

# Declaration of Bradley Jackson

1 Bradley Jackson makes he following declaration under penalty of perjury:

2 I have provided RF Field Engineering and Project Management services for KMCE,  
3 Inc. since 2003. The following sets forth a plan of action, and a background time line of  
4 activities regarding Low Power Television Station K14SI-D ("the Station") in the  
5 displacement and re-pack of television services during 2020, into channels 36 and below.  
6 Except for licensing matters and other matters in the public record, I am relating these matters  
7 from my personal knowledge.  
8

## Summary and Conclusions

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10 The K14SI-D licensee has a choice between: 1) Implementing an expensive Mask  
11 Filter (costs possibly as high as \$50,000) and, 2) Changing channels to Channel 35. An  
12 application to move to Channel 35 appears feasible from an RF engineering standpoint, and  
13 the channel change could be implemented at costs of approximately \$6,500. Regarding the  
14 mask filter, there are no technical guarantees being offered by the manufacturers, Dielectric  
15 or ERI, that the Channel 14 Mask Filter 'solution' would be 100% effective at fully mitigating  
16 Land Mobile interference. Both the total costs and the apparent effectiveness to provide  
17 interference-free service are unknowns, unless and until the modification was implemented in  
18 practice. The channel change is the more definite, as well as the vastly cheaper alternative.  
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## Background to Complaints and Remediation Efforts

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21 On January 22, 2019 the Station was granted a Construction Permit to Displace to  
22 Channel 14 (473 MHz) with its same transmitter location at Fremont Peak, CA. On  
23 November 25, 2019 the Station was deemed eligible for Reimbursement of expenses incurred  
24 in the displacement.  
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26 In January, 2020, I installed a Broadband UHF Panel Antenna System with new RF  
27 line and a Kathrein 6-pole Full Service Mask Filter. When sourcing this Filter, I discussed  
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1 with the manufacturer my concern that the Station needed to be able to successfully operate  
2 on Channel 14 without causing interference to Land Mobile (LM) radio operations. Kathrein  
3 told me they were confident that their mask filter would be adequate for these purposes.

4 On February 1, 2020 I put the Station on the air from Fremont Peak at 2.2 kW ERP  
5 and meeting the other parameters of the Construction Permit. Sampling from a line section  
6 directly after the Mask Filter output, our RF analyzer indicated that at 469 MHz (top of LM  
7 operations), CH14's emissions were down -76.5dBm from the output measured at the center  
8 frequency of CH14 - 473 MHz. The Station was Granted 'License to Cover' on Channel 14  
9 on February 7.

10 On March 2, I received a call from Dave Hernandez of Crystal Communications  
11 stating that our transmissions on CH 14 were interfering with their LM operations at Fremont  
12 Peak. I responded with some ideas we might use to identify possible mitigation efforts, and  
13 how we could work collaboratively to solve the interference issues. The suggestions included  
14 Low PIM antennas, more aggressive filtering for their radios, and changing antenna  
15 placements on the structure. The next day I reached out again to Crystal Communications to  
16 reiterate Station's desire to work collaboratively and identify steps we might take. Later that  
17 evening, Crystal Communications responded by e-mail:  
18

19 *Believe me when I say in response to all your suggestions in your email that*  
20 *there is no technical fix for the problem we are experiencing. We have talked*  
21 *to many engineers since we talked and provided them all the measurements at*  
22 *the site and there is no way for us to coexist at the site. You must get a new*  
23 *frequency allocation or move to a very distant site. We were at the site first*  
24 *which means you must solve the problem, not us. To minimize our damages I*  
25 *kindly request you cease operation. If you do not see the light by Thursday we*  
26 *will be forced to go to the FCC to cancel your license. We have had to take*  
27 *this type of action before and will not hesitate to do it again. You are*  
28 *dreaming if you think this can be remedied any other way. - Dave Hernandez*

I was also contacted on March 4 by David Smith, the Frequency Coordinator for Land  
Mobile Licensees in our area, indicating that the Station was causing interference with two  
more LM Licensees, these operated by Silke Communications:

My name is David Smith and I am a FCC certified frequency coordinator and Executive Vice President of FIT.

KMCE's transmissions on channel 14 are causing extreme interference to two of Silke Communications licenses under call signs WPVV808 and WPWG659 at Fremont Peak in Salina California. Each authorization serves numerous subscribers who are unable to use their radios when the station is broadcasting - David Smith.

Because the Station had now been contacted by two individual LM operators, I decided it was necessary to reduce the ERP until we could fully evaluate, and we did so on March 5.

On March 15th, I was contacted by Dennis Smiley of Tait Communications, yet a third LM operator. stating that they had earlier been experiencing interference from Station's CH14 transmissions from Fremont Peak. Tait was encouraged that in the intervening time, Station had reduced power to remove the interference. Tait asked me to provide them ample notice and contact them "...if we EVER intended to go back to full ERP with CH14".

As of May 21, we had so far not been able to identify a clear path and budget to technically alleviate interference with LM operators. The Station applied for, and was granted an STA to remain Silent.

As I see it today, there are but two options to move forward with K14SI-D:

Option 1 - Install New CH14 Mask Filter(s) and Provide New Antennas/Filtering to Land Mobile Operators(as needed):

- Both Dielectric and ERI are prescribing a possible solution that employs two 8-pole Mask Filters which are cascaded from the first to the second.
- Initial Costs:
  - ~\$17k for the CH14 Filter(s), ~\$1.5k for various 'RF Plumbing' components and consumables, ~\$6k in labor (installation labor -and- labor for coordinated testing with LM operators when CH14 is ready to power-up to full ERP).
  - Costs which cannot be accurately identified at this time:
  - After spending ~\$25k on the new CH14 cascaded Mask Filter 'solution', Station could still find itself in a position where LM operators are experiencing interference.
  - In that case, it could be necessary to attempt further mitigation to the Land Mobile users by replacing their current antennas with 'Low PIM' version(s) and providing more aggressive filtering for their radio(s).
  - The (3) LM operators noted above are only those who contacted Station during the three weeks Station was transmitting full ERP on CH14 -- It is conceivable that other LM operators could surface, claiming interference.

