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October 18, 2021

CDPH-Laboratory Field Services
320 West 4th Street, Suite 890
Los Angeles, CA 90013
Attention: Catherine Tolentino, Examiner II

Dear Ms. Tolentino:

I am writing in response to your letter dated October 08, 2021 requesting additional information from the CDPH Branch Laboratory operated by PerkinElmer Genetics, Inc. in Valencia, California ("VBL"). Your letter indicated the following condition level deficiencies remain. Please find the credible allegation of compliance and acceptable evidence requested documenting the actions we have taken to correct the specified condition level deficiencies. Finally, as stated in your email, dated October 11, 2021, some of the items provided are statements where you indicated "LFS has not been asking for a response. LFS only restated the previous communication…". As such we did not provide a response and left them as statements.

D5200 – 42 CFR section 493.1230 Condition: General Laboratory Systems

A. In its submission, the laboratory stated in the Provider's Plan of Correction Page 1 of 43, "The roster personnel provided on 2/8/2021 was an official one, an issue being addressed through audit preparation training and exercises." However, the laboratory stated in the Provider's Plan of Correction Page 4 of 43 under findings 4 and 5, "The roster provided on 2/8/2021 was not an official one, therefore, the following numbers (personnel list) as presented in the LFS findings vary slightly."

   To correct this deficiency, the laboratory must address the information specified in the following bullet:
   - Correct the inaccuracy/inconsistency in the statement provided. Clarify whether the laboratory provided an "official" roster or "not an official" roster (personnel list).

RESPONSE TO A:

We apologize for the typographical error. The response should read "The roster provided on 2/8/2021 was not an official one, therefore, the following numbers (personnel list) as presented in the LFS findings vary slightly."

B. In its submission, the laboratory also stated, "A review of our records found that 412/412 (100%) of employees involved in the testing process have documented training;

however, a limited number of delays in capturing training documentation were noted. These delays did not affect the Data Analysts, who are the only staff who report patient results, among whom 21/21 (100%) had no delay in training documentation."
The laboratory failed to provide documentation to support the statement above. Testing involves preanalytical, analytical, and postanalytical processes. Data Analysts are involved in the postanalytical process as they report patient results. Accuracy of patient test results can also be affected by the training and competency of the preanalytical and analytical laboratory personnel.

RESPONSE TO B:

We have reviewed quality exception and found no evidence that individuals with delayed training documentation made errors related to training (see Response S below).

D5209 PERSONNEL COMPETENCY ASSESSMENT POLICIES CFR(s): 493.1235

A. In its submission, the laboratory stated, "An enhanced Training/Orientation (CAPER-SOP-001) and Competency (CA-PER-SOP-002) v.4.0, was recently implemented as of 04/11/2021. The Quality Management Plan (QMP) was revised (v3, 04/11/2021) and in Section 6.2 Assessment of Competency, the statement that a separate competency in addition to the training documentation attesting that the individual is competent to perform the tasks were both removed. Personnel competence is assessed at the following times for existing, new, or changed job processes and procedures: 6 and 12 months from start of training (first year), at least annually throughout the laboratory tenure after the first 12 months on a workstation (ongoing), and when assessment reveals the need for improvement (remedial). To correct this deficiency, the laboratory must address the information specified in the following bullets:

   - Training is separate from competency assessment. A testing person or a consultant may have received training yet may not be competent to conduct any phase (preanalytical, analytical, and postanalytical) of the testing process that they are supposed to perform.

B. CFR 493.1451 (b)(9) states the technical supervisor is responsible for "evaluating and documenting the performance of individuals responsible for high complexity testing at least semiannually during the first year the individual tests patient specimens. Thereafter, evaluations must be performed at least annually unless test methodology or instrumentation changes, in which case, prior to reporting patient test results, the individual's performance must be reevaluated to include the use of new test methodology or instrumentation."

C. To ensure that testing personnel are following the laboratory's policies and procedures and testing accurately and proficiently, the laboratory director and technical supervisors must ensure there is a mechanism in place to ensure personnel were only allowed to handle patient specimens when trained and assessed utilizing the six elements required by CLIA.

D. The laboratory's new enhanced policies and procedures did not include the six elements specified in 493.1451 (b)(8)(i)-(vi), required by CLIA to ensure that testing personnel were following the laboratory's policies and procedures, and testing accurately and proficiently, prior to handling, processing, and testing patient samples

E. The training and competency assessment forms submitted by the laboratory for preanalytical, analytical, and postanalytical personnel did not include the six elements required by CLIA to ensure testing personnel are following the entire laboratory process, and limit errors in all phases of testing, prior to handling, processing, and testing patient samples

COMBINED RESPONSE TO A-E

The laboratory is in agreement that training is separate from competency, hence the change in the QMP and in the separation of the original training/competency form into two separate forms to capture the requirements unique to training assessments and unique to competency assessments.

From our understanding of **CFR 493.1445 (e)(12)**, training includes the assessment and successful ***demonstration of skills necessary*** for employees to perform their job duties ***prior*** to testing patient specimens. From our reading of **CFR 493.1489** Standard; High Complexity Testing Personnel Qualifications, the laboratory is required to have documentation of individual training that ensures the following skills: (1) preanalytical (if applicable) (2) ability to perform standard lab procedures, (3) ability to perform each test and proper instrument use, (4) ability to perform maintenance and troubleshooting on instrumentation (5) knowledge of reagent stability/storage, (6) Implementation of QC practices (and for this lab we include Quality Assurance practices), (7) awareness of factors influencing test results, and (8) ability to assess/verify validity of results through evaluation of QC before reporting patient results.

Due to both the multistep procedure with different instrumentation and workstations for the COVID PCR test method as well as the large-scale operation of testing, one technologist does not complete all preanalytical, analytical, or postanalytical tasks associated with an individual test. The techs are trained to prescribed workstation(s) within the testing pathway. As many of these steps are specimen processing/extraction steps without defined result endpoint, there is no way to evaluate 'test results' on an individual workstation. Evaluation of compliance with prescribed procedural steps as stipulated in the SOP can be demonstrated and evaluated. Per our training plan, the employee is assessed for ability to perform procedure with methods

including direct observation and review of records, and the Supervisor determines and attests that the employee demonstrates the skills necessary to perform their job duties based on observation of performance of required tasks as stipulated on the training checklist.

The laboratory is in agreement that the current CDPH Laboratory Director has recommended and approved the processes in place to ensure appropriate education and experience, (as required per the State of CA Governor's emergency proclamation governing personnel) and training for the type and complexity of services offered; the training documentation on the new training forms covers the 8 skill sets specified in training requirements above (if applicable to the workstation) and includes attestations from both employee ('understand the job duties, procedures, and processes of the specific work area') and the Supervisor ('training to the specific work area is completed and that the employee demonstrates the skills necessary to perform their job duties') that is expected to be signed and dated ***prior to employee conducting patient testing***. Supervisors attach workstation training/competency labels to employee badges ensuring an enforcement mechanism that work performed at a particular station is only permitted for those employees who have demonstrated ability to perform the indicated testing duties and responsibilities.

The laboratory is in agreement that the current CDPH Laboratory Director has put processes in place (CA-PER-SOP-002 Competency) to ***monitor*** trained individuals who conduct preanalytical, analytical, and postanalytical phases of testing, assuring that they are competent. It is the Laboratory Director's interpretation of the regulations that ***monitor*** means to assess ***AFTER*** the training in which the employee ***demonstrated the skills necessary to perform their job duties and the Supervisor conducted observation and review of records, attesting to the employee's readiness and ability to perform testing job duties***. This interpretation of competency and requirements as to when to document the six competency tasks is based on **42CFR 493.1451 (b)(9)** and the CMS/CLIA guidelines https://www.cms.gov/regulations-and-guidance/legislation/clia/downloads/clia_compbrochure_508.pdf which states that evaluating and documenting competency of personnel responsible for testing is required at least semiannually during the first year the individual tests patient specimens. Thereafter, competency assessment must be performed at least annually.

The laboratory includes all 6 elements as part of its competency program. As stated before, the lab deems the training program documentation, specifying the demonstration of skills necessary to perform specified tasks, as sufficient evidence that the employee is able to perform testing with limited supervision. It is not our understanding that these six elements, as stated in the LFS complaint, are required following the training demonstration assessment as stipulated in **CFR 493.1489.** Per our Training Plan (overview located in Appendix as Figure 1 of the Training and Orientation SOP, CA-PER-SOP-001), following orientation, observation of process and hands-on-training, an assessment is conducted that includes direct observation of a complete run and review of batch records. Once the employee demonstration is complete and approved, the employee may begin testing, under limited supervision.

Credible allegation of compliance and Acceptable evidence of correction for the deficiency

a. The laboratory believes that it is in full compliance with the requirements for training as described in **CFR 493.1489 (8 elements), and separately, in**

compliance with 6- and 12-month competency assessments as outlined in 42CFR493.1451 (b)(8)(I-vi) (6 elements) and also (clia_compbrochure_508.pdf (cms.gov) Training occurs prior to testing of patient samples, for all testing personnel, and competency occurs at 6 and 12 months.

b. **The statute stated in the deficiency 42CFR493.1451 applies specifically to the responsibilities of the technical supervisor to be performed semiannually in terms of documenting the performance of individuals responsible for high complexity testing. This role can also be delegated, and we are in compliance.**

We reviewed the attachments your laboratory submitted and noted inconsistencies. To correct this deficiency, the laboratory must also address the inconsistencies specified in the following bullets:

F. Attachment 5209_3r and 3s_Accessioning_Day_Sun-Tue indicated 35 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider's Plan of Correction indicated only 34 out of 34 Accessioning staff during day shift, Sunday to Tuesday

**Please note supporting files for training records are named the same as the ones originally submitted and noted to be "corrected". **

RESPONSE TO F: The original submission was missing both training forms for V M-H. In addition, two other training forms from other shifts were included in error. This has been corrected. We have verified that there are now 34 names on Day Sun – Tues Roster, and 34(x2) corresponding documents.

G. Attachment 5209_3v and 3w_Accessioning_Night_Sun-Tue indicated 40 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider's Plan of Correction indicated 43 out of 43 Accessioning staff during night shift, Sunday to Tuesday

RESPONSE TO G: The original submission had two repeated names (JD and RW).
The Provider's Plan of Correction should state 41 out of 41 not 43 out of 43. In addition, both Accessioning and Heat Inactivation training records for DG were missing. These have been printed and added. We have verified that there are now 41 names on Night Sun – Tues Roster, and 41(x2) corresponding documents.

H. Attachment 5209_3t and 3u_Accessioning_Day_Wed-Fri indicated 44 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider's Plan of Correction indicated 46 out of 46 Accessioning staff during day shift, Wednesday to Friday

RESPONSE TO H: The original submission omitted three records: HB, CB, and SG. These training records have been printed and added. SG resigned prior to being trained to do Heat

Inactivation, therefore a memo was added. A review of records and personnel interview determined that “Paul” is a preferred name for “Jeff” (JM was assessed as PM). This record is present. Therefore, this roster should have reflected 46 individuals. This has been corrected.

I. Attachment 5209_3x and 3y_Accessioning_Night_Wed-Fri indicated 28 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider’s Plan of Correction indicated 37 out of 37 Accessioning staff during night shift, Wednesday to Friday

RESPONSE TO I: We have confirmed that this file has 37 people on roster, all have documentation in the provided file.

J. Attachment 5209_3i and 3j_Extraction_Day_Sun-Tue indicated 35 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider’s Plan of Correction indicated total of 37 Extraction staff during day shift, Sunday to Tuesday

RESPONSE TO J: 37 is the correct number of individuals. 35 records were submitted because:

- One record was omitted in error (initials CH), this record is now added.
- One individual (CB) had not yet been trained on and was not operating the Janus G3 Transfer and Reformatter, therefore, no record was submitted. A memo stating, “CB was not trained on the Janus Reformatter Liquid Handler, therefore no training document on file.” has been added to explain this.
- One individual (LO) had not yet been trained on and was not operating the Chemagic, therefore, no record was submitted. A memo stating, “LO was not trained on Nucleic Acid Extraction using Chemagic 360, therefore no training document on file.” has been added to explain this.

K. Attachment 5209_3k and 3l_Extraction_Night_Sun-Tue indicated 55 initial training records for laboratory staff. [but the table provided on page 4 of 43 in the Provider’s Plan of Correction indicated total of 46 Extraction staff during night shift, Sunday to Tuesday.

RESPONSE TO K: 55 is the correct number. There are 55 people on the roster, and 55 documents total. Pease note that not every person on the roster was operating both the Janus Reformatter and the Chemagic; however, every person is trained on at least one of these functions.

Since the original submission, 3/55 (DM, RR, SS) completed training on the JanusG3 Reformatter and 6 (AA, AA, KC, SF, JH, CO) completed training on the Chemagic.

L. Attachment 5209_3m and 3n_Extraction_Day_Wed-Fri indicated 39 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider’s Plan of Correction indicated total of 40 Extraction staff during day shift, Wednesday to Friday

RESPONSE TO L: 40 is the correct number. One set of training records (JS) were not added to the original submission. This omission has been corrected and the record added.

M. Attachment 5209_3o and 3p_Extraction_Night_Wed-Fri indicated 51 initial training records for laboratory staff. Nucleic Acid Extraction using Chemagic 360- there were only 48 out of 51 with competency assessments.

RESPONSE TO M: 51 is the correct number. Pease note that not every person on the roster was operating both the Janus Reformatter and the Chemagic; however, every person is trained on at least one of these functions.

Since the original submission 1/55 (TH) completed training on the Chemagic. 2/51 (KO and MR) did not train on the Chemagic.

N. Attachment 5209_3e_PCR_Night_Sun-Tue indicated 15 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider's Plan of Correction indicated 14 out of 15 PCR staff during night shift, Sunday to Tuesday

RESPONSE TO N: 14 is the correct number. A review of the files provided found that:

"AS" belongs to Night, Sun-Tues
"ES" belongs to Day, Sun-Tues

The SARS-CoV2 RT PC-AJ (CA-PER-FM-013) form for "ES" was incorrectly submitted in place of the file for "AS" in attachment 3e

In the files provided, the SARS-CoV-2 RT-PCR Janus (CA-PER-FM-014) form for "ES" is present in attachment 3d (Day, Sun-Tues)

The missing training form for "AS" has been added to Attachment D5209_3e_PCR_Night_Sun_Tues_corrected (page 30)

O. Attachment 5209_3b_Data Analysts indicated 13 initial training records for laboratory staff, but the table provided on page 4 of 43 in the Provider's Plan of Correction indicated 21 out of 21 Data Analysts staff. Resubmit new evidence other than the previous information emailed on 02/08/2021.

RESPONSE TO O: New analysts had been hired between the date of the inspection and the date of the response. Those analysts were included in the roster for the response; however, their training records were not provided. Please see Attachment D5209_3b_DataAnalysts_Corrected for a complete set of training records.

P. In its submission, the laboratory stated in the Provider's Plan of Correction Page 4 of 43, "The unofficial roster is used by Managers and Supervisors as reference for staff on

shifts or in areas with which they do not work directly. Inaccuracies in this roster may result in inconvenience for laboratory staff therefore there is no patient impact on patient care."

- Provide evidence to support that the claim mentioned above did not contribute to series of Quality Exception Reports (QER) and CAPA

RESPONSE TO P: The purpose of the unofficial roster was to provide a directory of names, not to direct training or any other laboratory process. Although there was a delay in capturing some training documentation, there is no evidence this delay resulted in quality exceptions (see Response S below).

Q. In its submission, the laboratory stated in the Provider's Plan of Correction Page 4 of 43 under (3) Preventive Measures stated, "Two training sessions and mock inspection drills have been completed."
   - Provide the policy and procedures for mock inspection drills

RESPONSE TO Q: Please see Exhibits D5209_Q for The External Audit Work Instruction (CA-QM-SOP-005) and associated forms and guides. Training sessions and mock drills have been conducted.

R. In its submission, the laboratory stated in the Provider's Plan of Correction Page 6 of 43, under (1) Immediate Corrective Action. "Any task for which a training form was not captured was reassessed for the individual or that individual was removed from the testing process until re-assessment was completed."
   - Provide evidence of individuals that were removed from the testing process until re-assessment was completed

RESPONSE TO R: Two individuals (SK and ND) were identified in December 2020 has having missing training documentation. They did not perform testing again until reassessed in (SK in January 2021 and ND in February 2021). See batch records in Exhibit D5209-R.

S. In its submission, the laboratory stated in the Provider's Plan of Correction Page 7 of 43, "The limited number of instances of missed training documentation identified are unlikely to impact patient care since the assay steps performed in extraction do NOT include data review or analysis."
   - The laboratory failed to provide any documentation to support its claim that "instances of missed training documentation identified are likely to impact patient care."

RESPONSE TO S: QERs were reviewed from the start of testing to dates where training documentation for the Janus Reformatter and the Chemagic were completed to determine if delayed training documentation contributed to quality exceptions. Most individuals were not involved in quality exceptions. For those who were, the root causes included process improvement needs, instrument errors, or communication problems between staff. None were directly related to training. See Exhibit D5209-S.

D5400 - 42 C.F.R section 493.1250 Condition: Analytic systems D5400
(Refer to D5407, D5779, D5787, D5791)

D5407 PROCEDURE MANUAL CFR(s): 493.1251(d)

A. Procedures and changes in procedures must be approved, signed, and dated by the current laboratory director before use. In its submission, the laboratory stated in the Provider's Plan of Correction Page 9 of 43, "It is also important to note that manual pipetting is a standard laboratory practice that all technologist is proficient in." To correct this deficiency, the laboratory must address the information specified in the following bullets:
   - There are several types of pipettes and techniques. Not all technologists are proficient in manual pipetting. It is a skill developed through experience. Manual pipetting requires accuracy to prevent contamination and failed runs.

RESPONSE TO A: Training in the Extraction and PCR areas does include assessment of pipetting to perform the assay. See:
- Extraction Training Checklist (CA-PER-FM-032 v1.0), Section 8: "How to properly use pipettes"
- PCR Training Checklist (CA-PER-FM-033 v1.0), Section 5: "Use Proper Pipetting Mechanics"

We do agree that a more specific pipetting skills assessment could be beneficial for the laboratory. The training checklists for Extraction (CA-PER-FM-032 v3.0) and PCR (CA-PER-FM-033 v3.0) have been updated to specifically assess the volumes that are pipetted (Exhibit D5407-A1).

All procedures have been approved by the Laboratory Director in a timely manner (Exhibit D5407-A2).

B. In its submission, the laboratory stated in the Provider's Plan of Correction Page 9 of 43, "(2) Patient Impact, as this was an acceptable deviation from the SOP tracking of the occurrences was not required; as there was no tracking, a lookback between 01/27/2020 and 01/27/2021 is not possible."
   - Provide a mechanism to ensure that loss of tracking which resulted in lack of look-back can be prevented in the future

RESPONSE TO B: Manual pipetting is part of the established protocol, therefore, additional tracking of when it is performed is not needed. The SOP, which originally neither prohibited nor allowed manual pipetting, was updated 19Feb2021 to explicitly allow manual pipetting (Exhibit D5407-B - CA-PCR-SOP-001, version history).

C. In its submission, the laboratory stated in the Provider's Plan of Correction Page 10 of 43 under preventive measures, "The current Laboratory Director participates in regular meetings with technical, general supervisors and wet laboratory managers to discuss improvement and regulatory initiatives.

- Provide evidence of minutes of the meetings, agenda, and attendees (with signatures)

RESPONSE TO C: Please see meeting agendas and attendance records in Exhibit D5407-C.

D. In its submission, the laboratory stated in the Provider's Plan of Correction Page 10 of 43 under finding 2, "QER-20-031 was further investigated and was not due to low volume STO plate issue, rather a cassette of specimens that was tipped during de-capping, prior to extraction, and a small portion of some of the specimen volumes spilled. This was treated as a minor spill, remaining volumes in the sample tubes were determined to be adequate, and the specimens were submitted to Extraction for processing on the JanusG3."
   - Provide the laboratory's definition of a minor spill.
   - Provide a mechanism to ensure there was no contamination after the "minor spill."
   - How does the laboratory define an adequate volume after a minor spill.

RESPONSE TO D:

The laboratory recognizes that a procedure or policy was not in place by the laboratory directors on 08DEC2020, at the time of the spill defining a minor and major spill. This will now be corrected as a troubleshooting addendum to the existing extraction SOP CA-EXT-SOP-004. A minor spill will be defined as a spill in which all specimens remain within 15% of their starting volume [850uL]. An adequate volume for RNA extraction is 270uL of media (MTM or lysis buffer) from an MTM or dry swab sample according to CA-SOP-EXT-004

A procedure to evaluate contamination and to distinguish between minor (spills not resulting in visible evidence of contamination) and major spills (requiring re-extraction) will be added as a troubleshooting guide to the existing extraction SOP, CA-SOP-EXT-004. Criteria included will be:

1) Supervisor judgement about the extent of the spill and potential for cross contamination
2) Measurement by pipette of volumes in each specimen tube following the spill
3) Passing QC metrics according to the Data Analysis and Reporting SOP (CA-RPT-SOP-002), including analysis of plate positivity and clustering patterns.

Instruction to discard PCR plates if they are dropped, will be added to the PCR SOP.

E. In its submission, the laboratory stated in the Provider's Plan of Correction Page 11 of 43 under (2) Patient Impact, "Only one sample, [redacted] tested positive and review of batch QC for this samples well as the batch heatmap did not indicate sample or batch contamination. Per Laboratory Director, there was no change in diagnosis, treatment, or recommended patient action for the 16 samples references in this citation and there would NOT be patient harm. The results were reported."
   - Only one sample came out "positive." Provide evidence that lack of positive results was not due to "minor spill" which can potentially result in "inadequate" sample.
   - Provide statistics of (+) and (-) results per batch of sample near the date of the incident

RESPONSE TO E:

Samples were reviewed by the Manager and found to have adequate volume for testing. Therefore, no negative were the result of inadequate specimen volume.

We reviewed the batch in question [redacted]) which was the first batch processed in the biosafety hood that day, as well as 7 batches processed by the same operator subsequently. Positivity rate for [redacted] was 18% while positivity for the subsequent batches ranged from 7%-34% (Exhibit D5407-E). Therefore, both the negative and the positive rate for batch B003657 is within the range of the subsequent batches and does not by itself indicate contamination.

F. In its submission, the laboratory stated in the Provider's Plan of Correction Page 12 of 43 under (2) Patient Impact, "With respect to the health of the patient and community, the current Laboratory Director, determined that the lack of an approved procedure did not impact the health of the patient as amended reports were generated and submitted as described in the draft procedure."
   - How did the laboratory conclude that there was no impact to the health of the patient and community?

RESPONSE TO F:

The procedure for issuing amended reports is the same in the draft procedure as it in the approved procedure. Therefore, there would not be an impact on the health of the patient and community as a result of this difference. Amended reports are issued as soon as laboratory errors are discovered. With regards to the patient, a laboratory error that results in a report that cannot be generated for an individual patient may or may not have an impact depending on their actual infection status at the time. A delay in receiving a result due to the requirement for re-test might result in a delay in a patient going into quarantine, in the event that they re-test positive (5% probability based on laboratory statistics during this time), and the possibility, in the interim, of spread to close contacts. The risk of spread to close contacts would depend on many factors including living and social conditions (example, living alone versus in a congregate living facility, schools). The risk to the patient of a delayed diagnosis would depend on age, underlying health conditions (example, diabetes, immunosuppression), and the associated likelihood of severe disease or hospitalization associated in a multifactorial manner with all these factors.

G. In its submission for D5407, the document identified as "Extraction Training Record 3" showed the date of training as "30 May 2021." The date "30 May 2021" was entered twice in the form. • The laboratory's submission was received on May 3, 2021. • The training would not have occurred on May 30, 2021.
   - When did the training occur for the individual identified in the Extraction Record Training 3?

RESPONSE TO G: A review of communications determined that Training 3 occurred on May 3, 2021. An explanation has been added to the file (see Exhibit D5407-G).

D5779 CORRECTIVE ACTIONS CFR(s): 493.1282(a

A. In its submission, the laboratory stated in the Provider's Plan of Correction Page 14 of 43, "The College of American Pathology (CAP) field tested 11 indicators through their Q-TRACKS program and determined a statistical median rate of 2.8 test result corrections per 10,000 billable tests. Among results released in 2020 and in 2021, CDPH Branch Lab had -0.83 and -0.24 per 10,000 test result correction which is lower than the median 2.8 reported by the CAP Q-TRACKS program, therefore, this error rate is determined to not be outside of industry standards."
   - The above response is not relevant to the cited deficiency. The laboratory was cited because it reported incorrect SARS-CoV-2 results, according to CLIA regulations as adopted by California State law, not according to CAP standards pertaining to billable tests.

RESPONSE TO A: The intension of our comparison was to determine if that the laboratory is operating outside of industry averages. The laboratory has quality systems in place to identify and correct errors.

D5787 TEST RECORDS CFR(s): 493.1283(a

A. In its submission, the laboratory stated in the Provider's Plan of Correction Page 17 of 43 under finding 2, "The laboratory acknowledges that a discretionary decision was made in the interest of public health to not give a patient conflicting information, but rather inform the patient an error was made and recommend re-testing. Therefore, the language in the lab record for the repeated test analysis, and the result stated on amended report are different." The laboratory's response further affirms the cited deficiency. It also indicates the laboratory's failure to retain all records of patient testing.

   The laboratory's response also failed to indicate
   - What measure the laboratory has put into place or what systemic changes the laboratory has made to ensure that the deficient practice does not recur.
   - How the laboratory is monitoring corrective action(s) to ensure the deficient practice does not recur.

RESPONSE TO A: Finding 2 in the Provider's Plan of Correction Page 17 of 43 concerns samples for which errors were made. We disagree with the statement that the laboratory failed to retain all records. All laboratory results and patient reports have been retained. The laboratory has made improvements to increase transparency of the records.

UNACCEPTABLE SPECIMENS:

Specimen condition acceptability criteria for testing are created by the laboratory. To record and maintain the condition of samples that are rejected for failure to meet these criteria, several specified unacceptability codes (UNAC) in LIMC are utilized. The UNAC code for capturing

laboratory error resulting in rejected samples (rendering them unacceptable for testing) was included in this category. For these types of rejections, a generic report indicating that specimen could not be tested due to unacceptable specimen condition was generated.

CORRECTIVE ACTION:
In an effort to provide the disposition of acceptable samples that are unreportable due to laboratory error in the preanalytical and analytical phase of testing prior to report generation, a report template specific for samples lost due to laboratory error was created. This template is used when a sample is coded as "UNAC6". A sample report (template) approved for use with Color Genomics, the contracted vendor who generates and distributes patients reports, is provided (see Exhibit D5787-A1). The implementation of this new report was live on 18May2021. Examples of this type of report and their quality exception reports (QERs) are provided (see Exhibit D5787-A2).

- What measure the laboratory has put into place or what systemic changes the laboratory has made to ensure that the deficient practice does not recur.

  The laboratory error template has been coded in the Color Genomics reporting system, therefore, the use of UNAC6 will result in the correct reporting language (see Exhibit D5787-A2). Matching the laboratory result to the final report is done as part of the monthly tracer audit.

AMENDED REPORTS

When any error occurs that casts doubt on the validity of the result, the reporting approach is to issue an amendment that alerts to a process error stating that the lab is 'Unable to Return results for this sample as the previously reported result (XXXX) is not valid due to a process error'. A recommendation for the patient to be retested is included in the report.

In order to meet the CFR 493.1283(a) regulation that the laboratory maintain records of ***each*** individual test result reported, including amended reports, the laboratory information management system (LIMC) records all individual data runs, data analysis interpretations, and when required, incidences of amended report. The AMENDED REPORT function records the date the report was amended and the reason for the amendment (laboratory analytical error or collection site preanalytical error).

CORRECTIVE ACTION:

Recording all amended reports in LIMC as INVALID ensures that the laboratory retains all records of patient testing and provides a record of the correct disposition of corrected results, with incorrect (original) results for the SARS COV2 testing. An example of the Amended Report query available from LIMC is attached (see Exhibit D5787-A3).

To monitor the capture and availability of the original and amended result within LIMC, the documented amended data is compared to a list of amended reports issued by Color Genomics, the vendor who generates and distributes patient test reports, original and amended. Any discrepancies between Color Genomic's documented amendments and data maintained in LIMC are investigated and reconciled. Additionally, the laboratory maintains hard copies of all amended reports with the corresponding original report. The Quality Department maintains the records of these reviews.

D5791 ANALYTIC SYSTEMS QUALITY ASSESSMENT CFR(s): 493.1289(a)(c

A. On page 21 of the May 3, 2021, allegation of compliance, the laboratory stated: “There is no regulatory requirement for a laboratory to assess any particular process with a quality indicator (42 CFR 493.1701); the selection is left to the discretion of the laboratory director.”

- As indicated in the statement of deficiencies, the laboratory was cited under 42 CFR 493.1289. • There is no section in the current CLIA regulation identified as “42 CFR 493.1701.” Please provide the source of this information.
- The laboratory’s response failed to indicate how its quality assessment policies and procedures will address the same or similar problems described in D5407, D5779, and D5787.

RESPONSE TO A:
The CFR citation (CFR 493.1701) was an error. In our initial response to D5791 we focused on the assessment activities and corrective actions associated with the specific observations made by LFS, not the overall assessment plan of HOW same or similar problems are addressed. This statement referencing quality indicators was specific to quality benchmark assessments, not to the applicable analytic systems specified in CFR 493.1251 – 1283.

- Our quality management plan includes assessing quality for the 3 lab processes (preanalytical, analytical and post analytical) the following ways:
  1. Establishment and monitoring of quality indicators with targeted benchmarks (as determined by the Lab Director).
  2. Performance of internal audits and reviews by the Quality Assurance WorkGroup. This assessment mechanism is used to verify that defined processes meet the regulatory requirements and determines how well these processes are functioning.
     a. Scheduled Audits at predetermined intervals for core processes or monitoring long term corrective actions
     b. For Cause, at discretion of the Lab Director/Quality Manager, based on results of benchmarking, recurring QE events, or results of external Audits/Inspections.
  3. Monitoring by Exception through the Quality Event (QE) Reporting Process. The laboratory supports a ‘just culture’ environment, promoting a nonpunitive environment in which personnel at every level are encouraged and supported in reporting QE’s.
  4. Analyzing problems for root cause and creating corrective action plans through the CAPA Process
  5. Conducting periodic Quality Management Reviews enabling the laboratory’s top managers and personnel to achieve the determined quality inputs and outputs (see Exhibit D5791_A1).

CFR 493.1289 (a)(c) specifies the analytical systems (CFR.1241- CFR 493.1283) to be monitored and evaluated for overall quality. The table below provides a list of these analytical systems that apply to this laboratory and the current documentation methods used to monitor and evaluate each.

Analytical System	ASSESSMENT METHOD

	Quality Indicators	QER & CAPA	AUDIT	QMR
Procedure Manuals		X	As needed	
Method Performance Specifications		X		X
Equipment/Reagents/Supplies		X	X	X
Maintenance & Function Checks		X	X	X
Quality Control	X	X		X
Comparison of Results		X	X	X
Corrective Actions	X	X		X
Test Record Documentation	X	X	X	X

To address the same or similar problems described in:

- D5407 (related to Procedure), we currently use QER/CAPA's to document instances when controlled documents failed to be updated and approved by Director before implementation of new or changed procedure. We also pull periodic reports from MediaLab to determine if there are documents held up in the approval process. (Example of this type of report reviewed is located in Exhibit D5407_A2_Document Sign-Off by Lab Director). This is currently not documented nor is this analytical system reviewed during QMR.

  Corrective Action: These reviews will be documented going forward from this date and incorporated into the Quality Management Review at the next scheduled meeting in November.

- D5779 (Corrective Actions) we utilize a benchmark (15 days completion of QER or CAPA approved implementation plan), the QER/CAPA process itself, and QMR monthly review of status and progress to assist in the capture and correction of problems in a structured and timely process. The Quality Assurance group also conducts weekly meetings to review status of open QER/CAPAs but this is currently not documented (typically on Wednesdays). Closure rates are monitored monthly through the Quality Management Review.

  Corrective Action: Formal minutes will be taken for QER / CAPA weekly reviews; however, attendance records from Wednesday QA check-in for September and October are provided (see Exhibit D5791-A2).

- D5787 (Test Record), we utilize ALL assessment methods to monitor specimen identification, date/time of receipt of specimen, condition and disposition of specimen, and all test data and results. The observation made by LFS that the lab corrected lab data in LIMC did not match the actual amended report was corrected as referenced in D5787 Response of this letter.

B. In its submission, the laboratory stated in the Provider's Plan of Correction Page 22 of 43 under finding 1c, "Patients were notified that their original result had been issued incorrectly and were advised to be retested. The result of the test was not changed due

to public health concerns that changing a result could result in confusion on the part of the patient. In addition, since time had passed, it was possible that the patient's infection status had changed and the result from the original specimen may no longer reflect the patient's true status. Therefore, the decision was made that the amended report should only state that the original report was issued in error and recommend that the patient be re-tested."

- The laboratory's response failed to indicate the extent of the error (specifically, clinically significant results were incorrectly reported).

RESPONSE TO B:

- A myriad of variables determines patient impact, therefore impact on an individual level is impossible to predict. A laboratory error that results in issuing an amended report indicating original results are invalid may or may not have an individual impact depending on their actual infection status at the time.
  - False negative or Invalid (no result): A delay in receiving a result due to the requirement for re-test might result in a delay in a patient going into quarantine, in the event that they re-test positive (5% probability based on laboratory statistics during this time), and the possibility, in the interim, of spread to close contacts. The risk of spread to close contacts would depend on many factors including living and social conditions (e.g., living alone versus in a congregate living facility, schools). The risk to the patient of a delayed diagnosis would depend on underlying health conditions (e.g., diabetes, immunosuppression), and the associated likelihood of severe disease or hospitalization. With regards to the community, a medical impact statement is better provided by a CDPH epidemiologist, or local health jurisdiction as they have access to contact tracing, and disease incidence information.
  - False positive or Invalid (no result): A result that is initially reported as positive, and then subsequently reported as invalid (with a recommendation to retest) would result in (i) anxiety to the patient regarding receiving a positive result (ii) unnecessary quarantine and (iii) possible psychological, social and economic losses.

D5800 - 42 C.F.R section 493.1290 Condition: Postanalytical systems
D5800 (Refer to D5805, D5821) POSTANALYTICAL SYSTEMS CFR(s): 493.1290

D5805 TEST REPORT CFR(s): 493.1291(c

A. In its submission, the laboratory stated in the Provider's Plan of Correction Page 24 of 43 under immediate corrective action, "Request was made to Color Genomics by the Laboratory Director on 04/30/2021 to change the language of the report to say, 'test could not be completed due to lab error.' It is expected that the change will be in effect no later than 06/01/2021."

- What is the laboratory's quality assurance mechanism for immediate corrective action? June 01, 2021 is a month-long wait for an immediate correction.
- Was there any patient monitoring or statistics of patients who came back for retesting?
- Correct information about specimen disposition will provide the patient proper guidance and inform the patient that the error was due to laboratory error, and their newly re-collected samples are more likely to give a satisfactory result

RESPONSE TO A:
The referenced report changes went into clinical use on May 18, 2021. Reference page 1 of Exhibit D5787-A1 for email confirmation from Color Genomics.

The laboratory under the direction of the laboratory director, provides test data that is then used by CDPH stakeholders to inform patient care. The laboratory itself does not provide patient care. The laboratory does not maintain a patient medical record where multiple clinical encounters or testing events are recorded, and different barcodes are matched to a medical record number, therefore VBL does not monitor retest rates. Monitoring patient re-testing is outside the scope of the laboratory and is not required by CLIA regulations. Each patient test is treated as a unique event. Since the patient did not receive a result and was advised to be retested it is unlikely retest rates would differ between inconclusive and a laboratory error result, since in both instances, the patient is advised per the laboratory report to be retested.

Where a laboratory error has occurred, that does not allow a test result to be reported, this is clearly stated on the Color reports, and guidance is given to the patient to re-test.

B. In its submission, the laboratory stated in the Provider's Plan of Correction Page 25 of 43 under (3) Preventive Measure, "The Accessioning Supervisor reviews all selected 'UNSAT' codes prior to release to ensure the correct code has been selected."

- Provide evidence of review mentioned in the above statement.

RESPONSE TO B: Please see 11th item from top of the "Supervisor Daily Checklist". Voiding samples refers to marking samples as unsatisfactory. Reference Exhibit D5805-B.

D5821 TEST REPORT CFR(s): 493.1291(k)

A. In its submission, the laboratory stated in the Provider's Plan of Correction Page 31 of 43, "The laboratory must perform the activities promptly but does not specifically define the number of days. Upon review of the QERs, it was determined that the laboratory took action to provide corrected reports within the timeframes below.
a. QER-20-010: 3 days from incident to identification of issue, 4 days to perform the investigation, and verification to Color.
b. QER-20-012: 1 day from incident to identification of the issue, 4 days to perform the investigation, and notification to Color Health which included rerunning the sample in question to confirm the result.
c. QER-20-013: 6 days from incident to identification of the issue, same day to perform the investigation and notification to Color Health."

- Identify potential patient impacts secondary to >2 days delay of issuing amended reports, or without a defined timeframe, in the context of highly communicable disease.
- What measure the laboratory has put into place or what systemic changes the laboratory has made to ensure that the deficient practice does not recur.
- How the laboratory is monitoring corrective action(s) to ensure the deficient practice does not recur.

RESPONSE TO A:
Errors impacting reported test results may be detected in all phases of testing (preanalytical, analytical and postanalytical); either a sample is registered, analyzed, resulted, and reported according to protocol, or a process error has taken place that may render the reported test result unacceptable. Errors will happen and for our lab these have been detected via preanalytical Collection Site misappropriation of sample identity, analytic batching errors and postanalytical data entry errors. Amended reports are issued as soon as laboratory errors impacting reported test results are discovered, investigated, and resolved. Given the scale of the laboratory and the type of error (particularly analytical error), determining the root cause of the potential error and whether the original report result of SARS-CoV-2 requires amending may exceed a 48hr/2-day benchmark.

- A myriad of variables determines patient impact, therefore impact on an individual level is impossible to predict. A laboratory error that results in issuing an amended report indicating original results are invalid may or may not have an individual impact depending on their actual infection status at the time.
    - False negative or Invalid (no result): A delay in receiving a result due to the requirement for re-test might result in a delay in a patient going into quarantine, in the event that they re-test positive (5% probability based on laboratory statistics during this time), and the possibility, in the interim, of spread to close contacts. The risk of spread to close contacts would depend on many factors including living and social conditions (e.g., living alone versus in a congregate living facility, schools). The risk to the patient of a delayed diagnosis would depend on underlying health conditions (e.g., diabetes, immunosuppression), and the associated likelihood of severe disease or hospitalization. With regards to the community, a medical impact statement is better provided by a CDPH epidemiologist, or local health jurisdiction as they have access to contact tracing, and disease incidence information.
    - False positive or Invalid (no result): A result that is initially reported as positive, and then subsequently reported as invalid (with a recommendation to retest) would result in (i) anxiety to the patient regarding receiving a positive result (ii) unnecessary quarantine and (iii) possible psychological, social and economic losses.

- Process improvement to reduce laboratory reporting errors is a continuous process. Through root cause analysis and preventative action planning, engineering controls in place. To date, the processes that have already been put into place include:
    - Post PCR/Data Analysis: Established weekly meetings with the Data Analysts, hosted by the Lab Director, to review previous and current week analysis and reporting issues. Any reported errors and accompanying QERs are studied and analyzed for root cause as well as review of processes and reported analytical issues to detect potential errors. These meetings are recorded and available for review of re-review/training by all data analysts.
    - Analytical/Wet Lab: Software Engineering Controls have been implemented to minimize result reporting errors (25Sep2021 V2.2; see Exhibit D5821-A LIMC v2.2 User Requirement 11 (UR011, page 3 and User Acceptance Testing page 40).

        - Barcodes must match with both extraction and PCR plates (Chemagic files check that elution, lysis and batch numbers all match).
        - PCR files are not able to upload until Chemagic Files are uploaded.
    - Additional Software Engineering Controls expected for the next LIMC release tentatively scheduled for December 2021 include preventing the release of patient results if QC fails.

- Monitoring the corrective actions to help prevent result reporting errors occurs weekly and monthly.
    - Monitor and track the number of QER events and the length of time from detection to amended report generation through QER/CAPA Meetings (weekly) and Quality Management Review (monthly; See D5791-A1 and A2).
    - Reconcile COLOR report listing all amended reports with laboratory documented notification.

D5891 (Refer to D5805 and D5821) POSTANALYTICAL SYSTEMS QUALITY ASSESSMENT

As part of our monitoring and evaluating overall quality of Postanalytical Systems and correction of identified problems related to the Test Report Standard (CFR 493.1291), the lab utilizes multiple processes:

1. Establishment and monitoring of quality indicators with targeted benchmarks (as determined by the Lab Director).
2. Conducting internal audits and reviews by the Quality Assurance WorkGroup.
3. Monitoring by Exception through the Quality Event (QE) Reporting Process.
4. Analyzing problems for root cause and creating corrective action plans through the CAPA Process
5. Conducting periodic Quality Management Reviews enabling the laboratory's top managers and personnel to achieve the determined quality inputs and outputs

Post Analytical Systems | Test Report	ASSESSMENT METHOD			
	Quality Indicators	QER & CAPA	AUDIT	QMR
Accurate data transmission from data entry to final report			X	X
Test Report readily available			X	X
Test Report includes .1291(c)(1-7)			X	X
Availability/Communication of Method performance specifications to Clients				X
Notification of Delayed Testing	X	X		X
Access to Test Reports and Data Records (LIMC/COLOR)		X	X	X
Error Detection and Notification	X	X	X	X
Notification to Client				X
Issue corrected reports promptly			X	
Maintain Duplicates of original and amended			X	
Availability of Reports to Patient/Representative				X

Refer to D5805 and D5821 Responses.

D6076 – 42 CFR 493.1441 Laboratories performing high complexity testing; Laboratory Director (Refer to D6094, D6102)

D6094 LABORATORY DIRECTOR RESPONSIBILITIES CFR(s): 493.1445(e)(5)

A. In its submission, the laboratory stated in the Provider's Plan of Correction Page 37of 43, "There is weekly documented review of all QERs and CAPAs to monitor progress, detect trends and initiate process improvements, as appropriate."

- Provide all the QERs and CAPAs as of 04/23/2021
- Provide evidence that it was completed within 15 days

RESPONSE TO A:
QERs and CAPAs since 23Apr2021 are provided (reference Exhibit D6094-A-CAPA and Exhibit D6094-A-QER).

The laboratory reviews and summarizes status of QERs and CAPAs as part of the monthly quality management review. A review of 2021 QERs shows that although marked improvements in closing QERs within 15 days have been made, the goal of all QERs being closed within 15 days has not yet been met (reference Exhibit D6094-A-15 Day Summary).

D6102 LABORATORY DIRECTOR RESPONSIBILITIESCFR(s): 493.1445(e)(12)

A. The laboratory director must ensure that prior to testing patients' specimens, all personnel have the appropriate education and experience, receive the appropriate

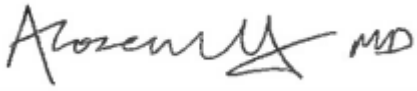
training for the type and complexity of the services offered, and have demonstrated that they can perform all testing operations reliably to provide and report accurate results. To correct this deficiency, the laboratory must address the information specified in the following bullets:

- Provide all the missing competency assessments indicated in the deficient practice

RESPONSE TO A: In addition to the training documents provided in D5209, 6-month competency assessments have been provided (see Exhibit D6102-A01-A12).

Thank you, we look forward to working with LFS to address any additional questions that might arise, and to continuing to offer accurate and timely COVID testing for the citizens of California.

Sincerely,



Adam Rosendorff, MD
Laboratory Director