BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
PROPOSED AMENDMENTS TO CLEAN	)	
CONSTRUCTION OR DEMOLITION	)	**R12-9**
DEBRIS FILL OPERATIONS (CCDD):	)	(Rulemaking – Land)
PROPOSED AMENDMENTS TO 35Ill.	)	
Adm. Code 1100	)	

COMMENTS ON FIRST NOTICE BY MICHAEL RAPPS

ON BEHALF OF IRON HUSTLER EXCAVING, INC.

These comments follow the proposal given in first notice and especially the Board's proposal to rely upon the most conservative TACO Tier 1 concentrations of chemical constituents as a method for determining Maximum Allowable Concentrations (MACs). To be certain, the statute that directs the Agency and the Board to develop MACs is ambiguous on its face requiring on one hand that the MACs reflect levels ".....that (do not) pose a threat to human health and safety and the environment" and on the other hand not exceed local background levels ".....where the soil is used as fill material." TACO Tier 1 fulfills neither of these directives. With respect to the local background requirement, a single set of MACs is fulfilling only if background conditions are uniform throughout Illinois, a condition not shown in evidence in the R12-9 record. Moreover, the ongoing saga of CCDD in the statutes and in related rule-makings stems in large part from the disparity in background soil chemistry that exists from one place to another. Chicago soils in contrast to all others is the most prominent example.

The Tier 1 numerical limits and the state-wide background levels in Il. Adm. Code 742 (i.e., TACO) were not particularly controversial during the TACO rule-making process. This is because, in light of the available Tier 2 and Tier 3 options, they did not represent a bright line test. In contrast, the proposed MACs are a bright line that, as given in the Chicago Public Building Commission testimony, likely carries a heavy economic cost.

TACO Tier 1 levels were not vetted during the TACO rule-making; they were accepted as proposed with the full knowledge that they were ultra conservative values to be used in what was then a revolutionary departure from previous cleanup standards. The regulated community was delighted with the change. Consequently, there were few if any objections to the use of a single chemical concentration (the median value of a range of values) to represent Illinois background conditions. Nor were there any objections to the presentation of Tier 1 values that in some cases exceed background conditions in parts of the state.

The Tier 1 levels in TACO matter less in the application of TACO than they do in this instance where they will label as "contaminated" many materials that are essentially harmless. This is particularly true of compounds that have been randomly distributed as particulate matter such as polycyclic aromatic hydrocarbons (PAHs) and certain heavy metals, e.g. lead oxides. As Dr. William Roy has testified, many such compounds have little or no water solubility and are readily attenuated in soil. Further, their distribution in the form of particulates rather than as liquid or gaseous fluids makes it difficult to establish a true background condition. Think of this as finding cinders in a pile of dirt wherein the cinders represent PAHs. This is easier to envision in the attached graphical representations of the concentrations of PAHs and the heavy metal lead in Chicago soils as determined by Kay, et. al. (2001-2002). It shows a very broad distribution of the PAHs and metals that play havoc with the prospect of establishing a meaningful background. Studies referenced by Dr. Roy in his pre-filed testimony tend to show the same degrees of variability. In short, less is known about this phenomenon than is needed.

As a final note, a pile of dirt, or a truck full of dirt, cannot be properly characterized with a single sample. Depending upon size, a great many samples may be needed. The present price for a commercial laboratory soil analysis for all of the test parameters in the MAC list is in the vicinity of $1,500. I respectfully suggest that the Board consider focused analyses that limit test parameters to those most likely to be of concern.

Reference:

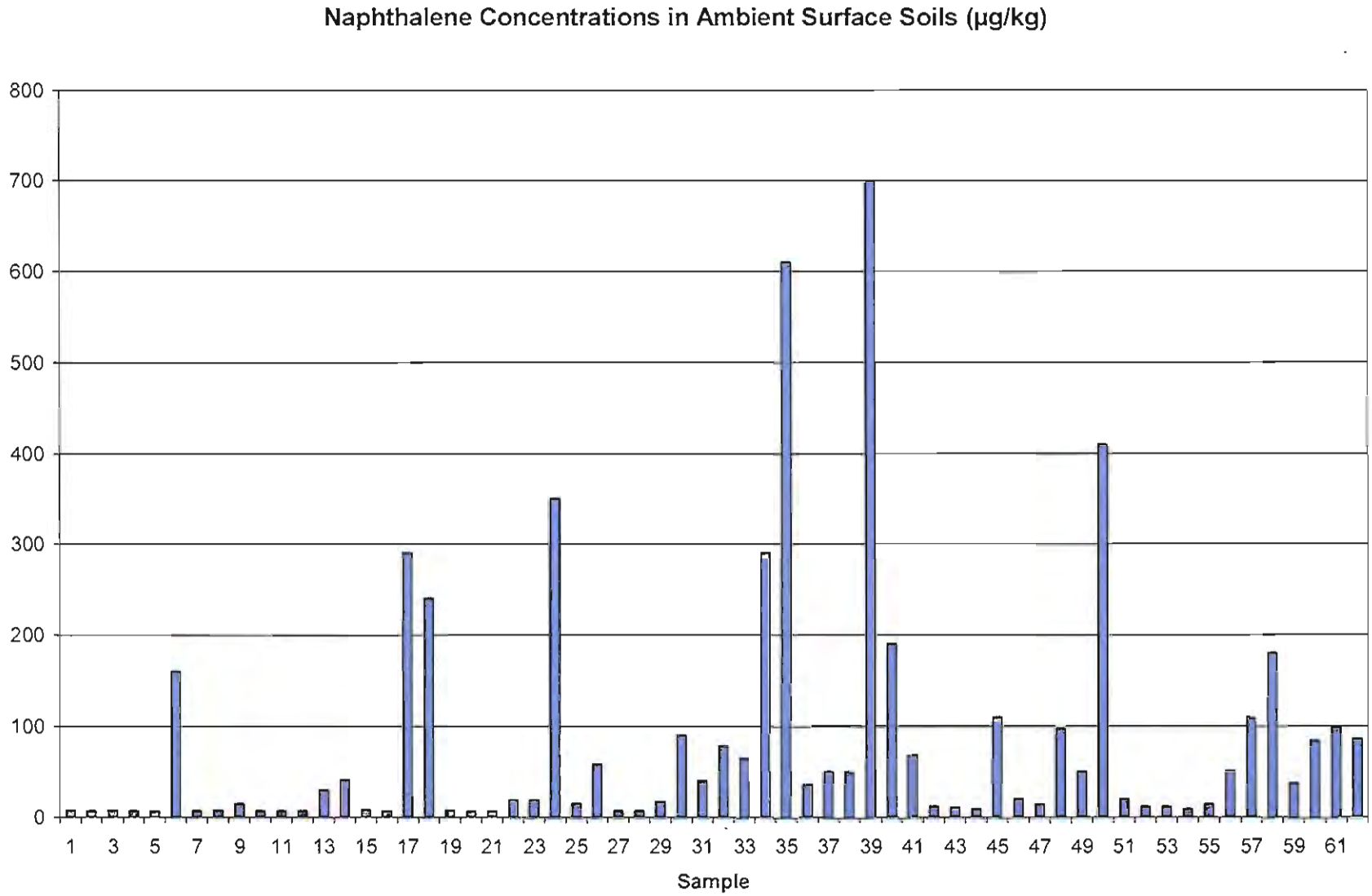
Kay,Robert T., Arnold, Terri L.,Cannon, William F.,Graham, David, Morton, Eric, and Bienert, Raymond, Concentrations of Polynuclear Aromatic Hydrocarbons and Inorganic Constituents in Ambient Surface Soils, Chicago, Illinois: 2001-02, Water-Resources Investigations report 03-4105, Urban, Illinois, 2003

Respectfully submitted;

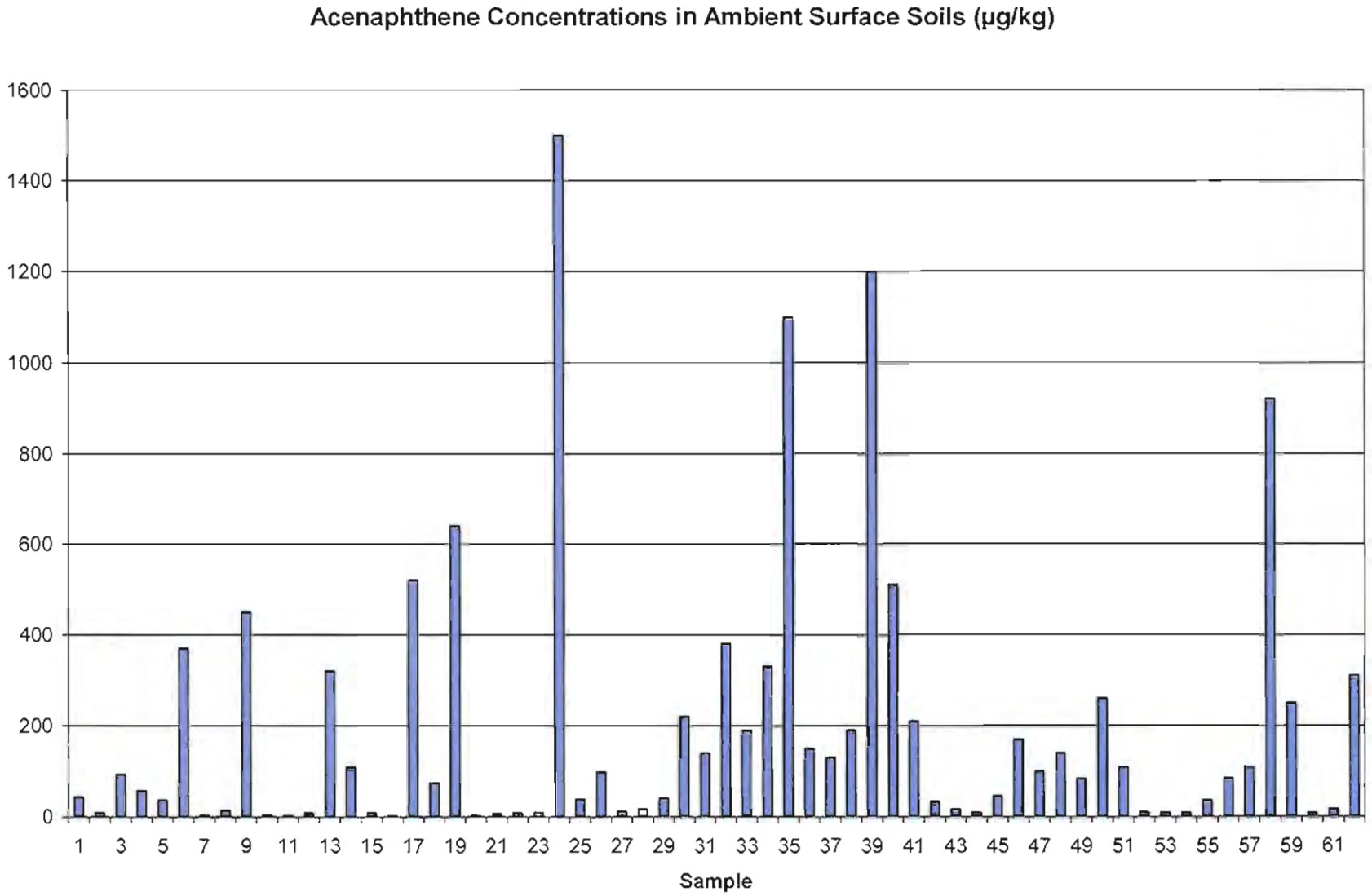
Michael W. Rapps, P.E.

President

Rapps Engineering & Applied Science, Inc.



Source: Concentrations of Polynuclear Aromatic Hydrocarbons and Inorganic Constituents in Ambient Surface Soils, Chicago, Illinois: 2001-02, Water-Resources Investigations Report 03-4105, USGS, Urbana, IL. 2003.



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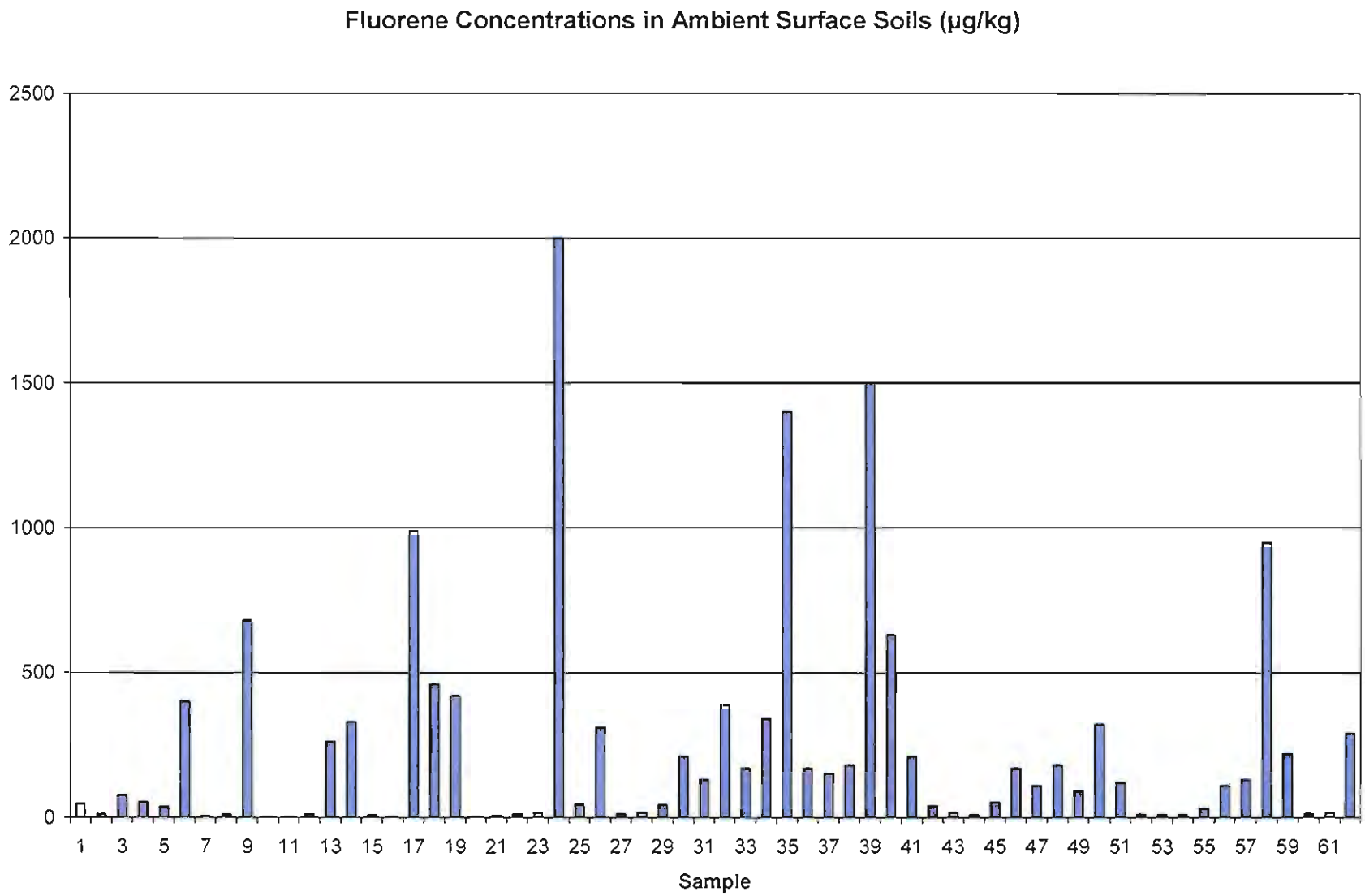

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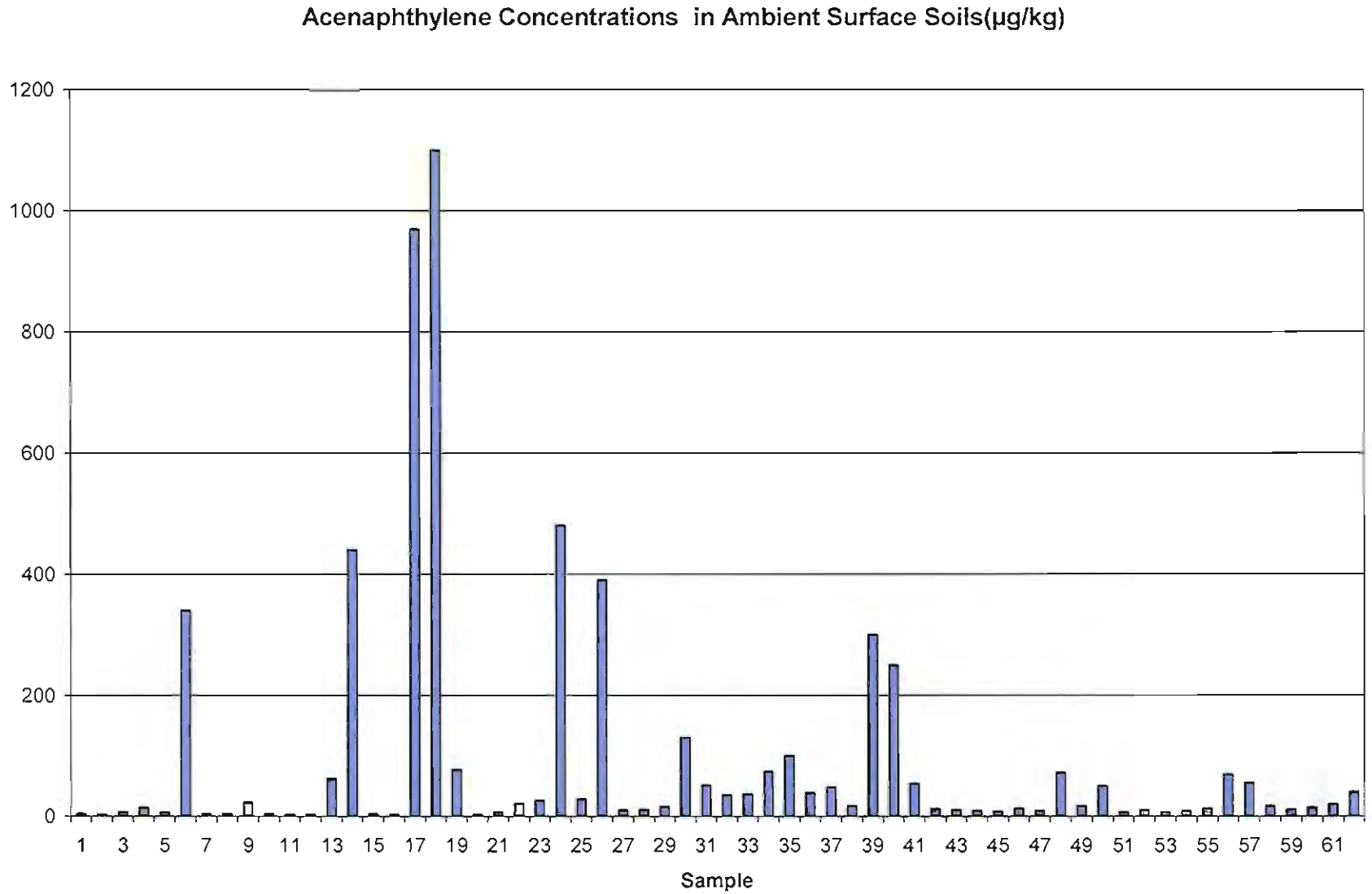

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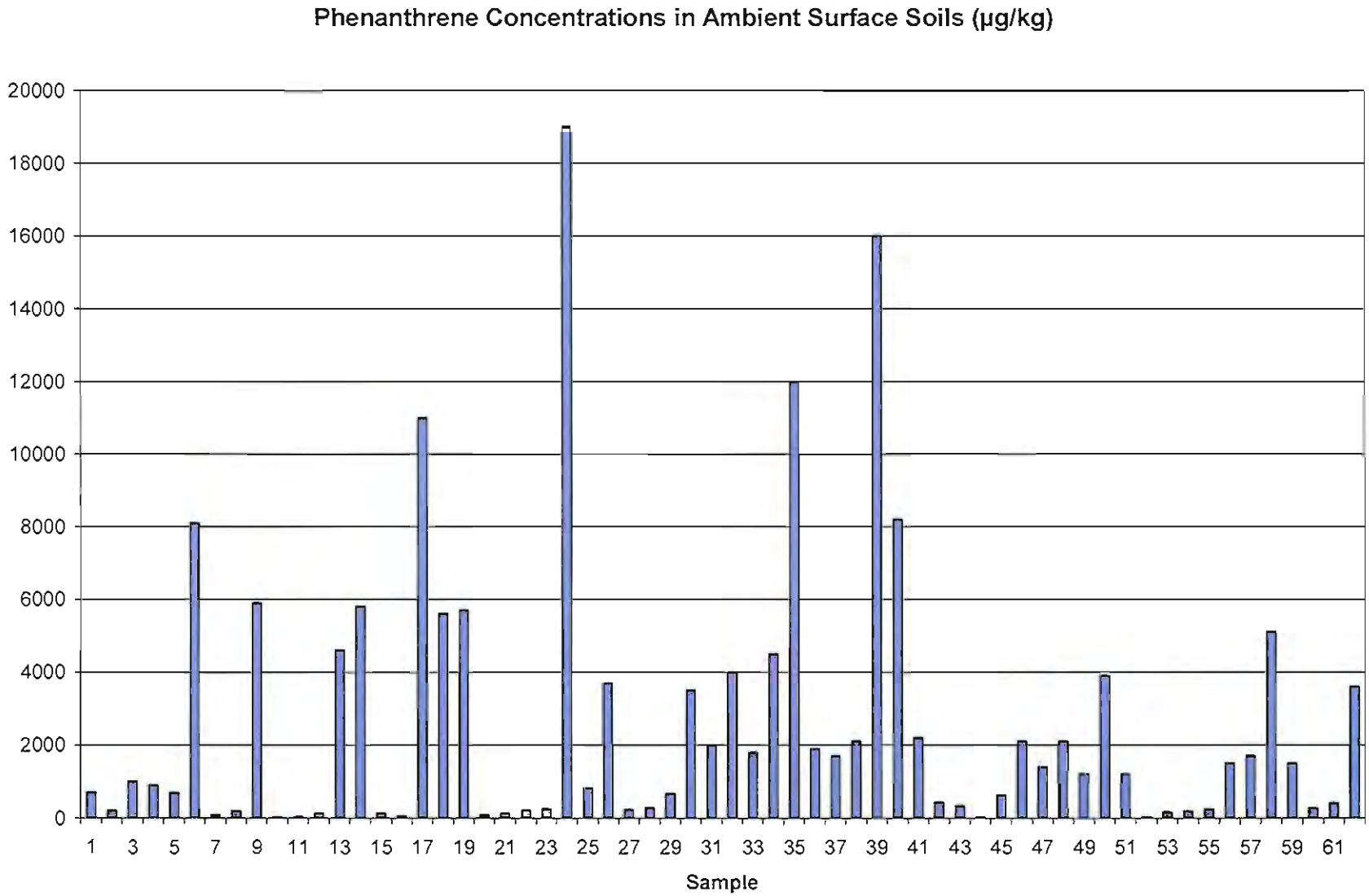

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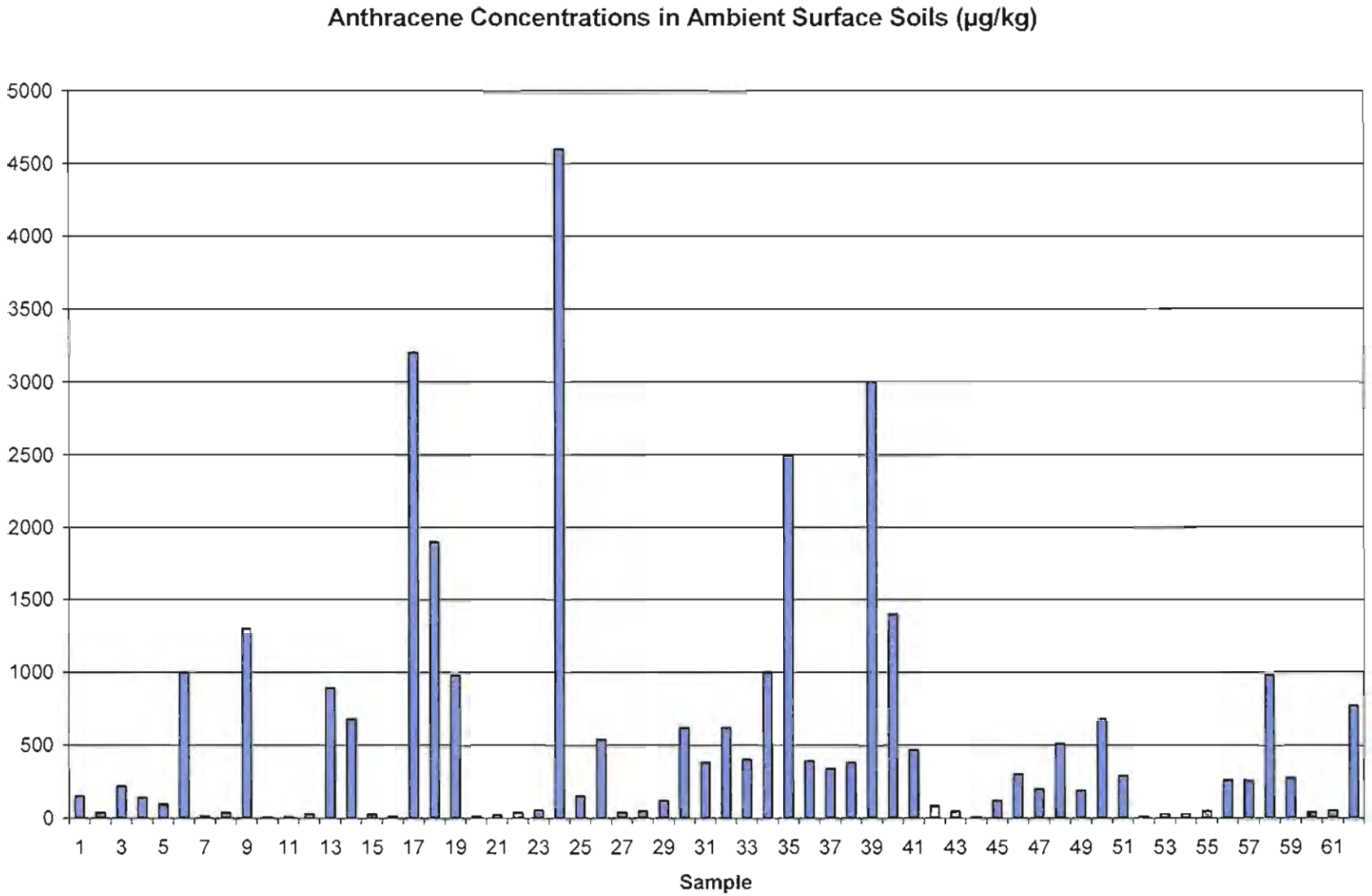

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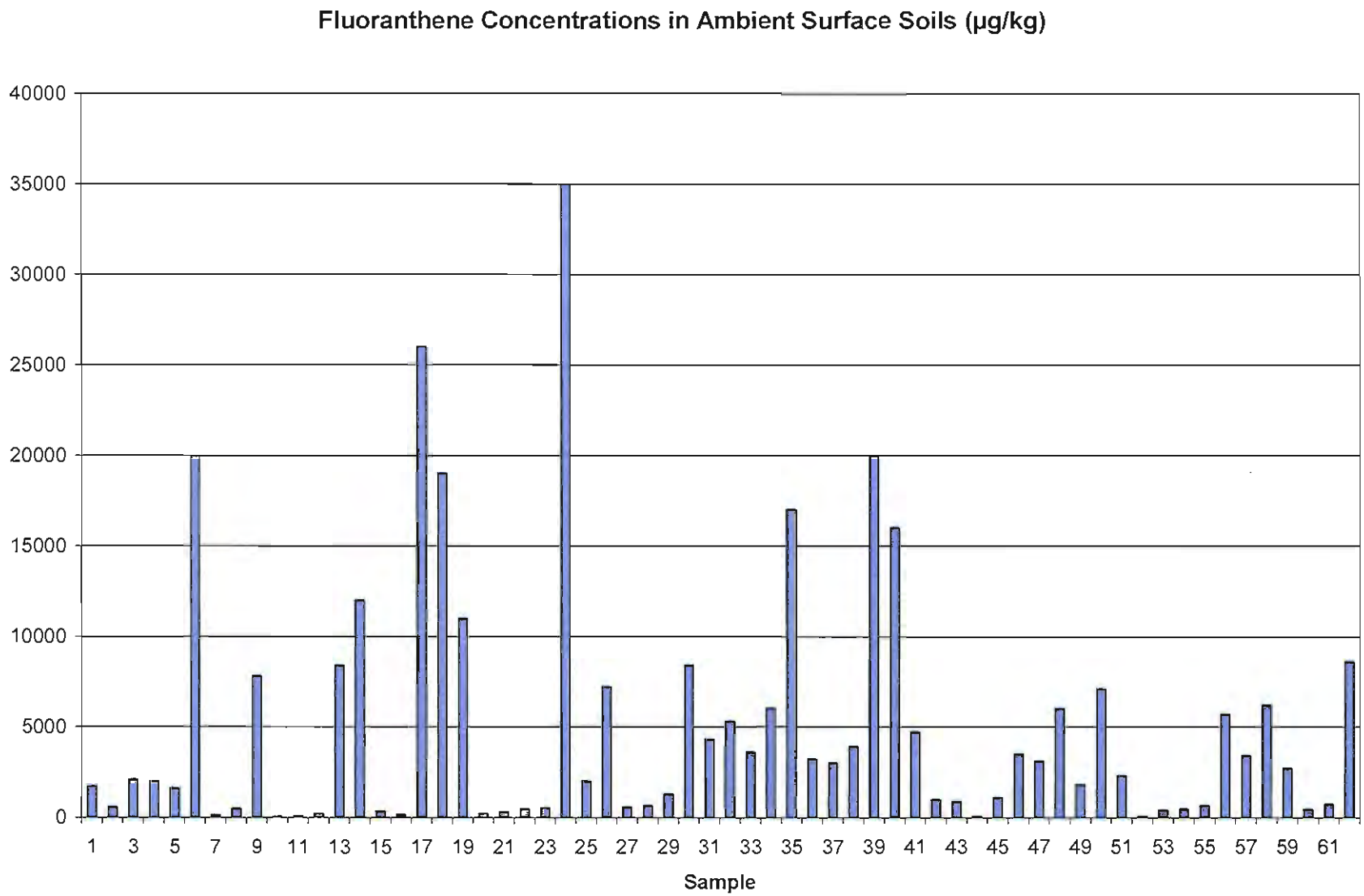

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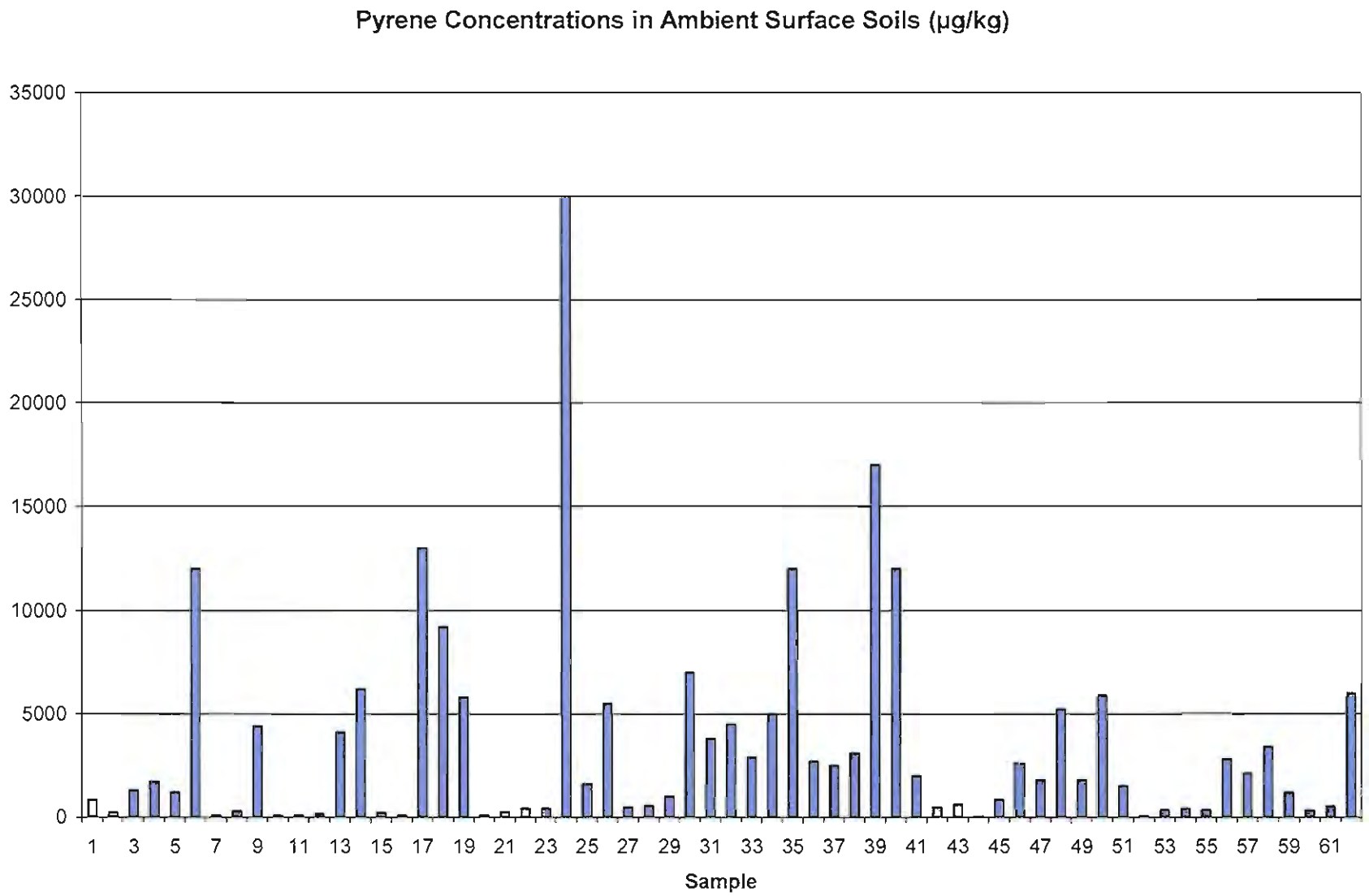

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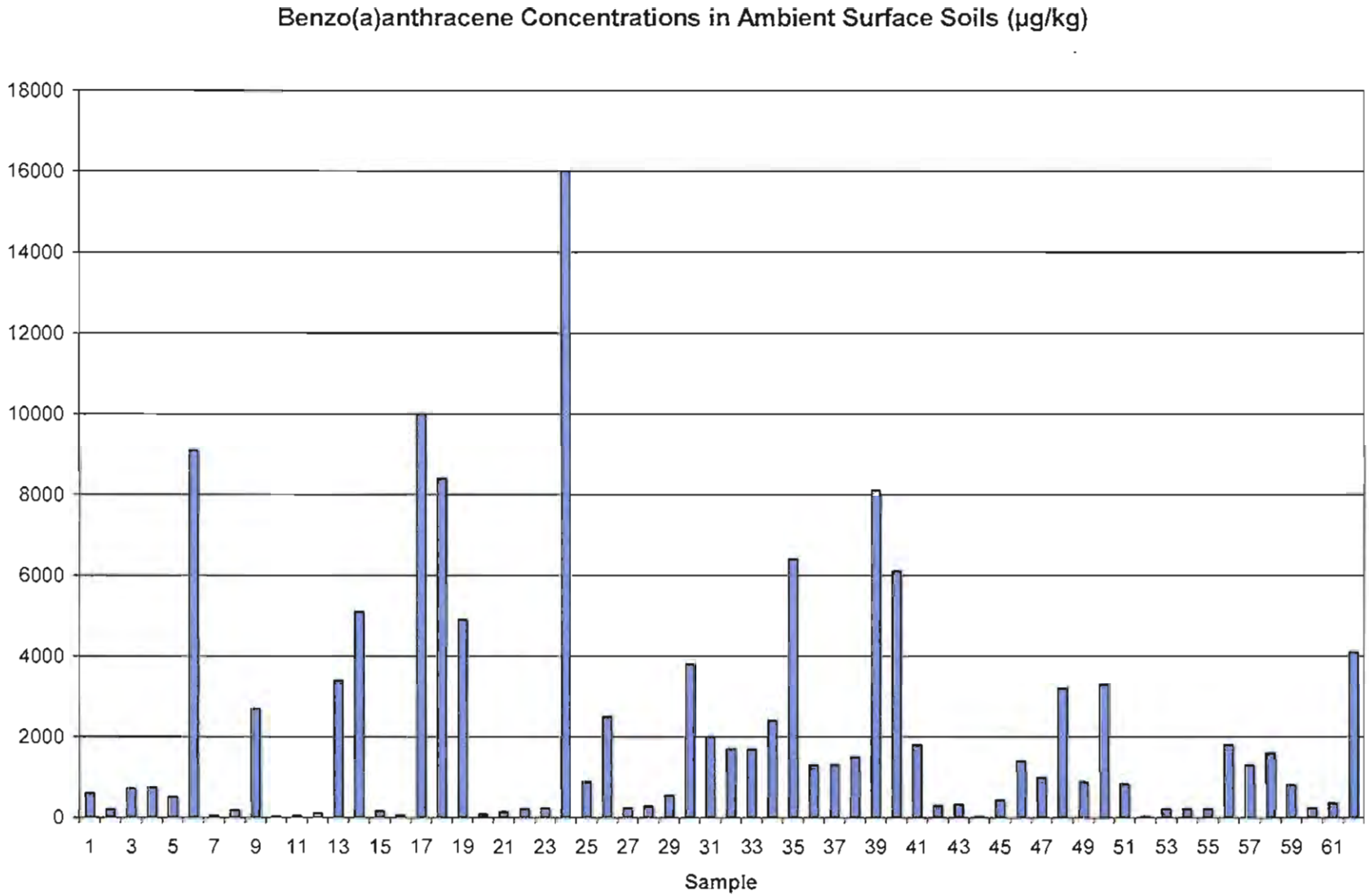

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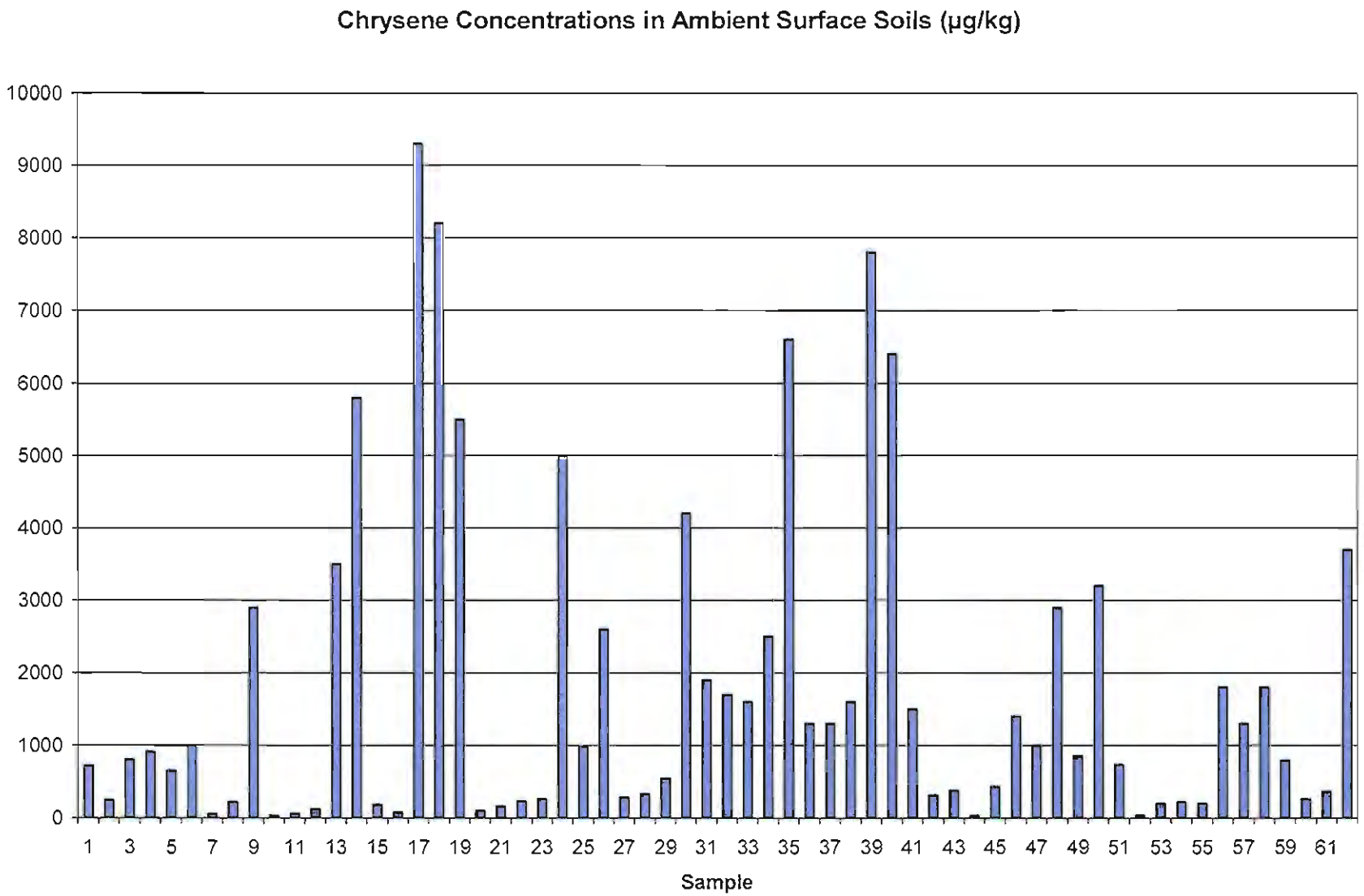

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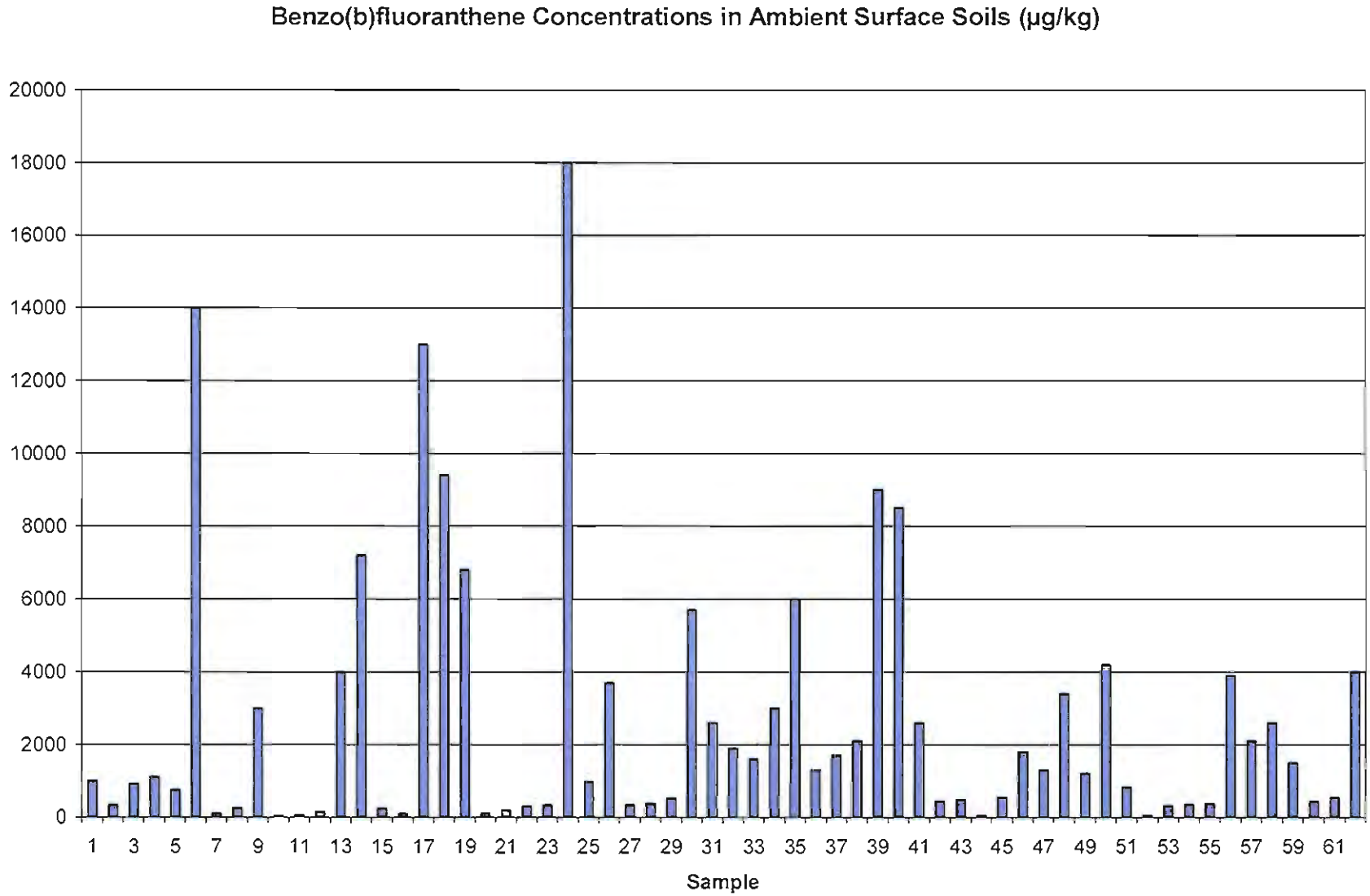

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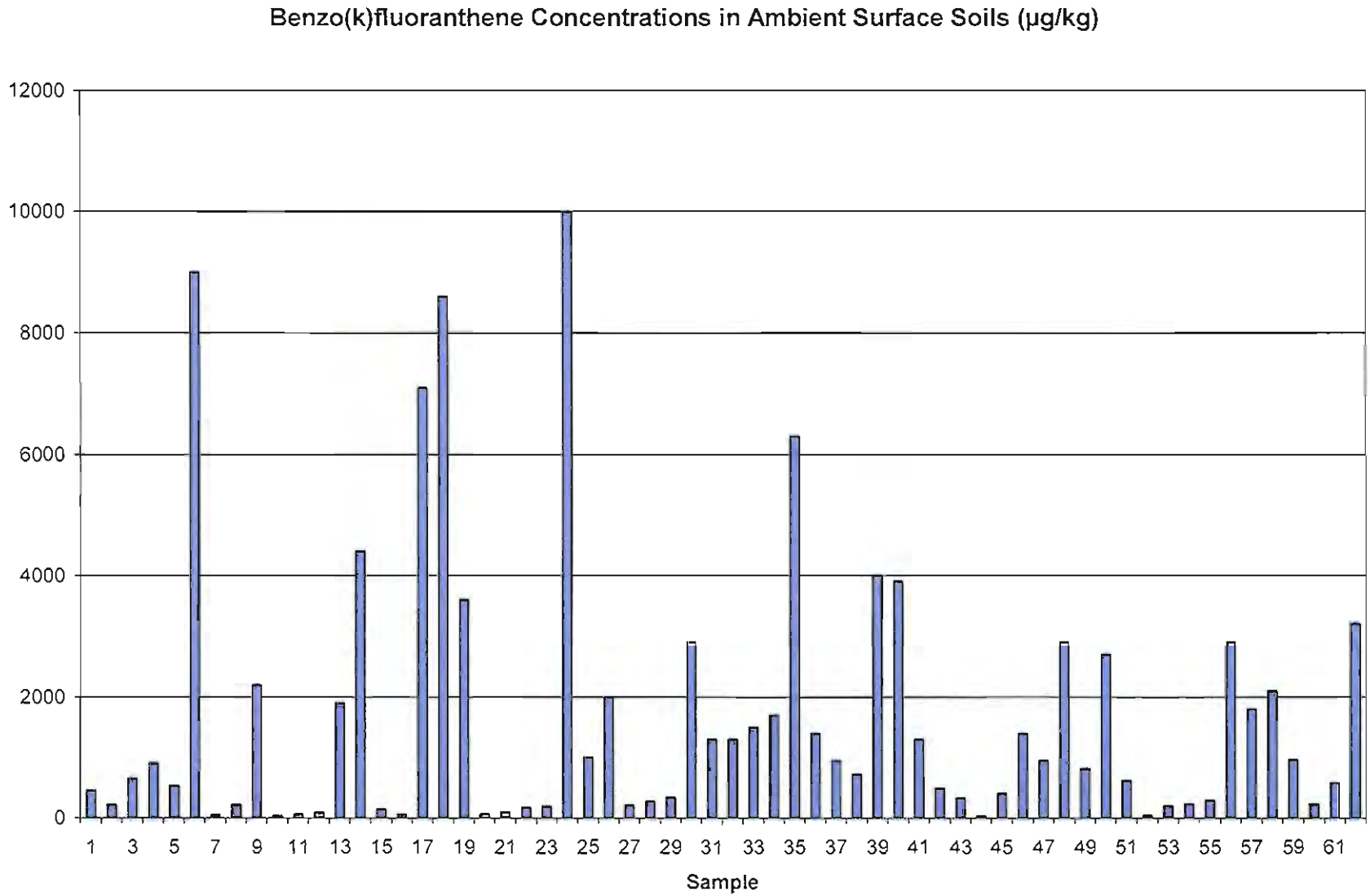

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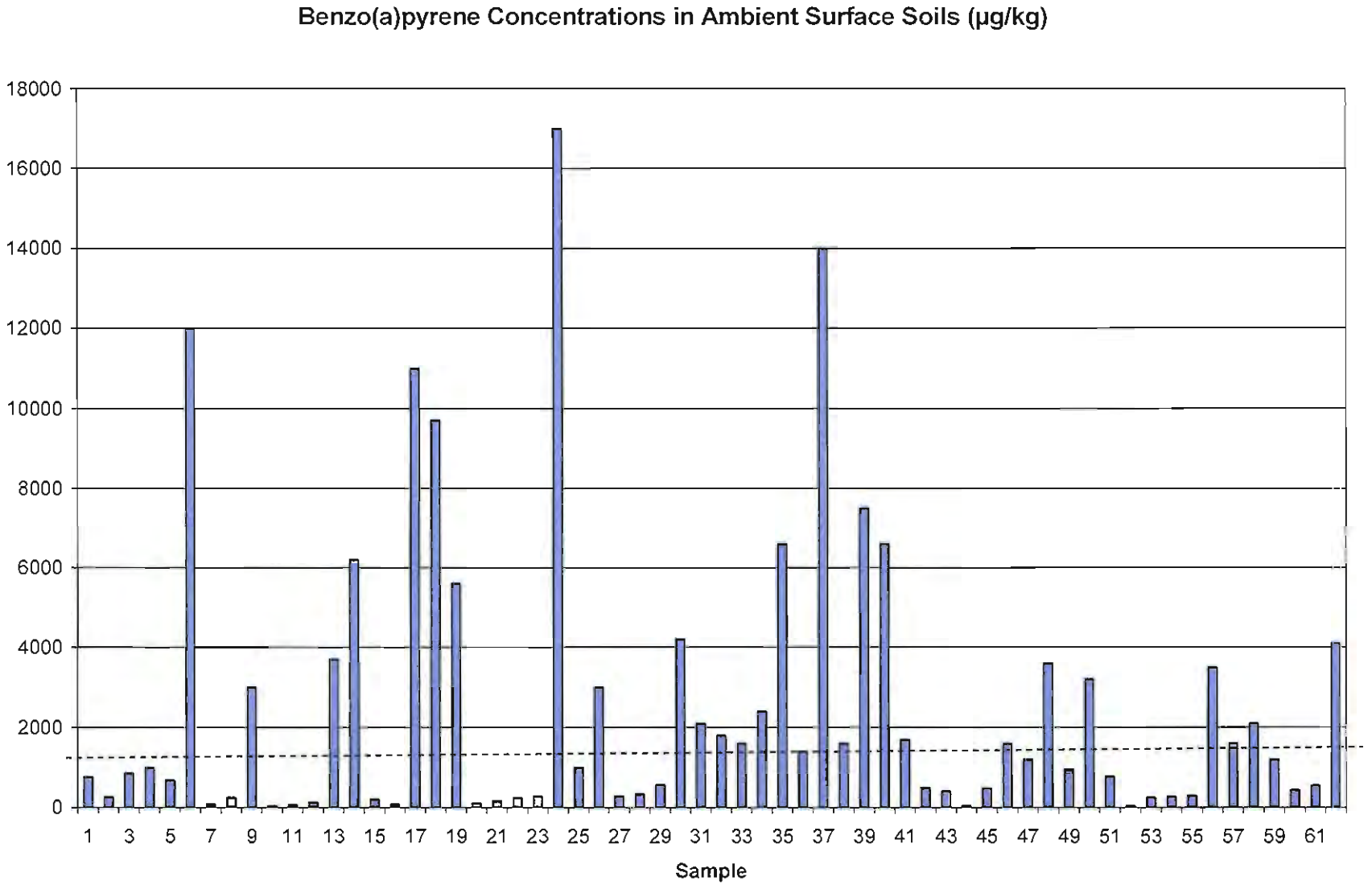

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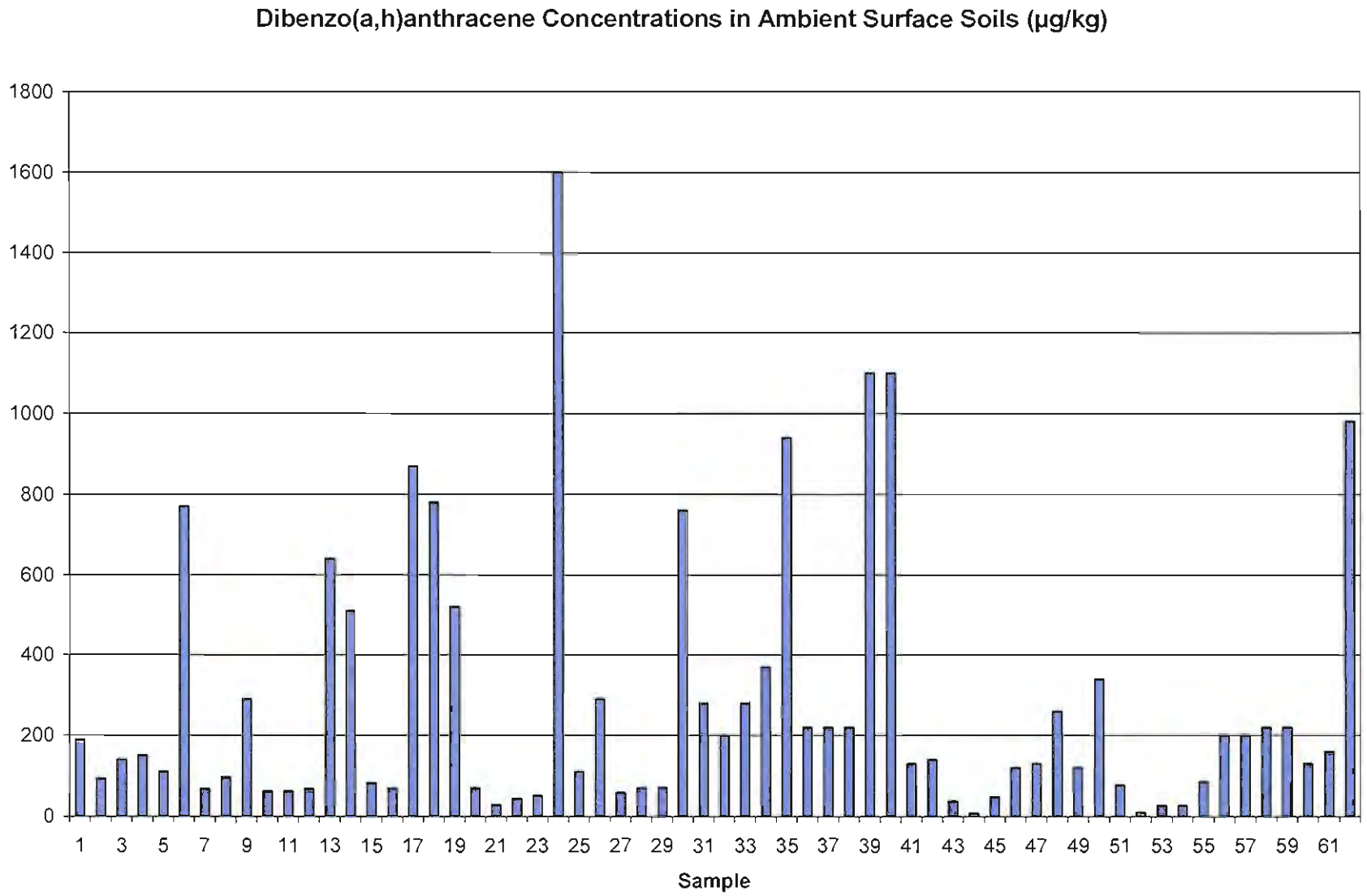

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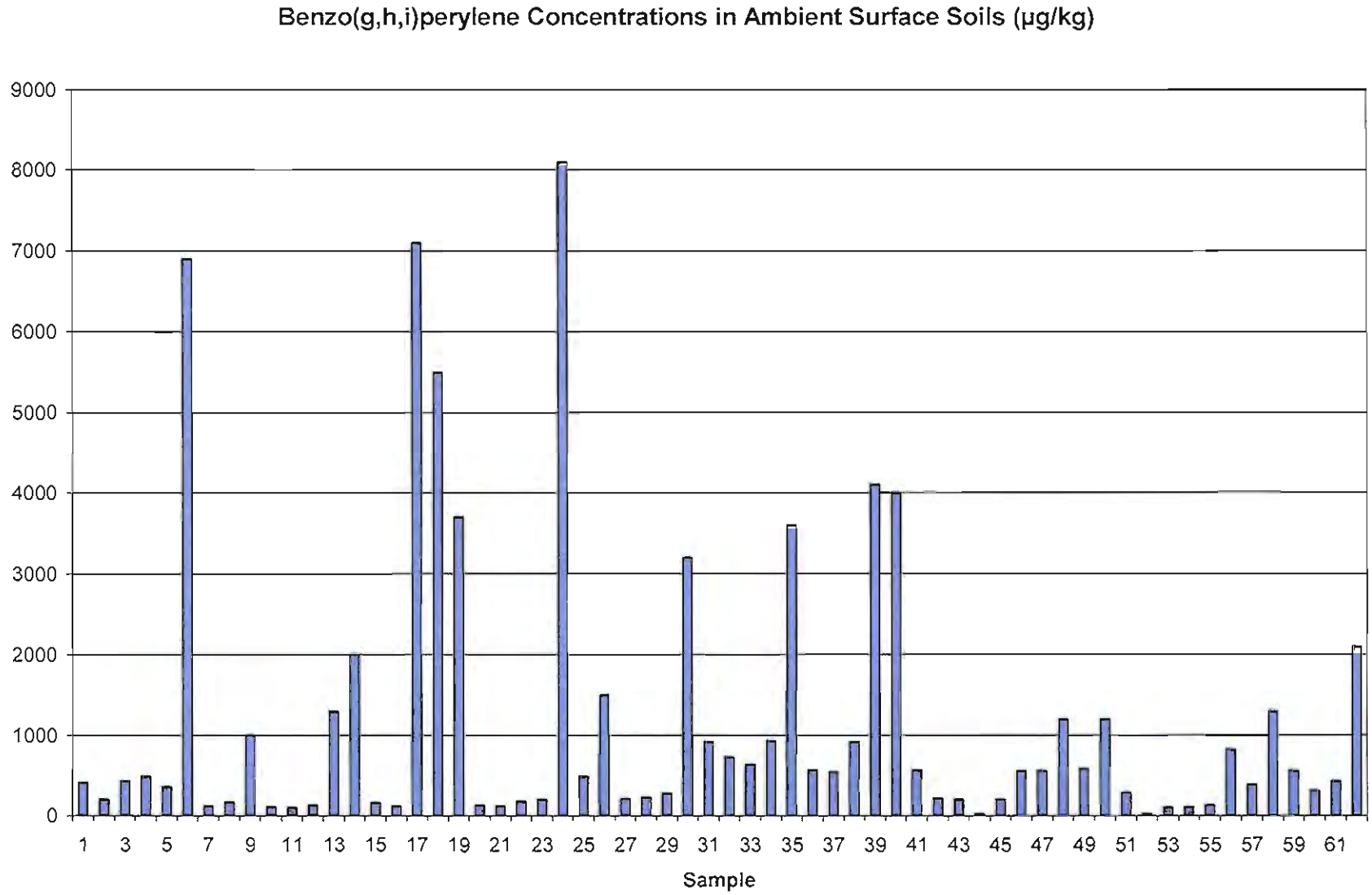

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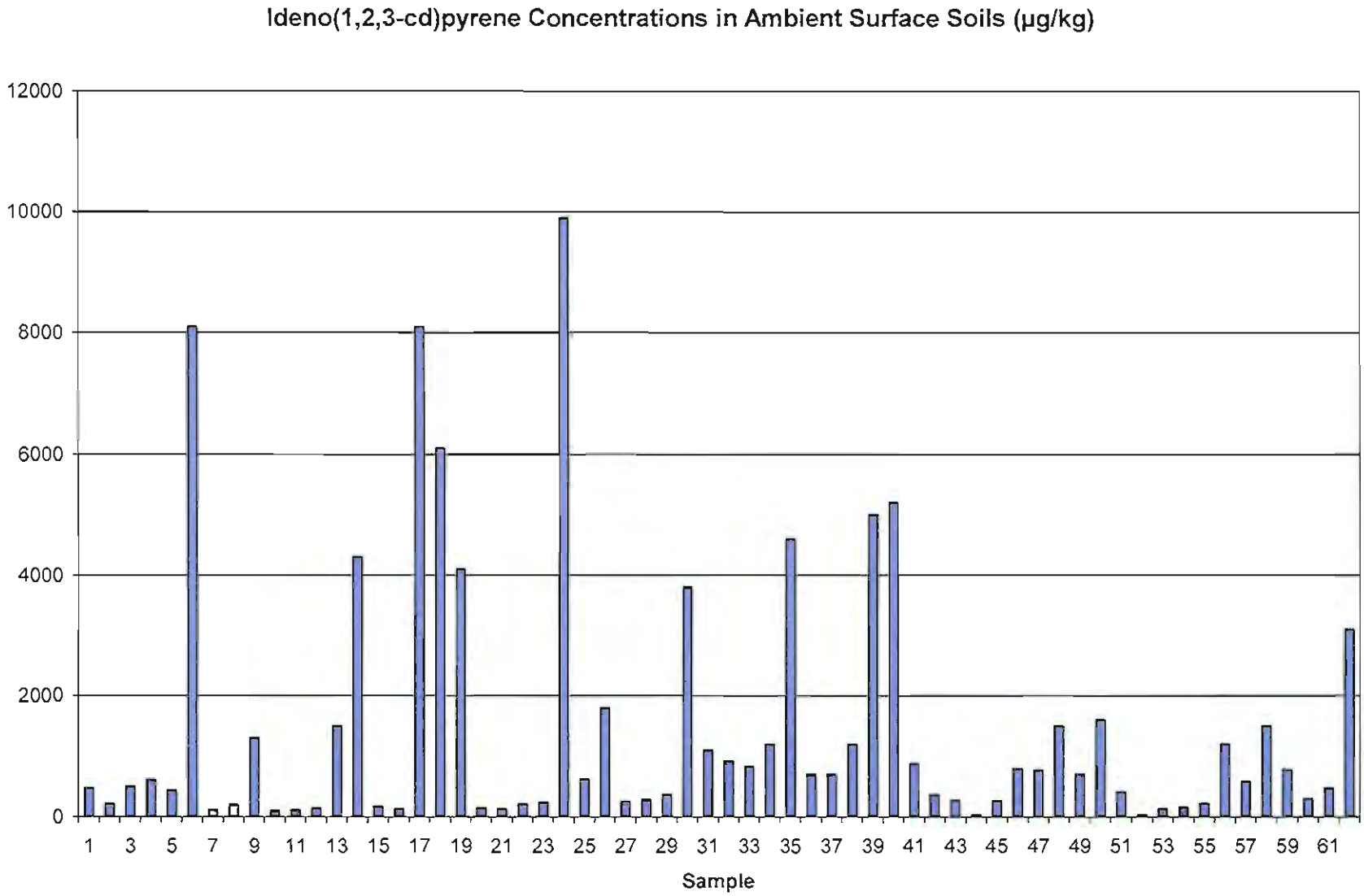

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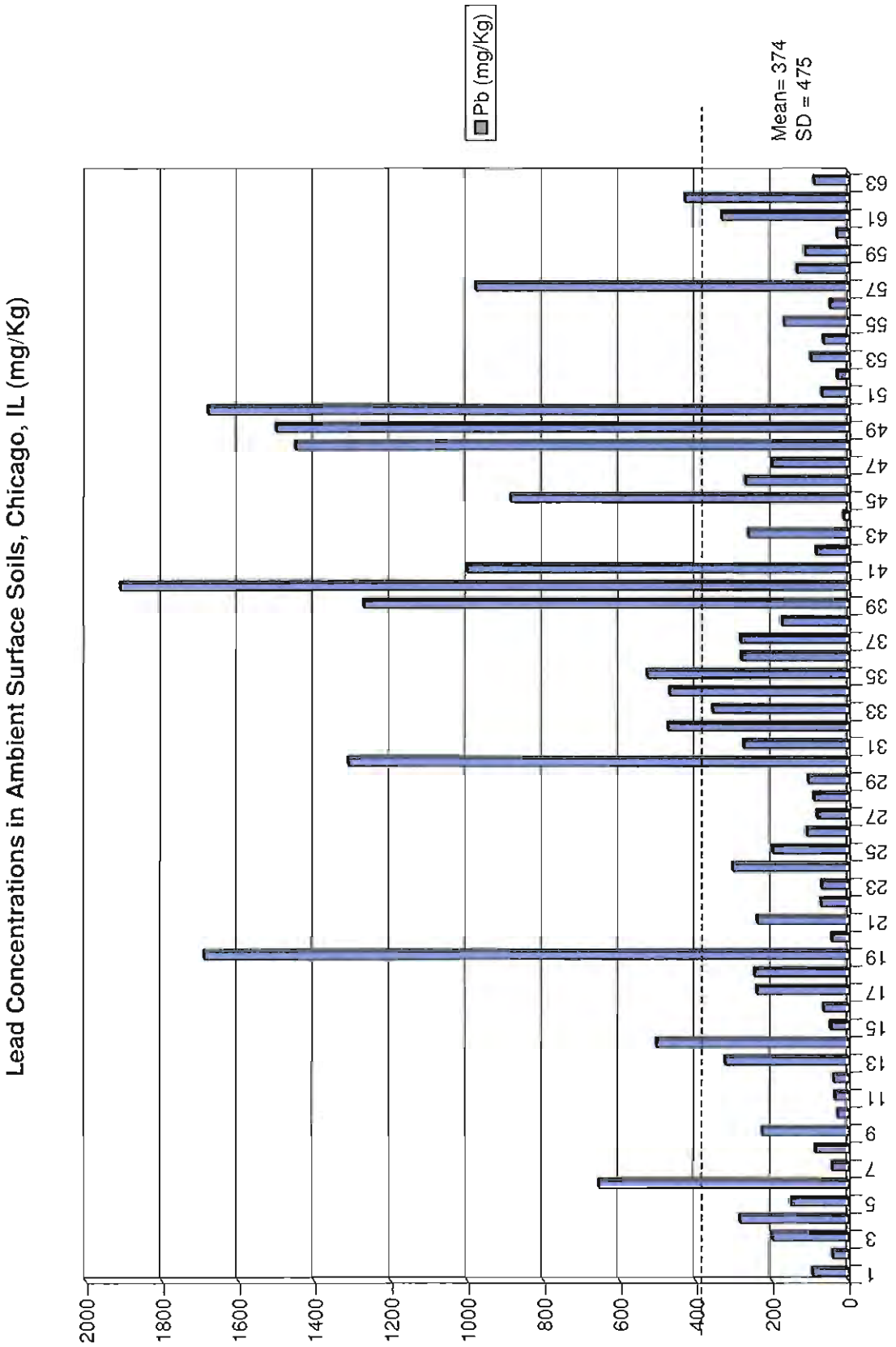
Lead Concentrations in Ambient Surface Soils, Chicago, IL (mg/Kg)
Pb (mg/Kg)
Mean= 374
SD = 475
2000
1800
1600
1400
1200
1000
800
600
400
200
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