North Country Environmental Services, Inc.

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February 20, 2009

Ms. Karlee Kenison, P.G.
New Hampshire Department of Environmental Services
Waste Management Division
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

Re: North Country Environmental Services, Inc.
Landfill Facility – Bethlehem, New Hampshire
Groundwater Performance Standards

Dear Ms. Kenison:

NCES (North Country Environmental Services, Inc.) is in receipt of your December 23, 2008 correspondence commenting on proposed performance standards for various monitoring points at our facility in Bethlehem, New Hampshire.

We have retyped your comments below represented in *italic print* with our responses in **bold print**. We wish to preface our response with the observation that, while we are prepared to work with NHDES in a sincere and good-faith effort to achieve background conditions in the release detection wells, the scientific evidence demonstrates beyond serious question that there has been no release from the containment system of landfill.

NCES maintains that NHDES has no lawful authority to deny modifications to its Stage IV standard permit based on the contaminants in the release detection wells. As a result, NCES disputes and will promptly contest any nexus NHDES may assert between NCES's pending application to modify the Stage IV standard permit and NCES's efforts to bring contaminant concentrations to background levels in the release detection wells.

Proposed Groundwater Performance Standards Near Well Couplets MW-402 & MW-403:

The Department agrees in concept with monthly monitoring until sampling confirms that a downward temporal trend is established. However, due to the variability of the water quality data, more than two consecutive rounds will be required to determine that there is a downward trend in VOCs and bromide concentrations. As indicated above, groundwater quality must be restored to background concentrations. During implementation of the corrective action plan, the Department may be able to conclude that the source has been identified and effectively remediated, but continued groundwater monitoring under the Corrective Action Plan would still be required until groundwater quality is restored to background concentrations for VOCs and bromide. Depending upon the information collected during the remediation of the area in the vicinity of the leachate collection system and whether a source area (e.g. contaminated soil) is discovered and

removed, NCES may need to install one or more additional monitoring wells in that area to monitor groundwater quality. The Department expects that such additional monitoring well(s) would provide valuable information on the effectiveness of the remedial action.

The Department does not concur that 0.4 mg/L of bromide is the appropriate target concentration to demonstrate that background has been achieved. NCES will need to look at individual well histories to see what the actual background concentrations were in the affected wells. In previous discussions between NCES and the Department, we agreed that background bromide concentrations at the site ranged between 0.1 and 0.4 mg/L, not that 0.4 mg/L should be identified as the background concentration to be applied to all wells. Future monitoring results will be reviewed closely to assess trends.

The source of the VOCs and bromide detected in the 402/403 series wells is from prior leachate handling practices at the site. The maximum concentration for total VOCs at any of these wells was 87 mg/l in 2004 and we have since experienced an overall downward trend in total VOC concentrations (please refer to the attached graphs) that demonstrates the cause has attenuated and is not from a chronic source. Recent sampling confirms that in three of the four 402/403 series wells there is no detection of VOC's, further supporting our conclusions.

Nonetheless, we have worked collaboratively with the NHDES to pursue and implement a practical and responsible plan to minimize the risk of future discharges and protect the environment at the site. This plan is consistent with Env.-Or 703.15 (in its entirety), and was reviewed and approved by the Waste Management Division in May 2008. We are in the final stages of this project and hope to have it completed by September 1, 2009.

With respect to background concentrations and based upon historical data, we propose the following;

Location	proposed total VOC (mg/l)	Proposed bromide concentration (mg/l)
MW-402L/LR	≤10.0	Non-detect (< 0.1)
MW-402U	≤10.0	≤ 0.1
MW-403L	≤10.0	Non-detect (< 0.1)
MW-403U	0.0	≤ 0.1

Subject to our prefatory remarks we propose to continue to collect groundwater samples from wells MW-402U and MW-403L for VOCs and bromide analysis monthly until such time as the above background levels are obtained.

Proposed Groundwater Performance Standards Well B-913M:

As with the proposal for well couplets MW-402 and MW-403, the Department agrees in concept to monthly monitoring until sampling confirms that a downward temporal trend is established. However, because of water quality variability, more than two consecutive rounds will be required to demonstrate this.

The Department does not concur that 0.4 mg/L of bromide is the appropriate target concentration to demonstrate that background has been achieved. NCES will need to look at the individual well history to see what the actual background concentration range was in this affected well and that should be the target goal to establish that concentrations have returned to background conditions that are specific to each well. Future monitoring results will be reviewed closely to assess trends in water quality over time..

Based upon an analysis of historical bromide concentrations in B-913M, non detection of bromide is proposed as a background condition at this location.

Subject to our prefatory remarks, NCES proposes to continue to collect groundwater samples from well B-913M monthly until such time as the above background level is verified and this performance standard is met.

Proposed Groundwater Performance Standards for Wells B-919U, B-921M, and B-921U:

We do not have sufficient information to agree with your conclusion that the dichlorodifluoromethane detections in B-919U and B-921M are related to the historical occurrence of this compound in the former unlined landfill area located upgradient of these wells. As such, a decreasing trend of dichlorodifluoromethane (DCDFM) in wells B-919U and B-921M needs to be confirmed. If a decreasing trend does not continue, further evaluation of the presence of this compound will be required.

NCES agrees that a decreasing trend for DCDFM concentrations in the above wells should be confirmed and we propose to add wells B-919U and B-921M to the monthly sampling program to provide additional data.

Subject to our prefatory remarks, we propose to collect samples monthly for DCDFM until such time as a downward trend can be verified.

With regard to bromide in B-921U, future data will need to be closely evaluated to demonstrate that the cause of the bromide in this well is consistent with the construction-related release scenario presented by NCES. If a downward trend toward the background concentration range previously shown for this well is not demonstrated by future sampling results (2 years of data), then further evaluation of the presence of bromide in this well/area will need to be provided.

Based upon an analysis of historical bromide concentrations in B-921U, non detection of bromide is proposed as a background condition at this location.

Subject to our prefatory remarks, as with other locations, we propose to collect groundwater samples for bromide analysis from well B-921U monthly until such time as the background levels are obtained.

Proposed Groundwater Performance Standards for Well B-304UR:

With regard to bromide in B-304UR, no additional information has been provided that explains the occurrence of elevated bromide in this well. Rather, NCES proposes to increase the sampling frequency to monthly for bromide until two consecutive rounds of sampling confirm that the bromide levels have dropped below 0.4 mg/L.

Due to the variability of the water quality data, more than two consecutive rounds will be required before the Department can conclude that there is a downward trend in bromide concentrations. Further, the Department notes that the July 2006 and November 2006 sampling data for this well indicate bromide at concentrations of .269 mg/L and .251 mg/L, respectively. As such, the target background concentration for this well should be less than the proposed 0.4 mg/L value.

The elevated bromide can indicate a potential release. Therefore, in order to characterize the groundwater in this well and determine the source of the bromide release, the Department requests that analysis for VOCs be added to the monthly sampling. Future data will need to be closely evaluated to demonstrate that the cause of the bromide in this well is not the result of a landfill liner leak/failure.

Based upon an analysis of historical bromide concentrations in B-304UR, NCES proposes a background concentration level of 0.20 mg/l be established at this location.

Subject to our prefatory remarks, we propose to collect groundwater samples from well B-304UR (to include volatile organic compounds and bromide analysis) monthly until such time as the above background condition is established for bromide and a downward trend for total VOC's can be verified.

Conclusion

Consistent with the requirements of a corrective action plan under the groundwater release detection permit rules (Env-Or 700) and in accordance with the site's Groundwater Management and Release Detection Permit GWP-198704033-B-005, the final groundwater performance standards for the release detection wells must be defined as background concentrations. In addition, both soil and groundwater data are needed to identify the source of each exceedence of the background concentrations for VOCs and

bromide, and to confirm that the source(s) of the exceedences have been effectively remediated. If proposed activities in the Corrective Action Plan do not achieve the performance standards, then further work will be required in accordance with Env-Or703.15(a).

Based upon the outcome of this and any future correspondence, NCES proposes to provide a comprehensive work plan summarizing groundwater performance standards as proposed above with the existing approved soil performance standards provided in our September 2007 Work Plan. NCES will also provide the Department a construction quality assurance report for the approved work plan corrective action project once completed. The construction quality assurance report would include the results of soil and groundwater sampling performed throughout the corrective action project.

Should you have any questions or require additional information, please contact me at (802) 223 – 7221 or (802) 236 – 5973.

Sincerely,

NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.

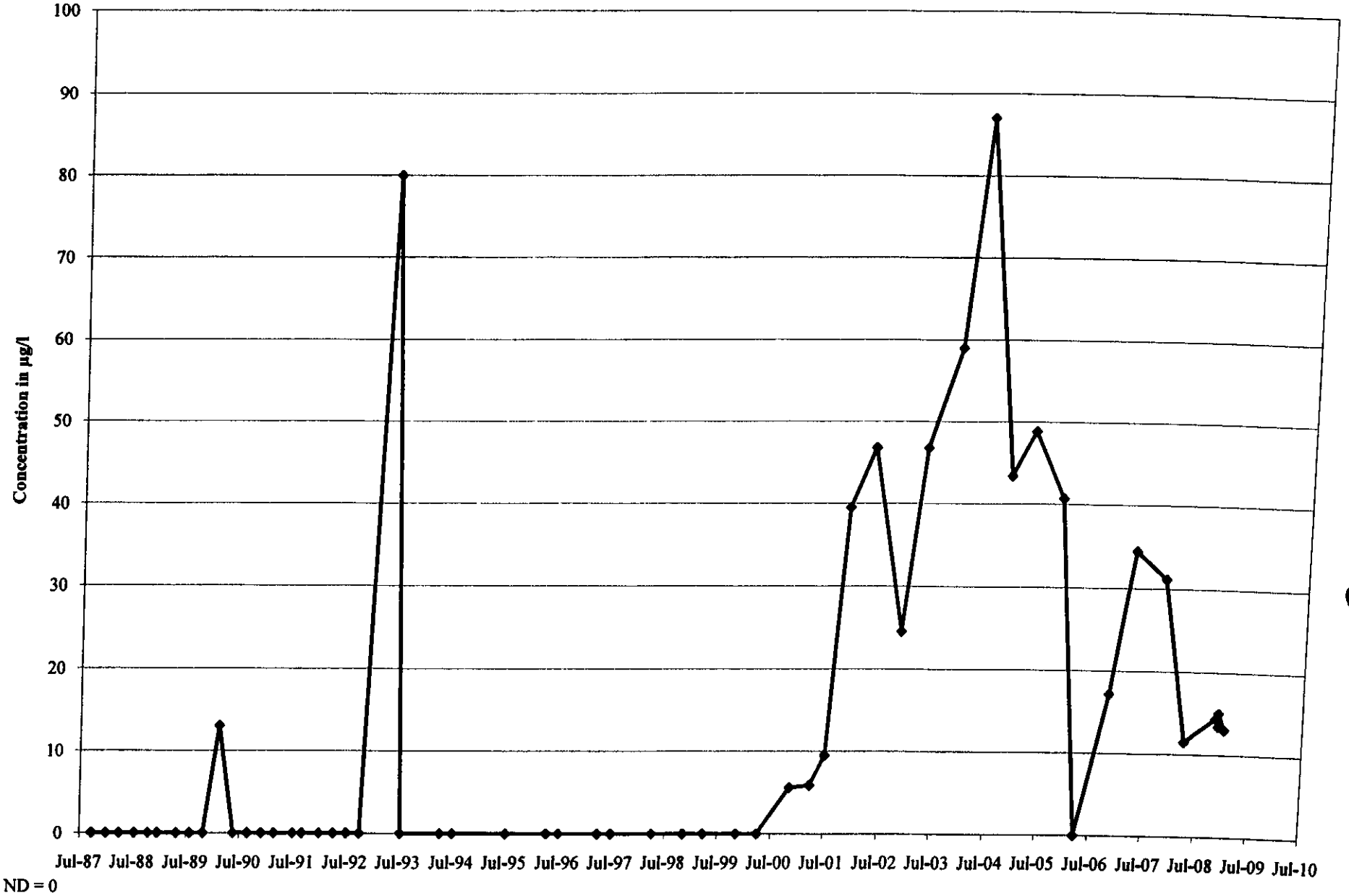
J. Gay

John Gay, E.I.
Engineering, Permitting, Compliance & Construction

Enclosures

c. Wayne Wheeler, NHDES Waste Management Division
✓ Paul Gildersleeve, NHDES Waste Management Division
John Regan, NHDES Waste Management Division
Kevin Roy, North Country Environmental Services, Inc. (via email)
Bryan Gould, Brown, Olson & Gould
Robert Grillo, CMA Engineers, Inc. / Portsmouth
Paul Rydel, Sanborn, Head & Associates, Inc. / Concord

Total VOCs in Well MW-402U



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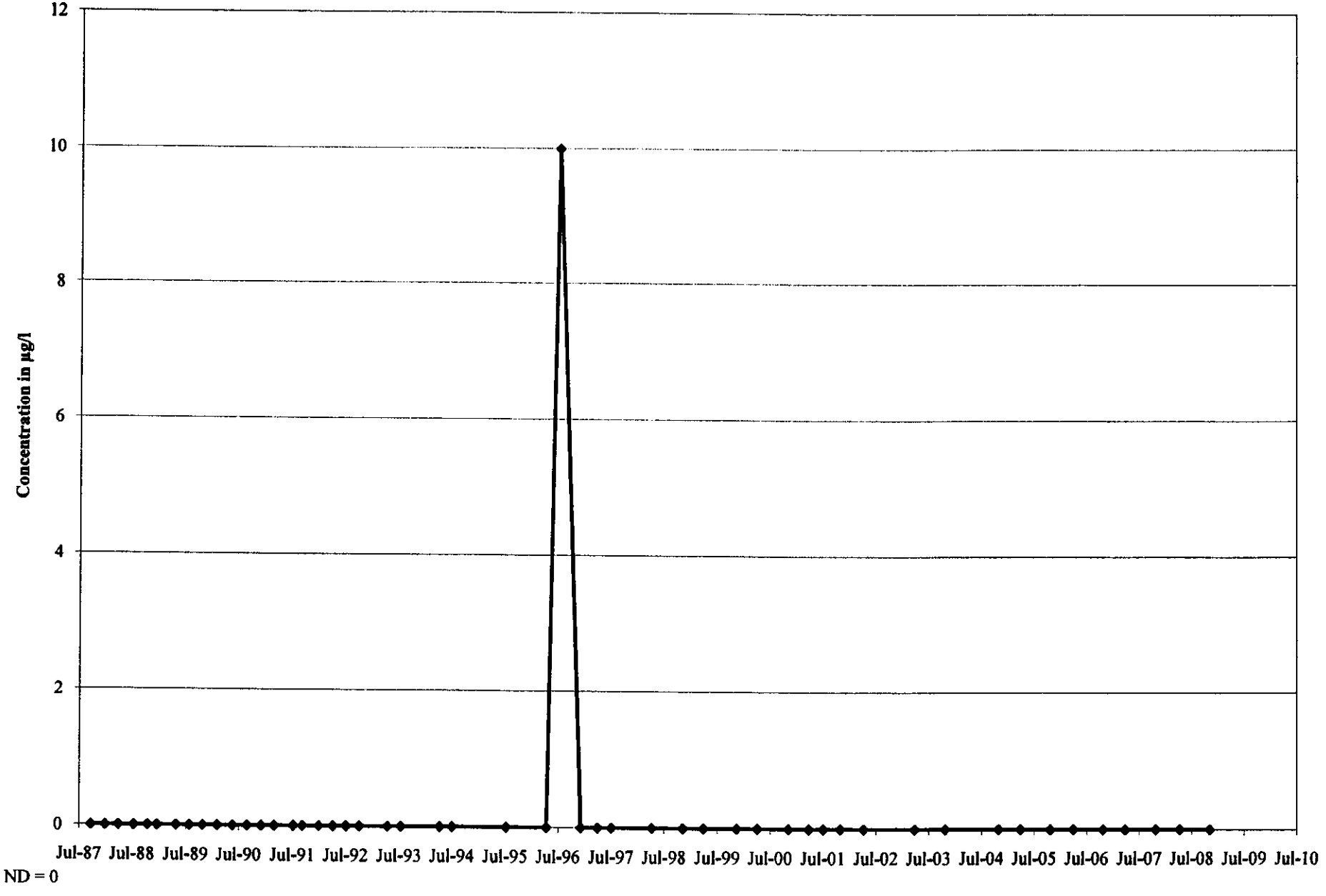
Total VOCs in Well MW-402L/MW-402LR



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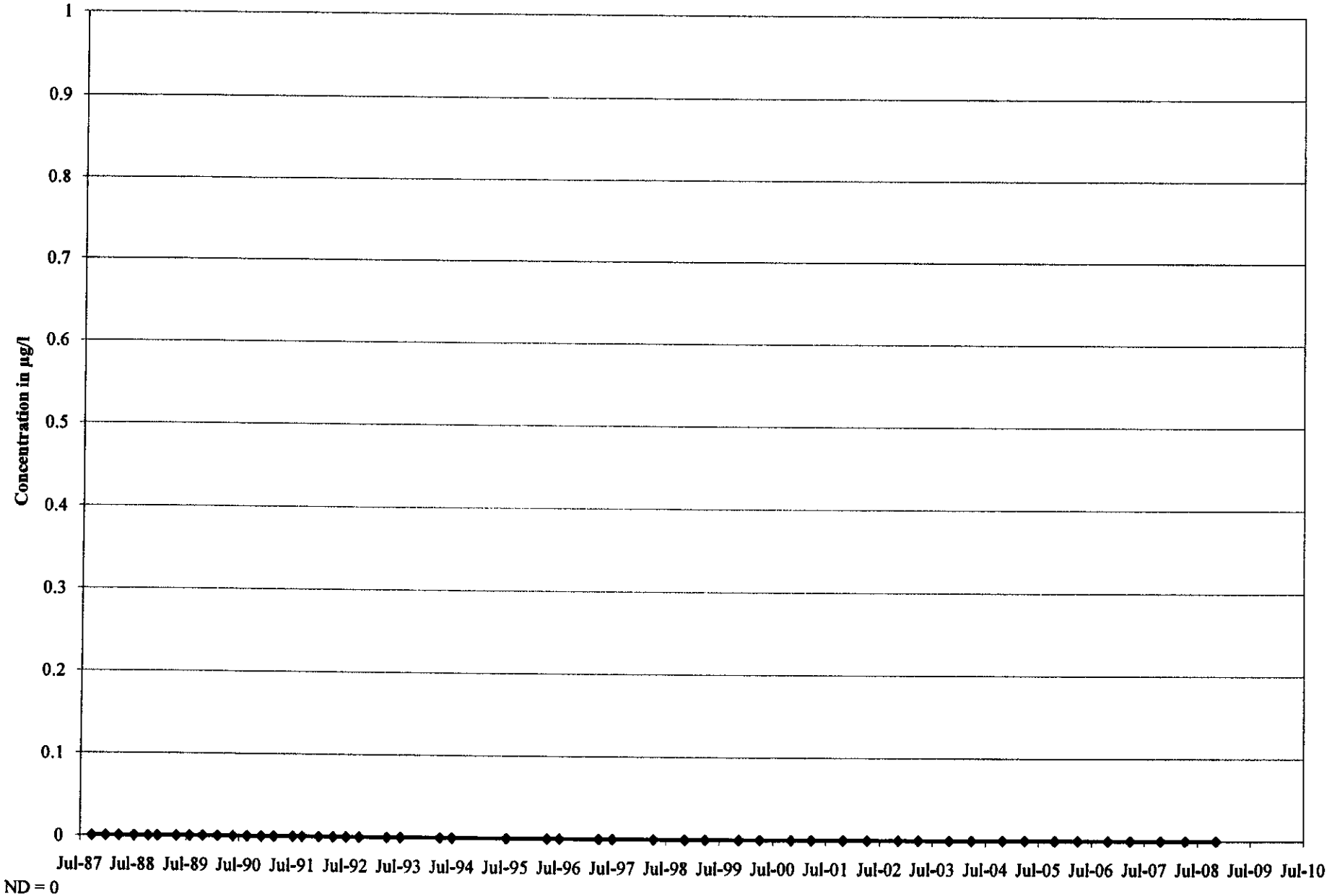
Total VOCs in Well MW-403U



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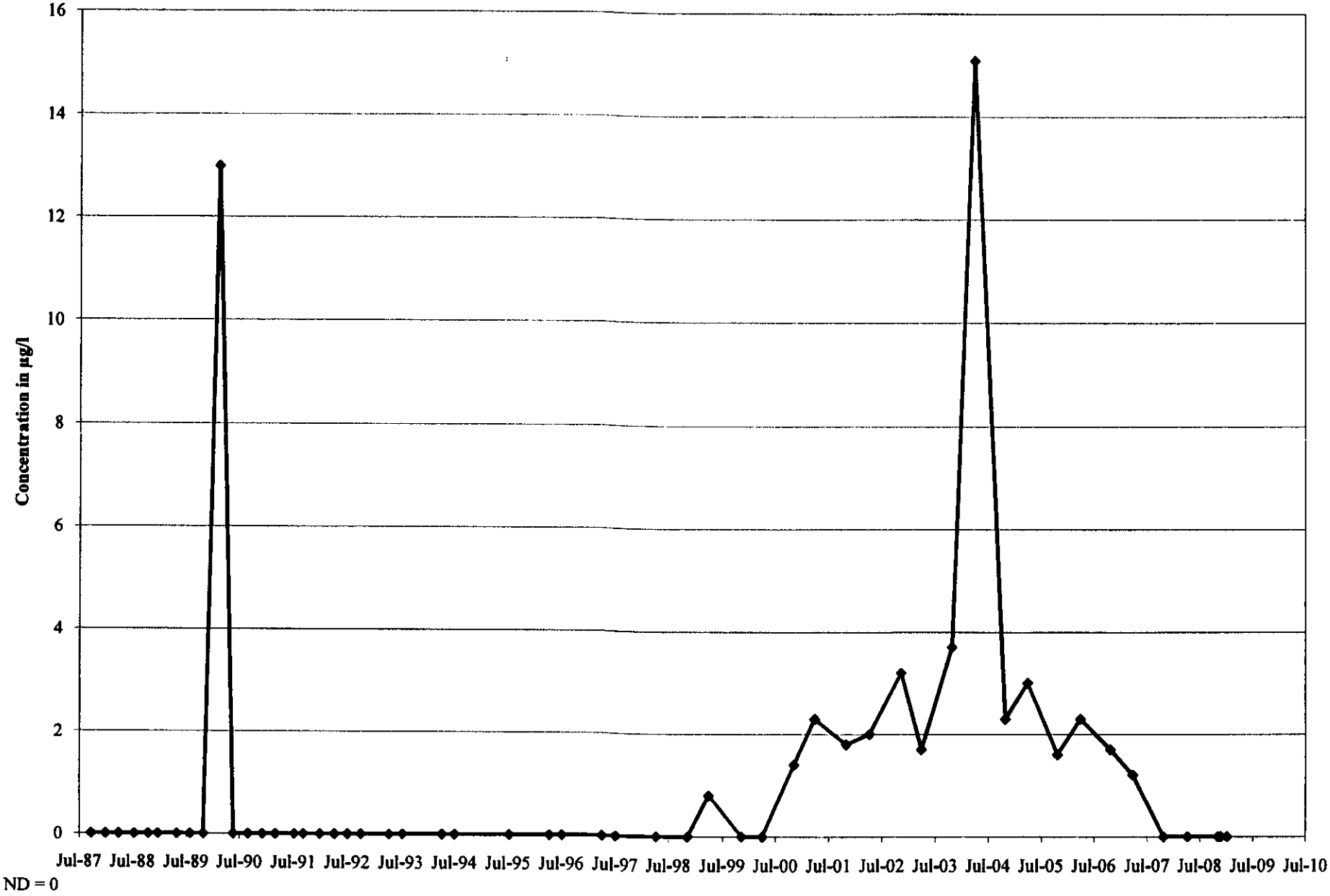
Total VOCs in Well MW-403L



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