Vista Chemical Company

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VISTA

December 15, 1989

Mr. B. I. Raffle
Supervising Counsel
Environmental & Engineering Group
Conoco Legal Department
P.O. Box 2197
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Mr. H. J. Neeld
Director, Environmental Programs
Environmental Conservation
Conoco Inc.
P.O. Box 2197
Houston, TX 77252

Gentlemen:

Vista is providing you with the attached information relative to recently discovered solid waste activities at the Lake Charles Chemical Plant. This discovery was discussed with Jack Neeld when initially found. The attached material describes the extent and regulatory status of the waste. The existence of this solid waste management unit will be disclosed in our ongoing RCRA permitting process.

Sincerely,

Thomas G. Grumbles, C.I.H.
Environmental Quality Manager

dlj

cc: J. Friend, M. G. Hayes-LCCP
Attachment

VVV 000007342

NOV 2 9 1989

To: Mike Hayes

From: M. L. Milanowski
Date: November 16, 1989

VISTA

**Interoffice Communication**

Subject: **LCCP Office Revisions - Soil Testing Results**

## Introduction

This report presents the results of the soil analysis for this project. A black granular substance, determined to be coke fines, was found on September 5, 1989, while excavating for the chain wall foundation. Extensive analysis has determined this material to be a non-hazardous solid waste. The extent appears to be limited to the North third of the addition and to a depth of approximately ten (10) feet. Because this material provided unsatisfactory bearing support, it was removed from beneath the chain wall and replaced with fresh compacted clay. Four 30 cubic yard dumpsters of excavated material were disposed of at Chem Waste Management, Inc. on October 12 and 13, 1989. The foundation for the building is being constructed as designed.

## Chronological Sequence of Results

09/05/89 "Coke Fines" found - four samples taken and sent to Vista Laboratories

09/08/89 Two samples taken to Core Laboratories to run EP Toxicity Test

09/11/89 Samples taken on 9/5/89 were taken to Core Laboratories for Verification using the EP Toxicity Test

09/11/89 Two water samples were analyzed for soluble Chromium at Vista's LCCP Laboratory

09/14/89 Samples taken at two levels in five feet increments around the perimeter of the building (See Sketch Page 4)

09/14/89 Sent thirty-two of the above samples to LCCP Laboratory for analysis

09/14/89 Four samples taken to Core Laboratories for further verification

| | |
|---|---|
| 09/22/89 | McClelland Engineering to take five soil borings to determine the extent of the material |
| 10/11-13/89 | Removal and disposal of the Coke Material underneath the Chain Wall foundation |

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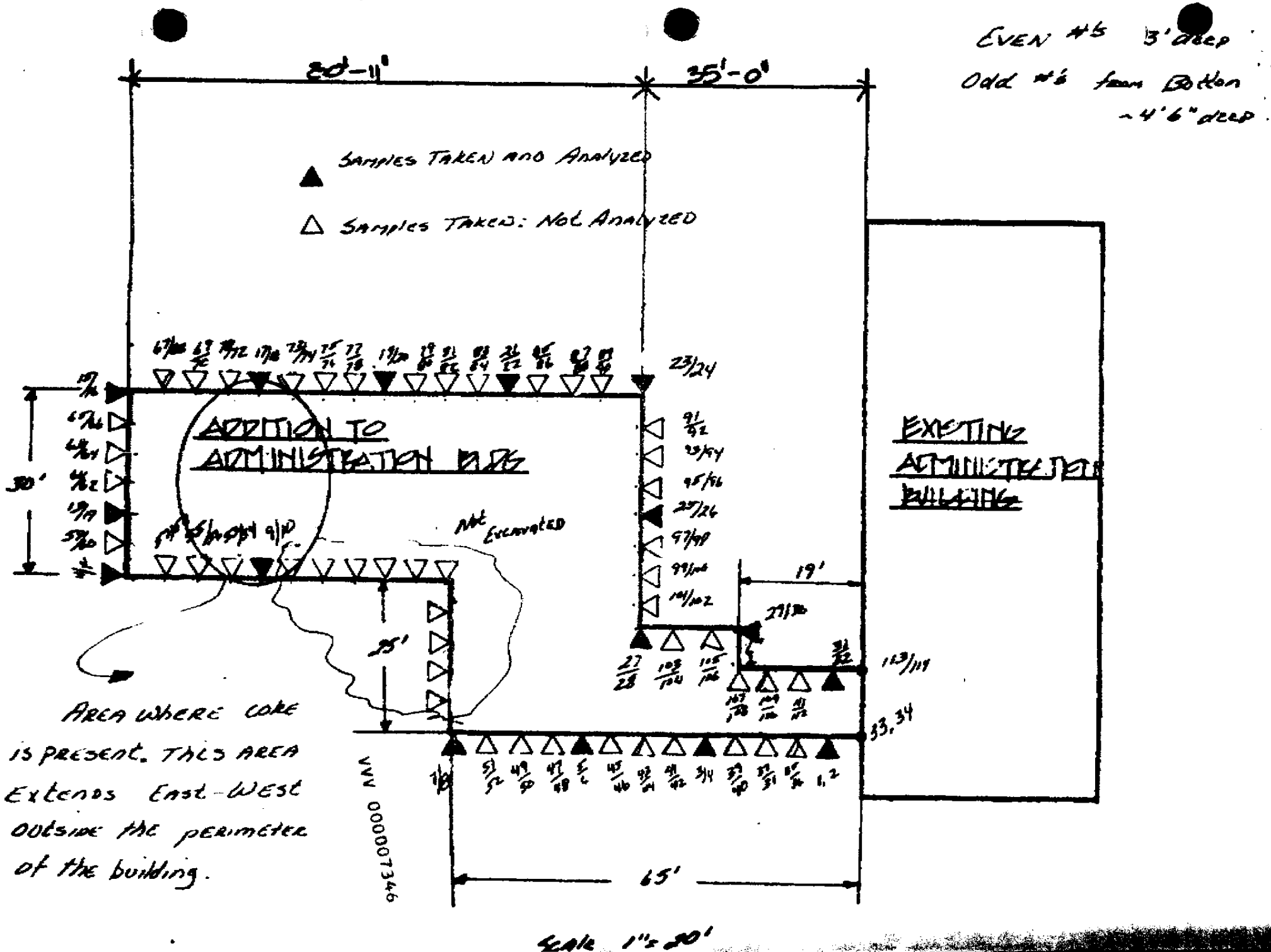
## Extent of the Material

The extent of the coke material appears to be limited to the North third of the building. The material was placed in a trench approximately fifteen feet wide from the depth of four to ten feet deep. The material beneath the chain wall was removed disposed of, and replaced with fresh clay. The material beneath the slab was not removed.

Even though the coke is limited to North third of the building, the total (soluble and insoluble) metal content of the soil around the perimeter of the building appears to be random. The concentration of chromium, lead, and zinc is not a function of whether or not coke is present. This is evident in the graphs shown on the following pages. The coke was found in the location of sample numbers 9 and 17.

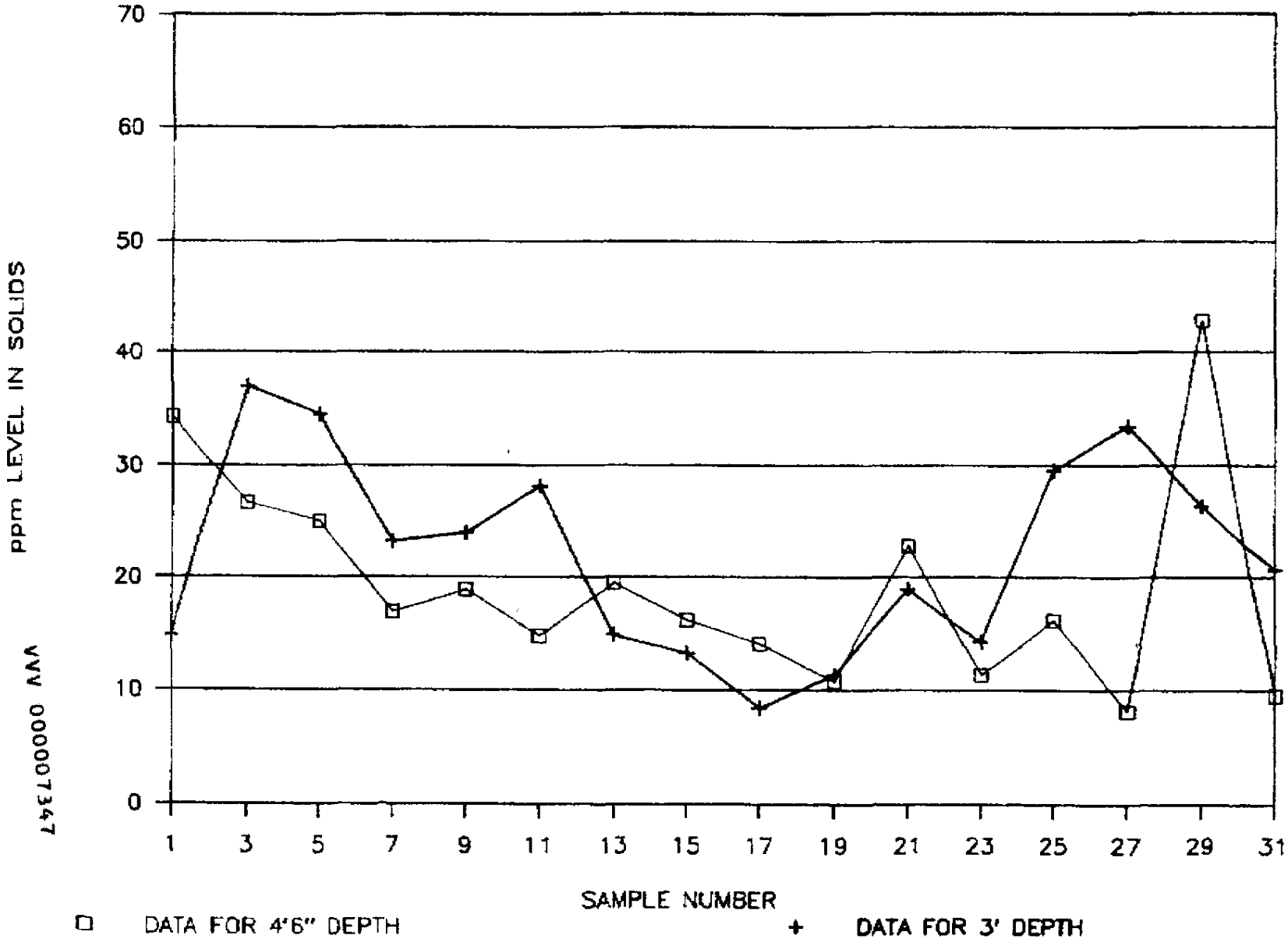
It should be noted that the results were obtained at Vista's LCCP Laboratory using the digestive procedure. The data comes from the thirty-two samples taken on 9/14/89. This procedure gives information on total metal content; not just the soluble metals as specified by the EPA. These results do not indicate hazardous levels. They were used to determine the extent of the metal content and to determine if a correlation existed between the metal concentration and the presence of coke. This correlation did not exist.


EVEN #5 3' deep
Odd #6 from Bottom
-4'6" deep.
30'-11"
35'-0"
▲ Samples Taken and Analyzed
△ Samples Taken: Not Analyzed
ADDITION TO ADMINISTRATION BLDG
EXISTING ADMINISTRATION BUILDING
30'
Not Excavated
19'
25'
65'
AREA WHERE COKE IS PRESENT. THIS AREA Extends East-West Outside the perimeter of the building.
VVV 000007346
Scale 1"=20'

DEC-11-'98 MON 11:22 ID:LOOP VISTA TEL NO:318 494 5172 #816 P06

# CHROMIUM CONCENTRATION (ppm)

## IN EXPANSION SOLIDS

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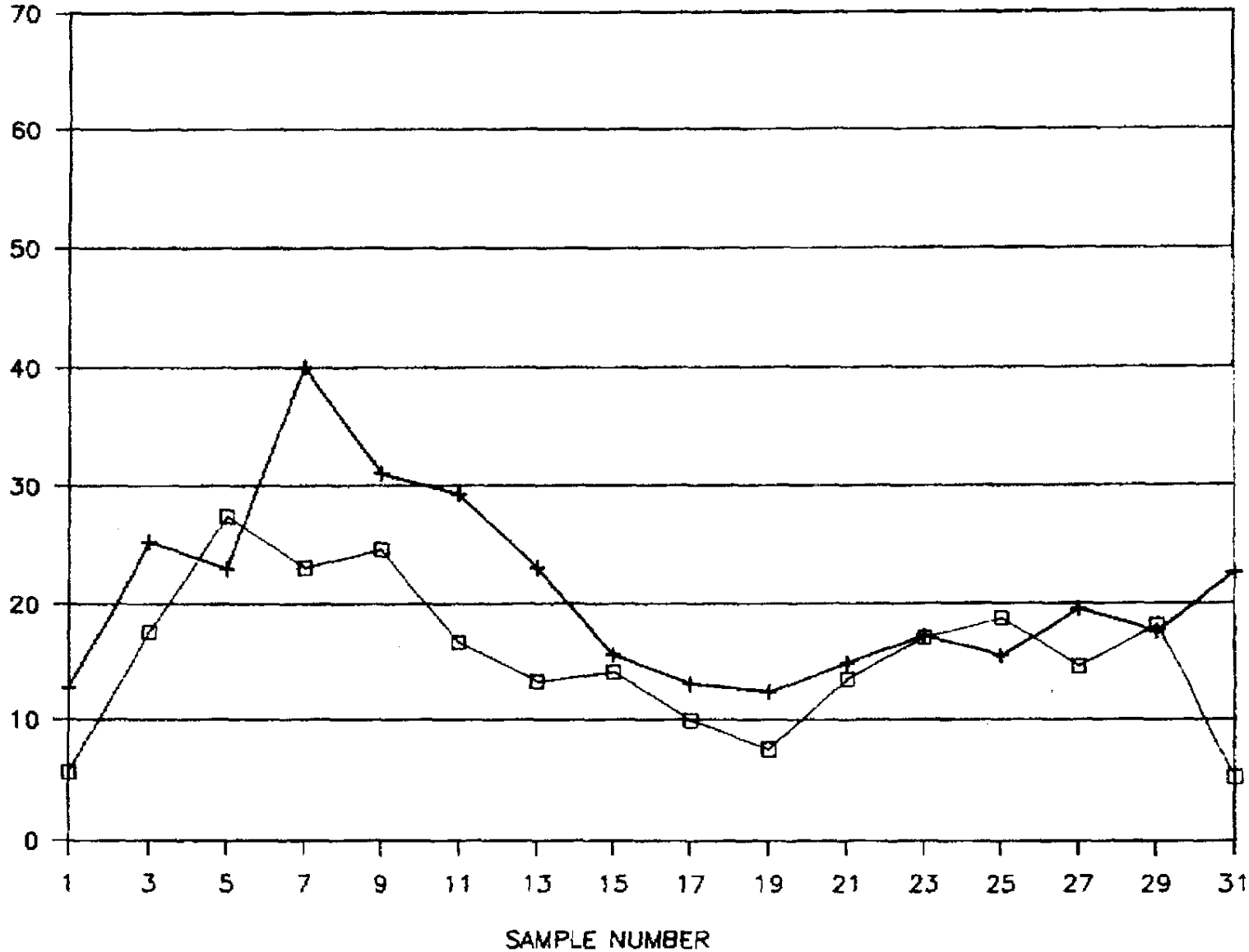
DEC-11-'89 MON 11:23 ID:LOOP VISTA TEL NO:719 494 5172 #816 P07

# LEAD CONCENTRATION (ppm)

IN EXPANSION SITE SOLIDS

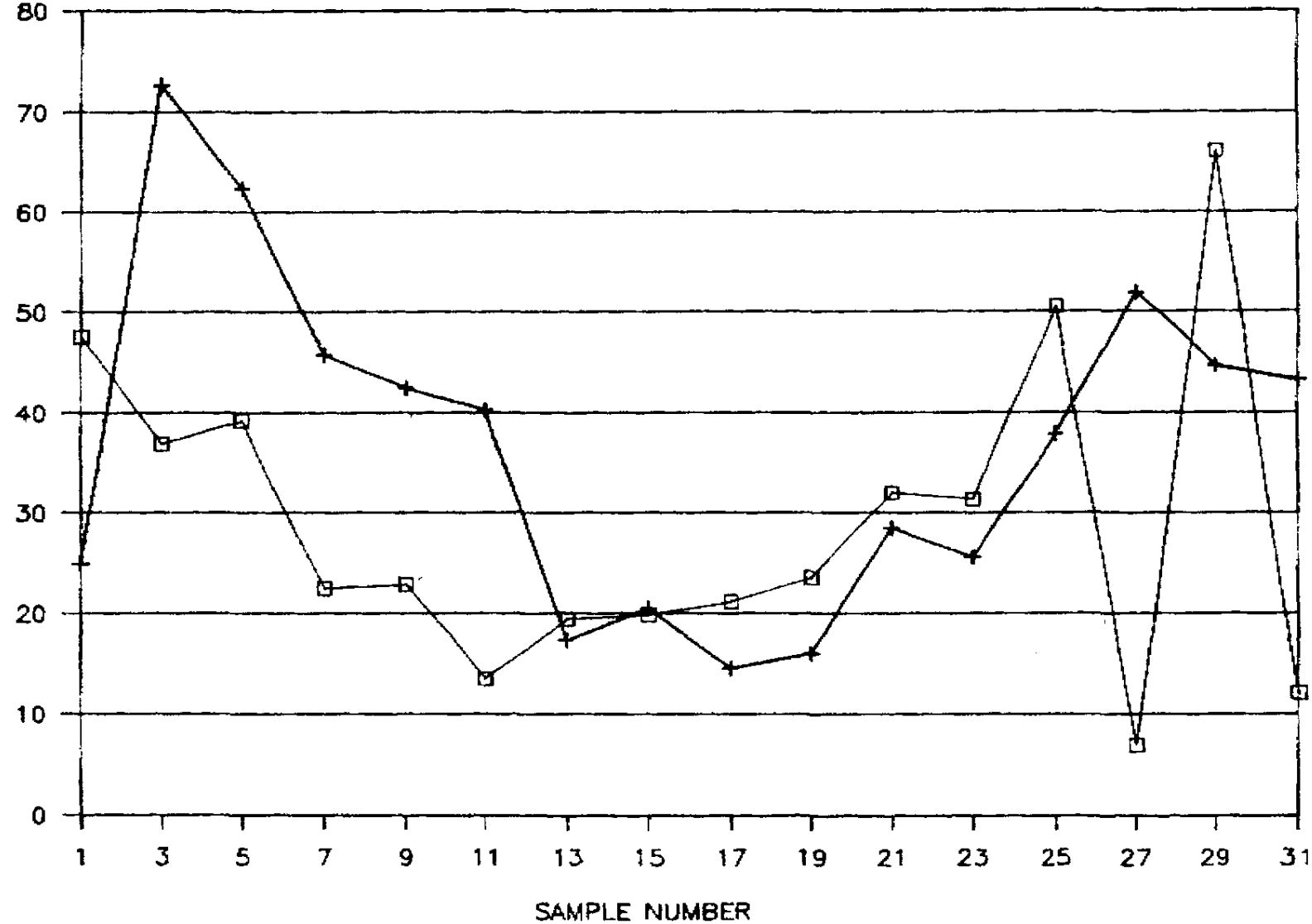



VVV 0000073448

DEC-11-'89 MON 11:23 ID:LOCAP VISTA TEL NO:318 494 5172 #816 P09

# ZINC CONCENTRATION (ppm)

IN EXPANSION SITE SOLIDS

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## Summary of Results

| Date Taken | Sample# | Laboratory | Test | VOC ug | Chromium ppm | Lead ppm | Zinc ppm | PH |
|---|---|---|---|---|---|---|---|---|
| 09/05/89 | #1 | Vista/ LCCP | Acid Digestion | --- | 50 | No | No | 8.8 |
| | #4 | Vista/ LCCP | Acid Digestion | --- | 48 | No | No | 7 |
| | #2 | Vista/ VCM | GCMS | 4.01 Methylene Chloride | -- | -- | -- | -- |
| | #3 | Vista/ VCM | GCMS | 3.6 Methylene Chloride | -- | -- | -- | -- |
| 09/08/89 | #1 | Core | EPTOX | --- | .45 | -- | -- | -- |
| | #2 | Core | EPTOX | --- | <.0.01 | -- | -- | -- |
| | #3 | Core | EPTOX | --- | <.0.01 | -- | -- | -- |
| | #4 | Core | EPTOX | --- | <0.01 | -- | -- | -- |
| 09/11/89 | #1* | Core | EPTOX | --- | .39 | .20 | .29 | -- |
| | #4* | Core | EPTOX | --- | .41 | <.09 | .08 | -- |
| 09/14/89 | #4' | Core | EPTOX | --- | <0.01 | -- | -- | -- |
| | #12' | Core | EPTOX | --- | <0.01 | -- | -- | -- |
| | #16' | Core | EPTOX | --- | <0.01 | -- | -- | -- |
| | #24' | Core | EPTOX | --- | <0.01 | -- | -- | -- |

**NOTES:**

- 1* and 4* represent samples 1 and 4 taken on 9/5/89.
- Samples 4', 12', 16', 24' represent those samples taken while determining the extent. They correlate with samples 4, 12, 16, 24 shown on the sketch page.
- The Vista LCCP Laboratory analyzed the samples using the acid digestion procedure. According to the EPA guidelines, however, the EP Toxicity test must be used to determine if the material is hazardous. When the EP Toxicity test was used, the levels were well below the 5 ppm limit.
- For more information, refer to the appendix. Each individual report is presented.

## Conclusion

In summary, an extensive analysis of the soil in the area of construction was performed. The material was determined to be a non-hazardous solid waste. No VOC's were present, and the metal concentration was well below hazardous levels. Using the EP Toxicity procedure the highest chromium level was .45 ppm, while the limit is 5 ppm.

The extent of the material appears to be limited to the North third of the building, but the total metal content doesn't appear to be a function of coke. The depth of the coke is approximately 10' and was placed in a 15' wide trench going East-West across the building. Because of its pour bearing capability, the material was removed, disposed of, and replaced with fresh compacted clay. The foundation was constructed as designed.

If you have any questions or need additional information call me at 494-5146.

Mike Milanowski

c: **JF PDC CRD NER SWH JJ MGM - LCCP**
**WLM - Houston**

# APPENDIX