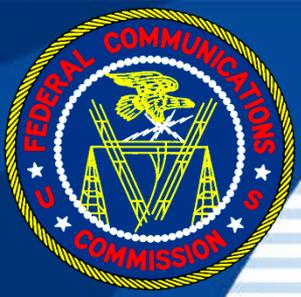


Equipment Authorization Program Review

Office of Engineering and Technology
Laboratory Division



Overview

- FCC 14-208 Equipment Authorization order process changes
- KDB Updates
- Measurement Standards/Site Validation



Review of Equipment Authorization Program

Presented at June 2012 Commission Meeting

- **First NPRM – TCB Obligations**
 - Consider:
 - Refine & codify PBA procedure
 - Clarify TCB obligations for post-grant checks
 - Require accreditation for all test labs
 - Recognize latest industry testing standards

- **Second NPRM – Administrative Procedures**
 - Consider:
 - Merge different self-approval procedures
 - Modify permissive change and Software Defined Radio rules
 - Certify modular transmitters for licensed services



Equipment Authorization Order

- **Equipment Authorization Report and Order**
 - ET Docket No. 13-44, RM-11652
 - NPRM Released: February 15, 2013
 - R&O FCC 14-208 Adopted: December 17, 2014
 - Release December 30, 2014
 - Effective Date: 30 days after publication in Federal Register
 - Some transition periods defined in order for longer transition
 - FCC is updating multiple KDBs impacted by order

- **Outline:**
 - TCB Program
 - Test Laboratories
 - Transition Period
 - KDB Work Plan
 - Site Validation
 - Measurement Procedures



TCB Program

- All certification of RF Equipment by TCBs
 - As of effective date of order FCC will no longer accept new equipment authorization applications for FCC to issue grant
 - FCC will process applications received before effective date
- Authority for TCB to dismiss(DM) applications for certification not compliant with FCC requirements
 - Pre grant
 - May only DM applications TCB was requested to grant
 - Must upload all exhibits and provide specific reason
 - Post grant
 - May only DM grants they approved
 - May only DM within 30 calendar days of grant date
 - Programming changes will require DM correspondence by created by TCB on FCC website specifying issues
 - Correspondence will be emailed to TCB and grantee



TCB Program (2)

- Authority for TCB to DM applications (continued)
 - DM will notify FCC to review
 - DM will trigger automated notification when any new 731 initiated under same FCCID by any TCB to insure all issues have been resolved
- Pre-approval guidance procedure
 - Former Permit but Ask (PBA) now codified in 2.964
 - No significant changes from PBA process
 - KDB's will be updated for new filing process
 - Programming plan to move process out of KDB and have TCBs initiate process directly with 731 submission
 - Add question to 731~ "Is pre approval guidance required for this application?"
 - » This will initiate FCC review and any FCC questions, clarifications or sample requests will be sent thru 731 application process



TCB Program (3)

- Post-market surveillance
 - Requirements codified in 2.962(g)
 - Details remain in KDB 610077
 - Audit % not changing
 - Order allows TCB to request voucher to obtain sample directly from market but doesn't require voucher process to be used
 - Programming Plan (pending)
 - Create process for TCB to request sample from FCC website and sample request sent by FCC
 - Not mandatory to request thru FCC site
 - Create process for TCB to update status of sample requests on FCC website
 - Automated emails to TCB when no updates
 - Allows FCC to better manage audit process
 - Future surveillance process changes being evaluated



TCB Program (4)

- Post-market surveillance
 - Programming Plan (continued)
 - Create process for TCB to upload non compliance finding directly to FCCID
 - Create automated notifications to FCC regarding grantees that are not responsive to sample requests
- Assessing TCB performance (2.962(e))
 - Additional options for addressing TCB performance issues:
 - Limit scope of deficient TCB
 - Require deficient TCB to have all grants processed thru pre approval guidance procedures
- Update rules to reference current ISO/IEC Standards:
 - ISO/IEC 17011:2004 for Accreditation Bodies
 - ISO/IEC 17025:2005 for Accredited Laboratories
 - ISO/IEC 17065:2012 – TCBs must be accredited and FCC recognized by September 15, 2015 to continue issuing grants of Certification



TCB Program (5)

- Related programming changes (planned)
 - More secure login process
 - Each TCB user will have unique login and password
 - Logins will be linked to Key Employee List (KEL)
 - » New key employees entered on KEL by designating authority as currently done
 - » Requires adding email and security questions for each employee to KEL
 - » Admin key employee at TCB will be identified and may expire or reset user password
 - » Identify Admin(s) at TCB who should have rights to reset passwords and expire users
 - » User may reset their own password and create security question/answers



TCB Program (6)

- Eliminating letter mailing
 - Goal is to implement electronically signed and digitally verified documents on website and attached to emails
 - Requires valid emails for all parties
 - Steps occurring now to validate email addresses
 - Blocking grantees with no email address on record
 - Email confirmations when new grantee or other entity created
 - Email confirmations when key employee added
 - FCC transition to electronic correspondence process
 - FCC receiving increasing number of undeliverable bounce backs
 - FCC emails identified as spam by mail servers
 - Some mail servers only accept email from “validated” user
 - All FCC equipment authorization and KDB emails sent from:
 - OETECH@fccsun27W.fcc.gov
 - » FCC initiated Email created by specific user but not sent from their email account
 - » Verify that OETECH@fccsun27W.fcc.gov is allowed address



Testing Laboratories

- Discontinue “2.948 Listing” Program
 - On effective date of order FCC will stop accepting requests for recognition of 2.948 listed test firms
 - FCC will complete reviews of 2.948 listing requests received before effective date
 - All 2.948 listed test firms with an expiration date of more than one year from effective date will have expiration date modified to one year from effective date.
 - All 2.948 listed test firms with an expiration date after the effective date but less than one year from effective date of order will retain their current expiration date
 - These test firms will be able to follow the normal renewal procedures, if there are no changes to their test site since the last recognition, to extend their expiration date to one year from the effective date
 - This process will not occur automatically



Testing Laboratories (2)

- Discontinue “2.948 Listing” Program (cont)
 - Test reports for testing completed at 2.948 listed test firms which remain recognized for the full year from the effective date of the order, where the testing is completed prior to the expiration date will be accepted by the FCC for three month after the expiration date
- Order requires that all equipment subject to Certification and DoC procedures, under any rule part, be tested by a testing laboratory accredited to ISO/IEC 17025 and recognized by the FCC
 - Under current rules only DoC devices and Part 15 Certified devices required testing at an accredited/FCC recognized test laboratory
 - Now devices under licensed radio services are included
- Upon effective date of order all 731 Forms will require 2.948 listed or accredited test firm to be entered



Testing Laboratories (3)

- Recognition of accredited testing laboratories
 - FCC KDB 974614 will be updated
 - Draft publication viewable on www.fcc.gov/labhelp
 - Test firms must be accredited to ISO/IEC 17025 and the FCC requirements and FCC recognized in order for reports to be valid
 - Testing by external resources/subcontracted must be completed by accredited test firm that is FCC recognized
 - This is an expansion of the requirements in ISO/IEC 17025
 - TCBs will be required to verify that a test firm is FCC recognized for scope of testing for test reports they accept and authorize



Testing Laboratories (4)

- Accredited testing laboratory scopes
 - Proposed initial scopes for accredited test firms:
 - Part 15 Unintentional Radiators
 - Part 18 Industrial, Scientific, and Medical Equipment
 - Part 15 Intentional Radiators except Part 15D
 - Part 15 Subpart D (UPCS)
 - Licensed Devices Radio Service Rule Part
 - RF Radiation Exposure
 - Part 20 Hearing Aid Compatibility (HAC)
 - Test firms don't need to be accredited to all scopes but must be accredited to everything within each scope they are accredited for
 - FCC discussing plan to apply scopes on ~350 current Labs



Testing Laboratories (5)

- Test Firm Accreditation Body (TFAB) recognition
 - Order codifies requirements for recognition of laboratory Accreditation bodies - 47 CFR 2.949
 - Current procedures allow FCC to recognize:
 - Domestic accredited labs
 - Foreign accredited labs under the terms of Government to Government Mutual Recognition Agreement (MRA)
 - » US Accreditation bodies may assess foreign labs in MRA partner countries but lab is designated to FCC through MRA recognize designating authority
 - Alternative arrangements can be recognized by FCC
 - » Currently no alternative arrangements recognized
 - » If procedures to recognize non MRA country accrediting bodies and testing labs are developed they will be published but this is not required by FCC 14-208
 - Order allows same options but does not require that FCC develop procedures to recognize accrediting bodies in non MRA countries



Testing Laboratories (6)

- Test Firms in non MRA countries
 - FCC recognized US Test Firm Accreditation bodies (TFAB's) are currently only permitted to designate domestic accredited test firms to the FCC
 - MRA Partner TFAB's are only permitted to designate test firms within their territory to the FCC
 - Current procedures don't recognize accredited test firms in non MRA countries
 - FCC is considering necessary requirements and discussing issues with stakeholders



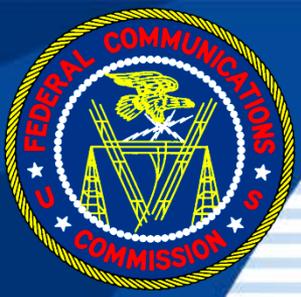
Delegate Authority

- Delegated authority
 - Provides greater flexibility for FCC/OET to use delegated authority to address minor technical issues related to updating standards for Parts 2, 5, 15 and 18.
 - New standards adoption or major standards revisions must still go through rulemaking process



Transition Period 2.950/Timeline

- Order becomes effective 30 days after being printed in federal register
- On effective date:
 - Discontinue accepting Form 731 requests for FCC equipment authorization applications
 - Discontinue accepting requests for “2.948 Listing” of test laboratories
- One year from effective date
 - Expire all recognized 2.948 listed test firms
 - Require use of C63.4-2014 and C63.10-2013
- 15 months from effective date
 - Stop accepting test reports from all “2.948 listed”
- 3 Years from effective date
 - Require test firms to meet new site validation requirements for radiated emissions above 1 GHz



Revised KDB Publications

- Publish Draft KDBs as they are ready
- Publish final KDBs closer to effective date of the rules:
 - 30 days following publication in Federal Register
- Work plan
 - OET staff working on revisions to KDB Publications impacted by rule change
 - Identified 72 publications needing review and possible revision



KDB Updates

- KDB 974614 Accredited Test Firm Roles and Responsibilities
 - Modified for FCC 14-208
 - Added scopes of accreditation and test methods
 - 2.949 Recognition of test firm accrediting bodies
 - Site validation requirements
 - Accredited/FCC recognized test labs required for testing all DoC and Certified devices
 - Compliance testing experimental radio license
 - Updated contacts and addresses for A2LA and ANAB(formerly ACLASS)



KDB Updates (2)

- KDB 853844 Accredited Testing Laboratory FCC Technical Assessment Checklist
 - Modified for FCC 14-208
 - Reduced questions specific to ANSI C63.4
 - Adjusted questions to be applicable for additional standards
 - Added questions regarding accredited lab scopes
- KDB 641163 TCB Program Roles and Responsibilities
 - Modified for FCC 14-208
 - Table 2 Scopes of accredited test laboratories
 - Subcontracted testing by accredited/FCC recognized test lab
 - Clarified evaluation/review/decision on certification
 - Combined testing capability and core testing sections
 - Updated TCB personnel training section

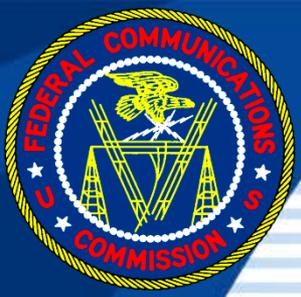


KDB Updates (3)

- KDB 668797 TCB Program ISO/IEC 17065 Technical Assessment Form
 - Modified for FCC 14-208
 - Removed expired KDBs
- KDB 610077 TCB Post Market Surveillance
 - Modified for FCC 14-208
 - Updated rule parts and references
- KDB 388624 Pre Approval Guidance
 - Modified for FCC 14-208
 - Change name from Permit but Ask to Pre Approval Guidance



QUESTIONS AND ANSWERS



RADIATED EMISSIONS TEST SITE VALIDATION REQUIREMENTS



Radiated Test Site Validation

Requirements Specification

- FCC radiated test site validation requirements are defined in §2.948(d)
- Radiated test site technical requirements are encapsulated in ANSI C63.4-2014 for unlicensed unintentional radiators and in ANSI C63.10-2013 for unlicensed intentional radiators
- In general, test sites used for radiated emissions measurements are required to comply with ANSI C63.4-2014 and validation of the test site shall be confirmed no less than once every three years.
- KDB Publication 704992 will be updated and provide additional information regarding FCC test site validation requirements.



Site Validation Requirements as a Function of Frequency Range

- Test site validation requirements for radiated emissions measurements in the 30 MHz to 1000 MHz frequency range.
 - Radiated test sites shall comply with the site validation requirements specified in ANSI C63.4-2014 clause 5.4.
- Test site validation for radiated emissions measurements at frequencies above 1000 MHz
 - Radiated test sites shall comply with the site validation requirements specified in ANSI C63.4-2014 (Clause 5.5.1), such that the validation criteria stated by CISPR 16-1-4:2010-04 is satisfied.
 - ANSI C63.4-2014 provides two options for test sites to be use to perform radiated emissions measurements above 1 GHz:
 - utilize site validation criterion specified in CISPR 16-1-4:2010; or
 - cover a specified area of the ground plane as described in ANSI C63.4-2014.
 - ANSI C63.10 requires a radiated test site for use above 1 GHz to conform to the site validation criteria specified in CISPR 16-1-4:2010.



Site Validation Transition Period

- Order provides for a three year transition period for bringing test sites into compliance with the CISPR standard.
 - Over the duration of this three-year transition period, either option specified in ANSI C63.4-2014 may be used.
 - However, at the conclusion of the transition period, any test site to be used for radiated emission measurements above 1 GHz with respect to both unintentional and intentional radiators shall comply with CISPR 16-1-4:2010-04.
- Test laboratories are encouraged to begin the transition to CISPR 16-1-4:2010 immediately so as to permit the time necessary for making any requisite changes needed to bring their test sites into compliance.



Order-Referenced Measurement Standards

ANSI C63.4-2014

ANSI C63.10-2013

ANSI C63.5 -2006



Measurement Standards Recognized by FCC 14-208

- **ANSI C63.4-2014** – Measurement Procedures for Compliance Testing of Unintentional Radiators
 - Replaces ANSI C63.4-2003 and ANSI C63.4-2009 editions.
 - Becomes mandatory for use after 1-year transition period, beginning upon publication of the Order in the Federal Register.
 - Any of the three versions of the standard may be used during the transition period.
 - Order provides special exceptions for use of 2003 version for a limited time.
- **ANSI C63.10-2013** – Measurement Procedures for Compliance Testing of Unlicensed Wireless Devices
 - Replaces ANSI C63.10-2009 referenced by FCC Public Notice DA-09-2478.
 - Becomes mandatory for use after 1-year transition period, beginning upon publication of the Order in the Federal Register.
 - Either standard may be used during the transition period.
- **ANSI C63.5-2006** – RF Measurement Antenna Calibration
 - Defines antenna calibration requirements for NSA testing integral to both ANSI C63.4-2014 and ANSI C63.10-2013.
 - New edition currently in ballot comment resolution.



QUESTIONS AND ANSWERS