

***IIIF - Report Period: APR 2017***  
***Status Of Reported Tests***

| STATUS                    | COUNT | PERCENT |
|---------------------------|-------|---------|
| Aborted                   | 2     | 3.922   |
| Special Case. Do Not MTAC | 1     | 1.961   |
| Valid                     | 48    | 94.118  |
| Total Reported Tests      | 51    | 100.000 |

***IIIF - Report Period: APR 2017***  
***Itemized Lost Test Report***

| Obs | Date     | TESTKEY   | REASON                                                                                                                |
|-----|----------|-----------|-----------------------------------------------------------------------------------------------------------------------|
| 1   | 20161102 | ACC-19344 | Test Terminated At 67 Hours Due To Loss Of Oil Temperature Control.                                                   |
| 2   | 20161206 | ACC-19415 | Test Terminated At 70 Hours Due To Significant Oil Viscosity Increase.                                                |
| 3   | 20170110 | ACC-19820 | Test Declared Non-Interpretable Due To Oil Consumption Greater Than 5.2l And A Stated Noack Volatility Less Than 15%. |

***IIIF - Report Period: APR 2017***  
***Replicate Database Report***

| Components of<br>Replicate<br>Database | APR<br>2017 | All<br>Periods |
|----------------------------------------|-------------|----------------|
| Number of Tests                        | .           | 114            |
| Formulations                           | .           | 49             |
| Labs                                   | .           | 4              |
| Stands                                 | .           | 19             |

***IIIF - Report Period: APR 2017***  
***by-Formulation Pooled s and Reproducibility of Replicate Data***

| Report Period | Parameter          | Degrees of Freedom | Pooled s | R       |
|---------------|--------------------|--------------------|----------|---------|
| All           | PVIS               | 65                 | 0.02308  | 0.06461 |
| All           | WPD                | 65                 | 0.64430  | 1.80405 |
| All           | APV                | 65                 | 0.25868  | 0.72431 |
| All           | SACLW              | 65                 | 3.37307  | 9.44458 |
| All           | PVIS (Without SA)  | 65                 | 0.02322  | 0.06502 |
| All           | WPD (Without SA)   | 65                 | 0.63329  | 1.77320 |
| All           | APV (Without SA)   | 65                 | 0.25449  | 0.71256 |
| All           | SACLW (Without SA) | 65                 | 2.47468  | 6.92910 |

**IIIF - Report Period: APR 2017**  
**Pass/Fail**

| Report Period | API Category                   | N    | Number Passed | % Passed |
|---------------|--------------------------------|------|---------------|----------|
| APR 2017      | All Categories, All Parameters | 48   | 31            | 64.583   |
| APR 2017      | SL - All Parameters            | 48   | 31            | 64.583   |
| APR 2017      | SL, APV                        | 48   | 47            | 97.917   |
| APR 2017      | SL, APV (Without SA)           | 48   | 48            | 100.000  |
| APR 2017      | SL, PVIS                       | 48   | 37            | 77.083   |
| APR 2017      | SL, PVIS (Without SA)          | 48   | 37            | 77.083   |
| APR 2017      | SL, SACLW                      | 48   | 47            | 97.917   |
| APR 2017      | SL, SACLW (Without SA)         | 48   | 47            | 97.917   |
| APR 2017      | SL, STUCK_RINGS                | 48   | 47            | 97.917   |
| APR 2017      | SL, WPD                        | 48   | 41            | 85.417   |
| APR 2017      | SL, WPD (Without SA)           | 48   | 41            | 85.417   |
| All           | All Categories, All Parameters | 2788 | 1444          | 51.793   |
| All           | SL - All Parameters            | 2788 | 1444          | 51.793   |
| All           | SL, APV                        | 2788 | 2409          | 86.406   |
| All           | SL, APV (Without SA)           | 2788 | 2482          | 89.024   |
| All           | SL, PVIS                       | 2788 | 1950          | 69.943   |
| All           | SL, PVIS (Without SA)          | 2788 | 1924          | 69.010   |
| All           | SL, SACLW                      | 2788 | 2684          | 96.270   |
| All           | SL, SACLW (Without SA)         | 2788 | 2717          | 97.453   |
| All           | SL, STUCK_RINGS                | 2788 | 2710          | 97.202   |
| All           | SL, WPD                        | 2788 | 2211          | 79.304   |
| All           | SL, WPD (Without SA)           | 2788 | 2189          | 78.515   |



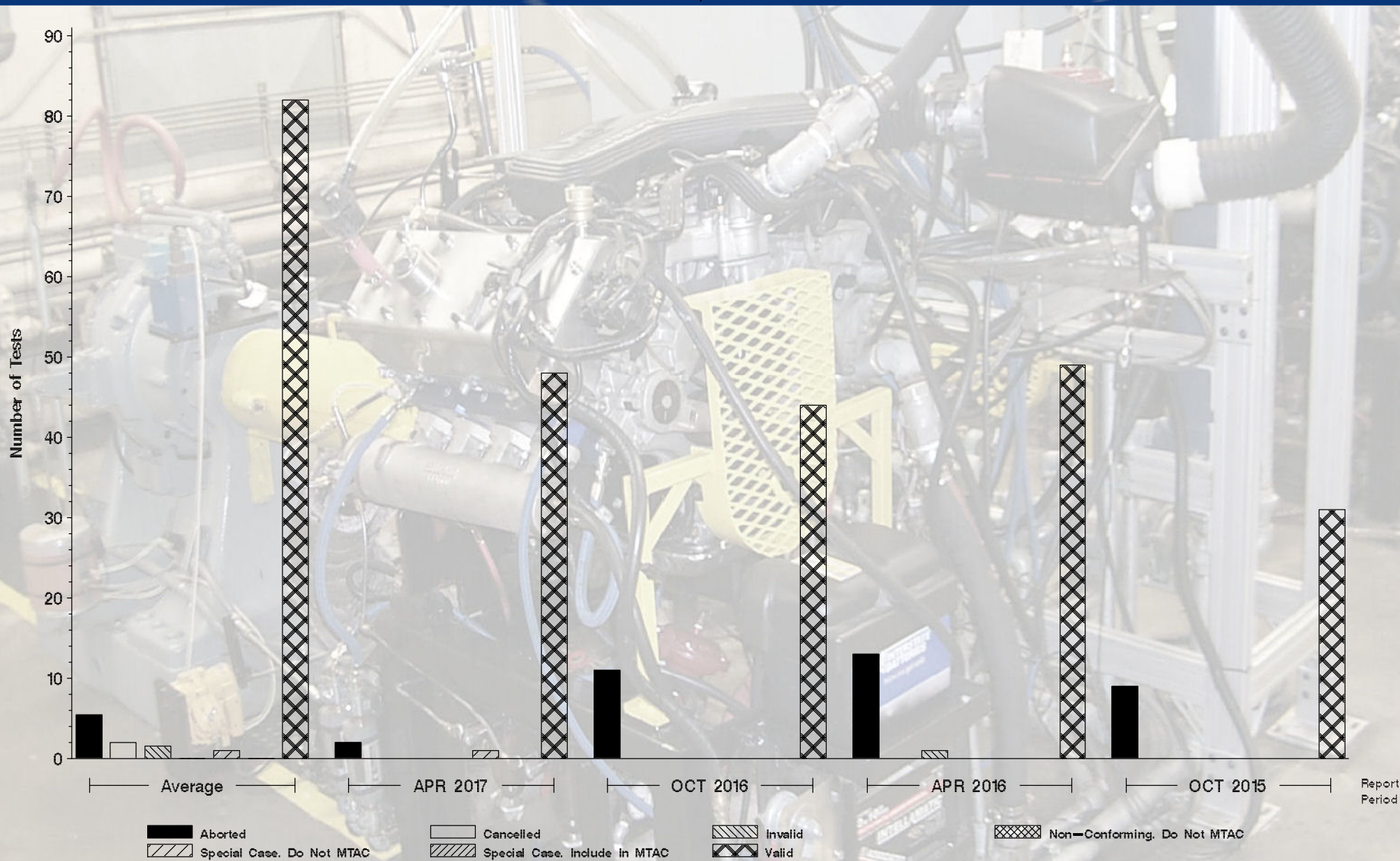
# Monitoring Agency

6555 Penn Avenue, Pittsburgh, PA 15206

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IIIF

Status of Reported Tests





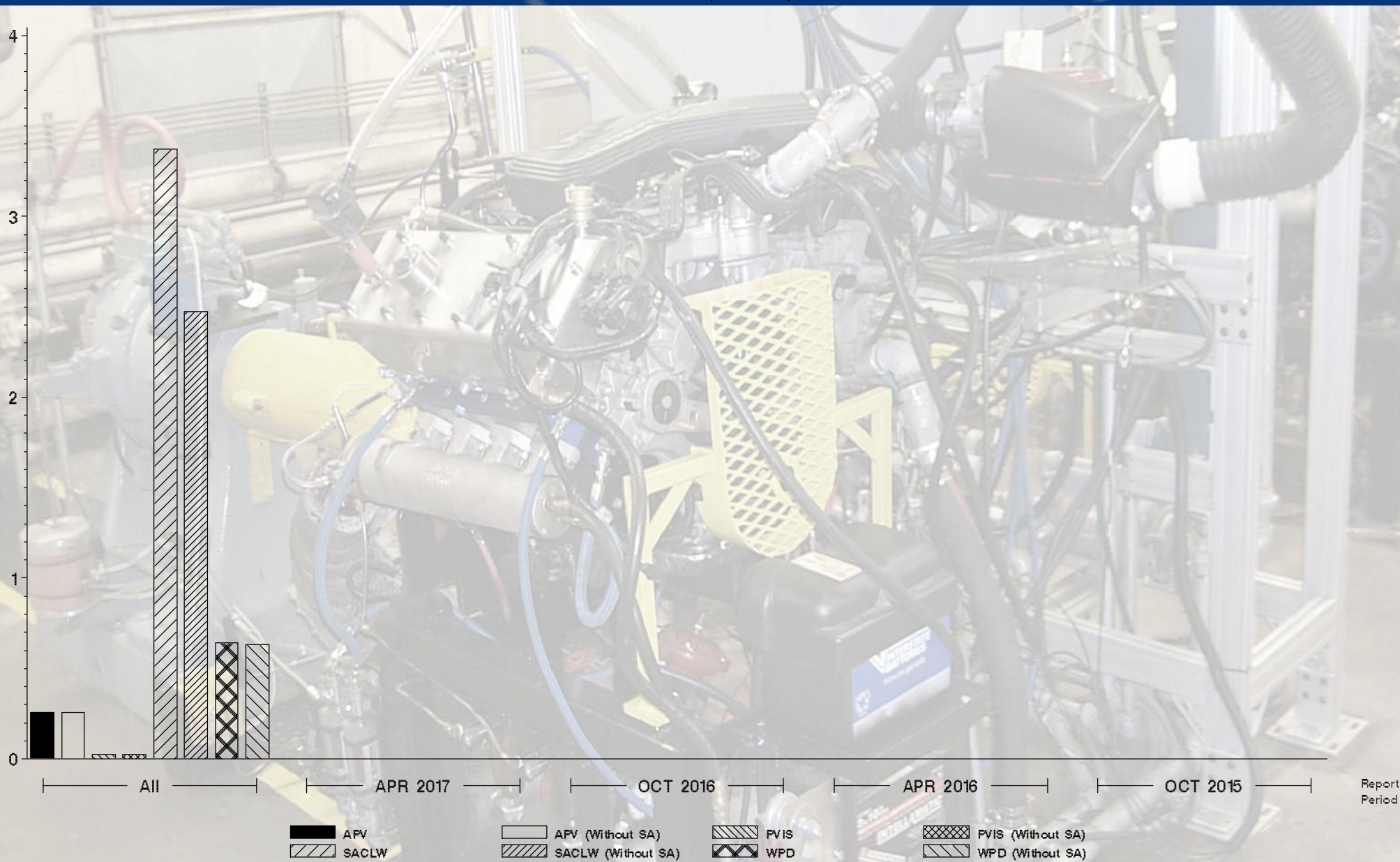
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III F

Candidate Precision as Represented by Pooled S





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