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February 8, 2012

AUDITOR 02/08/12 PM 2:40

Honorable Mayor Sam Adams and
City Commissioners
City of Portland
1221 SW 4th Ave.
Portland, OR 97204

Re: **Appellant's Rebuttal**
LU 11-125536 CU AD (Verizon Wireless)

Dear Mayor Adams and Commissioners:

I am writing on behalf of Verizon Wireless in response to new material submitted during the January 11-25, 2012 open record period. Specifically, this rebuttal addresses comments received concerning the threshold ERP interpretive issue and the FCC's rules relating to "categorical exclusions" from routine environmental evaluations. Verizon Wireless will submit its final written rebuttal on February 15, 2012.

ERP Interpretive Issue

During the open record period, Ms. Cate and Mr. Walters submitted memos to you dated 1/25/12. Opponents submitted several documents during this period as well. These documents focus primarily on the threshold ERP interpretive issue. Mr. Walters' memo is particularly helpful because it discusses the two primary ways that ERP is regulated under federal law. This distinction is important because the way ERP is calculated in a particular situation depends upon the regulatory context in which ERP is being used.

As Mr. Walters' memo points out, the two primary ways that ERP is used under federal law is to regulate power limits and RF exposure limits. For purposes of regulating power limits, evidence in the record shows that the FCC calculates ERP by channel. This conclusion is supported by Mr. Gorton's testimony. He stated in his 1/24/12 letter at page 6 that: "ERP per channel is the standard method of expressing ERP for purposes of determining compliance with FCC power limits." Mr. Pinion agrees with this conclusion. See 1/25/12 Pinion letter, p. 3. On the other hand, for purposes of regulating RF exposure limits, the FCC calculates ERP by adding together the power from all channels, on all antennas, in a given direction. This conclusion is

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supported by Mr. Gorton's letter of 1/24/12/ at pages 2-3, where he stated that "when calculating human exposure to radiofrequency electromagnetic fields, we consider the total ERP of all channels of all antennas oriented toward whatever location we wish to study, generally all antennas in a single sector of a site, never all antennas of a sectorized site." Mr. Pinion agrees with that conclusion. *See* 1/25/12 Pinion letter, pp. 2-12.

The distinction between the way ERP is calculated for purposes of regulating power limits, versus the way ERP is calculated for purposes of regulating RF exposure limits, is critically important to the proper understanding of how to interpret and apply the phrase "facilities operating at 1000 watts ERP or less" in PCC 33.815.225(C). Mr. Walters, Mr. Gorton and Mr. Pinion agree on these distinctions and all agree that this distinction is important. This distinction and its importance is further corroborated by the testimony of Mr. Campbell, the FCC engineer contacted by Mr. Hermans. In his November 2 email, Mr. Campbell cautioned Mr. Hermans that the answer to his question regarding ERP "depends on the context." We agree. Mr. Campbell further explained that for purposes of establishing power limits under 47 CFR § 22.913, the FCC regulates power by "transmitter" (i.e. channel), but for purposes of RF exposure "ERP is summed for all channels and all antennas operated by a single licensee in a single sector in each particular service or frequency band." Again, we agree that for purposes of RF exposure, ERP is summed for all channels, and all antennas, in a single sector, in each particular service or frequency band. As Mr. Gorton stated in his 1/24/12 letter at page 5, pursuant to OET Bulletin 56, "the FCC considers the words 'channels' and 'transmitters' to be interchangeable." *See* OET Bulletin 56, p. 20.

In short, all of the experts who have testified in this case agree that there are two basic ways to calculate ERP. The methodology that applies in a particular situation "depends on the context." All of the experts in this case agree that in the context of determining or regulating power limits, ERP is calculated per channel. The experts also agree that in the context of determining or regulating RF exposure limits, ERP is calculated by summing the power from all of the channels, of all of the antennas, in a single sector. Simply put, there is no debate among any of the experts in this case about how to calculate ERP for each of these specific purposes.

The question then becomes, on which of these two specific purposes did the City base its 1000 watts ERP threshold? The answer to that question is found in the legislative history associated with the City's enactment of the 1000 watts ERP threshold.

Before reviewing the pertinent legislative history, it may be helpful to underscore two important points that the parties apparently agree on.

First, in his "White Paper" at page 6 of 15, Mr. Hermans states that "ERP is clearly an engineering term describing a technical concept, and is therefore in its definition based on engineering. Therefore, to get an accurate handle on its meaning, value should be given to how

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engineers (or specifically RF Engineers) would interpret the term and its meaning.” We agree. As summarized above, all three RF engineers who have testified in the case agree that the way ERP is calculated depends on the purpose of the calculation. They also agree that the two methods described above are the standard ways of calculating ERP, both in terms of federal law and common engineering practice.

Second, in his “White Paper” at page 12 of 15, Mr. Hermans makes another important point, when he states that: “The threshold of 1,000 watts ERP used in PCC is not an invention or a randomly selected number by City of Portland staff, but rather finds its origin in FCC code.” Again, we agree. The two basic methods of calculating ERP under federal law and standard engineering practice are described above. For the purpose of determining RF exposure limits, ERP is calculated by summing the power from all of the channels, of all of the antennas, in a single sector. For purposes of determining power limits, ERP is calculated by channel (i.e. by transmitter).

With that background in mind, documents in the record show what the City’s intent was in 2004 when it enacted the 1000 watts ERP threshold. Documents in the record show that when the City enacted the 1000 watts ERP threshold in 2004, its intent was to be consistent with FCC regulations so that all wireless facilities would be regulated consistently. For example, in the Appellant’s Hearing Memo, Exhibit A-3, page 3 of 12, the City’s Code Maintenance Commentary specifically says that:

“These amendments will conform Title 33 to the City Council’s adopted Cable Office right-of-way franchise policy for wireless facilities and Federal Communication Commission (FCC) regulations. The threshold of 100 watts effective radiated power (ERP) is outdated, particularly for cellular telephones because of changes in radio communication technology and in the FCC standards.... All wireless telephone providers were intended to be reviewed under the approval criteria currently stated for facilities of less than 100 watts ERP. Increasing the threshold to 1,000 watts ERP will level the field for all providers and make the Zoning Code regulations consistent with FCC regulations.”

In other words, the record shows that the reason the City enacted its 1000 watts ERP threshold was to make the City’s zoning code consistent with FCC regulations, so that all wireless telephone providers would be reviewed under the approval criteria that were then currently stated for facilities of less than 100 watts ERP. The intended result of these amendments was to review all wireless facilities operating outside the public ROW, under the conditional use criteria in PCC 33.815.225(A), (B) or(C) and under the relevant development standards in PCC Chapter 33.274.

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Taking it one step further, what specific FCC regulations did the City intend its 1000 watts ERP threshold to be consistent with? Again, documents in the record reveal what the City's intent was. In the Appellant's Hearing Memo, Exhibit A-1, pages 1 and 2, memo titled "Effective Radiated Power as a Review Threshold in Chapter 33.274," the City stated that:

"With the passage of the 1996 Telecommunications Act and associated broadcast spectrum auctions, new types of cellular services, known as "wireless communications" were introduced to the consumer market...The 1996 Telecom Act created three different types of personal mobile wireless telecommunications systems: the original "Cellular" mobile phone service, and two new types, Personal Communication Service (PCS) and Specialized Mobile Radio Service (SMRS).

"In response to the 1996 Telecommunications Act and public concerns, Chapter 33.274 and the associated conditional use review Section 33.815.225, were significantly revised in November 1997 to include new development standards, new approval criteria and revised review procedures to better address these new wireless telecommunications facilities and their impacts."

"What was not noticed at the time that time was the FCC had also established ERP standards for the three primary services of wireless telecommunications (officially: Cellular Radiotelephone Service, Personal Communications Services, and Specialized Mobile Radio Service). Each of these classifications are regulated by limit of power, defined as effective radiated power(ERP)...The power limits of the three categories of wireless telecommunications services are regulated as follows Cellular, 47 CFR Section 22, Subpart H: PCS, 47 CFR Section 24; and SMRS,47 CFR Section 90 [ref. OET Bulletin 65, pp65-70]. In general, it appears that these types of facilities are authorized by the FCC to routinely operate at or below 1000 watts ERP (1640 watts EIRP). Any facility exceeding these FCC thresholds requires a 'routine environmental evaluation' as further defined by the FCC."

A few weeks later, the City issued a second memo further explaining the purpose of the proposed changes to the City's ERP threshold. As explained in Appellant's Hearing Memo, Exhibit A-2, page 1 of 2, the City stated that:

"In the 1997 code revisions for RF facilities, 100 watts ERP was set as the threshold to distinguish low power wireless communications facilities from larger, more powerful facilities. The power threshold was set at 100 watts ERP, based on

what the City understood the power of these facilities to be and was developed with industry input. In a concurrent process, the FCC determined power limits for three types of wireless communications facilities: cellular, PCS and SMRS. In general, it appears that these types of facilities are authorized by the FCC to routinely operate at or below 1000 watts ERP.” (Emphasis added)

The record therefore shows that the City amended its 100 watt ERP threshold to 1000 watts in 2004 for the specific purpose of being consistent with the FCC’s power limits. These FCC power limits are described in Mr. Gorton’s letter, Mr. Pinion’s letter, Mr. Walters’ memo, and in other references submitted into the record by the applicant, the opponents, and by City staff. All of the engineering experts in this case agree that FCC power limits calculate ERP by channel (i.e. transmitter) not by facility, or by antenna. There is no legislative history in the record showing that the purpose of the City was to invent a new standard that had no relation to FCC rules. The evidence shows that the City specifically intended its new ERP threshold to be consistent with FCC power limits for wireless facilities. Those power limits calculate ERP by channel.

It should be further noted that there is no legislative history in the record showing that the City’s purpose in enacting its new 1000 watts ERP threshold in 2004 was to make the 1000 watts threshold consistent with FCC RF exposure limits. This is true for several reasons. First, the City was acutely aware, even back in 2004, that the FCC had pre-empted local governments from regulating wireless facilities based on the effects of RF emissions. Second, the City did not identify a need to amend its RF emission standards in 2004 in relation to some unnoticed change in FCC RF exposure limits. If RF emission limits were the driving force behind the 1000 watts ERP amendments in 2004, the record would show that there was some previously overlooked FCC RF exposure limits that had changed or that the City now felt it needed to comply with. That is simply not the case. The record does not show that the City was reacting to a change in RF exposure limits or that it had overlooked any RF exposure standard. The record shows that the City enacted the 1000 watts ERP amendments in 2004, because it did not previously realize that FCC power limits for wireless technology had been established by the FCC at 1000 watts or less, not because FCC RF exposure limits had changed. In short, there is simply no evidence in the record that the City enacted its 1000 watts ERP threshold in order to comply with FCC RF exposure limits.

In conclusion, the record shows that the City’s purpose for amending the City’s ERP threshold from 100 to 1000 watts ERP was to make its ERP threshold consistent with the FCC’s power limits. The FCC’s power limits for wireless facilities calculate ERP by transmitter (i.e. by channel). FCC power limit regulations do not calculate ERP by facility or by antenna. The City’s 1000 watts ERP threshold must be interpreted in a way that is consistent with the specific set of federal regulations that it is based upon. For the purpose of calculating power limits, the FCC calculates ERP by channel, not by facility or by antenna. As Mr. Hermans stated, the

City's 1000 watts ERP threshold was not an invention or a randomly selected number by the City of Portland planning staff or City Council; it is firmly grounded in federal law.

The record shows that the City's 1000 watts ERP threshold is firmly grounded in the FCC's power limit regulations in CFR Chapter 47, which calculate ERP by channel, not by facility or by antenna. City staff has therefore been properly interpreting the ERP threshold in PCC 33.815.225(C) since it was originally enacted in 1997 and since it was amended in 2004. The hearings officer's interpretation that ERP in PCC 33.815.225(C) must be calculated by antenna, and the opponents' interpretation that ERP in that section must be calculated by facility, is inconsistent with the specific federal law on which the City's ERP threshold is based. These interpretations are not firmly grounded in federal law and are therefore inconsistent with the context in which the City's ERP threshold was enacted. Council's interpretation of the phrase "facilities operating at 1000 watts or less ERP" cannot be resolved by simply looking at the phrase or the words in isolation. The context of this phrase includes the purpose and intent of the phrase when it was enacted. The purpose and intent of this phrase shows that the City specifically intended its ERP threshold to be consistent with FCC power limits. FCC power limits calculate ERP by transmitter (i.e. by channel) not by facility or by antenna. For purposes of the ERP threshold in PCC 33.815.225 (C), ERP is therefore calculated by channel, not by facility or by antenna.

Categorical Exclusion from Routine Environmental Evaluation

With regard to the "categorical exclusion" provisions of federal law relating to wireless facilities, Mr. Walters states in his memo that:

"After the passage of the 1996 legislation, the FCC adopted implementing administrative regulations. In doing so, the FCC evaluated potential environmental impacts as required by the National Environmental Policy Act. One of the FCC's primary concerns in undertaking this evaluation was to set maximum permissible exposure levels for radiofrequency emissions, to protect human health and safety. After concluding a rulemaking proceeding, the FCC determined that certain transmitting facilities, including cellular and wireless facilities, could be categorically excluded from routine environmental review, if these facilities were below RF emission guidelines."

In his memo, Mr. Walters points out that "With respect to personal wireless services, a cellular facility is categorically excluded if the total effective radiated power (ERP) of all channels operated by the licensee at a site is 1000 watts or less. If the facility uses sectorized antennas, only the total effective radiated power in each direction is considered."

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The “categorical exclusion” provisions referred to by Mr. Walters in his memo are codified at 47 CFR § 1.1307. These provisions define when a Routine Environmental Evaluation (REE) is required under federal law. Mr. Pinion discussed these provisions in his 1/25/12 letter. In his letter, he concluded that:

“An REE (Routine Environmental Evaluation) is required when there is a low antenna height **and** a high ERP. If an antenna is high enough (above 10 m) **or** if the ERP is low enough (below 1000 watts or 2000 watts depending on the service), then there is no requirement for a REE. One does not need to consider the maximum ERP from a personal wireless facility if all of the personal wireless antennas are greater than 33 feet above ground. The facility will be exempt from an REE regardless of the ERP. This makes sense from a technical standpoint because the higher the antennas, the less influence they have on the RF exposure environment. Here is a quotation from page 14 of OET Bulletin 65: ‘For antennas mounted higher than 10 meters, measurement data for cellular facilities have indicated that ground-level power densities are typically hundreds to thousands of times below the new MRE limits.’ Therefore, the proposed Verizon Wireless facility is ‘categorically excluded’ (i.e. exempt) under FCC rules from the requirement for routine environmental assessment regarding RF exposure hazards.” *See* Pinion 1/25/12 letter page 5 and Pinion October 2010 Report (Record Exhibit H28(a), p. 14).

On one hand, it is important to understand how the FCC’s “categorical exclusion” relates to this facility because even if the per sector power from this facility is greater than 1000 watts ERP, this facility would be categorically excluded from performing a Routine Environmental Evaluation, because the height of the proposed antenna on the facility is greater than 33 feet (10 meters). In short, the proposed Verizon Wireless facility is categorically exempt from performing an REE.

On the other hand, for purposes of interpreting the phrase “facilities operating at 1000 watts ERP or less” in PCC 33.815.225(C), the “categorical exclusion” language in 47 CFR § 1.1307 is irrelevant, because there is no evidence in the record that this federal standard was the basis for the City’s 1000 watt ERP threshold. Even if it was, the facility is excluded from having to perform a routine environmental evaluation under Section 1.1307, because the height of the proposed antennas is greater than 33 feet.

Conclusion

All of the evidence in the record shows that the City enacted its 1000 watt ERP threshold in order to be consistent with the FCC’s power limits. The City did not enact its ERP threshold to be consistent with FCC emission standards or to be consistent with FCC “categorical

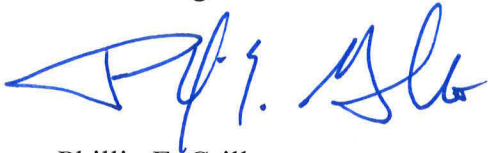
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exclusion” standards. FCC power limits calculate power per channel (i.e. transmitter) not per facility or per antenna. The City’s 1000 watts ERP threshold therefore requires the applicant to show that the maximum power per channel on the facility will not exceed 1000 watts ERP, consistent with federal power limits.

Respectfully submitted,

Davis Wright Tremaine LLP

A handwritten signature in blue ink, appearing to read "P. E. Grillo", is written over the printed name below.

Phillip E. Grillo

PEG/lkt

cc: Client