Specifically, investigations pertaining to out-of-specification (OOS) residual solvents and/or water content results in API, which were performed for several batches of API manufactured from 5/07/17 to 10/08/18, were not thorough. For example,

a) Investigation into OOS-U08-000734, OOS-U08-000735, OOT-U08-000151, OOT-U08-000154, initiated on 12/06/17, reporting OOS for Residual Solvents and/or water content; concluded that a malfunction pertaining to the circulation in API was investigated and/or discussed. Additionally, the investigation did not include a review of the equipment qualification for the equipment's Quality Unit for its acceptability. Additionally, the firm does not maintain electronic batch processing data for equipment validation.

b) Investigation into OOS-U08-000734, OOS-U08-000735, OOT-U08-000151, OOT-U08-000154, initiated on 12/06/17, reporting OOS for Residual Solvents and/or water content; concluded that a malfunction pertaining to the circulation in API was investigated and/or discussed. Additionally, the investigation did not include a review of the equipment qualification for the equipment's Quality Unit for its acceptability. Additionally, the firm does not maintain electronic batch processing data for equipment validation.

c) Investigation into OOS-U08-000734, OOS-U08-000735, OOT-U08-000151, OOT-U08-000154, initiated on 12/06/17, reporting OOS for Residual Solvents and/or water content; concluded that a malfunction pertaining to the circulation in API was investigated and/or discussed. Additionally, the investigation did not include a review of the equipment qualification for the equipment's Quality Unit for its acceptability. Additionally, the firm does not maintain electronic batch processing data for equipment validation.
such as (b) (4) 002, therefore an adequate review of the (b) (4) process and functioning of the (b) (4) could not be performed. Ten batches of (b) (4) API manufactured from 5/07/17 to 10/08/18 were OOS for Residual Solvents or Water Content.

b) Investigation into OOS-U08-000860 & OOS-U08-000861 initiated 9/14/18 reporting OOS for Residual Solvents (b) (4) concluded that a malfunction pertaining to leakage in the (b) (4) line; however all potential root causes were not investigated and/or discussed.

c) Deviation Record Number DE-U08-000455 initiated 12/19/17 reporting an OOS for water content for (b) (4) Reprocessed Batch (b) (4) (reprocessed batch of (b) (4) API, input batch (b) (4) ), concluded that condensation in the packing material during storage of the input batch caused the failure; however all potential root causes were not investigated and/or discussed.

**OBSERVATION 3**

The responsibilities and procedures applicable to the Quality Unit are not established or fully followed. Specifically, procedures are not established to determine when a reprocessed batch will be put on stability to ensure the batch meets its quality attributes throughout the retest or expiry period, when no changes will be made to the process. For example, (b) (4) API-Reprocessed, including (b) (4) Batch (b) (4) (12/15/17), which was distributed as (b) (4) Batch (b) (4) was not put on stability, and there is no documented rationale for its exclusion.

**OBSERVATION 4**

Batch production and control records do not always include complete information and data relating to the production and control of each batch. For example, electronic batch processing data for equipment such as (b) (4) 002, used in the manufacture of (b) (4) API, including (b) (4) API Batch (b) (4) is not maintained.