

DOCKET SECTION

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

RECEIVED
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Postal Rate and Fee Changes, 1997)

Docket No. R97-1

OFFICE OF THE CONSUMER ADVOCATE NOTICE OF THE
FILING OF ERRATA TO OCA-T-600, OCA 602, and OCA 603
TESTIMONY OF J. EDWARD SMITH, JR.
(February 13, 1998)

The Office of the Consumer Advocate hereby gives notice of the filing of Errata to OCA-T-600, Testimony of J. Edward Smith, Jr. (revised pages attached), and Exhibits OCA 602 (revised pages attached) and OCA 603 (revised pages attached).

The specific changes are as follows.

OCA-T-600.

Page 16, line 8 Delete "capital and"

Page 27, line 13 Delete "I have previously pointed out that"

Page 27, line 14 Delete "proportionality" and insert "variability approaching 100 percent"

Page 28, Delete footnote 38 and substitute "Such plots substantiate a variability approaching 100 percent between hours and TPH. "

Page 29, line 1 Delete "of a pooled nature." Insert "approaching 100 percent variability, as could be obtained in a pooled model."

The electronic files are "Page16" and "PG27-29".

EXHIBIT 602

Page 4. A new graph is substituted; the previous one was inadvertently not in logs, and a new one in logs has been substituted to be consistent with the rest of the exhibit. The electronic file is roca-t602exh.

EXHIBIT 603

Page 2. Delete "Graphs were chosen based on their appearances for illustrative purposes; accordingly, different mail handling locations were chosen across activities.";

Page 2. Add the highlighted words in "a plot that is in good agreement with a pooled effects **regression such as presented by but not endorsed by witness Bradley in response to the Presiding Officer's Information Request #4.**";

Page 2. Add "as found in POIR #4" in "Plot for IDNUM=242: Consistent with Pooled Effects **as found in POIR #4.**";

Page 2. Add "as found in POIR #4" in "Plot for IDNUM=5255: Consistent with Pooled Effects **as found in POIR #4.**";

Page 3. Add "as found in POIR #4" in "Plot for IDNUM=621: Consistent with Pooled Effects **as found in POIR #4**";

Page 3. Add "as found in POIR#4" in "Plot for IDNUM=2375: Consistent with Pooled Effects **as found in POIR #4**";

Page 3 Delete "the logs of" in the last line;

Page 4. Delete "DATA ARE IN LOGS," as found in the heading;

Page 5. Delete "DATA ARE IN LOGS," as found in the heading;

Page 6 Delete "DATA ARE IN LOGS," as found in the heading;

Page 7. Delete "DATA ARE IN LOGS," as found in the heading;

Page 8. Delete "DATA AREIN LOGS," as found in the heading;

Page 9. Delete "DATA ARE IN LOGS," as found in the heading;

Page 10. Delete "DATA ARE IN LOGS," as found in the heading;

Page 11. Delete "DATA ARE IN LOGS," as found in the heading;

Page 12. Delete "DATA ARE IN LOGS," as found in the heading;

Page 13. Delete "DATA ARE IN LOG FORM," as found in the heading;

Page 14. Delete "DATA ARE IN LOG FORM," as found in the heading;

Page 15. Delete "DATA ARE IN LOG FORM," as found in the heading;

Page 16. Delete "DATA ARE IN LOG FORM," as found in the heading;

Page 17. Delete "DATA ARE IN LOG FORM," as found in the heading;

Page 18. Delete "DATA ARE IN LOG FORM," as found in the heading;

Page 19. Delete "DATA ARE IN LOG FORM," as found in the heading.

The electronic file is roca-t603exhs.

Respectfully submitted,



Kenneth E. Richardson
Attorney

1 looking at essentially “monthly” or, more precisely, four-week periods.²³ Given the
2 short-run four week time frames he nevertheless intermingles short-run and longer-
3 run considerations.
4 The reason that short-run/longer-run issues are so important is that estimates of
5 cost incidence will be different, depending on which type of cost (short-run or longer-
6 run) one is attempting to measure. It is generally recognized that most production
7 processes will permit a slight increase or decrease with proportionately lower
8 amounts of labor. However, the appropriate mail processing cost to measure as
9 volumes increase or decrease is the longer-run cost—which witness Bradley has not
10 measured. Witness Bradley states that:

11 ...economists define the long-run as a situation in which all inputs are
12 flexible and can be adjusted. The short-run would exist when any of
13 those inputs would not be perfectly adjusted.²⁴
14

15 In commenting on the longer-run/short-run issue, witness Bradley indicated:

16 I am informed that once an automated machine has been accepted
17 from the manufacturer, it will typically only take one or two accounting
18 periods to reach the minimum threshold for normal operations.²⁵
19

20 Based on witness Bradley’s comments, it appears that the longer-run for the
21 mail processing activities under consideration is approximately a year, given the

²³ There are thirteen time periods in a year, so data are close to, but not exactly, monthly.

²⁴ Tr. 11/5547.

²⁵ Tr. 11/5356.

1 Question 3 or 4, where I produced econometric results for what is
2 known as a pooled model.

3
4 Econometric results for the pooled model give you a variability
5 of one, or in most cases a little bit greater than one, which could be
6 consistent with this plot.³⁷

7
8 The plots of the underlying data tend to substantiate the conclusion that the
9 pooled approach is correct.

10 **B. The Actual Data Plots By Facility Also Are Visually Compelling, Leading**
11 **To A Pooled Regression Model Conclusion**

12
13 The data presented in exhibit OCA 602 are visually compelling in demonstrating a
14 variability approaching 100 percent between labor hours and mail volume. In order
15 to assess empirically witness Bradley's selection of a regression line, I performed
16 additional data analyses on the activities and facilities. I chose the activities Manual
17 Flats, Manual Letters, OCR, and LSM. I first plotted the data on a site specific
18 basis. This resulted in hundreds of plots, *i.e.*, one for each location denoted by an
19 IDNUM (site location) for each type of activity. A selection of the plots is presented
20 in exhibit OCA 603. All plots are presented in library reference OCA-LR-9. There
21 are three types of plots. The first type of plot substantiates the A/B/C/D equation
22 form in Diagram 1. This array of plots would be expected in the short term for
23 specific facilities. The second type of plot corresponds to the line E in

³⁷ Tr. 11/5581-82.

1 Diagram 1. If witness Bradley's theory were correct, this array of plots would not be
2 expected.³⁸ Finally, some plots resemble a random "blob" of data. These "blob"
3 plots do not substantiate either a fixed effects model or a pooled model.³⁹

4 Since I have plotted actual data rather than having computed regressions,
5 the conclusions are visually compelling but not precise. It is clear, however, that the
6 underlying data plotted on a site by site basis substantiate both fixed effects
7 regressions and pooled regressions.⁴⁰

8 Exhibit OCA 603 also includes plots denoted as IDNUM 9999 for each
9 activity. IDNUM 9999 is not a specific location. Rather, each point in IDNUM 9999
10 for a specific activity represents a summation of all of the logs of the hours and TPH
11 data for a given location. Accordingly, a point on the IDNUM 9999 plot for a specific
12 activity is representative of the total hours and total TPH at a given site. The plotting
13 of all of the points together is representative of hours as a function of TPH, across
14 sites for a given activity. Assuming that a specific facility may operate either below
15 or above capacity, then total data for a site should be representative of overall
16 operations at the site. The plot of the summed data shows that the expansion path

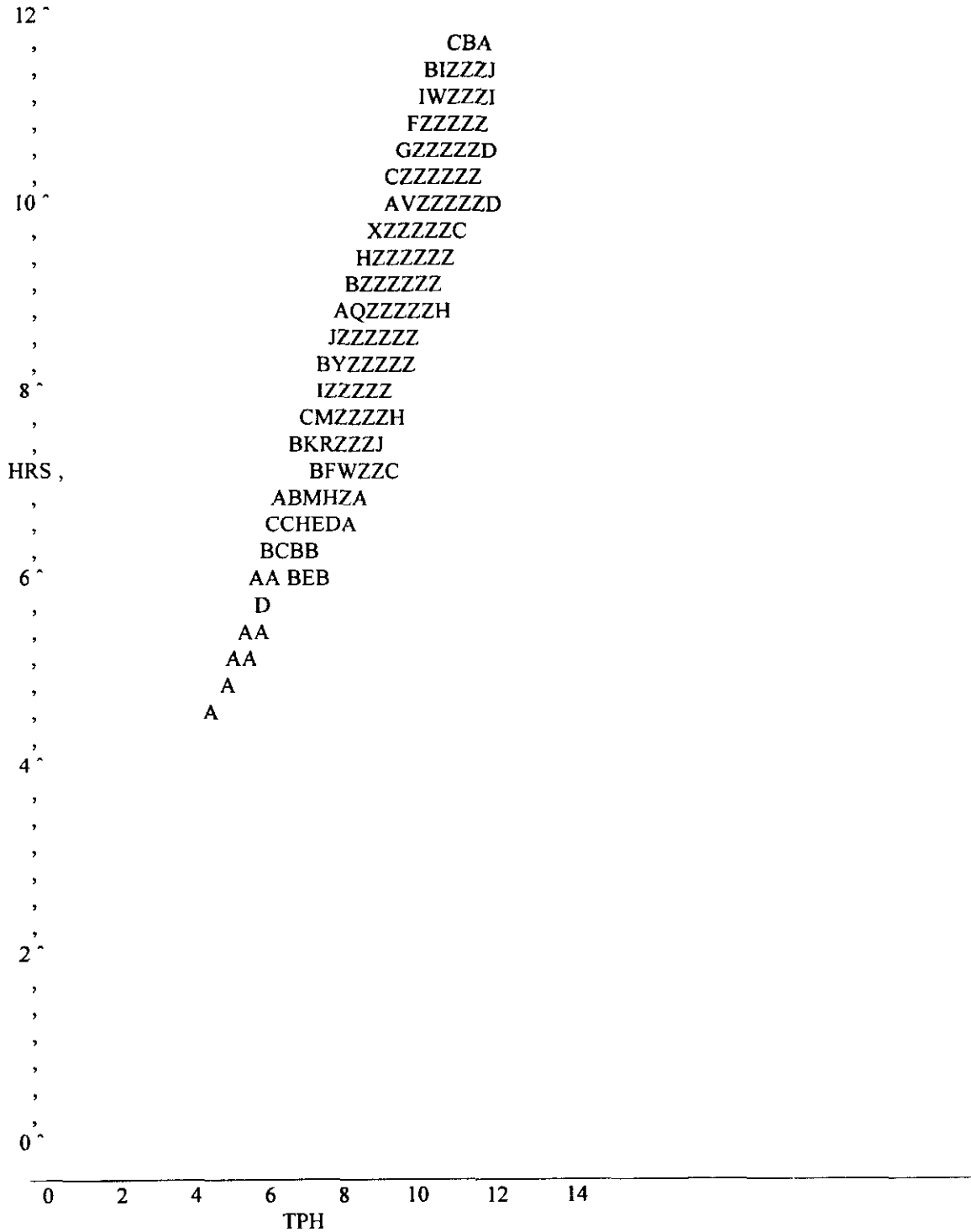
³⁸ Such plots substantiate a variability approaching 100 percent between hours and TPH.

³⁹ A model can be forced through such plots, but such an exercise does not necessarily establish a relationship.

⁴⁰ In each case where I have summarized the form of a data plot, I have used informed judgment as to its shape.

1 for a specific activity appears to be approaching 100 percent variability, as could be
2 obtained in a pooled model. In performing additional analysis of the hours/TPH
3 relationship witness Bradley should consider the design capacity for each facility as
4 one of the exogenous drivers of hours, examining the impact on the hours/TPH
5 relationship as facility size changes.

LSM; DATA IN LOGS
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



NOTE: 17382 obs hidden.

Each computer program run for an activity resulted in hundreds of graphs—one for each of the sites. For each activity I present four of the graphs generated by the computer program. I selected representative graphs. All graphs generated for an activity along with the relevant computer programs for this exhibit are presented in OCA-LR-9.

For each of the four types of activities presented in this exhibit the basis for the selection of the four graphs is as follows. Three of the graphs for each activity are for specific locations and illustrate that a variety of data patterns form the underlying data used in the study. The three types of plots by location include,

- a plot that is in good agreement with a fixed effects regression.
- a “blob” type of plot, indicating that for the location under consideration there does not appear to be a clear data relationship; and
- a plot that is in good agreement with a pooled effects regression such as presented by but not endorsed by witness Bradley in response to the Presiding Officer’s Information Request #4.

A summary of the three types plots mentioned above follows:

Manual Letters

Plot for IDNUM=8195: Consistent with Fixed Effects.

Plot for IDNUM=3361: Consistent with Blob.

Plot for IDNUM=242: Consistent with Pooled Effects as found in POIR#4.

Manual Flats

Plot for IDNUM=1374: Consistent with Fixed Effects.

Plot for IDNUM=3593: Consistent with Blob.

Plot for IDNUM=5255: Consistent with Pooled Effects as found in POIR#4.

OCR

Plot for IDNUM=9961: Consistent with Fixed Effects.

Plot for IDNUM=2467: Consistent with Blob.

Plot for IDNUM=621: Consistent with Pooled Effects as found in POIR#4.

LSM

Plot for IDNUM=7346: Consistent with Fixed Effects.

Plot for IDNUM=4347: Consistent with Blob.

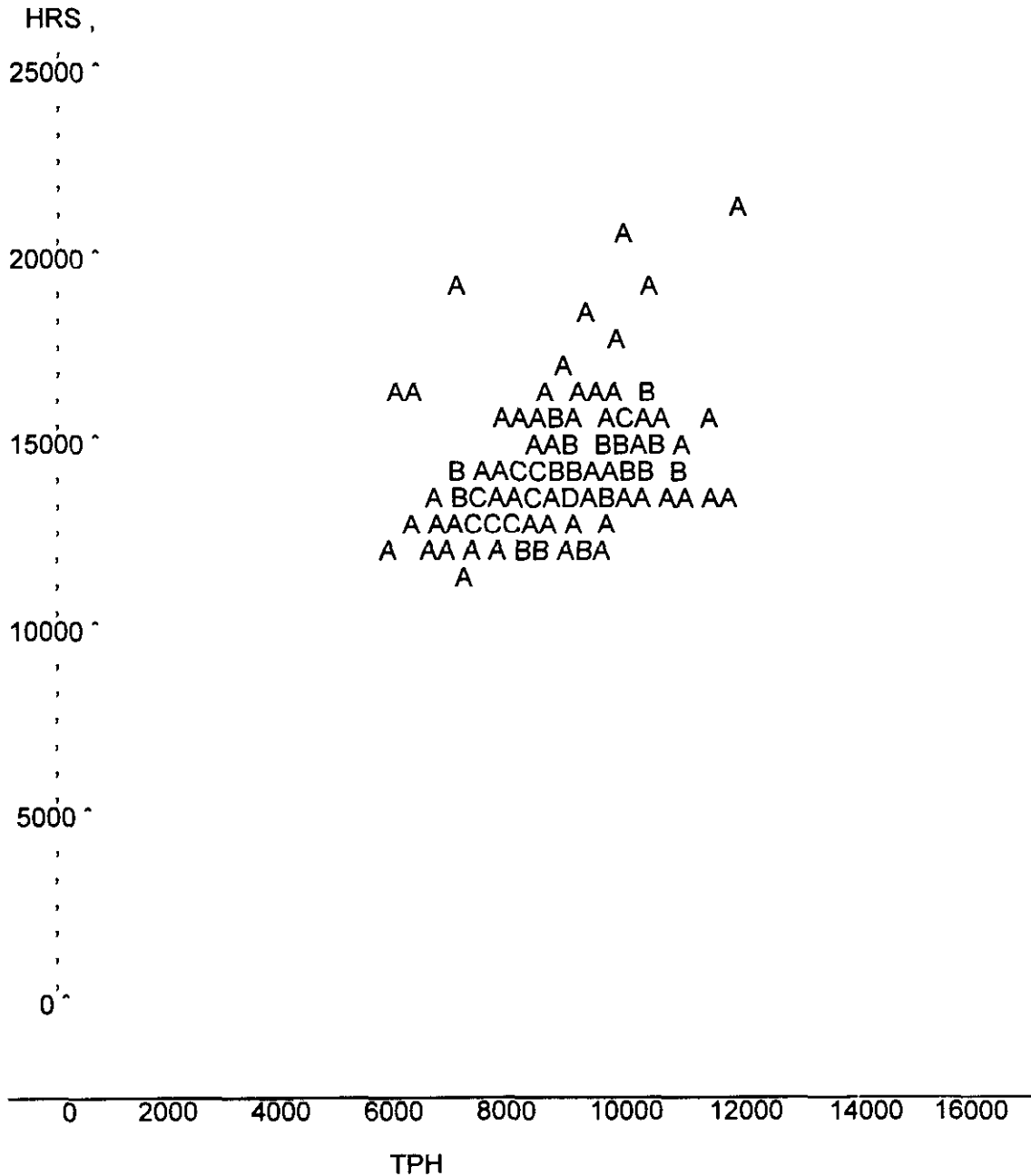
Plot for IDNUM=2375: Consistent with Pooled Effects as found in POIR#4.

The fourth graph for each activity is designated as IDNUM 9999. One graph of this type has been printed for each activity. There is, however, no location cited for IDNUM 9999. Rather, IDNUM 9999 is a computed set of data. The plot for IDNUM 9999 has a number of points. Each point summarizes the summation of the logs of total hours of mail processing labor and the total TPH at a specific site. All of the data points—one per site—are then plotted. The data plotted in the graph of IDNUM 9999 are therefore based on all of the sites for a specific activity data set, with hours and TPH summed for each site.

MANUAL LETTER OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Site

----- IDNUM=242 -----

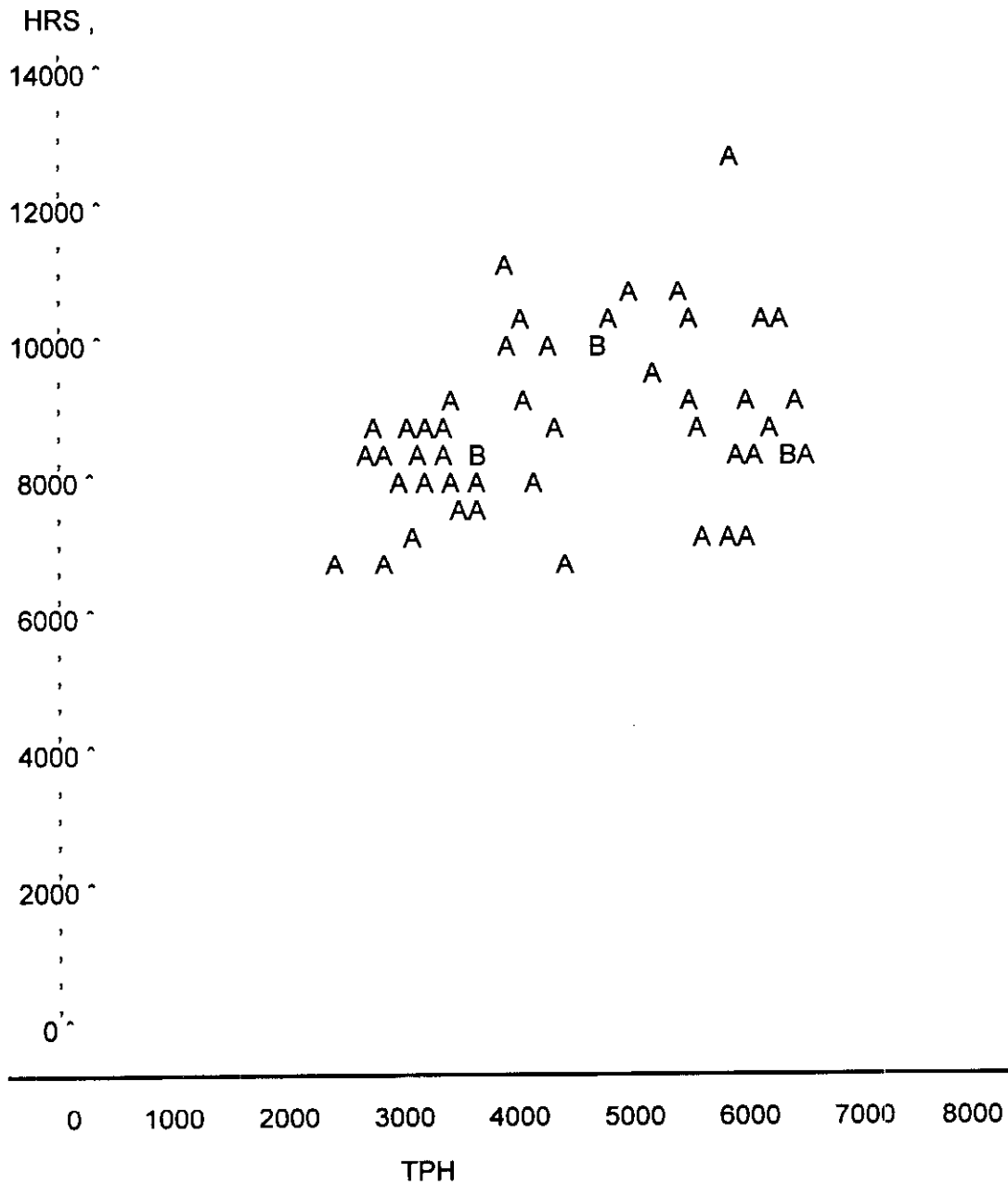
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



MANUAL LETTER OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Site

----- IDNUM=3361 -----

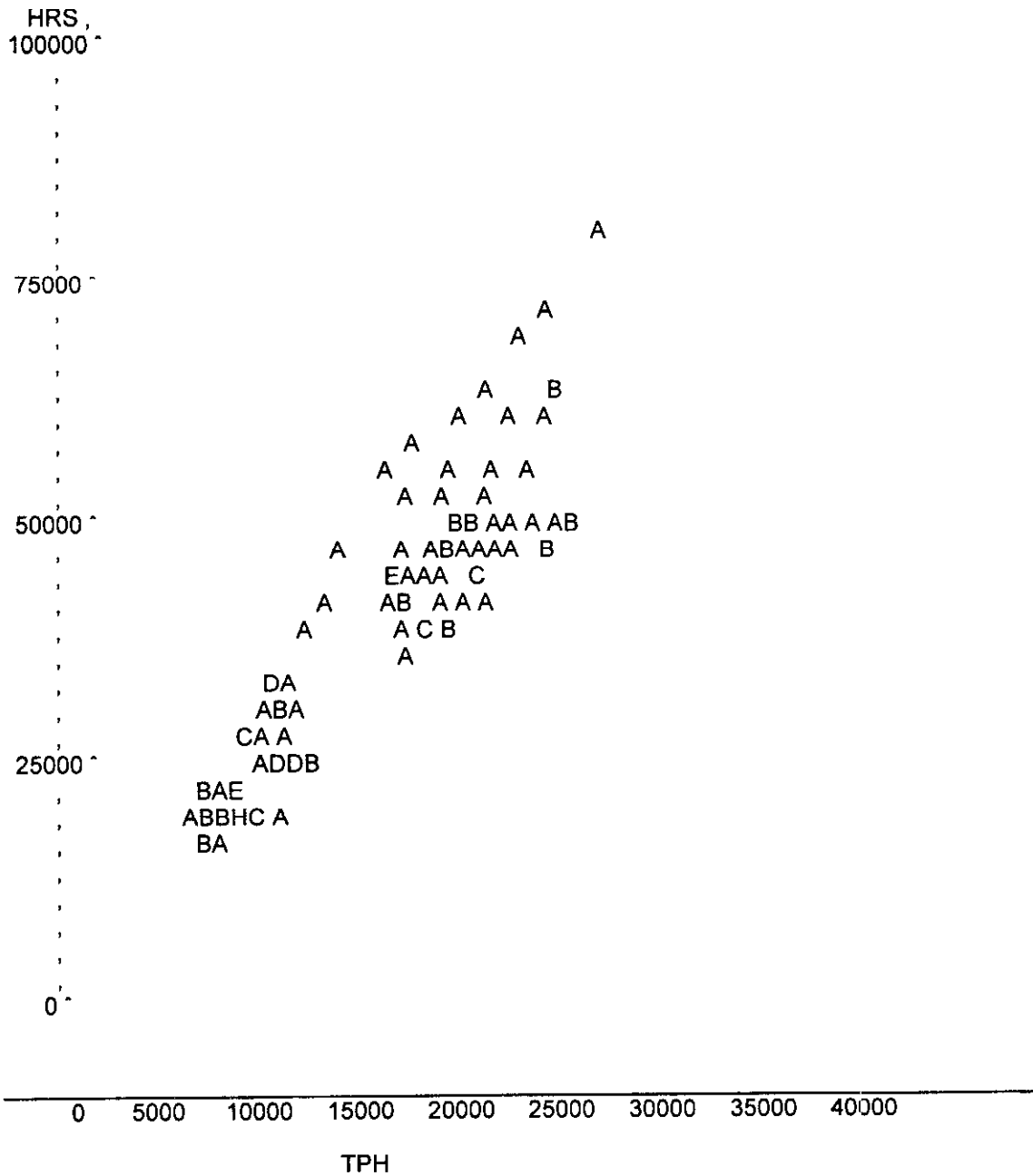
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



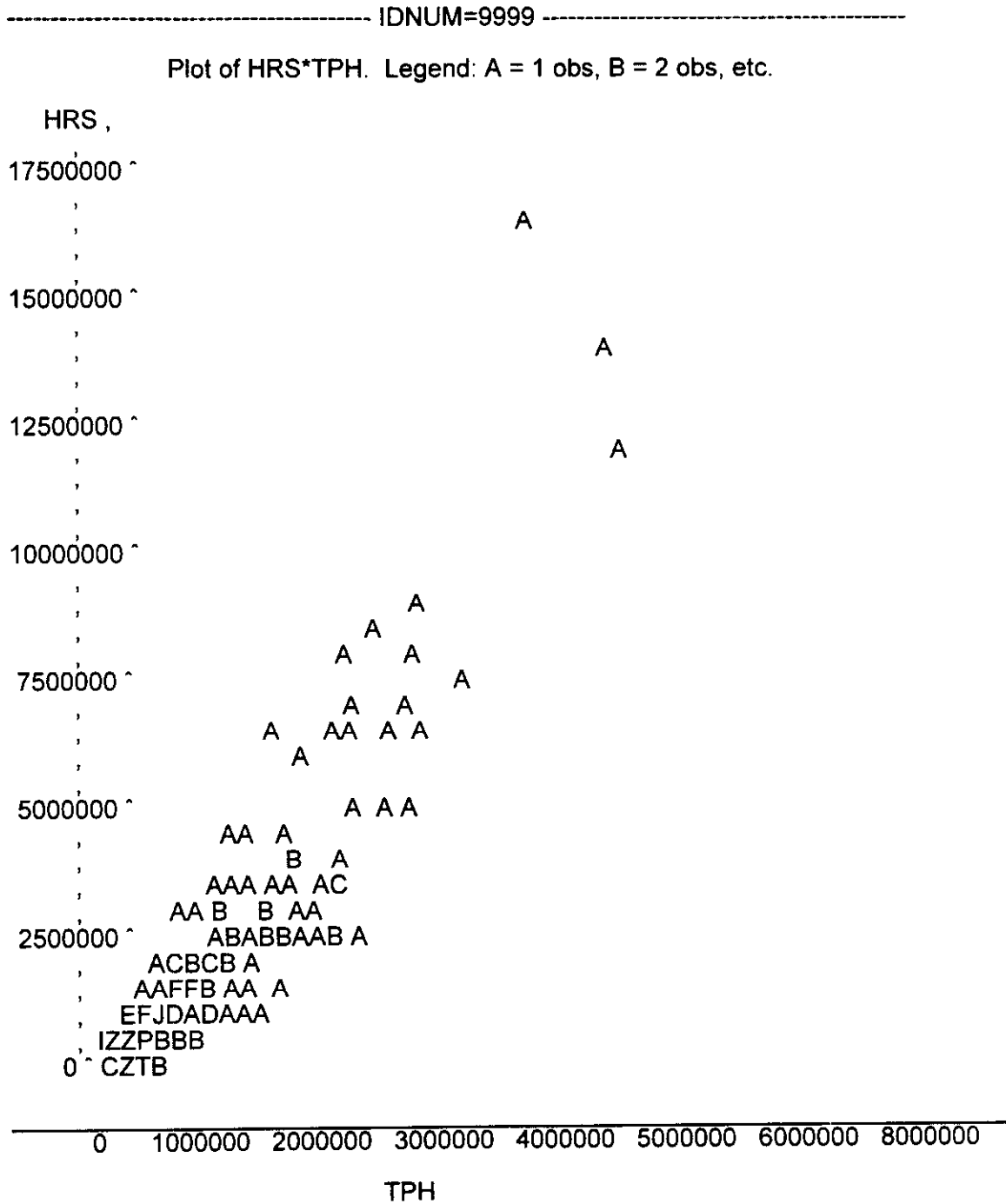
MANUAL LETTER OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Site

----- IDNUM=8195 -----

Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



MANUAL LETTER OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Site

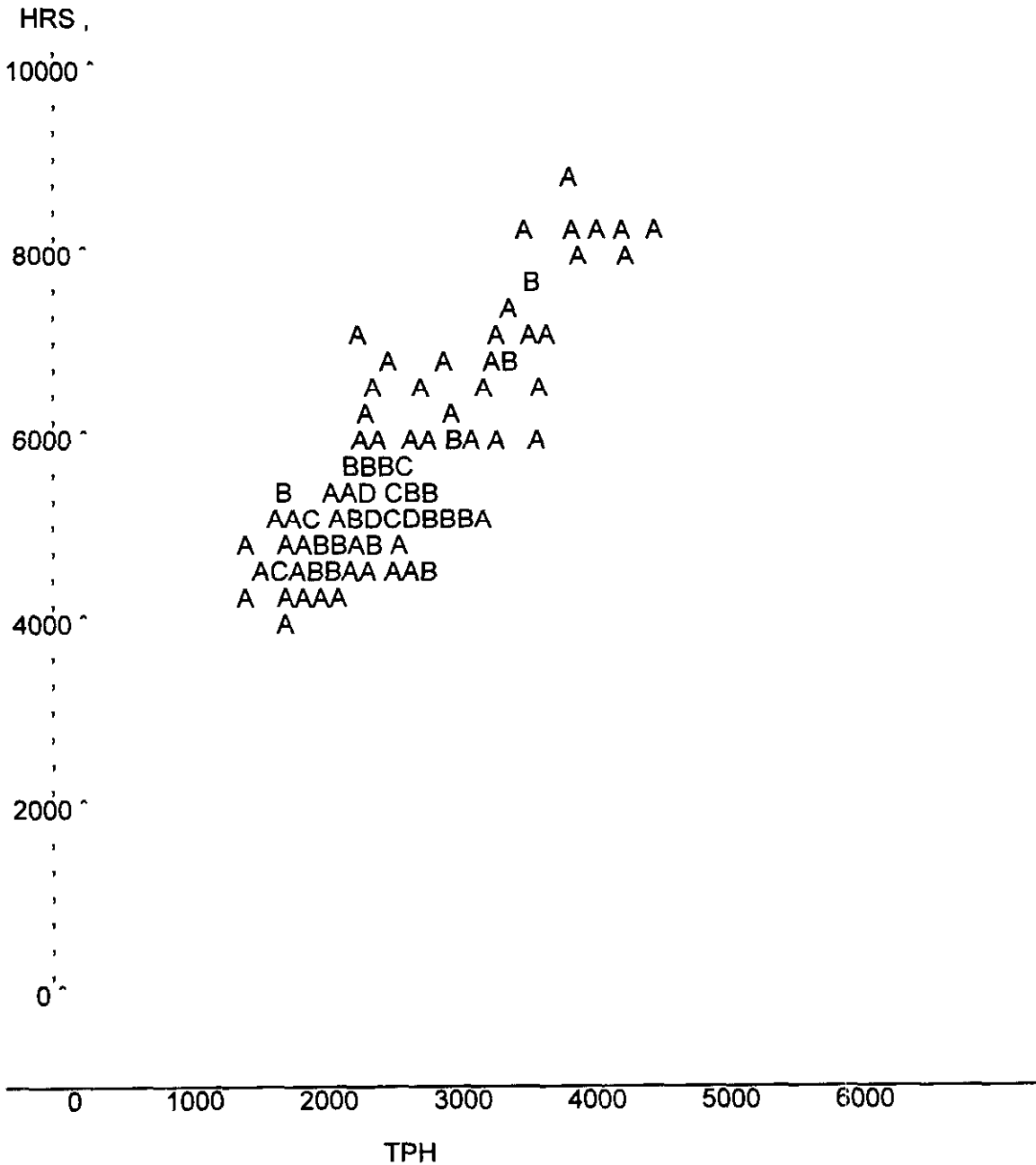


NOTE: 56 obs hidden.

MANUAL FLAT OPERATIONS
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Site

----- IDNUM=1374 -----

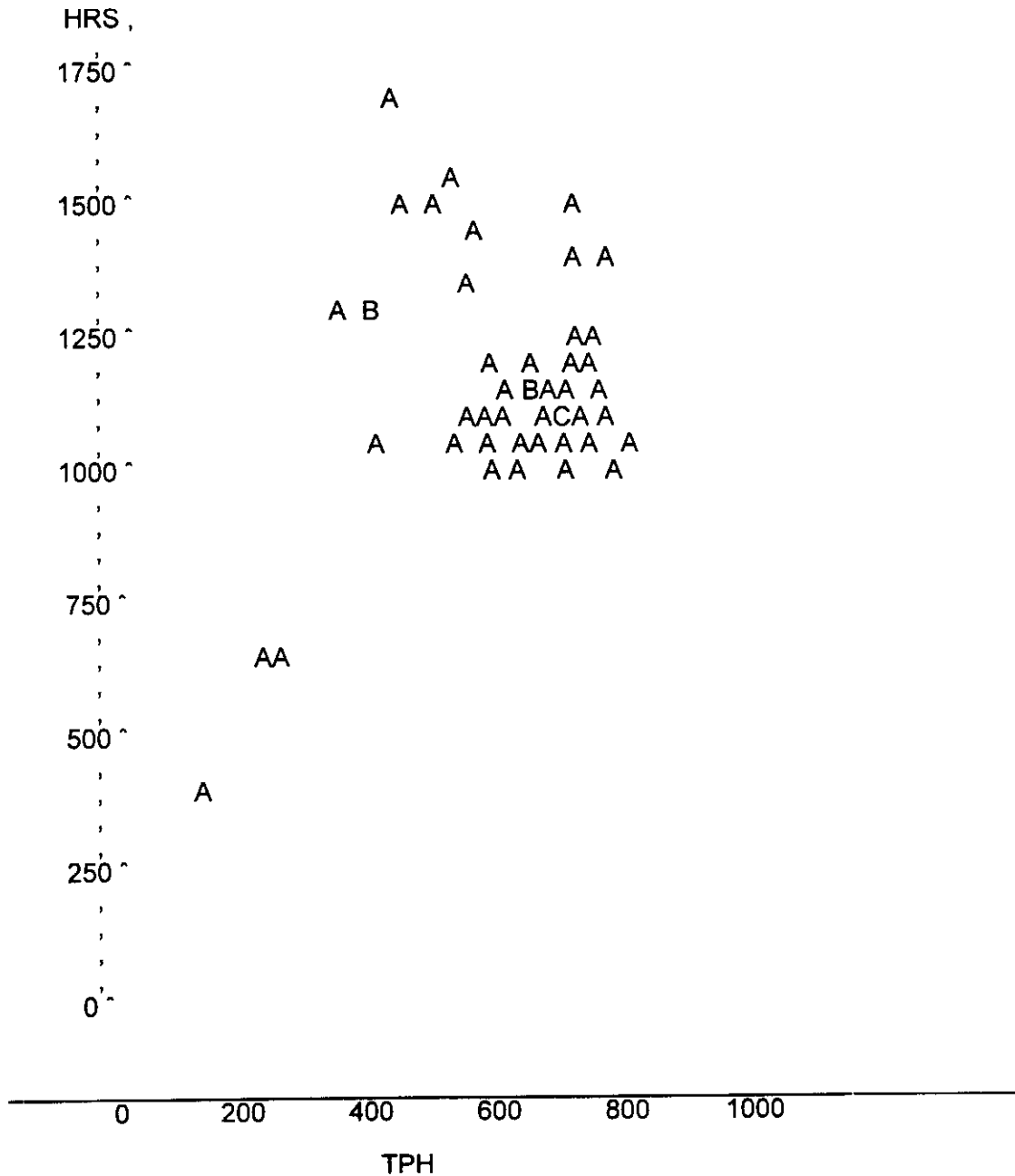
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



MANUAL FLAT OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Site

----- IDNUM=3593 -----

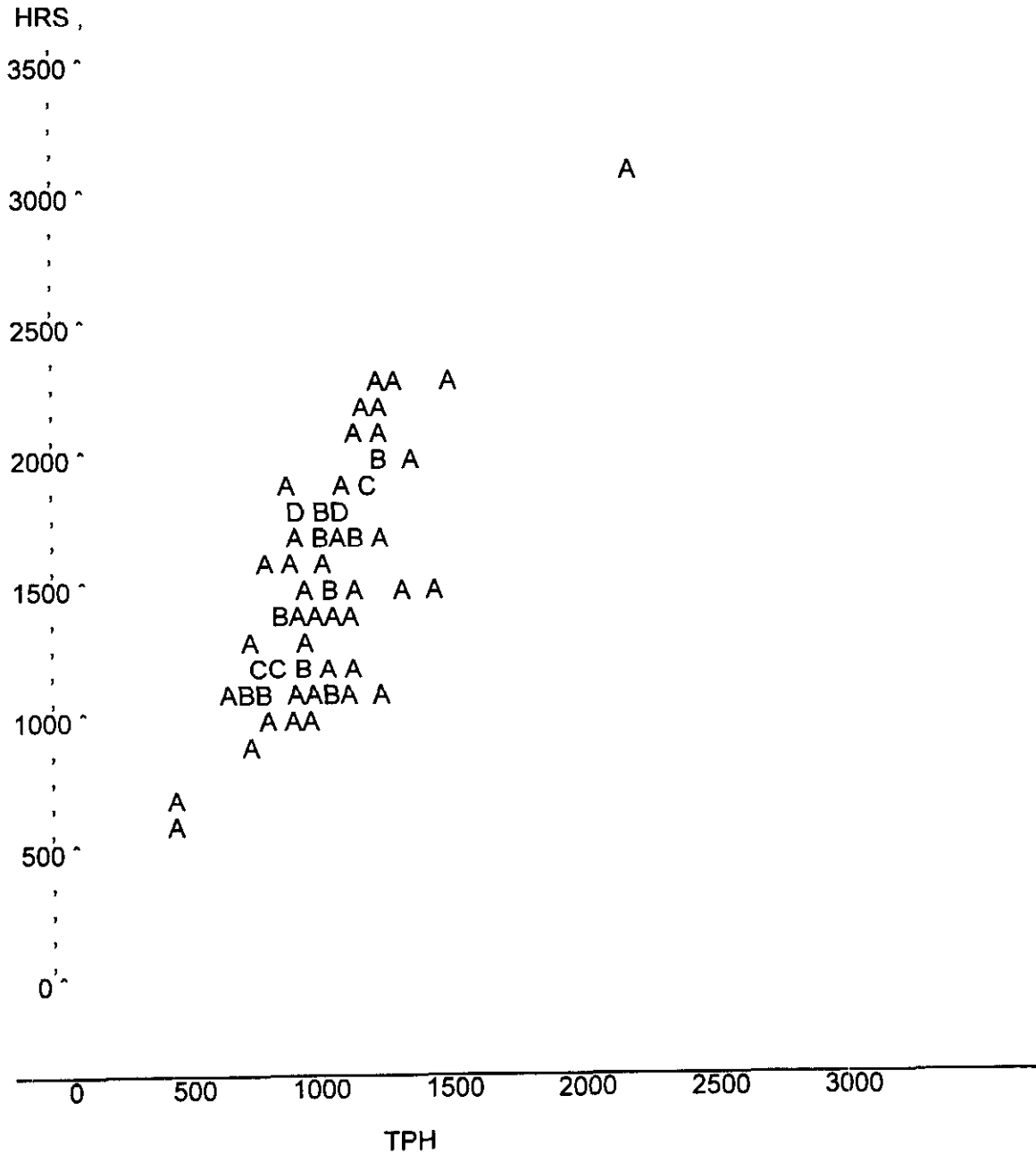
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



MANUAL FLAT OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

----- IDNUM=5255 -----

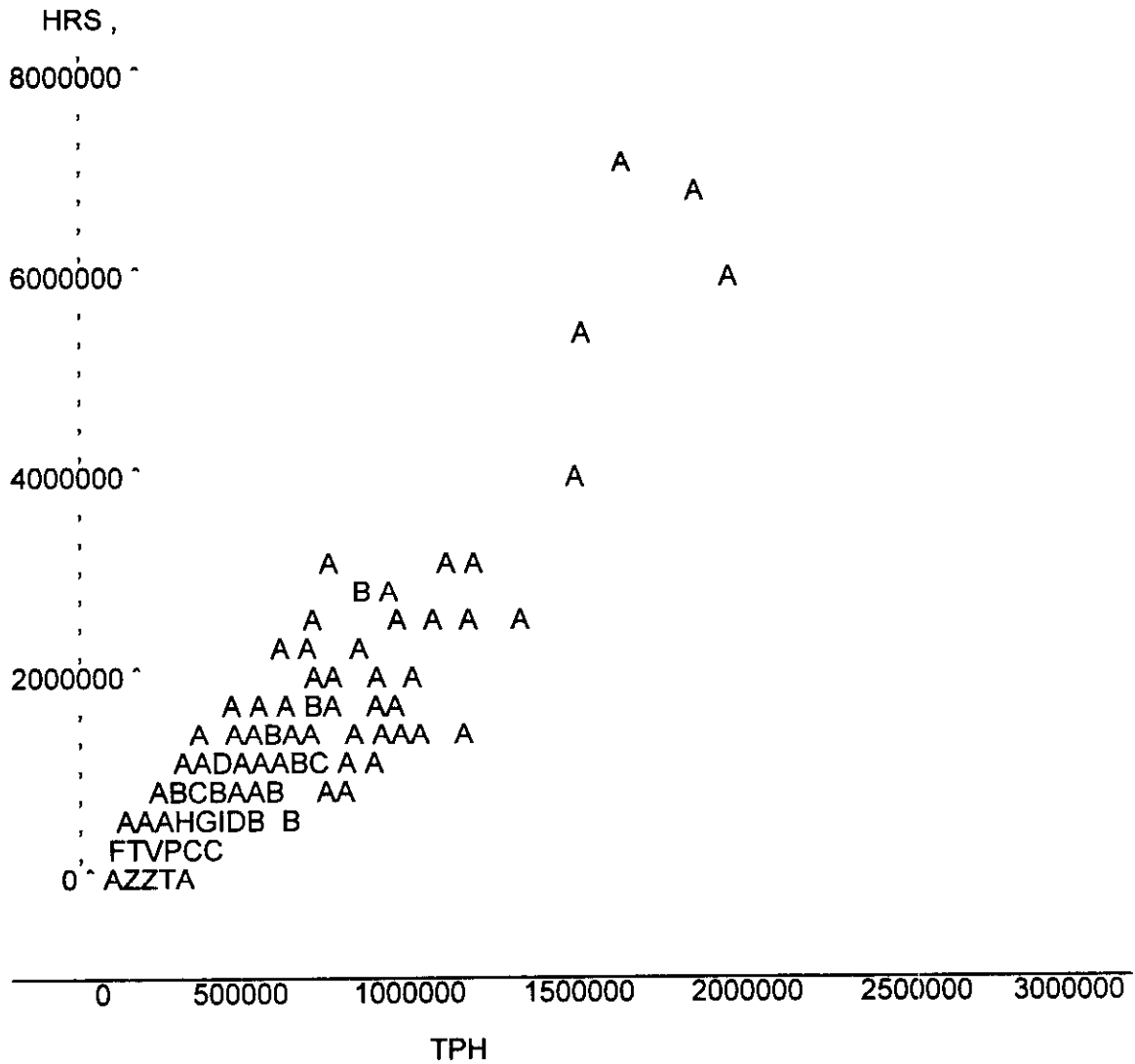
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



MANUAL FLAT OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

----- IDNUM=9999 -----

Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.

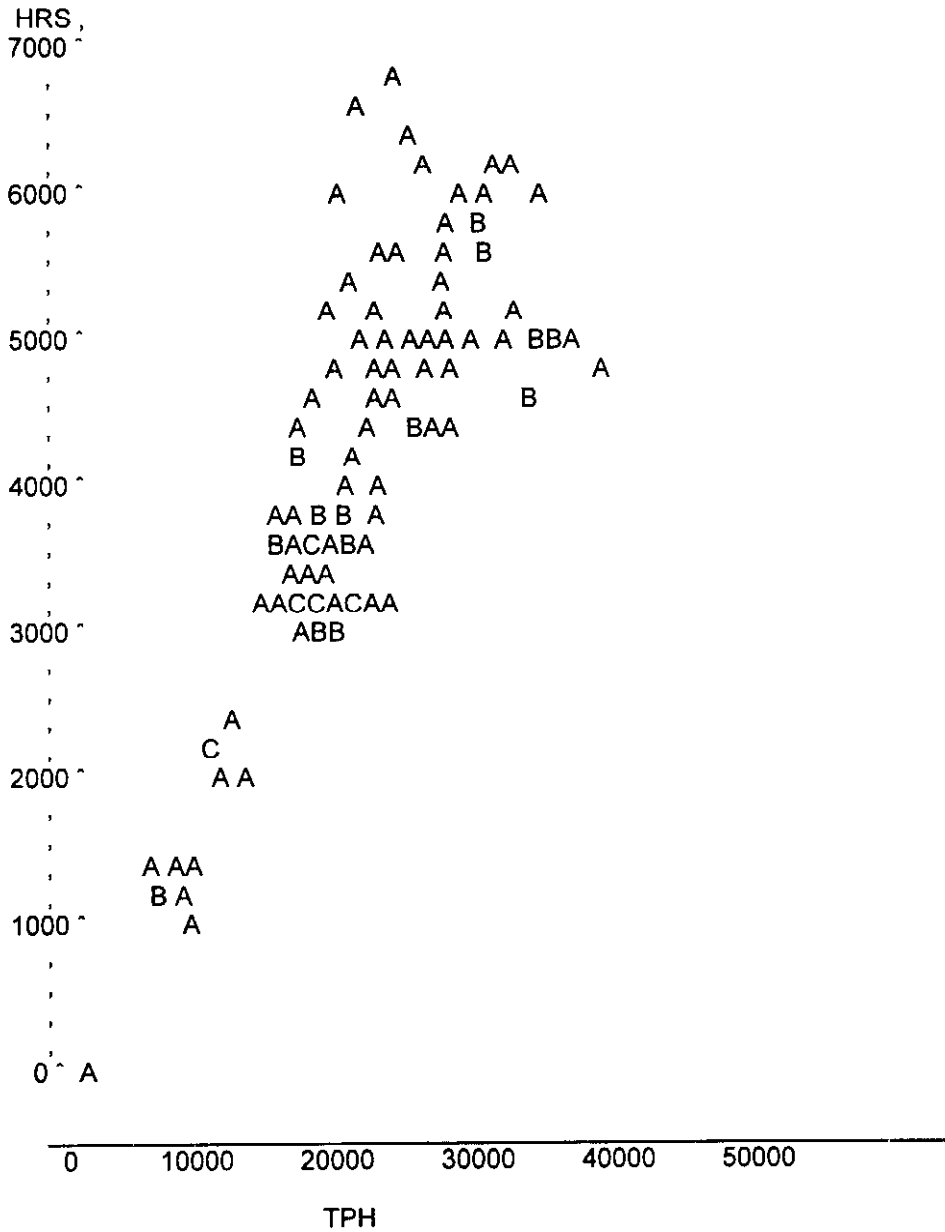


NOTE: 48 obs hidden

OCR OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

----- IDNUM=621 -----

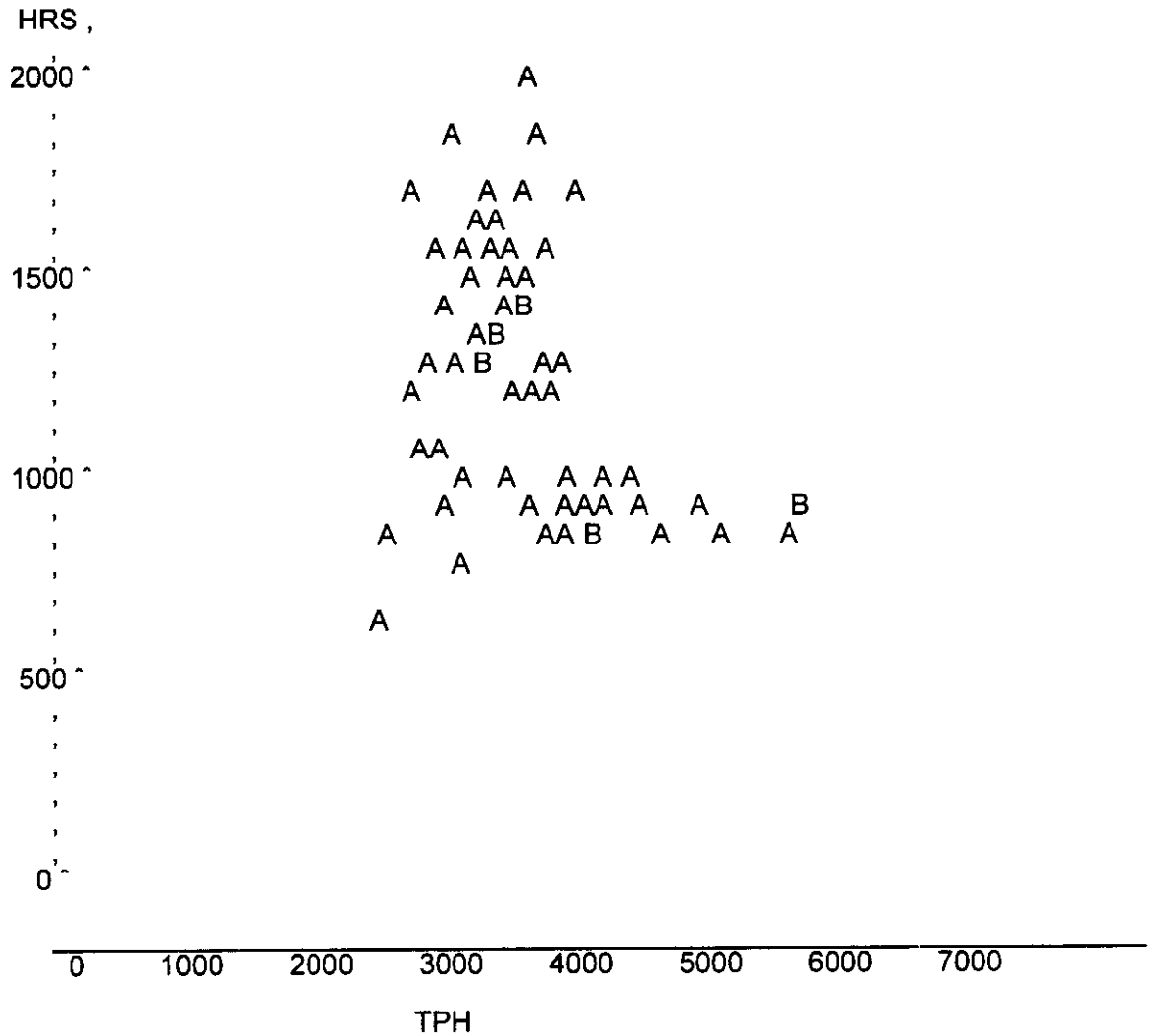
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



OCR OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

----- IDNUM=2467 -----

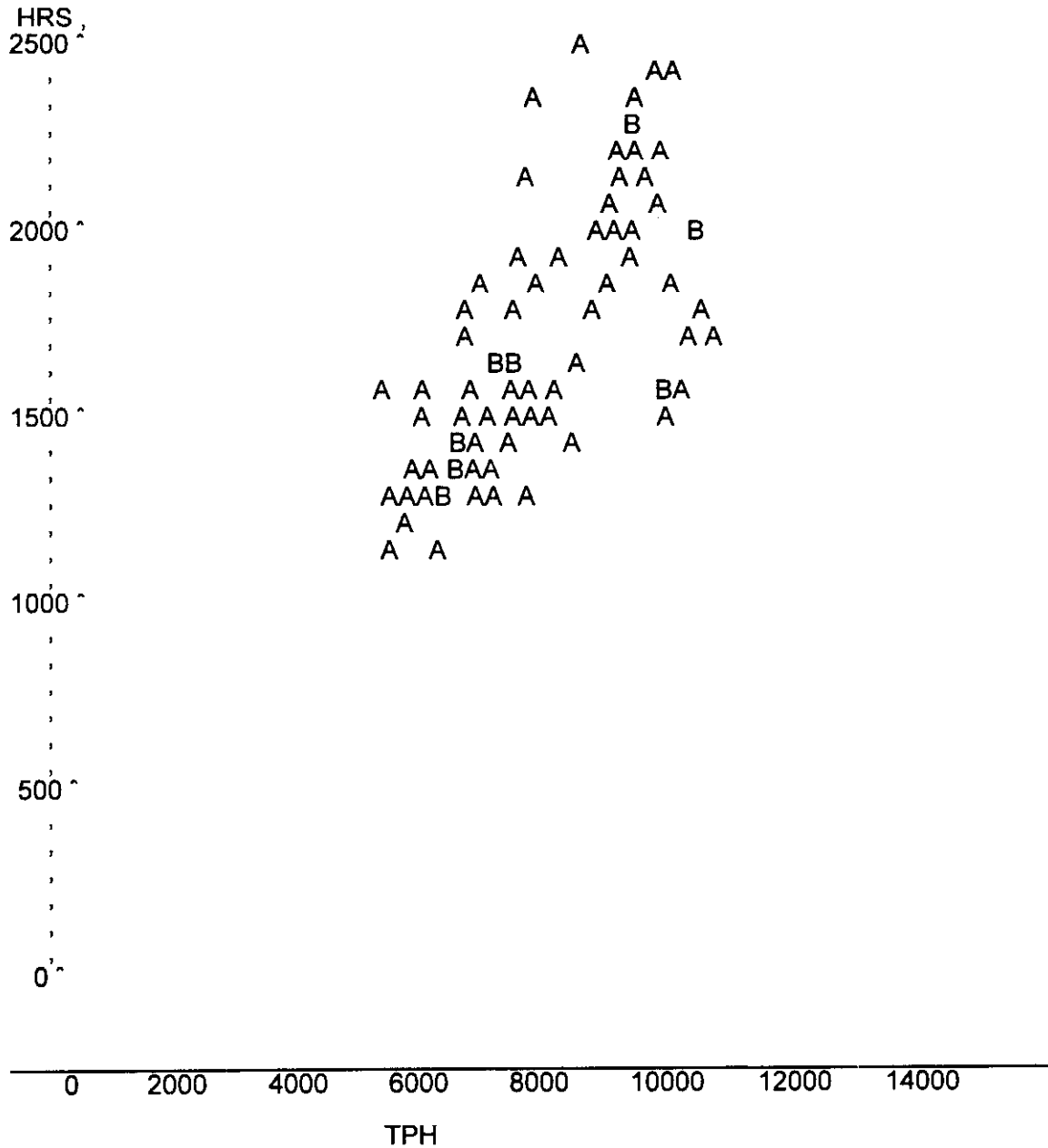
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



OCR OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

----- IDNUM=9961 -----

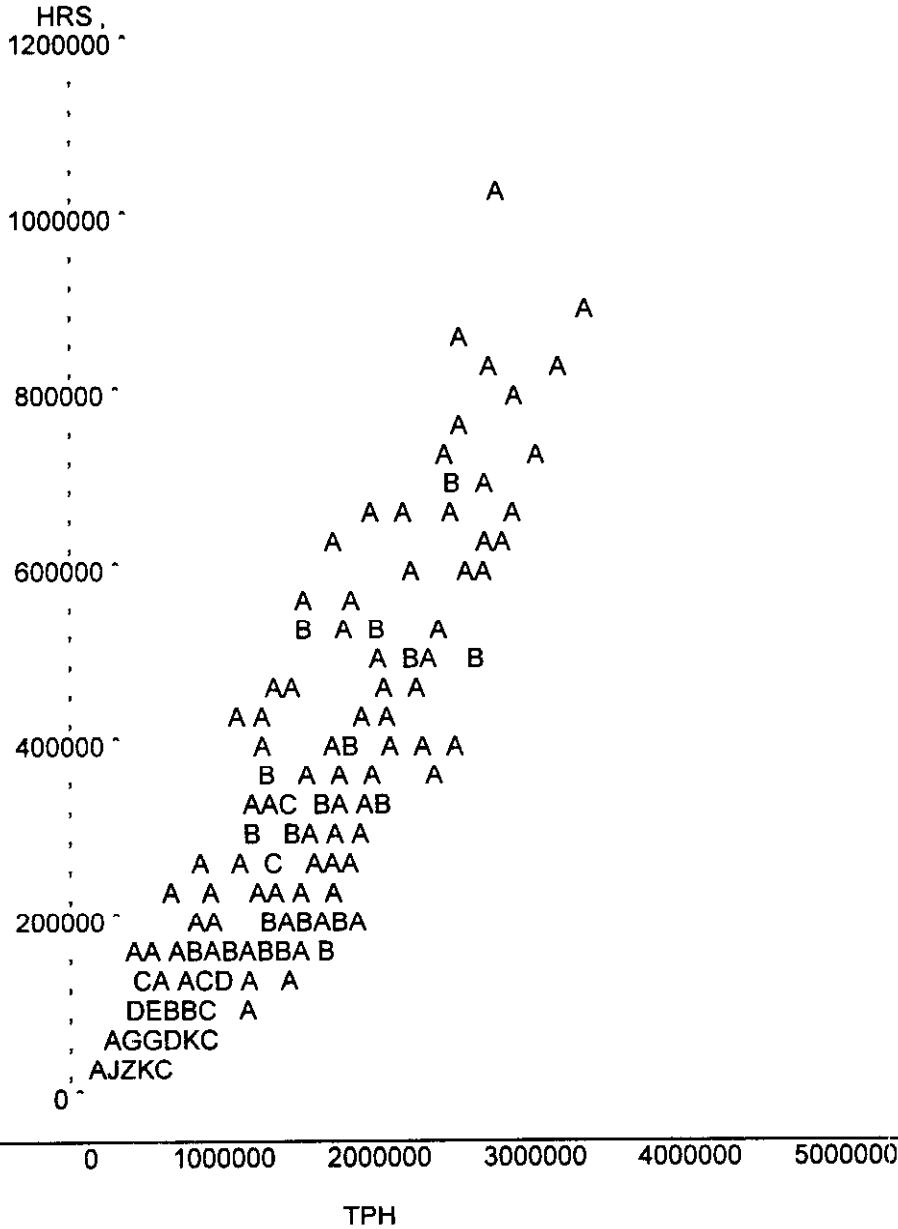
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



OCR OPERATIONS/ HOURS ON TPH
 USING ONLY CONTINUOUS DATA FROM 8801-9613
 INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
 Plotted by Location

----- IDNUM=9999 -----

Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.

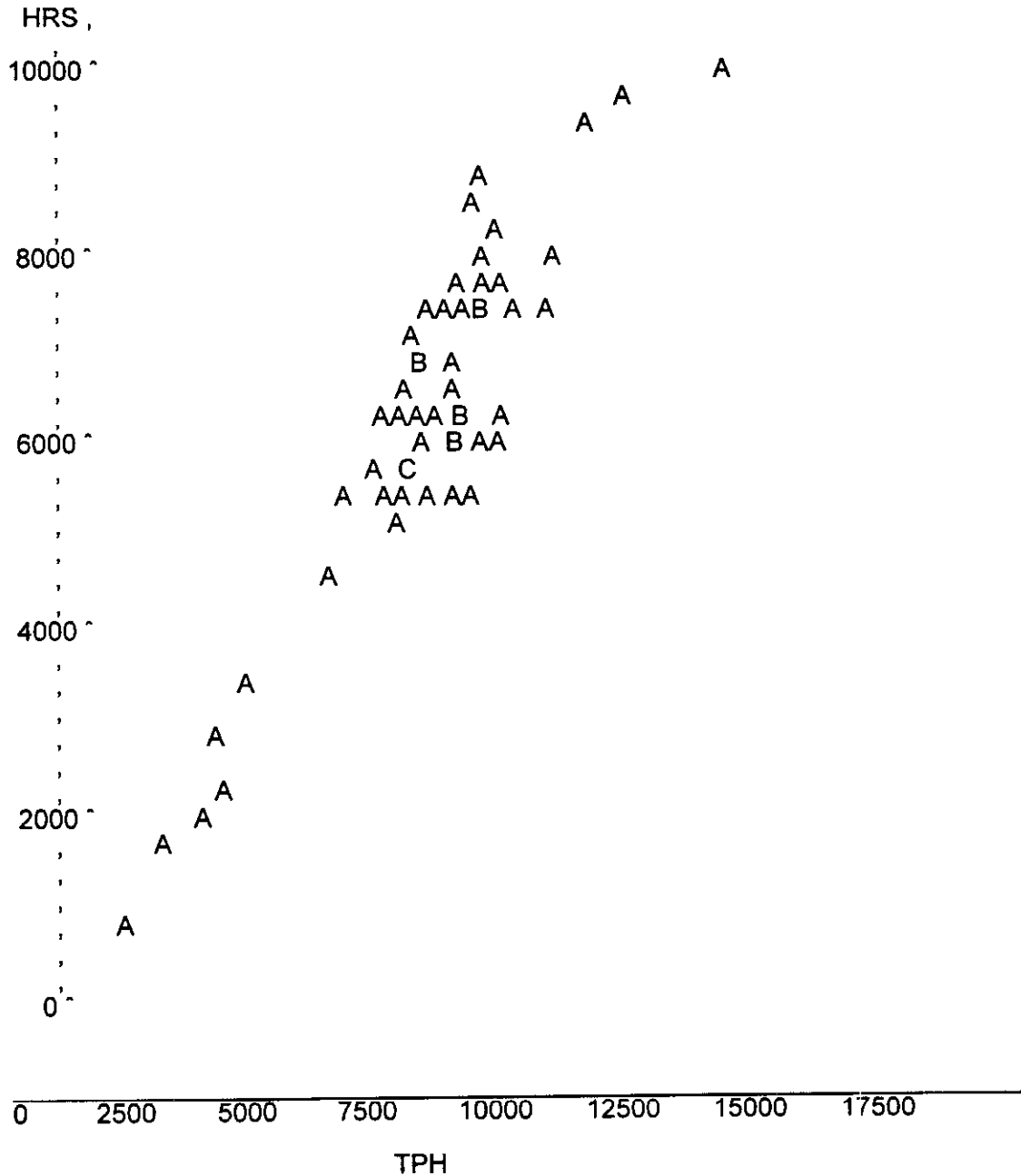


NOTE: 3 obs hidden.

LSM OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL.
Plotted by Location

----- IDNUM=2375 -----

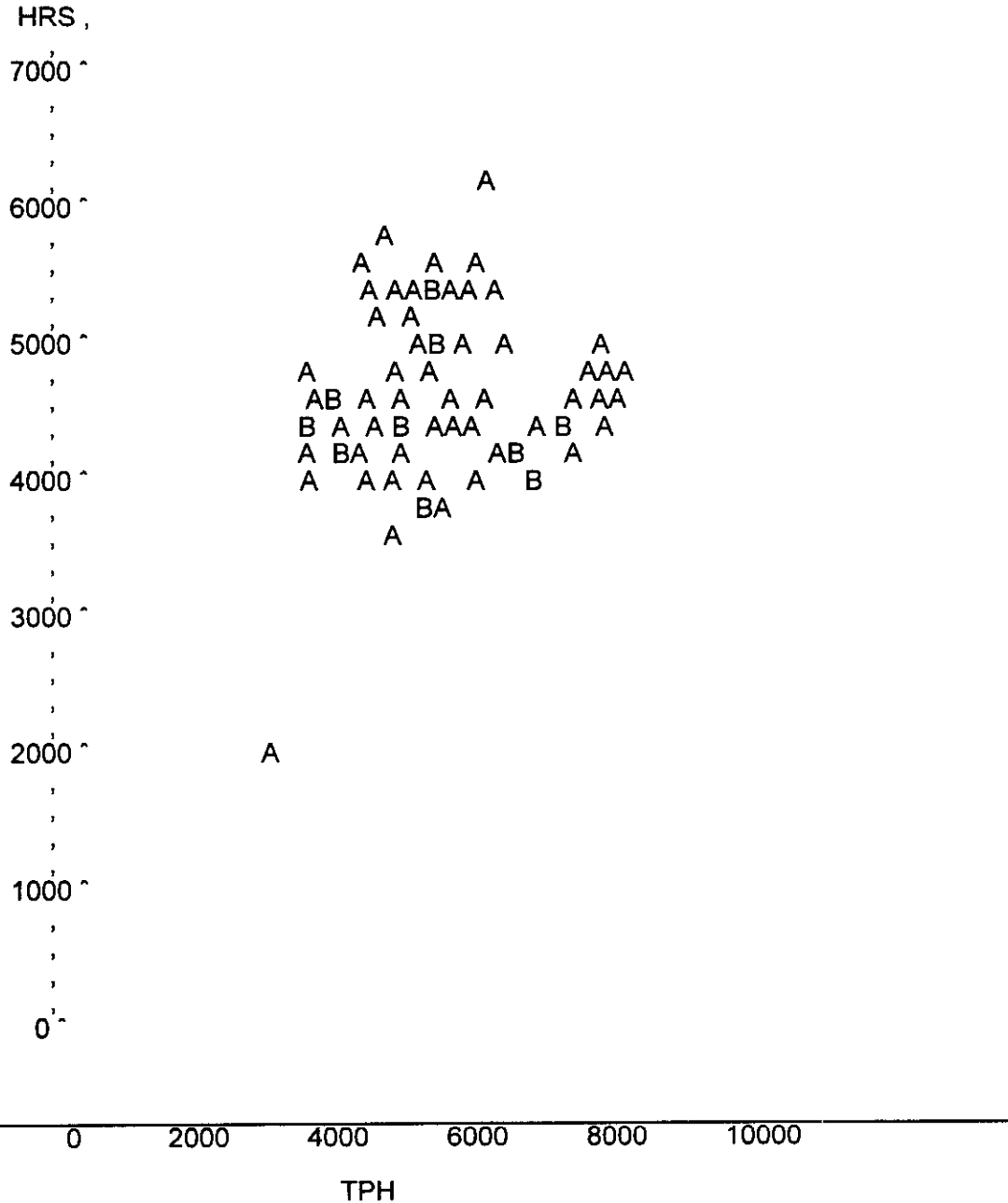
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



LSM OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

----- IDNUM=4347 -----

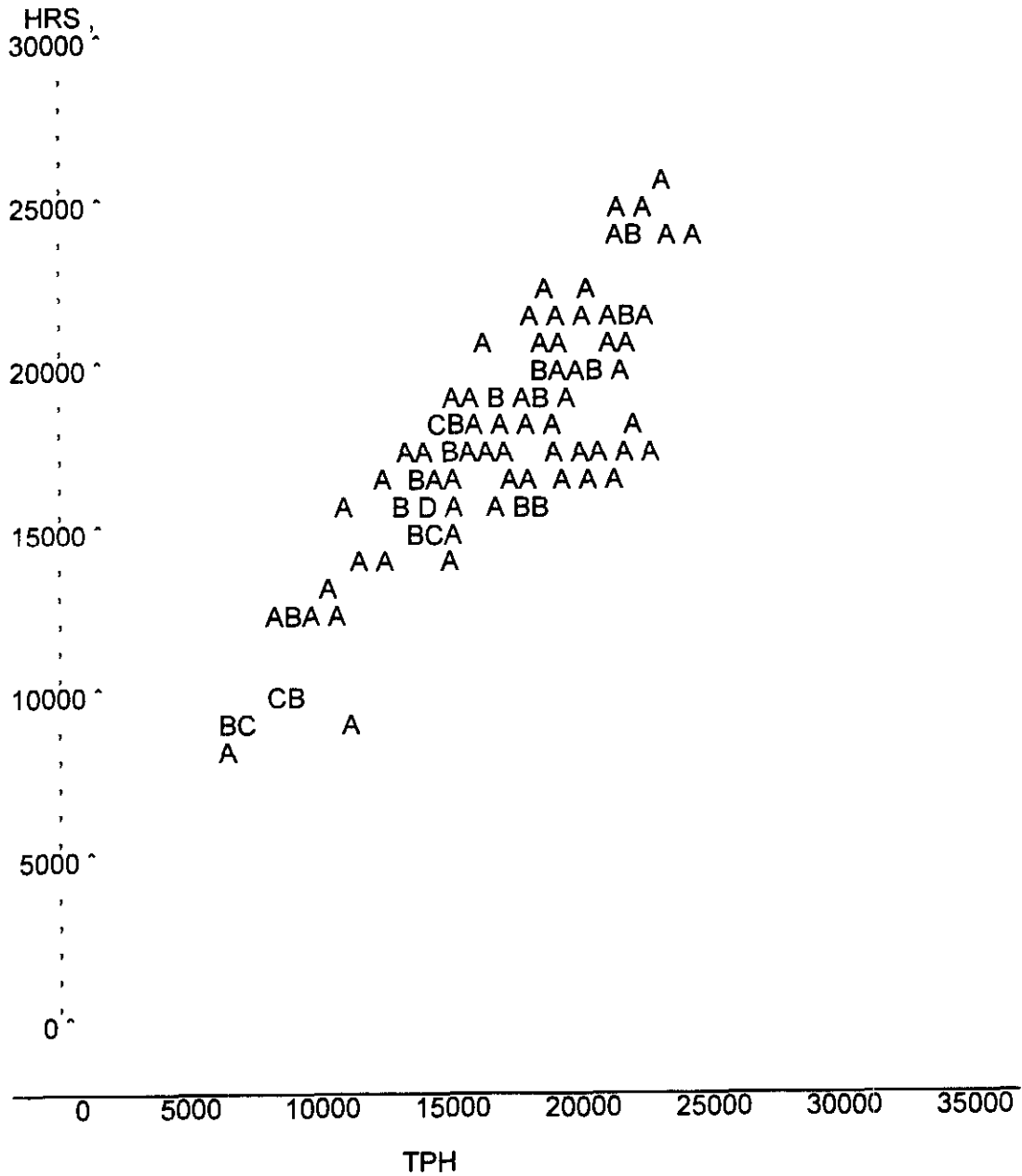
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



LSM OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location

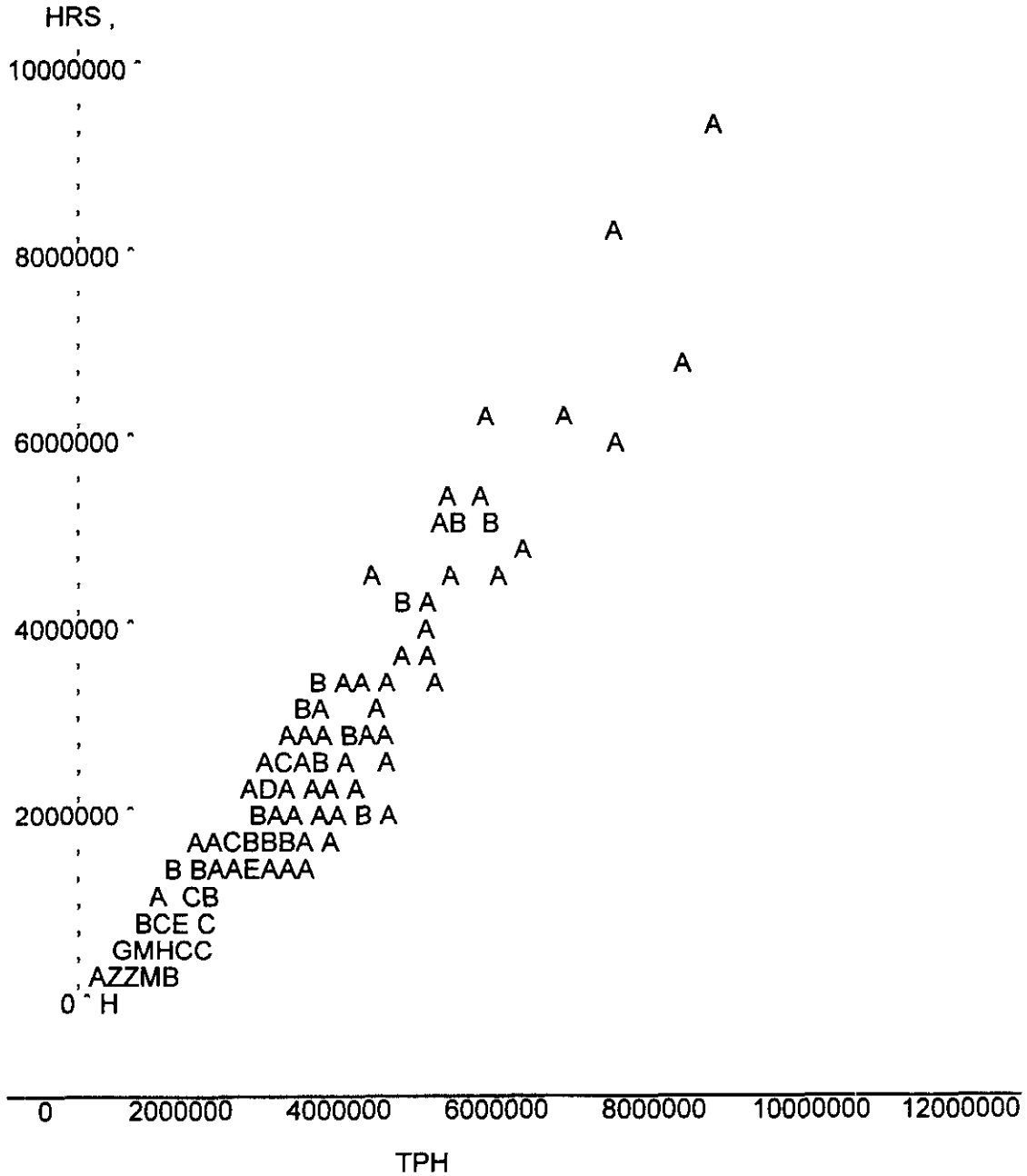
----- IDNUM=7346 -----

Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



LSM OPERATIONS/ HOURS ON TPH
USING ONLY CONTINUOUS DATA FROM 8801-9613
INCLUDING OFFICES @ LEAST 39 OBS/LAG MODEL
Plotted by Location
----- IDNUM=9999 -----

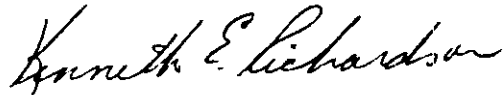
Plot of HRS*TPH. Legend: A = 1 obs, B = 2 obs, etc.



NOTE: 16 obs hidden.

CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the rules of practice.

A handwritten signature in cursive script that reads "Kenneth E. Richardson".

Kenneth E. Richardson
Attorney

Washington, D.C. 20268-0001
February 13, 1998