**EPA Star Lab to Field Analysis (to be filled out)**

1. **Data**

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| **Log** | **Folder** | **Description** |
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| **Instrument** | **Folder** | **Description** |
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1. **Libraries**

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| **Package** | **Usage** |
| **tidyverse** | Wrapper for multiple data manipulation and visualization packages (http://tidyverse.org) |
| **readxl** | Reads excel files quickly |
| **reshape** | For back compatibility only (use tidyverse) |
| **forcats** | Supplementary tidyverse package for factors |
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1. **R\_Scripts**

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| **Script** | |
| **R\_functions** | |
| is\_outlier | check for outliers |
| filter\_times | filter data frame for time periods of interest only |
| **R\_load\_data.R** |  |
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| **R\_load\_metadata.R** |  |
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| **R\_tidy.R** |  |
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1. **Variables**

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| **Variable** | **Unit** | **Class** |
| time | seconds of day | numeric |
| date | “YYYY-MM-DD” | Date |
| datetime | "2016-05-31 14:34:15 TZ" | POSIXct |
| pol | pollutant name | factor |
| type | “pre”, “post”, “sample”, “bg” | factor |
| var | variable name (use descriptive name if possible) | numeric |
| id | experiment id: 1A, 1B... | factor |
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1. **Initial processing (r\_markdown)**
   1. **load\_save\_data.Rmd**

Loads all data and metadata, then saves as multiple .Rda files for further analysis

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| **File produced** | **Description** |
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* 1. **Process metadata.Rmd**

Takes all the metadata, separates by instrument/measurement etc, then saves a .Rda file for each.

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* 1. **Field\_temp.Rmd**
  2. **Field\_sums.Rmd**