

Best Practices for Post Approval Changes

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■ History and Current Landscape for Post-Approval Changes

1995 - SUPAC-IR

1997 - SUPAC-IR & ANSWERS

1997 - SUPAC-MR

1997 - SUPAC-SS

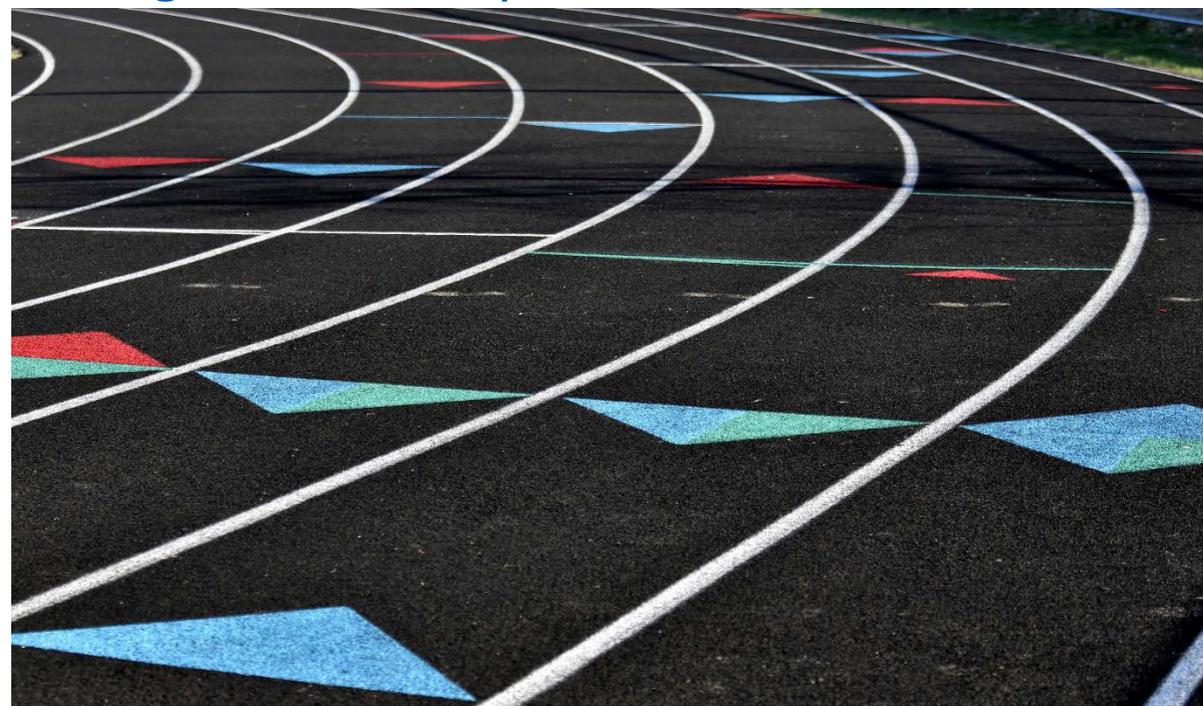
1998 - PAC-ATL (PA CHANGES TO ANALYTICAL TESTING LABORATORY SITES)

2004 - CHANGES TO APPROVED NDAS & ANDAS

2014 - CMC POST-APPROVAL CHANGES DOCUMENTED IN ANNUAL REPORTS

2018 - POST- APPROVAL CHANGES TO DRUG SUBSTANCES

- ✓ 21 CFR 314.70 requires FDA notification of changes.
- ✓ Drugs have increased in complexity
- ✓ Additional regulatory roadmaps can be beneficial when it comes to post-approval changes for these products.



Filing Requirements of Complex Generic Post

■ Approval Changes

Guidance on Data Requirements for certain changes to complex drug or combination products can be helpful.

<u>Filing Categories</u>	<u>Examples of Types of Changes</u>	<u>Potential Data Requirements</u>
PAS CBE-30 CBE-0 AR	Formulation Changes Batch Scale Up Site Transfers Packaging Changes Excipient Source Changes	Number of Batches? Stability required? In-vivo/In-vitro BE Requirements? Characterization Data?



Challenges - Life Cycle Management of Complex

■ Products

Complex generic products often have a multi-layered structure or complex manufacturing processes. This complexity makes it challenging to assess the impact of changes on product quality, safety, and effectiveness.

- Although resources are available to guide drug development / approval for complex products (e.g., Product Specific Guidances, Controlled Correspondence, Product Development Meetings, Pre-submission Meetings), additional resources can be helpful for post approval changes to complex products.
- Controlled correspondences does not address urgent changes commonly encountered with routine manufacture of drug products while waiting a minimum of 60-120 days for a response.



TAKEAWAY: The Agency has done a commendable job issuing guidance and providing avenues for scientific discussion in support of drug development to bring complex generics to market – however – guidance on complex products and changes can be helpful to avoid overly conservative filing approaches to post-approval changes.

■ Case Study–DP Manufacturing Site Change

Complex Peptide Sterile Injectable

- **Proposed Change:** Site change for manufacture of drug product
- **Submission Type:** CBE-30/PAS
- **Submission Requirements#:**
 - Specifications
 - Methods
 - Master Batch records
 - Sterility Assurance Package
 - Process controls
 - CoAs and batch records
 - Stability data

not all inclusive

Uncertainties



- Will one batch per strength suffice for a complex peptide product?
- Immunogenicity data required?
 - 3 batches required?
 - End of shelf-life immunogenicity required ?
- Repeat physicochemical characterization?
 - all characterization tests be required – or - only a subset – and - which ones ?



Additional guidance / recommendations would be beneficial as more complex products are approved.

Controlled correspondence allows for mechanism of feedback from the Agency - however - additional guidance and mechanisms for seeking feedback would also be beneficial in navigating such changes.

■ Best Practices

- ✓ Use regulations and guidance documents (when available) to determine the appropriate reporting category for the change and provide sufficient supporting data.
- ✓ If there are multiple related changes, the most restrictive filing category would apply.
- ✓ If guidance is not available for changes to complex generics, or there are unique considerations at hand, utilize Controlled Correspondence to obtain FDA concurrence prior to submission.
- ✓ Clearly list all proposed changes in the cover letter.
- ✓ In situations where there could be a supply disruption, contact FDA's drug shortage group.
- ✓ Keep track of USP updates.
- ✓ Work with your DMF holder closely (as applicable).



■ Parting Thoughts & Opportunities

- ✓ While the landscape for post-approval changes has remained largely unchanged over the years, generic products continue to advance in complexity.
- ✓ Challenges associated with post-approval changes for complex generic products is related to their unique characteristics, regulatory uncertainties & the need for extensive data.
- ✓ Additional post-approval guidance could allow for new avenues to be available for scientific discussion related to complex post-approval changes.
- ✓ Success requires careful planning, collaboration and effort from both FDA and Industry ultimately resulting in:

Reduced Cost and Time



Reduced Regulatory Burden



Reduced Drug Shortages



*Thank
you!*

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