Guide to RTL Invalid Data and Orphan Output (v. 4.5.2)

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Executive Summary

This document describes the output tables as generated by the Raw Trip Level (RTL) quality control program. RTL detects and organizes errors found in the NMFS databases. These databases include the VTR database (NOAA under FSO), the sector database (Sector under FSO), the dealer database (CFDBS at SOLE), the permits database (Permit under FSO), and data originating with the observer program.

1.0 Key

This guide provides information for each output table in the following format:

Table description

Table or view name
How table or view is generated.
Grouped or Summed by: …
[Prioritized by: …
Where to look next: …]

The database may contain thousands of errors, in which case, QC personnel need to identify the most problematic areas and group errors from these areas together according to similar causes. Prioritization tables list these large error groups. Prioritization tables are marked by underlining. "Where to look next" instructs you what to do after you identify a priority.

2.0 Errors in the VTR Database (NOAA.images and NOAA.catch)

2.1 Invalid VTRSNs in VTR database

view v_pc_odd_vtr_in_images
VTR serial number (VTRSN) in noaa.images table is all zeros or is not in one of the following formats:

1. new format
2. old dashed format with dash removed
3. old dashed format
4. research format
5. electronic VTR, often used for did not fish

Grouped by: sector, VTRSN

2.2 Null VTRSNs in VTR database

view v_pc_null_vtr_in_images
VTRSN is null in noaa.images table.
Grouped by: sector, VTRSN

2.3 Duplicate records in VTR database

view v_pc_duprecords_in_images
VTRSN appears in more than one record in noaa.images table.
Grouped by: duplicate count

2.4 Invalid area codes in VTR database

table t_pc_bad_area_img
Statistical area code in noaa.images table is not valid. Valid codes are those in cfdbs.area@sole plus those on the VTR Instructions charts.
Grouped by: sector

2.5 Invalid gear codes in VTR database

table t_pc_bad_gear_img
Gear code in noaa.images table is not on the list of valid gear codes on the VTR Instructions.
Grouped by: sector

2.6 Null permit numbers in VTR database

view v_pc_null_permit_vtrs
Null permit number in noaa.images table.
No grouping.

2.7 Null or zero dealer numbers in VTR database

view v_pc_vtr_null_dealer
VTR database (join of noaa.images with noaa.catch) has null or zero dealer numbers.
Grouped by: sector, permit_num

2.8 Sum of missing permit or dealer numbers by sector and permit

view v_pc_vtr_null_dealer_sum
Count of defective records in v_pc_vtr_null_dealer (2.7).
Summed by: sector, permit, count
Prioritized by: count
Where to look next: VTR image. Look for fuzzy matches in cfders.

2.9 Sum of bad areas by sector and permit

table t_pc_bad_area_by_vessel
Invalid area code counts by vessel permit.
Summed by: sector, permit
Prioritized by: count
Where to look next: VTR image. Contact vessel owner or sector manager.

2.10 Sum of bad gear codes by sector and permit

table t_pc_bad_gear_by_vessel
Invalid gear code counts by vessel permit.
Summed by: sector, permit
Prioritized by: count
Where to look next: VTR image. Contact vessel owner or sector manager.

3.0 Errors and Statistics in the Dealer Database (cfders)

3.1 Dealer records missing both hull ID and permit

table t_pc_null_hull_permit
Both hull id and permit number are null or zero in cfdbs.cfders@sole. By law, dealer records are required to have one or the other.
Grouped by: dersource, where dersource indicates the dealer reporting system and whether the report passed inspection.
Valid dersource values are:

a) safis_k = data keyed in using SAFIS web form
b) safis_u = data upload, dealer notified right away if not valid
c) safis_s = PC based data entry system, followed by upload
d) codes = original data entry system used by port agents
e) scbi = newer code for safis_s
f) swcb = same as scbi but could not pass inspection

3.2 Dealer use by sector

view v_pc_dealer_use_by_sector
Indicates frequency of dealer use by sector.
Summed by: sector X dealer combination

3.3 Not currently in use

table NA
NA
Grouped by: NA

3.4 Dealer records that did not pass inspection upon upload

table t_pc_dealer_didnt_pass
Records failing inspection according to dersource = 'SWCB'. This table tends to mirror t_pc_null_hull_permit (3.1) but not always.
Grouped by: sector, dealer

3.5 Invalid VTRSNs in dealer database

table t_pc_odd_dealer_vtr
Records in cfders that involve sales from federally permitted vessels to federal dealers with bad VTRSNs formats (as described in 2.1) and species other than inshore species.
Grouped by: sector, dealer

3.6 Counts of invalid VTRSNs in dealer database

table t_pc_odd_dealer_vtr_grp
Counts of invalid VTRSNs in t_pc_odd_dealer_vtr (3.5) by sector and dealer.
Summed by: sector, dealer
Prioritized by: count
Where to look next: 3.5

3.7 Out of range VTRSNs with current formats

table t_pc_out_of_range_dealer_vtr
For current format VTRSNs the valid range is known and checked here. Only records involving federally permitted vessel sales to federal dealers, where the species is other than an inshore species are inspected. See t_pc_odd_dealer_vtr (3.5).
Grouped by: sector, dealer

3.8 Not currently in use

table NA
NA
Grouped by: NA

3.9 Null VTRSNs in dealer database

table t_pc_null_dealer_vtr
A list of records in the dealer database with null VTRSNs. Only records involving federally permitted vessel sales to federal dealers, where the species is other than an inshore species are inspected. See t_pc_odd_dealer_vtr (3.5).
Grouped by: sector, dealer

3.10 Counts of null VTRSNs in dealer database

table t_pc_null_dealer_vtr_grp
Counts of null VTRSNs in t_pc_null_dealer_vtr (3.9) by sector and dealer.
Summed by: sector and dealer
Prioritized by: count
Where to look next: 3.9

3.11 Counts of out of range VTRSNs in dealer database

table t_pc_oor_dealer_vtr_grp
Counts of out of range VTRSNs in t_pc_out_of_range_dealer_vtr (3.7) by sector and dealer.
Summed by: sector and dealer
Prioritized by: count
Where to look next: 3.7

3.12 Reused VTRSNs in dealer database

table t_pc_reused_dealer_vtr
Pairs of dealer records where the VTRSN is the same but the permit is different. This indicates that a dealer is reusing VTRSNs across multiple trips. Data is collapsed across multiple sales within a single trip.
Ordered by: sector and dealer

3.13 Counts of reused VTRSNs in dealer database

table t_pc_reused_dealer_vtr_grp
Counts pairs of dealer records where the VTRSN is the same but the permit is different in t_pc_reused_dealer_vtr.
Ordered by: sector and dealer
Prioritized by: count
Where to look next: 3.7

4.0 Dealer Orphans

4.1 Dealer orphans

table t_pc_dealer_orph_age

Dealer records that do not have a corresponding VTR record in the VTR database. Matching is by docid, dealer, permit, and species; all four fields must match. The docid is a unique trip level identifier. Note that the table may contain dealer records that are not true orphans; that is, dealer records that are not expected to have matching VTRs because the transactions are associated with vessels that are exempt from reporting requirements. These records are not excluded because the matching process cannot readily determine with certainty whether an orphaned dealer record is associated with an exempt vessel.

Grouped by: sector, age (in weeks), dealer, permit, species

4.2 Count of dealer orphans by sector X dealer X permit

table t_pc_dealer_orph_dealerXpermit

Counts of dealer orphans by sector, dealer, permit.

Summed by: sector, dealer, permit

Prioritized by: live weight

Where to look next: 4.1, then look for fuzzy matches in noaa.images and noaa.catch

4.3 Scallop related dealer orphans

view v_pc_scallop_dlr_orph_stats

Counts for dealer orphans for which the vessel has a scallop permit.

Summed by: permit and dealer

5.0 VTR Orphans

5.1 VTR orphans

table t_pc_vtr_orphans

VTR records that do not have a corresponding dealer record in the dealer database. Matching is by docid, dealer, permit, and species; all four fields must match. The docid is a unique trip level identifier. Note that the table may contain VTR records that are not true orphans; that is, VTRs that are not expected to have matching dealer records because of dealer reporting exemptions. These VTRs are not excluded because the matching process cannot readily determine with certainty whether an orphaned VTR record is associated with dealer reporting exemption.

Grouped by: sector, date sold

5.2 VTR orphans by sector X dealer X permit

table t_pc_vtr_orphans_by_dlr_ves

VTR orphans grouped to show the most problematic dealer-vessel combinations. Shows number of VTR orphans for each sector-dealer-permit combination Ordered within sector by count.

Summed by: sector, dealer, permit

Prioritized by: landed weight

Where to look next: 5.1, then cfders.

5.3 Scallop related VTR orphans

table t_pc_vtr_scal_orph_by_dlr_ves
Count of VTR orphans, for which the vessel has a scallop permit.
Summed by: sector, dealer, permit

6.0 Errors in the Sector Manager's Detail Report

6.1 Invalid VTRSNs in Sector Manager's Detail Report

table t_sdr_bad_vtr
Sector Detail Report records (in sector.sector_detail_report) with null or invalid VTRSN formats (as described in 2.1).
Grouped by: sector

6.2 Invalid stocks in Sector Manager's Detail Report

table t_sdr_odd_stocks
Sector Detail Report records (in sector.sector_detail_report) with invalid stocks. Valid stocks are: 'CODGBE', 'CODGBW', 'CODGMSS', 'FLWGB', 'FLWGMSS', 'HADGBE', 'HADGBW', 'HADGM', 'HKWGMMA', 'PLAGMMA', 'POKGMASS', 'REDGMGBSS', 'WITGMMA', 'YELCCGM', 'YELGB', 'YELSNE'.
Grouped by: sector, stock

6.3 Invalid stock summary from Sector Manager's Detail Report

table t_sdr_odd_stocks_sum
List of distinct invalid stock codes found in Sector Detail Report records (in sector.sector_detail_report).
No Grouping

6.4 Invalid gear codes in Sector Manager's Detail Report

table t_sdr_odd_gear
Sector Detail Report records (in sector.sector_detail_report) with gear codes not on the list of valid gear codes on the VTR Instructions.
Grouped by: sector, gear

6.5 Sector orphans (w.r.t. VTR database)

view v_pc_sdr_vtr_orphs
Sector Detail Report records (in sector.sector_detail_report) with VTRSNs not in the VTR database.
Grouped by: sector, VTRSN

6.6 Null observer flags in Sector Manager's Detail Report

table t_pc_sdr_null_obs
Sector Detail Report records (in sector.sector_detail_report) with null observer flag. Should be 'N' or 'Y'.
Grouped by: sector, VTRSN

7.0 Errors in the Observer Data

7.1 Duplicates in observer trip archive

table t_pc_observer_dups
Duplicates of VTRSN X stock_id X mesh_cat in t_observer_trip_discard_arch.
Grouped by: vtrserno, stock_id, mesh_cat

7.2 Null VTRSNs in observer trip archive

table t_pc_observer_null
Null VTRSNs in t_observer_trip_discard_arch.
Grouped by: stock_id, secgearfish, mesh_cat, process_last_run

7.3 Duplicates in observer discard rate archive

table t_pc_discard_rate_dups
Duplicates in t_observer_discard_rate_arch. Records are identical with respect to sector_id, stock_id, secgearfish, mesh_cat, other_strata, process_last_run.
Grouped by: stock_id, secgearfish, mesh_cat, process_last_run

8.0 Sector Orphans

8.1 Sector orphans (w.r.t. NMFS data)

table t_pc_sector_orphans
Sector records that are not found in the NMFS (VTR+Dealer) data. Matching by docid, stock, gear, mesh; all four fields must match. The docid is a unique trip level identifier.
Grouped by: sector, date_sold

9.0 NMFS Orphans

9.1 NMFS orphans (w.r.t. sector data)

table t_pc_nmfs_orphans
NMFS generated records without matching sector records. Matching by docid, stock, gear, mesh; all four fields must match. The docid is a unique trip level identifier.
Grouped by: sector

10.0 Sector Landings and Discard Differences

10.1 Landings differences

table t_pc_nmfs_sdr_comp
Differences between NMFS and sector reported landings. Matching by docid, stock, gear, mesh.
Grouped by: sector, weight difference

10.2 Non-zero landings differences

table t_pc_nmfs_sdr_errors_only
Same as t_pc_nmfs_sdr_comp (10.1) but excludes records without landings differences.
Grouped by: sector, weight difference
Prioritized by: weight
Where to look next: noaa.images and fso.v_obspeciesstockarea (find all related VTRSNs, check gear, area, mesh; determine how many strata are in the trip); noaa.catch (see which species are caught in different strata and compute apportionment fractions); cfders (find weights to be apportioned over strata for each species); sector.sector_detail_report (see how sectors reported).

10.3 Discard differences

view t_pc_nmfs_sdr_dis_comp
Differences between NMFS and sector reported discards. Matching by docid, stock, gear, mesh.
Grouped by: sector, weight difference

10.4 Non-zero discard differences

table t_pc_nmfs_sdr_dis_errors_only
Same as t_pc_nmfs_sdr_dis_comp (10.3) but excludes records without landings differences.
Grouped by: sector, weight difference
Prioritized by: weight
Where to look next: noaa.images and fso.v_obspeciesstockarea (find all related VTRSNs, check gear, area, mesh; determine how many strata are in the trip); noaa.catch (see which species are caught in different strata and compute apportionment fractions); cfders (find weights to be apportioned over strata for each species); sector.sector_detail_report (see how sectors reported).

11.0 Permits

11.1 One permit on two hulls

table t_pc_permit_on_2_hulls
Permits found in permit.vps_vessel that are applied to multiple hulls at the same time
Grouped by: date

12.0 Other Scallop Tables

These are run using different dates than the main body of RTL.

12.1 Scallop non-dealer landings

view v_scallop_non_dealer_landings
Total scallop non-dealer landings.
Summed by: permit_num, dealer_num, fmps

13.0 Supplemental Tables for Use in Investigations

13.1 Supplemented VTR images view

view v_pc_image_sup

Contains noaa.images data supplemented with vessel permit number, minimum VTRSN for a trip, date land, and median date sold for the catch. This is useful when investigating dealer orphans. Supplemental data obtained from noaa.document and noaa.catch.

13.2 VTR images joined with catch

table t_pc_image_catch

When investigating dealer orphans, it is often necessary to view VTR image and catch data. This is a join of noaa.images with noaa.catch.

13.3 Dealer data with normal date and dealer name

view v_pc_ders_dealer_name_0

This view is useful when dealer names and normal dates are needed, such as when investigating VTR orphans via dealer date ranges. Source data is cfdbs.cfders@sole.

13.4 Dealer data for two years

table t_pc_cfders

This table combines year information when a fishing year spans two calendar years. Unused cfders columns are eliminated for ease of use.

13.5 VTR data with supplemental information

table t_pc_image_catch_nespp3

This table is like table t_pc_image_catch but with more extensive supplemental information.

Appendix A. List of RTL Table and View Names

RTL Table / View #	Table/View Name	Information
2.1	v_pc_odd_vtr_in_images	Invalid VTRSNs in database
2.2	v_pc_null_vtr_in_images	Null VTRSNs in VTR database
2.3	v_pc_duprecords_in_images	Duplicate records in VTR database
2.4	t_pc_bad_area_img	Invalid area codes in VTR database
2.5	t_pc_bad_gear_img	Invalid gear codes in VTR database
2.6	v_pc_null_permit_vtrs	Null permit numbers in VTR database
2.7	v_pc_vtr_null_dealer	Null or zero dealer numbers in VTR database
2.8	v_pc_vtr_null_dealer_sum	Sum of missing permit or dealer numbers by sector and permit
2.9	t_pc_bad_area_by_vessel	Sum of bad areas by sector and permit
2.10	t_pc_bad_gear_by_vessel	Sum of bad gear codes by sector and permits
3.1	t_pc_null_hull_permit	Dealer records missing both hull ID and permit
3.2	v_pc_dealer_use_by_sector	Dealer use by sector
3.3		
3.4	t_pc_dealer_didnt_pass	Dealer records that did not pass inspection upon upload
3.5	t_pc_odd_dealer_vtr	Invalid VTRSNs in dealer database
3.6	t_pc_odd_dealer_vtr_grp	Counts of invalid VTRSNs in dealer database
3.7	t_pc_out_of_range_dealer_vtr	Out of range VTRSNs with current formats
3.8		
3.9	t_pc_null_dealer_vtr	Null VTRSNs in dealer database
3.10	t_pc_null_dealer_vtr_grp	Counts of null VTRSNs in dealer database
3.11	t_pc_oor_dealer_vtr_grp	Counts of out of range VTRSNs in dealer database
3.12	t_pc_reused_dealer_vtr	Reused VTRSNs in dealer database
3.13	t_pc_reused_dealer_vtr_grp	Counts of reused VTRSNs in dealer database

4.1	t_pc_dealer_orph_age	DEALER ORPHANS
4.2	t_pc_dealer_orph_dealerXpermit	Count of dealer orphans by sector X dealer X permit
4.3	v_pc_scallop_dlr_orph_stats	Scallop related dealer orphans
5.1	t_pc_vtr_orphans	VTR ORPHANS
5.2	t_pc_vtr_oprhans_by_dlr_ves	VTR orphans by sector X dealer X permit
5.3	t_pc_vtr_scal_orph_by_dlr_ves	Scallop related VTR orphans
6.1	t_sdr_bad_vtr	Invalid VTRSNs in Sector Manager's Detail Report
6.2	t_sdr_odd_stocks	Invalid stocks in Sector Manager's Detail Report
6.3	t_sdr_odd_stocks_sum	Invalid stock summary from Sector Manager's Detail Report
6.4	t_sdr_odd_gear	Invalid gear codes in Sector Manager's Detail Report
6.5	v_pc_sdr_vtr_orphs	SECTOR orphans (w.t.r to VTR data)
6.6	t_pc_sdr_null_obs	Null observer flags in Sector Manager's Detail Report
7.1	t_pc_observer_dups	Duplicates in observer trip archive
7.2	t_pc_observer_null	Null VTRSNs in observer trip archive
7.3	t_pc_discard_rate_dups	Duplicates in observer discard rate archive
8.1	t_pc_sector_orphans	SECTOR ORPHANS
9.1	v_pc_nmfs_orphans	NMFS ORPHANS
10.1	t_pc_nmfs_sdr_comp	Landings differences
10.2	t_pc_nmfs_sdr_errors_only	Non-zero landings differences
10.3	t_pc_nmfs_sdr_dis_comp	Discard differences
10.4	t_pc_nmfs_sdr_dis_errors_only	Non-zero discard differences
11.1	t_pc_permit_on_2_hulls	One permit on two hulls
12.1	v_scallop_non_dealer_landings	Scallop non-dealer landings
13.1	v_pc_image_sup	Supplemented VTR images view
13.2	t_pc_image_catch	VTR images joined with catch
13.3	v_pc_ders_dealer_name_0	Dealer with normal date and dealer name
13.4	t_pc_cfders	Dealer data for two years
13.5	t_pc_image_catch_nespp3	VTR data with supplemental information