

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

County of Genesee, New York

and

Sprint Nextel Corp.

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WT Docket No. 02-55
Mediation No. TAM-43102

To: Adm. James Arden Barnett, Jr.
Chief, Public Safety & Homeland Security Bureau

PETITION FOR RECONSIDERATION

Respectfully submitted,

OAKLAND COUNTY, MICHIGAN

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SUMMARY

Oakland County, Michigan (“Michigan”) respectfully requests reconsideration of the Memorandum Opinion and Order (“*MO&O*”) in the above-captioned proceeding.

The *MO&O* fails to maintain the 1 MHz separation between Nextel’s cellularized operations and Genesee’s public safety operations. As such, the *MO&O* is contrary to the Commission’s Rules, policies and specific findings in WT Docket No. 02-55. As stated by the Deputy Chief in the *MO&O*, ESMR operations in the General Category must maintain at least 1 MHz of separation from public safety operations. However, as related to Genesee County, New York (and Oakland) by the Transition Administrator (“TA”), Nextel will have ESMR operations on General Category frequencies in the region around Genesee County (and Oakland) which are less than 1 MHz from the frequencies assigned by the TA for Genesee County (and Oakland). Thus, even if Oakland County agreed with the *MO&O*’s analysis that the 1 MHz separation applies only when ESMR operations utilize General Category frequencies, the decision to require Genesee to relocate within the General Category within 1 MHz of Nextel’s operations is still contrary to the *MO&O*’s statement of the Commission’s Rules. Similarly, the Transition Administrator has made the same error in assigning frequencies to Oakland County.

As anticipated by the Commission in its *Canadian Border Order*, the Commission should direct that the dividing line between ESMR and non-ESMR operation should be moved sufficiently to maintain at least 1 MHz of spectral separation between Nextel and all public safety licensees.

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PETITION FOR RECONSIDERATION

Oakland County, Michigan (“Oakland”), through counsel and pursuant to Section 1.106 of the Commission’s Rules, 47 C.F.R. §1.106, hereby respectfully requests reconsideration of the Memorandum Opinion and Order (“*MO&O*”) issued by the Deputy Chief, Policy and Licensing Division, Public Safety and Homeland Security Bureau, on September 9, 2011 in the above-captioned proceeding.¹

I. BACKGROUND

Oakland County operates an 800 MHz Harris OpenSky trunked radio system for its Public Safety communications. OpenSky is a TDMA technology, offering the Oakland integrated voice and data service and up to four (4) talkpaths per channel. The system is networked and is deployed at 37 sites incorporating 44 Public Safety 800 MHz channels and is designed to provide coverage into buildings. Also included in the County’s network architecture are several 700 MHz OpenSky cell sites

¹ DA 11-1521, released September 9, 2011.

to fill in coverage between 800 MHz high sites. Lastly, the County employs vehicular repeaters operating on four (4) frequencies separate from the trunked infrastructure to cover those areas needing coverage enhancement, or for the creation of ad-hoc networks to accommodate field tactical situations. The County's network serves 100 public safety agencies located in Oakland (including fire, police and public safety departments and hospitals) and over 5,000 subscriber units.

A. The TA's Frequency Proposal Report

On January 23, 2009, the 800 MHz Transition Administrator ("TA") issued Frequency Proposal Reports ("FPRs") covering 12 of the Oakland's 800 MHz Public Safety authorizations. The TA's FPRs resulted in the following:

- Qty (28) 800 MHz network channels are replaced at 22 sites
- Qty (16) 800 MHz network channels are unchanged
- Qty (4) 800 MHz VRS channels are replaced

Upon review of the TA's frequency replacement recommendations, Oakland discovered that five (5) of its channels at four (4) sites relocate from existing wideband 25 kHz channels to NPSPAC channels having a reduced bandwidth. The effect of reduced bandwidth in the Oakland's OpenSky system is to degrade the Channel Performance Criterion ("CPC") with a resultant reduction in radio coverage.

B. Effect Of NPSPAC Reduced Bandwidth On Wideband Operations

In order to gauge the effect of reduced (NPSPAC) bandwidth on five (5) channels at four (4) sites, Oakland requested that Harris perform a coverage characterization test to demonstrate any difference in system performance between wideband and NPSPAC modulation. Accordingly, Harris developed a suitable characterization test using the downlink communications channel for comparing the CPC for the two bandwidths, 25 kHz wideband and NPSPAC reduced bandwidth channels.

The CPC test utilized the County's Commerce site that has one RF channel and compared Block Error Rate (BLER) measurements from the one channel. For the first test, the channel was configured as a wideband channel and BLER tests were performed within the Township boundary associated with the Commerce site. Then, the channel was reconfigured as a narrowband channel and BLER tests were again performed. The data from each test was compared in order to characterize any difference in the percentage of covered area at various block error thresholds.

The CPC test was performed during August 2009. The data from each test was compared in order to characterize the difference in percentage of covered area at various block error thresholds – 1%, 5%, 7%, and 10% BLER. In all cases, the percentage of covered area was consistently less for NPSPAC reduced bandwidth emission than for wide band emission. The decrease in bandwidth approximates to a 2 dB difference in CPC such that the NPSPAC channel would require a 2 dB stronger minimum signal level compared to the wideband channel for the same RF coverage performance.

C. NPSPAC Relief From Region Committee

In order to not suffer the 2 dB degradation in coverage performance brought about by the change to NPSPAC bandwidth on five (5) rebanded channels, County sought relief in October of 2009 from the NPSPAC Region 21 (Michigan) Committee to stay wideband on NPSPAC channel assignments. Such relief is permissible under the FCC's Rebanding Canadian Report and Order provided the Regional Planning Committee concurs, and the licensee requests a waiver from the FCC. On November 16, 2009, Region 21 concurred and granted the requested relief provided the TA not make any regional frequency assignment changes that would permit the County to move up to the interleaved band, where wideband 25 kHz emission can be employed.

D. Harris OpenSky Radio Code

With the prospect of using wideband modulation on the five (5) TA-assigned NPSPAC channels, Harris reviewed its radio programming tool and OpenSky radio code to determine whether the alteration to wideband emission could be accommodated on a NPSPAC channel. At this point in time, Harris had already rewritten its OpenSky radio code to accommodate the shift of the NPSPAC sub-band 15 MHz lower in frequency. Both with the previous and rewritten radio codes, NPSPAC mask and modulation is assigned in programming based on FCC channel number. Neither the radio programming software nor the radio code has the capability to associate the modulation masks independently for either the pre- or post-rebanding channel plans. Ultimately, Harris determined that a further significant rewrite of radio code would be required to allow the selection of wideband or NPSPAC modulation on a particular frequency assignment. Harris declined to rewrite its OpenSky radio code for what appeared to be a unique situation not faced by any of its other customers.

E. Nextel Request For Alternate Channels

Also during October 2009, Harris (on behalf of Oakland) reached out to Nextel requesting alternative wideband channel assignments to avoid using the NPSPAC replacement channels proposed by the TA. At the time, Sprint informed Oakland that it could not locate any substitute wideband channels fitting within the County's geography.

F. Saginaw County And State Of Michigan Channels

Beginning January 2010, the County's consulting engineer (RF Systems) engaged in discussions with the State of Michigan to determine whether any channel swaps may be possible between the County and the State to alleviate the County's concern with NPSPAC channels. The State primarily operates as NPSPAC but was allocated certain wideband channels by the TA for the State's

800 MHz reconfiguration project. The State advised RF Systems of two State channel assignments that were potentially swappable. The State also advised that Saginaw County channels were potentially available because Saginaw County was dismantling its 800 MHz system and joining the State system instead.

RF Systems found that two (2) State channels and five (5) Saginaw channels were free of co-channel users within 113 km when used at certain sites within the Oakland's OpenSky network. RF Systems developed a revised frequency plan to incorporate these seven channels and move various County channels among sites to remove the TA's NPSPAC assignments from Oakland's rebanding project. On March 24, 2010, Oakland requested that the TA consider a change in the post-rebanding frequency assignments based on the introduction of the State and Saginaw frequencies.

On April 8, 2010, the County convened a meeting attended in person or via telephone by its personnel and representatives, the State of Michigan, the TA and Nextel to discuss the proposed frequency swaps between Oakland and State, and the acquisition of certain Saginaw channels. The parties generally agreed to move forward. However, some minor additional work was required by the TA with respect to the Saginaw channels, as such channels were part of an existing FRA.

During the months of April and May 2010, Oakland further optimized its proposed frequency plan utilizing the State and Saginaw frequencies, along with further coordination with the TA and Sprint Nextel.

G. FCC Order Proposing Modification

On May 21, 2010, the FCC released an Order proposing modification to the County's authorization for station WPPC814 by: (1) reducing the Effective Radiated Power (ERP) of all base station locations; and (2) restricting the area of operation of all mobile units and control stations

operating above 2.5 watts ERP to more than 30 kilometers from the Canada-United States border. The FCC took this action “in furtherance of ensuring compliance with international obligations.” The frequencies authorized under WPPC 814 are designated primary for Canadian licensees and emissions from stations using the frequencies in the United States must be limited to not exceed specified values of Power Flux Density (PFD) at the Canadian border. Although WPPC814 frequencies were previously authorized by the FCC years ago, the Commission determined that the PFD at the border with Canada exceeded permitted levels. The FCC then prescribed ERP levels for Oakland’s WPPC814 channels at which they become non-interfering with Canada. For the channels in use at Oakland Ave, the FCC specified a reduction of ERP from 125 Watts to 12.8 Watts, and the channel at Clarkson a reduction from 125 Watts to 22.4 Watts ERP.

At the time of the FCC’s Order, only three of the twelve channels authorized under WPPC814 were in use in the Oakland’s network. Oakland has since deleted all non-used channels from its license. Two of the problem channels remain at the Oakland County’s Oakland Avenue site and one at the Clarkston site.

H. Oakland Initial PFD Analysis

In attempting to comply with the FCC’s Order Proposing Modification, Oakland engaged Harris and RF Systems to investigate the effect of a reduction in ERP as proposed by the Commission and to determine alternatives to the Commission’s solution for non-interference. Harris determined significant coverage holes resulting from lowering ERP to FCC prescribed levels. RF Systems noted that FCC methodology for determining PFD levels into Canada are based on Free Space Loss but when calculations are made using the Bullington Plane Earth model and considering intervening terrain, the PFD levels at the border with Canada become non-interfering.

I. County Opposition To Proposed Modification

On June 21, 2010, Oakland filed an Opposition to the proposed FCC Modification Order seeking grandfather status for its technical operation under WPPC814 and citing reasons for doing so, as well as the Commission's assistance in working with Canadian officials to reach an accommodation on behalf of Oakland. Within its Opposition, Oakland brought forth the significant matter of resultant coverage holes from the Commission's ordered reduction in ERP levels and suggested how the current Oakland's operation would actually become non-interfering if terrain was considered in the calculation of the PFD levels at the border. In its Opposition, Oakland cited that the FCC's Order also impeded Oakland's ability to reband its network because the alternative channels being sought from the State and Saginaw are also Canadian primary and would have the same problem of operating within the Commission's prescribed PFD limits.

J. FCC Review Of Oakland's Opposition

Upon review of the Oakland's Opposition to Proposed Modification, the Commission found by additional calculations that while PFD levels at the border with Canada from Oakland County's Oakland Avenue and Clarkston sites can be non-interfering when terrain is considered, "the signal strength exceeds the permitted PFD value at locations beyond the border in Canada where the terrain rises." On July 28, 2010, the Commission inquired whether there are other techniques Oakland can employ "in addition to relying on knife-edge diffraction to reduce the ERP in the direction of Canada, for example, beam tilt or a directional antenna in the horizontal plane."

K. Oakland Second PFD Analysis

During August and September 2010, Harris and RF Systems continued to work with Oakland on further refining the solution for the sites affected by the Order Proposing Modification. In addition to a blanket reduction of ERP to prescribed FCC levels, Harris also considered antenna beam tilt. The Oakland Avenue site was already downtilted 1.5 degrees in its installed configuration. Harris applied 3 degrees and then 6 degrees of beam tilt. While the latter showed significant improvement or elimination of harmful PFD beyond the border with Canada (defined as -107 dBW/m²), becoming this aggressive with modification of antenna pattern at Oakland Avenue and Clarkston degraded RF coverage to such an extent that this course of action could not be recommended.

The next step taken by Harris was to attempt to move the offending Canada primary channels from Oakland Avenue and Clarkston to other sites within the County that were shadowed to a greater extent by terrain. This effort proved fruitful, leading RF Engineering to revise the channel plan for Oakland's OpenSky network by proposing swaps of seven (7) channels among six (6) sites.

L. TA-Proposed Alternative Frequencies

On November 19, 2010, the TA communicated to Oakland that it had "an alternative available for all the problematic frequencies either up in the GX band or via rearranging replacement frequency locations." At that time, the TA further defined the first Nextel ESMR channel as 863.0500 MHz so that Oakland could gauge the separation of ESMR operations from certain proposed GX sub-band channels. The TA also modified Oakland's frequency planning table that had been the working document since the assignment of channels in the TA's original FPR.

M. Oakland Third PFD Analysis

The TA's alternative channel assignment plan provided seven (7) GX Band channels, all within 2 MHz of the proposed Nextel operation. In fact, six of the proposed GX Band channels were within 450 kHz of the proposed Nextel operation. The limited separation from Nextel operations caused Oakland to set aside the TA's recommended channel plan of 11/03/10 and, instead, pursue the State and Saginaw channels.

Through additional PFD analysis, Harris determined County sites which offered the most terrain shielding from Canada. A total of 15 sites complied with PFD limitations when terrain was considered in the analysis. An ERP of 125 Watts was used for the analysis.

RF Engineering then developed a revised version (Version 4) of the Oakland frequency plan using the candidate sites and the State and Saginaw channels and issued the Plan on January 11, 2011. The RF Engineering Version 4 Plan assumed that FCC would grant a waiver to allow terrain to be taken into account for the PFD calculations at the Canadian Border.

N. FCC Meeting – January 19, 2011

On December 3, 2010, Oakland notified the FCC that after many months of working toward an acceptable resolution, Oakland had reached an impasse with the TA on the matter of comparable frequencies. Oakland further advised the Commission that it could not reband its OpenSky system with NPSPAC channels and the TA did not have wideband channels that are more than 1 MHz from the proposed Nextel operations. Oakland requested a meeting with Commission representatives to further discuss the situation.

The meeting with the Commission was ultimately held January 19, 2011, at which time the Harris PFD methodology and the RF Engineering Version 4 Frequency Plan was presented and

discussed. Commission representatives requested that further work be shown supporting the PFD analysis and frequency plan, which would be based on sound engineering principals. Commission representatives also advised that under the revised treaty with Canada, it was now permissible to take terrain into account when making the PFD calculations.

O. Oakland Fourth PFD Analysis

In addition to permitting the use of terrain in calculating PFD at or beyond the Canadian border, Oakland was informed that the new agreement with Canada lowered the limit at which PFD would be considered interfering. The new limit is -124 dB(W/m²)/25 kHz. Moreover, applicants or licensees under this provision are to calculate the PFD good engineering practice and generally accepted terrain-sensitive propagation models (with location and time variables of 10% and standard 3 arc-second digitized terrain data).

During late January and early February 2011, Harris again repeated its PFD analysis but this time substituted the new PFD limit. Under that constraint, only one County site yielded results of no interference at or beyond the border with Canada. Harris presented its findings to Oakland on March 14, 2011. The discussion with Oakland resulted in suggestions to consider alternative sites for PFD analysis and to test antenna beam tilt at certain sites.

P. Oakland Fifth PFD Analysis

By April 6, 2011, Harris had completed and reported on its latest round of PFD calculations. Harris examined every site in the northwest portion of the County to test terrain shielding from Canada. Harris also considered heavy antenna down-tilt (6 degrees) on those sites that previously generated “spotty” interference at or beyond the Canadian border. Again, the results were poor and unworkable. Because of the requirement for heavy (18 dB) in-building coverage, it was not practical for Oakland to

consider the use of Canada primary channels in its OpenSky network. Harris met with Oakland on April 14, 2011 to discuss the results of Fifth Round efforts.

Q. Subsequent Efforts

After the failed Fifth PFD Analysis, Oakland continued its efforts, and its work with the TA and the FCC, to find a workable alternative. The following represents a summary of efforts by the parties:

03/22/11 – TA Mediator suggests that Oakland may also want to re-look at some of the alternatives proposed by the TA last Fall and see if some combination of those alternatives and moving channels around might help achieve a solution.

04/21/11 – Oakland advised the FCC that the County and its vendors have spent a considerable amount of time trying to figure out a way to meet the new PFD requirements in order to be able to reband the County system and despite best efforts, the County had reached a dead end. The County then requested another meeting with FCC representatives to seek further recommendations.

04/22/11 – The TA inquires whether Oakland can consider certain interleaved channels previously recommended as they should be far enough from the ESMR line.

04/25/11 – TA requests more information prior to the planned May 20, 2011 FCC meeting regarding what Oakland tried that didn't work or only partially worked, what sites the overpowered frequencies would work on (if any) given the revised PFD rules, which of the alternative GX channels suggested by the TA were tried and where, why a software modification won't work, etc.

04/29/11 – TA inquires of the County as to the relationship between County and Bloomfield Township, since it was reported that Bloomfield would join the County OpenSky network. The TA was interested in whether certain Bloomfield channels may be applicable to resolving the County rebanding frequency issues.

05/11/11 – TA provided a replacement frequency plan with an alternative approach. The plan was noted as consistent with the Commission's standards respecting co-channel spacing and resolving the issue of the County operating with excessive power at some of its sites on channels primary to Canada. The TA requested that the County and its representatives evaluate this plan before the FCC meeting on May 20, 2011 and be prepared to address any concerns they may have with the plan.

R. FCC Meeting – May 20, 2011

On May 20, 2011, there was a joint meeting of the FCC, 800 Transition Administrator, Nextel, Oakland County, Harris, RF Systems, and Counsel to Oakland County at the Commission's offices. In response to the TA's inquiry, Harris provided rule-of-thumb adjacent channel assignment methodology for Oakland County OpenSky system of 2 sites between adjacent channel locations.

The Parties discussed the replacement frequency plan advanced by the TA on May 11, 2011. To ease adjacent channel concerns, RF Systems suggested a swap of channels between Oxford Channel 501 and Groveland Channel 288; and between Hospital Road 297 and Highland Channel 268. Harris concurred with the change in these channel assignments. RF Systems was tasked to confirm the switch in channel assignments.

In lieu of the original TA-allocated NPSPAC assignments or State and Saginaw Canada primary channels, the TA replacement frequency plan contains certain GX channel assignments. Three of the proposed GX channels are located within 450 kHz of the TA-proposed Nextel boundary at 863.0625 MHz, which Oakland has deemed an unacceptable risk of interference.

To promote the reconsideration of TA-assigned NPSPAC channels, Nextel suggested converting NPSPAC channels to 2-slot TDMA operation and adding an additional NPSPAC channel to a NPSPAC site in order to make up the 2 dB coverage shortfall that would be realized in converting from wideband (25 kHz) operation to NPSPAC emission, and the capacity degradation in transitioning from 4-slot to 2-slot operation. Harris was tasked to study "2 X 2-Slot" solution.

As a potential alternative to using certain GX assignments, the TA suggested using NPSPAC channels at high sites along west border of County and fill in coverage deficiencies with OpenSky cell sites operating on Canada primary channels. The TA requested technical specifications for cell sites and estimated equipment cost. Harris was tasked to study this "High Site-Cell Site" alternative. In addition,

the TA asked that Oakland review four (4) channels that were previously assigned but not in current version of frequency plan and not yet cancelled.

S. TA Correspondence – June 1, 2011

On June 1, 2001, the TA advised that the swap of channels between Oxford Channel 501 and Groveland Channel 288 and between Hospital Road Channel 297 and Highland Channel 268 would work. In addition, the TA also inquired about: (1) TTA specifications; and (2) Confirming that 2-slot in NPSPAC will mitigate the 2 db loss projected for 4-slot.

T. TA Correspondence – July 1, 2011

On July 1, 2011, the TA sent to Oakland a letter relating much of the history of Oakland's frequency review but again specifying channels within 500 MHz of Nextel's proposed operations. The letter indicated that the TA had completed its frequency work, and any objection should be communicated to the FCC.

In response, on July 14, 2011, Counsel to Oakland received a telephone call from the TA Mediator, and Counsel to Oakland stated Oakland's opposition to the TA plan and proposed an alternative which in essence proposed Oakland would accept frequencies within 1 MHz of Nextel IF those channels could be the first three channels within 1 MHz (I think that you understand what I mean by that, but let me know if you don't). The TA Mediator stated that he would consult with concerned parties and respond to Oakland.

Prior to Oakland's receiving a response to the July 14, 2011 proposal, on July 29, 2011, the Commission sent a letter to Oakland stating that Oakland had until August 8, 2011 to object to or concur with the TA's July 1, 2011 proposal. In response, Counsel to Oakland reiterated Oakland's

prior submitted objection and communicated Oakland's next alternative. Oakland was thereafter informed that it should communicate its proposal directly to the Commission.

At this time, the TA has assigned three channels (862.6125, 862.7375 and 862.7625 MHz) to Oakland County that are within 1 MHz of the first projected frequency for Nextel's ESMR operations (projected by the TA to be 863.0625 MHz), two of which are within .5 MHz of Nextel's projected ESMR operations.

Prior to Oakland's completion of its draft alternative plan, the Commission released its decision in the Genesee County rebanding matter. As discussed in Oakland's separately filed Motion for Leave to Intervene, the Genesee decision directly impacts Oakland's interests. Therefore, Oakland is filing this Petition for Reconsideration.

II. ARGUMENT

A. Placement Of Public Safety Channels Within One MHz Of Cellular Operations Ignores The Entire Record Of The Commission's Proceeding

The *MO&O* properly summarizes the Minimum Cost Standard for rebanding as taking into account "... not only cost, but all of the objectives of the proceeding..."² The primary objective of the proceeding was the elimination of interference from cellular-like configuration systems to public safety operations. In doing so, the Commission specifically rejected sole reliance on post-incident interference mitigation. Rather, the Commission required proactive, not reactive interference mitigation. The Commission specifically stated that "... achieving satisfactory interference abatement

² *MO&O* at 3.

will require both band reconfiguration and application of Enhanced Best Practices.”³ The Commission was clear that the “... best long term solution requires a restructuring of the 800 MHz band to substantially reduce the need for case-by-case interference management.”⁴

The impact of the *MO&O* is a finding that Canadian Border public safety licensees are not entitled to proactive interference protection. However, none of the Commission’s Orders in WT Docket No. 02-55 have found that Canadian Border public safety licensees are entitled to some lesser amount of proactive protection than non-border licensees. Rather, the Commission specifically recognized that the limited amount of spectrum in this region might require Nextel, not public safety licensees, to make accommodations to maintain at least one MHz of spectral separation. Specifically, the Commission directed Nextel “... to maintain at least one MHz separation from the highest Canada primary channels used by public safety licensees in the region.”⁵ The *MO&O* fails to explore the option of having Nextel’s operations moved higher in the band. For this reason, the *MO&O* must be reconsidered.

Oakland is not requesting reconsideration of the *800 MHz Second Report and Order*. Rather, Genesee is only requesting proper application of that Order’s parameters in that Genesee be able to operate at least 1 MHz distant from these cellular operations. In fact, Genesee is asking for less spectral separation (1 MHz) than public safety licensees in the non-border areas, where such licensees

³ *Improving Public Safety Communications in the 800 MHz Band, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, WT Docket No. 02-55, released August 6, 2004 at para. 88 (emphasis added).

⁴ *Id.* at para. 122.

⁵ *Improving Public Safety Communications in the 800 MHz Band, Second Report and Order*, WT Docket No. 02-55, DA 08-1094, released May 9, 2008 at para. 25 (“*Canadian Border Order*”). The paragraph does not specify that Nextel maintain one MHz separation from NPSPAC licensees only, but rather all public safety licensees.

enjoy 2 MHz of separation. Thus, Genesee's position is: (1) consistent with the Commission's Orders; and (2) recognizes the more difficult spectrum environment in the Canadian Border Area. The *MO&O* is inconsistent with the Commission's Orders, and therefore must be reconsidered.

In fact, it was Nextel that stated that there needed to be separation of at least 2 MHz between public safety and ESMR operations. In its Comments submitted on May 6, 2002, Nextel proposed the creation of "a guard band containing at least the 2 MHz of the proposed new public safety band (859-861 MHz) adjacent to the new digital SMR channel block." This 2 MHz guard band, according to Nextel, would provide public safety systems with significant additional protection from CMRS-based interference. It was Nextel's position that, with at least 2 MHz of additional separation between cellularized SMR systems and public safety operations, the incidence of IM interference to public safety transmissions should, at the very least, be reduced to a level that is manageable through site-by-site coordination."⁶ Nextel said its proposed guard band "would allow noise-related interference from CMRS out-of-band-emissions ('OOBE') to be reduced."⁷

Later in 2002, Nextel and numerous public safety organizations collaborated to create the Consensus Plan, which recommended "that the 2 X 2 MHz block (814-816/859-861 MHz) immediately adjacent to the first cellularized channel be used as a guard band for further protection of public safety systems from interference resulting from cellularized operations."⁸ In its comments, Nextel called the Consensus Plan an "effective, comprehensive and achievable solution" to public safety interference because it "addresses the interference problem at its source by separating the

⁶ Comments of Nextel Communications, Inc., WT Docket No. 02-55 at 22 (May 6, 2002).

⁷ *Id.*

⁸ Reply Comments of Industrial Telecommunications Association, Inc., WT Docket No. 02-55 at 9 (Aug. 7, 2002).

interleaved 800 MHz spectrum allocation and associated incompatible network architectures.”⁹ In later comments, Nextel described the Consensus Plan as “the only detailed, practical, and sustainable means for improving public safety communications in the 800 MHz band and meeting all of the Commission’s objectives” and urged the Commission to adopt the Consensus Plan “in its entirety.”¹⁰

Both Nextel and the Consensus Parties (which included Nextel) argued that Motorola’s proposed technical toolbox, essentially the mitigation techniques already reviewed by Genesee in this proceeding, would be insufficient by itself to prevent harmful interference to public safety. The Consensus Parties wrote that the technical toolbox would be “... inconsistent with the Commission’s decision in the 700 MHz Guard Band proceeding. There, the Commission established Guard Bands to separate public safety and cellular systems, finding that adjacent channel cellular systems posed too great an interference threat to public safety operations. The record contains no explanation of how it can be possible, therefore, to maintain adjacent and interleaved public safety and cellular operations in the 800 MHz band, despite the well-documented evidence of extensive interference from cellular to 800 MHz public safety and private wireless systems.”¹¹ The Consensus Parties considered the technical toolbox would be a complement, not a replacement, for 800 MHz realignment.¹²

The Consensus Parties offered several reasons why Motorola’s technical toolbox alone was not a solution to harmful interference. First, the technical toolbox’s solutions were reactive to interference

⁹ Comments of Nextel Communications, Inc., WT Docket No. 02-55 at i (Sept. 23, 2002).

¹⁰ Comments of Nextel Communications, Inc. and Nextel Partners, Inc., WT Docket No. 02-55 at i, iii (Feb. 10, 2003).

¹¹ Consensus Parties Ex Parte Submission, WT Docket No. 02-55 at vii (Aug. 7, 2003).

¹² *Id.* at 35.

instead of proactive, and therefore inappropriate for first responders who need reliability.¹³ Second, Nextel and other licensees previously tried Motorola's proposed solutions to OOB public safety interference (such as external filtering, reduced CMRS transmission power, directional antennas, and increased transmitter height) and found them lacking.¹⁴

Nextel reiterated its support for the Consensus Plan and opposition to the Motorola's technical toolbox in ex parte presentations before the Commission. Nextel called the Consensus Plan "the only effective solution" and quoted APCO and other public safety organizations' joint statement that the technological toolbox was not a "technological silver bullet" that would eliminate the need for rebanding.¹⁵

The Commission adopted the position of Nextel and the Consensus Parties. Specifically, the Commission stated that:

Proposals advancing the use of Enhanced Best Practices - however defined - as the sole remedy for interference abatement have a significant drawback that makes them problematic as a long-term solution: they incur high transactional costs for all parties would have to continuously be applied to an increasing number of interference incidents that are inevitable as use of the 800 MHz band intensifies.¹⁶

Yet the *MO&O* provides only for reactive Enhanced Best Practices for Genesee. The *MO&O* fails to address the high transaction costs, not to mention potential life-threatening consequences of interference, from Genesee having to play interference "whack-a-mole." The *MO&O* ignores the history in the rule making proceeding and ignores the Commission's specific findings that interference

¹³ *Id.* at 36.

¹⁴ *Id.* at 37-42.

¹⁵ *See* Nextel Communications, Inc. Ex Parte Notice, WT Docket No. 02-55 (Oct. 6, 2003) quoting Nextel Communications, Inc. Ex Parte Notice, WT Docket No. 02-55 (July 9, 2003).

¹⁶ *Id.* at para. 119.

resolution should be proactive, not reactive. Further, the *MO&O* fails to require 1 MHz of separation in Nextel's proposed use of General Category frequencies.

B. The *MO&O* Improperly Places Genesee In The Middle Of Cellularized Operations

Section 90.619(c)(10) Table C10 of the Commission's Rules provides that in Canadian Border Region 2 (where Genesee is located) and Canadian Border Region 3 (where Oakland is located) that the Enhanced SMR block of channels begins with Channel 711 (866.0125 MHz).¹⁷ However, the *MO&O* is inconsistent with Section 90.619(c)(7) Table C7 of the Commission's Rules. This Table establishes the General Category block of frequencies in the Canadian Border area. In Region 2, Table C7 states that High Density Cellular operations are permitted on any frequency in the Category from Channel 621 (863.7625 MHz) up to the beginning of the ESMR block.

Therefore, Table C7 provides that Genesee's assigned frequencies (864.1875 and 864.4375 MHz) are entirely encompassed within the block where High Density Cellular operations (whether by an SMR operator or any Part 90 eligible licensee) are permitted. Further, the Transition Administrator informally informed Genesee on June 17, 2010 that it expected that Nextel's operations would begin at 864.5625 MHz, part of the General Category frequencies and less than .5 MHz from Genesee's proposed channels.¹⁸ Thus, Nextel will be using channels specified for the General Category.

In Oakland County's case, Oakland's system is located in Canadian Region 3. Section 90.619(c)(7) Table C7 lists Channel 509 (860.9625 MHz) as the first channel where high density

¹⁷ Genesee has been assigned 864.1875 and 864.4375 MHz for its FRED operations by the Transition Administrator. *MO&O* at footnote 29.

¹⁸ However, the TA noted that this assignment was not final.

operations are permitted. Thus, like Genesee, Oakland has been assigned frequencies in the middle of spectrum which can be utilized for high density cellular operations.

It is the assertion of the *MO&O* that the "... Bureau established a 1 MHz buffer only for Sprint operations that remain in the non-ESMR segment of the band, post rebanding.... Genesee will have the benefit of the 1 MHz "buffer" established in the 800 MHz *Second Report and Order* relative to any Sprint stations located below the ESMR line."¹⁹ However, the *MO&O* is incorrect in its analysis. If the TA's report to Genesee is accurate, Nextel will indeed be operating on General Category frequencies, and operating less than 1 MHz from Genesee's operations (in fact, less than .5 MHz). For this reason, the *MO&O* is fatally flawed.

Similarly, in Region 3, Nextel's projected operation on 864.5625 MHz is clearly within the General Category, but less than 1 MHz from Oakland's proposed operations.

III. CONCLUSION

The Memorandum Opinion and Order improperly places Genesee within 1 MHz of Nextel's ESMR operations on General Category frequencies. The *MO&O* places Genesee's operations (and Oakland's operations) in the middle of frequencies where cellularized operations are permitted, without any consideration of the Commission's findings in WT Docket No. 02-55. Further, the *MO&O* provides no analysis of the reactive interference abatement procedures which Genesee (and Oakland) will endure and ignores the costs of those efforts, efforts which were specifically rejected by the Commission in WT Docket No. 02-55 as contrary to the purpose of this proceeding.

¹⁹ *MO&O* at paragraph 30.

WHEREFORE, the premises considered, it is respectfully requested that the Commission act in accordance with the views presented herein and provide that Nextel's ESMR operations will not be located within 1 MHz of the highest public safety frequency in the applicable Canadian Border Region.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of October, 2011, a true copy of the foregoing Petition For Reconsideration was served by electronic mail upon:

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