



# Technical Compliance Audit of the Enviroserv Waste Management (Pty) Ltd, Shongweni, Class H:h Landfill, September 2005



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- The on-site visual aspect was satisfactory at the time of the audit. Visual impact of the landfill operation to users of the P461 Road was negligible .
- No windscatter from the site was seen along the access road, perimeter fencing or entrance to the site. Community members are employed to control the windscatter problem if and when it arises.



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- Few flies were seen on the main working face.
- No pests were noticed at the entrance to the sight.
- Fly baits must be introduced with the onset of summer



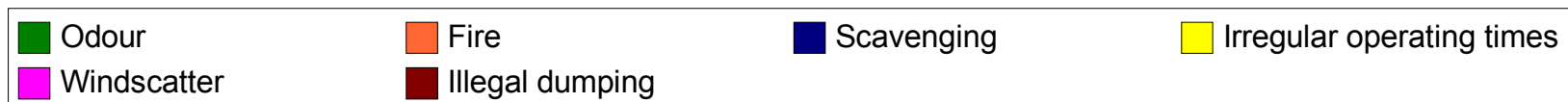
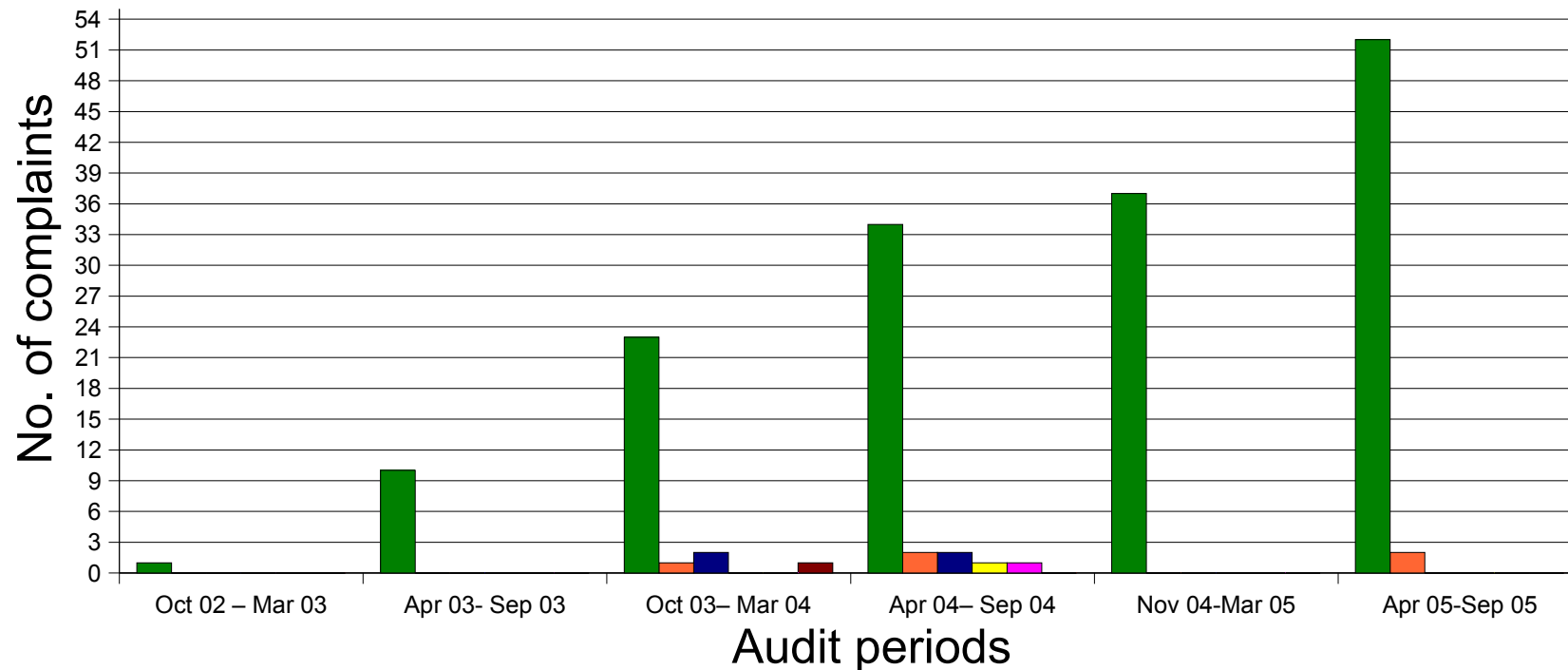
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- The landfill odour impact on the day of the audit was confined to the site activities only.
- Fifty two odour complaints were received over the audit period.
- Dirt/sand accumulation on site roads still contributes to the dust burden. This has been alleviated somewhat following the completion of the washbay



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## Complaints Register Shongweni April 2005 - September 2005



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- Reported volumes of leachate transported for disposal are higher than that actually being generated. This is due to combination with the contents of the contaminated storm water dam.
- The volume has decreased over the past 6 months from 14294 m<sup>3</sup> to 7901 m<sup>3</sup>. Volumes remain considerably lower than those recorded 2 years ago, primarily due to a reduction in volumes of liquid waste accepted.
- The quantity of leachate/contaminated storm water averaged 1316.8m<sup>3</sup>/month.



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- Surface water monitoring indicated that the invert directly below the landfill (sampling point SW1) continues to be contaminated with landfill leachate.
- The water is captured and pumped into the storm water containment dam for disposal.

Class 0	Ideal water quality - suitable for lifetime use.	•
Class 1	Good water quality - suitable for use, rare instances of negative effects.	
Class 2	Marginal water quality - conditionally acceptable. Negative effects may occur in some sensitive groups.	
Class 3	Poor water quality - unsuitable for use without treatment. Chronic effects may occur.	•

The water quality further down the invert at SW4 shows an improvement in quality since the pump at SW1 became operational.

This water (SW4) is placed in Class 1 'Good' of the water quality guidelines.

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- Jones & Wagener are responsible for the collection of ground water and surface water samples. This is done in accordance with their recommendations.
- 4 new boreholes have been added to the groundwater sampling regime:  
BH 05 10S; BH 05 10D  
BH 05 12S; BH 05 12D
- SW 5 has been added to the surface water sampling regime.
- Single data sets exist for these new stations, and as such they cannot be used for comparative purposes at this time.

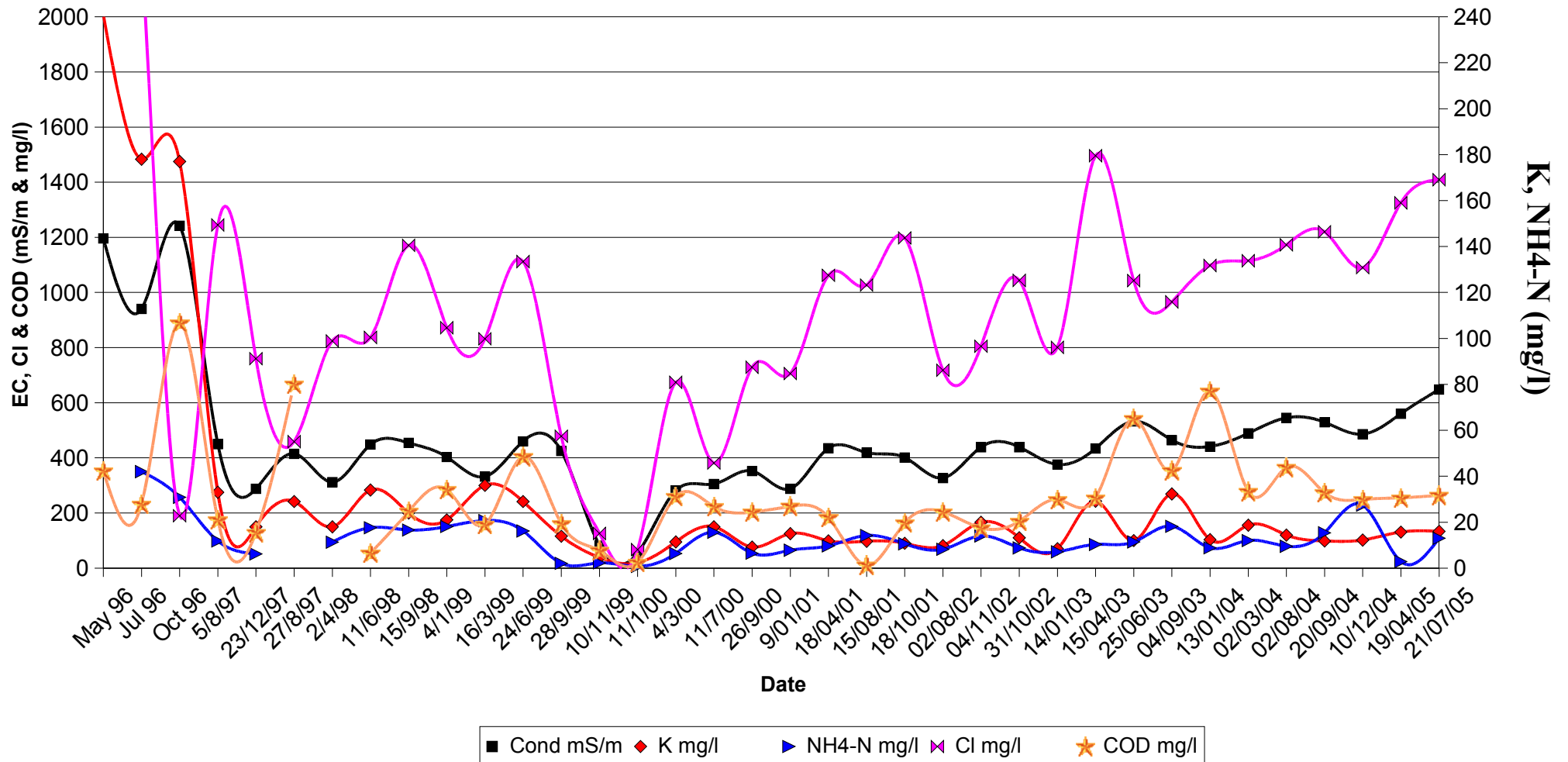
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- There was some evidence of limited leachate contamination of groundwater down gradient of the landfill.
- There was no evidence of landfill gas migration outside the boundary of the site in those boreholes which could be monitored
- The calculated co-disposal ratio was on average 8.06:1 (dry:liquid). This shows steady improvements from earlier values

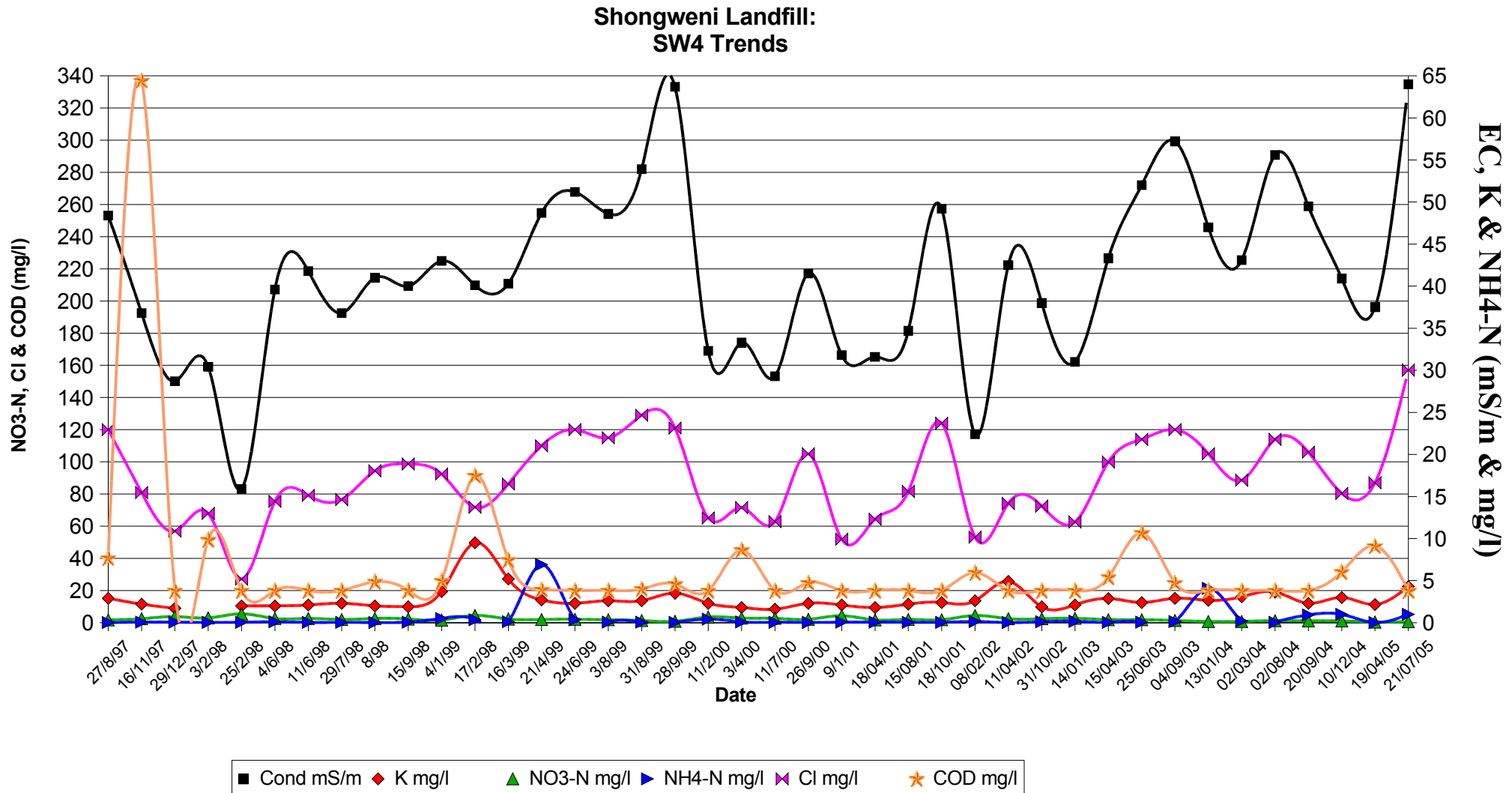


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Shongweni Landfill:  
SW 1

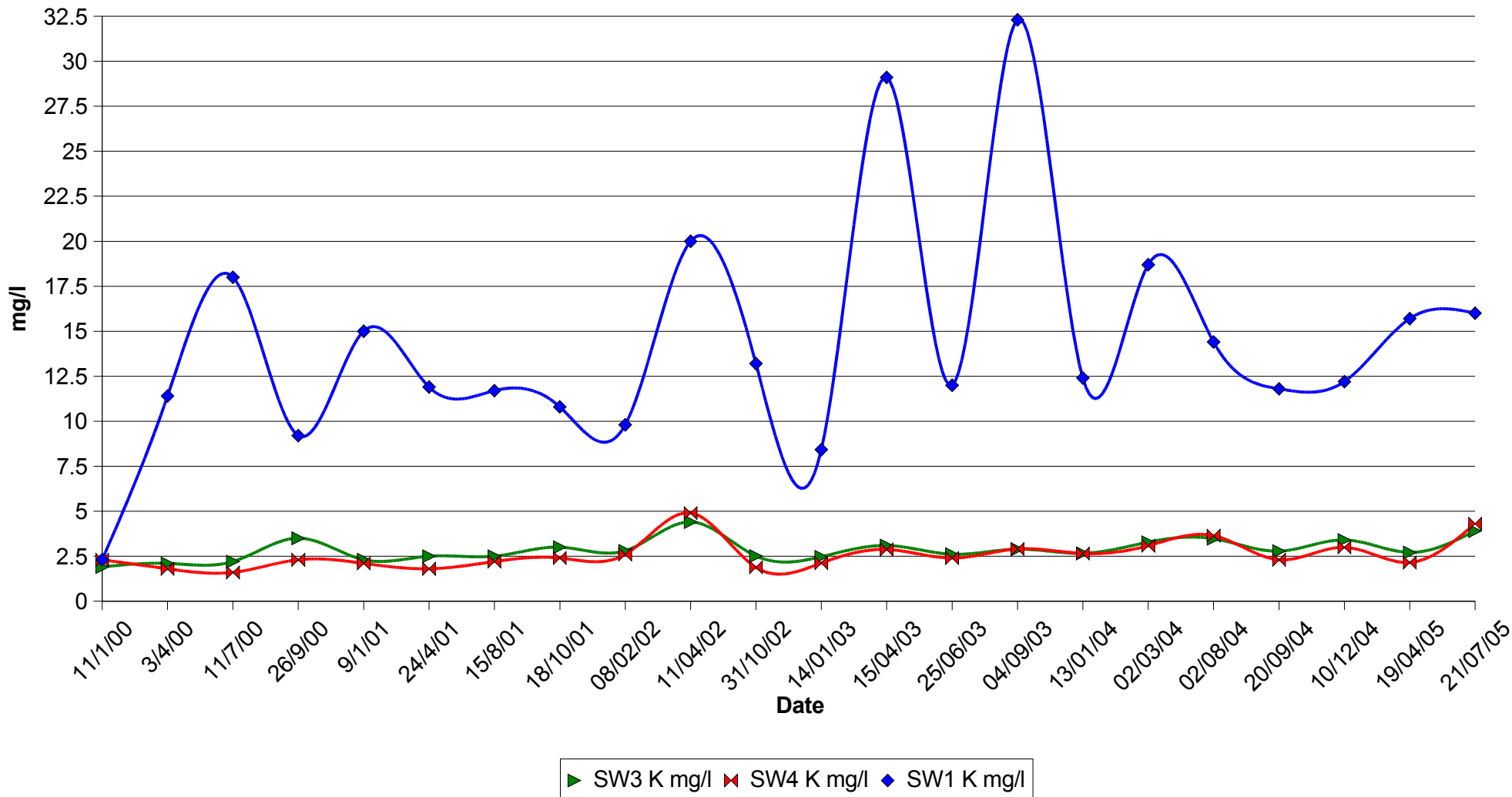


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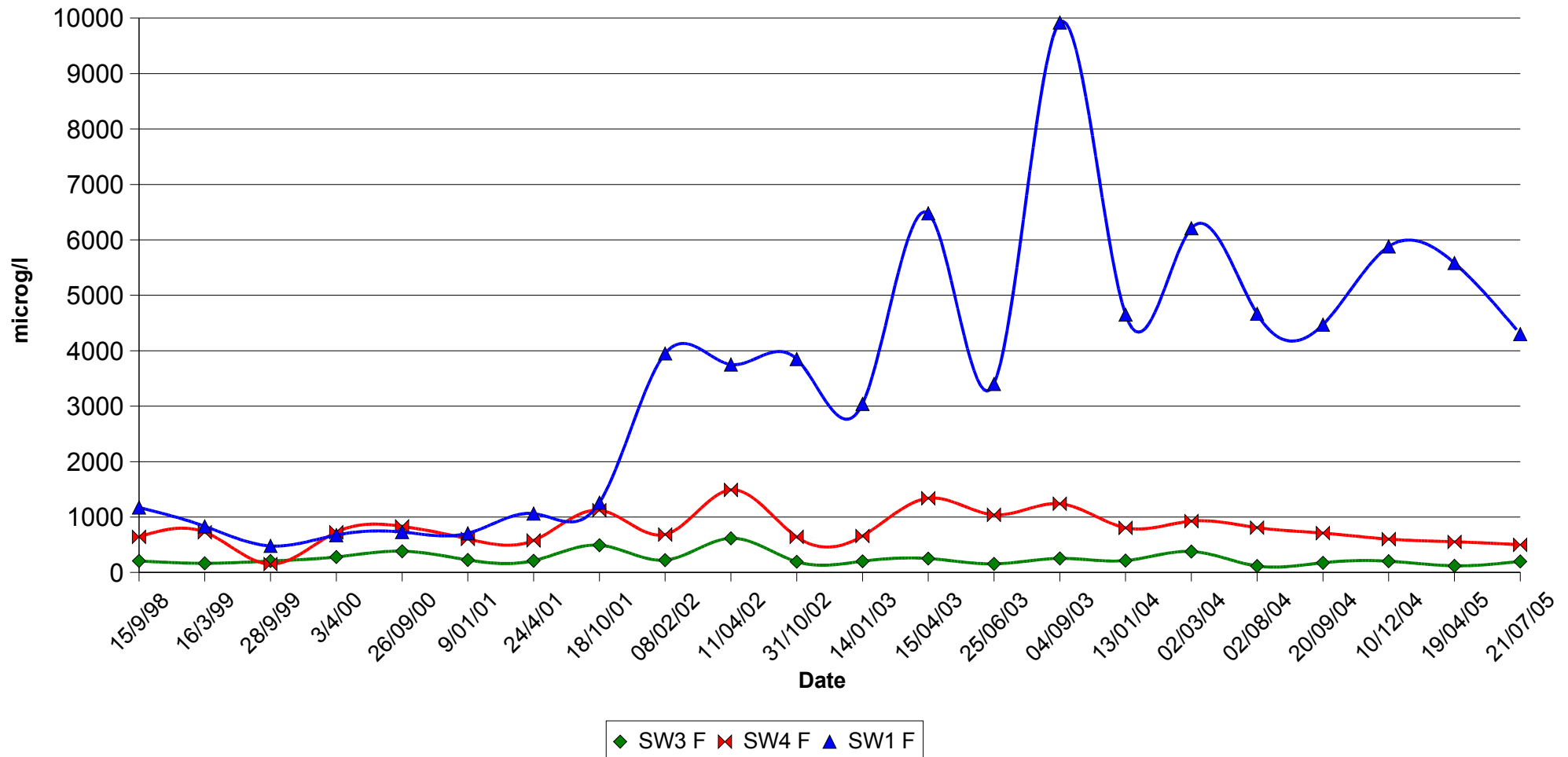
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Shongweni Landfill: SW1, SW3, SW4 - Potassium



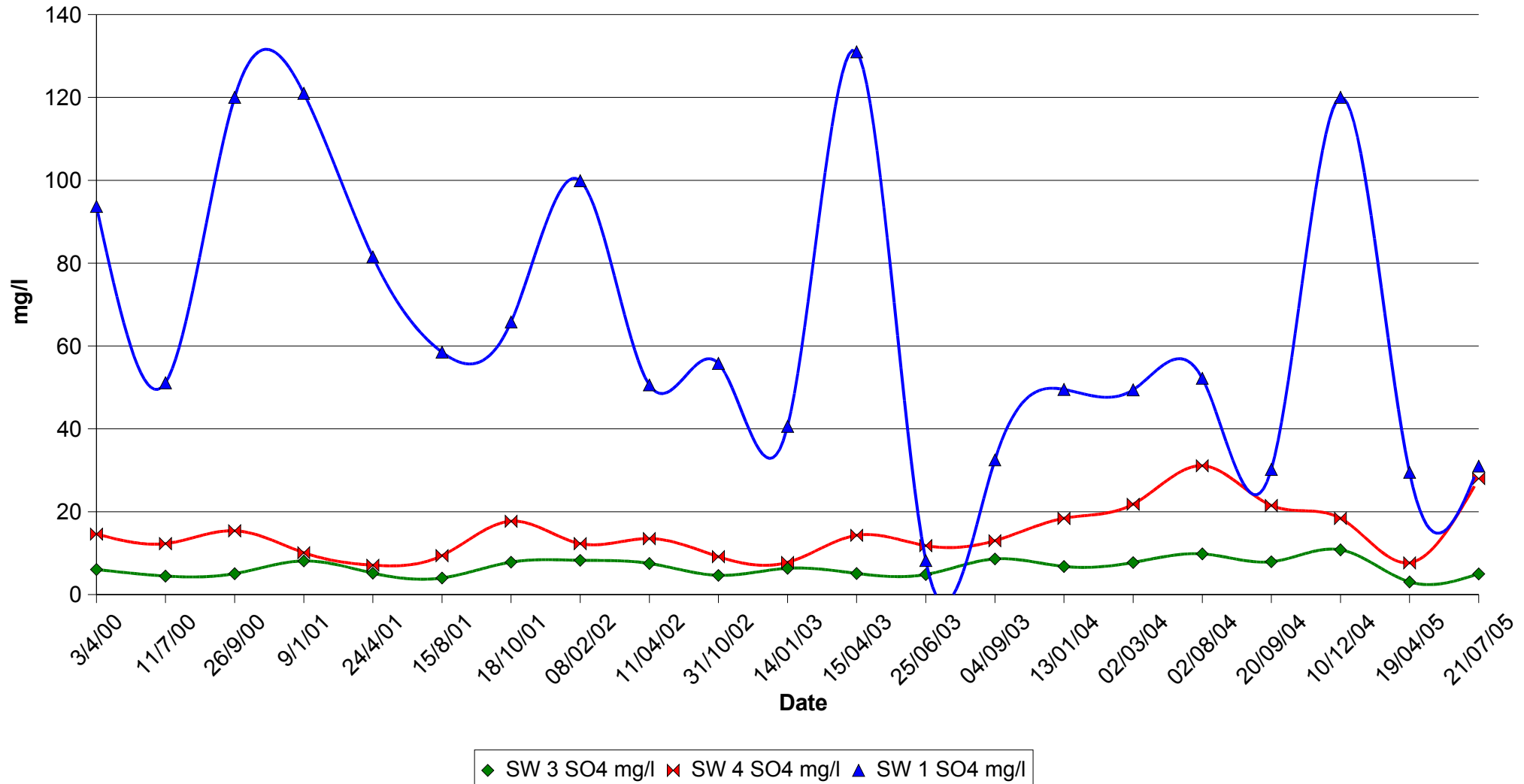
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Shongweni Landfill: SW1, SW3, SW4 - Fluoride



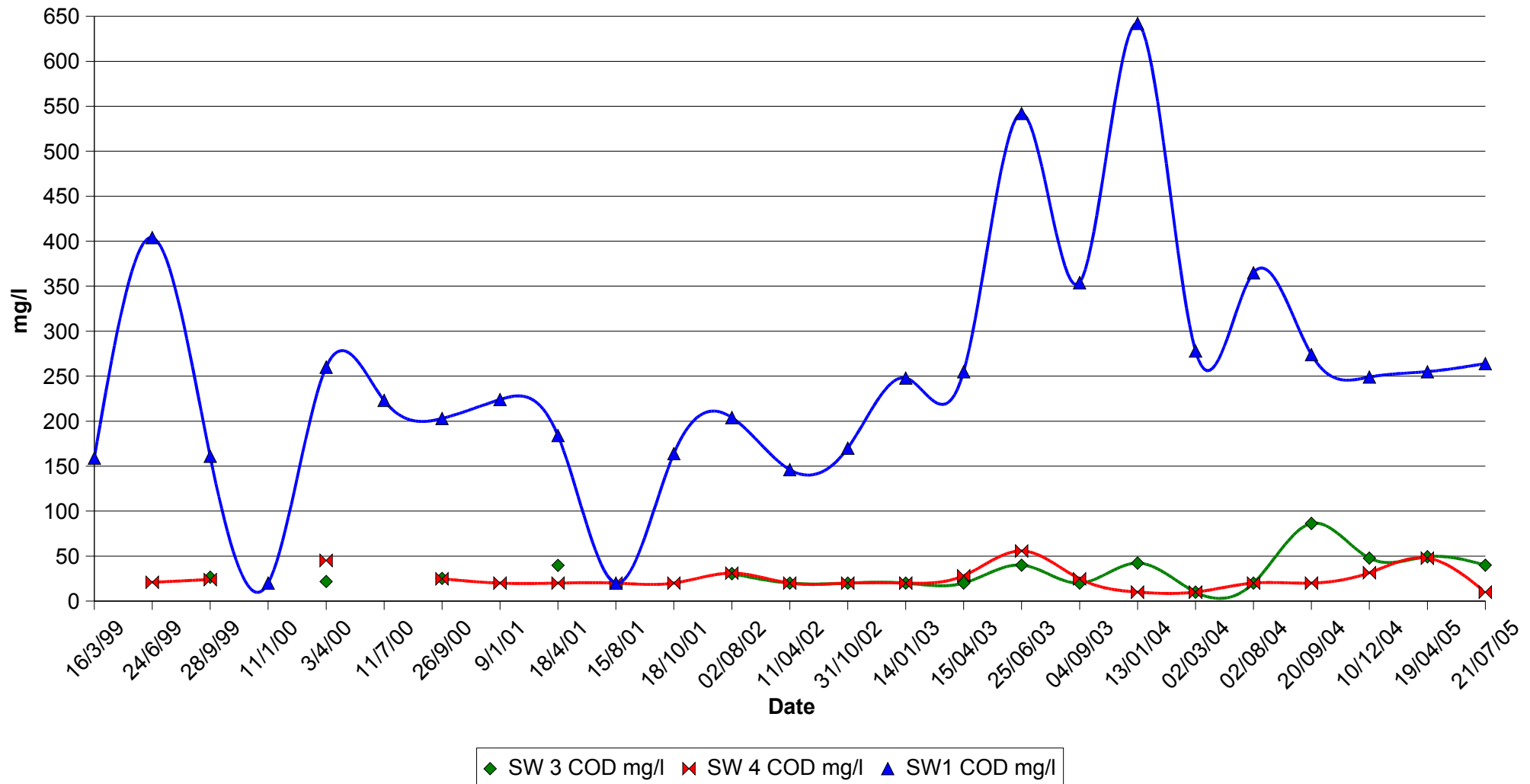
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Shongweni Landfill: SW1, SW3, SW4 - SO4



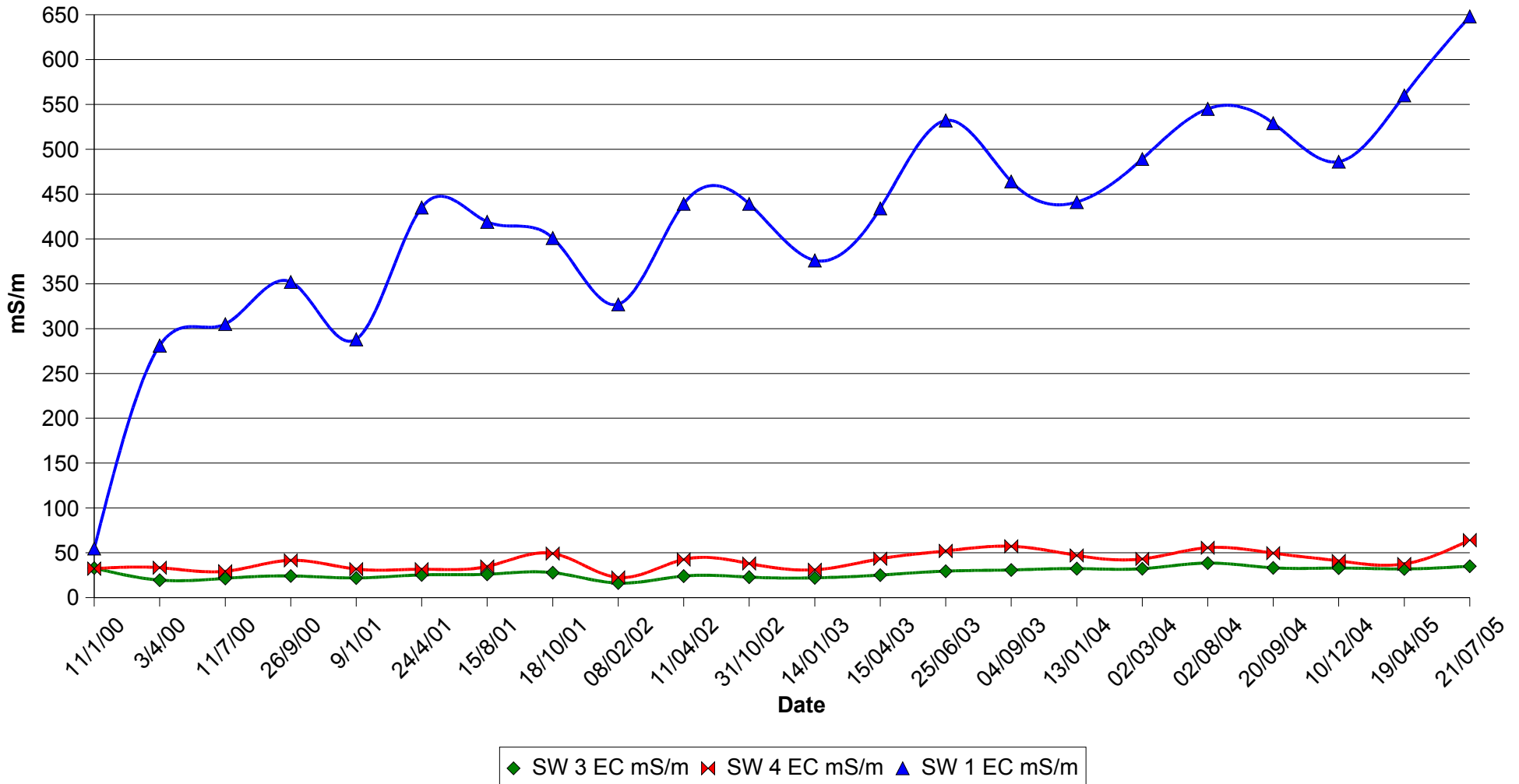
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Shongweni Landfill: SW1, SW3, SW4 - COD



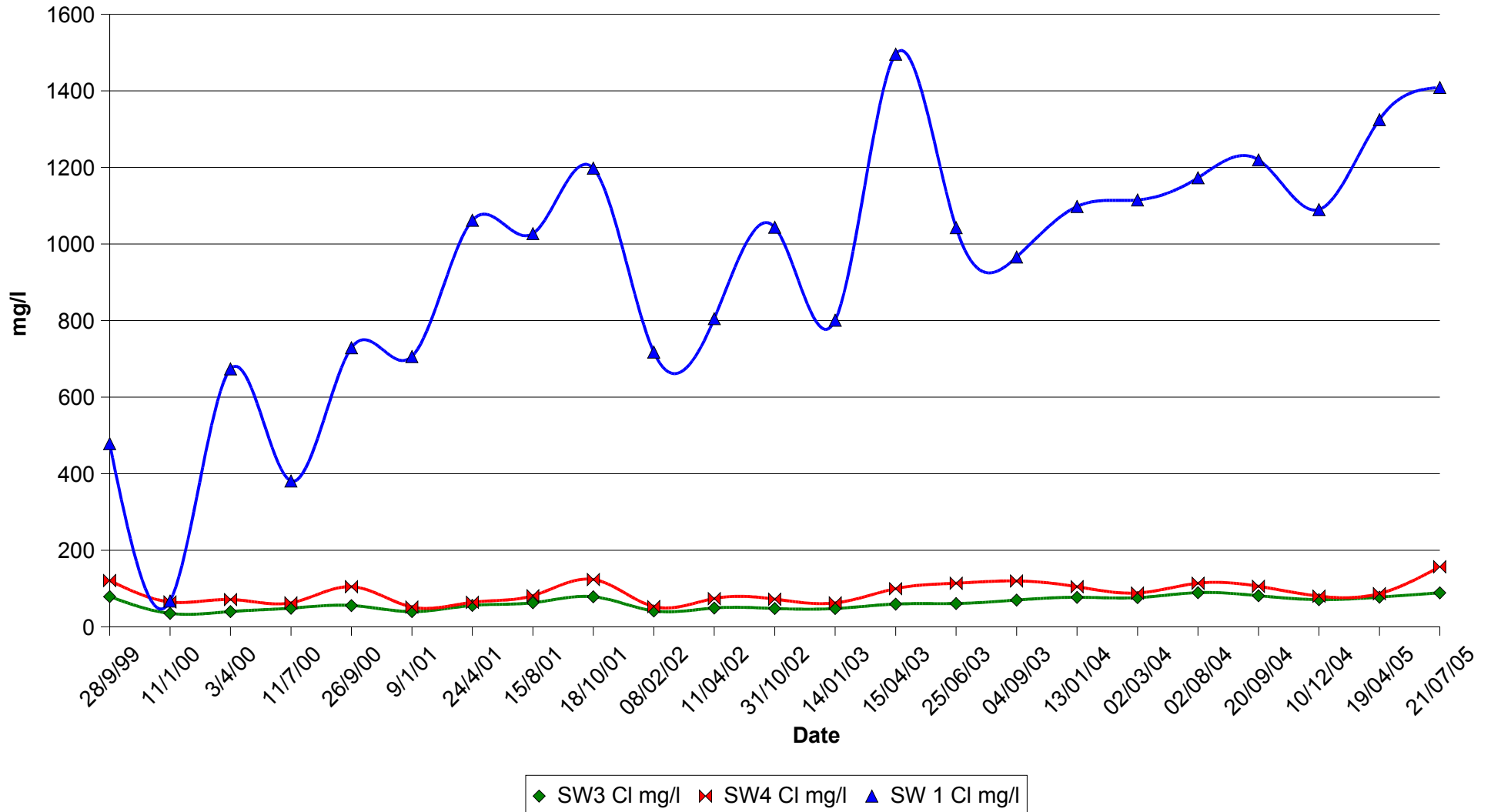
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Shongweni Landfill: SW1, SW3, SW4 - EC



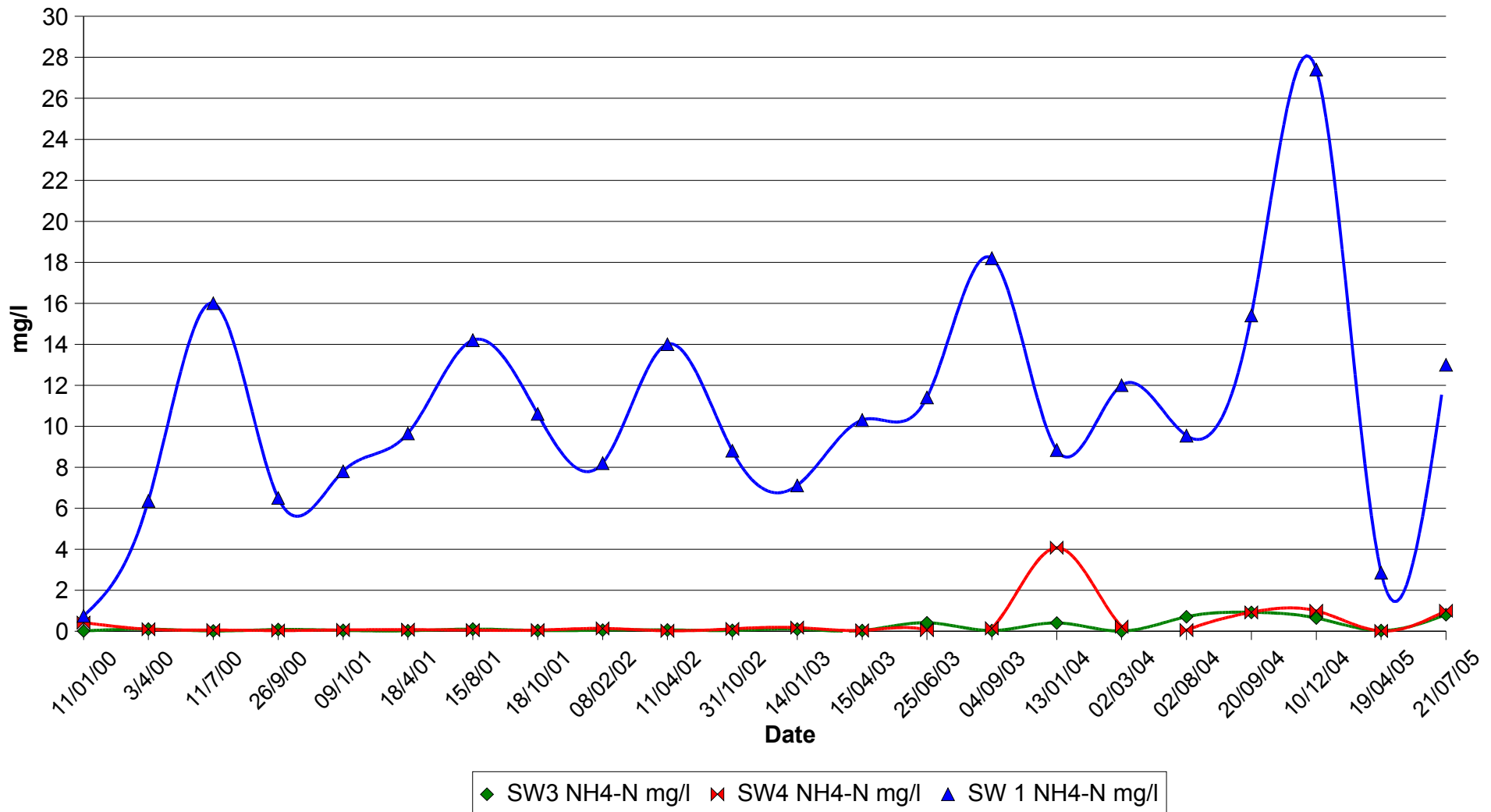
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Shongweni Landfill: SW1, SW3, SW4 - Chloride



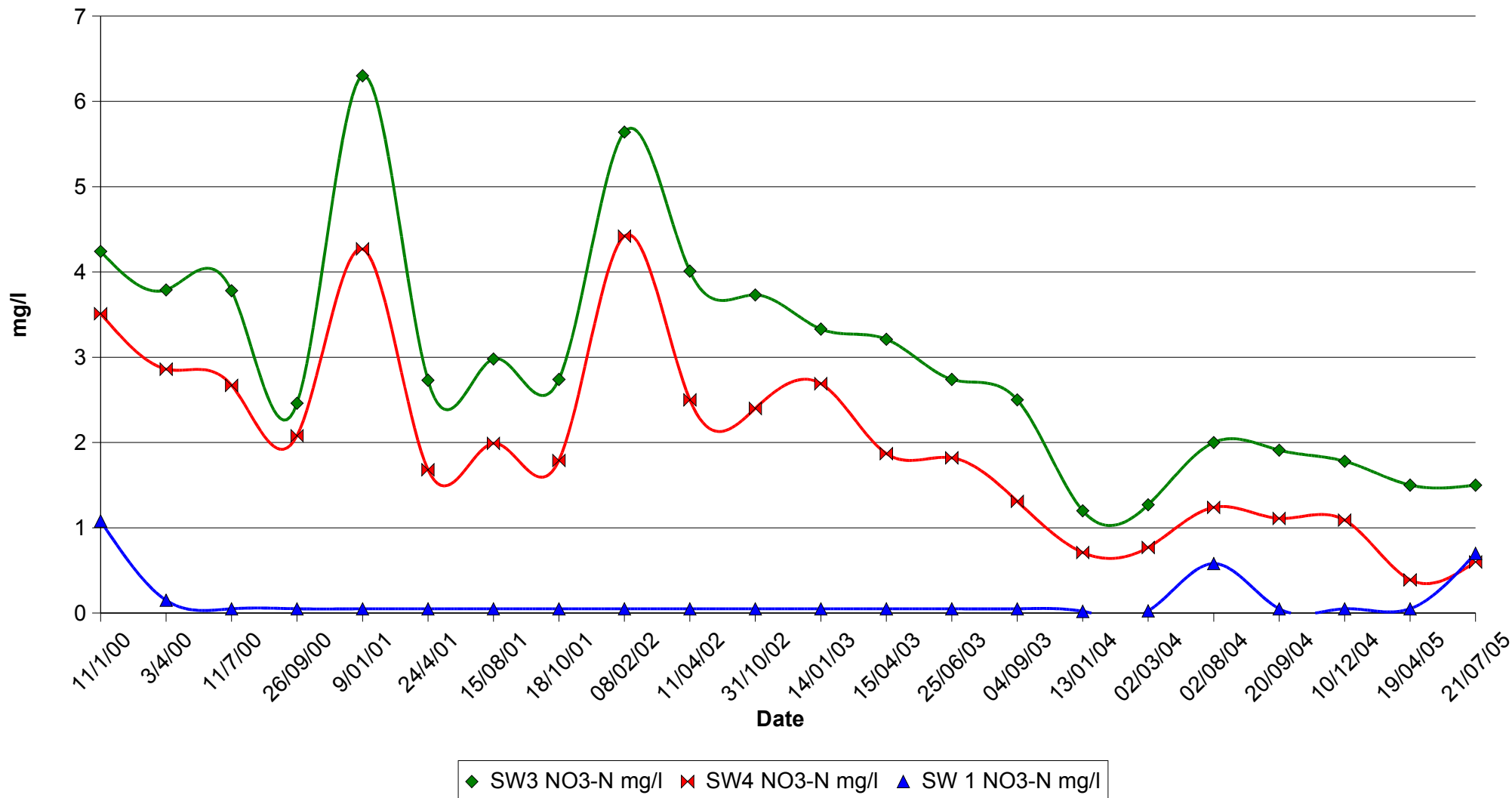
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Shongweni Landfill: SW1, SW3, SW4 - NH4-N



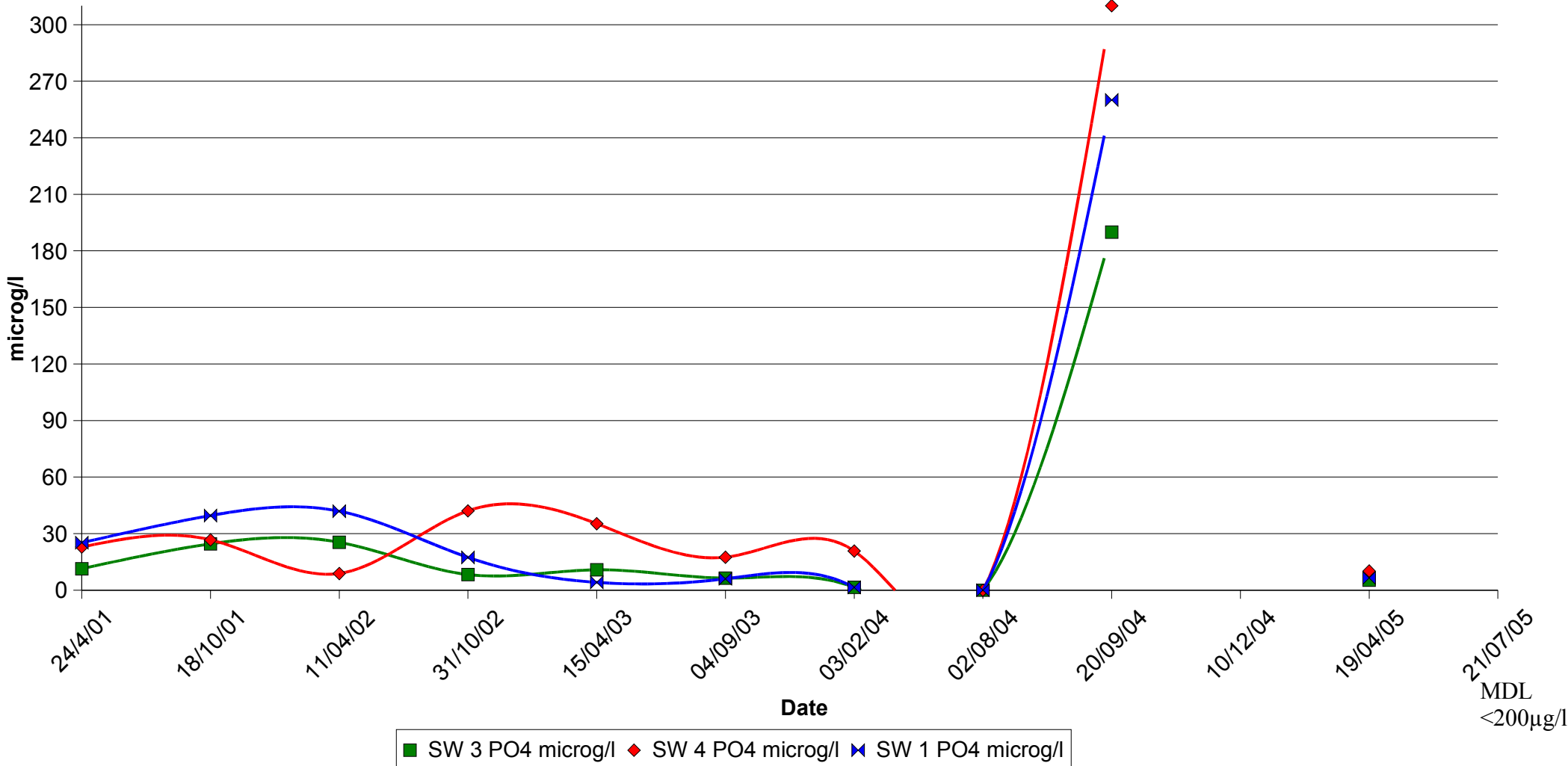
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Shongweni Landfill: SW1, SW3, SW4 - NO3-N



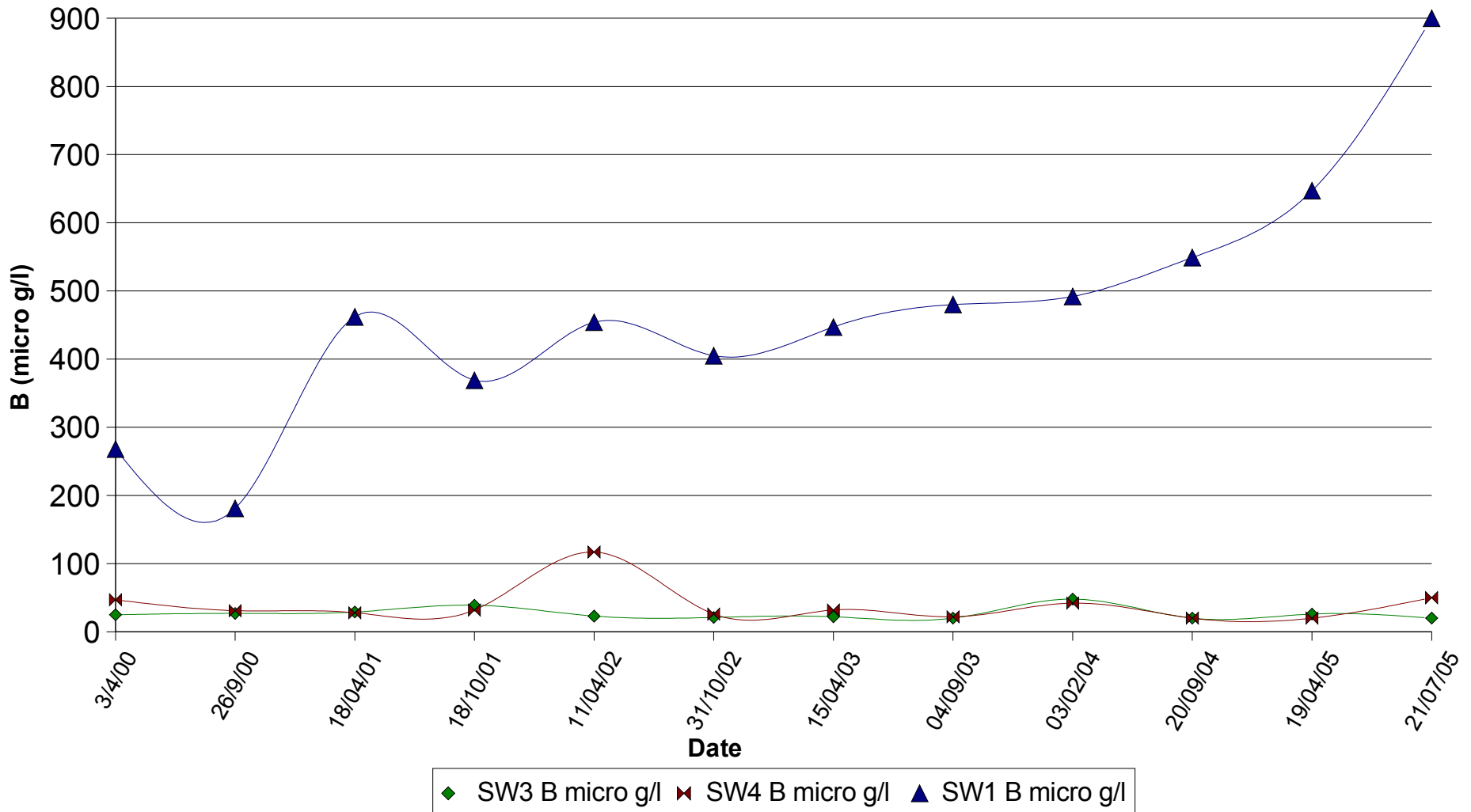
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Shongweni Landfill: SW1, SW3, SW4 - Phosphate



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Shongweni Landfill: SW1, SW3, SW4 - B



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- The following 5 clauses of the permit have not been complied with by Dispose-tech in their operation of Shongweni Landfill.
  - 4.4.3 requires that the site be operated in a manner that prevents nuisances or health hazards. Fifty two odour complaints constitute a nuisance
  - 4.4.4 requires that sufficient dust control measures are supplied
  - 7.2.2.2.1 The leachate detection system is not monitored monthly.
  - 7.2.2.2.2 No bi-annual test carried out on pipes exposed to leachate..
  - 11.3 Records for biennial pressure testing, liner inspections and leachate detection monitoring not being kept.

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- The permit to operate contains 88 auditable clauses.
- The operation had complied with 83 of them at the time of the audit.
- Despite non-compliances, the landfill was being operated to a satisfactory standard.

