AASHTO re:source MSCR PSP Data: A Brief Update

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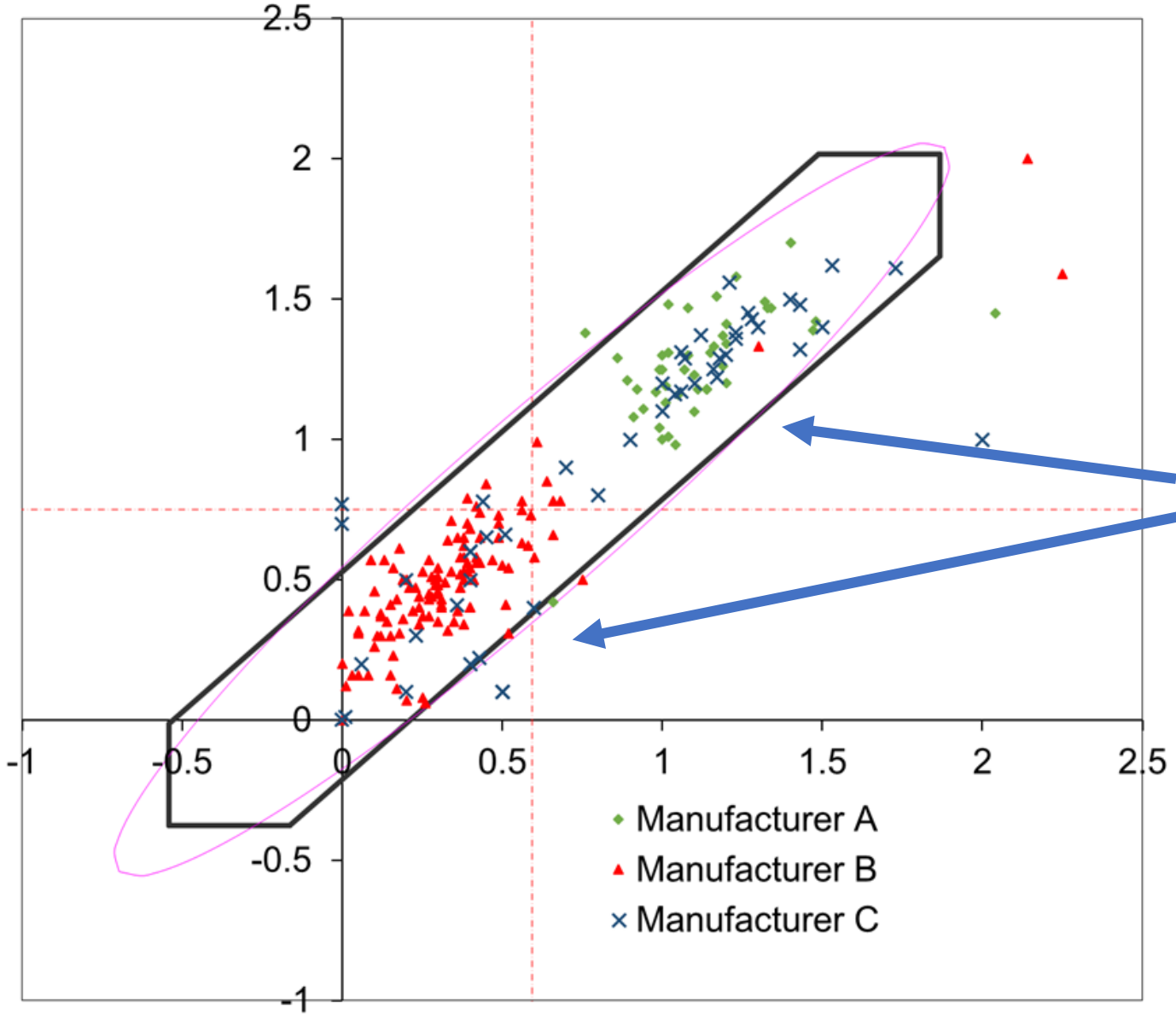
Asphalt Binder ETG Meeting

May 10, 2018

Data from Spring 2016 Sample Round

Percent Recovery
at 3.2kPa
(PGB 243/244)



Bi-modal distribution

Significance

Statistical significance existed between manufacturers for the following parameters:

- % recovery at 0.1 kPa (all manufacturers)
- % recovery at 3.2 kPa (all manufacturers)
- % difference in recovery (all manufacturers)
- % difference in jnr (all manufacturers)

Corrective Actions: Working with Manufacturers

- Contacted rheometer manufacturers to cross-reference the reported software reported versions.
  - Communication indicated that laboratories were not certain on what type of software they had.
  - Rheometer manufacturers reached out to customers to ensure that software is being updated to the most current versions.

Corrective Actions: AASHTO re:source Assessments

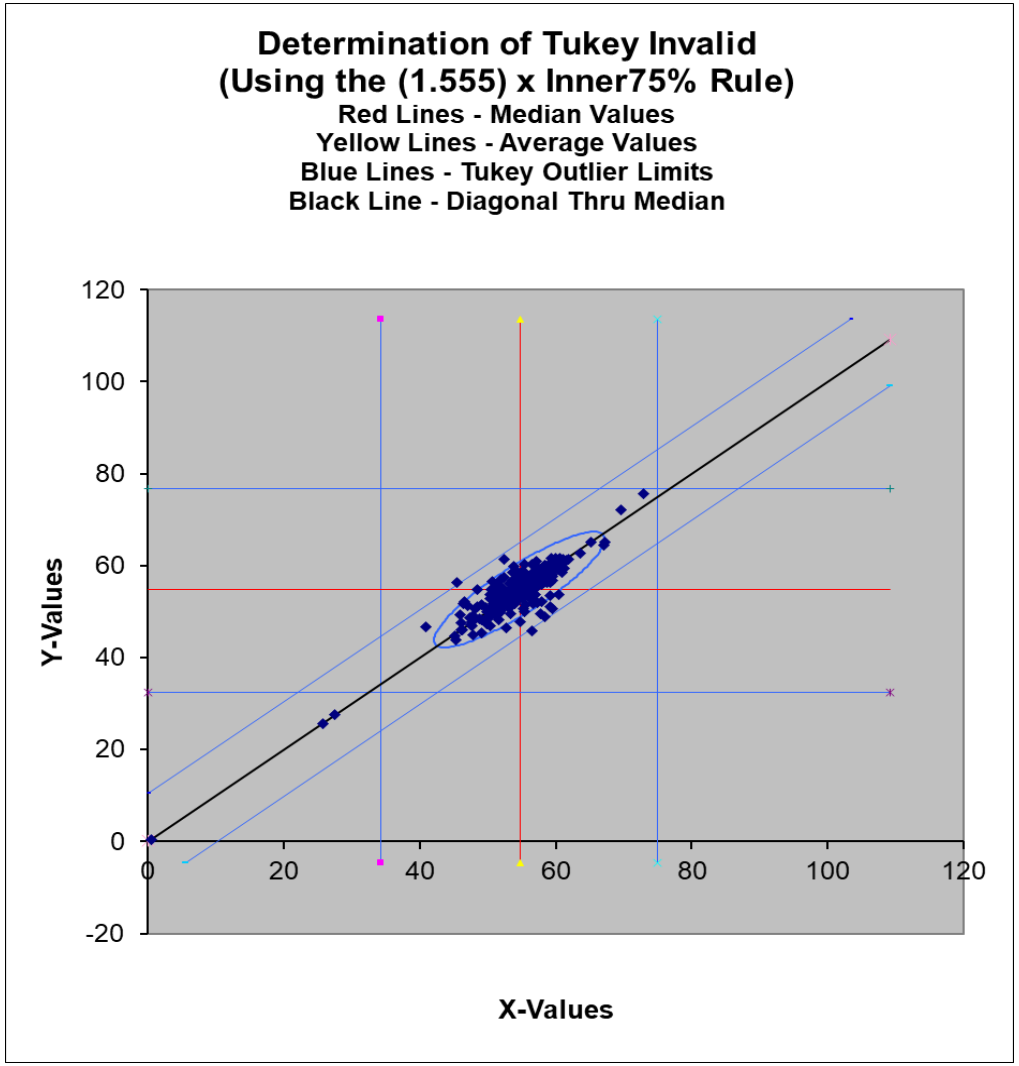
- Identified devices without most current software.
- Assessors reviewed data in the field to determine if correct conditioning cycles were being applied.

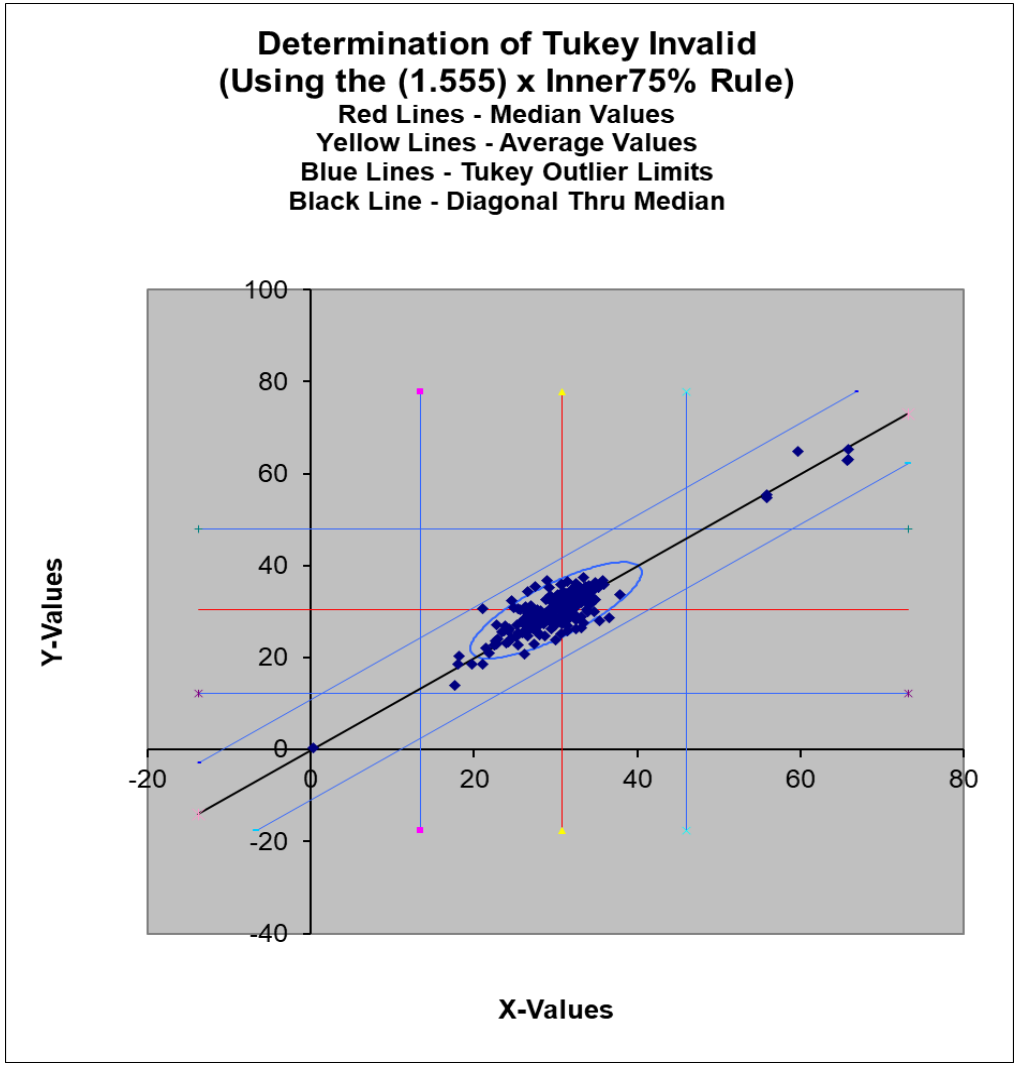
Outcome

- Current PSP Data indicates that no significant differences exist between manufacturers
- This is evident in three most current sample rounds
  - PGB 245/246 (Fall 2016)
  - PGB 247/248 (Spring 2017)
  - PGB 249/250 (Fall 2017)
  - Analysis for 251/252 will be available by May 2017

MSCR Plots from PGB 245/246 (Fall 2016)

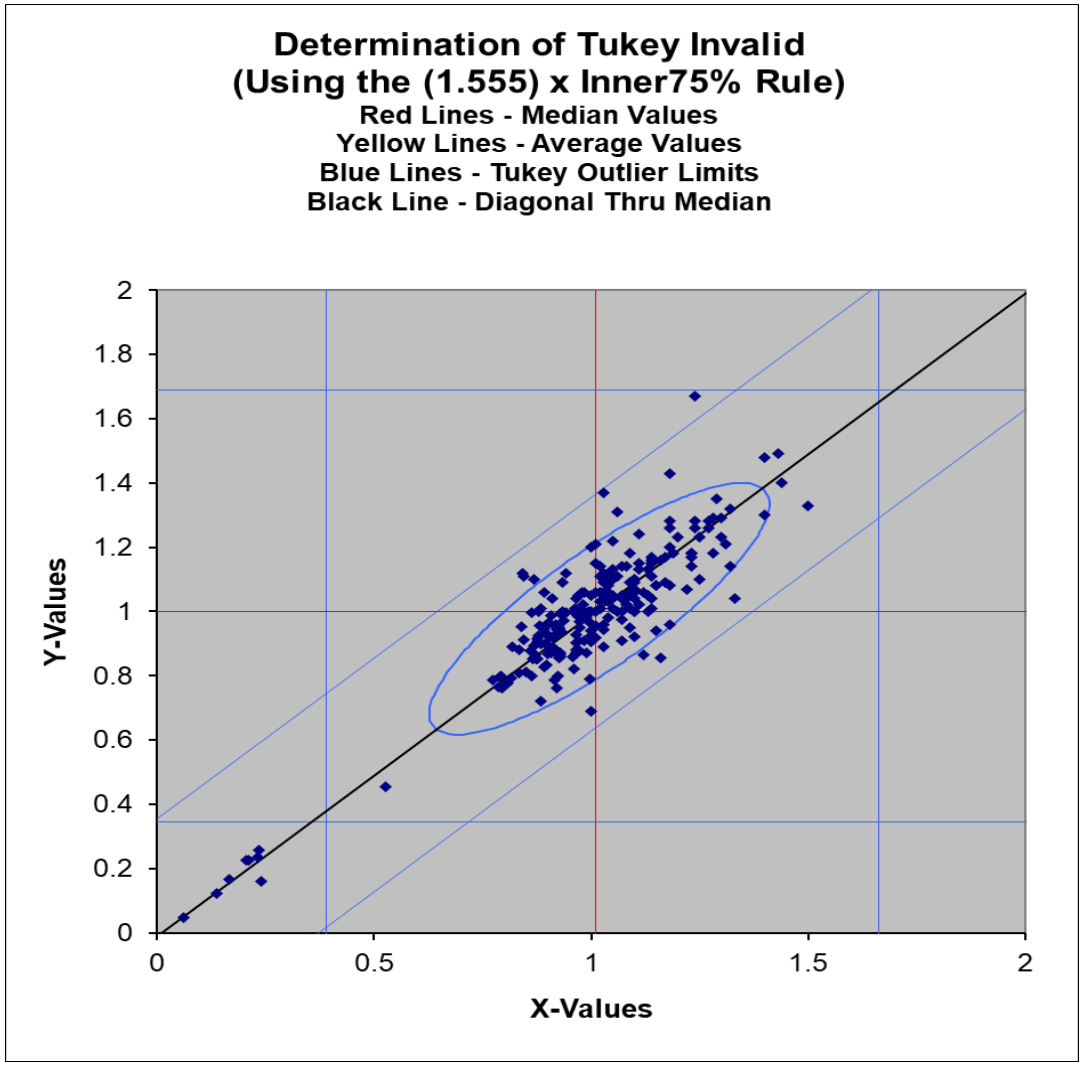
(Recovery at 0.1 and 3.2 kPa)

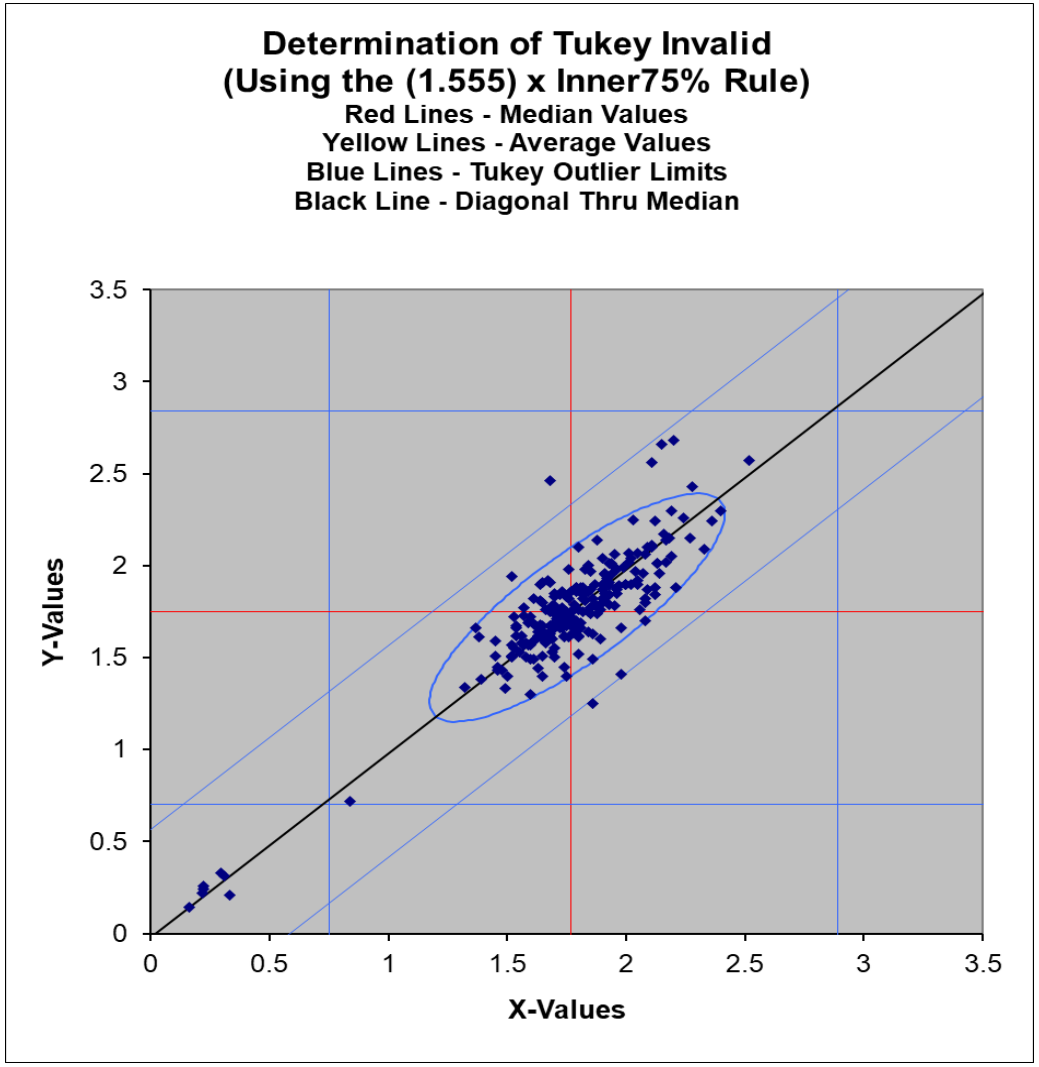




MSCR Plots from PGB 245/246 (Fall 2016)

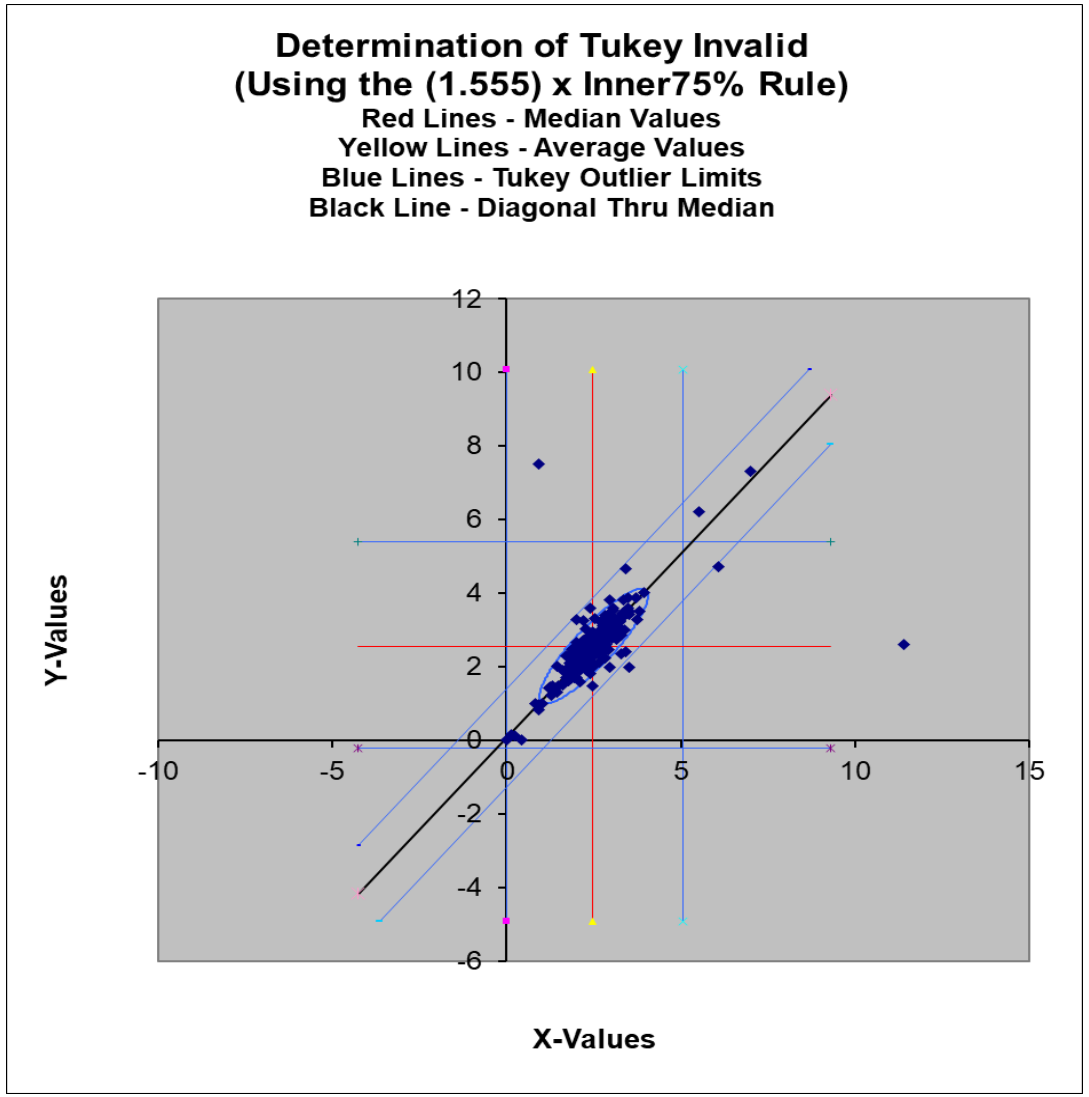
(Jnr at 0.1 and 3.2 kPa)

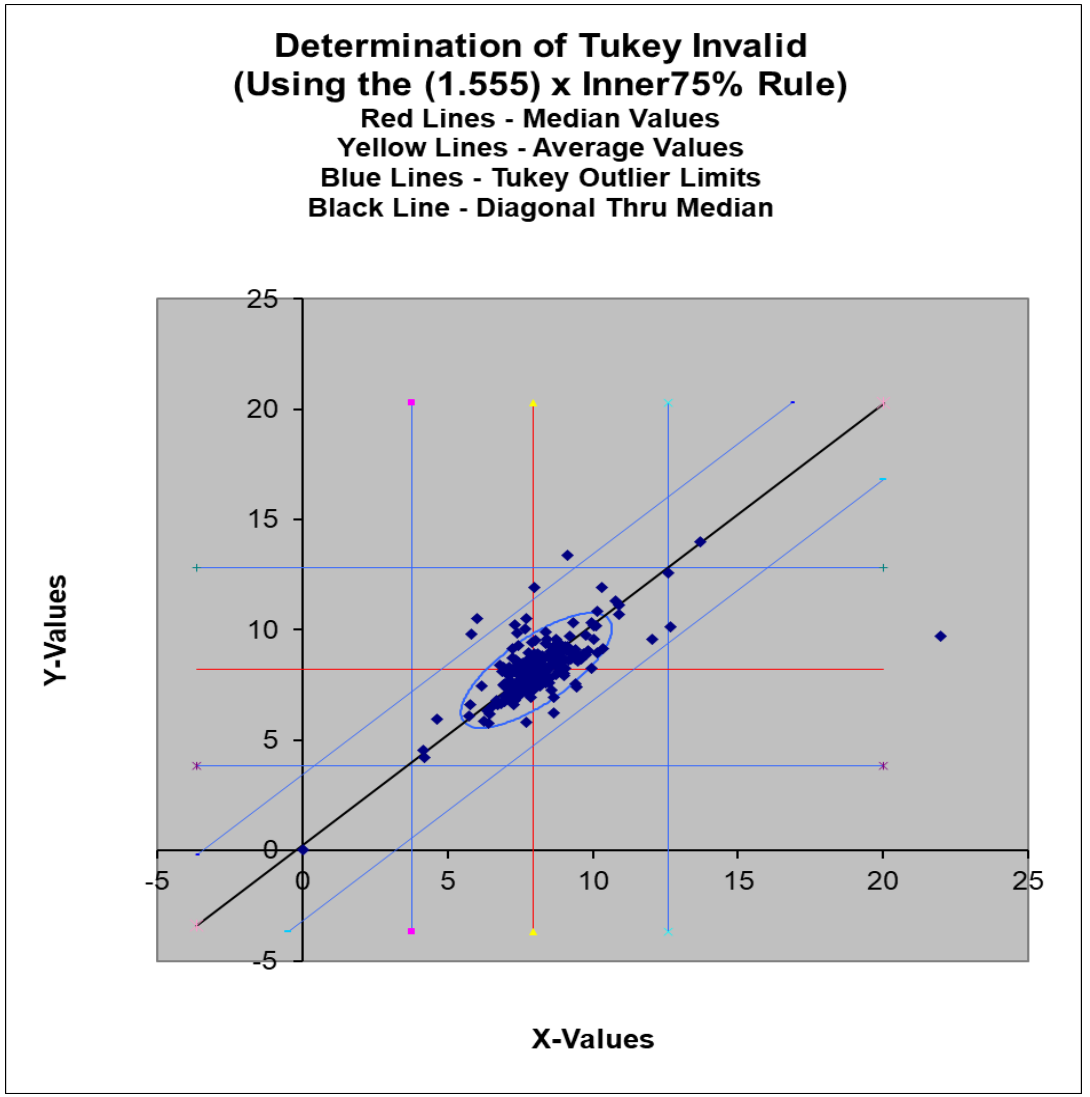




MSCR Plots from PGB 247/248 (Spring 2017)

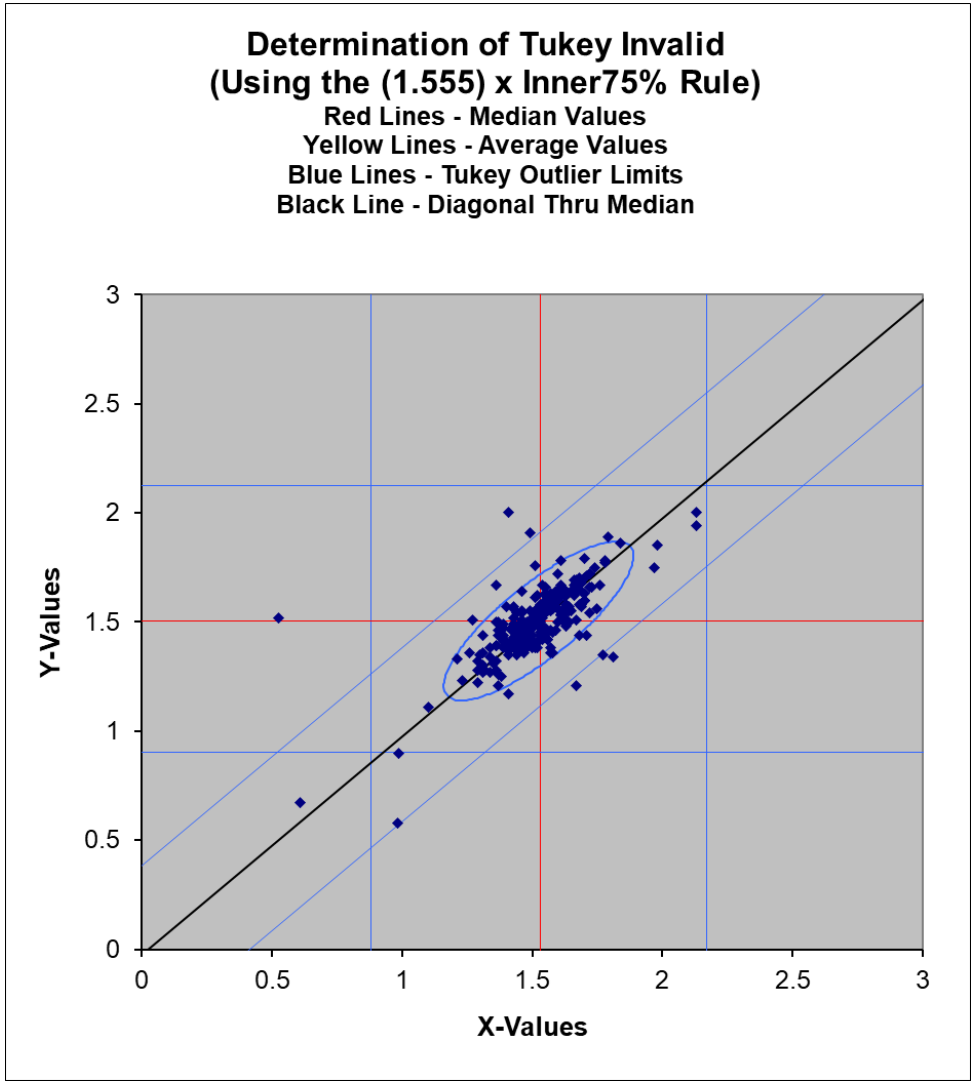
(Recovery at 0.1 and 3.2 kPa) – neat binder

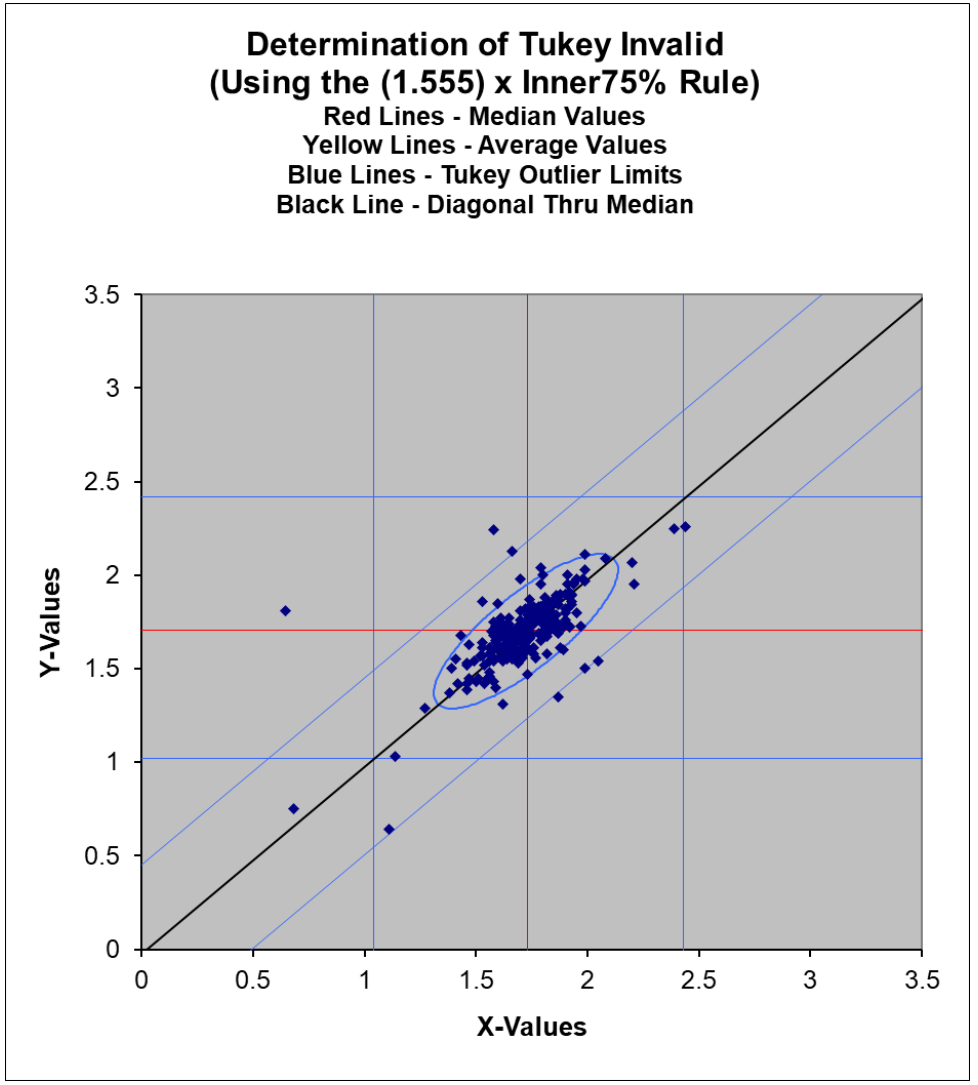




MSCR Plots from PGB 247/248 (Spring 2017)

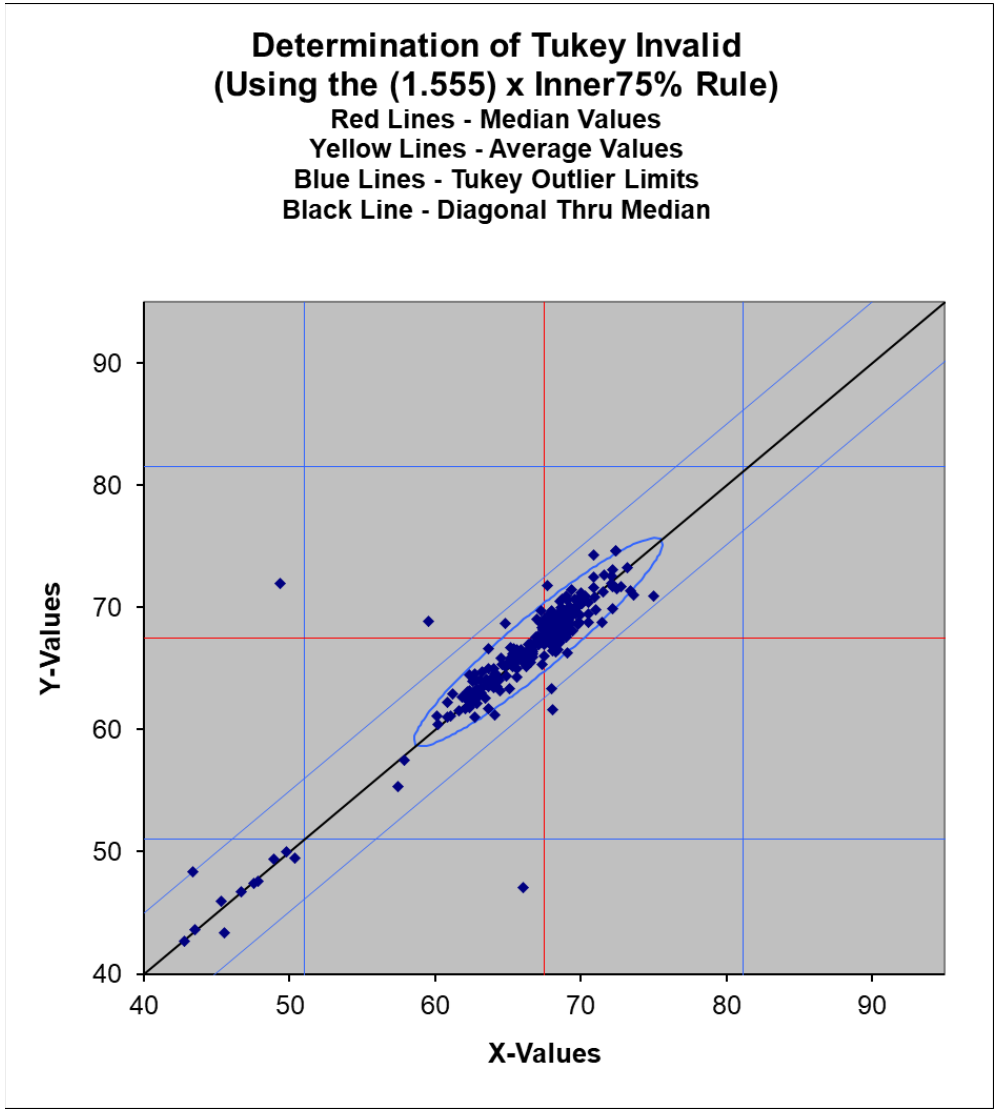
(Jnr at 0.1 and 3.2 kPa)

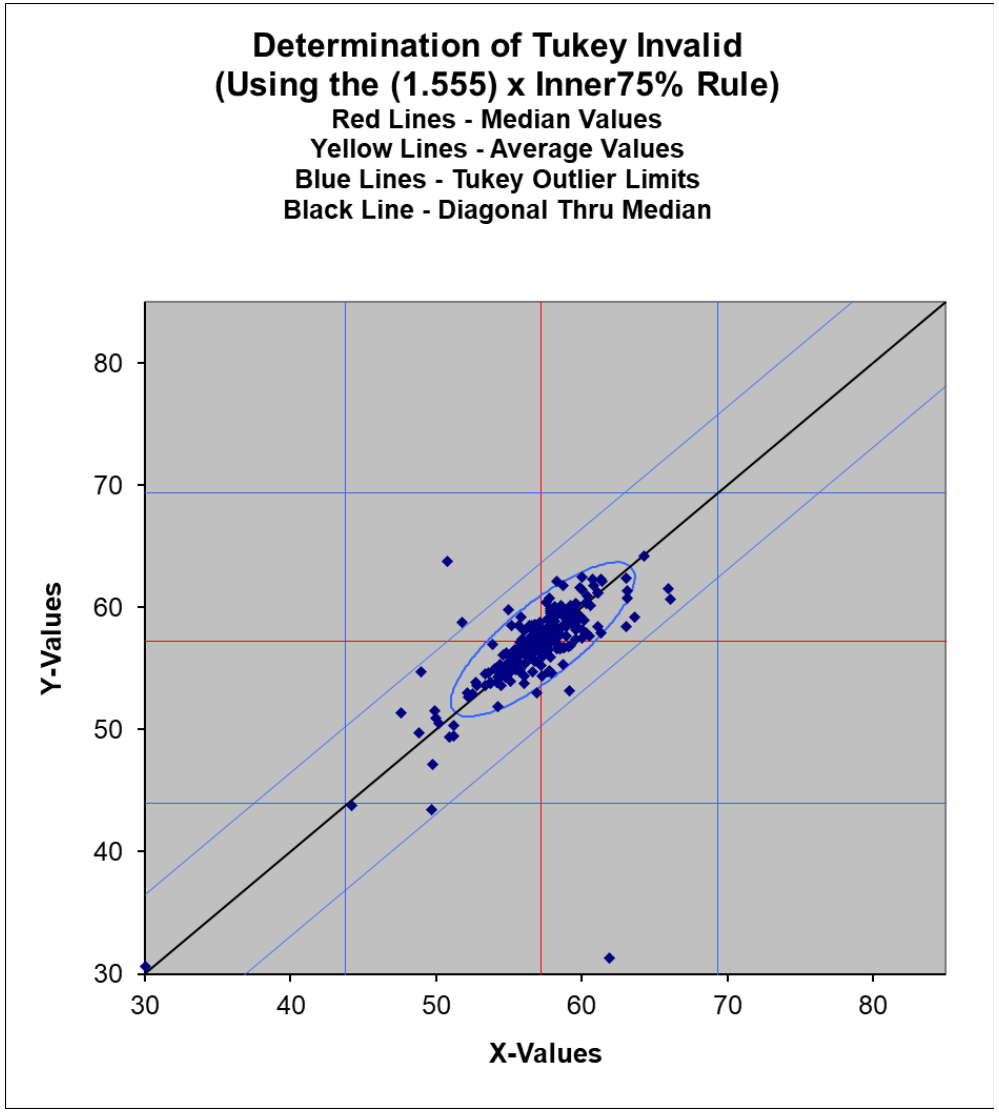




MSCR Plots from PGB 249/250 (Fall 2017)

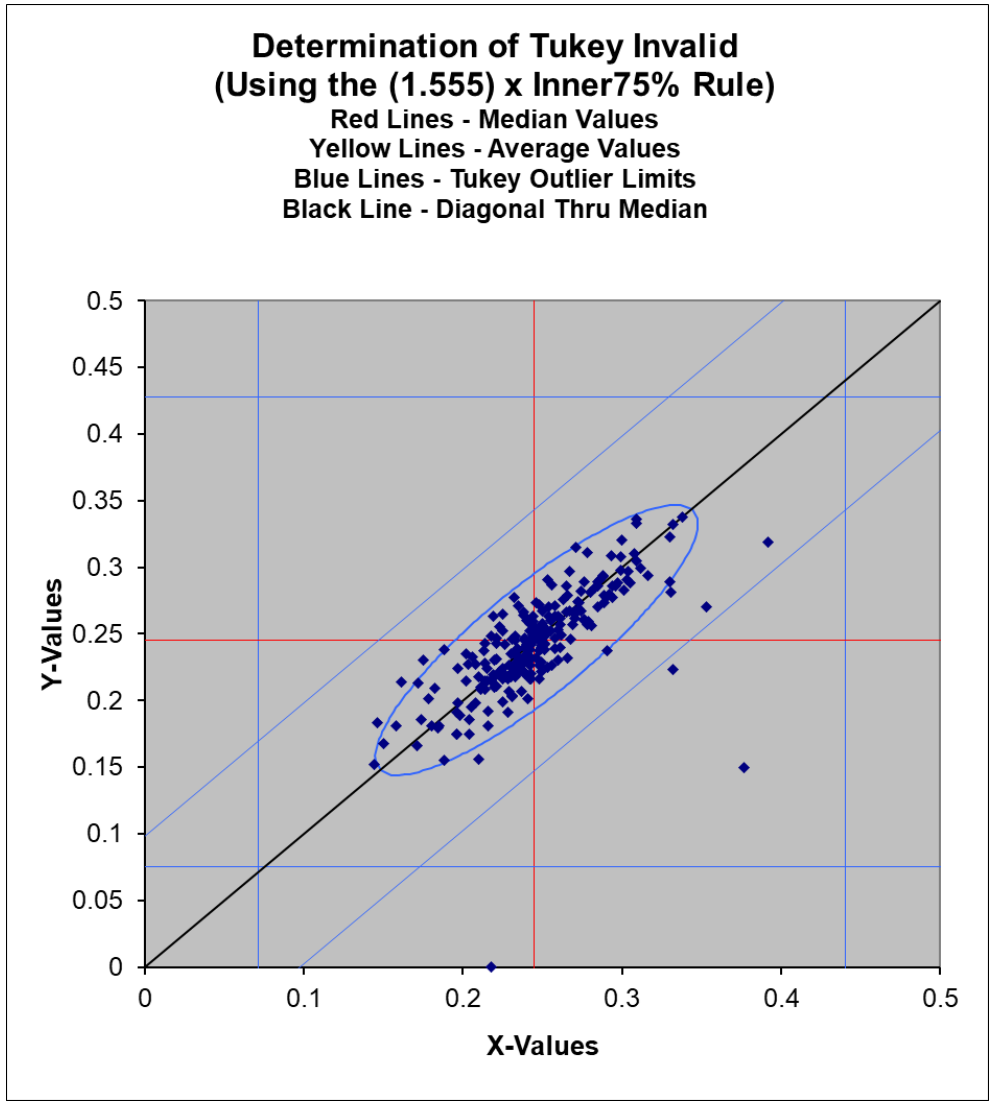
(Recovery at 0.1 and 3.2 kPa)

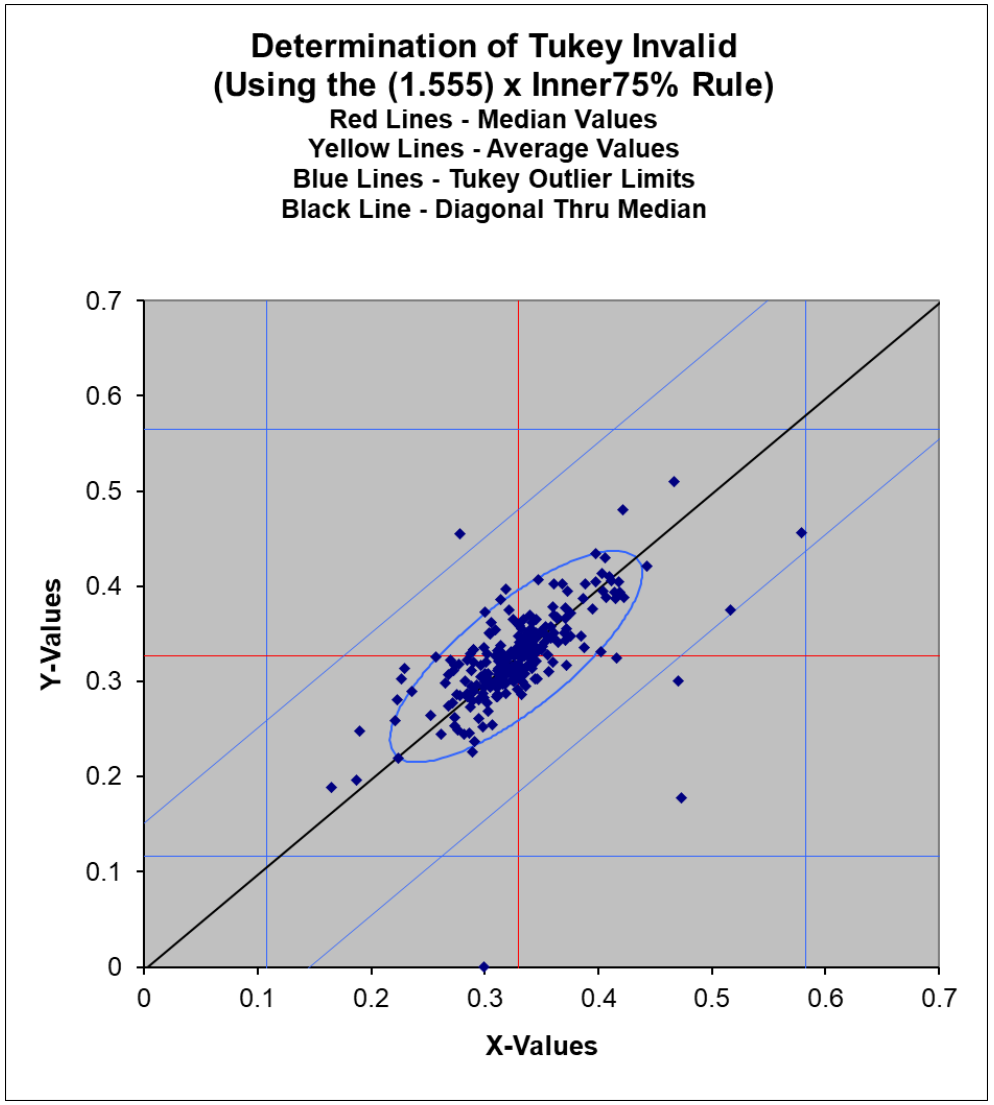




MSCR Plots from PGB 249/250 (Fall 2017)

(Jnr at 0.1 and 3.2 kPa)





Conclusions….