DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE FOOD AND DRUG ADMINISTRATION	DISTRICT ADDRESS AND PHONE NUMBER U.S. Food + Drug Admin 1401 Rockville Pike Rockville, MD 20852 (301) 827-6191	
NAME OF INDIVIDUAL TO WHOM REPORT ISSUED TO: Robert C. Myers, DVM	PERIOD OF INSPECTION 2/4-20/98	C. F. NUMBER 1873886
TITLE OF INDIVIDUAL Director	TYPE ESTABLISHMENT INSPECTED [illegible]	
FIRM NAME Michigan Biologic Products Instit	NAME OF FIRM, BRANCH OR UNIT INSPECTED Same	
STREET ADDRESS 3500 N. Martin Luther King Jr. Blvd.	STREET ADDRESS OF PREMISES INSPECTED Same	
CITY AND STATE (Zip Code) Lansing, MI 48909	CITY AND STATE (Zip Code) Same	

DURING AN INSPECTION OF YOUR FIRM (I) (WE) OBSERVED:

ANTHRAX, Vaccines

1. The manufacturing process for Anthrax Vaccine is not validated. For example,

a. The formulation tank has not been qualified for long term storage of formulated bulk Anthrax. Storage times have varied from one week to four months between formulation and filling. Lot FAV033 was formulated on 8/27/96, however it was not filled until 12/23/96.

b. The formulation tank has not been qualified for mixing time, demonstrating homogeneity of the suspension. Mixing time is not specified in the batch record prior to filling and during the filling operations. The product is [illegible] and settles quickly in the tank.

c. The firm did not perform media fill challenges to validate aseptic manufacturing after harvest from the holding tank. These operations include the transfer of the sublots from building [illegible] to building [illegible] for formulation.

Media fills are performed on fermentation and harvest trains, however not on a scheduled basis.

d. There is no validation of [illegible] as a sporicide in anthrax production and potency testing facilities.

e. The analytical methods for determination of [illegible] and [illegible] in Anthrax Vaccine are not validated with respect to accuracy, precision, linearity, specificity and limit of detection.

f. There is no validation of the length of time sublots are held until they are used in a lot. Sublots have been held longer than 3 years prior to use. There is no stability data to support this hold time.

SEE REVERSE OF THIS PAGE	EMPLOYEE(S) SIGNATURE [illegible]	EMPLOYEE(S) NAME AND TITLE (Print or Type) [illegible]	DATE ISSUED 2/20/98

FORM FDA 483 (5/85) PREVIOUS EDITION MAY BE USED INSPECTIONAL OBSERVATIONS

DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE FOOD AND DRUG ADMINISTRATION	DISTRICT ADDRESS AND PHONE NUMBER CBER, Office of Compliance and Biologics Quality, HFM-605 1401 Rockville Pike Rockville, MD 20852 (301) 827-6191	
NAME OF INDIVIDUAL TO WHOM REPORT ISSUED TO: ^Fgad EL-Hibri	PERIOD OF INSPECTION ^11/15-23/99	C. F. NUMBER ^
TITLE OF INDIVIDUAL CEO	TYPE ESTABLISHMENT INSPECTED Biologics Manufacturer	
FIRM NAME BioPort Corporation	NAME OF FIRM, BRANCH OR UNIT INSPECTED Same	
STREET ADDRESS ^3500 N. Martin Luther King, Jr. Blvd.	STREET ADDRESS OF PREMISES INSPECTED Same	
CITY AND STATE (Zip Code) ^Lansing, MI 48906	CITY AND STATE (Zip Code) Same	

DURING AN INSPECTION OF YOUR FIRM (I) (WE) OBSERVED:

1. The manufacturing process for the production of Anthrax Vaccine Adsorbed is not validated. These process steps include :

a) the fermentation parameters/process;

b) the addition of and adsorption to ——— and the settling time in holding tanks;

c) the formulation operations (downstream processing) of sublots;

d) the pooling process, including mixing to formulate the final bulk drug product (repeat observation from 2/98). There is no validation of the actual mixing process. In addition, on Oct. 28, 1999 FAV053 was formulated with only – sublots, whereby – sublots are normally used.

e) the holding time for sublots prior to their use in final product bulk (repeat observation from 2/98). In addition, the stoppers used to seal the —— sublot bottles may be reused indefinitely based on visual examination. The integrity of the container/closure system has not been evaluated.

f) the hold time for the sterile formulated bulk drug product (repeat observation from 2/98).

g) the holding times for sterilized Alhydrogel.

1a-f. No comment at this time.

2) Regarding assays used for in-process control and further processing decisions of sublots :

a) ——— Sublots AV721 and AV744 have been deferred from further use due to "unusual" ——— results. This assay has not been validated nor does it have established specifications.

SEE REVERSE OF THIS PAGE	EMPLOYEE(S) SIGNATURE Julia Lukas Gorman Cynthia L Kelley	EMPLOYEE(S) NAME AND TITLE (Print or Type) ^Julia Lukas Gorman, Supv. Biologist ^Cynthia L. Kelley, Microbiologist	DATE ISSUED ^ 11/23/99