

Claude Opus 4.5 Chat

Autovalidation Project

Chat: ValidateSingleRow refactoring and validation errors.

Continuation from chat “Continuation of Project Restructure” which began in chat “Testing Claude for Excel VBA project optimization”.

Key Findings from the PDFs:

1. AutoValidationCommentPrefixMappingTable (Page 3 of Config PDF)

The table has column `ReviewSheet Column Header` with values like:

- `Gender Inclusive Washrooms - Quantity`
- `Gender Inclusive Washrooms - Included`
- `Electricity`
- `Electricity Metered`
- `Heat Source`
- `Heat Metered ← This one is in the mapping table`
- `Construction Date`

2. Target Table Headers (Page 9 of Config PDF)

The actual data table `REP2DSMDraft_Buildings` has headers like:

- `Construction Date ✓ (matches)`
- `Building Type`
- `Main Usage Type`

But the debug shows:

Column 'Heat Metered' not found in table REP2DSMDraft_Buildings

3. The Row Range Issue

Row 11 is outside table range (16-2009)

The table starts at row **16**, but config cells B4 says start at row **5** or **11**.

Root Causes:

1. **Row range comes from legacy cells (B4/D4)** instead of from the table itself
2. **Header name mismatches** between Config mapping and actual target table headers
3. **The "Heat Metered" column doesn't exist** in the target table (maybe it's named differently?)

Let me create a proper fix that:

1. **Auto-detects table row range** from the ListObject
2. **Provides diagnostic output** showing what headers exist vs. what's mapped
3. **Uses only table references** - no cell references

Create comprehensive AV_Engine v2.3 that auto-detects table ranges and provides diagnostic info

av_engine_v2.3.bas

Now let me update AV_DataAccess to work consistently with the engine:

Create AV_DataAccess v2.3 with robust table header lookup

av_dataaccess_v2.3.bas

Now let me update AV_Validators to work with the new architecture:

Create AV_Validators v2.3 with table-based sibling cell lookup

av_validators_v2.3.bas

Now let me update AV_Format to work with table headers:

Create AV_Format v2.3 with table-based cell lookup

av_format_v2.3.bas

Now let me present all the files:

Presented 4 files

Summary: v2.3 Updates - Fully Table-Based Architecture

Key Changes from v2.2:

1. AV_Engine v2.3 - Completely rewritten to be table-based:

- Gets target from **ValidationTargets** table - not B3 cell
- Auto-detects row range from **ListObject.DataBodyRange** - not B4/D4 cells
- Finds table by name across all worksheets
- Provides **DIAGNOSTIC output** comparing mapped headers vs actual table headers
- Uses **GetCellByTableHeader()** for all cell lookups

- Removed all legacy cell references

2. AV_DataAccess v2.3 - Enhanced table operations:

- `GetCellByTableHeader()` - Core function for header-based cell access
- `FindTableByName()` - Searches all worksheets for a table
- `GetTableStartRow()`, `GetTableEndRow()` - Helper functions
- `GetCellSmart()` - Uses `AV_Engine.CurrentTargetTable`

3. AV_Validators v2.3 - Updated sibling cell lookup:

- `GetSiblingCell()` now uses `AV_DataAccess.GetCellByTableHeader()`
- Gets column header from `AutoValMap("ColumnRef")`
- Falls back to reading `AutoValidationCommentPrefixMappingTable` directly

4. AV_Format v2.3 - Table-based cell access:

- `WriteSystemTagToDropColumn()` uses header names, not column letters
- `FormatKeyCell()` uses table's first column as key
- All cell lookups go through `AV_DataAccess.GetCellByTableHeader()`

Expected Debug Output After Import:

Target table name: REP2DSMDraft_Buildings

Found table on sheet: B - Buildings-Bâtiments

Table data range: Row 16 to 2009 (1994 rows)

Key column from config: AO ID

DIAGNOSTIC: Header Mapping Check

OK: Validate_Column_Electricity -> 'Electricity' found in table

OK: Validate_Column_Construction_Date -> 'Construction Date' found in table

MISSING: Validate_Column_Heat_Metered -> 'Heat Metered' NOT in table

This will clearly show which header names in

`AutoValidationCommentPrefixMappingTable.ReviewSheet` Column Header don't match the actual table headers in `REP2DSMDraft_Buildings`.

Important: Check Your Table Headers

Looking at your PDF (page 9), the target table has headers like:

- `Construction Date ✓`

- Building Type ✓

But your `AutoValidationCommentPrefixMappingTable` (page 3) maps to:

- Heat Metered - Verify this exists in the target table

If the header doesn't exist, you need to either:

1. Add the column to the target table, OR
2. Update `AutoValidationCommentPrefixMappingTable.ReviewSheet Column Header` to match the actual header name