

## CITY OF BATTLE CREEK

**ADDENDUM # 1**  
**IFB# 2018-015B**

**TITLE: Centrifuge Control Modification**

**ADDENDUM ISSUED: August 8, 2017**

**The following changes, additions and deletions have been provided:**

**CHANGE:** Due date from August 10, 2017 to August 24, 2017 at 2:00pm

**REPLACE:** Existing price sheet with attached revised price sheet Addendum 1. Changes made:  
 DELETE Option A, B, D and E

**ADD trade-in credit for existing hydraulics and gear boxes**

**ADD new and refurbish gear box options**

**REPLACE:** Existing specifications background (IFB page # 6) with:

**BACKGROUND:** The City's Waste Water Treatment Plant has four (4) centrifuge machines that require an updated control system and optional motor upgrades. The Centrifuge process consists of de-watering and stabilization of sludge. Dewatering sludge to achieve 23% and up solids and stabilizing to achieve 12% solids.

**REPLACE:** Existing specifications scope of work (IFB page # 6) with:

**SCOPE OF WORK:** Updating the existing controls for (4) Sharples DS-706 Centrifuges.

PLC and Peripheral Equipment Per Centrifuge:

- Allen Bradley Compact Logix PLC (must have a min. of 25% expansion for future needs)
- HMI (Human Machine Interface) with color and touch screen. Manufacturer must be Allen Bradley panel viewer with 15 inch display
- Gaskets and mounting stubs for cut out for the HMI
- Hydraulic controller to replace the Viscotherm CVC600\*
- Shark200-60-10-V3-D2-INP100S-2 (Power Meter)
- 3 - EI-WCS4-300-RAO5 (300/5 Split Core CT)
- Sensors to be added per machine
- 2 - Vibration Sensor for monitoring the Centrifuge bearing housing
- 2 - Vibration Sensor Cable
- 2 - Bearing Temperature Sensor mounted in bearing housing
- 2 - Bearing Temperature Cables
- Provide new backplane which includes new controls
- Replace two (2) existing cabinet doors with two (2) new cabinet doors

**REPLACE: Existing specifications motor upgrades (IFB page # 6) with:**

Motor Upgrades:

- 300 HP VFD using existing 300 HP Motor or replacement of three size 5 contactors.
- Converting the back drive to an AC motor and VFD. Contractor shall perform the installation of mechanical motor gear box and adapter. (For this option, the hydraulic controller to replace the Viscotherm CVC600 is not needed above)\*

**Following are the questions were asked and answered at the pre-bid meeting:**

**Question: Provide the serial numbers of the centrifuge machines**

**Answer:**

Centrifuge Number One  
Serial Number: 94 - DS706 - 065  
Order Number: 486870

Centrifuge Number Two  
Serial Number: 94 - DS706 - 064  
Order Number : 486869

Centrifuge Number Three  
Serial Number: 94 - DS706 - 069  
Order Number: 486872

Centrifuge Number Four  
Serial Number: 94 - DS706 - 068  
Order Number: 486871

**Question: Provide the electrical schematics, centrifuge drawings, and gear box specifications**

**Answer: Included with Addendum 1 (addendum #1 pages 5-11) and electronic downloadable files**

File Names: Centrifuge Drawings.PDF

Electronic files available to download at: <http://www.battlecreekmi.gov/230/Bid-Proposal-Solicitations>

Click on link "Bid & Proposal Solicitations" and you will be routed to different website that contains all the City's current bids and proposal solicitations, files and documents.

**Question: Provide current plan holders list**

**Answer: Included with Addendum 1 (page 12-13)**

**Question: Provide the PLC program**

**Answer: Electronic downloadable file**

File Names: Centrifuge PLC Program.RSS

Only electronic file is available to download at: <http://www.battlecreekmi.gov/230/Bid-Proposal-Solicitations>

Click on link "Bid & Proposal Solicitations" and you will be routed to different website that contains all the City's current bids and proposal solicitations, files and documents.

**This addendum must be acknowledged or your bid may be deemed non-responsive.**

REVISED PRICE SHEET  
IFB#2018-015B ADDENDUM #1

**Option A:** PLC and peripheral equipment and motor upgrade 300 HP VFD using existing 300HP motor. (4 centrifuges) \$ \_\_\_\_\_

**Option B:** PLC and peripheral equipment with 300 HP VFD using existing 300HP motor and converting the back drive to an AC Motor with new gear box and VFD. (4 centrifuges) \$ \_\_\_\_\_

Less trade-in credit for existing hydraulics and gear boxes (\$ \_\_\_\_\_)

**Total Option B less trade-in \$ \_\_\_\_\_**

**Option C:** PLC and peripheral equipment with 300 HP VFD using existing 300HP motor and converting the back drive to an AC Motor with refurbished gear box and VFD. (4 centrifuges) \$ \_\_\_\_\_

Less trade-in credit for existing hydraulics and gear boxes (\$ \_\_\_\_\_)

**Total Option C less trade-in \$ \_\_\_\_\_**

Lead time to complete work after receipt of contract **Days** \_\_\_\_\_

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Labor rate for work that falls outside of the contract (not used to determine low bid) \$ \_\_\_\_\_

Bids must include the new backplane layout.

Non-attendance at the pre-bid and walk thru maybe cause for disqualification of your bid.

Prices shall be all-inclusive to include, but not limited to, the following: shipping, travel, time, materials, overhead, etc. Bidders must submit bids with no conflicting terms and conditions and no modifications to the price page.

If bidders believe the price page needs modification (such as the unit of measure, for example), immediately call the buyer listed on the front page of this IFB. Changes may only be made before bidding and via authorized addendum issued by the City.

The City may choose other than low bid with consideration to warranty or completion time. State warranty, if applicable.

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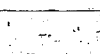
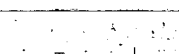
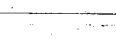
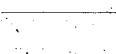
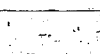
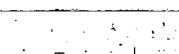
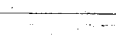
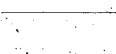
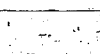
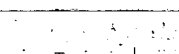
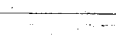
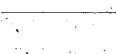
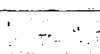
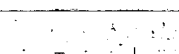
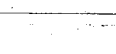
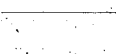
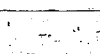
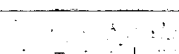
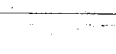
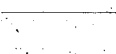
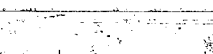
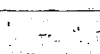
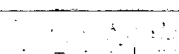
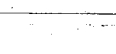
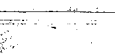
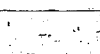
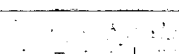
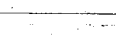
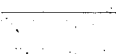
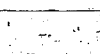
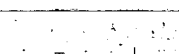
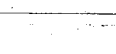
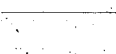
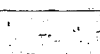
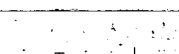
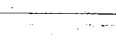
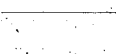
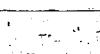
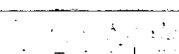
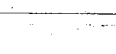
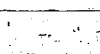
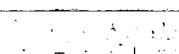
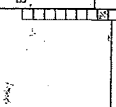
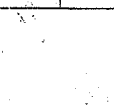
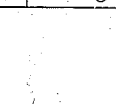
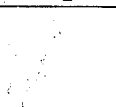
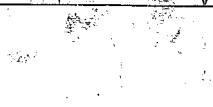
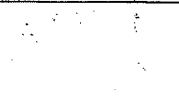
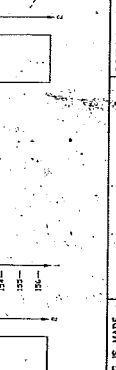
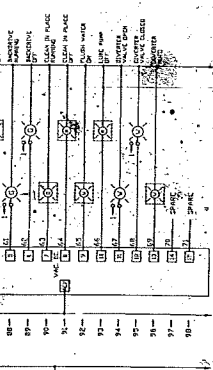
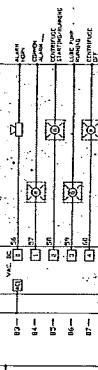
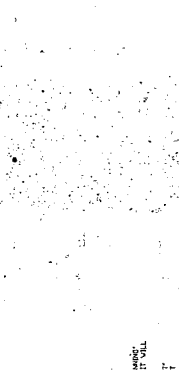
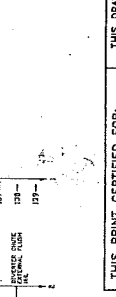
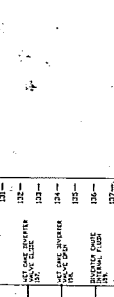
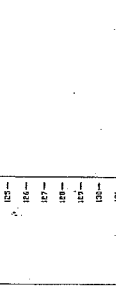
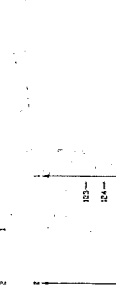
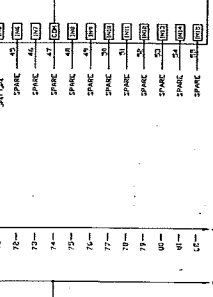
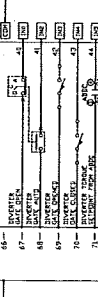
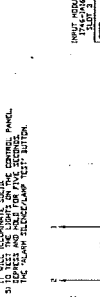
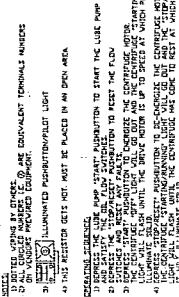
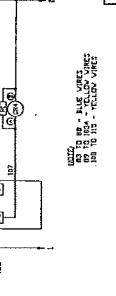
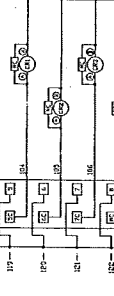
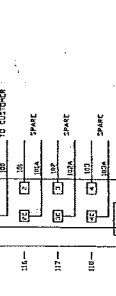
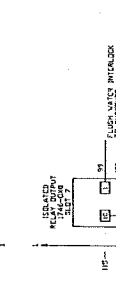
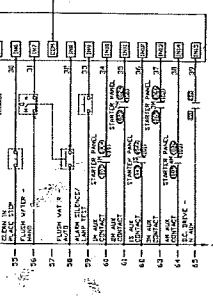
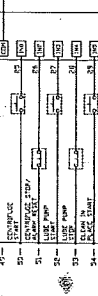
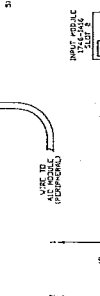
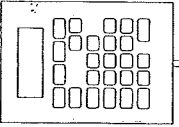
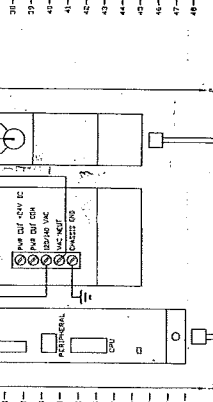
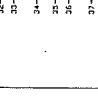
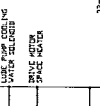
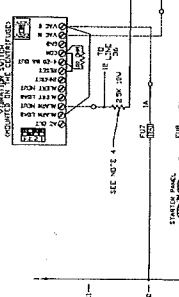
**Drawings and Specifications (pages 5-11)**

**Plan Holders List (pages 12-13)**





FILE 2200044  
 ISIC 48587  
 P-ES0005.44 S



THIS PRINT CERTIFIED FOR CUSTOMER ADDRESS: \_\_\_\_\_

THIS DRAWING IS MADE ON A CAD SYSTEM. DO NOT REVERSE IT MANUALLY.

LEGEND:  
 ○ - TERMINAL BLOCK COMPONENT  
 ⊗ - TERMINAL BLOCK OF PRE-WID  
 ⊕ - TERMINAL BLOCK OF PRE-WID  
 ⊖ - TERMINAL BLOCK OF PRE-WID  
 ⊗ - TERMINAL BLOCK OF PRE-WID

SHARPLES  
 1000 W. 10TH ST. SUITE 100  
 TAMPA, FL 33604

DATE: \_\_\_\_\_

THIS COPY IS PART OF SUBMITAL NO. \_\_\_\_\_

WIRING DIAGRAM

DATE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

SCALE: \_\_\_\_\_

REVISIONS BY: \_\_\_\_\_

DATE: \_\_\_\_\_

NO. OF SHEETS: \_\_\_\_\_

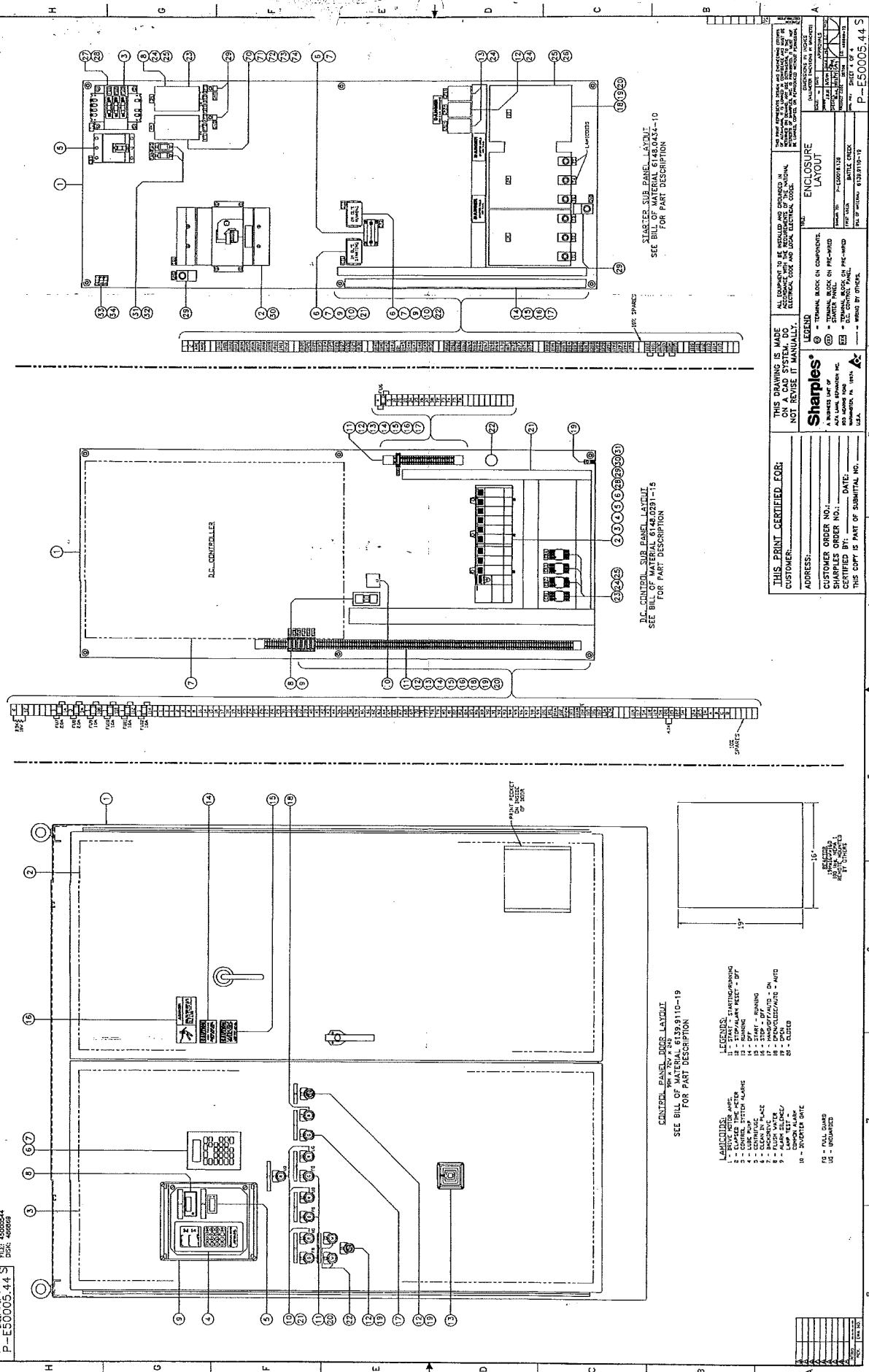
SHEET 2 OF 4

P-ES0005.44 S





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 DES. 400024  
 DSR. 400008



STARTER SUB PANEL LAYOUT  
 SEE BILL OF MATERIAL 6148.0434-10  
 FOR PART DESCRIPTION

D.C. CONTROLLER SUB PANEL LAYOUT  
 SEE BILL OF MATERIAL 6148.0281-15  
 FOR PART DESCRIPTION

CONTROL PANEL DOOR LAYOUT  
 SEE BILL OF MATERIAL 6139.9110-19  
 FOR PART DESCRIPTION

- LEGENDS:**
- LAMICODS:**
- 1 - BLANK TIME METER
  - 2 - CONTROL SYSTEM ALARMS
  - 3 - CONTROLLER
  - 4 - CONTROLLER LAMP
  - 5 - BACKSTOP
  - 6 - ALARM SILENCE
  - 7 - COMMON ALARM
  - 8 - INVERTER BITE
- FIG = FULL BOARD**  
**CG = CIRCUITRY**
- LEGENDS:**
- 12 - STOP AND RESET - STOP
  - 13 - BATTERY
  - 14 - START - BATTERY
  - 15 - START - BATTERY
  - 16 - INVERTER/FAULTS - ON
  - 17 - INVERTER/FAULTS - OFF
  - 18 - STOP
  - 19 - STOP
  - 20 - STOP

**THIS PRINT CERTIFIED FOR:**

CUSTOMER: \_\_\_\_\_ DATE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

**THIS DRAWING IS MADE TO ORDER AND SHOULD BE REPRODUCED IN FULL. ANY REVISIONS TO THIS DRAWING MUST BE APPROVED BY THE ORIGINAL DRAWING ENGINEER AND LOCAL ELECTRICAL CODES. NOT REUSE IT MANUALLY.**

**Sharples®**  
 A DIVISION OF  
 APL LABORATORIES INC.  
 401 LAKE WASHINGTON BLVD.  
 SEASIDE, WASHINGTON, WA 98148, U.S.A.

**ENCLOSURE LAYOUT**

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DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 TITLE: \_\_\_\_\_  
 PROJECT NO.: \_\_\_\_\_  
 SHEET NO. OF 4  
 P-E50005.44 S



DESCRIPTION OF CENTRIFUGE GEARBOX

MANUFACTURER: Sharples  
TYPE: M220/95  
DESIGN: Heavy Duty Two (2) Stage Planetary  
RATIO: 95:1  
WEIGHT (APPROX.): 1,000 lbs.  
SIZE (APPROX.): 19 Inch Diameter x 18 Inches Long  
LUBRICATION: Oil Bath (Self Contained)  
TORQUE RATING: 220,000 Inch Pounds  
AGMA SERVICE FACTOR: 1.00 at Full Rated Torque Load  
AGMA CLASS: 11 & 12  
GEAR MATERIAL: Steel AISI Type 9310

SUN & PLANETARY GEARS ARE CASE HARDENED AND GROUND  
GEARBOX IS DESIGNED TO APPLICABLE AGMA STANDARDS

GEAR BOX NOISE SOUND PRESSURE READINGS WILL NOT EXCEED 85 DBA WHEN  
MEASURED AT 10 FT. FROM GEAR BOX WHEN MACHINE IS RUNNING DRY AT  
FULL BOWL SPEED IN MANUFACTURER'S SHOP FLOOR, WITH DISCHARGES  
CLOSED.

Separators, Inc.  
5707 W Minnesota St  
Indianapolis, IN 46241-3825

ACM, LLC  
400 Centrifuge Way  
Oak Ridge, TN 37830-8069

Heinkel Filtering Systems, Inc.  
520 Sharptown Rd  
Swedesboro, NJ 08085-3161

Alpha & Omega Service, Inc.  
PO Box 83937  
Gaithersburg, MD 20883-3937

Bazell Technologies Corp.  
5066 Commercial Cir Unit C-E  
Concord, CA 94520-1284

Hettich Instruments L. P.  
100 Cummings Ctr Ste 136L  
Beverly, MA 01915-6127

Centrifuge Chicago Corp.  
1721 Summer St  
Hammond, IN 46320-2235

Broadbent, Inc.  
PO Box 185249  
Fort Worth, TX 76181-0249

Hiller Separation & Process, LLC  
1010 McLean St  
Lampasas, TX 76650-2036

Flottweg Separation Technology  
10700 Toebben Dr  
Independence, KY 41051-9418

Cen-Tex Centrifuge, LLC  
16505 Interstate 45 N  
Willis, TX 77318-6998

Jenkins Centrifuge Co.  
1123 Swift Ave  
North Kansas City, MO 64116-4129

GTech USA  
PO Box 2787  
Conroe, TX 77305-2787

Centrifuge Repair & Engineering  
PO Box 868  
La Porte, TX 77572-0868

KINESPIN  
156 Goddard Memorial Dr  
Worcester, MA 01603-1260

Hutchison Hayes Separation, Inc.  
3520 E Sam Houston Pkwy N  
Houston, TX 77015-3247

Drucker Diagnostics  
168 Bradford Dr  
Port Matilda, PA 16870-1024

Kubco Services, LLC  
8031 Breen Dr  
Houston, TX 77064-8417

Kayden Industries USA, Inc.  
9400 Grogans Mill Rd Ste 305  
The Woodlands, TX 77380-3636

Garver Mfg., Inc.  
PO Box 306  
Union City, IN 47390-0306

Numeric Control, LLC  
PO Box 916  
Morton, WA 98356-0916

Warwick Mfg. & Equipment Co., LLC  
1112 12th St  
North Brunswick, NJ 08902-1869

GEA Mechanical Equipment US, Inc.  
100 Fairway Ct  
Northvale, NJ 07647-2401

Separator Spares & Equipment, LLC  
144 Intracoastal Dr  
Houma, LA 70363-6776

CentraSep Centrifuges  
14425 Bergen Blvd Ste A1  
Noblesville, IN 46060-3422

GFMD Ltd.  
2280 Springlake Rd Ste 106  
Dallas, TX 75234-5830

U. S. Centrifuge System  
113 Fairgrounds Dr  
Manlius, NY 13104-2416

Western States Machine Co  
625 Commerce Center Dr  
Fairfield, OH 45011-1172

Hamilton Bell Co., Inc.  
30 Craig Rd  
Montvale, NJ 07645-1709

Glenn Hummel  
Centrisys Centrifuge  
9586 58th Place  
Kenosha, WI 53144

**Mark Bourgeois  
Andritz Separation Inc.  
1050 Commercial Blvd South  
Arlington, TX 76001**