The Modeling Process

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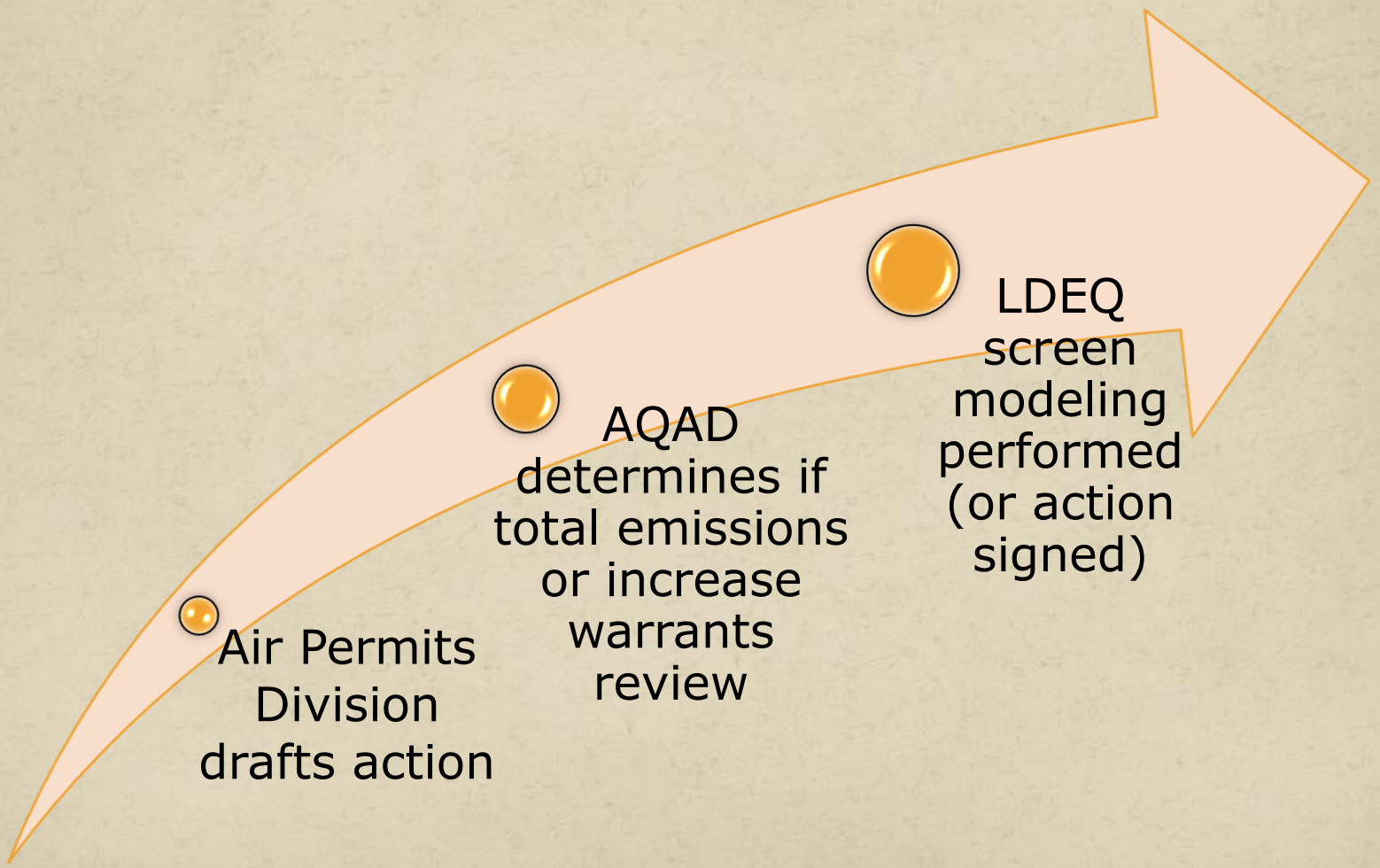
LDEQ's Process

Step 1


Air Permits Division drafts action
AQAD determines if total emissions or increase warrants review
LDEQ screen modeling performed (or action signed)

Screening Permit Actions

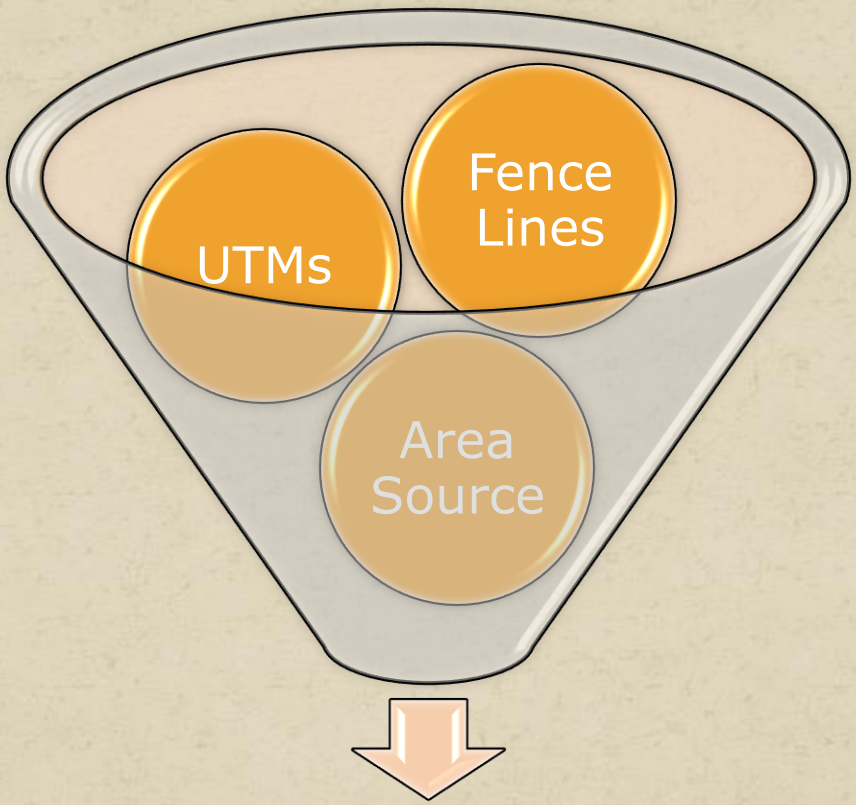
- AERMOD or ISCST3
- Representative met data
- Onsite sources only
- No BPIP file
- Conservative default options
- 3 km grid, 100 m spacing

If model demonstrates compliance with applicable standard, action is signed.

Word to the Wise

EIQs in permit applications must contain all stack information. Missing stack parameters cause VERY HIGH modeling results.

Step 2

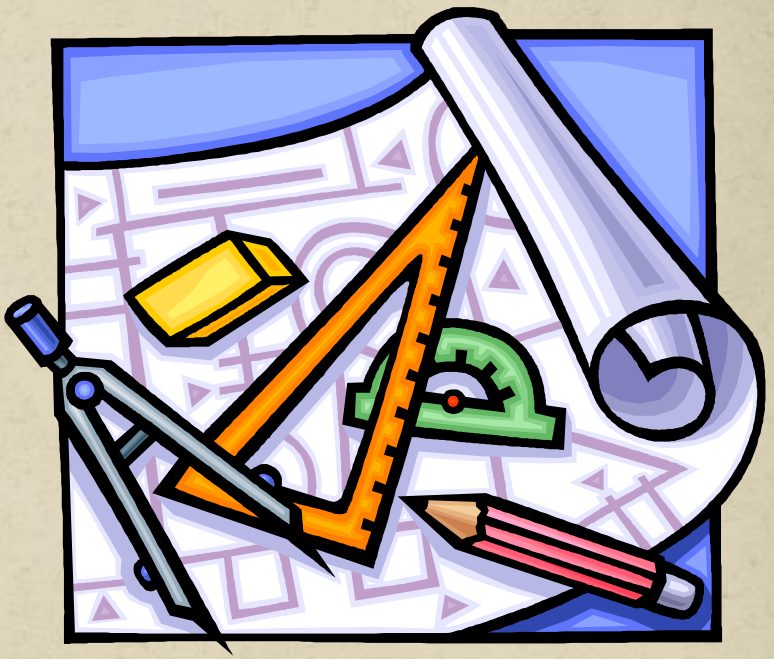


Gather Additional Information

Area and Volume Sources

Providing a sketched diagram of the size and location of area sources saves time in the review process.

Sources inside of buildings should be specially noted.



Step 3

Engineering Support Recommends Modeling

Air Permits Issues Letter for Additional Information

Company Performs Screen/Refined Modeling

What about minor sources?

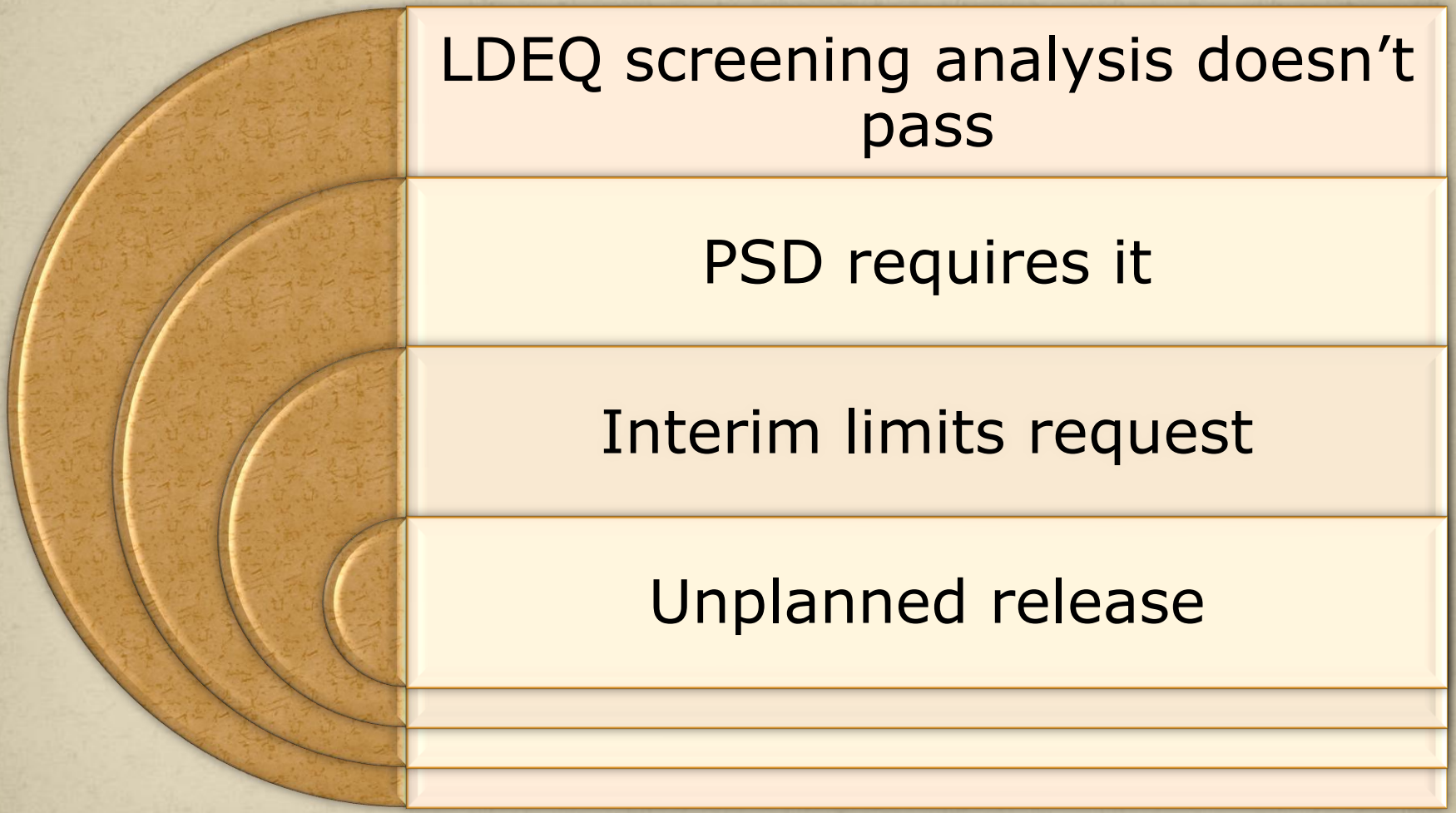
- Must comply with NAAQS and AAS
  - Maintain Louisiana's air resources
  - Attainment/maintenance of NAAQS
- LAC 33:III.103.A

  "These regulations and air quality standards and emissions limitations apply to any source of emissions existing partially or wholly within the state of Louisiana."
- LAC 33:III.517.D.15

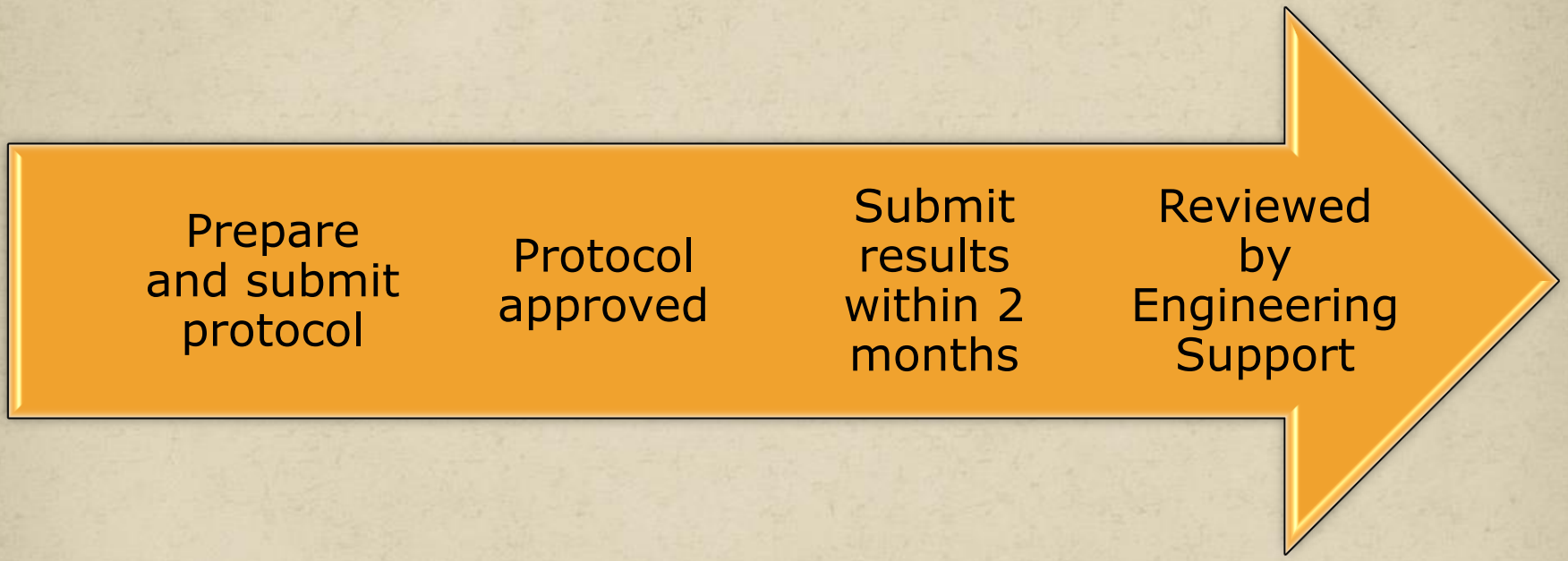
  "At the request of the permitting authority, a detailed analysis of ambient air impacts shall be provided."
- TAPs – Not regulating the source under Chapter 51; ensuring compliance with AAS

The Facility's Process

When should I model?



I’m required to model…now what?



LDEQ Guidelines

www.deq.louisiana.gov

Divisions = Air Quality Assessment

Air Modeling Resources

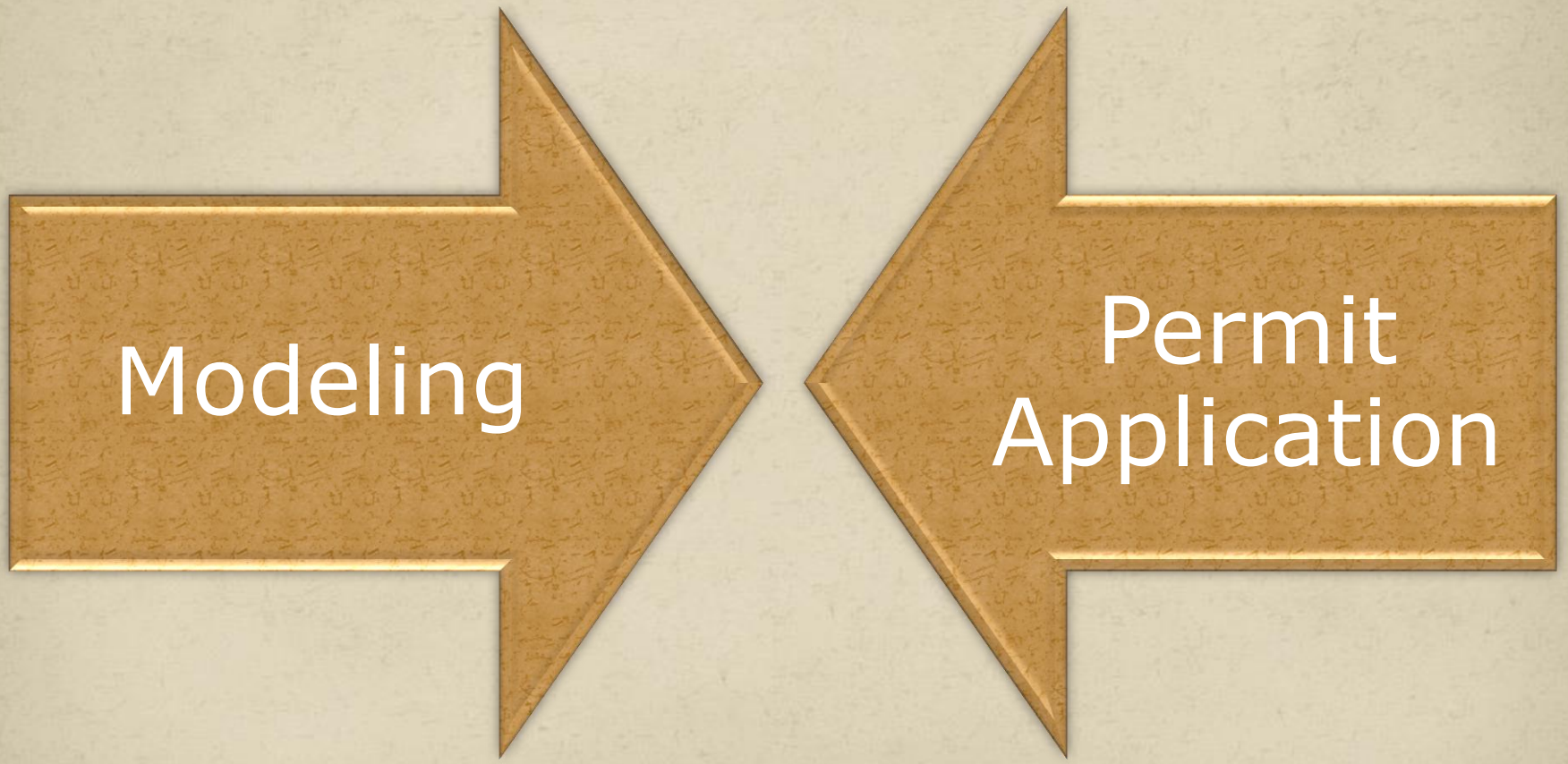
Protocols

- How the modeling will be performed
  - Pollutants
  - Met Stations and Years
  - Receptor Grid
  - Land Use Analysis
  - Background Concentration
  - Default Parameters
- ANY changes from standard procedures
- Work out problems ahead of time

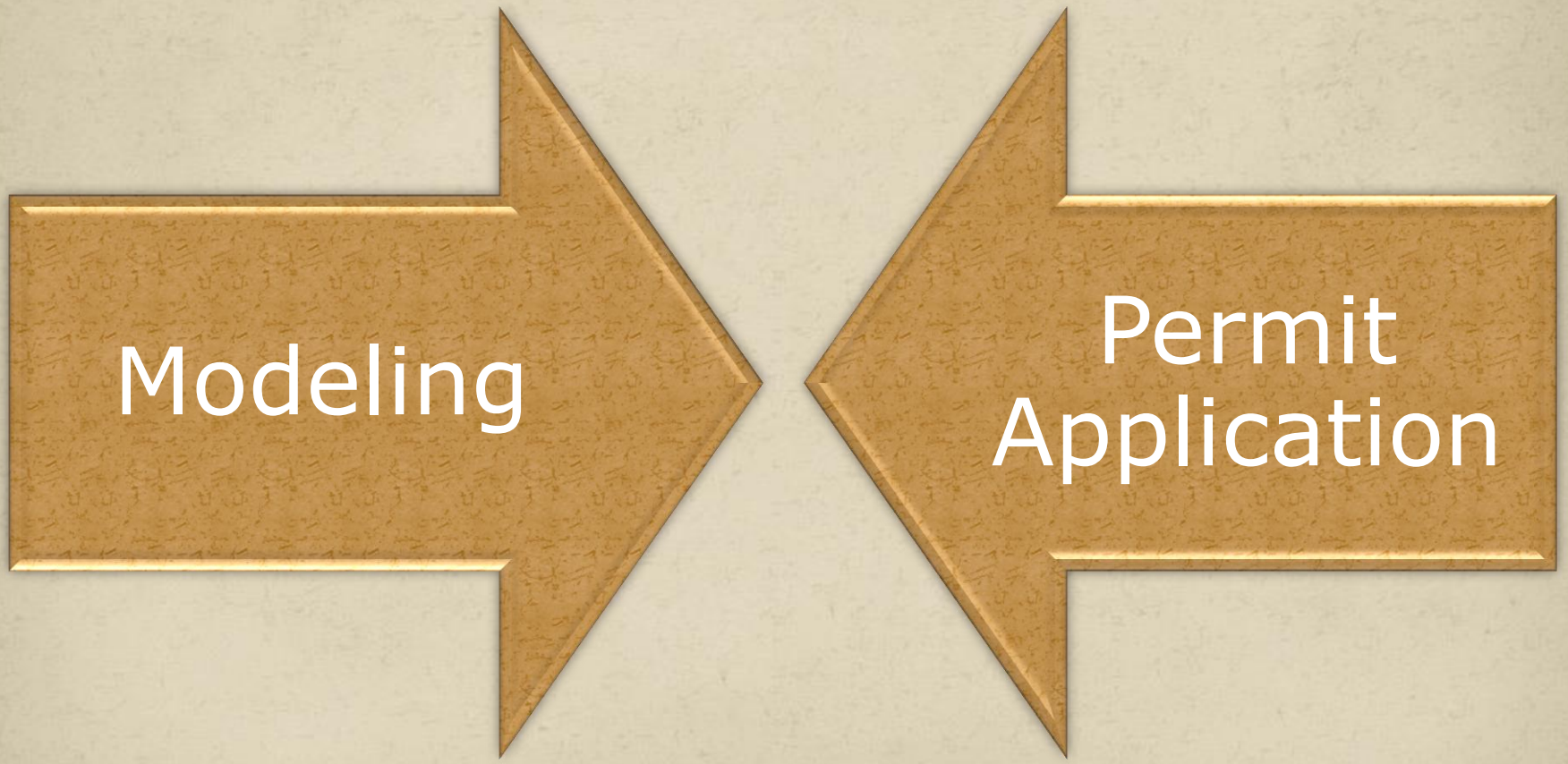
The Report

- Plot plan
- Summary of model inputs
- Stack parameters and emissions for each source
- Detailed explanation on assumptions
- Detailed explanation on changes in inventory
- Summary table of results indicating worst year
- Met data files (electronic)
- Input and output files for all years (electronic)
- QA/QC reports (if not using primary met station)

Modeling must match application!



If they don’t match…



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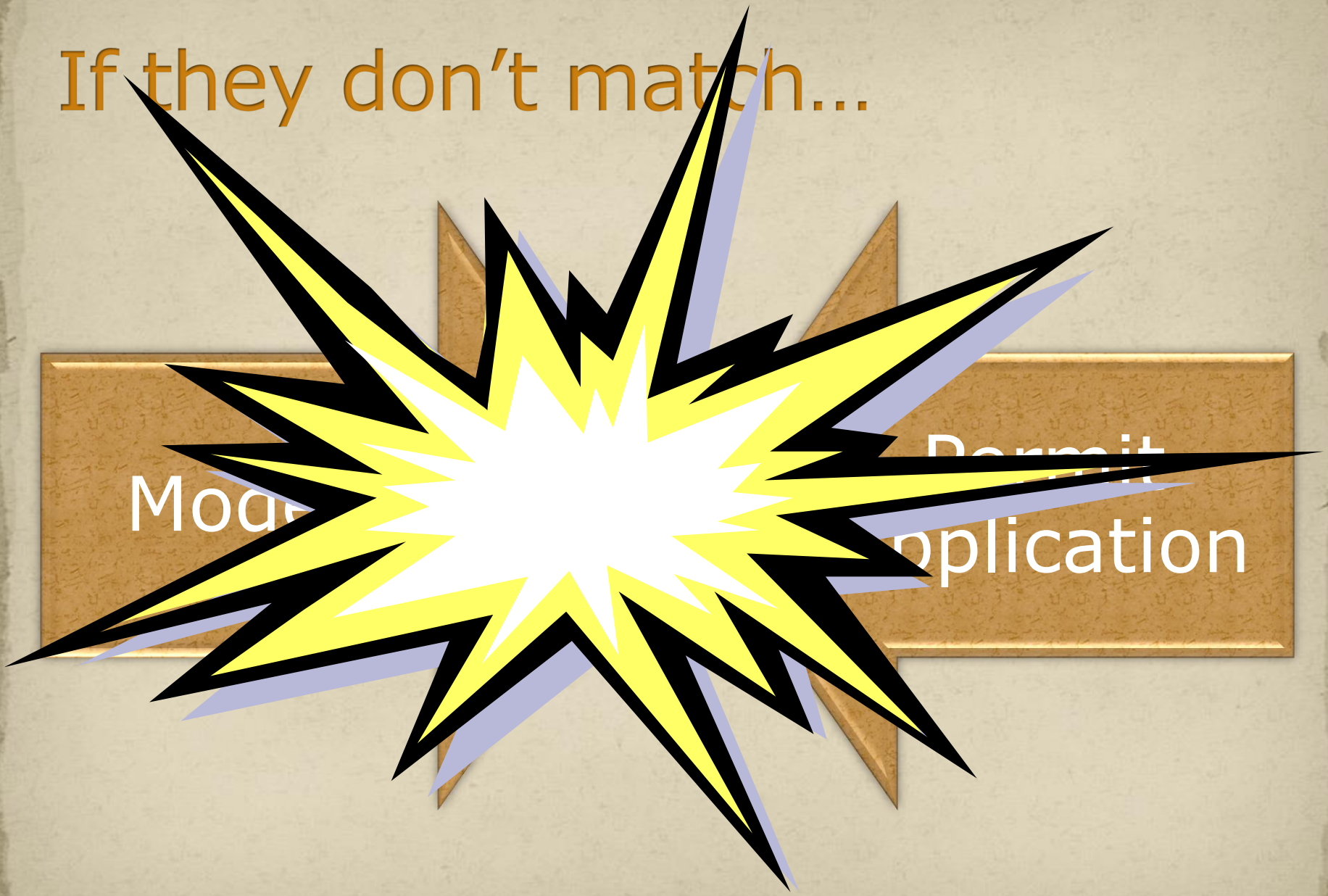

Recent Changes

- Lead - 0.15 μg/m^3 standard
- Ozone impact - VOC or NOx > 100 tpy
- Class I needs to be considered for anything within 400 km range (not 100)
- Don’t use default met variables
- Use AERSURFACE and AERMAP
- Do not adjust background
- Considerations for other industrial property

More Recent Changes

- PM
  - PM_{10} fugitives – storage piles and roads
  - $PM_{2.5}$
- Inventory Data
  - ERIC
  - TEMPO

Air Quality Assessment Division

Engineering Support Section

225-219-3535

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