, fertilizer, etc.) necessary to continue to farm the adjacent farm fields.

It should be noted that adjacent farm fields are mainly addressed since the possible impacts from the development should be greater on nearby property if adverse impacts are produced by the development. Subsequently, if there are minor impacts to adjacent property it would be reasonable to conclude that the impacts to property further away from the development should be even less. Therefore, the effects caused by the proposed development are more of a concern on adjacent property than distant property.

Currently, there are large trucks that frequent the site hauling gavel and rock out of the pit. Additional truck traffic will be experienced on Birch Creek Road during times when the applicant has projects requiring asphalt. Area farmers and residents may notice the increased traffic and it could necessitate some adjustment in the movement of large farm equipment on Birch Creek Road and other auxiliary roadways. The standard clearly states the use "will not *significantly* increase the cost of farming practices..." The word significantly or significant

is an important qualifier in this standard. The effects of additional truck traffic may change the movement of farm equipment on the roadway to some degree, but will it *significantly* increase the cost of farming (i.e. time and fuel used by the farmer moving farm equipment or livestock from one field to the other)? The word *significant* is generally defined as "fairly large in amount or quantity." [1] Thus, to qualify as a significant increase in additional time or fuel the farmer would have to spend a large amount of additional time and fuel on the road by waiting for trucks to pass until the farm equipment or livestock could move from one field to another on the roadway. Of course, the trucks hauling asphalt would not take precedence and may have to wait if the roadway is impassable because of the travel of large farm equipment or the movement of a large number of livestock. As stated earlier, the typical crops grown in the area is dry land wheat and/or peas and beans, which requires use of farm equipment in the spring to cultivate, fertilize and plant the crop and summer harvesting. In any event, the possible interference of truck traffic with intermittent movement of farm equipment or livestock would not cause a large amount or a significant increase in the cost of farming practices on adjacent farm operations.

Emissions[2] of particulate and gaseous material from the asphalt plant will be addressed by the Air Contaminate Discharge (ACD) Permit, Air Quality Program of the Oregon Department of Environmental Quality (DEQ). The reduction in these emissions is the main emphasis for the permitting process through the DEQ. The applicant is required to obtain all State permits necessary to operate the asphalt plant and maintain the permits each year. The County requires such permits to be obtained and maintained. The County does have a great deal of interest to ensure the environment is protected from hazardous substances, however, the DEQ Air Quality program is relied upon to institute the environmental protection program to protect from harmful levels of emissions. Copies of all DEQ permits and relevant correspondence such as emission reports generated by third party consultants dealing with the asphalt plant must be provided the County Planning Department.

---

1 The word "significant" as defined by http://www.thefreedictionary.com/significant is as follows:

sig·nif·i·cant (sĭg-nĭf'ĭ-kənt) *adj.*
1. Having or expressing a meaning; meaningful.
2. Having or expressing a covert meaning; suggestive: *a significant glance.* See Synonyms at expressive.
3. Having or likely to have a major effect; important: *a significant change in the tax laws.*
4. Fairly large in amount or quantity: ***significant casualties; no significant opposition.***
5. *Statistics* Of or relating to observations or occurrences that are too closely correlated to be attributed to chance and therefore indicate a systematic relationship.

2 *EPA Hot Mix Asphalt Plants: Emission Assessment Report, EPA-4-4541R-00-019; December 2000).* Page 1. The primary emission sources associated with HMA [Hot Mix Asphalt] production are the dryers, hot bins, and mixers, which emit particulate matter (PM) and a variety of gaseous pollutants. Other emission sources found at HMA plants include storage silos, which temporarily hold the HMA; truck load-out operations, in which the HMA is loaded into trucks for hauling to the job site; liquid asphalt storage tanks; hot oil heaters, which are used to heat the asphalt storage tanks; and yard emissions, which consist of fugitive emissions from the HMA in truck beds. Emissions also result from vehicular traffic on paved and unpaved roads, aggregate storage and handling operations, and vehicle exhaust.

§ 152.615 ADDITIONAL CONDITIONAL USE PERMIT RESTRICTIONS.

In addition to the requirements and criteria listed in this subchapter, the Hearings Officer, Planning Director or the appropriate planning authority may impose the following conditions upon a finding that circumstances warrant such additional restrictions:

(A) Limiting the manner in which the use is conducted, including restricting hours of operation and restraints to minimize such an environmental effects as noise, vibration, air pollution, glare or odor; The Umatilla County Planning Department finds that there are no limitations outlined for this proposal. The proposed asphalt plant will produce a certain level of noise, vibration and particulate and gaseous emissions. The question is not whether persons in the general area will see, hear, or smell the asphalt plant, but the standard seeks to *minimize* the environmental effects. The closest dwelling is greater than ½ mile away from the aggregate site where the asphalt plant will be located. At this time it is presumed that the impact to the nearby residents will be minimal because of the distance the project site is from the dwellings. The landscape along Birch Creek Road is a series of hills and gullies, which will shield to some degree the nearby residents from most of the issues listed in this standard. Birch Creek Road is paved, which does lessen the amount of dust created by the movement of trucks and other large vehicles on the roadway.

Additionally, asphalt plants generally do not run continuously for weeks on end, which also should lessen the impact on the surrounding property. The applicant will be required to obtain State permits that deal with air pollution. The Air Contaminate Discharge Permit (ACD) through the DEQ provides oversight for particulate and gaseous emissions. A third party consultant is called in to monitor emissions periodically and reports to the DEQ and the plant owner. If emission levels are not within regulated tolerances then actions are taken to bring the asphalt plant into compliance. The intent of the ACD Permit is to minimize emissions to State standards. Copies of the State permits and reports are required to be provided the Planning Department.

(B) Establishing a special yard, other open space or lot area or dimension; The Umatilla County Planning Department finds that there is no need to establish a special yard or open space in relation to this use. The standard setbacks will apply.

(C) Limiting the height, size or location of a building or other structure; The Umatilla County Planning Department finds that no new buildings are proposed with this development. Different pieces of equipment will be placed on the site that are a part of the asphalt plant, but will not be limited to size, height or location besides required setbacks. The required front yard setback from Birch Creek Road is 60 feet from the middle of the roadway. Also, the structures are to be a minimum of 100 feet from Birch Creek. The site plan submitted by the applicant shows these setback requirements will be met.

(D) Designating the size, number, location and nature of vehicle access points; The Umatilla County Planning Department finds that access points are already established and has been since at least 1992.

(E) Increasing the required street dedication, roadway width or improvements within the street right of way; The Umatilla County Planning Department finds that there is no requirement to improve the roadway width or other improvement to the road. Birch Creek Road is a county maintained roadway and has been paved to County Road standards past the development site. It should be noted that in the early 1990's Humbert Asphalt voluntarily paved the 2 mile stretch of Birch Creek from the intersection of Hood Road down to and past the rock pit. This criterion is not applicable.

(F) Designating the size, location, screening, drainage, surfacing or other improvement of a parking or loading area; The Umatilla County Planning Department finds that the area around the existing pit is large enough to accommodate parking and maneuvering of equipment. The site slopes into the pit away from the Birch Creek Road. Additionally, there is a tall earthen berm (some 10-20 feet in height) that prevents runoff from the site onto the roadway. The only area where the earthen berm does not create the physical barrier to prevent water from running off site onto the roadway are the two driveways off of Birch Creek Road. However, the elevation of the access points does slope away from the roadway such that any water on site will not run off site. It has been found that water pounds in the rock pit site catching any possible spring run off or large rain event on site.

(G) Limiting or otherwise designating the number, size, location, height and lighting of signs; The Umatilla County Planning Department finds that no signs were proposed with this request.

(H) Limiting the location and intensity of outdoor lighting and requiring its shielding; The Umatilla County Planning Department finds that any outdoor lighting in relation to this project must be shielded to prevent glare onto nearby and adjacent properties.

(I) Requiring diking, screening, landscaping or other methods to protect adjacent or nearby property and designating standards for installation and maintenance. The Umatilla County Planning Department finds that there is no requirement for diking, screening, landscaping or other similar activities. The intent of this criterion is to "protect" adjacent property from the visual impact of the development through diking, screening, landscaping etc. The earthen berm was constructed in 1992 to screen the rock pit from the roadway. The asphalt plant is tall and no amount of screening will limit the view of the equipment from nearby property. As pointed out early in this document, the geography of the area naturally screens this project from the general view because of the valley area with relatively steep slopes along the roadway. Thus, until someone enters the immediate area of the development site the asphalt plant cannot be seen. There are no dwellings that are closer than ½ mile that would be impacted by the view of the asphalt plant. Consequently, the asphalt plant cannot be seen from the closest off site dwelling because of the natural geography. The other standards will bring out other methods to protect adjacent property from other possible impacts such as dust, odor, etc.

(J) Designating the size, height, location and materials for a fence; The Umatilla County Planning Department finds that there is no requirement for adding fencing as part of this project at this time. There are gates at the two entrance points to the rock pit. The earthen berm does provide a natural barrier that a fence would typically serve.

(K) Protecting and preserving existing trees, vegetation, water resources, wildlife habitat, or other significant natural resources; The Umatilla County Planning Department finds that the subject property does not contain any trees or other notable landscaping features that will be removed because of the development. The proposed location of the asphalt plant will be located in the existing aggregate site which has been established since 1992. Thus, the project area is rocky and does not have any notable vegetation. Additionally, the site has been a rocky area which is why the site has been used for extraction and crushing of rock. Since there is little vegetation or natural ground cover the area has not been a significant wildlife habitat area for large game such as deer and elk. Wildlife habitat will not be impacted because of the establishment of the asphalt plant being located on the project site. The noise and movement of large trucks has been occurring in this area for over 20 years and so wildlife has most likely acclimated or become accustomed to the effects of truck traffic.

Protecting Birch Creek which is located along the west side of Birch Creek Road is also important to address. It is not presumed that the asphalt plant will adversely impact the stream. The constructed earthen berm and slope of the development site and the roadway itself does provide a barrier of water runoff between the asphalt plant and the stream. The stream is some 30-50 feet west of the roadway, which also provides additional open space to absorb any runoff from the road surface.

Another concern to impacts to the stream would be possible effects from air quality emissions. Monitoring of emission discharge will take place through the required DEQ Air Contaminate Discharge Permit program. A third party consultant will provide on-site emissions evaluation and report the findings to DEQ as required by the permit process. Non-compliance with required emission levels will be handled through that ACD program. All reporting and permit correspondence must be provided the County Planning Department.

(L) Parking area requirements as listed in §§ 152.560 through 152.562 of this chapter. The Umatilla County Planning Department finds that the area around the aggregate pit can accommodate parking of equipment and work trucks necessary for the development.

§ 152.617 STANDARDS FOR REVIEW: CONDITIONAL USES AND LAND USE DECISIONS ON EFU ZONED LANDS.

(I) EFU CONDITIONAL USES

(A) *Asphalt plants.*

(1) Access roads shall be arranged in such a manner as to minimize traffic danger and nuisance to surrounding properties; The Umatilla County Planning Department finds that the project site has direct access from Birch Creek Road. Access roads on the site are minimal with access points arranged such as to make traffic movement safe. Birch Creek Road is a paved roadway, but in this area of the county has minimal traffic. The applicant indicated that Humbert Asphalt worked with Umatilla County Road Department to widen and pave Birch Creek Road in the early 1990s to allow better movement of vehicles.

(2) Processing equipment shall not be located or operated within 500 feet from a residential dwelling; The Umatilla County Planning Department finds that the closest house is approximately ½ mile (2,500 feet +/-) from the project site. The homes that are on the subject parcel are more than 1,000 feet away from the development site. This criterion is not applicable.

(3) Haul roads shall be constructed to a standard approved by the Public Works Director to reduce noise, dust and vibration; The Umatilla County Planning Department finds that there are no new haul roads that will be constructed in relation to the asphalt plant.

(4) The operation complies with all applicable air, noise, and dust regulations of all county, state or federal jurisdictions; and all state and federal permits are obtained before the activity begins; The Umatilla County Planning Department finds that Humbert Asphalt has indicated that they have applied for Federal and State permits dealing with the establishment of an asphalt plat. Approvals are pending and copies of the permits are to be provided the Planning Department. These permits must be obtained prior to the asphalt plant beginning production.

(5) New plants proposed on EFU zoned lands. Plants that batch and blend mineral and aggregate into asphalt cement may not be authorized within two miles of a planted Vineyard totaling 40 acres or more that are planted as of the date the application for batching and blending is filed. The Umatilla County Planning Department finds that there are vineyards east of Milton-Freewater. The closest 40 acre vineyards to the subject project site are some 4-5 miles away near Telephone Pole Road.

(6) Complies with other conditions deemed necessary. The Umatilla County Planning department finds that there are no other conditions that are deemed necessary at this time.

FINAL DECISION: THIS CONDITIONAL USE PERMIT REQUEST TO ESTABLISH AN ASPHALT BATCH PLANT COMPILES WITH THE STANDARDS OF THE UMATILLA COUNTY DEVELOPMENT CODE, SUBJECT TO THE FOLLOWING CONDITIONS:

Precedent Conditions: The following precedent conditions must be fulfilled prior to final approval of this request:

1. Obtain all other federal and state permits necessary for development. Provide copies of these permit approvals and evaluation reports to the County Planning Department.

    a. Obtain all applicable permits for the asphalt plant from DOGAMI before the activity begins.

    b. Obtain all applicable permits for the asphalt plant from DEQ (air, noise, and water quality issues) before the activity begins.

    c. Obtain State Fire Marshall permits necessary for the asphalt batch plant.

2. Pay notice costs as invoiced by the County Planning Department.

Subsequent Conditions: The following subsequent conditions must be fulfilled following final approval of this request Umatilla County:

3. Obtain a Zoning Permit from the Umatilla County Planning Department for the asphalt batch plant. The zoning permit should include an approved site plan showing existing structures, setbacks, etc.

4. Any lighting used for the asphalt batch plant must be shielded to prevent glare onto adjacent property.

5. The applicant shall be required to provide dust control on the project site and on all haul roads.

6. The standards of the required federal and state permits must be met on a continual basis for the conditional use permit to be valid. Additional review by the Planning Department will be conducted if the standards of the required federal and state permits are not met.

7. If the asphalt batch plant is removed from the property for more than one year then this conditional use permit becomes void per UCDC 152.613 (D).

8. A review of the asphalt batch plant will be completed one year from the approval date to ensure that the conditions listed above and the criteria for establishing this use in

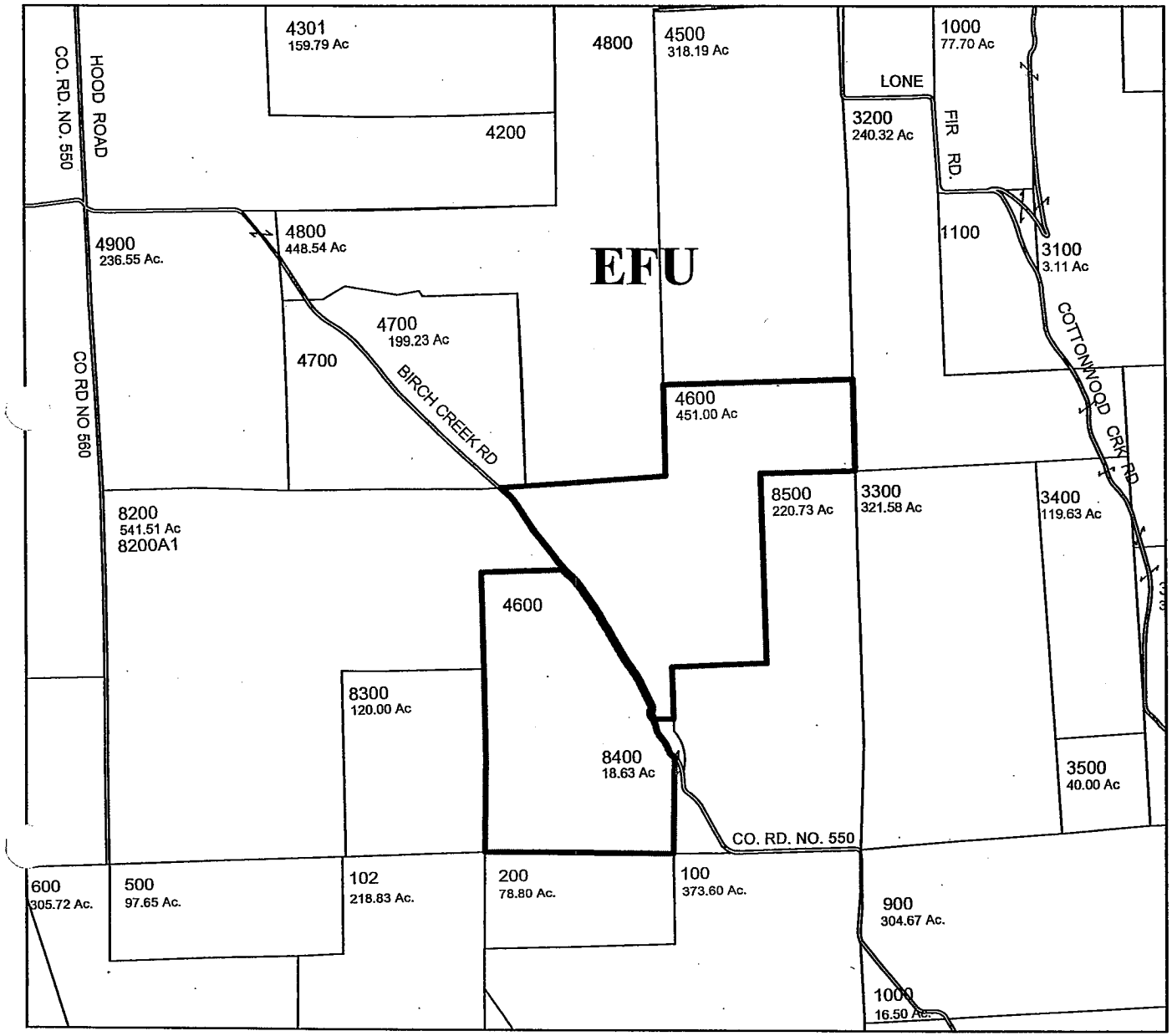
the EFU Zone are being met with subsequent yearly reviews. Conditional use permits are valid as long as the conditions are met.

9. Annual reviews fees will be assessed.

UMATILLA COUNTY DEPARTMENT OF LAND USE PLANNING

Tamra J. Mabbott, *Planning Director*

9-18-13
Date



CONDITIONAL USE REQUEST #C-1226-13
HUMBERT ASPHALT, APPLICANT
KENNEY FARMS, OWNER
MAP 6N36 TAX LOT 4600

SUBJECT PARCEL

PROPERTY OWNERS WITHIN 750'
NOTICE OF SUBJECT PARCEL

MAP 5N36

100	DODGE LAND & CATTLE INC 1/2 ETAL 1/2
102	REA AG CORP
200	KENNEY BARBARA ETAL C/O KENNEY FARMS INC

MAP 6N36

4500	MARUM MICHAEL J (TRUSTEE)
4600	**KENNEY BARBARA ETAL** **C/O KENNEY FARMS INC**
4700	LEAHY EDWARD P & CARRINE M & WILLIAM J
4800	TINKER TAMI JO C/O ROBERT TINKER
8200A1	BISHOP JOYCE RESER
8200U1	BISHOP JOYCE RESER 2/3 ETAL 1/3
8200U2	BAKKENSEN JOHN R (TRS) 1/3 ETAL 2/3
8200U3	BERRY ROBERT 1/6 ETAL 5/6
8200U4	BISHOP JOYCE R (TRS) 1/6 ETAL 5/6
8300	REA AG CORP
8400	DODGE LAND & CATTLE INC
8500U1	REA LAURA B, TRS REA DENNIS
8500U2	MCQUEEN MARILYN RAE 1/4 ETAL 3/4
8500U3	REA BONNIE J 1/4 ETAL 3/4
8500U4	REA DENNIS C (REA HT (TRS) 1/4 ETAL 3/4 C/O REA DENNIS C
8500U5	REA NATHAN H & ETAL REA DENNIS

MAP 6N37

3200	MARUM MICHAEL J (TRUSTEE)
3300U1	REA LAURA B, TRS REA DENNIS
3300U2	MCQUEEN MARILYN RAE 1/4 ETAL 3/4
3300U3	REA BONNIE J 25% ETAL 75%
3300U4	REA DENNIS C & REA H T (TR) 25% ETAL 75% C/O REA H T TRUSTEE
3300U5	REA NATHAN H & ETAL REA DENNIS

N
W E
S

0 1000 2000 3000
Feet

DATE: 8/1/13

OREGON DEPARTMENT OF STATE POLICE
OFFICE OF STATE FIRE MARSHAL

PLAN REVIEW APPROVAL

Oregon
John A. Kitzhaber, MD, Governor

Department of State Police
Office of State Fire Marshal
4760 Portland Rd NE
Salem, OR 97305-1760
(503) 378-3473
FAX (503) 373-1825
TTY (503) 390-4661
E-mail: oregon.sfm@state.or.us
http://www.oregon.gov/OSP/SFM/

PLAN REVIEW APPROVAL

Premier Public Safety Services

Liquefied Petroleum Gas Above Ground Tanks

October 1, 2013

Humbert Asphalt Inc
84899 Hwy 11
Milton Freewater, OR 97862

COUNTY: Umatilla
Plan Review Number: **LPG 13-06**

Your application has been reviewed for conformity with fire protection statutes and applicable regulations of the State Fire Marshal as contained in the Oregon Fire Code 2010 Edition, Chapter 38, and NFPA 58 (2011).

LOCATION: Kenny Pit/Birch Creek
Section 36 Township 6N Range 36E, Milton Freewater 97862

INSTALLED BY: Amerigas

OSFM INSTALLER LICENSE #: 005683-000-3712

LIQUEFIED PETROLEUM GAS - (above ground)

Quantity: **15,000 Gallon** (Water gallons)
Vertical:_____Horizontal: X DOT:_____ ASME: X

The following items are required to be included in the project to meet current requirements prior to installation:

Tanks are required to be constructed in accordance with OFC, Chapter 38 Section 3801.1 and NFPA 58, Sec. 5.2.

Containers are required to be located a minimum of **50 feet** from property lines which may be built upon, buildings and public ways. OFC 3804.3 and NFPA 58, Section 6.3.

Aboveground tanks installed in floodplain locations shall be securely anchored.
NFPA 58, Section 6.6.1.6.

Containers shall be equipped with one or more pressure relief devices which shall be designed to relieve vapor. NFPA 58, Section 5.7.2.

Regulators shall be installed in accordance with NFPA 58, Section 6.8.

Containers shall be equipped with openings suitable for the service in which the container is to be used. NFPA 58, Section 5.2.5.1.

Installation of pipe, tubing pipe and tubing fittings shall be in accordance with NFPA 58, Section 6.9.3, 6.9.4 or 6.9.7 and NFPA 54.

Installation of valves shall be in accordance with NFPA 58, Section 5.9 and NFPA 54.

Provisions shall be made in piping to compensate for expansion, contraction, jarring and vibration, and for settling. NFPA 58, Section 6.9.3.9 or 6.9.4.5. Aboveground piping shall be supported and protected against physical damage. NFPA 58, Section 6.9.3.10.

Underground metallic piping shall be protected against corrosion as warranted by soil conditions. NFPA 58, Section 6.9.3.14.

All piping is required to be tested and proven free of leaks at not less than the normal operating pressure. NFPA 58, Section 6.14.

Electrical wiring and equipment shall be installed and maintained in accordance with the State Electrical Code. NFPA 58, Section 6.22.2.

Fire protection shall be provided for installations having storage containers of more than 4,000 gallons (15 141 L) water capacity. NFPA 58 Section 6.25 The modes of such protection shall be specified in a written fire safety analysis. NFPA 58, Section 6.25.3.2. Portable fire extinguishers complying with OFC Section 906 shall be provided as specified in NFPA 58 OFC Section 3808.2. **If required by Deputy State Fire Marshal, Scott Goff.**

NO SMOKING signs shall be posted when required by the fire code official. OFC Section 3807.2.

Weeds, grass, brush, trash and other combustible materials shall be kept a minimum of 10 feet (3048 mm) from LP-gas containers. OFC Section 3807.3 and NFPA 58, Section 6.4.5.2.

Guard posts or other approved barrier protection shall be provided for LP-gas storage containers, pumps and dispensers. OFC Section 2207.5.3. Protection from vehicles shall be in accordance with OFC Section 312.

NOTE: Compliance with the Oregon Fire Code does not automatically constitute compliance with EPA or other federally mandated rules, and further research may be necessary.

This plan review approval shall expire and become null and void if installation is not commenced within 180 days from the date of this approval.

It is the responsibility of the installer to notify the State Fire Marshal of each installation and the submission of the required fees. ORS 480.450. The enclosed Notice Of Installation Of Liquefied Petroleum Gas Tank must be completed and forwarded to the Office of State Fire Marshal, License and Permit Unit, with the required notice fee by the last day of the month that the tank was installed.

It is the responsibility of the applicant to ensure that this installation shall be in full compliance with applicable statutes of the state of Oregon and any local codes and ordinances.

Prior to filling, you are required to schedule an on-site inspection of the tank(s) with Deputy State Fire Marshal Scott Goff, telephone (503) 325-5515 x24.

Sincerely,

John Caul, Deputy State Fire Marshal (ret.)
Codes and Technical Support Unit

cc: Richard Jennings, Umatilla Planning/Zoning Official
Milton Freewater Rural Fire Department
Amerigas, Installing Co.
Scott Goff, Deputy State Fire Marshal
Anita Phillips, Licensing/Permit Services Manager

LETTER FROM ADJACENT PROPERTY OWNER ROBERT BERRY IN OPPOSITION TO CONDITIONAL USE PERMIT #C-1226-13

August 27, 2013

Richard Jennings
Senior Planner
Umatilla County
Department of Land Use Planning
216 S.E. 4th Street
Pendleton, Oregon 97801

Dear Mr. Jennings:

I am writing to submit the enclosed Statement in Opposition in the Matter of the Application for a Conditional Use Permit for an Asphalt Plant (Request #C 1226-13) of Humbert Asphalt, Applicant and Kenney Farms Inc., Owner.

Thank you for your attention in this matter.

Sincerely,

Robert Berry

Robert Berry
P.O. Box 335
Barnstable, MA 02630
508 362 3419

In the Matter of the)
Conditional Use Permit)
For an Asphalt Plant)
Request #C 1226-13 for)
Map #6N 36 Tax Lot #4600)
Humbert Asphalt, Applicant)
Kenney Farms Inc., Owner)

Response of Adjacent Property Owners to

The Public Notice of

August 7, 2013

Submitted by

Robert R. Berry and
Helen Reser Bakkensen Trust

August 27, 2013

1. Summary of Request including Permit Number

The request by Applicant Humbert Asphalt is to establish an Asphalt Batch Plant in an existing aggregate site at the address 57445 Birch Creek Road, Milton-Freewater, Oregon. The Request Number is #C-1226-13, Map #6N 36, Tax Lot #4600, Account #110617.

2. Status of Respondents.

Respondents are adjacent property owners of the parcel located on Map #6N 36, Tax Lot #8200.

3. Summary of Response in Opposition.

Respondents oppose the request because the evidence and analysis in support of the request to locate an asphalt plant are incomplete as they appear in the "Public Notice" dated August 7, 2013. Moreover, the location of an asphalt plant at this site is generally incompatible with the Exclusive Farm Use (EFU) zone in which Applicant proposes to locate the plant and specifically incompatible with a site which includes a nearby waterway, Birch Creek.

4. Umatilla County Code Sections and Oregon Revised Statutes

The Umatilla County Department of Land Use Planning states that it relies on Umatilla County Code Sections 152.060, 152.061, 152.615 and 152.617. The relevant Oregon Revised Statutes are in Chapter 215, including 215.283 and 215.296.

5. The Public Notice presents unsupported conclusions in its analysis under Section 152.061.

In its review of the application under 152.061, the Public Notice (hereafter "Notice") offers only summary statements, provides no evidence for its conclusions, inappropriately restricts the scope of its review and omits several relevant facts. First, the Notice characterizes the farm practices on property

contiguous as "dry land wheat" which is incomplete because at least until recently farms did raise peas as well as wheat and some had limited livestock grazing. Also, given the undefined scope of asphalt plant emissions, the Notice improperly confined its observation to contiguous farms and should include some comment on non-abutting farms, including the impact on vineyards even though they could be more than two miles distant. Second, the Notice states "No change to farming practices will occur because of the proposed processing-asphalt plant" but offers only a conclusion and no evidence in support. Third, the Notice states " that since the farming practices around this parcel have been present for several decades and that there will be no change in farming practices therefore the cost of those farming practices will also not be affected". At a minimum, this statement is incomplete; the conclusion of no impact *from the plant* does not follow from a mere recitation of historical farm practices. Moreover, the statement is wrong because farming *practices* have changed over several decades. Such change has occurred with the adoption of different cultivation practices on dry land wheat farming, the adoption of pea farming on abutting land and the application of practices designed to limit water erosion under NRCS oversight of HEL land. Fourth, the Notice states that "The proposed activity does not appear to affect farming on adjacent resource land" which again offers no evidence in support. Fifth, the Notice states that "The activity will be contained within a 30 acre area" which is factually incorrect given the nature and extent of air plant emissions (EPA *Hot Mix Asphalt Plants: Emission Assessment Report*, EPA-4-454/R-00-019; December 2000).

6. The Public Notice presents unsupported conclusions in its analysis under Section 152.615.

In its review under application of 152.615, the Public Notice offers only summary statements, provides no evidence for its conclusions and omits several relevant facts. First, with respect to "limiting the manner in which the use is conducted" the Notice restricts its analysis to "residential development" and finding that the "closest dwelling is greater than one-half mile away," the Notice states that "it is

presumed the impact to dwellings will be minimal". However, the Notice does not address the effect of contaminants emitted from asphalt plants which could disperse more widely. Second, the Notice states that "The proposed plant will produce a certain level of noise, vibration, dust and odor" but provides no further detail of these activities which is inadequate because the County should require the Applicant to submit reports forecasting these levels and then re-open the process for further comments. Third, the Notice states that "the standard asks 'will the effect be excessive?' ". However, the Notice provides no standard by which to define what is "excessive" and instead presumes that it will not be excessive. Again, the Applicant should be required to provide an analysis of the impact of these effects and a reference to and discussion of public standards for these effects. Fourth, the Notice offers the statement that "The applicant will be required to obtain Federal and State permits that deal with some of these issues such as noise and dust". As part of its Request for a Umatilla County Permit, the Applicant should file a copy of the Permits which the Applicant is required to submit to the State and Federal entities such as the Oregon Department of Environmental Quality (DEQ). This statement implies that the County has no obligation to review the broader impact of the asphalt plant activity, including its emissions. While DEQ does have the delegated responsibility for oversight over the plant's controlling and monitoring of the plant's generation of contaminants, the County has the responsibility to evaluate the plant's generation of contaminants as well as the plant's generation of levels of "noise, vibration, dust and odor" as part of the County's review of the plant's compatibility with the site under the County's enforcement of its zoning code. To argue otherwise implies that the County has no general oversight over health and welfare as part of its zoning code enforcement. Fifth, the Notice in addressing the issue of "Protecting and preserving existing trees, vegetation, water resources, wildlife habitat or other significant natural resources" states that "the subject property does not contain any trees or other notable landscaping features". This statement ignores the impact of the asphalt plant on nearby natural resources owned by Respondents and other parties, which includes many trees and native plants and

other vegetation along Birch Creek and Birch Creek Road that are immediately adjacent to the site where the Applicant proposes to locate the plant. The trees, native plants and other vegetation are located south of Birch Creek Road. Birch Creek itself meanders through this property. Sixth, the Notice provides no evaluation of the additional traffic attributable to the asphalt plant. Such a traffic analysis is almost always required of Applicants for commercial and industrial permits where the activity involves frequent deliveries.

7. An Asphalt Plant is not a favored conditional use within an EFU.

Under ORS 215.283 and Umatilla County Code 152.060, an asphalt plant is allowed as a conditional use within an Exclusive Farm Use (EFU) Zone. ORS and the Umatilla Code allow only two conditional uses which are not connected with farm or forest activity and which generate hazardous air pollutants, asphalt plants and power generation facilities. Therefore, by strictly limiting the number of types of use, the Umatilla Code and ORS clearly do not favor the siting of such uses.

8. The siting of an Asphalt Plant within an EFU requires more scrutiny.

The asphalt plant is a conditional use within an Exclusive Farm Use (EFU). In the document entitled "The Umatilla County Development Code," Umatilla County presents the "Description and Purpose" of an EFU zone in Section 152.055 and states that "The purposes of an EFU, Exclusive Farm Use Zone, are to preserve and maintain agricultural lands for farm use...to conserve and protect scenic resources; to maintain and improve the quality of air, water and land resources of the county..." (p. 61). Clearly, the presence of an asphalt plant will degrade, not improve, the air quality in an EFU Zone. However, Section 152.060 of the Umatilla Code lists the conditional uses within an EFU and this list includes an asphalt plant in Sub-Section (B) (3). Either the Development Code contains inconsistent provisions or the County intends to apply additional scrutiny to the location of an activity which emits contaminants in an EFU Zone. Such scrutiny could include requiring the Applicant to show that another location, not within an

EFU, is less suitable for the site of its proposed asphalt facilities such as in the East County industrial lands identified in the County Plan (p.18-377).

9. The Asphalt Plant will generate Hazardous Air Pollutants.

The asphalt plant will generate hazardous air pollutants (HAPs). (EPA *Hot Mix Asphalt Plants: Emission Assessment Report*, EPA-4-454/R-00-019; December 2000). These HAPS include polycyclic aromatic hydrocarbons (PAHs), which are known carcinogens. (Environmental Protection Agency, "Evaluation and Estimation of Potential Carcinogenic Risks of Polynuclear Aromatic Hydrocarbons" 1985; K. Srogi, "Monitoring of Environmental Exposure to Polycyclic Aromatic Hydrocarbons: a Review," *Environmental Chemical Letters*, 2007, vol. 5, p. 169). PAHs do accumulate in the soil and are present in crops, with wheat crops as an example. (Kobayashi, et.al., "Polycyclic aromatic hydrocarbons in edible grain: A pilot study of agricultural crops as a human exposure pathway for environmental contaminants using wheat as a model crop," *Environmental Research*, 2008, vol. 107, p. 145).

10. Analysis of the Impact of an Asphalt Plant on the adjacent waterway, Birch Creek.

The applicant proposes to locate its asphalt plant adjacent to a small inland waterway, Birch Creek. The environmental impact of contaminants, including routine and accidental discharges, from a given size source will be larger and more serious with smaller inland waterways. Respondent asserts that Umatilla County should require the Applicant to submit to the County a report that analyzes the impact of the siting of this specific asphalt plant on the unique characteristics of this waterway; this report should identify other asphalt plants permitted near small inland waterways and include an examination of the impacts of contaminants from these plants. This examination should include an evaluation of non-permitted discharges into nearby waterways. This report should be prepared by a firm which has experience in the analysis of such impacts. This report does not duplicate oversight of DEQ, which in the issuance

of its permits applies general standards developed by the United States Environmental Protection Agency (EPA) and by the Oregon Department of Environmental Quality and does not examine the historical performance of similar plants.

11. The County provides no evidence to support its conclusion under Section 152.061 and unnecessarily restricts the interpretation.

The standard for the approval of a conditional use in an Exclusive Farm Use (EFU) Zone appears in Umatilla Code 152.061 (which applies the two-pronged test in ORS 215.296) which states that "The following limitations shall apply to all conditional uses in an EFU zone. Uses may be approved only where such uses: (A) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and (B) Will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use." Further restrictions appear in Umatilla County Code 152.617 which prohibits location of an asphalt plant within two miles of a planted vineyard of 40 acres or more and "complies with other conditions deemed necessary."

In the Notice, the County states that under Section 152.061 conditional uses may be approved only where such uses "will not force a significant change in accepted farm or forest practices" and "will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use." These conditions restate ORS 215.296. The Notice then states that "The Umatilla County Planning Department finds that the batching of asphalt will not force a significant change in accepted farm practices on surrounding lands devoted to farm use." The Notice provides no evidence to support its conclusion.

In 1973, Oregon embarked on a path to conserve farmland with the passage of SB100 which created the Land Conservation and Development Commission, whose function was to develop statewide planning goals (Edward Sullivan, "The

Long and Winding: Farmland Protection in Oregon 1961-2009, *San Joaquin Agricultural Law Review*, 2009, vol. 18, p. 1). There are now over 50 uses allowed in an EFU and while "Many are directly supportive of agriculture", "One of the more controversial uses, mining was allowed in 1973 and has been the subject of intense debate between farm and mining interests ever since." (Sullivan, *ibid,* p.26).

The history of Oregon land use legislation since 1973 expresses a preference to adopt policies which encourage designated farmland to continue in agricultural use and to avoid policies which would discourage farm use. This preference appears in the goal setting activity of the LCDC. Such goal setting is inherently forward looking. This forward looking perspective should inform the interpretation of the two prong test, particularly the interpretation of the phrase "*accepted farm or forest practices*". Certainly, "accepted" *means at least current* practices but to work in a dynamic market environment the term must also include the future. Consider, for example, the farmer who faces a decline in demand for a crop and who must find a substitute crop to continue to make the farm economically viable. Should the interpretation of the term "accepted" ignore this possibility? Or should the interpretation include not only the crops raised historically on a given farm but also include other crops, raised on nearby farms with similar soil, rainfall and temperature? With a production history, these nearby crops are demonstrated, not speculative, substitutes. This approach implies a two step test: first, the farmer shows that the historical crops are no longer economically viable; and second, the farmer identifies an alternative crop on farms with similar soil, temperature and rainfall with a declining weight placed on farms which are increasingly remote. However, applying this test is much *simpler because it merely extends the definition of "surrounding" land from* abutting to, for example, the boundary of the EFU zone. This test extends the flexibility of the test in *Dierking,* in which the Land Use Board of Appeals noted both the abandonment of a plan and development of alternative plans (Dierking v. Clackamas County, 38 OrLUBA 106 (2000)). A showing of the development

of specific alternative plans can be a fact intensive exercise. Instead, the proposed test here only evaluates the impact of the conditional use on crops raised in a wider ambit of surrounding lands.

12. The Asphalt Plant will deposit contaminants which could make the crops from the surrounding land unmarketable.

The discussion above noted that the proposed asphalt plant will deposit known carcinogens on the crops and soil of surrounding farm land. This deposition could have a costly impact. The evaluation of the effect of the deposition of a known carcinogen on a crop should not be restricted only to the consideration of the currently known biochemical effect but also should consider the potential adverse market reaction. The recent adverse market reaction to the potential presence of the glyphosate resistant gene in Umatilla County soft white wheat indicates that the international and domestic market reaction to the presence of contaminants is simply not predictable. Consequently, if the proposed conditional use will significantly increase the concentration of the contaminant, the conditional use should not be approved because such increased concentration itself could impose a significant change in farm practices, including the possible abandonment of the farm itself.

13. Proposed Conditions if the County approves the Permit.

If the requested Permit is issued, then the following are recommended restrictions on the Permit: first, that the term be no more than the ten years which coincides with the term for the renewal of the DEQ permit; second, that a third party perform all monitoring required by DEQ; and third, that the operation of the plant at least not occur during the harvesting of crops on abutting land.

The undersigned Respondents submit this statement in opposition.

Dated this 27th day of August, 2013

Robert K. Berry

Robert R. Berry

Helen Reser Bakkensen Trust

By John K. Bakkensen /rb

Subject: Conditional Use Permit Request #C 1226-13
From: John Bakkensen <jrbakken@aol.com>
Date: September 01, 2013 7:46 PM
To: richardj@umatillacounty.net

Richard H. Jennings: Please add my address to your mailing list for the Findings and Conclusions in this matter. I am trustee of the Helen Reser Bakkensen Trust and joined with Robert R. Berry in a written Response to the Conditional Use Permit Request dated August 27, 2013.

Although I live in Portland, I have many ties to Eastern Oregon. I was born in Pendleton in 1943, and the Trust (for which I serve as trustee) owns one-third of the Ralph Reser ranch that adjoins the quarry site on the South side of Birch Creek.

Our response refers to our concerns over the environmental impact of the proposed asphalt batch plant on Birch Creek. I wish to supplement our Response with the fact that the domestic water source for the Reser ranch is a natural spring at the head of Birch Creek. The priority of this water right dates back to 1894. See the records of the State of Oregon Engineer, Volume 12 at page 9. The water right was also confirmed in a Certificate of Water Right issued to Ralph Reser and his brother Raymond Reser on April 5, 1940 by the Oregon State Engineer. See State Record of Water Right Certificates, Volume 11, page 13150.

Thank you.

John Reser Bakkensen
1141 SW Mitchell Lane
Portland, OR 97239-2822
Phone: (503) 245-0385
Fax: (503) 245-0610
Trustee: Helen Reser Bakkensen Trust
Member: Oregon State Bar and State Bar of California