Reference for Bulletin RU 2018-01

Procedures to Merge MicroStation DGN Files

Keep Low Pressure Natural Gas Pipelines and Customer Symbols

1. Before starting the merge process, a blank dgn file (projected in NAD83 10TM) is needed. It will be used as the "Merge Into" file. For simplicity, a blank dgn file can be provided by Rural Utilities. Users can copy this seed file and rename it for every merge.

2. Start MicroStation Merge Tool (Run MicroStation: File – Merge, see Figure 1).
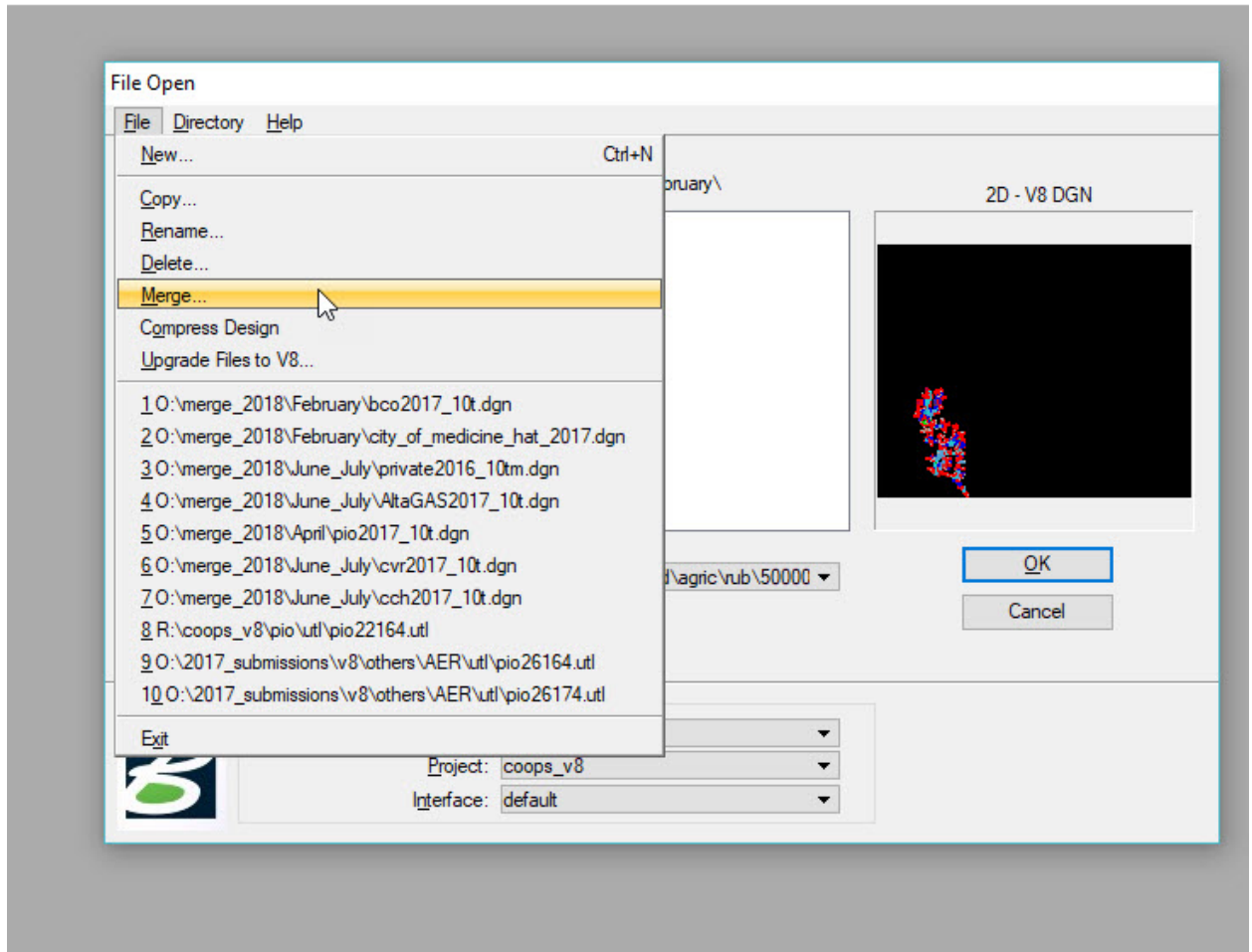

Figure 1. Start MicroStation Merge Tool

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Select and add the township and subdivision utility files in the "Files to Merge" and select the empty "Merge Into" file. Then press "Merge" (see Figure 2).
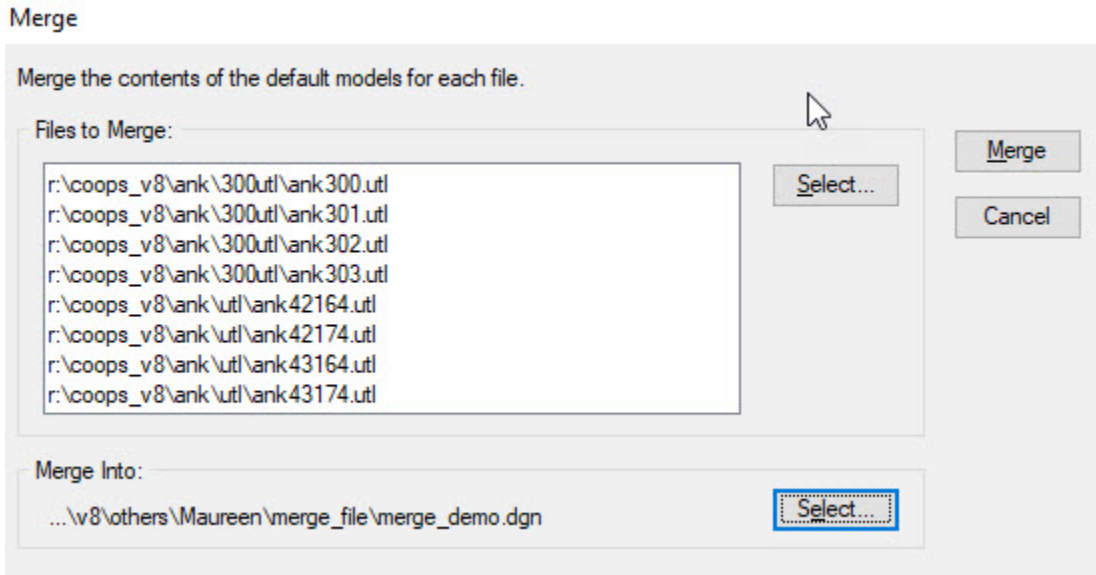

Figure 2. Select utility files and the "Merge Into" file

3. Open the merged file, fit view, turn on all levels, and set the view attributes: Clip Volume, Constructions, Dimensions, Data Fields, Tags, Text and Text Nodes. (Short Cut to open View Attributes: press Ctrl + B, or Menu Settings – View Attributes. See Figure 3).
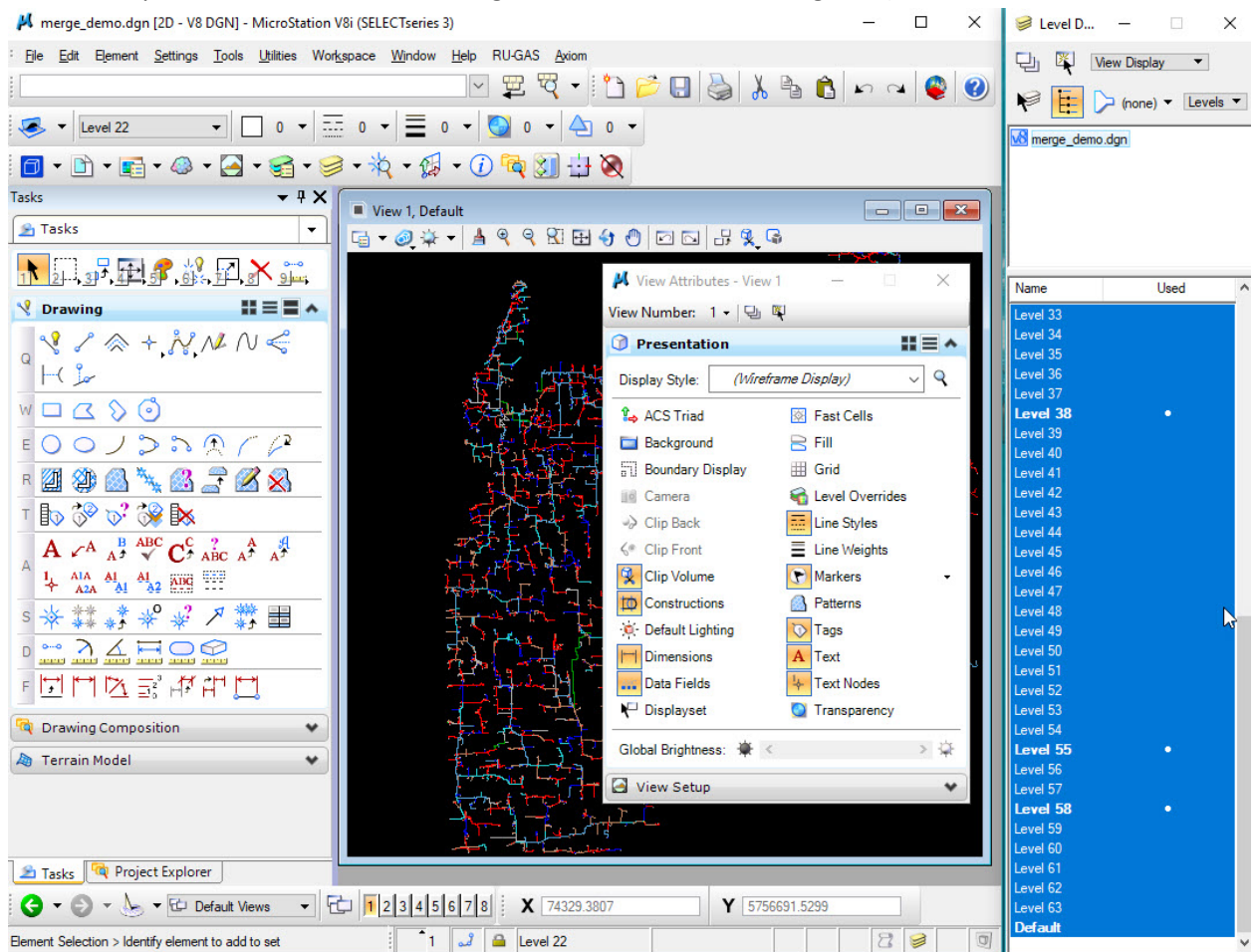

Figure 3. Open the merged dgn file, turn on all levels and view attributes

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4. Select all other levels but turn off the following levels to keep (Edit – Select By Attributes, Inclusive. See Figure 4):

➢ Level 26, PE pipe
➢ Level 29, PVC pipe
➢ Level 38, Abandoned pipe
➢ Level 55, Service symbols
➢ Level 58, Secondary irrigation symbols

NOTE:

*These Co-ops have low-pressure steel that should be added to the levels above to keep:

- ANK – level 19
- TLL – level 20
- DIN – level 20

These Co-ops have low-pressure steel, but only in certain drawings (It is easier to reference these drawings at the end of the process and copy the low pressure steel into the merged file.):

- TIL – Level 19/20 (dwg300)
- DVA – level 20 (dwg308)
- FMI – level 20 (dwg311)
- CTW – level 20 (dwg305 & 306)
- CTH – level 19 (dwg307, 308, 309)
- CTH – level 20 (dwg309)
- YHD – level 20 (dwg301)
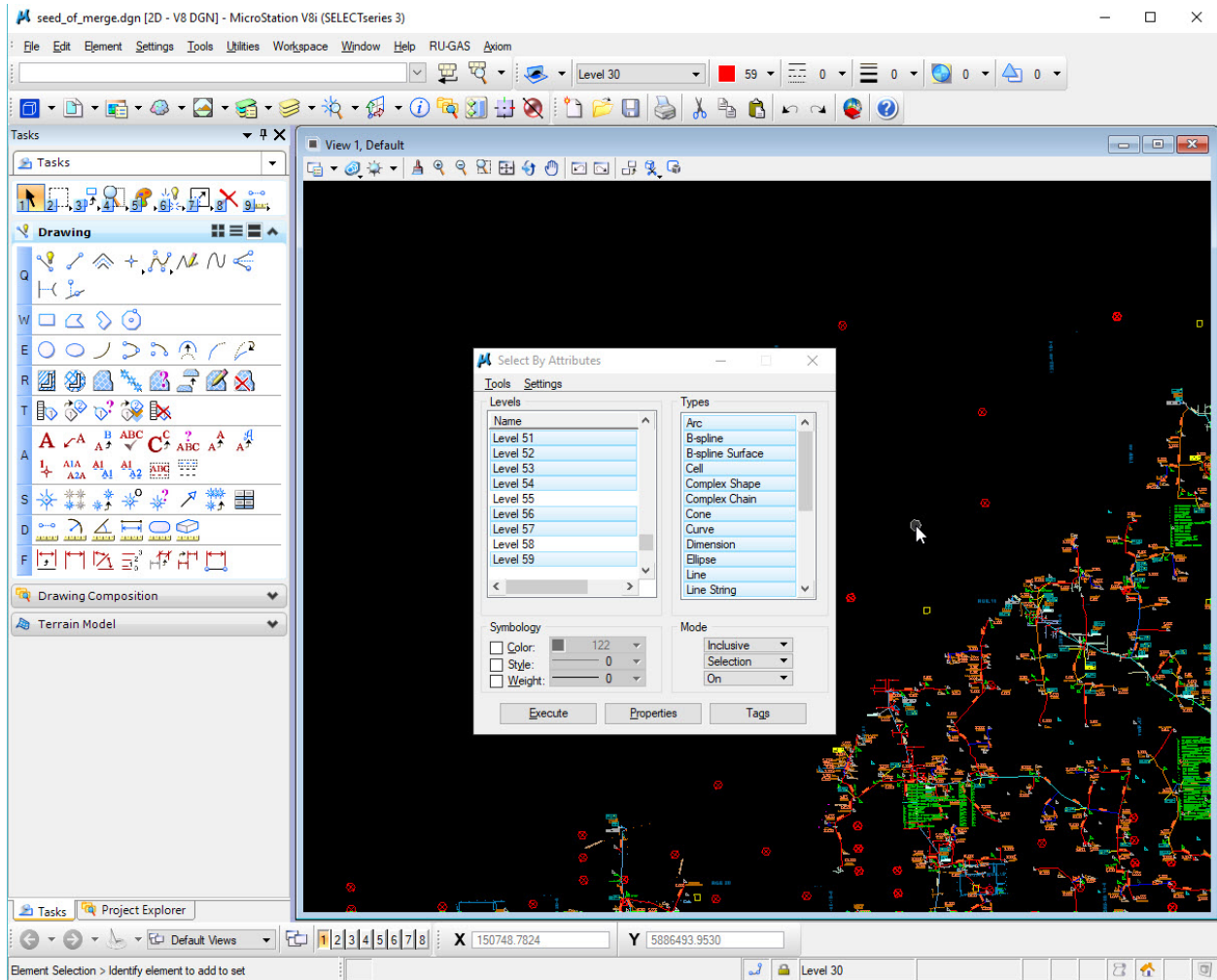- TWN – level 20 (dwg301)

Figure 4. Select By Attributes, turn off levels 26, 29, 38, 55, 58 (also 19 and 20 for those Co-ops mentioned), turn on all Types of elements, Inclusive Mode

Press "Execute" in the above "Select By Attributes" window.

5. All elements inclusive of what is defined should be highlighted.
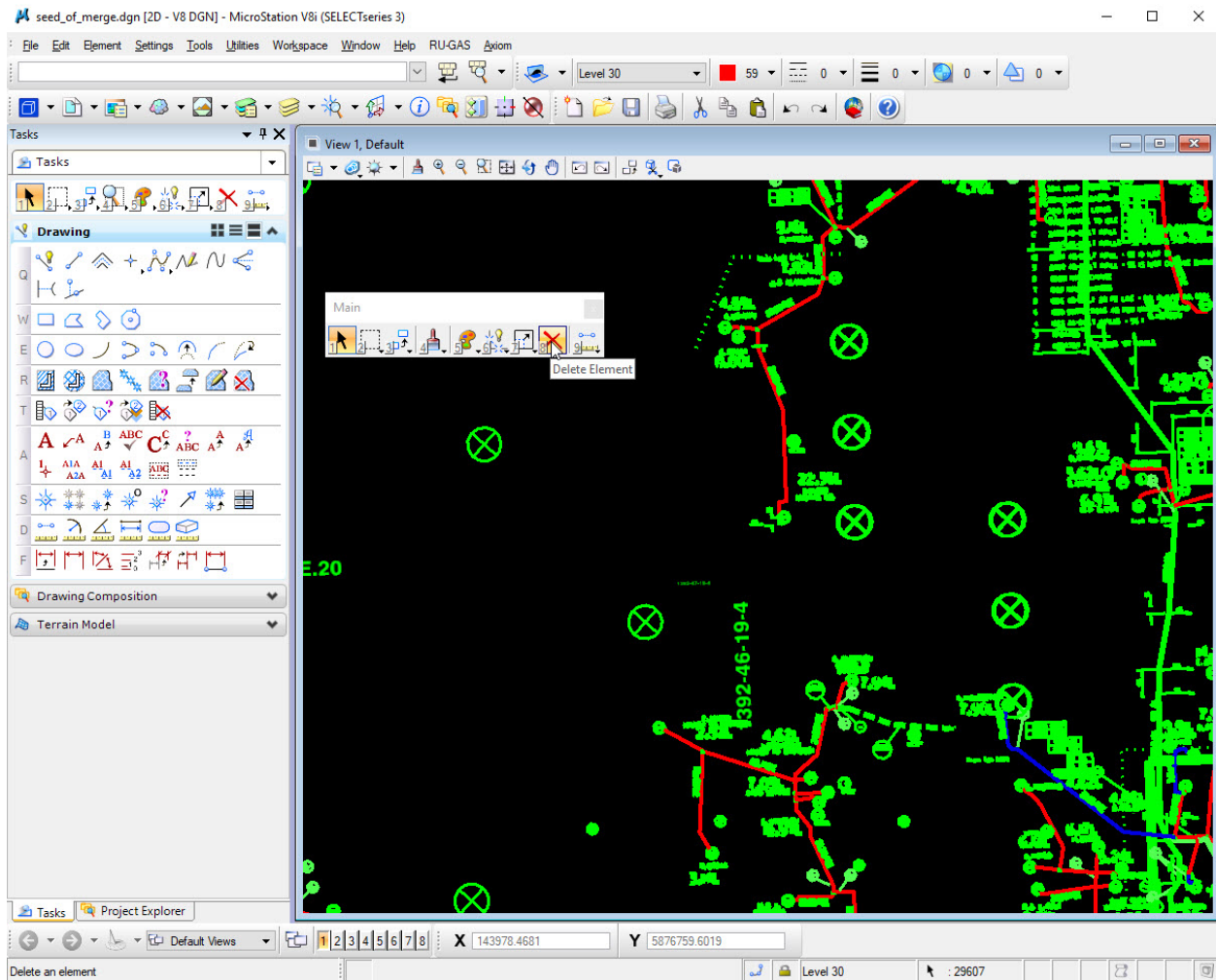   Click on Delete Element to delete highlighted elements (See Figure 5.):

Figure 5. Highlighted all elements (in green) inclusive of what is defined in 4.

Delete highlighted elements.

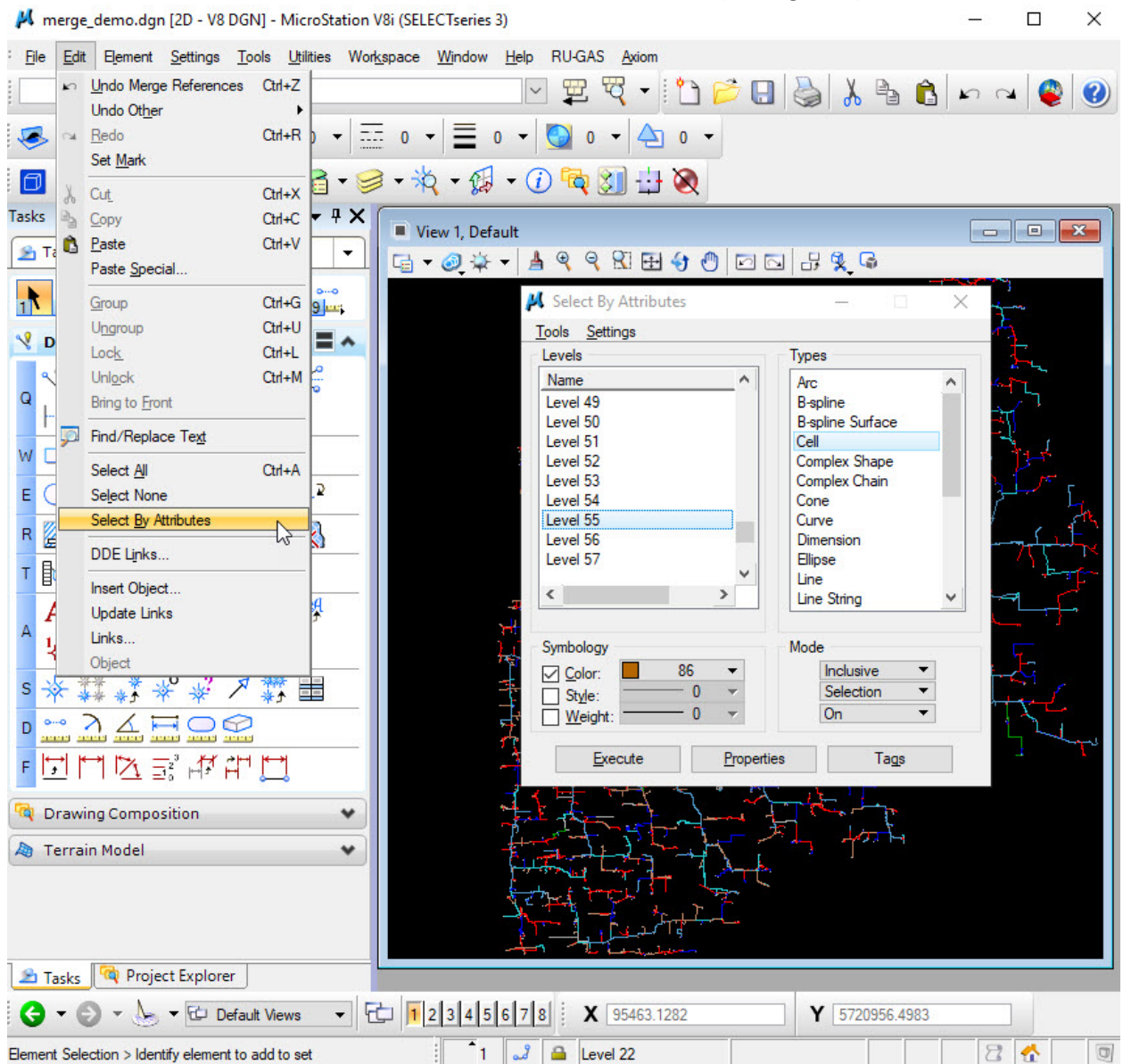6. Delete all cells on level 55 with color 86 – Subdivision Customer #s (See Figure 6).

Figure 6. Select cells on level 55 with color 86, Inclusive Mode

Press "Execute" in the above "Select By Attributes" window.

All elements inclusive of what is defined should be highlighted.

Click on Delete Element to delete highlighted elements.

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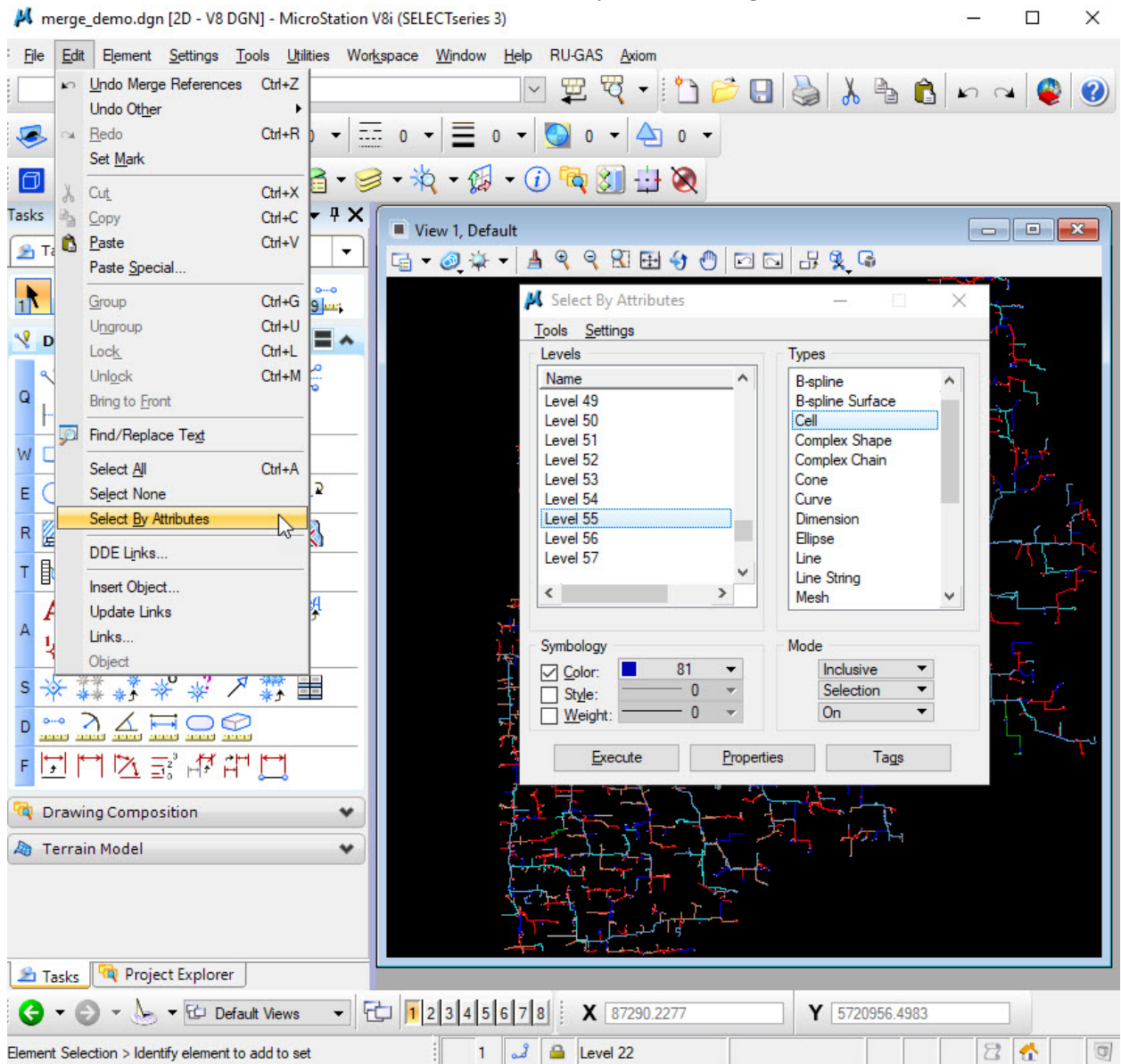7. Delete all cells on level 55 with color 81 – Non-Burner Symbols (See Figure 7.).

Figure 7. Select cells on level 55 with color 81, Inclusive Mode

Press "Execute" in the above "Select By Attributes" window.

All elements inclusive of what is defined should be highlighted.

Click on Delete Element to delete highlighted elements.

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8. Delete all cells, lines and line strings on level 38 with color 65 – Abandoned Symbols and Leader Lines (See Figure 8).
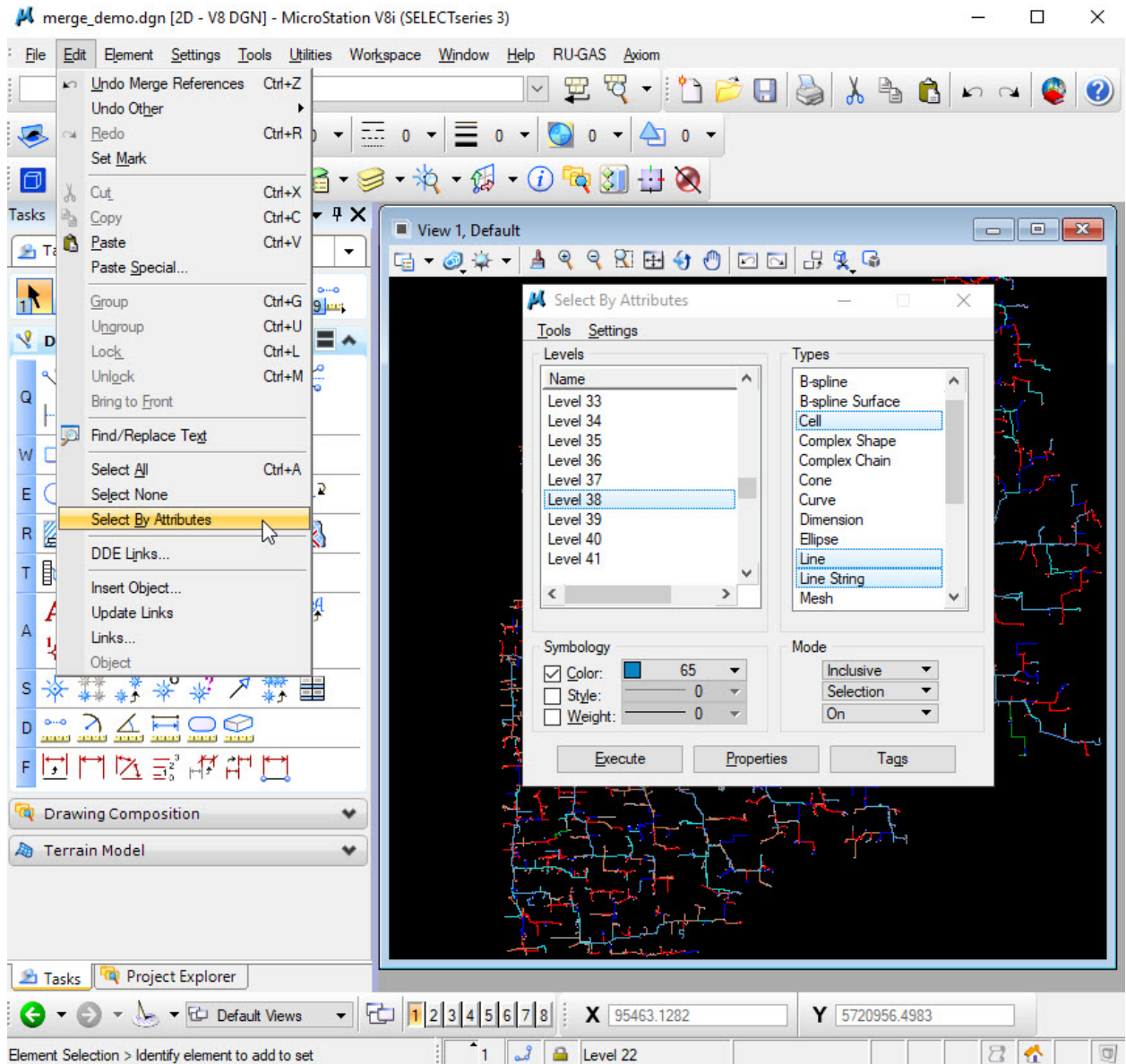

Figure 8. Select cells, lines and line strings on level 38 with color 65, Inclusive Mode

Press "Execute" in the above "Select By Attributes" window.

All elements inclusive of what is defined should be highlighted.

Click on Delete Element to delete highlighted elements.

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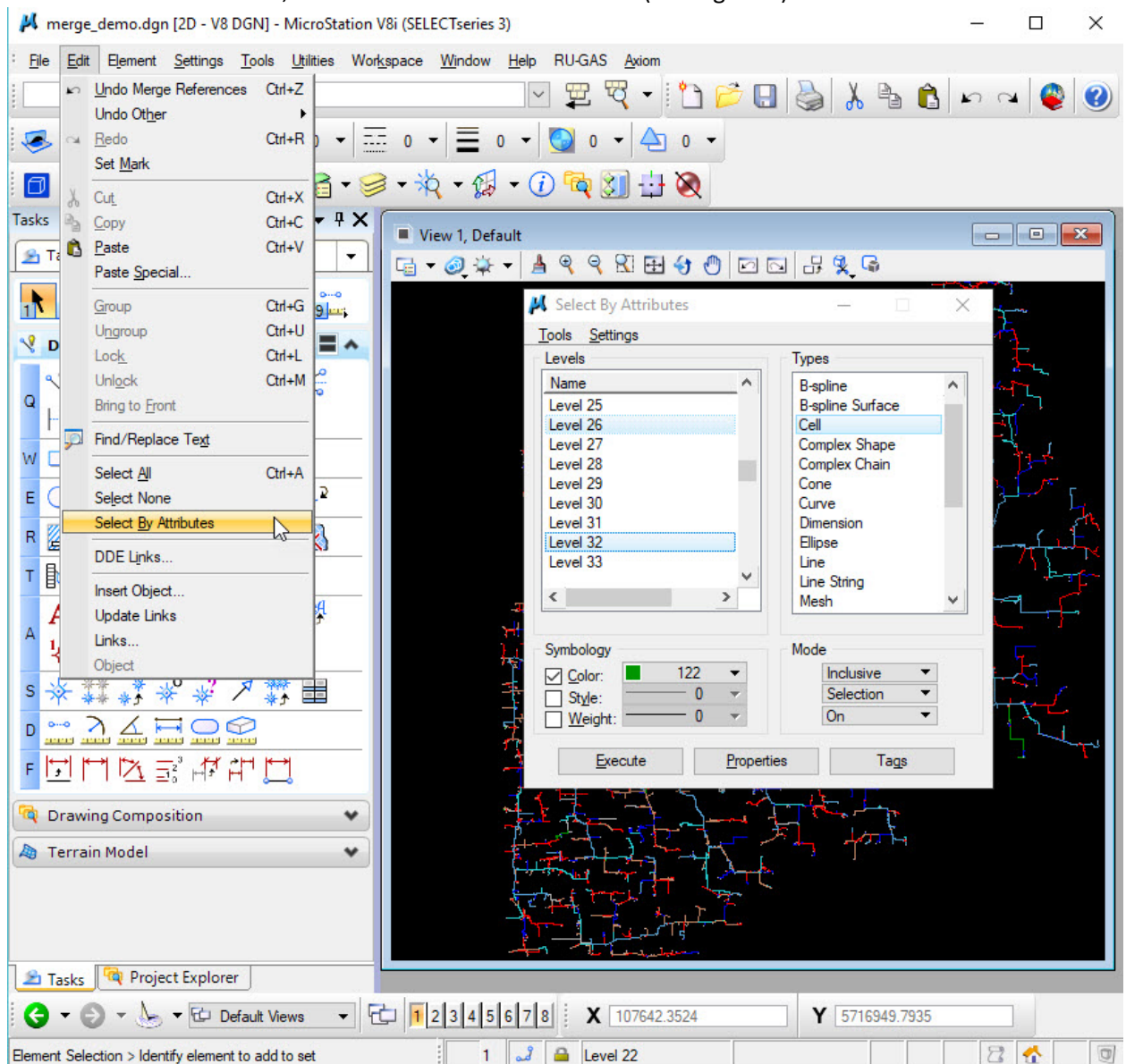9. Delete all cells on level 26, 32 with color 122 – Block Valves (See Figure 9).

Figure 9. Select cells on level 26 & 32 with color 122, Inclusive Mode

Press "Execute" in the above "Select By Attributes" window.

All elements inclusive of what is defined should be highlighted.

Click on Delete Element to delete highlighted elements.

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10. Ensure the merged file is in NAD83-10TM (See Figure 10).
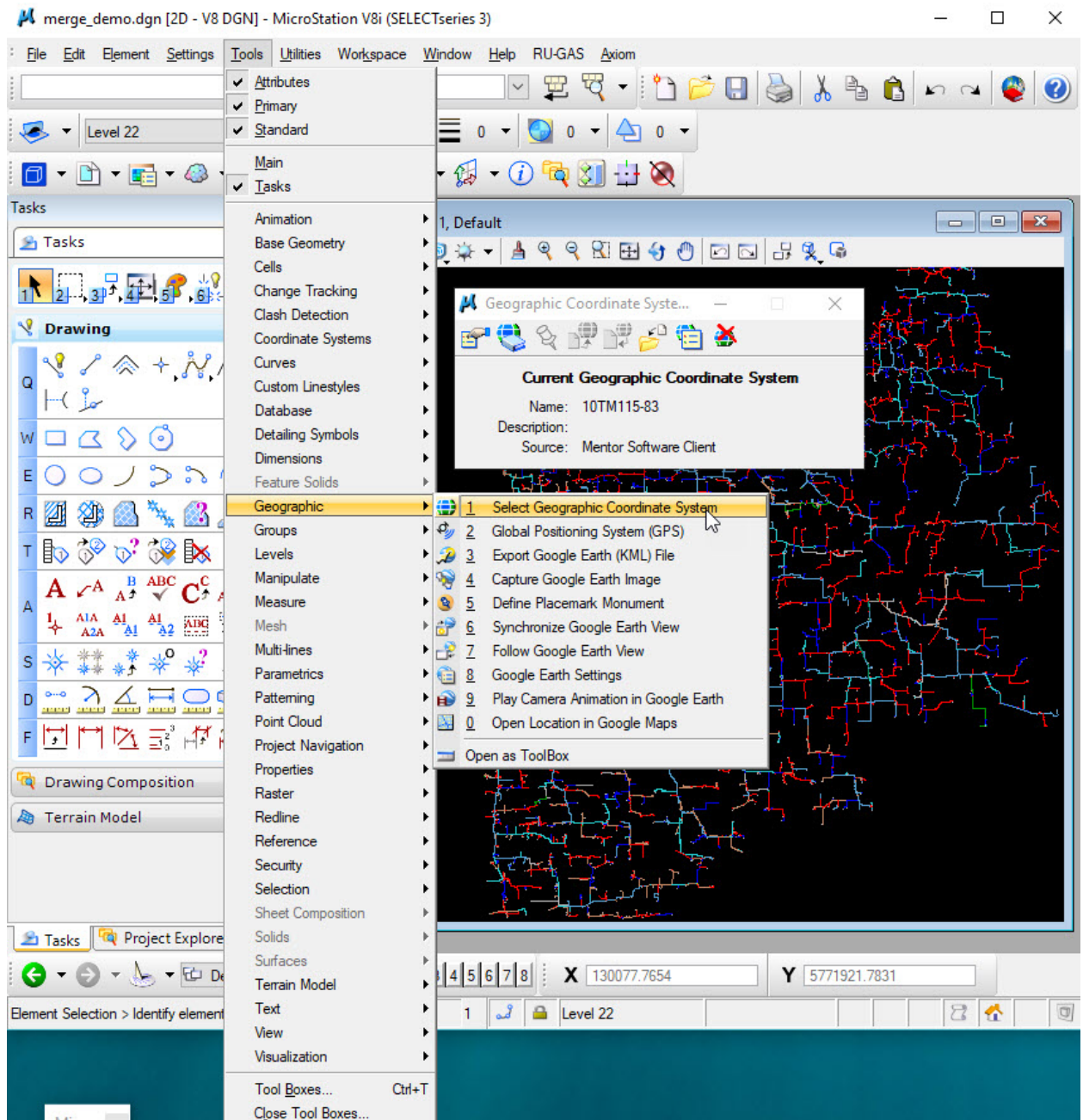

Figure 10. The coordinate system: 10TM115-83

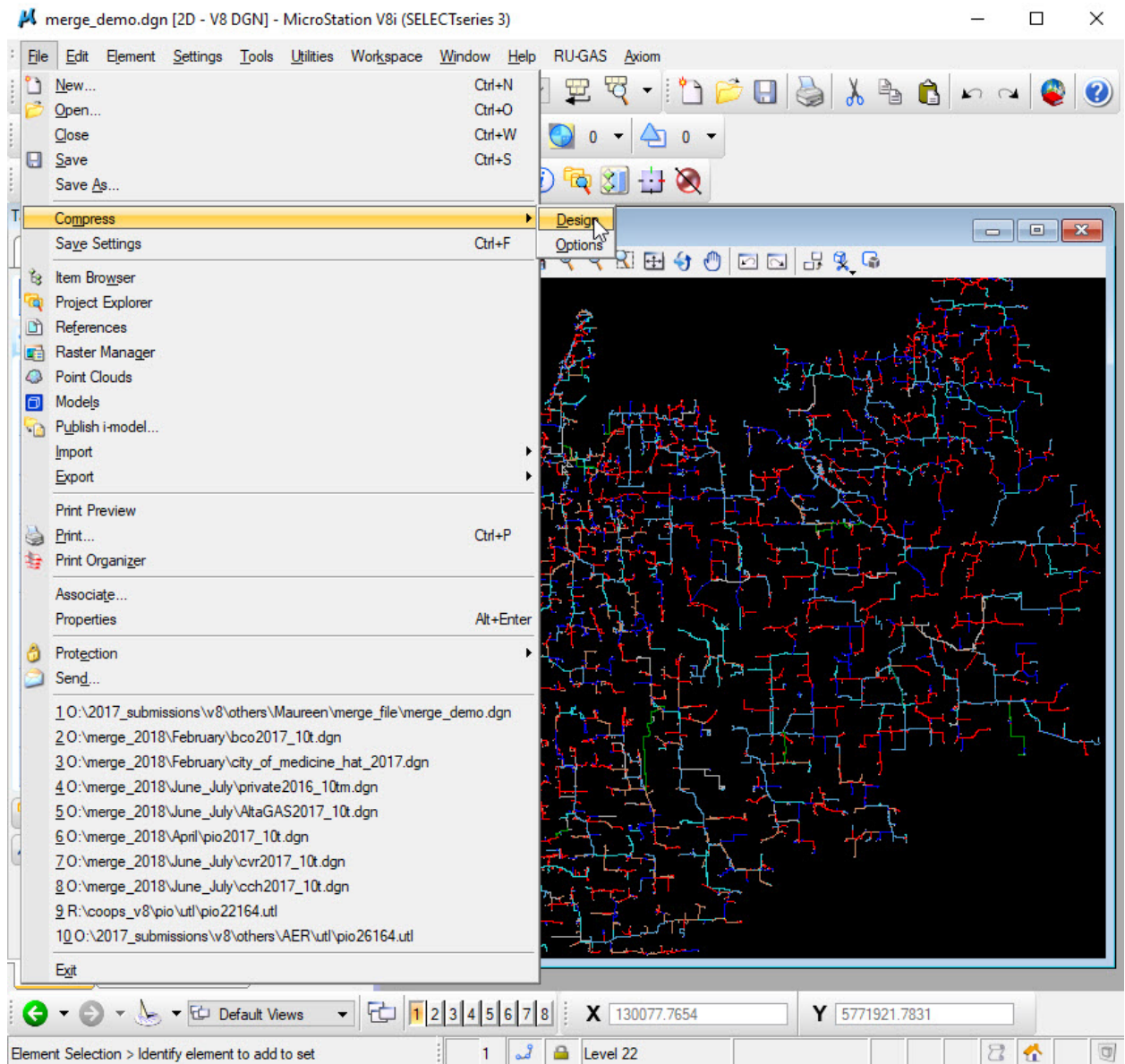11. Compress the merged file (See Figure 11).

Figure 11. Compress the dgn file

12. Scan the merge file to make sure ALL UNWANTED text/text nodes/leader lines/cells are deleted.

13. a) If you are missing lines, reference the original utl file – common scenario is the missing line is a cell on LV=2 (brought in to utl from GPS).
    b) Some cells may have been "dropped" in the original utl file and would be missed in this process.

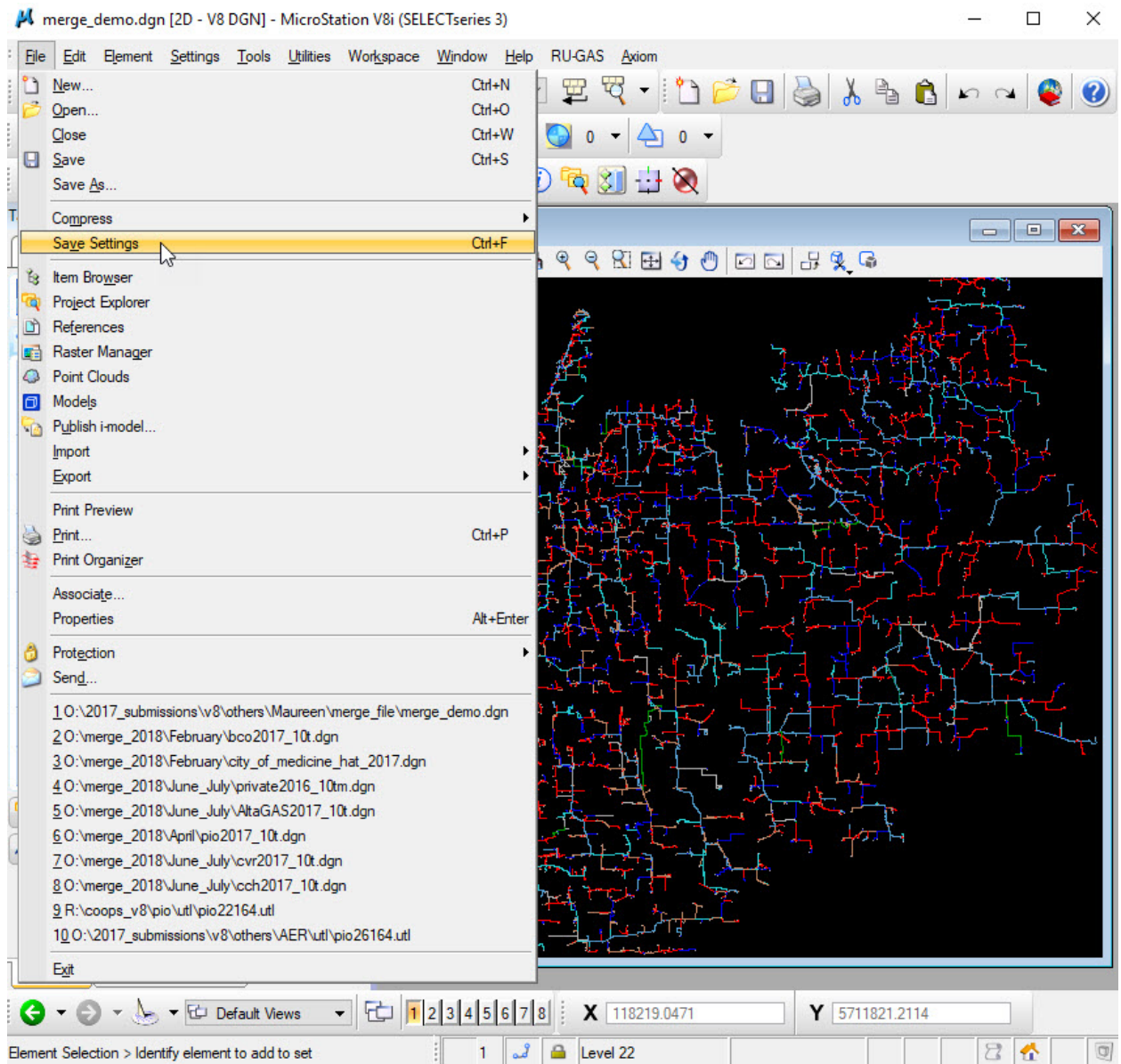14. Save settings (See Figure 12).

Figure 12. Save settings