TABLE OF CONTENTS

SUMMARY

This was a surveillance inspection of an infant formula and medical food manufacturer conducted in accordance with CP 7321.006 – Infant Formula Program and CP 7321.002 – Medical Foods Program; and FY18 Assignment 11776354, DFPG #18-06 and under eNSpect Op ID 100424. Inspection was also conducted in accordance with guidance in infant formula processor inspection assignment DFPG #14-25. This inspection covered manufacturing of powdered infant formula and medical foods, plus ready-to-feed infant and medical foods, and included review of processing records, complaints, and testing records.

The previous inspection conducted in September 2017, found no deficiencies and no FDA 483 was issued to the firm. Two items were discussed: 1) lack of protection from ambient contamination of over/under filled containers in the Line [redacted] filling room; and 2) review of the preventative controls plan and batch records showed that not all the preventative control points were shown as documented in the batch record. The first item was corrected during the inspection. This inspection was classified NAI.

The current inspection found no objectionable conditions and no FDA 483 was issued to the firm.

Infant Formula and Medical Food surveillance samples INV978419, INV978420, INV978421, and INV978422 were collected on 09/11/2018.

(b) (3) (A) . The firm has not experienced any recalls since the previous inspection.

ADMINISTRATIVE DATA

Inspected firm:	Abbott Nutrition
Location:	901 N Centerville Rd Sturgis, MI 49091-9302
Phone:	269-651-0600
FAX:	269-651-0959
Mailing address:	901 N Centerville Rd Sturgis, MI 49091-9302
Email address:	
Dates of inspection:	9/10/2018-9/13/2018, 9/18/2018
Days in the facility:	5
Participants:	**Erin M Miller, Investigator** **Christi L. Bellmore, Investigator**

A FDA 482 - Notice of Inspection was issued to Susan M. Elgan, Director, Site Quality Assurance, on 09/10/2017. Ms. Elgan identified herself as the most responsible onsite, and the Site Director, Patrick A. Cooper was away from the firm. The inspection was primarily conducted with Ms. Susan Elgan, Manager, Director, Site Quality Assurance; Mr. Steven E. Cooper, Compliance Manager; (b) (6) . Quality Engineer; Robert W. Stuart, Operations Manager; and, Megan Fry, Quality Systems Manager. A 482a, Demand for Records form and 482b, Request for Information form was issued to Ms. Susan M. Elgan. Various department managers were present during the tour of the firm's facilities and provided information during the inspection.

On 09/11/2018, Investigator Christi L. Bellmore issued FDA 482, Notice of Inspection to Susan M. Elgan, Director, Site Quality Assurance. Inv. Bellmore collected the finished product samples as part of this inspection on 09/11/2018. At the conclusion of the inspection, the FDA 484, Receipt for Samples, was issued to Susan M. Elgan, Director, Site Quality Assurance.

Future correspondence with the firm should be directed to Mr. Patrick Cooper, Site Director, at the above address.

This report is written by Inv. Miller.

HISTORY

Abbott Nutritionals divisional headquarters is located in Columbus, OH and the corporate headquarters are located in Lake Forest, IL. The firm's CEO is Miles White. The firm employs approximately (b) (4) employees at this facility, (b) (4) Office hours are typically 8:00 am to 5:00 pm. The total value of product produced at the Sturgis facility is (b) (4). The firm has not experienced any recalls of products produced at this location since the previous inspection.

INTERSTATE (I.S.) COMMERCE

Several ingredients received by the firm are received in interstate commerce including raw milk from (b) (4) Finished products are all distribution outside the State of Michigan for distribution nationwide and internationally.

JURISDICTION (PRODUCTS MANUFACTURED AND/OR DISTRIBUTED)

This facility manufactures infant formula, exempt infant formulas, medical foods and nutritional foods. The firm manufactures dried powder and ready-to-feed infant formulas and medical foods. A product list, broken down by infant formulas, exempt formulas, and medical foods was provided (Exhibit 1).

INDIVIDUAL RESPONSIBILITY AND PERSONS INTERVIEWED

Mr. Patrick A. Cooper, Site Director is the most responsible person for this facility with oversight of all the facilities manufacturing operations. Managers of Manufacturing, Quality Assurance, and other areas report to Mr. Cooper. Information during the inspection was primarily provided by Ms. Susan M. Elgan, Plant Quality Systems Manager, Mr. Steven E. Cooper, Compliance Manager; (b) (6). Quality Engineer, Megan Fry, Quality Systems manager; and Mr. Robert Stuart, Operations Manager. Several other persons in various departments provided information and accompaniment during the inspection of their areas.

FIRM'S TRAINING PROGRAM

The firm maintains a training program which includes training for new hires as well as ongoing training for existing employees. Employee training curriculums are specific to each job code. Employees are trained on various topics through live classroom instructor-led training, computer-based training, and on-the-job training. Ongoing training is provided at minimum (b) (4) and covers topics such as GMPs, food safety, HACCP, allergens and preventative controls.

Competency is tested and documented. All training is documented in the firm's (b) (4)

system. Required training is specific to each job code.

MANUFACTURING/DESIGN OPERATIONS

There have been no significant changes to the firm's processing lines since the previous inspection. The firm's retort is still active, and the firm plans to continue production of the ready-to-feed products produced on that line.

The firm had two major and minor reported processing and product changes since the previous inspection. All Attachment A submissions are made by Abbott Division, Columbus OH. All stability testing conducted for new/reformulated products is completed at Division.

Attachment A-Similac Pro-Total Comfort: formulation changed (b) (4) (b) (4).

Attachment A-Elecare: new graphic design on principal display panel (PDP), modified language on PDP, modified langue in mixing guide for preparation and use from mixing instructions and changed the name of ingredients to reflect current regulations.

Information for the Attachment B Infant Formula Nutrient Reporting Form was completed by the firm for Alimentum powder produced on Line (b) (4).

The Inspection Questionnaire for CGMP's from the assignment DFPG #14-25 was used to guide this inspection. No objectionable conditions were noted during review of the firm's systems and records. The firm's quality systems remain relatively unchanged from previous reports, refer to 9/2015 EIR where the full questionnaire was reported. Topics, changes, and updates reviewed during this inspection include:

Environmental Monitoring

The firm performs environmental monitoring for select pathogens per the Division policy, "Environmental Monitoring for Qualified Buildings, Facilities, and Utilities (ANPPR06-001 Version 6 Effective 08/10/2017)" (Exhibit 2), which defines minimum requirements for environmental monitoring of qualified facilities including the typed and number of samples to be collected, specified frequencies, action levels, corrective actions and test methods. The Sturgis standard operation procedure "Environmental Monitoring, ST-1000.10 dated 04/07/2018 (Exhibit 3) establishes the firm's environmental monitoring program (EMP) to regularly monitor the numbers and types of microorganisms found in the plant environment, and it is used as a verification of the firm's cleaning and sanitizing procedures. The procedures and results for the last three months were reviewed during this inspection. Sampling zones, locations and frequencies are defined in the procedure. Zones are defined in the Zone Definitions Policy (ANPPR06-003 Version 2.0 dated 05/08/2016) (Exhibit 4). Zones are delineated between low care, medium care and high care areas. The firm samples dry areas for *Salmonella, Enterobacteriaceae* and SPC. Environmental monitoring samples are collected from (b) (4) manufacturing

environment. (b) (4) areas the firm collects the following:

- a minimum of (b) (4) swabs for EB (b) (4)
- a minimum of (b) (4) swabs for EB and SPC (b) (4)

For *Salmonella* monitoring a minimum of (b) (4) swabs are collected (b) (4) across all zones.

Action levels for each organism are established based (b) (4) the limit are:

- *Enterobacteriaceae:* (b) (4) for (b) (4))
- SPC: (b) (4))
- *Cronobacter* spp: absent
- *Salmonella:* absent (b) (4))

Any EB test that fails the action level is further tested to determine if the sample is *Cronobacter* spp. The firm does not conduct whole genome sequencing (WGS) on EB isolates. EB isolates that are further tested for *Cronobacter* and found to be presumptive positive using (b) (4) sent to (b) (4) and confirmed using the (b) (4) .

Follow-up to above-the-action-level results include cleaning the area and retesting. Further investigation may be trigged a single sampling site has (b) (4) alert levels or unfavorable trends are identified.

During the past year, the firm has received two confirmed *Cronobacter* spp results. The non-conformance reports for both instances were reviewed and found to be the same location with one matching (b) (4) strain, See Exhibits 5 and 6.

Testing methodology used for the EMP program include:

- (b) (4) Micro: Environmental Monitoring Procedure dated (b) (4) (Exhibit 7)
- (b) (4) Micro: Sample Preparation and Pre-enrichment Guide for Pathogen Methods dated (Exhibit 8)
- (b) (4) Micro: Plate Counts dated (b) (4) (Exhibit 9)
- (b) (4) Micro: Detection of *Salmonella* spp, *Staphylococcus aureus* and *Cronobacter* spp. Using the (b) (4) System dated (b) (4) (Exhibit 10)

LACF Operations

The firm manufactures infant formula and medical foods in liquid 8 oz. 'Ready-to-Feed' cans which are sterilized in the firm's (b) (4) . During this inspection, I reviewed operations during production of PediaSure on 09/10/2018. LACF Inspection reports, Form 3511 and (b) (4) were completed during the inspection. The firm monitors temperature and pressure at points where

the control of these parameters is necessary to assure the scheduled processes were met. The firm's (b) (4) electronic monitoring and periodic visual monitoring appeared to comply with the LACF regulations.

As dictated by the SOP ST-1600.18-Validation and Change Control procedure, the sterilizer retort is revalidated on a (b) (4) frequency. This revalidation and temperature distribution study (b) (4) (b) (4) dated 07/16/2018) was reviewed during the inspection, and it was determined that the retort and (b) (4) were operating within specification. All process deviations since the previous inspection were reviewed; all deviations were documented and addressed adequately.

Batch Record Review Retort: 8 oz. PediaSure lots:

(b) (4)

No objectionable conditions were identified in the retort batch record review.

There was one deviation encountered within the last year, affecting batch (b) (4), produced on 01/02/2018. The (b) (4) (b) (4) was out of specification (OOS) at 0 ppm (spec (b) (4) The process authority reviewed the deviation and determined there was no impact to the adequacy of the thermal process as the (b) (4) testing showed the (b) (4) was within the (b) (4) specification. The batch was released. The root cause of the OOS (b) (4) result was attributed to the (b) (4) pump loosing prime, the pump was primed which corrected the failure.

Powder Batch Record Review (Alimentum) Lots:

(b) (4)

Batches (b) (4) and (b) (4) were reviewed as each was involved in cases of *Cronobacter sakazakii* infections (See Complaints section).

No objectionable conditions were identified in the powder infant formula batch record review.

Infant Formula Audits

Audits are conducted (b) (4) by Mr. Steven Cooper, Compliance Manager, as directed by SOP ST-1000.46. Per the procedure, Mr. Cooper creates the audit schedule (b) (4), which is approved by plant quality manager. The (b) (4) infant formula audit requirement is satisfied with the cGMP and quality system audits (b) (4). The most recent audit was conducted 012/19/2017. Mr. Cooper maintains his impartiality over all the areas audited because he does not have a direct interest in any of the quality or production activities audited.

MANUFACTURING CODES

A typical batch code in use by the firm would read (b) (4)
The first (b) (4).
The following (b) (4)
The letters (b) (4):

(b) (4)

The last (b) (4).

COMPLAINTS

The following FDA complaints were followed-up on during the inspection: 153992, 153895, 153073, 151137, 151118, and 150923. The firm's investigations were matched with each FDA complaint; all investigations were reviewed with no deficiencies noted.

There were two complaints involving *Cronobacter sakazakii* infections. The batch records for each were reviewed, no deviations were noted with either and the firm’s internal investigation found no medical concerns with the product.

RECALL PROCEDURES

The firm has a written recall procedure. The written corporate-level procedure defines roles and responsibilities of key personnel during a recall and includes step to monitor the effectiveness of a recall. There have been no recalls or product withdrawals from this facility since the last inspection. The firm conducts trace back-trace forward investigations bi-annually.

REFUSALS

No refusals were encountered.

GENERAL DISCUSSION WITH MANAGEMENT

A close-out meeting was held with firm management on 09/18/2018, the following management team members were in attendance: Susan M. Elgan, Plant Quality Manager; Steven Cooper, Compliance Manager; Patrick A. Cooper, Site Director; Robert Stuart, Operations Manger, Megan Fry, Quality Systems Manager; (b) (6) . Quality Engineer; (b) (6) Specialist; and T.J. Hathaway, Operations Manager.

No objectionable conditions were observed during this inspection and no items were discussed.

ADDITIONAL INFORMATION

The firm contracts with (b) (4) as their pest management service. Mr. Robert Stauffer, Plant Sanitation Manager, oversees the firm's relationship with their pest management service. (b) (4) makes (b) (4) pest service visits to all of the firm's facilities (main facility, off-site warehouse, and off-site recycling facility). Per Mr. Stauffer, the firm (b) (4) and have (b) (4) during their (b) (4)). Mr. Stauffer stated that any issues noted during the pest management service's visit are immediately discussed during the firm's quality management meetings held (b) (4) (b) (4) Any major issues noted typically require a work order and are corrected as soon as possible. The firm tracks and trends pest data and had defined action levels to assist in decision-making and corrective actions. (b) (4) reports for the period of 08/01/2018 to present were reviewed with no objectionable conditions noted.

SAMPLES COLLECTED

Samples Collected as part of the Infant Formula and Medical foods assignment include:

- INV978419: 36, 198g cans of Similac Alimentum powdered infant formula for nutrient analysis, lot 91662Z260.

- INV978420: 60, 198g cans of Similac Alimentum powdered infant formula for micro analysis, lot 91662Z260.
- INV978421: 24, 400g containers of Phenex-2 powdered medical food for nutrient analysis, lot 90395Z200.
- INV978422: 60, 400g containers of Phenex-2 powdered medical food for micro analysis, lot 90395Z200.

EXHIBITS COLLECTED

1. Sturgis Product list, 6 pgs.
2. Environmental Monitoring Policy, 34 pgs.
3. Sturgis EMP SOP, 4 pgs.
4. Zone Definitions, 2 pgs.
5. NC (b) (4), 10 pgs.
6. NCR (b) (4), 9 pgs.
7. (b) (4) Micro Method, 8 pgs.
8. (b) (4) Micro Method, 17 pgs.
9. (b) (4) Micro Method, 6 pgs.
10. (b) (4) Micro Method, 20 pgs.

ATTACHMENTS

FDA 482, Notice of Inspection dated 9/10/2018, 3 pgs.
FDA 482, Notice of Inspection dated 9/11/2018, 3 pgs.
FDA 482a, Demand for Records, 1 pg.
FDA 482b, Request for Information, 1 pg.
Attachment A-Similac Pro-Total Comfort, 3 pgs.
Attachment A-Elecare, 2 pgs.
Attachment B-Alimentum, 1 pg.
FDA 3511, LACF Inspection Report, 18 pgs.
(b) (4), 14 pgs.

Erin M. Miller -S

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Christi Bellmore -S

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