Met Office

NAME Technical Specification Document B02

Output Specification

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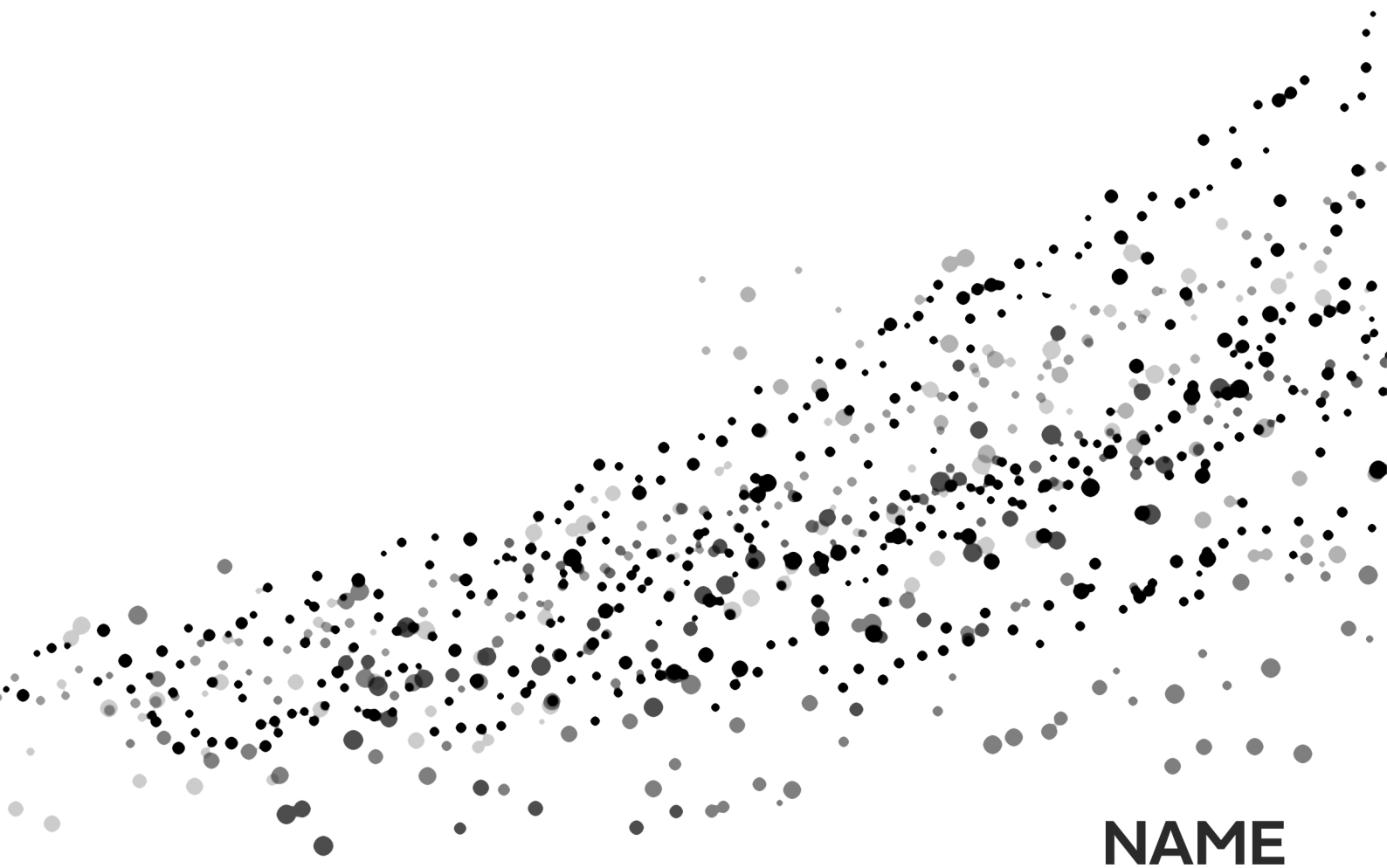
Documentation issued with	**:**	NAME Version 8.7
Document last updated for	**:**	NAME Version 8.7
Last updated on	**:**	21/08/2024



NAME

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Contents

1 Column Headers

The column headers of NAME output files contain a lot of information. Many of the rows are fixed, always referring to a specific defining parameter, however the content of certain rows can vary depending on the type of output being generated.

1.1 NAME III Master List: Coordinate and or time columns

Depending on the type of output requested the first columns (left most) contain either information on the output grid (2d filed type output) or the time (time series output) of the output. It is possible to output gridded data for multiple times in the same file in which case columns describing the spatial and temporal characteristics of the grid will appear in the file.

1.2 NAME III Master List: Concentration/Met data columns

Not all of these lines can appear simultaneously.

1. Species category
2. Name
3. Quantity
4. Species
5. Units
6. Source/source group
7. Ensemble averaging information
8. Time averaging/integrating information
9. Horizontal averaging/integrating information
10. Vertical averaging/integrating information
11. Probabilities and percentiles
12. Probabilities and percentiles - over ensemble
13. Probabilities and percentiles - over time
14. T when this is 'across'. If would otherwise be blank, these give averaging/integrating information.
15. X-Y location name when this is 'across'
16. X when this is 'across'
17. Y when this is 'across'
18. Z when this is 'across'
19. D when this is 'across', commas otherwise
20. Commas
21. Blank line

2 Fields Output

2.1 NAME III Output Options

To request a 'standard' 2d Field output then the following options should be set in NAME III in the 'Output Requirements - Fields:' block.

- Separate File = 'T'

- Across = 'TZ' (D also needed for quantities depending on a data grid - must not be a 'floating' D-Grid; can also include D if no D dependence)
- Output Format options to include I & A
  - We can also add '2' to 'Output Format' to generate Name II formatted fields files. Here the Output Group must begin 'Fields_'. This option is now DEPRECATED.
- A T-grid, a structured regular H-grid, and no S-grid

2.2 NAME II Output Grid Column Header Format

1. Blank line
2. Blank line
3. Blank line
4. Blank line
5. Blank line
6. Blank line
7. Grid title or coordinate title
8. Blank line

Example:

```
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
          X grid,          Y grid,       Longitude,        Latitude,

        1.500000,        1.500000,       -4.051550,       51.605549,
```

X grid, Y grid – internal reference to the cell position in the output grid.
Longitude, Latitude – coordinate used. In this case standard long-lat

2.3 NAME II Concentration/Met Data Column Header Format

1. Species category
2. Species
3. Time averaging/integrating information
4. Quantity
5. Units
6. Z plus Z averaging information when Z is 'across'.
7. Time
8. Blank line.

Example:

```
      CHEMISTRY-SPECIES,
                 TRACER,
   012 hr time averaged,
      Air Concentration,
                  g/m3,
From   500 -  1500m asl,
     1200UTC 01/12/2008,
                      ,
        0.00000000E+00,
```

2.4 NAME III Output Grid Column Header Format

1. Blank line
2. Blank line
3. Blank line
4. Blank line
5. Blank line
6. Blank line
7. Blank line
8. Blank line
9. Blank line
10. Blank line
11. Blank line
12. Blank line
13. Blank line
14. Blank line
15. Blank line
16. Blank line
17. Grid title or coordinate title

Example:

```
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
                ,                ,                ,                ,
X Index,        Y Index,         X (Lat-Long),    Y (Lat-Long),
```

X Index, Y Index – internal reference to the cell position in the output grid.
X (Lat-Long), Y(Lat-Long) – coordinate used. In this case standard long-lat.

Other potential coordinates:

- X (UK National Grid (m)), Y (UK National Grid (m))

2.5 NAME III Column Header Format

1. Species category
2. User defined column data name
3. Quantity
4. Species
5. Units
6. Source/source group
7. Ensemble averaging information
8. Time averaging/integrating information
9. Horizontal averaging/integrating information

10. Vertical averaging/integrating information
11. Probabilities and percentiles
12. Probabilities and percentiles - over ensemble
13. Probabilities and percentiles - over time
14. Time
15. Z when this is 'across'
16. D when this is 'across', commas otherwise
17. Commas

Example:

```
         CHEMISTRY-SPECIES,
       Unnamed Field Req 1,
         Air Concentration,
                    TRACER,
                 Kg / m^3,
               All sources,
     No ensemble averaging,
          6hr 0min average,
   No horizontal averaging,
    Boundary layer average,
                          ,
                          ,
                          ,
      07/10/2008 06:00 UTC,
    Boundary layer average,
                          ,
                          ,
            0.0000000E+00,
```

3 Time Series Output

3.1 NAME III Output Options

To request a 'standard' time series output then the following options should be set in NAME III in the 'Output Requirements - Fields:' block.

- Separate File = 'XY' or blank
- Across = 'XYZ' (D also needed for quantities depending on a data grid - must not be a 'floating' D-Grid; can also include D if no D dependence)
- Output Format options to include A & Z but not I or 2
- A T-grid, an unstructured H-grid of named points, and no S-grid

We can also add '2' to 'Output Format' to generate Name II formatted time series output. Here the Output Group must begin 'Time_series_'. This option is now DEPRECATED.

3.2 NAME II Column Header Format

1. Y when this is 'across'.
2. X when this is 'across'.
3. X-Y location name when this is 'across'.
4. Species category.
5. Species.
6. Quantity.
7. Z plus Z averaging information when Z is 'across'.
8. Units.
9. Blank line.

3.3 NAME III Column Header Format

1. Species category
2. User defined column data name
3. Quantity
4. Species
5. Units
6. Source/source group
7. Ensemble averaging information
8. Time averaging/integrating information
9. Horizontal averaging/integrating information
10. Vertical averaging/integrating information
11. Probabilities and percentiles
12. Probabilities and percentiles - over ensemble
13. Probabilities and percentiles - over time
14. X-Y location name when this is 'across'
15. X when this is 'across'
16. Y when this is 'across'
17. Z when this is 'across'
18. D when this is 'across', commas otherwise
19. Commas

Example:

```
CHEMISTRY-SPECIES,
   Unnamed Field Req 11,
      Air Concentration,
                 TRACER,
              kg / m^3,
            All sources,
  No ensemble averaging,
          15min average,
No horizontal averaging,
  No vertical averaging,
                        ,
                        ,
                        ,
                 Source,
 X = -2.831339 Lat-Long,
  Y = 53.28201 Lat-Long,
     Z = 25.00000 m agl,
                        ,
                        ,
          2.1516149E-05,
```

4 Vertical Slice (XZ or YZ) Output

4.1 NAME III Output Options

To request a 'standard' vertical slice output then the following options should be set in NAME III in the 'Output Requirements - Fields:' block.

- Separate File = 'T'
- Across = 'TY' for XZ slice or 'TX' for YZ slice
- Output Format - as there is currently no standard IDL script to plot vertical slices, any options can be used here (suggested options are A & I).
- An H-grid, a Z-grid, and no S-grid. T-grid is optional

4.2 NAME III Column Header Format

1. Species category
2. User defined column data name
3. Quantity
4. Species
5. Units
6. Source/source group
7. Ensemble averaging information
8. Time averaging/integrating information
9. Horizontal averaging/integrating information
10. Vertical averaging/integrating information
11. Probabilities and percentiles
12. Probabilities and percentiles - over ensemble
13. Probabilities and percentiles - over time
14. Time
15. Horizontal averaging/integrating information
16. X when this is 'across', Y when this is 'across'
17. Commas

Example:

```
         CHEMISTRY-SPECIES,
       Unnamed Field Req 1,
         Air Concentration,
                    TRACER,
                 Kg / m^3,
              All sources,
     No ensemble averaging,
         3hr 0min integral,
   No horizontal averaging,
     No vertical averaging,
                          ,
                          ,
                          ,
      07/10/2008 06:00 UTC,
   No horizontal averaging,
     Y = 51.19990 Lat-Long,
                          ,
             0.0000000E+00,
```