License Termination Plan Groundwater Compliance Summary Report

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Haddam Neck Plant

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Executive Summary

Connecticut Yankee Haddam Neck Plant (HNP) has conducted groundwater monitoring in accordance with the groundwater monitoring plan implemented under the License Termination Plan (LTP) to support removal of non-independent spent fuel storage installation (ISFSI) areas impacted by groundwater contamination from the United States Nuclear Regulatory Commission (NRC) license (CYAPCO, 2006a). The LTP specifies a groundwater monitoring period of 18 months prior to removal of these areas from the license. The 18-month monitoring period started with the December 2005 groundwater sampling round and was completed with the June 2007 sampling round. Sampling on at least a quarterly basis has been conducted during the 18-month monitoring period. At the end of this period to meet NRC requirements, groundwater must exhibit the following conditions as established in the LTP (CYAPCO, 2006a):

- Substance of Concern (SOC) concentrations that are stable or decreasing;
- The cumulative dose resulting from residual soil, existing groundwater, and future groundwater does not exceed 25 mrem/yr.

This compliance summary report has been prepared for submittal with the Connecticut Yankee Atomic Power Company (CYAPCO) letter requesting release of the non-ISFSI portion of the site from the NRC license based on the results of the 18 months of groundwater monitoring prior to license termination. This report describes the existing groundwater conditions at HNP at the completion of the 18-month monitoring period.

Based on the 18 months of groundwater monitoring (i.e., December 2005 through June 2007), the following observations support license termination:

1. The plant-related SOCs detected in groundwater are tritium (H-3), strontium-90 (Sr-90), and cesium-137 (Cs-137).
2. SOC concentrations at most monitored locations are exhibiting a stable or decreasing concentration trend. While most monitoring locations do have stable or decreasing concentration trends, six of 60 LTP monitoring wells (MW-105S, MW-107D, MW-107S, MW-109S, MW-120-4, and MW-125) exhibit an increasing trend for H-3 and five of the 60 LTP monitoring wells (MW-118A-5, MW-125, MW-124, MW-136D, and MW-137) are associated with an increasing trend for Sr-90. Although there is an increasing trend in a limited number of monitoring wells, CYAPCO believes that the intent of the LTP in this regard has been met for the following reasons:
    - By fall 2006, remediation activities were completed in source areas (i.e. tank farm [2005], primary auxiliary building [PAB]-containment [2005], and fuel building [fall 2006]) where significant residual soil radionuclide contamination was historically located. Due to the completed remediation efforts, no additional significant plumes of radionuclides are anticipated to be developed or migrate through the HNP site.

- Radionuclide concentrations in monitoring wells located within and adjacent to the former tank farm, spent fuel building, and PAB-containment areas have decreased substantially from the levels exhibited before, during, and immediately after remediation activities that were completed in 2005. Discrete plumes of radionuclide-contaminated groundwater were also developed during the more recent fuel building remediation in fall 2006 and are currently migrating through the HNP site.

- The magnitude and distribution of the discrete plumes of radionuclides originating from the fuel building and containment currently migrating through the site are well characterized due to the location of monitoring wells directly downgradient and adjacent to the former fuel building and containment source areas. The most recent discrete plume originated during remediation in the fuel building in September/October of 2006. Reviewing the sample results from wells (in particular MW-137) adjacent to and directly downgradient of the fuel building and other downgradient wells, the following can be concluded:

    a. Cesium-137, although detected in MW-137, has not been reported in downgradient monitoring wells, demonstrating that no significant migration of Cs-137 away from the fuel building has occurred. Groundwater plumes of H-3 and Sr-90 associated with the fuel building and containment remedial activity have migrated downgradient from the fuel building and containment subsequent to the fall 2005 and fall 2006 remedial activities, respectively. The different behavior for Cs-137 relative to H-3 and Sr-90 is related to the radionuclide-specific partition coefficients; Cs-137 has a stronger affinity for soil relative to H-3 and Sr-90.

    b. The maximum groundwater concentrations detected in any of the monitoring wells immediately downgradient of the fuel building since the fall of 2006 is 13,800 pCi/L for H-3 (MW-125, March 2007) and 13.1 pCi/L for Sr-90 (MW-125, March 2007). The TEDE dose from these two maximum concentrations totals 1.83 mrem/yr, 23% of the existing groundwater allowed dose. This dose is well below the 8 mrem/yr that has been allocated by CYAPCO for the existing groundwater dose component of Equation 5-1 of the LTP.

    c. The few monitoring wells with increasing trends are related to discrete plumes of H-3 and Sr-90 that are currently migrating through the HNP site. The discrete plumes are expected to dissipate and discharge to the Connecticut River during 2007.

Although there may be some increases in H-3 or Sr-90 at downgradient monitoring wells in the near future related to the continued migration of discrete plumes of H-3 or Sr-90, the magnitudes of these increases are expected to correspond to a small fraction (i.e., less then 25%) of the allowable dose from the existing groundwater dose component of LTP Equation 5-1. Not all wells, therefore, need to show a stable or downward trend for it to be concluded that the concentrations in these downgradient monitoring wells will not rise to a level that approaches the allotted dose from the existing groundwater pathway. Based on this understanding, the total dose from all dose components of Equation 5-1 of the LTP will be below the unconditional release criterion of 25 mrem/yr.

3. As of June 2007, the maximum cumulative total effective dose equivalent (TEDE) for all detected SOCs for the worst case monitoring well (MW-137) contributes 1.98 mrem/yr to the existing groundwater component of the cumulative dose estimate for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license. Most of this TEDE is from Cs-137 (70%), which has limited mobility in site groundwater.

4. The existing groundwater component of the cumulative dose for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license is less than the maximum allowable dose of 8 mrem/yr. Using the values given in No. 2 above for Sr-90 and H-3, radionuclides with mobility in groundwater, the worst-case sample result equates to 23% of the maximum dose allowed for the existing groundwater component of the LTP Compliance Equation 5-1. Compliance with this maximum ensures that the cumulative dose from all dose pathways is less than 25 mrem/yr TEDE.

Based on the conditions observed during the 18-month license termination groundwater monitoring period, CYAPCO believes conditions for license termination for HNP groundwater are met for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license. While the cumulative TEDE is currently met at all monitoring wells, several monitoring wells do not currently exhibit a stable or downward trend. Based on the soil and bedrock remediation completed at HNP that has removed significant sources of SOCs and the site groundwater characterization completed to date, Connecticut Yankee believes that these up-trending monitoring wells reflect passage of discrete plumes of H-3 and Sr-90 migrating across the site (see Section 2.0) resulting from disturbance during remediation of source materials, and that these discrete plumes will dissipate and discharge to the Connecticut River during 2007. Although some downgradient wells are exhibiting, or may in the future exhibit, upward trends and/or short-term increases in SOC concentration, the concentrations that are expected to result from those increased levels are predicted to be well below the dose allowed for existing groundwater. Therefore, total dose from all dose components of Equation 5-1 of the LTP will be below the unconditional release criterion of 25 mrem/yr.

1.0 Introduction

This section describes the purpose, scope, and objectives of the Groundwater Compliance Summary Report and briefly summarizes the HNP LTP's use of groundwater monitoring data to document final status condition. The introduction also includes a summary of the groundwater monitoring sampling events that were completed during the complete duration of the 18-month monitoring period.

1.1 Report Purpose, Scope, and Objectives

The purpose, scope, and objectives of this Groundwater Compliance Summary Report are as follows:

- Purpose. The purpose of this document is to provide input to the Final Status Survey (FSS) report by presenting the groundwater compliance status within the framework of the HNP LTP at completion of the 18-month final status groundwater monitoring period.
- Scope. The scope of this document is to evaluate groundwater conditions at HNP for the 18-month license termination monitoring period. Groundwater monitoring data for the time period of December 2005 through June 2007 are incorporated as part of this report, and complete the 18-month groundwater monitoring period.
- Objectives. The objectives for this report are to document the groundwater SOC status with respect to concentration temporal trends of detected SOCs in groundwater (identified as H-3, Sr-90, and Cs-137) over the 18 months of the LTP groundwater monitoring period (i.e., December 2005 through June 2007), and to calculate the maximum TEDE contribution from existing groundwater conditions as of June 2007.

1.2 HNP License Termination Plan

This section describes the LTP's integration of groundwater monitoring results into the final status dose estimate (i.e., current groundwater dose contribution). The applicable metrics for SOCs in groundwater are summarized in Table 1-1. As identified in Table 1-1, the metrics summarized in this report include:

- Maximum allowable TEDE contribution from existing groundwater compared to the target of 8 mrem/yr, and
- SOC concentration trend in groundwater compared to the target of either stable or decreasing.

The stable or decreasing trend criterion was developed to ensure that radionuclide concentrations would not increase at some time in the future to levels in excess of the maximum allowable TEDE dose. The groundwater monitoring results for the radiological

SOCs presented in this document will be incorporated into the letter requesting release of the non-ISFSI areas from the NRC license as the existing groundwater contribution to the post-closure dose equation is currently met (LTP Equation 5-1). The cumulative dose for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license will be compared to the NRC's 25 mrem/yr maximum allowable post-closure dose, and a preliminary FSS compliance statement will be prepared. This document will be included as an attachment to the FSS final report.

1.3 Groundwater Monitoring Activities

A summary of monitoring events and related reports is presented in Table 1-2. The flow and consolidation of groundwater monitoring data are illustrated in Figure 1-1. As summarized in Figure 1-1 and Table 1-2, a total of seven quarterly sampling rounds and seven monthly reports were completed, along with three semi-annual reports during the 18-month groundwater monitoring period. This final LTP Groundwater Compliance Summary Report is issued at the completion of the 18-month groundwater monitoring period confirming and documenting the compliance criteria presented in the LTP Groundwater Compliance Summary Report submitted following the March and April 2007 sampling events (months 15 and 16 of the 18-month groundwater monitoring period).

2.0 Groundwater Monitoring Results

This section summarizes the HNP groundwater monitoring results for plant-related SOCs during the monitoring period based on the data and results presented in the quarterly, semi-annual, and special sampling events data summaries and reports. A summary of groundwater monitoring reports that support the license termination is presented in Table 1-2.

The results for SOCs for the second quarter (Q2) 2007 are included in Section 2.1, and the statistical trend analysis is summarized in Section 2.2 for the 18 months of monitoring data through, and including, the Q2 2007 sampling event.

2.1 Summary of Groundwater Target Analyte Concentrations

This subsection presents the most recent (i.e., Q2 2007) groundwater monitoring results and puts the current conditions in perspective of the applicable metrics (i.e., cumulative current groundwater TEDE contribution). All 60 monitoring wells included in the 18-month monitoring program were sampled in June 2007 (Q2 2007) (Table 2-1). The June 2007 groundwater concentrations observed for H-3, Sr-90, and Cs-137 in the 60 monitoring wells included in the LTP monitoring program are presented in Table 2-1, along with the calculated TEDE contribution for each monitoring well. SOC results and TEDE contribution for Q1 2007 and April 2007 are also included in Table 2-1 for reference. As many of the monitoring results for H-3, Sr-90, and Cs-137 are non-detect, the sample-specific minimum detectable concentration (MDC) is included in Table 2-1 where the reported concentration was below the MDC. MDCs are used for the concentration trend analysis (see Section 2.2), and per the LTP, only values greater then the MDC were used to calculate the TEDE for the monitoring wells (Table 2-1).

During Q2 2007, H-3 concentrations ranged from non-detect to 14,000 pCi/L. Tritium concentrations are less than 4,000 pCi/L for all but four monitoring wells (MW-121A-4 (5,170 pCi/L), MW-119-5 (10,900 pCi/L), MW-110D (4,910 pCi/L), and MW-119-6 (14,000 pCi/L). These four monitoring wells are all located in downgradient areas of the site and indicate that significant plumes of H-3 are not currently present in the upgradient portion of HNP, which historically have been associated with source areas for the H-3 and other SOCs. Maximum H-3 TEDE contribution is 0.54 mrem/year from MW-119-6 (Table 2-1).

Strontium-90 concentrations range from non-detect to 9.52 pCi/L for Q2 2007. The highest Sr-90 concentration reported for Q2 2007 is observed in MW-125 (9.52 pCi/L), which gives a TEDE of 0.95 mrem/yr. All other Sr-90 results are less than 4.5 pCi/L.

Cesuim-137 was detected in only MW-137 at a concentration of 23.9 pCi/L (Table 2-1). Cesium -137 has been reported in MW-137 during the 18-month monitoring period ranging from 8.25 pCi/L (April 2006) to 126 pCi/L (October 2006). Detections of Cs-137 have been limited to the upgradient portion of the site close to historic source areas. The current

Cs-137 concentration at MW-137 (23.9 pCi/L) corresponds to a TEDE of 1.39 mrem/yr (Table 2-1).

In addition to the SOC groundwater monitoring results and single nuclide TEDE dose for the detected SOCs, Table 2-1 also includes the cumulative TEDE dose for all detected SOCs for each monitoring well included in the LTP monitoring program. Through Q2 2007, all but two monitoring wells (MW-125 and MW-137) have TEDE cumulative dose below 1.0 mrem/yr. The cumulative dose in June 2007 for MW-125 and MW-137 are calculated to be 1.07 and 1.98 mrem/yr, respectively; well below the 8 mrem/yr metric established for existing groundwater (Tables 1-1 and 2-1).

2.2 Substances of Concern Trend Analysis

This subsection presents the statistical trend analyses for the concentrations of SOCs detected during the complete duration of the 18-month license termination monitoring period and a discussion of the behavior of SOCs in HNP groundwater.

The trend analyses were conducted in the same manner as previously done for the semi-annual groundwater monitoring reports (CYAPCO, 2006c and 2007a). The analysis utilized Sens Slope Trend analysis, and all results indicating an upward trend were confirmed using Kendall-Mann Upward Trend analysis (USEPA, 1989 and 1992). The Sens Slope Trend analysis was performed using commercially available statistical analysis software (ChemStat™). For samples exhibiting non-detectable concentrations of SOCs, the sample-specific MDC was used as the sample value.

The trend analyses include data for the license termination monitoring period only, starting with the December 2005 (Q4 2005) sampling event and including the June 2007 (Q2 2007) sampling event data. The trend analyses are summarized in Table 2-2, and the complete trend analyses results and time series graphs for each SOC and monitoring well are included as Attachment 1. For completeness, the previously calculated statistical trends identified for each nuclide in each monitoring well (as reported in previous semi-annual groundwater monitoring reports and the initial LTP Groundwater Compliance Summary Report) are also included in Table 2-2. In addition to the single SOC trends evaluated, the trend of cumulative TEDE for all three SOCs was also determined (Table 2-2).

A total of 62 monitoring wells were evaluated for trend status. Two monitoring wells (MW-139 and MW-140) were included in the trend analysis, but are not part of the LTP monitoring plan. These two monitoring wells were installed at the request of Connecticut Department of Environmental Protection. Of the 62 LTP monitoring wells evaluated for trend status, most of the results exhibited either stable or downward trends. Eight monitoring wells had upward trends determined for Sr-90 (MW-100S, MW-102D, MW-105S, MW-110S, MW-122S, MW-131D, MW-136S, and MW-139) and seven monitoring wells exhibit upward trends for Cs-137 (MW-100D, MW-103B, MW-106D, MW-118A-3, MW-119-5, MW-120-2, and MW-136D) where the upward trend is simply an artifact of variability in the sample-specific MDC (Table 2-2), as most of the results for SOCs in these monitoring wells were below radionuclide-specific MDC. Aside from the monitoring wells with

upward trends attributed to non-detect concentrations, all other monitoring wells had stable or downward trends for Cs-137.

Four of the 62 monitoring wells exhibited confirmed upward trends for H-3 (MW-107D, MW-107S, MW-109S, and MW-120-4), and four monitoring wells exhibited confirmed upward trends determined for Sr-90 (MW-118A-5, MW-124, MW-125, and MW-137) (Figures 2-1 and 2-2, respectively, and Table 2-2). Two monitoring wells (MW-105S and MW-125) had upward trends determined for H-3 that were not confirmed by the Kendall-Mann test, and one monitoring well (MW-136D) had an upward trend for Sr-90 that also was not confirmed with the Kendall-Mann analysis. This indicates that the upward trends for these three monitoring wells are not as significant in a statistical sense as those trends confirmed with both Sens and Kendall-Mann analysis.

Of the six monitoring wells with upward trends for H-3, five monitoring wells (MW-105S, MW-107D, MW-107S, MW-109S, and MW-120-4) had maximum H-3 concentrations less than 4,000 pCi/L (all but one monitoring well less than 2,570 pCi/L) with only a modest upward trend (Attachments). The H-3 concentrations in these five monitoring wells are well below the target concentration for H-3. The small upward trend in these five monitoring wells does not appear to be a significant issue with regard to TEDE status, as the largest TEDE value associated with H-3 for these monitoring wells is less than 0.15 mrem/yr. The upward trend for H-3 in MW-125 has higher H-3 concentrations (up to 13,800 pCi/L; March 2007) and appears to be associated with a plume of H-3 that is migrating across the HNP site related to source removal activities (CYAPCO, 2006c). As shown in Figure 2-1, the H-3 concentration in MW-125 decreased substantially in April and June 2007 to H-3 levels less than 3,300 pCi/L indicating the plume is dissipating rapidly under normal groundwater flow conditions. The TEDE dose due to H-3 in MW-125 in June 2007 equates to 0.13 mrem/yr or less then 2% of the allowable existing groundwater dose (Table 2-1).

Five monitoring wells have upward trends determined for Sr-90. Two of the monitoring wells (MW-136D and MW-137) are installed adjacent to, and downgradient of, remediated former source areas (tank farm and fuel building, respectively) located in the upgradient portion of HNP, and three monitoring wells are located in the downgradient portion of the site (MW-118A-5, MW-125, and MW-124). The upward trends established for all five monitoring wells appear to be initiating decreasing trends, as the Q2 2007 Sr-90 concentrations are lower than the Q1 2007 concentrations in each well (Figure 2-2). The upward trends determined for MW-118A-5, MW-124, and MW-125 are consistent with a plume of Sr-90 migrating through the HNP site (CYAPCO, 2006c). The highest Sr-90 concentration in these five monitoring wells occurs in MW-125, and has decreased from 13.1 pCi/L in March 2007 to 9.52 pCi/L in June 2007 (Table 2-1 and Figure 2-2). The TEDE dose attributed to Sr-90 in MW-125 in June 2007 equates to 0.95 mrem/yr per year or less then 12% of the allowable existing groundwater dose (Table 2-1).

As cumulative TEDE is one of the key metrics for license termination, the trend of cumulative TEDE was also evaluated for all monitoring wells included in the 18-month monitoring plan through June 2007 (Table 2-2). The complete trend analysis results are included in Attachment 2. Similar to the trends established for individual SOCs, most monitoring wells had either stable or decreasing trends (Table 2-2). A total of seven monitoring wells (MW-107D, MW-109S, MW-118A-5, MW-120-4, MW-124, MW-125, and

MW-131S) had upward trends identified for cumulative TEDE based on the most recent measurements, all but two (MW-109S and MW-131S) confirmed by the Kendall-Mann test. Upward trends in TEDE are a direct result of upward trends discussed above for SOCs Sr-90 and H-3. The variation of TEDE through time for the seven monitoring wells is shown in Figure 2-3. Most of the monitoring wells have cumulative TEDE less than 1.0, and the greatest cumulative TEDE value identified in the seven monitoring wells is 1.83 mrem/yr (MW-125 March 2007, Table 2-1 and Figure 2-3). The TEDE dose from this well subsequently decreased to 1.07 mrem/yr in June 2007 (Table 2-1). The maximum total TEDE value observed in MW-125 is well below the 8.0 mrem/yr established for existing groundwater (maximum of 22.5% in March of 2007). As shown in Figure 2-3, all of the seven monitoring wells demonstrated the initiation of decreasing TEDE values as the June 2007 TEDE values were lower than those established for March 2007 (Table 2-1).

As discussed above, the presence of monitoring wells with increasing TEDE is related to plumes of H-3 and Sr-90 that are migrating through the HNP site (CYAPCO, 2006c). The hydrogeologic conceptual model for HNP identifies a shallow, unconfined aquifer that occurs within unconsolidated sands and the upper, fractured portion of bedrock within the general footprint of the HNP industrial area, and a confined aquifer that occurs in the deeper bedrock. Groundwater in both aquifers exhibits recharge in the upgradient portion of the site with groundwater flow in both aquifers towards the Connecticut River where both aquifers discharge to the river (Figures 2-4 and 2-5). Radionuclide contamination (H-3, Sr-90, and Cs-137) occurs in both aquifers with historic source areas associated with the former tank farm, PAB, containment, and the fuel building all located in the upgradient portion of the HNP site. Tritium is present in both aquifers, while Sr-90 and Cs-137 are primarily distributed in the shallow, unconfined aquifer and the shallowest portion of the confined aquifer. The general radionuclide distribution is consistent with the soil/rock-groundwater partitioning behavior exhibited by Sr-90, Cs-137, and H-3. Both Sr-90 and Cs-137 exhibit substantial partition coefficients, while H-3, moving as tritiated water, does not partition to the solid phase. The partitioning behavior of the SOCs limits the migration of Sr-90 and Cs-137 relative to the highly mobile H-3.

Prior to 2005, the containment foundation mat dewatering sump (mat sump) was in operation, which exerted a hydraulic control on groundwater flow in both aquifers. In addition, active dewatering to support demolition and soil remediation gave rise to a groundwater capture zone in the central industrial area of HNP. Since the mat sump and the demolition dewatering system were shut down in mid-2005, groundwater levels have established a continuous gradient from the upgradient portion of the site to the Connecticut River. During the time of the historical mat sump operation, much of the radionuclide-contaminated groundwater in the upgradient areas of HNP was captured by the sump and subsequently discharged to the Connecticut River via the plant National Pollutant Discharge Elimination System (NPDES) permitted outfall system.

Substantial soil and bedrock remediation has occurred at HNP. The remedial efforts were focused in soils and shallow bedrock within source areas located in the upgradient portion of the site including the PAB-containment area (2005), tank farm (2005), and fuel building (fall 2006). The PAB- containment area and tank farm remedial efforts occurred prior to the mat sump closure and during dewatering efforts in the upgradient portion of HNP in 2005. Both the mat sump and the dewatering activities acted to minimize migration of

radionuclide-contaminated groundwater that may have been created during the remedial activities. Subsequent to the PAB and tank farm remedial efforts, SOCs adjacent to and downgradient of these areas have seen significant reductions in SOC concentration levels (CYAPCO, 2006a and CYAPCO, 2006c).

The fuel building remedial effort occurred in fall 2006 after the mat sump closure and did not include significant dewatering activities. As a result, it appears that a pulse of radionuclide contamination was released during the fuel building soil remediation. The groundwater impacts associated with the fuel building remediation are shown in Figure 2-6 where H-3 and Sr-90 groundwater concentrations are plotted versus sample date for MW-137. Well MW-137 is located adjacent to and directly downgradient of the fuel building (Figures 2-4 and 2-5). As shown in Figure 2-6, a substantial increase in H-3 is observed coincident with the fuel building remedial effort. Tritium in MW-137 is shown to increase from values near 1,000 pCi/L to a maximum value of 11,900 pCi/L in the September 2006 quarterly sampling round. Also shown in Figure 2-6 is a substantial increase in Sr-90 that occurred in MW-137 approximately three months later. Both of the observed concentration spikes are believed to be related to the fuel building remedial efforts. The lag in time associated with the Sr-90 concentration spike is a function of the retardation experienced by Sr-90 due to the significantly larger soil-water partition coefficient associated with Sr-90 relative to the non-retarded H-3.

The slugs of H-3 and Sr-90 contaminated groundwater that were released during the fuel building remediation in fall 2006 are currently migrating across the HNP site, and are responsible for some of the current upward trends observed in the HNP monitoring wells. An example of the H-3 slug migration is illustrated in Figure 2-7 where H-3 concentrations are plotted versus sample date for MW-137, MW-106S, and MW-125. Well MW-137 is upgradient of MW-106S, and MW-125 is downgradient of MW-106S (Figures 2-4 and 2-5). Thus, groundwater generally flows from the vicinity of MW-137 past MW-106S toward MW-125. The peak H-3 concentration observed for MW-137 occurred in early September, followed by the peak value in MW-106S that occurred in the October-November 2006 timeframe (Figure 2-7). The H-3 concentration in the downgradient MW-125 begins to increase in December 2006 and by April and June 2007 has significantly decreased (Figure 2-7). The duration of the slug appears to be approximately six months as observed in all three monitoring wells (Figure 2-7).

The impact of the slug of H-3 is more significant for MW-125 than that observed in MW-106S, as the peak H-3 concentration observed in MW-125 during March 2007 (13,800 pCi/L) is similar to that observed in MW-137 in September 2006 (11, 900 pCi/L). The peak H-3 value observed for MW-106S in fall 2006 was 5,260 pCi/L. This is due to the fact that MW-125 is more directly on the downgradient groundwater flow path from MW-137 and the fuel building relative to MW-106S (Figures 2-4 and 2-5). The slug of H-3 contaminated groundwater could be expected to impact monitoring wells downgradient of MW-125 during summer 2007 as it migrates through the downgradient portion of the site prior to discharge to the discharge canal and/or Connecticut River.

A similar scenario is also anticipated for Sr-90. The Sr-90 released during the fuel building remedial effort is expected to migrate through the HNP site, but at a retarded rate relative to that observed for H-3. Figure 2-8 shows Sr-90 groundwater concentrations versus sample date for MW-137, MW-106S, and MW-125. The slug of Sr-90 released from the fuel building

remediation passed through MW-137 in the December 2006-January 2007 time period and began to impact MW-106S in March-April 2007 (Figure 2-8), but at a lower concentration similar to the behavior of H-3 in MW-106S. While MW-125 is shown to have increasing Sr-90 during June 2006 through March 2007, the slug of Sr-90 that originated from the fuel building remediation in December 2006 has likely not reached MW-125 as of June 2007. The Sr-90-contaminated slug of groundwater associated with the fuel building remediation is expected to impact MW-125 in the summer-fall 2007 time period and is predicted to have a peak concentration in the range of that observed for MW-137 in December 2006 (9.72 pCi/L).

In addition to the Sr-90 increase experienced by MW-125 during early 2007, an earlier spike in Sr-90 also occurred in MW-106S during late August/early September 2006 (Figure 2-8). Sr-90 in MW-106S increased to 13.1 pCi/L in the third quarter 2006 and decreased to less than 2 pCi/L over a six-month period (Figure 2-8). A similar spike in Sr-90 also occurs in MW-125 approximately six months later, but no earlier significant increase in Sr-90 prior to August/September 2006 is observed for MW-137 (Figure 2-8). This suggests that the source for the slug of Sr-90 that impacted MW-106S and MW-125 during early September 2006 and March 2007, respectively, was located downgradient of MW-137, but upgradient of both MW-106S and MW-125. Likewise, the Sr-90 release would have occurred at least three months prior to the early September 2006 time period, based on the delayed presence of Sr-90 observed in MW-137 that was associated with the fuel building remediation.

During fall 2005, focused soil excavations within the annular space between the containment dome and surrounding bedrock excavation along the eastern, southern, and southwestern portions of containment were conducted to remove Sr-90 -contaminated soil (Figure 2-9). Most of this portion of the containment dome is downgradient of MW-137, but upgradient of both MW-106S and MW-125 (Figures 2-4 and 2-5). Based on the groundwater flow direction indicated in Figure 2-4, a plume of Sr-90 originating along the southern portion of containment would flow through both MW-106S and MW-125, but would have originated downgradient of MW-137. During the focused soil removal around containment, the mat sump was utilized for a period of time to minimize impacts to groundwater. The use of the mat sump, the approximate 100-foot distance from containment, and the retardation related to soil-water partitioning experienced for Sr-90 delayed the appearance of Sr-90 in MW-106S until the April-June 2006 time period, and the peak concentration associated with the slug of Sr-90 was observed in September 2006 (Figure 2-8). This slug of Sr-90 impacted MW-125 approximately six months later in March 2007 when 13.1 pCi/L was reported (Figure 2-8). Based on the decrease in Sr-90 to 9.52 pCi/L in MW-125 in June 2007 from the peak concentration of 13.1 pCi/L reported in March 2007, this Sr-90 plume appears to be migrating through the southern portion of the HNP site, and will ultimately discharge to either the discharge canal or Connecticut River (Figure 2-4).

The peak concentration of Sr-90 that will be observed in downgradient wells in the future is expected to be at or below the observed upgradient peak concentrations due to the attenuation of Sr-90 in the intervening unconsolidated formation and reactive fracture fill in shallow bedrock and processes of dilution and dispersion related to advective groundwater flow. The peak Sr-90 concentration in MW-137 associated with the fuel building remediation was 9.72 pCi/L (December 2006), while the peak Sr-90 value associated with the focused containment remediation was 13.1 pCi/L (MW-106S, September 2006 and

MW-125 March 2007). These concentrations equate to TEDE doses of 0.97 mrem/yr and 1.3 mrem/yr, respectively.

In general, H-3 has decreased in most of the monitoring wells in the upgradient portion of HNP in both the unconfined and confined aquifers. This is due to the substantial source remediation that has occurred in the tank farm, PAB-containment area, and most recently the fuel building, and the relatively rapid migration of the non-retarded H-3 relative to Sr-90. As of June 2007, all upgradient monitoring wells (i.e., monitoring wells upgradient of MW-125) have H-3 concentrations less than 4,000 pCi/L. The recent semi-annual groundwater monitoring report (Q3-Q4 2006) documented a slug of H-3-contaminated groundwater that was present in the downgradient portion of the deeper, confined aquifer during Q3 and Q4 2006 (see Figures 6-6 and 6-14 in the Semi-Annual Groundwater Monitoring Report). This is consistent with the low concentration distribution of H-3 observed in the upgradient monitoring wells through June 2007 (CYAPCO, 2007). The peak H-3 concentration in upgradient monitoring well MW-137 was 11,900 pCi/L (September 2006), while the current H-3 concentration in MW-137 is 3,920 pCi/L (June 2007). These H-3 concentrations equate to TEDE doses of 0.46 mrem/yr and 0.15 mrem/yr, respectively.

While H-3 currently appears to be focused in the more downgradient portions of the site, Sr-90 is still present in the more upgradient portion of HNP, and will take longer to migrate through the site. Increases in Sr-90 are expected to occur in MW-125 and potentially other downgradient monitoring wells during 2007. The maximum H-3 and Sr-90 groundwater concentrations that are experienced in the upcoming quarters should be bounded by concentrations already observed in upgradient monitoring wells. This is a function of the location of historic source areas in the upgradient area of HNP, the soil and bedrock remediation completed to date in those areas, partial attenuation of Sr-90 on aquifer materials, and processes of dilution and dispersion related to advective groundwater flow.

Although there may be some increases in H-3 or Sr-90 in downgradient monitoring wells in subsequent sampling rounds related to the continued migration of discrete plumes of H-3 and/or Sr-90 associated with recent remediation, the magnitude of these increases is expected to correspond to a small fraction (i.e., less then 25%) of the allowable dose from the existing groundwater dose component of LTP Equation 5-1 (8.0 mrem/yr).

As previously discussed, H-3 and Sr-90 are passing through the site at different rates. If the bounding concentrations given above for the upgradient wells (i.e., highest H-3 and Sr-90 concentrations directly downgradient of fuel building in MW-137) were to occur in a downgradient well at some time in the future, the maximum TEDE contribution would be 1.42 mrem/yr or 18% of the allowable dose for existing groundwater. Even with this conservative assumption, the TEDE is well below the 8.0 mrem/yr established in the LTP. Therefore, not all wells need to show a stable or downward trend for it to be concluded that the concentrations in these downgradient monitoring wells will not rise to a level that approaches the allotted dose of 8.0 mrem/yr.

3.0 Conclusions

Based on the 18 months of groundwater monitoring (i.e., December 2005 through June 2007) the following observations support license termination:

1. The plant-related SOCs detected in groundwater are H-3, Sr-90, and Cs-137.
2. Most monitoring locations do have stable or decreasing concentration trends; six monitoring wells (MW-105S, MW-107D, MW-107S, MW-109S, MW-120-4, and MW-125) exhibit an increasing trend for H-3 and five monitoring wells (MW-118A-5, MW-125, MW-124, MW-136D, and MW-137) are associated with an increasing trend for Sr-90. The increasing trends are related to discrete plumes of H-3 and Sr-90 that are currently migrating through the HNP site resulting from source removal remedial actions conducted around containment in fall 2005 and at the fuel building in the fall of 2006. The discrete plumes are expected to dissipate and discharge to the Connecticut River during 2007. While all monitoring wells do not currently exhibit stable or decreasing trends for H-3 or Sr-90, the radionuclide concentrations within the plumes have TEDE values well below the maximum allowable dose of 8 mrem/yr (bounding concentrations sum to 23% of maximum allowable dose), and source remediation at HNP has minimized the potential for significant groundwater plumes to be created in the future.
3. Through June 2007, the maximum cumulative TEDE for all detected SOCs for the worst case monitoring well contributes 1.98 mrem/yr to the existing groundwater component of the cumulative dose estimate for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license.
4. The existing groundwater component of the cumulative dose for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license is 25% of the maximum allowable dose of 8 mrem/yr. Compliance with this maximum ensures that the cumulative dose from all dose pathways is less than 25 mrem/yr TEDE.

Based on the conditions observed during the 18-month license termination groundwater monitoring period, the license termination conditions for HNP groundwater are believed to have been met for the non-ISFSI areas of the HNP at the time of release of these areas from the NRC license. The existing groundwater TEDE dose is well below the existing groundwater criterion of 8.0 mrem/yr at all monitoring locations. Several monitoring wells have increasing trends for H-3 and Sr-90. The increasing trends are related to the migration of discrete plumes of SOCs that were associated with soil remediation/source removal conducted around containment in fall 2005 and in the fuel building area in fall 2006. These discrete plumes are expected to migrate through the HNP site during 2007. The dose contribution resulting from SOC concentrations in groundwater at HNP is expected to remain well below the dose allowed for existing groundwater although some downgradient wells are or may in the future exhibit short term increases in concentration and/or upward trends. Potential future SOC groundwater concentrations in downgradient wells are believed to be bounded by concentrations already observed in upgradient wells. SOCs will be diluted and dispersed related to advective groundwater flow, and Sr-90 will exhibit

partial attenuation as it moves through aquifer sediments. Based on the observed SOC concentrations in upgradient monitoring wells, any increase in SOC concentration for the downgradient monitoring wells is expected to be less than 25% of the existing groundwater TEDE of 8 mrem/yr. The total dose, therefore, from all dose components of Equation 5-1 of the LTP will be below the unconditional release criterion of 25 mrem/yr. Although results of the last sampling effort reveal several monitoring wells that do not meet the criterion of a stable or decreasing trend, the cumulative data effectively identifies the transient nature of the increasing trends and supports the conclusion that the magnitude of potential future increases in downgradient wells will not exceed the groundwater TEDE limit of 8 mrem/yr. Based on this conclusion, CYAPCO requests concurrence that the results of the 18-month period of groundwater monitoring program successfully demonstrates this site can be removed under the LTP.

4.0 References

CYAPCO, 2006a. Haddam Neck Plant License Termination Plan, Rev. 4. Connecticut Yankee Atomic Power Company, Haddam Neck Plant, November 2006.

CYAPCO, 2006b. Groundwater Monitoring Plan to Support HNP License Termination, Rev. 2, Connecticut Yankee Atomic Power Company, Haddam Neck Plant, December 2006.

CYAPCO, 2006c. Semi-Annual Groundwater Monitoring Report January through June 2006, Connecticut Yankee Atomic Power Company, Haddam Neck Plant, October 2006.

CYAPCO, 2007a. Semi-Annual Groundwater Monitoring Report July through December 2006, Connecticut Yankee Atomic Power Company, Haddam Neck Plant, March 2007.

CYAPCO, 2007b. Quarterly Groundwater Monitoring Event Data Summary (March 2007 Sampling Event), Connecticut Yankee Atomic Power Company, Haddam Neck Plant, May 2007.

USEPA, 1989. Statistical Analysis of Groundwater at RCRA Facilities - Interim Final Guidance, April 1989.

USEPA, 1992. Statistical Analysis of Groundwater at RCRA Facilities - Addendum to Interim Final Guidance, July 1992.

Figures

Figure 1-1. HNP Groundwater Data Flow During 18-Month License Termination Monitoring Period.

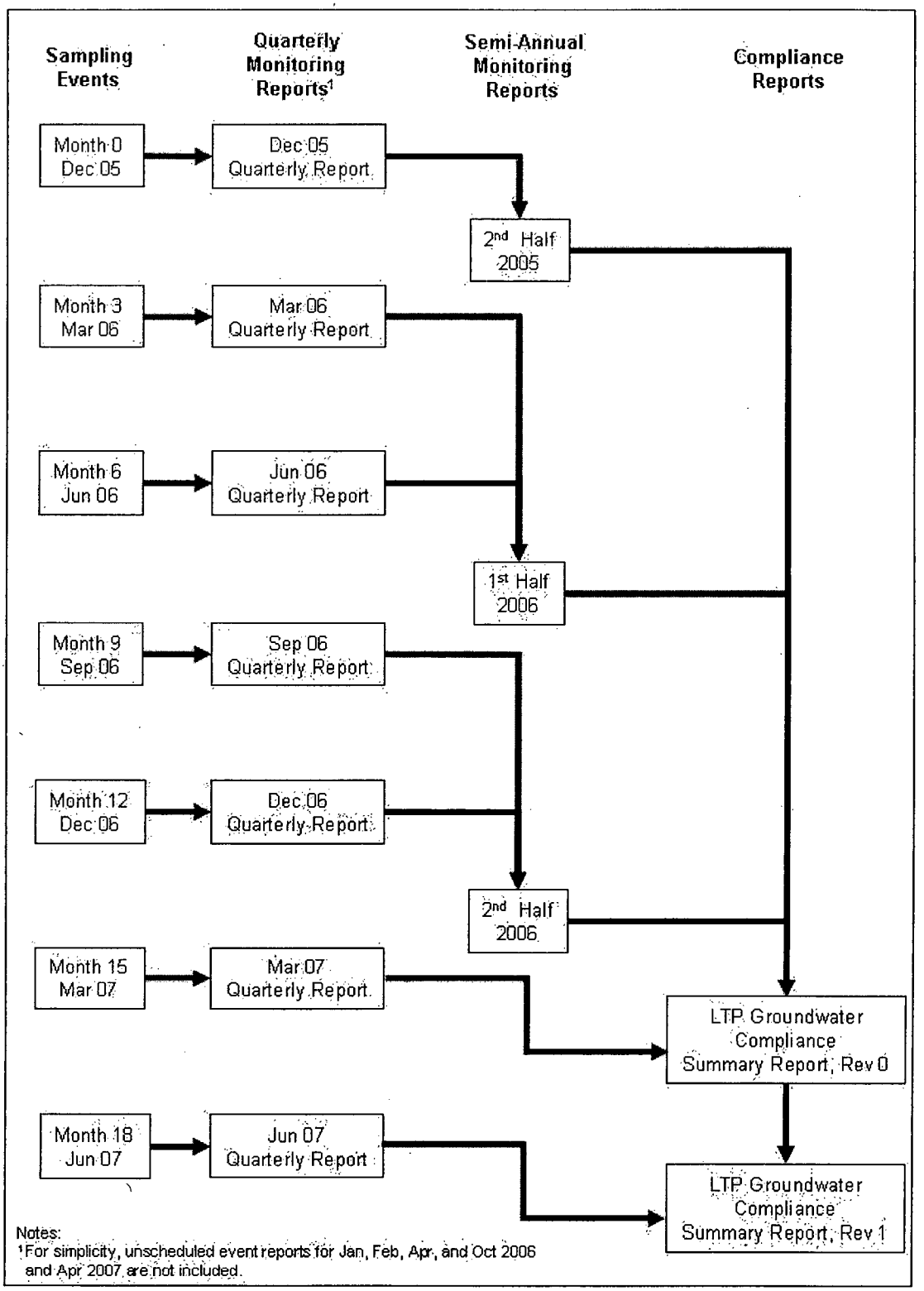


Figure 2-1
Monitoring Wells with Upward H-3 Trend June 2007

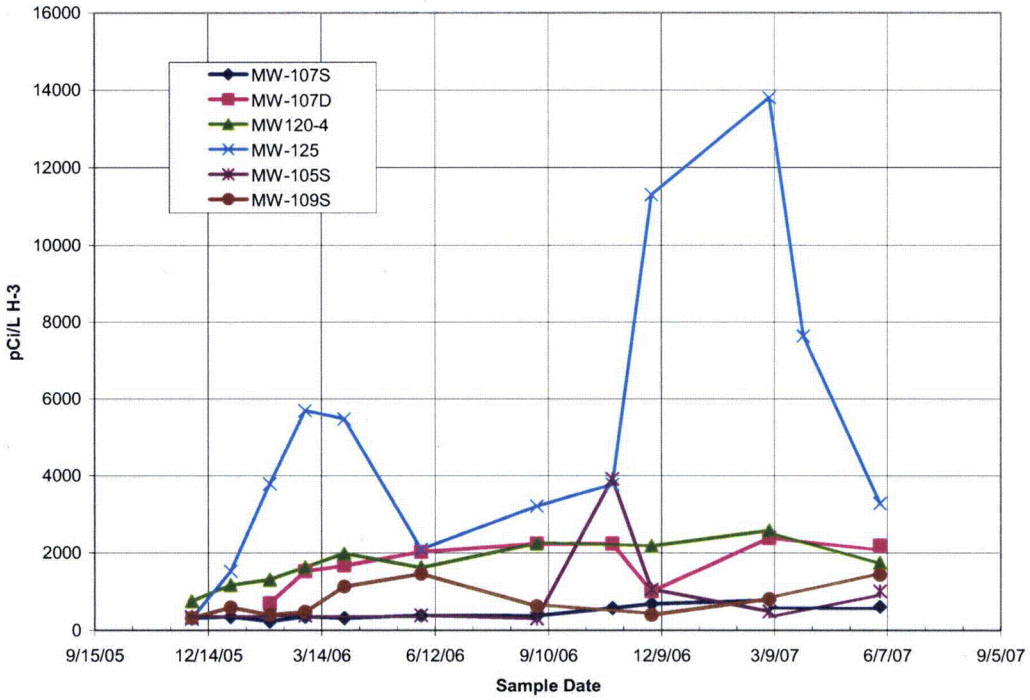


Figure 2-2
Monitoring Wells with Sr-90 Upward Trend June 2007

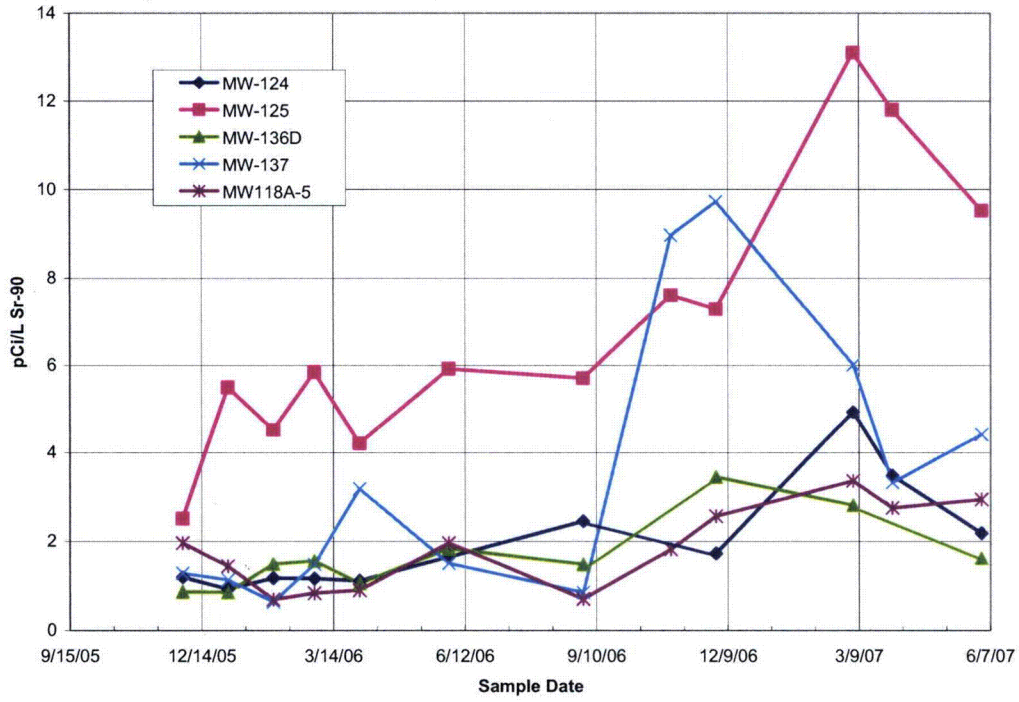
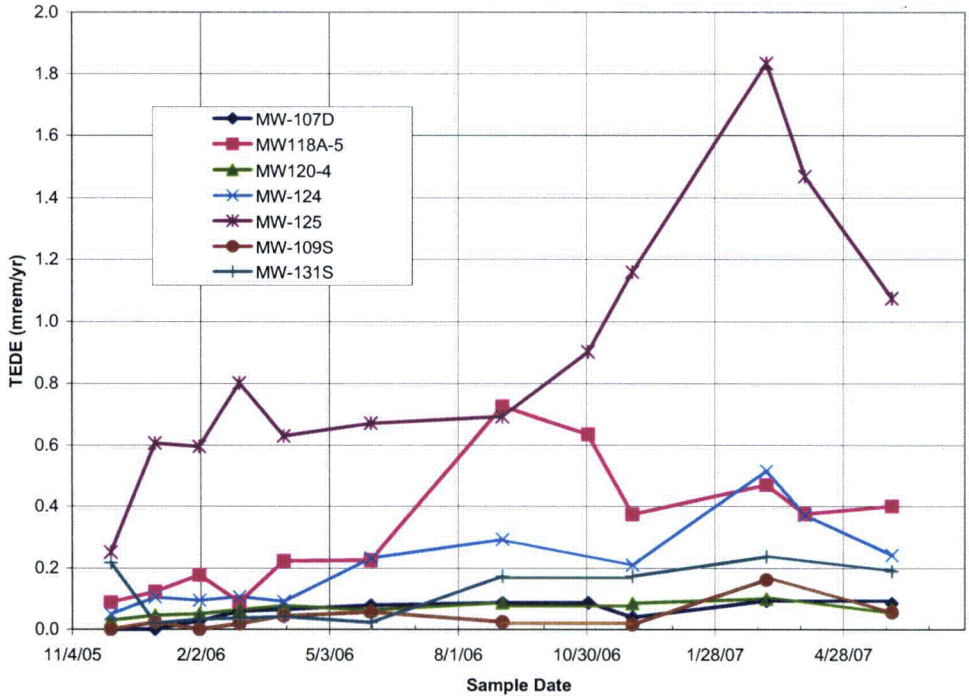


Figure 2-3
Monitoring Wells Total TEDE Upward Trend June 2007



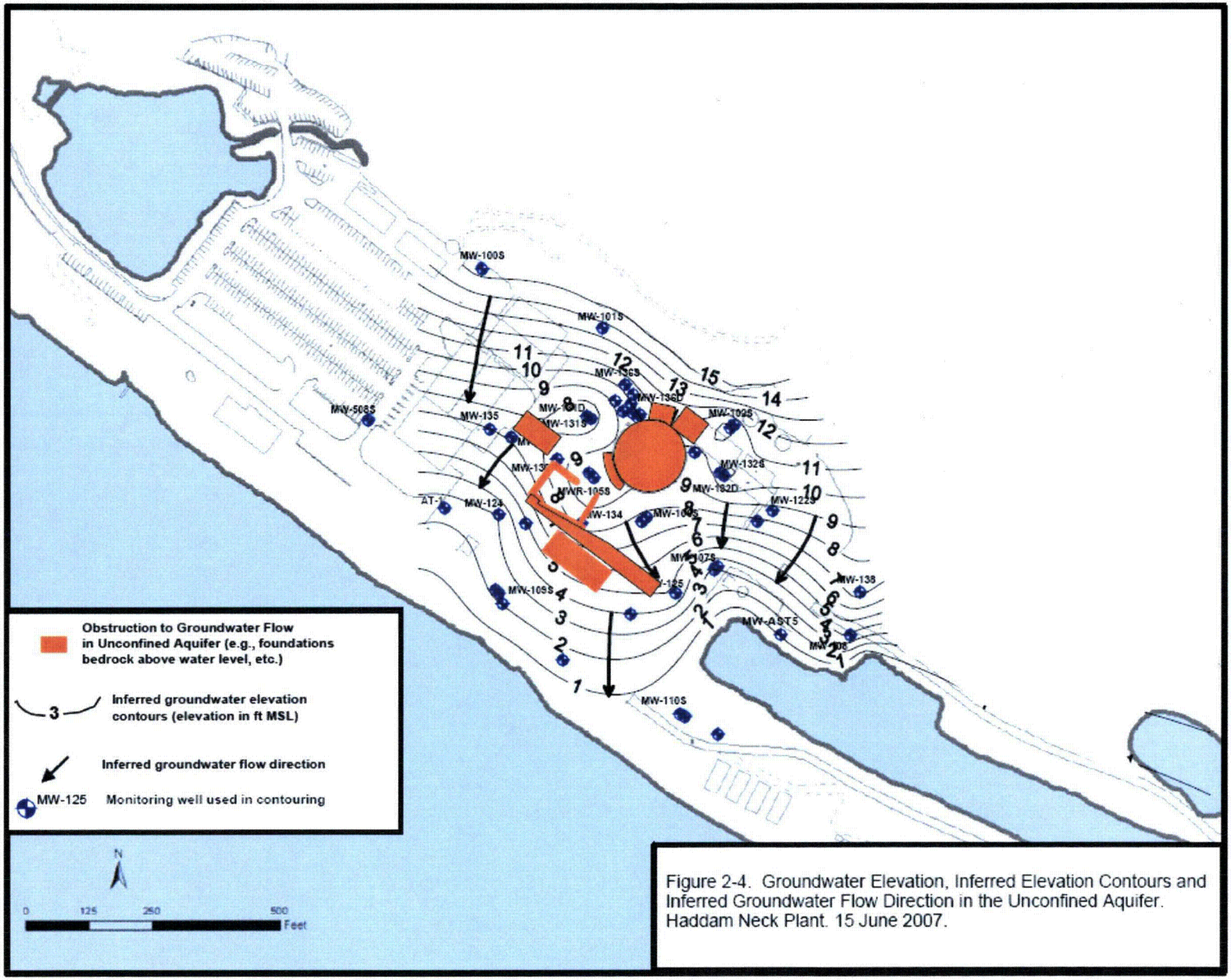


Figure 2-4. Groundwater Elevation, Inferred Elevation Contours and Inferred Groundwater Flow Direction in the Unconfined Aquifer. Haddam Neck Plant. 15 June 2007.

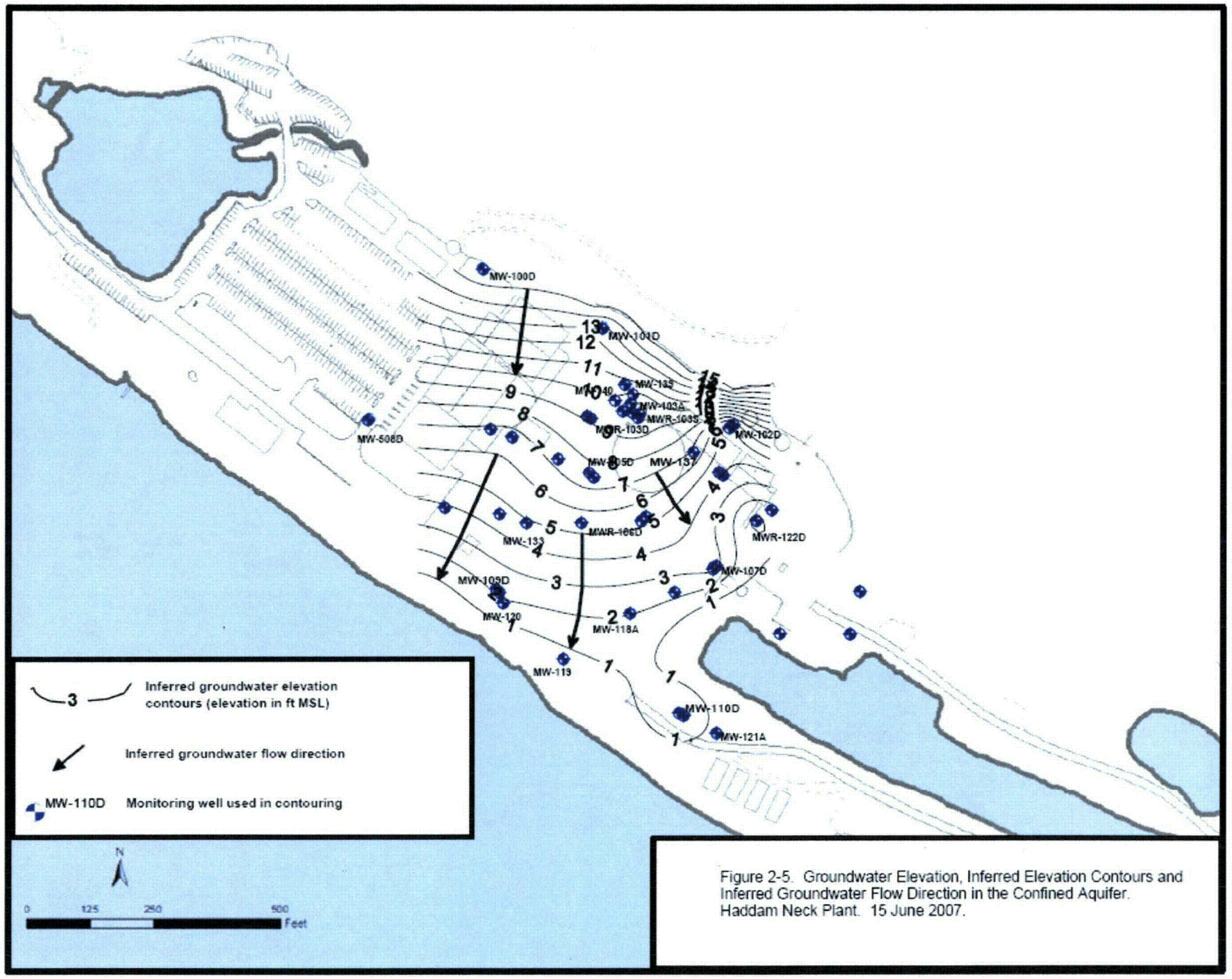


Figure 2-5. Groundwater Elevation, Inferred Elevation Contours and Inferred Groundwater Flow Direction in the Confined Aquifer. Haddam Neck Plant. 15 June 2007.

Figure 2-6
Sr-90 and H-3 MW-137

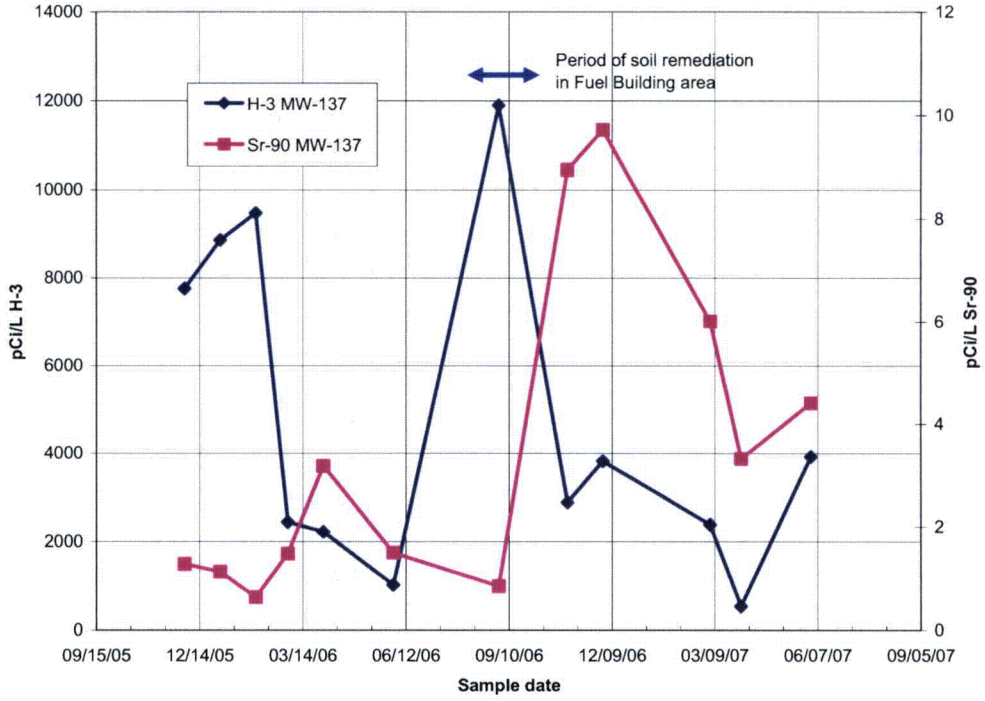


Figure 2-7
H-3 in MW-137, MW-106S, and MW-125

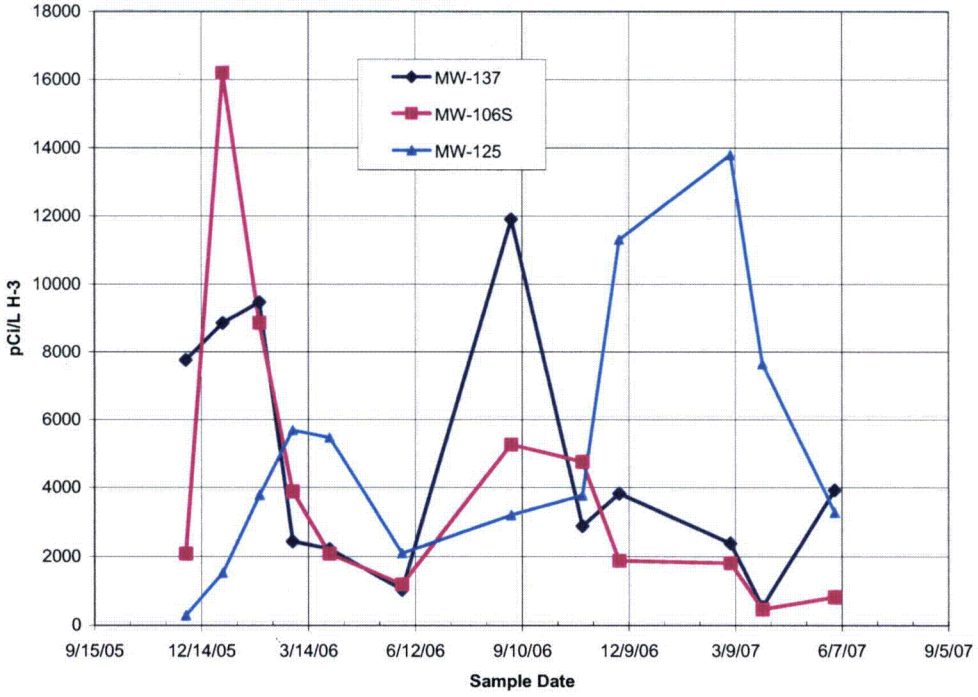


Figure 2-8
Sr-90 in MW-137, MW-106S and MW-125

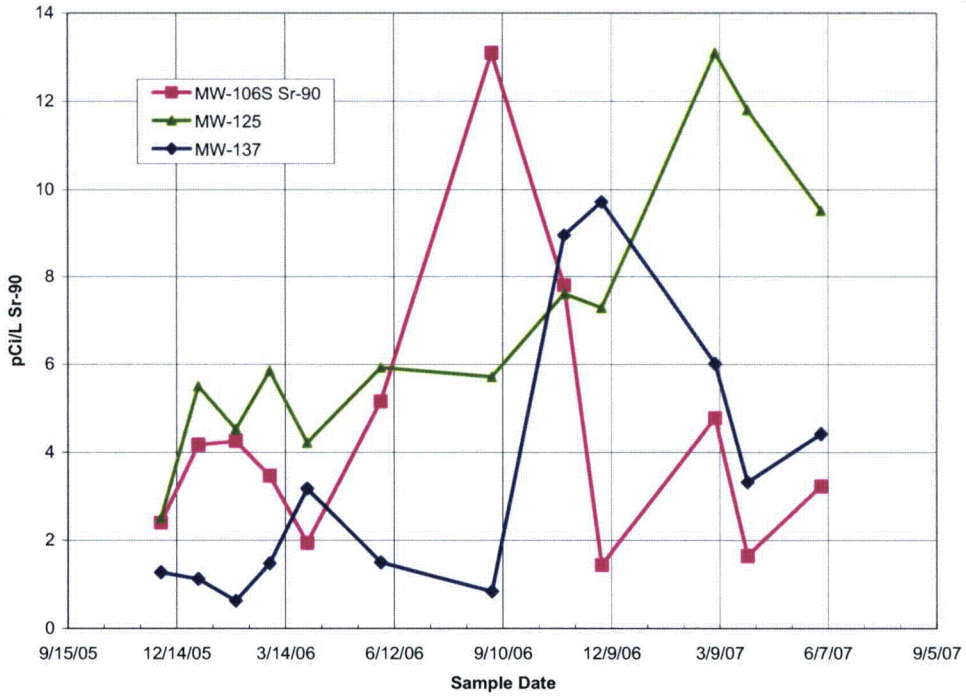
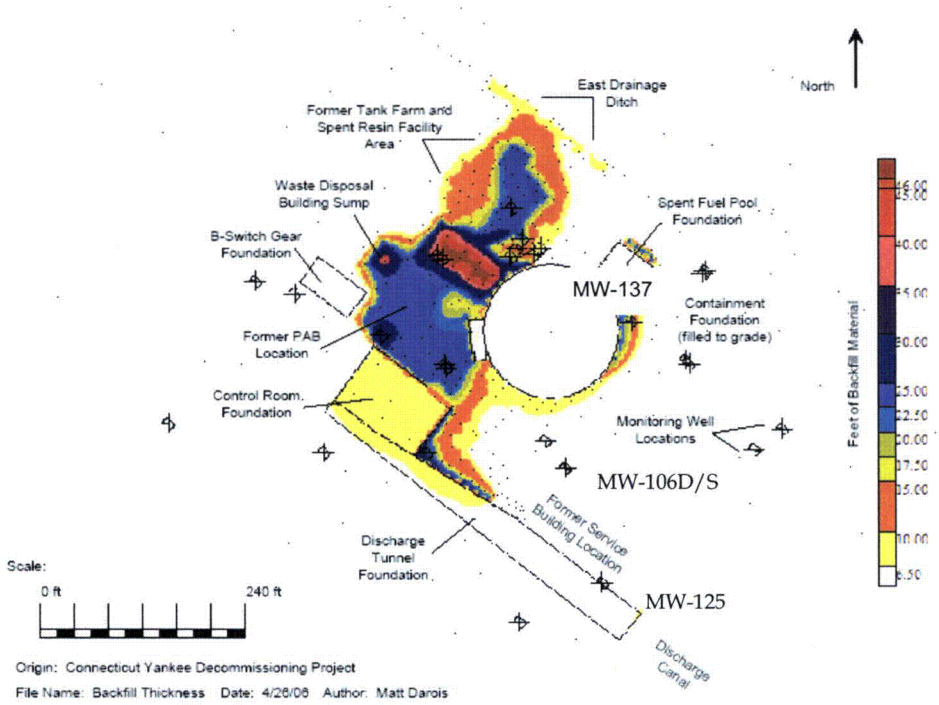


Figure 2-9

Location and Thickness of Backfill



Tables

Table 1-1. Compliance Metrics for Substances of Concern in Groundwater at HNP.

Metric	Value	Comment
Maximum allowable TEDE Contribution from Existing Groundwater	8 mrem/yr or less	This is based on the location (well) with the maximum cumulative TEDE dose. Values for the other dose contributors to the total cumulative dose (i.e., soil and future groundwater) have been set to be no more than 17 mrem/yr TEDE in the areas affected by "existing" groundwater dose. This leave 8 mrem/yr for the existing groundwater component to ensure compliance with the 25 mrem/yr TEDE LTP requirement.
SOC Concentration Trend in Groundwater	Stable or Declining	This trend is based on a statistical analysis of data collected during the 18-month LTP monitoring period.
Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) for beta/photon emitters	Less than 4 mrem/yr (Target Organ)	This metric reflects the cumulative drinking water dose using the Target Organ Method. Although the MCL is not a compliance metric identified in the LTP, the NRC is required to inform the EPA if the groundwater concentrations at an NRC licensed facility cause the MCL related triggers of the NRC/EPA Memorandum Of Understanding (MOU) to be exceeded. Performance of his metric has been assessed in a separate letter to be submitted to the NRC.

Table 1-2. Summary of Groundwater Monitoring Reports and Groundwater Monitoring Events Providing Supporting Data for License Termination at HNP.

Report	Sampling Event(s) Described	Event Rationale
Semi-Annual Groundwater Monitoring Report July through December 2005, Connecticut Yankee Atomic Power Company, Haddam Neck Plant	December 2005	This monitoring event was the first regularly scheduled quarterly sampling event in the 18-month LTP groundwater monitoring period.
Semi-Annual Groundwater Monitoring Report January through June 2006, Connecticut Yankee Atomic Power Company, Haddam Neck Plant	January 2006	Non-scheduled supplementary sampling event.
	February 2006	Non-scheduled supplementary sampling event.
	March 2006	Regularly scheduled spring quarterly sampling event.
	April 2006	Non-scheduled supplementary sampling event.
	June 2006	Regularly scheduled summer quarterly sampling event.
Semi-Annual Groundwater Monitoring Report July through December 2006, Connecticut Yankee Atomic Power Company, Haddam Neck Plant	September 2006	Regularly scheduled fall quarterly sampling event.
	October 2006	Non-scheduled supplementary sampling event.
	December 2006	Regularly scheduled winter quarterly sampling event.
Groundwater Monitoring Event Data Summary Memorandum	March 2007	Regularly scheduled spring quarterly sampling event.
	April 2007	Non-scheduled supplementary sampling event.
Groundwater Monitoring Event Data Summary Memorandum	June 2007	Final Sampling Round of the 18-month LTP groundwater monitoring period

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007.

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
AT-1	H-3	*357*	ND	WNS	NA	*321*	ND
	Sr-90	*1.34*	ND	WNS	NA	*1.41*	ND
	Cs-137	*3.55*	ND	WNS	NA	*4.18*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-100D	H-3	*168*	ND	WNS	NA	*254*	ND
	Sr-90	*1.52*	ND	WNS	NA	*0.899*	ND
	Cs-137	*4.69*	ND	WNS	NA	*6.02*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-100S	H-3	*170*	ND	WNS	NA	*252*	ND
	Sr-90	*1.49*	ND	WNS	NA	*0.999*	ND
	Cs-137	*3.91*	ND	WNS	NA	*6.01*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-101D	H-3	*376*	ND	WNS	NA	*272*	ND
	Sr-90	*1.24*	ND	WNS	NA	*0.766*	ND
	Cs-137	*5.13*	ND	WNS	NA	*4.42*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-101S	H-3	*376*	ND	WNS	NA	*272*	ND
	Sr-90	*1.12*	ND	WNS	NA	*0.768*	ND
	Cs-137	*3.54*	ND	WNS	NA	*4.17*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-102D	H-3	**1640**	0.06	WNS	NA	**1360**	0.05
	Sr-90	*1.55*	ND	WNS	NA	*1.68*	ND
	Cs-137	*2.54*	ND	WNS	NA	*3.3*	ND
		Cumulative Dose	0.06		NA	Cumulative Dose	0.05
MW-102S	H-3	*236*	ND	WNS	NA	*334*	ND
	Sr-90	*1.47*	ND	WNS	NA	*1.69*	ND
	Cs-137	*4.35*	ND	WNS	NA	*4.86*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-103A	H-3	*314*	ND	WNS	NA	**1180**	0.05
	Sr-90	*1.19*	ND	WNS	NA	*1.54*	ND
	Cs-137	*3.41*	ND	WNS	NA	*5.38*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.05
MW-103B	H-3	**1960**	0.08	WNS	NA	**1410**	0.05
	Sr-90	*1.42*	ND	WNS	NA	*1.97*	ND
	Cs-137	*7.29*	ND	WNS	NA	*6.63*	ND
		Cumulative Dose	0.08		NA	Cumulative Dose	0.05

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-103D	H-3	**443**	0.02	WNS	NA	**434**	0.02
	Sr-90	*1.22*	ND	WNS	NA	*1.14*	ND
	Cs-137	*4.7*	ND	WNS	NA	*7.28*	ND
		Cumulative Dose	0.02		NA	Cumulative Dose	0.02
MW-103S	H-3	*265*	ND	WNS	NA	**1250**	0.05
	Sr-90	*1.23*	ND	WNS	NA	*1.88*	ND
	Cs-137	*3.13*	ND	WNS	NA	*5.91*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.05
MW-105D	H-3	**1900**	0.07	WNS	NA	**1340**	0.05
	Sr-90	*1.29*	ND	WNS	NA	*1.22*	ND
	Cs-137	*2.81*	ND	WNS	NA	*3.49*	ND
		Cumulative Dose	0.07		NA	Cumulative Dose	0.05
MW-105S	H-3	**476**	0.02	WNS	NA	**999**	0.04
	Sr-90	*1.56*	ND	WNS	NA	*0.912*	ND
	Cs-137	*2.68*	ND	WNS	NA	*3.76*	ND
		Cumulative Dose	0.02		NA	Cumulative Dose	0.04
MW-106D	H-3	**776**	0.03	**640**	0.02	**1050**	0.04
	Sr-90	*1.53*	ND	*1.19*	ND	*1.3*	ND
	Cs-137	*6.94*	ND	*5.34*	ND	*5.76*	ND
		Cumulative Dose	0.03	Cumulative Dose	0.02	Cumulative Dose	0.04

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-106S	H-3	**1800**	0.07	**462**	0.02	**809**	0.03
	Sr-90	**4.77**	0.48	**1.64**	0.16	**3.23**	0.32
	Cs-137	*2.92*	ND	*4.45*	ND	*4.48*	ND
		Cumulative Dose	0.54	Cumulative Dose	0.18	Cumulative Dose	0.35
MW-107D	H-3	**2380**	0.09	WNS	NA	**2190**	0.08
	Sr-90	*1.75*	ND	WNS	NA	*1.89*	ND
	Cs-137	*9.45*	ND	WNS	NA	*6.06*	ND
		Cumulative Dose	0.09		NA	Cumulative Dose	0.08
MW-107S	H-3	**767**	0.03	WNS	NA	**597**	0.02
	Sr-90	*1.82*	ND	WNS	NA	*1.29*	ND
	Cs-137	*4.26*	ND	WNS	NA	*3.71*	ND
		Cumulative Dose	0.03		NA	Cumulative Dose	0.02
MW-108	H-3	*334*	ND	WNS	NA	*323*	ND
	Sr-90	*1.09*	ND	WNS	NA	*1.44*	ND
	Cs-137	*3.11*	ND	WNS	NA	*4.33*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-109D	H-3	**1790**	0.07	WNS	NA	**1760**	0.07
	Sr-90	*1.45*	ND	WNS	NA	*0.987*	ND
	Cs-137	*3.03*	ND	WNS	NA	*3.69*	ND
		Cumulative Dose	0.07		NA	Cumulative Dose	0.07

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-109S	H-3	**798**	0.03	WNS	NA	**1420**	0.05
	Sr-90	1.31	0.13	WNS	NA	*1.37*	ND
	Cs-137	*3.6*	ND	WNS	NA	*3.68*	ND
		Cumulative Dose	0.16		NA	Cumulative Dose	0.05
MW-110D	H-3	**4440**	0.17	**3910**	0.15	**4910**	0.19
	Sr-90	*1.56*	ND	*1.35*	ND	*1.26*	ND
	Cs-137	*3.68*	ND	*3.54*	ND	*4.79*	ND
		Cumulative Dose	0.17	Cumulative Dose	0.15	Cumulative Dose	0.19
MW-110S	H-3	**959**	0.04	**1240**	0.05	**920**	0.04
	Sr-90	*1.36*	ND	*1.3*	ND	*1.89*	ND
	Cs-137	*2.53*	ND	*3.95*	ND	*2.05*	ND
		Cumulative Dose	0.04	Cumulative Dose	0.05	Cumulative Dose	0.04
MW-112	H-3	*314*	ND	WNS	NA	*320*	ND
	Sr-90	*1.33*	ND	WNS	NA	*1.34*	ND
	Cs-137	*4.53*	ND	WNS	NA	*2.58*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-113	H-3	*373*	ND	WNS	NA	*323*	ND
	Sr-90	*1.13*	ND	WNS	NA	*1.91*	ND
	Cs-137	*3.76*	ND	WNS	NA	*4.2*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-117	H-3	*363*	ND	WNS	NA	*323*	ND
	Sr-90	*0.689*	ND	WNS	NA	*1.59*	ND
	Cs-137	*2.4*	ND	WNS	NA	*3.83*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-118A-3	H-3	**3640**	0.14	**3260**	0.13	**3350**	0.13
	Sr-90	*0.939*	ND	*1.81*	ND	*1.57*	ND
	Cs-137	*4.62*	ND	*3.14*	ND	*3.85*	ND
		Cumulative Dose	0.14	Cumulative Dose	0.13	Cumulative Dose	0.13
MW-118A-4	H-3	**2810**	0.11	**2790**	0.11	**2780**	0.11
	Sr-90	*1.27*	ND	*1.39*	ND	*1.42*	ND
	Cs-137	*3.81*	ND	*4.35*	ND	*3.27*	ND
		Cumulative Dose	0.11	Cumulative Dose	0.11	Cumulative Dose	0.11
MW-118A-5	H-3	**3500**	0.13	**2610**	0.10	**2780**	0.11
	Sr-90	**3.36**	0.33	*2.75*	ND	**2.94**	0.29
	Cs-137	*4.41*	ND	*3.84*	ND	*4.58*	ND
		Cumulative Dose	0.47	Cumulative Dose	0.10	Cumulative Dose	0.40
MW-119-2	H-3	**1500**	0.06	WNS	NA	**1050**	0.04
	Sr-90	*1.31*	ND	WNS	NA	*0.899*	ND
	Cs-137	*3.84*	ND	WNS	NA	*11.5*	ND
		Cumulative Dose	0.06		NA	Cumulative Dose	0.04

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-119-4	H-3	**809**	0.03	WNS	NA	**732**	0.03
	Sr-90	*1.41*	ND	WNS	NA	*1.26*	ND
	Cs-137	*5.11*	ND	WNS	NA	*4.73*	ND
		Cumulative Dose	0.03		NA	Cumulative Dose	0.03
MW-119-5	H-3	**10100**	0.39	WNS	NA	**10900**	0.42
	Sr-90	*1.69*	ND	WNS	NA	*0.899*	ND
	Cs-137	*10.3*	ND	WNS	NA	*8.91*	ND
		Cumulative Dose	0.39		NA	Cumulative Dose	0.42
MW-119-6	H-3	**15000**	0.58	WNS	NA	**14000**	0.54
	Sr-90	*1.73*	ND	WNS	NA	*1.6*	ND
	Cs-137	*3.51*	ND	WNS	NA	*4.05*	ND
		Cumulative Dose	0.58		NA	Cumulative Dose	0.54
MW-120-1	H-3	*382*	ND	WNS	NA	*267*	ND
	Sr-90	*1.58*	ND	WNS	NA	*1.38*	ND
	Cs-137	*3.85*	ND	WNS	NA	*3.12*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-120-2	H-3	*383*	ND	WNS	NA	*321*	ND
	Sr-90	*1.43*	ND	WNS	NA	*1.38*	ND
	Cs-137	*4.51*	ND	WNS	NA	*4.78*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-120-3	H-3	*380*	ND	WNS	NA	*323*	ND
	Sr-90	*1.39*	ND	WNS	NA	*1.99*	ND
	Cs-137	*2.06*	ND	WNS	NA	*3.53*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-120-4	H-3	**2570**	0.10	WNS	NA	**1740**	0.07
	Sr-90	*1.31*	ND	WNS	NA	*1.47*	ND
	Cs-137	*2.82*	ND	WNS	NA	*3.33*	ND
		Cumulative Dose	0.10		NA	Cumulative Dose	0.07
MW-120-5	H-3	**1290**	0.05	WNS	NA	**1120**	0.04
	Sr-90	*1.29*	ND	WNS	NA	*1.53*	ND
	Cs-137	*2.3*	ND	WNS	NA	*3.17*	ND
		Cumulative Dose	0.05		NA	Cumulative Dose	0.04
MW-121A-2	H-3	*331*	ND	*375*	ND	*334*	ND
	Sr-90	*0.874*	ND	*0.941*	ND	*1.58*	ND
	Cs-137	*3.71*	ND	*3.24*	ND	*3.42*	ND
		Cumulative Dose	0.00	Cumulative Dose	0.00	Cumulative Dose	0.00
MW-121A-3	H-3	**814**	0.03	**688**	0.03	**518**	0.02
	Sr-90	*0.825*	ND	*0.825*	ND	*1.96*	ND
	Cs-137	*3.33*	ND	*3.76*	ND	*4.02*	ND
		Cumulative Dose	0.03	Cumulative Dose	0.03	Cumulative Dose	0.02

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-121A-4	H-3	**6000**	0.23	**6120**	0.23	**5170**	0.20
	Sr-90	*1.06*	ND	*1.11*	ND	*1.75*	ND
	Cs-137	*2.58*	ND	*4.34*	ND	*2.8*	ND
		Cumulative Dose	0.23	Cumulative Dose	0.23	Cumulative Dose	0.20
MW-121A-5	H-3	**844**	0.03	WNS	NA	**839**	0.03
	Sr-90	*0.994*	ND	WNS	NA	*1.62*	ND
	Cs-137	*3.59*	ND	WNS	NA	*3.14*	ND
		Cumulative Dose	0.03		NA	Cumulative Dose	0.03
MW-122D	H-3	*321*	ND	WNS	NA	**516**	0.02
	Sr-90	*1.03*	ND	WNS	NA	*1.75*	ND
	Cs-137	*2.42*	ND	WNS	NA	*3.22*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.02
MW-122S	H-3	**1110**	0.04	WNS	NA	**3040**	0.12
	Sr-90	1.72	0.17	WNS	NA	*1.62*	ND
	Cs-137	*2.42*	ND	WNS	NA	*4.01*	ND
		Cumulative Dose	0.21		NA	Cumulative Dose	0.12
MW-123	H-3	*305*	ND	WNS	NA	*323*	ND
	Sr-90	*1.05*	ND	WNS	NA	*1.71*	ND
	Cs-137	*9.42*	ND	WNS	NA	*10.1*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-124	H-3	**620**	0.02	**600**	0.02	**615**	0.02
	Sr-90	**4.93**	0.49	**3.48**	0.35	**2.18**	0.22
	Cs-137	*3.62*	ND	*3.67*	ND	*5.37*	ND
		Cumulative Dose	0.51	Cumulative Dose	0.37	Cumulative Dose	0.24
MW-125	H-3	**13800**	0.53	**7640**	0.29	**3270**	0.13
	Sr-90	**13.1**	1.30	**11.8**	1.18	**9.52**	0.95
	Cs-137	*3.6*	ND	*3.51*	ND	*4.06*	ND
		Cumulative Dose	1.83	Cumulative Dose	1.47	Cumulative Dose	1.07
MW-130	H-3	*365*	ND	WNS	NA	**677**	0.03
	Sr-90	*0.75*	ND	WNS	NA	**1.64**	0.16
	Cs-137	*4.44*	ND	WNS	NA	*4.73*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.19
MW-131D	H-3	**433**	0.02	WNS	NA	**438**	0.02
	Sr-90	*1.92*	ND	WNS	NA	**1.44**	0.14
	Cs-137	*8.49*	ND	WNS	NA	*5.57*	ND
		Cumulative Dose	0.02		NA	Cumulative Dose	0.16
MW-131S	H-3	**484**	0.02	WNS	NA	**430**	0.02
	Sr-90	**2.18**	0.22	WNS	NA	**1.73**	0.17
	Cs-137	*4.13*	ND	WNS	NA	*4.45*	ND
		Cumulative Dose	0.24		NA	Cumulative Dose	0.19

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-132D	H-3	*264*	ND	WNS	NA	*329*	ND
	Sr-90	*1.61*	ND	WNS	NA	*1.51*	ND
	Cs-137	*2.61*	ND	WNS	NA	*4.83*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-132S	H-3	*368*	ND	WNS	NA	*317*	ND
	Sr-90	*1.39*	ND	WNS	NA	*1.64*	ND
	Cs-137	*2.69*	ND	WNS	NA	*3.88*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-133	H-3	**486**	0.02	WNS	NA	**533**	0.02
	Sr-90	**1.5**	0.15	WNS	NA	*1.46*	ND
	Cs-137	*6.42*	ND	WNS	NA	*4.6*	ND
		Cumulative Dose	0.17		NA	Cumulative Dose	0.02
MW-134	H-3	**1040**	0.04	WNS	NA	**1120**	0.04
	Sr-90	*1.18*	ND	WNS	NA	*0.985*	ND
	Cs-137	*3.92*	ND	WNS	NA	*3.83*	ND
		Cumulative Dose	0.04		NA	Cumulative Dose	0.04
MW-135	H-3	*378*	ND	WNS	NA	*321*	ND
	Sr-90	*1.5*	ND	WNS	NA	*1.42*	ND
	Cs-137	*4.77*	ND	WNS	NA	*3.05*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-136D	H-3	**590**	0.02	WNS	NA	**535**	0.02
	Sr-90	**2.81**	0.28	WNS	NA	*1.62*	ND
	Cs-137	*3.91*	ND	WNS	NA	*5.31*	ND
		Cumulative Dose	0.30		NA	Cumulative Dose	0.02
MW-136S	H-3	**359**	0.01	WNS	NA	**667**	0.03
	Sr-90	*1.71*	ND	WNS	NA	*1.28*	ND
	Cs-137	*3.51*	ND	WNS	NA	*3.81*	ND
		Cumulative Dose	0.01		NA	Cumulative Dose	0.03
MW-137	H-3	**2380**	0.09	**531**	0.02	**3920**	0.15
	Sr-90	**6.01**	0.60	**3.32**	0.33	**4.41**	0.44
	Cs-137	**29.8**	1.73	**15.3**	0.89	**23.9**	1.39
		Cumulative Dose	2.42	Cumulative Dose	1.24	Cumulative Dose	1.98
MW-138	H-3	*334*	ND	WNS	NA	*307*	ND
	Sr-90	*1.1*	ND	WNS	NA	*1.44*	ND
	Cs-137	*3.81*	ND	WNS	NA	*4.69*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-139 (1)	H-3	*359*	ND	WNS	NA	*310*	ND
	Sr-90	*1.87*	ND	WNS	NA	*1.96*	ND
	Cs-137	*3.32*	ND	WNS	NA	*5.29*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Table 2-1. Summary of Substances of Concern Concentrations and TEDE in Groundwater Monitoring Wells at Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	March 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater March 2007 (mrem/yr TEDE)	April 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater April 2007 (mrem/yr TEDE)	June 2007 Concentration (pCi/L)	Dose Contribution to Existing Groundwater June 2007 (mrem/yr TEDE)
MW-140 (1)	H-3	*367*	ND	WNS	NA	**412**	0.02
	Sr-90	*1.14*	ND	WNS	NA	*1.32*	ND
	Cs-137	*7.97*	ND	WNS	NA	*6.02*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.02
MW-508D	H-3	*358*	ND	WNS	NA	*250*	ND
	Sr-90	*1.57*	ND	WNS	NA	*0.795*	ND
	Cs-137	*11.4*	ND	WNS	NA	*3.33*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00
MW-508S	H-3	*262*	ND	WNS	NA	*251*	ND
	Sr-90	*1.24*	ND	WNS	NA	*0.801*	ND
	Cs-137	*2.97*	ND	WNS	NA	*3.79*	ND
		Cumulative Dose	0.00		NA	Cumulative Dose	0.00

Notes:
(1) MW-139 and MW-140 not part of LTP Monitoring Plan. Wells installed per direction of CTDEP
WNS - Well Not Sampled
NA - Not Applicable
pCi/L - pico curries per liter
MDC - Minimum Detectable Concentration
125 – Values in italics indicate constituent not detected. The value is the sample-specific MDC
ND - No TEDE dose as radionuclide concentration was below sample-specific MDC
Values in **BOLD** font indicate positive detections.

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007.

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
AT-1	H-3	Stable	Down	Down	WNS	Stable	Down	Stable
	Sr-90	Down	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-100D	H-3	Up (3)	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Up (3)	WNS		Up (3)	
MW-100S	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Up (3)	WNS		Up (3)	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-101D	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-101S	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Down	Down	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-102D	H-3	Stable	Stable	Down	WNS	Down	Down	Down
	Sr-90	Stable	Up (3)	Up (3)	WNS		Up (3)	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-102S	H-3	Down	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-103A	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Down	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-103B	H-3	Down	Down	Down	WNS	Down	Down	Down
	Sr-90	Down	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Up (3)	
MW-103D	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Up (3)	Up (3)	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-103S	H-3	Stable	Stable	Down	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-105D	H-3	Down	Down	Down	WNS	Down	Down	Down
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-105S	H-3	Stable	Stable	Stable	WNS	Stable	Up (1)	Stable
	Sr-90	Stable	Up (3)	Up (3)	WNS		Up (3)	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-106D	H-3	Stable	Down	Down	Down	Down	Down	Down
	Sr-90	Up	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Stable	Stable		Up (3)	
MW-106S	H-3	Stable	Stable	Stable	Down	Stable	Down	Stable
	Sr-90	Down	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-107D	H-3	Up	Up	Up	WNS	Up	Up	Up
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-107S	H-3	Stable	Up	Up	WNS	Stable	Up	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-108	H-3	Stable	Stable	Stable	WNS	Stable	Down	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-109D	H-3	Stable	Down	Down	WNS	Down	Down	Down
	Sr-90	Up (3)	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-109S	H-3	Stable	Stable	Stable	WNS	Stable	Up	Up(1)
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-110D	H-3	Stable	Down	Down	Down	Down	Down	Down
	Sr-90	Stable	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-110S	H-3	Stable	Stable	Stable	Stable	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	Stable		Up (3)	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-112	H-3	Stable	Down	Down	WNS	Stable	Down	Stable
	Sr-90	Up (3)	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-113	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Down	Down	WNS		Stable	
MW-117	H-3	Stable	Down	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-118A-3	H-3	Stable	Stable	Down	Down	Down	Down	Down
	Sr-90	Stable	Stable	Stable	Stable		Stable	
	Cs-137	Up (3)	Up (3)	Up (3)	Up (3)		Up (3)	
MW-118A-4	H-3	Down	Down	Down	Down	Down	Down	Down
	Sr-90	Stable	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-118A-5	H-3	Stable	Stable	Stable	Stable	Up	Stable	Up
	Sr-90	Stable	Stable	Stable	Up (1)		Up	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-119-2	H-3	Down	Down	Down	WNS	Down	Down	Down
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend - First Half 2006	Concentration Trend - Second Half 2006	Concentration Trend - March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-119-4	H-3	Stable	Stable	Stable	WNS	Down	Stable	Down
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-119-5	H-3	Stable	Down	Down	WNS	Down	Down	Down
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Up (3)	
MW-119-6	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-120-1	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-120-2	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Up (3)	Up (3)	WNS		Up (3)	
MW-120-3	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Down	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-120-4	H-3	Up	Up	Up	WNS	Up	Up	Up
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-120-5	H-3	Stable	Down	Down	WNS	Down	Down	Down
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Up (3)	Stable	Stable	WNS		Stable	
MW-121A-2	H-3	Stable	Stable	Stable	Stable	Stable	Stable	Stable
	Sr-90	Up (3)	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Up (3)	Stable		Stable	
MW-121A-3	H-3	Stable	Stable	Stable	Stable	Stable	Stable	Stable
	Sr-90	Up (3)	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-121A-4	H-3	Down	Down	Down	Down	Down	Down	Down
	Sr-90	Down	Stable	Stable	Stable		Stable	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-121A-5	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-122D	H-3	Stable	Stable	Stable	WNS	Down	Stable	Down
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Down	Down	WNS		Down	
MW-122S	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Up (3)	Up (3)	WNS		Up (3)	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-123	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-124	H-3	Stable	Stable	Down	Down	Up	Down	Up
	Sr-90	Stable	Stable	Up (1)	Up		Up	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-125	H-3	Stable	Stable	Up	Up	Up	Up(1)	Up
	Sr-90	Stable	Up	Up	Up		Up	
	Cs-137	Stable	Stable	Stable	Stable		Stable	
MW-130	H-3	Stable	Down	Down	WNS	Stable	Stable	Stable
	Sr-90	Down	Stable	Down	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-131D	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Up (3)	WNS		Up (3)	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-131S	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Up (1)
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-132D	H-3	Down	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-132S	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-133	H-3	Stable	Down	Down	WNS	Stable	Down	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-134	H-3	Up	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Table 2-2. Summary of Substances of Concern Groundwater Concentration Trend Analyses for Haddam Neck Plant as of June 2007. (continued)

Well ID	Substance of Concern	Concentration Trend – First Half 2006	Concentration Trend – Second Half 2006	Concentration Trend – March 2007	Concentration Trend - April 2007	Cumulative TEDE Trend - March/April 2007	Concentration Trend - June 2007	Cumulative TEDE Trend - June 2007
MW-139 (2)	H-3	Well Not Installed	Well Not Installed	Insufficient Data	WNS	Insufficient Data	Stable	Stable
	Sr-90	Well Not Installed	Well Not Installed	Insufficient Data	WNS		Up (3)	
	Cs-137	Well Not Installed	Well Not Installed	Insufficient Data	WNS		Stable	
MW-140 (2)	H-3	Well Not Installed	Well Not Installed	Insufficient Data	WNS	Insufficient Data	Stable	Stable
	Sr-90	Well Not Installed	Well Not Installed	Insufficient Data	WNS		Stable	
	Cs-137	Well Not Installed	Well Not Installed	Insufficient Data	WNS		Stable	
MW-508D	H-3	Stable	Stable	Stable	WNS	Stable	Stable	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	
MW-508S	H-3	Stable	Stable	Down	WNS	Stable	Down	Stable
	Sr-90	Stable	Stable	Stable	WNS		Stable	
	Cs-137	Stable	Stable	Stable	WNS		Stable	

Notes:
(1) Mann-Kendall trend analysis did not confirm Sens upward trend
(2) MW-139 and MW-140 not part of LTP Monitoring Plan. Wells installed per direction of CTDEP
(3) Indicates upward trend interpreted to be an artifact of variations in non-detect (MDC) values.
WNS - Well Not sampled
Shaded cell indicates statistically valid upward trend

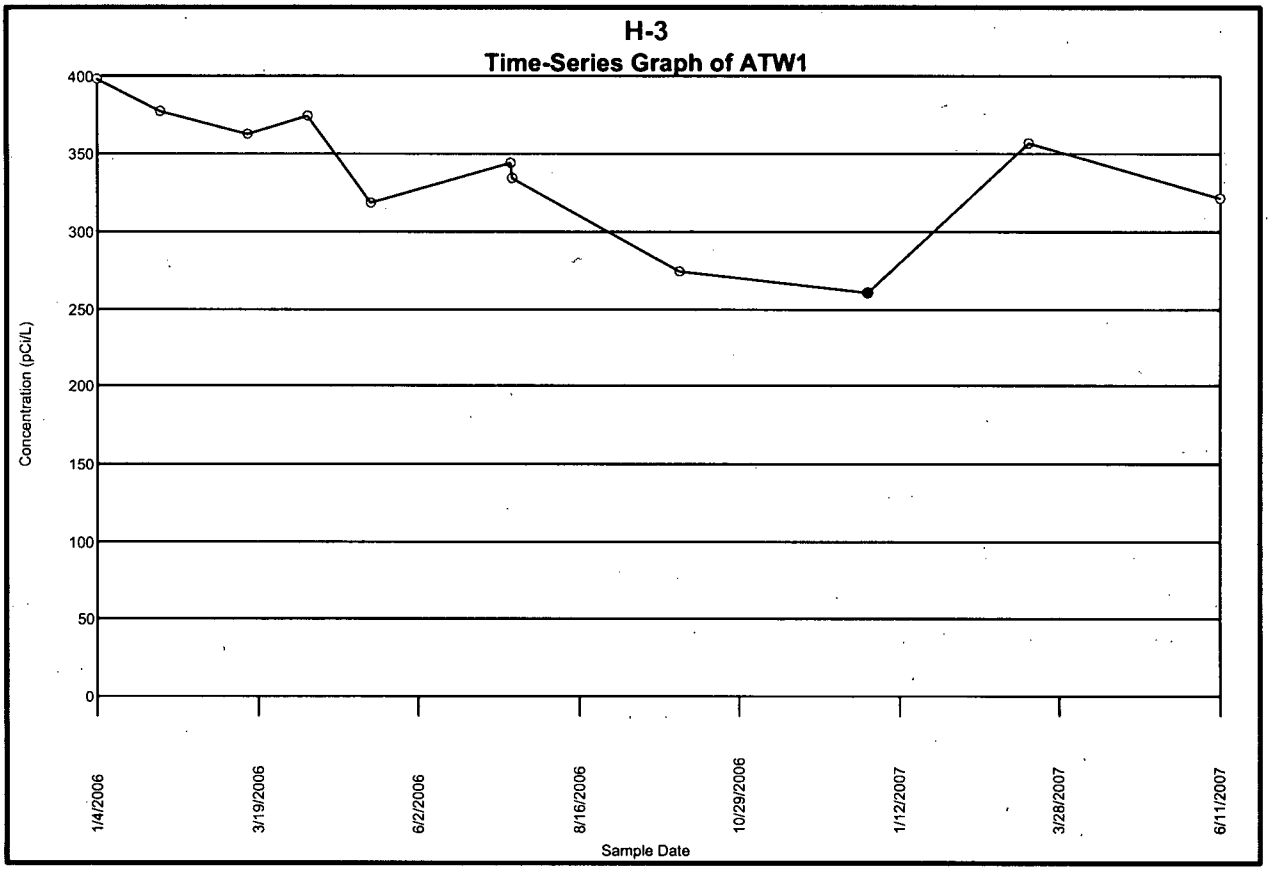
Attachments

June 2007 Statistical Trend Analysis Data Sheets – SOCs

June Statistical Trend Analysis Data Sheets -- TEDE

Attachment 1
June 2007 Statistical Trend Analysis Data Sheets – SOCs

Trend Analysis – Tritium
Q4 2005 through June 2007


H-3
Time-Series Graph of ATW1
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: ATW1

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<377 U (2/2/2006 a)	ND<398 U (1/4/2006 a)	(377 - 398)/(2 - 1)	-21
ND<363 U (3/15/2006 a)	ND<398 U (1/4/2006 a)	(363 - 398)/(3 - 1)	-17.5
ND<374 U (4/12/2006 a)	ND<398 U (1/4/2006 a)	(374 - 398)/(4 - 1)	-8
ND<318 OK (5/11/2006 a)	ND<398 U (1/4/2006 a)	(318 - 398)/(5 - 1)	-20
ND<344 OK (7/15/2006 a)	ND<398 U (1/4/2006 a)	(344 - 398)/(6 - 1)	-10.8
ND<334 OK (7/16/2006 ~)	ND<398 U (1/4/2006 a)	(334 - 398)/(7 - 1)	-10.6667
ND<274 OK (10/2/2006 a)	ND<398 U (1/4/2006 a)	(274 - 398)/(8 - 1)	-17.7143
260 OK (12/29/2006 a)	ND<398 U (1/4/2006 a)	(260 - 398)/(9 - 1)	-17.25
ND<357 OK (3/14/2007 a)	ND<398 U (1/4/2006 a)	(357 - 398)/(10 - 1)	-4.55556
ND<321 OK (6/11/2007 a)	ND<398 U (1/4/2006 a)	(321 - 398)/(11 - 1)	-7.7
ND<363 U (3/15/2006 a)	ND<377 U (2/2/2006 a)	(363 - 377)/(3 - 2)	-14
ND<374 U (4/12/2006 a)	ND<377 U (2/2/2006 a)	(374 - 377)/(4 - 2)	-1.5
ND<318 OK (5/11/2006 a)	ND<377 U (2/2/2006 a)	(318 - 377)/(5 - 2)	-19.6667
ND<344 OK (7/15/2006 a)	ND<377 U (2/2/2006 a)	(344 - 377)/(6 - 2)	-8.25
ND<334 OK (7/16/2006 ~)	ND<377 U (2/2/2006 a)	(334 - 377)/(7 - 2)	-8.6
ND<274 OK (10/2/2006 a)	ND<377 U (2/2/2006 a)	(274 - 377)/(8 - 2)	-17.1667
260 OK (12/29/2006 a)	ND<377 U (2/2/2006 a)	(260 - 377)/(9 - 2)	-16.7143
ND<357 OK (3/14/2007 a)	ND<377 U (2/2/2006 a)	(357 - 377)/(10 - 2)	-2.5
ND<321 OK (6/11/2007 a)	ND<377 U (2/2/2006 a)	(321 - 377)/(11 - 2)	-6.22222
ND<374 U (4/12/2006 a)	ND<363 U (3/15/2006 a)	(374 - 363)/(4 - 3)	11
ND<318 OK (5/11/2006 a)	ND<363 U (3/15/2006 a)	(318 - 363)/(5 - 3)	-22.5
ND<344 OK (7/15/2006 a)	ND<363 U (3/15/2006 a)	(344 - 363)/(6 - 3)	-6.33333
ND<334 OK (7/16/2006 ~)	ND<363 U (3/15/2006 a)	(334 - 363)/(7 - 3)	-7.25
ND<274 OK (10/2/2006 a)	ND<363 U (3/15/2006 a)	(274 - 363)/(8 - 3)	-17.8
260 OK (12/29/2006 a)	ND<363 U (3/15/2006 a)	(260 - 363)/(9 - 3)	-17.1667
ND<357 OK (3/14/2007 a)	ND<363 U (3/15/2006 a)	(357 - 363)/(10 - 3)	-0.857143
ND<321 OK (6/11/2007 a)	ND<363 U (3/15/2006 a)	(321 - 363)/(11 - 3)	-5.25
ND<318 OK (5/11/2006 a)	ND<374 U (4/12/2006 a)	(318 - 374)/(5 - 4)	-56
ND<344 OK (7/15/2006 a)	ND<374 U (4/12/2006 a)	(344 - 374)/(6 - 4)	-15
ND<334 OK (7/16/2006 ~)	ND<374 U (4/12/2006 a)	(334 - 374)/(7 - 4)	-13.3333
ND<274 OK (10/2/2006 a)	ND<374 U (4/12/2006 a)	(274 - 374)/(8 - 4)	-25
260 OK (12/29/2006 a)	ND<374 U (4/12/2006 a)	(260 - 374)/(9 - 4)	-22.8
ND<357 OK (3/14/2007 a)	ND<374 U (4/12/2006 a)	(357 - 374)/(10 - 4)	-2.83333
ND<321 OK (6/11/2007 a)	ND<374 U (4/12/2006 a)	(321 - 374)/(11 - 4)	-7.57143
ND<344 OK (7/15/2006 a)	ND<318 OK (5/11/2006 a)	(344 - 318)/(6 - 5)	26
ND<334 OK (7/16/2006 ~)	ND<318 OK (5/11/2006 a)	(334 - 318)/(7 - 5)	8
ND<274 OK (10/2/2006 a)	ND<318 OK (5/11/2006 a)	(274 - 318)/(8 - 5)	-14.6667
260 OK (12/29/2006 a)	ND<318 OK (5/11/2006 a)	(260 - 318)/(9 - 5)	-14.5
ND<357 OK (3/14/2007 a)	ND<318 OK (5/11/2006 a)	(357 - 318)/(10 - 5)	7.8
ND<321 OK (6/11/2007 a)	ND<318 OK (5/11/2006 a)	(321 - 318)/(11 - 5)	0.5
ND<334 OK (7/16/2006 ~)	ND<344 OK (7/15/2006 a)	(334 - 344)/(7 - 6)	-10
ND<274 OK (10/2/2006 a)	ND<344 OK (7/15/2006 a)	(274 - 344)/(8 - 6)	-35

260 OK (12/29/2006 a)	ND<344 OK (7/15/2006 a)	(260 - 344)/(9 - 6)	-28
ND<357 OK (3/14/2007 a)	ND<344 OK (7/15/2006 a)	(357 - 344)/(10 - 6)	3.25
ND<321 OK (6/11/2007 a)	ND<344 OK (7/15/2006 a)	(321 - 344)/(11 - 6)	-4.6
ND<274 OK (10/2/2006 a)	ND<334 OK (7/16/2006 ~)	(274 - 334)/(8 - 7)	-60
260 OK (12/29/2006 a)	ND<334 OK (7/16/2006 ~)	(260 - 334)/(9 - 7)	-37
ND<357 OK (3/14/2007 a)	ND<334 OK (7/16/2006 ~)	(357 - 334)/(10 - 7)	7.66667
ND<321 OK (6/11/2007 a)	ND<334 OK (7/16/2006 ~)	(321 - 334)/(11 - 7)	-3.25
260 OK (12/29/2006 a)	ND<274 OK (10/2/2006 a)	(260 - 274)/(9 - 8)	-14
ND<357 OK (3/14/2007 a)	ND<274 OK (10/2/2006 a)	(357 - 274)/(10 - 8)	41.5
ND<321 OK (6/11/2007 a)	ND<274 OK (10/2/2006 a)	(321 - 274)/(11 - 8)	15.6667
ND<357 OK (3/14/2007 a)	260 OK (12/29/2006 a)	(357 - 260)/(10 - 9)	97
ND<321 OK (6/11/2007 a)	260 OK (12/29/2006 a)	(321 - 260)/(11 - 9)	30.5
ND<321 OK (6/11/2007 a)	ND<357 OK (3/14/2007 a)	(321 - 357)/(11 - 10)	-36

Number of Q values = 55

Ordered Q Values

n	Q
1	-60
2	-56
3	-37
4	-36
5	-35
6	-28
7	-25
8	-22.8
9	-22.5
10	-21
11	-20
12	-19.6667
13	-17.8
14	-17.7143
15	-17.5
16	-17.25
17	-17.1667
18	-17.1667
19	-16.7143
20	-15
21	-14.6667
22	-14.5
23	-14
24	-14
25	-13.3333
26	-10.8
27	-10.6667
28	-10
29	-8.6
30	-8.25
31	-8
32	-7.7
33	-7.57143
34	-7.25

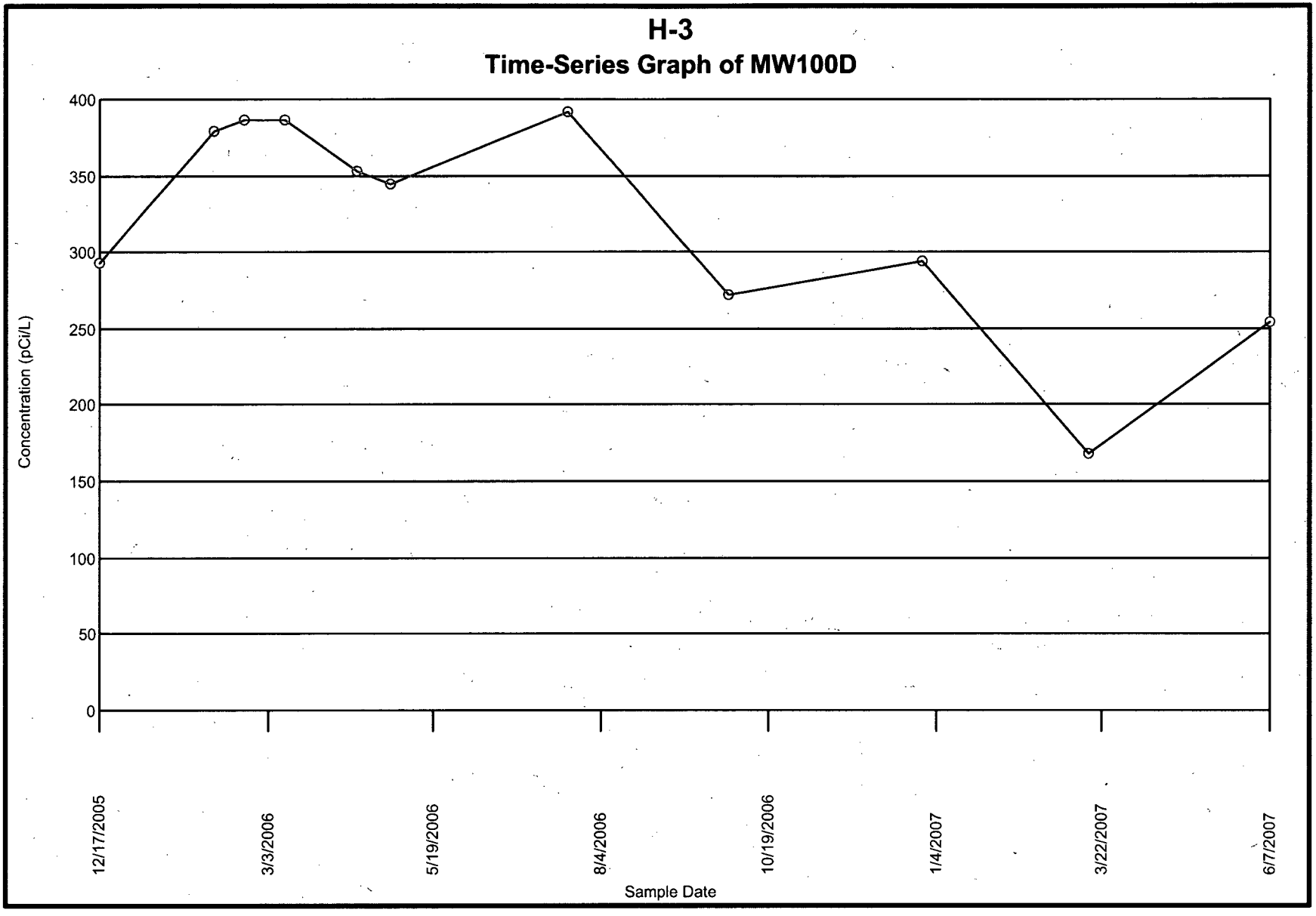
35	-6.33333
36	-6.22222
37	-5.25
38	-4.6
39	-4.55556
40	-3.25
41	-2.83333
42	-2.5
43	-1.5
44	-0.857143
45	0.5
46	3.25
47	7.66667
48	7.8
49	8
50	11
51	15.6667
52	26
53	30.5
54	41.5
55	97

Sen's Estimator (Median Q) is -10

Time Period	Observations
1/4/2006	1
2/2/2006	1
3/15/2006	1
4/12/2006	1
5/11/2006	1
7/15/2006	1
7/16/2006	1
10/2/2006	1
12/29/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -17.1667 = Q(17)
Upper limit is -4.55556 = Q(39)
-4.55556 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW100D
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/19/2006
1/4/2007
3/22/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW100D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<379 U (2/7/2006 a)	ND<293 U (12/17/2005 a)	(379 - 293)/(2 - 1)	86
ND<386 U (2/21/2006 a)	ND<293 U (12/17/2005 a)	(386 - 293)/(3 - 1)	46.5
ND<386 U (3/11/2006 a)	ND<293 U (12/17/2005 a)	(386 - 293)/(4 - 1)	31
ND<353 U (4/14/2006 a)	ND<293 U (12/17/2005 a)	(353 - 293)/(5 - 1)	15
ND<344 OK (4/29/2006 a)	ND<293 U (12/17/2005 a)	(344 - 293)/(6 - 1)	10.2
ND<392 OK (7/20/2006 a)	ND<293 U (12/17/2005 a)	(392 - 293)/(7 - 1)	16.5
ND<272 OK (10/2/2006 a)	ND<293 U (12/17/2005 a)	(272 - 293)/(8 - 1)	-3
ND<294 OK (12/29/2006 a)	ND<293 U (12/17/2005 a)	(294 - 293)/(9 - 1)	0.125
ND<168 OK (3/16/2007 a)	ND<293 U (12/17/2005 a)	(168 - 293)/(10 - 1)	-13.8889
ND<254 OK (6/7/2007 a)	ND<293 U (12/17/2005 a)	(254 - 293)/(11 - 1)	-3.9
ND<386 U (2/21/2006 a)	ND<379 U (2/7/2006 a)	(386 - 379)/(3 - 2)	7
ND<386 U (3/11/2006 a)	ND<379 U (2/7/2006 a)	(386 - 379)/(4 - 2)	3.5
ND<353 U (4/14/2006 a)	ND<379 U (2/7/2006 a)	(353 - 379)/(5 - 2)	-8.66667
ND<344 OK (4/29/2006 a)	ND<379 U (2/7/2006 a)	(344 - 379)/(6 - 2)	-8.75
ND<392 OK (7/20/2006 a)	ND<379 U (2/7/2006 a)	(392 - 379)/(7 - 2)	2.6
ND<272 OK (10/2/2006 a)	ND<379 U (2/7/2006 a)	(272 - 379)/(8 - 2)	-17.8333
ND<294 OK (12/29/2006 a)	ND<379 U (2/7/2006 a)	(294 - 379)/(9 - 2)	-12.1429
ND<168 OK (3/16/2007 a)	ND<379 U (2/7/2006 a)	(168 - 379)/(10 - 2)	-26.375
ND<254 OK (6/7/2007 a)	ND<379 U (2/7/2006 a)	(254 - 379)/(11 - 2)	-13.8889
ND<386 U (3/11/2006 a)	ND<386 U (2/21/2006 a)	(386 - 386)/(4 - 3)	0
ND<353 U (4/14/2006 a)	ND<386 U (2/21/2006 a)	(353 - 386)/(5 - 3)	-16.5
ND<344 OK (4/29/2006 a)	ND<386 U (2/21/2006 a)	(344 - 386)/(6 - 3)	-14
ND<392 OK (7/20/2006 a)	ND<386 U (2/21/2006 a)	(392 - 386)/(7 - 3)	1.5
ND<272 OK (10/2/2006 a)	ND<386 U (2/21/2006 a)	(272 - 386)/(8 - 3)	-22.8
ND<294 OK (12/29/2006 a)	ND<386 U (2/21/2006 a)	(294 - 386)/(9 - 3)	-15.3333
ND<168 OK (3/16/2007 a)	ND<386 U (2/21/2006 a)	(168 - 386)/(10 - 3)	-31.1429
ND<254 OK (6/7/2007 a)	ND<386 U (2/21/2006 a)	(254 - 386)/(11 - 3)	-16.5
ND<353 U (4/14/2006 a)	ND<386 U (3/11/2006 a)	(353 - 386)/(5 - 4)	-33

ND<344 OK (4/29/2006 a)	ND<386 U (3/11/2006 a)	(344 - 386)/(6 - 4)	-21
ND<392 OK (7/20/2006 a)	ND<386 U (3/11/2006 a)	(392 - 386)/(7 - 4)	2
ND<272 OK (10/2/2006 a)	ND<386 U (3/11/2006 a)	(272 - 386)/(8 - 4)	-28.5
ND<294 OK (12/29/2006 a)	ND<386 U (3/11/2006 a)	(294 - 386)/(9 - 4)	-18.4
ND<168 OK (3/16/2007 a)	ND<386 U (3/11/2006 a)	(168 - 386)/(10 - 4)	-36.3333
ND<254 OK (6/7/2007 a)	ND<386 U (3/11/2006 a)	(254 - 386)/(11 - 4)	-18.8571
ND<344 OK (4/29/2006 a)	ND<353 U (4/14/2006 a)	(344 - 353)/(6 - 5)	-9
ND<392 OK (7/20/2006 a)	ND<353 U (4/14/2006 a)	(392 - 353)/(7 - 5)	19.5
ND<272 OK (10/2/2006 a)	ND<353 U (4/14/2006 a)	(272 - 353)/(8 - 5)	-27
ND<294 OK (12/29/2006 a)	ND<353 U (4/14/2006 a)	(294 - 353)/(9 - 5)	-14.75
ND<168 OK (3/16/2007 a)	ND<353 U (4/14/2006 a)	(168 - 353)/(10 - 5)	-37
ND<254 OK (6/7/2007 a)	ND<353 U (4/14/2006 a)	(254 - 353)/(11 - 5)	-16.5
ND<392 OK (7/20/2006 a)	ND<344 OK (4/29/2006 a)	(392 - 344)/(7 - 6)	48
ND<272 OK (10/2/2006 a)	ND<344 OK (4/29/2006 a)	(272 - 344)/(8 - 6)	-36
ND<294 OK (12/29/2006 a)	ND<344 OK (4/29/2006 a)	(294 - 344)/(9 - 6)	-16.6667
ND<168 OK (3/16/2007 a)	ND<344 OK (4/29/2006 a)	(168 - 344)/(10 - 6)	-44
ND<254 OK (6/7/2007 a)	ND<344 OK (4/29/2006 a)	(254 - 344)/(11 - 6)	-18
ND<272 OK (10/2/2006 a)	ND<392 OK (7/20/2006 a)	(272 - 392)/(8 - 7)	-120
ND<294 OK (12/29/2006 a)	ND<392 OK (7/20/2006 a)	(294 - 392)/(9 - 7)	-49
ND<168 OK (3/16/2007 a)	ND<392 OK (7/20/2006 a)	(168 - 392)/(10 - 7)	-74.6667
ND<254 OK (6/7/2007 a)	ND<392 OK (7/20/2006 a)	(254 - 392)/(11 - 7)	-34.5
ND<294 OK (12/29/2006 a)	ND<272 OK (10/2/2006 a)	(294 - 272)/(9 - 8)	22
ND<168 OK (3/16/2007 a)	ND<272 OK (10/2/2006 a)	(168 - 272)/(10 - 8)	-52
ND<254 OK (6/7/2007 a)	ND<272 OK (10/2/2006 a)	(254 - 272)/(11 - 8)	-6
ND<168 OK (3/16/2007 a)	ND<294 OK (12/29/2006 a)	(168 - 294)/(10 - 9)	-126
ND<254 OK (6/7/2007 a)	ND<294 OK (12/29/2006 a)	(254 - 294)/(11 - 9)	-20
ND<254 OK (6/7/2007 a)	ND<168 OK (3/16/2007 a)	(254 - 168)/(11 - 10)	86

Number of Q values = 55

Ordered Q Values

n	Q
1	-126
2	-120

3	-74.6667
4	-52
5	-49
6	-44
7	-37
8	-36.3333
9	-36
10	-34.5
11	-33
12	-31.1429
13	-28.5
14	-27
15	-26.375
16	-22.8
17	-21
18	-20
19	-18.8571
20	-18.4
21	-18
22	-17.8333
23	-16.6667
24	-16.5
25	-16.5
26	-16.5
27	-15.3333
28	-14.75
29	-14
30	-13.8889
31	-13.8889
32	-12.1429
33	-9
34	-8.75
35	-8.66667
36	-6
37	-3.9
38	-3
39	0
40	0.125
41	1.5
42	2
43	2.6

44	3.5
45	7
46	10.2
47	15
48	16.5
49	19.5
50	22
51	31
52	46.5
53	48
54	86
55	86

Sen's Estimator (Median Q) is -14.75

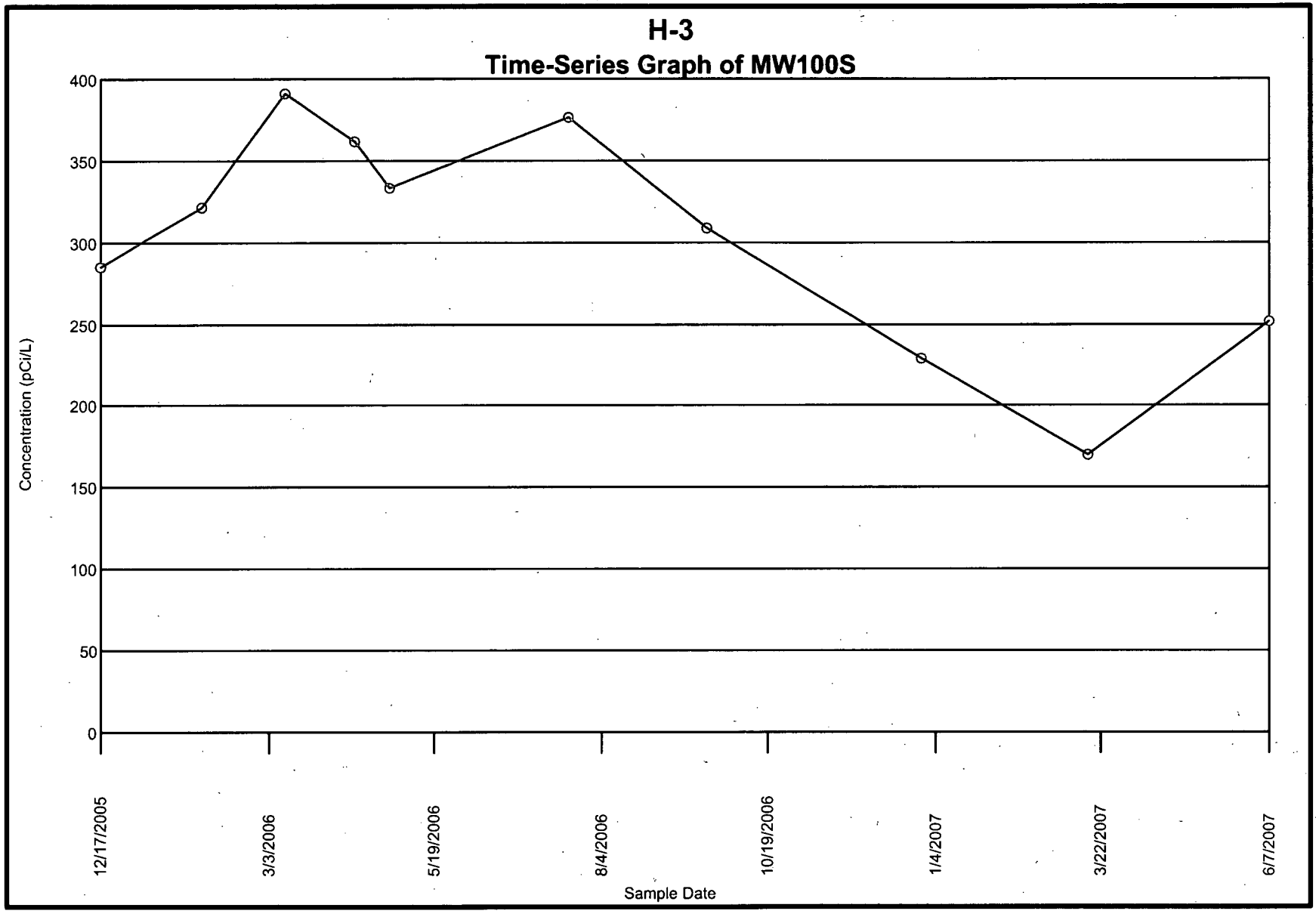
Tied Group	Value	Members
1	386	2

Time Period	Observations
12/17/2005	1
2/7/2006	1
2/21/2006	1
3/11/2006	1
4/14/2006	1
4/29/2006	1
7/20/2006	1
10/2/2006	1
12/29/2006	1
3/16/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164

For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -21 = Q(17)
Upper limit is 0 = Q(39)
-21 < 0 < 0 indicating no trend in data.


H-3
Time-Series Graph of MW100S
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/19/2006
1/4/2007
3/22/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW100S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<321.5 U (2/1/2006 ~)	ND<285 U (12/17/2005 a)	(321.5 - 285)/(2 - 1)	36.5
ND<391 U (3/11/2006 a)	ND<285 U (12/17/2005 a)	(391 - 285)/(3 - 1)	53
ND<362 U (4/13/2006 a)	ND<285 U (12/17/2005 a)	(362 - 285)/(4 - 1)	25.6667
ND<333 OK (4/29/2006 a)	ND<285 U (12/17/2005 a)	(333 - 285)/(5 - 1)	12
ND<376 OK (7/20/2006 a)	ND<285 U (12/17/2005 a)	(376 - 285)/(6 - 1)	18.2
ND<309 OK (9/22/2006 a)	ND<285 U (12/17/2005 a)	(309 - 285)/(7 - 1)	4
ND<229 OK (12/29/2006 a)	ND<285 U (12/17/2005 a)	(229 - 285)/(8 - 1)	-8
ND<170 OK (3/16/2007 a)	ND<285 U (12/17/2005 a)	(170 - 285)/(9 - 1)	-14.375
ND<252 OK (6/7/2007 a)	ND<285 U (12/17/2005 a)	(252 - 285)/(10 - 1)	-3.66667
ND<391 U (3/11/2006 a)	ND<321.5 U (2/1/2006 ~)	(391 - 321.5)/(3 - 2)	69.5
ND<362 U (4/13/2006 a)	ND<321.5 U (2/1/2006 ~)	(362 - 321.5)/(4 - 2)	20.25
ND<333 OK (4/29/2006 a)	ND<321.5 U (2/1/2006 ~)	(333 - 321.5)/(5 - 2)	3.83333
ND<376 OK (7/20/2006 a)	ND<321.5 U (2/1/2006 ~)	(376 - 321.5)/(6 - 2)	13.625
ND<309 OK (9/22/2006 a)	ND<321.5 U (2/1/2006 ~)	(309 - 321.5)/(7 - 2)	-2.5
ND<229 OK (12/29/2006 a)	ND<321.5 U (2/1/2006 ~)	(229 - 321.5)/(8 - 2)	-15.4167
ND<170 OK (3/16/2007 a)	ND<321.5 U (2/1/2006 ~)	(170 - 321.5)/(9 - 2)	-21.6429
ND<252 OK (6/7/2007 a)	ND<321.5 U (2/1/2006 ~)	(252 - 321.5)/(10 - 2)	-8.6875
ND<362 U (4/13/2006 a)	ND<391 U (3/11/2006 a)	(362 - 391)/(4 - 3)	-29
ND<333 OK (4/29/2006 a)	ND<391 U (3/11/2006 a)	(333 - 391)/(5 - 3)	-29
ND<376 OK (7/20/2006 a)	ND<391 U (3/11/2006 a)	(376 - 391)/(6 - 3)	-5
ND<309 OK (9/22/2006 a)	ND<391 U (3/11/2006 a)	(309 - 391)/(7 - 3)	-20.5
ND<229 OK (12/29/2006 a)	ND<391 U (3/11/2006 a)	(229 - 391)/(8 - 3)	-32.4
ND<170 OK (3/16/2007 a)	ND<391 U (3/11/2006 a)	(170 - 391)/(9 - 3)	-36.8333
ND<252 OK (6/7/2007 a)	ND<391 U (3/11/2006 a)	(252 - 391)/(10 - 3)	-19.8571
ND<333 OK (4/29/2006 a)	ND<362 U (4/13/2006 a)	(333 - 362)/(5 - 4)	-29
ND<376 OK (7/20/2006 a)	ND<362 U (4/13/2006 a)	(376 - 362)/(6 - 4)	7
ND<309 OK (9/22/2006 a)	ND<362 U (4/13/2006 a)	(309 - 362)/(7 - 4)	-17.6667
ND<229 OK (12/29/2006 a)	ND<362 U (4/13/2006 a)	(229 - 362)/(8 - 4)	-33.25
ND<170 OK (3/16/2007 a)	ND<362 U (4/13/2006 a)	(170 - 362)/(9 - 4)	-38.4
ND<252 OK (6/7/2007 a)	ND<362 U (4/13/2006 a)	(252 - 362)/(10 - 4)	-18.3333
ND<376 OK (7/20/2006 a)	ND<333 OK (4/29/2006 a)	(376 - 333)/(6 - 5)	43
ND<309 OK (9/22/2006 a)	ND<333 OK (4/29/2006 a)	(309 - 333)/(7 - 5)	-12
ND<229 OK (12/29/2006 a)	ND<333 OK (4/29/2006 a)	(229 - 333)/(8 - 5)	-34.6667
ND<170 OK (3/16/2007 a)	ND<333 OK (4/29/2006 a)	(170 - 333)/(9 - 5)	-40.75
ND<252 OK (6/7/2007 a)	ND<333 OK (4/29/2006 a)	(252 - 333)/(10 - 5)	-16.2
ND<309 OK (9/22/2006 a)	ND<376 OK (7/20/2006 a)	(309 - 376)/(7 - 6)	-67
ND<229 OK (12/29/2006 a)	ND<376 OK (7/20/2006 a)	(229 - 376)/(8 - 6)	-73.5
ND<170 OK (3/16/2007 a)	ND<376 OK (7/20/2006 a)	(170 - 376)/(9 - 6)	-68.6667
ND<252 OK (6/7/2007 a)	ND<376 OK (7/20/2006 a)	(252 - 376)/(10 - 6)	-31
ND<229 OK (12/29/2006 a)	ND<309 OK (9/22/2006 a)	(229 - 309)/(8 - 7)	-80
ND<170 OK (3/16/2007 a)	ND<309 OK (9/22/2006 a)	(170 - 309)/(9 - 7)	-69.5

ND<252 OK (6/7/2007 a)	ND<309 OK (9/22/2006 a)	(252 - 309)/(10 - 7)	-19
ND<170 OK (3/16/2007 a)	ND<229 OK (12/29/2006 a)	(170 - 229)/(9 - 8)	-59
ND<252 OK (6/7/2007 a)	ND<229 OK (12/29/2006 a)	(252 - 229)/(10 - 8)	11.5
ND<252 OK (6/7/2007 a)	ND<170 OK (3/16/2007 a)	(252 - 170)/(10 - 9)	82

Number of Q values = 45

Ordered Q Values

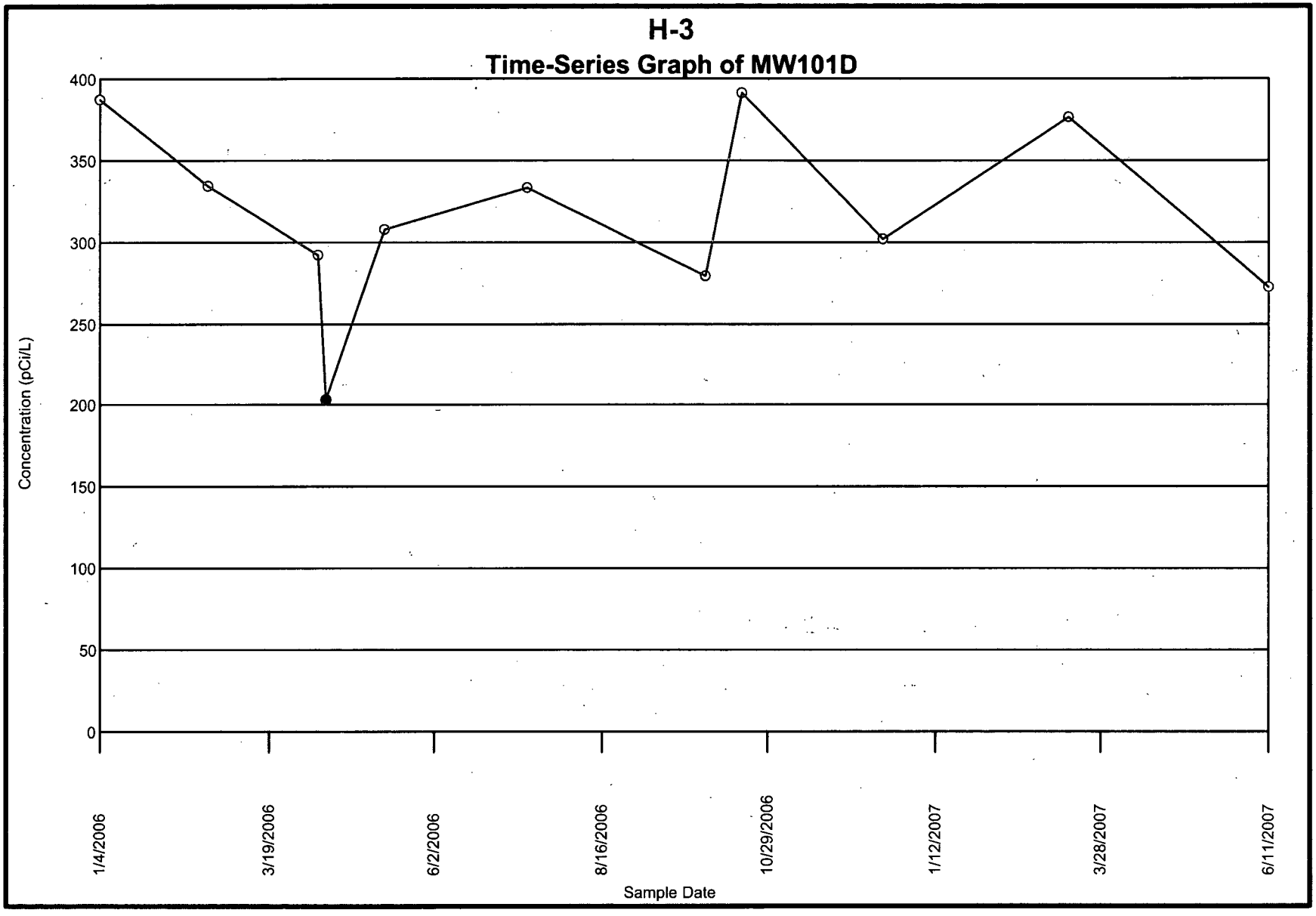
n	Q
1	-80
2	-73.5
3	-69.5
4	-68.6667
5	-67
6	-59
7	-40.75
8	-38.4
9	-36.8333
10	-34.6667
11	-33.25
12	-32.4
13	-31
14	-29
15	-29
16	-29
17	-21.6429
18	-20.5
19	-19.8571
20	-19
21	-18.3333
22	-17.6667
23	-16.2
24	-15.4167
25	-14.375
26	-12
27	-8.6875
28	-8
29	-5
30	-3.66667
31	-2.5
32	3.83333
33	4
34	7
35	11.5
36	12
37	13.625
38	18.2
39	20.25
40	25.6667
41	36.5
42	43
43	53
44	69.5
45	82

Sen's Estimator (Median Q) is -16.2

Time Period	Observations
12/17/2005	1
2/1/2006	1
3/11/2006	1
4/13/2006	1
4/29/2006	1
7/20/2006	1
9/22/2006	1
12/29/2006	1
3/16/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -31 = Q(13)
Upper limit is 4 = Q(33)
-31 < 0 < 4 indicating no trend in data.


H-3
Time-Series Graph of MW101D
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW101D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<334 U (2/21/2006 a)	ND<387 U (1/4/2006 a)	(334 - 387)/(2 - 1)	-53
ND<292 U (4/11/2006 a)	ND<387 U (1/4/2006 a)	(292 - 387)/(3 - 1)	-47.5
203 U (4/15/2006 a)	ND<387 U (1/4/2006 a)	(203 - 387)/(4 - 1)	-61.3333
ND<308 OK (5/11/2006 a)	ND<387 U (1/4/2006 a)	(308 - 387)/(5 - 1)	-19.75
ND<333 OK (7/14/2006 a)	ND<387 U (1/4/2006 a)	(333 - 387)/(6 - 1)	-10.8
ND<279 OK (10/2/2006 a)	ND<387 U (1/4/2006 a)	(279 - 387)/(7 - 1)	-18
ND<391 OK (10/18/2006 a)	ND<387 U (1/4/2006 a)	(391 - 387)/(8 - 1)	0.571429
ND<302 OK (12/20/2006 a)	ND<387 U (1/4/2006 a)	(302 - 387)/(9 - 1)	-10.625
ND<376 OK (3/14/2007 a)	ND<387 U (1/4/2006 a)	(376 - 387)/(10 - 1)	-1.22222
ND<272 OK (6/11/2007 a)	ND<387 U (1/4/2006 a)	(272 - 387)/(11 - 1)	-11.5
ND<292 U (4/11/2006 a)	ND<334 U (2/21/2006 a)	(292 - 334)/(3 - 2)	-42
203 U (4/15/2006 a)	ND<334 U (2/21/2006 a)	(203 - 334)/(4 - 2)	-65.5
ND<308 OK (5/11/2006 a)	ND<334 U (2/21/2006 a)	(308 - 334)/(5 - 2)	-8.66667
ND<333 OK (7/14/2006 a)	ND<334 U (2/21/2006 a)	(333 - 334)/(6 - 2)	-0.25
ND<279 OK (10/2/2006 a)	ND<334 U (2/21/2006 a)	(279 - 334)/(7 - 2)	-11
ND<391 OK (10/18/2006 a)	ND<334 U (2/21/2006 a)	(391 - 334)/(8 - 2)	9.5
ND<302 OK (12/20/2006 a)	ND<334 U (2/21/2006 a)	(302 - 334)/(9 - 2)	-4.57143
ND<376 OK (3/14/2007 a)	ND<334 U (2/21/2006 a)	(376 - 334)/(10 - 2)	5.25
ND<272 OK (6/11/2007 a)	ND<334 U (2/21/2006 a)	(272 - 334)/(11 - 2)	-6.88889
203 U (4/15/2006 a)	ND<292 U (4/11/2006 a)	(203 - 292)/(4 - 3)	-89
ND<308 OK (5/11/2006 a)	ND<292 U (4/11/2006 a)	(308 - 292)/(5 - 3)	8
ND<333 OK (7/14/2006 a)	ND<292 U (4/11/2006 a)	(333 - 292)/(6 - 3)	13.6667
ND<279 OK (10/2/2006 a)	ND<292 U (4/11/2006 a)	(279 - 292)/(7 - 3)	-3.25
ND<391 OK (10/18/2006 a)	ND<292 U (4/11/2006 a)	(391 - 292)/(8 - 3)	19.8
ND<302 OK (12/20/2006 a)	ND<292 U (4/11/2006 a)	(302 - 292)/(9 - 3)	1.66667
ND<376 OK (3/14/2007 a)	ND<292 U (4/11/2006 a)	(376 - 292)/(10 - 3)	12
ND<272 OK (6/11/2007 a)	ND<292 U (4/11/2006 a)	(272 - 292)/(11 - 3)	-2.5
ND<308 OK (5/11/2006 a)	203 U (4/15/2006 a)	(308 - 203)/(5 - 4)	105
ND<333 OK (7/14/2006 a)	203 U (4/15/2006 a)	(333 - 203)/(6 - 4)	65
ND<279 OK (10/2/2006 a)	203 U (4/15/2006 a)	(279 - 203)/(7 - 4)	25.3333
ND<391 OK (10/18/2006 a)	203 U (4/15/2006 a)	(391 - 203)/(8 - 4)	47
ND<302 OK (12/20/2006 a)	203 U (4/15/2006 a)	(302 - 203)/(9 - 4)	19.8
ND<376 OK (3/14/2007 a)	203 U (4/15/2006 a)	(376 - 203)/(10 - 4)	28.8333
ND<272 OK (6/11/2007 a)	203 U (4/15/2006 a)	(272 - 203)/(11 - 4)	9.85714
ND<333 OK (7/14/2006 a)	ND<308 OK (5/11/2006 a)	(333 - 308)/(6 - 5)	25
ND<279 OK (10/2/2006 a)	ND<308 OK (5/11/2006 a)	(279 - 308)/(7 - 5)	-14.5
ND<391 OK (10/18/2006 a)	ND<308 OK (5/11/2006 a)	(391 - 308)/(8 - 5)	27.6667
ND<302 OK (12/20/2006 a)	ND<308 OK (5/11/2006 a)	(302 - 308)/(9 - 5)	-1.5
ND<376 OK (3/14/2007 a)	ND<308 OK (5/11/2006 a)	(376 - 308)/(10 - 5)	13.6
ND<272 OK (6/11/2007 a)	ND<308 OK (5/11/2006 a)	(272 - 308)/(11 - 5)	-6
ND<279 OK (10/2/2006 a)	ND<333 OK (7/14/2006 a)	(279 - 333)/(7 - 6)	-54
ND<391 OK (10/18/2006 a)	ND<333 OK (7/14/2006 a)	(391 - 333)/(8 - 6)	29

ND<302 OK (12/20/2006 a)	ND<333 OK (7/14/2006 a)	(302 - 333)/(9 - 6)	-10.3333
ND<376 OK (3/14/2007 a)	ND<333 OK (7/14/2006 a)	(376 - 333)/(10 - 6)	10.75
ND<272 OK (6/11/2007 a)	ND<333 OK (7/14/2006 a)	(272 - 333)/(11 - 6)	-12.2
ND<391 OK (10/18/2006 a)	ND<279 OK (10/2/2006 a)	(391 - 279)/(8 - 7)	112
ND<302 OK (12/20/2006 a)	ND<279 OK (10/2/2006 a)	(302 - 279)/(9 - 7)	11.5
ND<376 OK (3/14/2007 a)	ND<279 OK (10/2/2006 a)	(376 - 279)/(10 - 7)	32.3333
ND<272 OK (6/11/2007 a)	ND<279 OK (10/2/2006 a)	(272 - 279)/(11 - 7)	-1.75
ND<302 OK (12/20/2006 a)	ND<391 OK (10/18/2006 a)	(302 - 391)/(9 - 8)	-89
ND<376 OK (3/14/2007 a)	ND<391 OK (10/18/2006 a)	(376 - 391)/(10 - 8)	-7.5
ND<272 OK (6/11/2007 a)	ND<391 OK (10/18/2006 a)	(272 - 391)/(11 - 8)	-39.6667
ND<376 OK (3/14/2007 a)	ND<302 OK (12/20/2006 a)	(376 - 302)/(10 - 9)	74
ND<272 OK (6/11/2007 a)	ND<302 OK (12/20/2006 a)	(272 - 302)/(11 - 9)	-15
ND<272 OK (6/11/2007 a)	ND<376 OK (3/14/2007 a)	(272 - 376)/(11 - 10)	-104

Number of Q values = 55

Ordered Q Values

n	Q
1	-104
2	-89
3	-89
4	-65.5
5	-61.3333
6	-54
7	-53
8	-47.5
9	-42
10	-39.6667
11	-19.75
12	-18
13	-15
14	-14.5
15	-12.2
16	-11.5
17	-11
18	-10.8
19	-10.625
20	-10.3333
21	-8.66667
22	-7.5
23	-6.88889
24	-6
25	-4.57143
26	-3.25
27	-2.5
28	-1.75
29	-1.5
30	-1.22222
31	-0.25
32	0.571429
33	1.66667
34	5.25

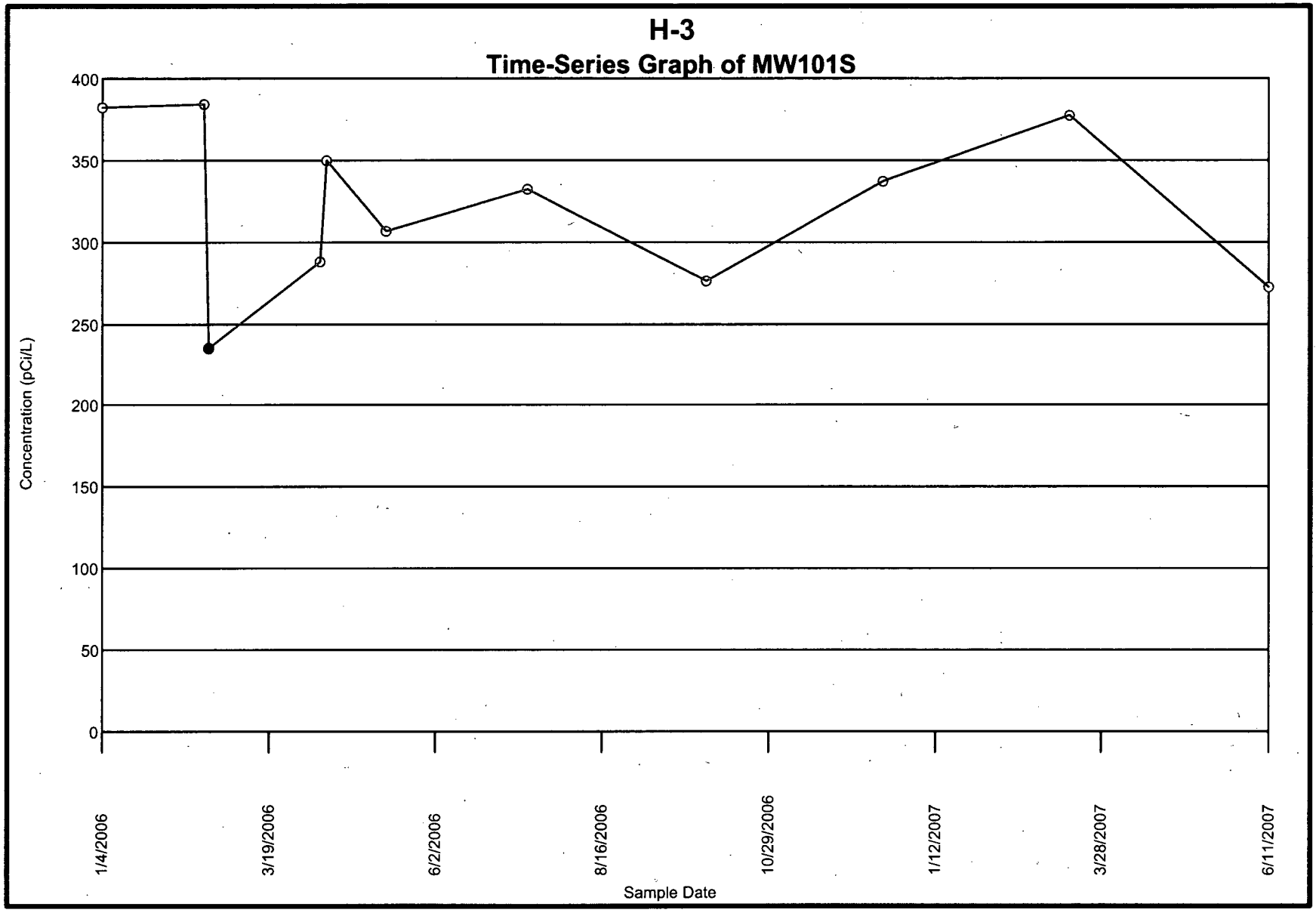
35	8
36	9.5
37	9.85714
38	10.75
39	11.5
40	12
41	13.6
42	13.6667
43	19.8
44	19.8
45	25
46	25.3333
47	27.6667
48	28.8333
49	29
50	32.3333
51	47
52	65
53	74
54	105
55	112

Sen's Estimator (Median Q) is -1.75

Time Period	Observations
1/4/2006	1
2/21/2006	1
4/11/2006	1
4/15/2006	1
5/11/2006	1
7/14/2006	1
10/2/2006	1
10/18/2006	1
12/20/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -11 = Q(17)
Upper limit is 11.5 = Q(39)
-11 < 0 < 11.5 indicating no trend in data.


H-3
Time-Series Graph of MW101S
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW101S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<384 U (2/19/2006 ~)	ND<382 U (1/4/2006 a)	(384 - 382)/(2 - 1)	2
235 U (2/21/2006 a)	ND<382 U (1/4/2006 a)	(235 - 382)/(3 - 1)	-73.5
ND<288 U (4/12/2006 a)	ND<382 U (1/4/2006 a)	(288 - 382)/(4 - 1)	-31.3333
ND<350 U (4/15/2006 a)	ND<382 U (1/4/2006 a)	(350 - 382)/(5 - 1)	-8
ND<307 OK (5/11/2006 a)	ND<382 U (1/4/2006 a)	(307 - 382)/(6 - 1)	-15
ND<332 OK (7/14/2006 a)	ND<382 U (1/4/2006 a)	(332 - 382)/(7 - 1)	-8.33333
ND<276 OK (10/2/2006 a)	ND<382 U (1/4/2006 a)	(276 - 382)/(8 - 1)	-15.1429
ND<337.5 OK (12/20/2006 ~)	ND<382 U (1/4/2006 a)	(337.5 - 382)/(9 - 1)	-5.5625
ND<377.5 OK (3/14/2007 ~)	ND<382 U (1/4/2006 a)	(377.5 - 382)/(10 - 1)	-0.5
ND<272 OK (6/11/2007 a)	ND<382 U (1/4/2006 a)	(272 - 382)/(11 - 1)	-11
235 U (2/21/2006 a)	ND<384 U (2/19/2006 ~)	(235 - 384)/(3 - 2)	-149
ND<288 U (4/12/2006 a)	ND<384 U (2/19/2006 ~)	(288 - 384)/(4 - 2)	-48
ND<350 U (4/15/2006 a)	ND<384 U (2/19/2006 ~)	(350 - 384)/(5 - 2)	-11.3333
ND<307 OK (5/11/2006 a)	ND<384 U (2/19/2006 ~)	(307 - 384)/(6 - 2)	-19.25
ND<332 OK (7/14/2006 a)	ND<384 U (2/19/2006 ~)	(332 - 384)/(7 - 2)	-10.4
ND<276 OK (10/2/2006 a)	ND<384 U (2/19/2006 ~)	(276 - 384)/(8 - 2)	-18
ND<337.5 OK (12/20/2006 ~)	ND<384 U (2/19/2006 ~)	(337.5 - 384)/(9 - 2)	-6.64286
ND<377.5 OK (3/14/2007 ~)	ND<384 U (2/19/2006 ~)	(377.5 - 384)/(10 - 2)	-0.8125
ND<272 OK (6/11/2007 a)	ND<384 U (2/19/2006 ~)	(272 - 384)/(11 - 2)	-12.4444
ND<288 U (4/12/2006 a)	235 U (2/21/2006 a)	(288 - 235)/(4 - 3)	53
ND<350 U (4/15/2006 a)	235 U (2/21/2006 a)	(350 - 235)/(5 - 3)	57.5
ND<307 OK (5/11/2006 a)	235 U (2/21/2006 a)	(307 - 235)/(6 - 3)	24
ND<332 OK (7/14/2006 a)	235 U (2/21/2006 a)	(332 - 235)/(7 - 3)	24.25
ND<276 OK (10/2/2006 a)	235 U (2/21/2006 a)	(276 - 235)/(8 - 3)	8.2
ND<337.5 OK (12/20/2006 ~)	235 U (2/21/2006 a)	(337.5 - 235)/(9 - 3)	17.0833
ND<377.5 OK (3/14/2007 ~)	235 U (2/21/2006 a)	(377.5 - 235)/(10 - 3)	20.3571
ND<272 OK (6/11/2007 a)	235 U (2/21/2006 a)	(272 - 235)/(11 - 3)	4.625
ND<350 U (4/15/2006 a)	ND<288 U (4/12/2006 a)	(350 - 288)/(5 - 4)	62
ND<307 OK (5/11/2006 a)	ND<288 U (4/12/2006 a)	(307 - 288)/(6 - 4)	9.5
ND<332 OK (7/14/2006 a)	ND<288 U (4/12/2006 a)	(332 - 288)/(7 - 4)	14.6667
ND<276 OK (10/2/2006 a)	ND<288 U (4/12/2006 a)	(276 - 288)/(8 - 4)	-3
ND<337.5 OK (12/20/2006 ~)	ND<288 U (4/12/2006 a)	(337.5 - 288)/(9 - 4)	9.9
ND<377.5 OK (3/14/2007 ~)	ND<288 U (4/12/2006 a)	(377.5 - 288)/(10 - 4)	14.9167
ND<272 OK (6/11/2007 a)	ND<288 U (4/12/2006 a)	(272 - 288)/(11 - 4)	-2.28571
ND<307 OK (5/11/2006 a)	ND<350 U (4/15/2006 a)	(307 - 350)/(6 - 5)	-43
ND<332 OK (7/14/2006 a)	ND<350 U (4/15/2006 a)	(332 - 350)/(7 - 5)	-9
ND<276 OK (10/2/2006 a)	ND<350 U (4/15/2006 a)	(276 - 350)/(8 - 5)	-24.6667
ND<337.5 OK (12/20/2006 ~)	ND<350 U (4/15/2006 a)	(337.5 - 350)/(9 - 5)	-3.125
ND<377.5 OK (3/14/2007 ~)	ND<350 U (4/15/2006 a)	(377.5 - 350)/(10 - 5)	5.5
ND<272 OK (6/11/2007 a)	ND<350 U (4/15/2006 a)	(272 - 350)/(11 - 5)	-13
ND<332 OK (7/14/2006 a)	ND<307 OK (5/11/2006 a)	(332 - 307)/(7 - 6)	25
ND<276 OK (10/2/2006 a)	ND<307 OK (5/11/2006 a)	(276 - 307)/(8 - 6)	-15.5

ND<337.5 OK (12/20/2006 ~)	ND<307 OK (5/11/2006 a)	(337.5 - 307)/(9 - 6)	10.1667
ND<377.5 OK (3/14/2007 ~)	ND<307 OK (5/11/2006 a)	(377.5 - 307)/(10 - 6)	17.625
ND<272 OK (6/11/2007 a)	ND<307 OK (5/11/2006 a)	(272 - 307)/(11 - 6)	-7
ND<276 OK (10/2/2006 a)	ND<332 OK (7/14/2006 a)	(276 - 332)/(8 - 7)	-56
ND<337.5 OK (12/20/2006 ~)	ND<332 OK (7/14/2006 a)	(337.5 - 332)/(9 - 7)	2.75
ND<377.5 OK (3/14/2007 ~)	ND<332 OK (7/14/2006 a)	(377.5 - 332)/(10 - 7)	15.1667
ND<272 OK (6/11/2007 a)	ND<332 OK (7/14/2006 a)	(272 - 332)/(11 - 7)	-15
ND<337.5 OK (12/20/2006 ~)	ND<276 OK (10/2/2006 a)	(337.5 - 276)/(9 - 8)	61.5
ND<377.5 OK (3/14/2007 ~)	ND<276 OK (10/2/2006 a)	(377.5 - 276)/(10 - 8)	50.75
ND<272 OK (6/11/2007 a)	ND<276 OK (10/2/2006 a)	(272 - 276)/(11 - 8)	-1.33333
ND<377.5 OK (3/14/2007 ~)	ND<337.5 OK (12/20/2006 ~)	(377.5 - 337.5)/(10 - 9)	40
ND<272 OK (6/11/2007 a)	ND<337.5 OK (12/20/2006 ~)	(272 - 337.5)/(11 - 9)	-32.75
ND<272 OK (6/11/2007 a)	ND<377.5 OK (3/14/2007 ~)	(272 - 377.5)/(11 - 10)	-105.5

Number of Q values = 55

Ordered Q Values

n	Q
1	-149
2	-105.5
3	-73.5
4	-56
5	-48
6	-43
7	-32.75
8	-31.3333
9	-24.6667
10	-19.25
11	-18
12	-15.5
13	-15.1429
14	-15
15	-15
16	-13
17	-12.4444
18	-11.3333
19	-11
20	-10.4
21	-9
22	-8.33333
23	-8
24	-7
25	-6.64286
26	-5.5625
27	-3.125
28	-3
29	-2.28571
30	-1.33333
31	-0.8125
32	-0.5
33	2
34	2.75

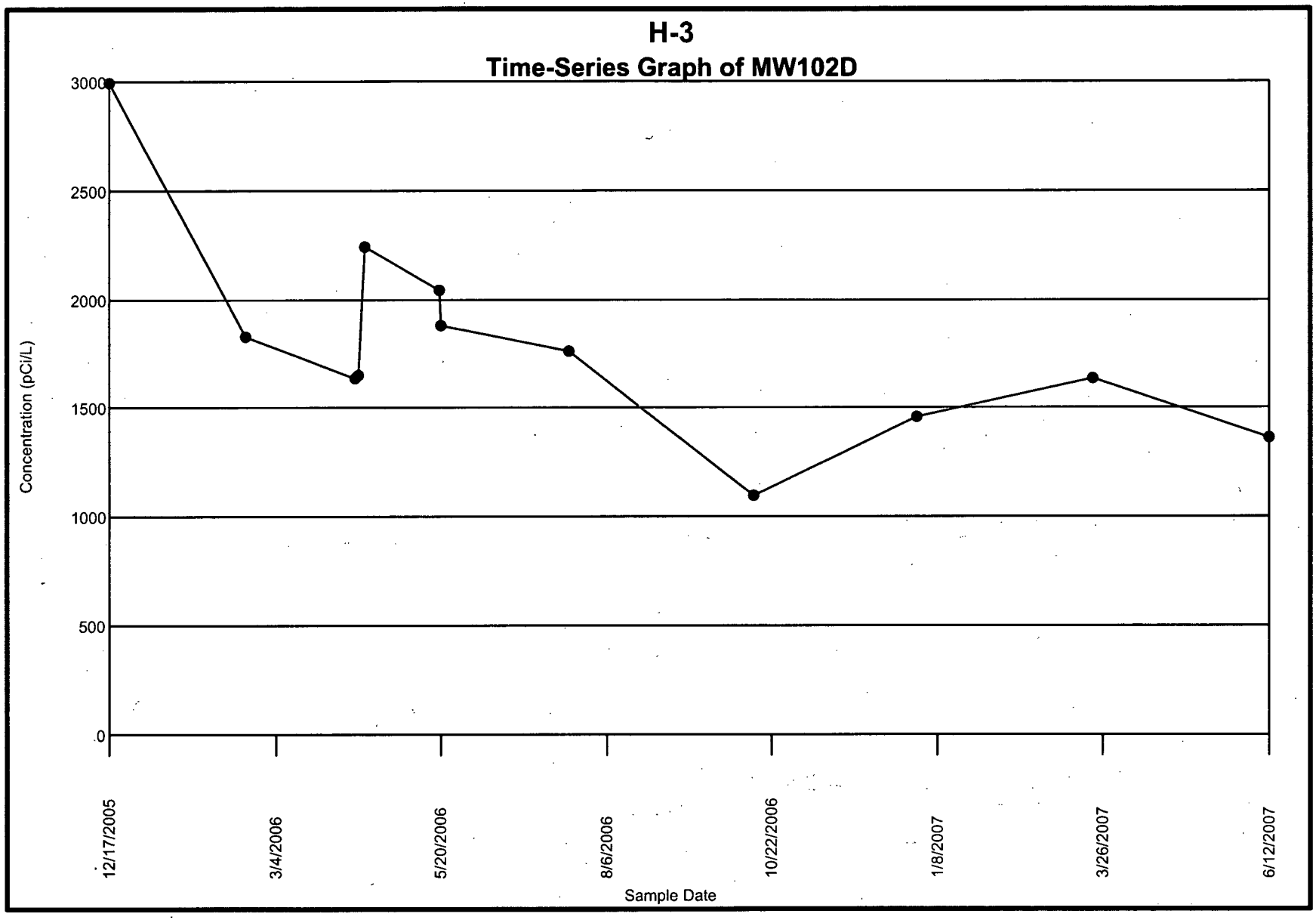
35	4.625
36	5.5
37	8.2
38	9.5
39	9.9
40	10.1667
41	14.6667
42	14.9167
43	15.1667
44	17.0833
45	17.625
46	20.3571
47	24
48	24.25
49	25
50	40
51	50.75
52	53
53	57.5
54	61.5
55	62

Sen's Estimator (Median Q) is -3

Time Period	Observations
1/4/2006	1
2/19/2006	1
2/21/2006	1
4/12/2006	1
4/15/2006	1
5/11/2006	1
7/14/2006	1
10/2/2006	1
12/20/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -12.4444 = Q(17)
Upper limit is 9.9 = Q(39)
-12.4444 < 0 < 9.9 indicating no trend in data.


H-3
Time-Series Graph of MW102D
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
12/17/2005
3/4/2006
5/20/2006
8/6/2006
10/22/2006
1/8/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW102D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1830 OK (2/18/2006 a)	2995 OK (12/17/2005 ~)	(1830 - 2995)/(2 - 1)	-1165
1640 OK (4/11/2006 a)	2995 OK (12/17/2005 ~)	(1640 - 2995)/(3 - 1)	-677.5
1650 OK (4/12/2006 a)	2995 OK (12/17/2005 ~)	(1650 - 2995)/(4 - 1)	-448.333
2240 OK (4/15/2006 a)	2995 OK (12/17/2005 ~)	(2240 - 2995)/(5 - 1)	-188.75
2040 OK (5/20/2006 a)	2995 OK (12/17/2005 ~)	(2040 - 2995)/(6 - 1)	-191
1880 OK (5/21/2006 a)	2995 OK (12/17/2005 ~)	(1880 - 2995)/(7 - 1)	-185.833
1760 OK (7/20/2006 a)	2995 OK (12/17/2005 ~)	(1760 - 2995)/(8 - 1)	-176.429
1100 OK (10/14/2006 a)	2995 OK (12/17/2005 ~)	(1100 - 2995)/(9 - 1)	-236.875
1460 OK (12/29/2006 a)	2995 OK (12/17/2005 ~)	(1460 - 2995)/(10 - 1)	-170.556
1640 OK (3/22/2007 a)	2995 OK (12/17/2005 ~)	(1640 - 2995)/(11 - 1)	-135.5
1360 OK (6/12/2007 a)	2995 OK (12/17/2005 ~)	(1360 - 2995)/(12 - 1)	-148.636
1640 OK (4/11/2006 a)	1830 OK (2/18/2006 a)	(1640 - 1830)/(3 - 2)	-190
1650 OK (4/12/2006 a)	1830 OK (2/18/2006 a)	(1650 - 1830)/(4 - 2)	-90
2240 OK (4/15/2006 a)	1830 OK (2/18/2006 a)	(2240 - 1830)/(5 - 2)	136.667
2040 OK (5/20/2006 a)	1830 OK (2/18/2006 a)	(2040 - 1830)/(6 - 2)	52.5
1880 OK (5/21/2006 a)	1830 OK (2/18/2006 a)	(1880 - 1830)/(7 - 2)	10
1760 OK (7/20/2006 a)	1830 OK (2/18/2006 a)	(1760 - 1830)/(8 - 2)	-11.6667
1100 OK (10/14/2006 a)	1830 OK (2/18/2006 a)	(1100 - 1830)/(9 - 2)	-104.286
1460 OK (12/29/2006 a)	1830 OK (2/18/2006 a)	(1460 - 1830)/(10 - 2)	-46.25
1640 OK (3/22/2007 a)	1830 OK (2/18/2006 a)	(1640 - 1830)/(11 - 2)	-21.1111
1360 OK (6/12/2007 a)	1830 OK (2/18/2006 a)	(1360 - 1830)/(12 - 2)	-47
1650 OK (4/12/2006 a)	1640 OK (4/11/2006 a)	(1650 - 1640)/(4 - 3)	10
2240 OK (4/15/2006 a)	1640 OK (4/11/2006 a)	(2240 - 1640)/(5 - 3)	300
2040 OK (5/20/2006 a)	1640 OK (4/11/2006 a)	(2040 - 1640)/(6 - 3)	133.333
1880 OK (5/21/2006 a)	1640 OK (4/11/2006 a)	(1880 - 1640)/(7 - 3)	60
1760 OK (7/20/2006 a)	1640 OK (4/11/2006 a)	(1760 - 1640)/(8 - 3)	24
1100 OK (10/14/2006 a)	1640 OK (4/11/2006 a)	(1100 - 1640)/(9 - 3)	-90
1460 OK (12/29/2006 a)	1640 OK (4/11/2006 a)	(1460 - 1640)/(10 - 3)	-25.7143
1640 OK (3/22/2007 a)	1640 OK (4/11/2006 a)	(1640 - 1640)/(11 - 3)	0
1360 OK (6/12/2007 a)	1640 OK (4/11/2006 a)	(1360 - 1640)/(12 - 3)	-31.1111
2240 OK (4/15/2006 a)	1650 OK (4/12/2006 a)	(2240 - 1650)/(5 - 4)	590
2040 OK (5/20/2006 a)	1650 OK (4/12/2006 a)	(2040 - 1650)/(6 - 4)	195
1880 OK (5/21/2006 a)	1650 OK (4/12/2006 a)	(1880 - 1650)/(7 - 4)	76.6667
1760 OK (7/20/2006 a)	1650 OK (4/12/2006 a)	(1760 - 1650)/(8 - 4)	27.5
1100 OK (10/14/2006 a)	1650 OK (4/12/2006 a)	(1100 - 1650)/(9 - 4)	-110
1460 OK (12/29/2006 a)	1650 OK (4/12/2006 a)	(1460 - 1650)/(10 - 4)	-31.6667
1640 OK (3/22/2007 a)	1650 OK (4/12/2006 a)	(1640 - 1650)/(11 - 4)	-1.42857
1360 OK (6/12/2007 a)	1650 OK (4/12/2006 a)	(1360 - 1650)/(12 - 4)	-36.25
2040 OK (5/20/2006 a)	2240 OK (4/15/2006 a)	(2040 - 2240)/(6 - 5)	-200
1880 OK (5/21/2006 a)	2240 OK (4/15/2006 a)	(1880 - 2240)/(7 - 5)	-180
1760 OK (7/20/2006 a)	2240 OK (4/15/2006 a)	(1760 - 2240)/(8 - 5)	-160
1100 OK (10/14/2006 a)	2240 OK (4/15/2006 a)	(1100 - 2240)/(9 - 5)	-285
1460 OK (12/29/2006 a)	2240 OK (4/15/2006 a)	(1460 - 2240)/(10 - 5)	-156

1640 OK (3/22/2007 a)	2240 OK (4/15/2006 a)	(1640 - 2240)/(11 - 5)	-100
1360 OK (6/12/2007 a)	2240 OK (4/15/2006 a)	(1360 - 2240)/(12 - 5)	-125.714
1880 OK (5/21/2006 a)	2040 OK (5/20/2006 a)	(1880 - 2040)/(7 - 6)	-160
1760 OK (7/20/2006 a)	2040 OK (5/20/2006 a)	(1760 - 2040)/(8 - 6)	-140
1100 OK (10/14/2006 a)	2040 OK (5/20/2006 a)	(1100 - 2040)/(9 - 6)	-313.333
1460 OK (12/29/2006 a)	2040 OK (5/20/2006 a)	(1460 - 2040)/(10 - 6)	-145
1640 OK (3/22/2007 a)	2040 OK (5/20/2006 a)	(1640 - 2040)/(11 - 6)	-80
1360 OK (6/12/2007 a)	2040 OK (5/20/2006 a)	(1360 - 2040)/(12 - 6)	-113.333
1760 OK (7/20/2006 a)	1880 OK (5/21/2006 a)	(1760 - 1880)/(8 - 7)	-120
1100 OK (10/14/2006 a)	1880 OK (5/21/2006 a)	(1100 - 1880)/(9 - 7)	-390
1460 OK (12/29/2006 a)	1880 OK (5/21/2006 a)	(1460 - 1880)/(10 - 7)	-140
1640 OK (3/22/2007 a)	1880 OK (5/21/2006 a)	(1640 - 1880)/(11 - 7)	-60
1360 OK (6/12/2007 a)	1880 OK (5/21/2006 a)	(1360 - 1880)/(12 - 7)	-104
1100 OK (10/14/2006 a)	1760 OK (7/20/2006 a)	(1100 - 1760)/(9 - 8)	-660
1460 OK (12/29/2006 a)	1760 OK (7/20/2006 a)	(1460 - 1760)/(10 - 8)	-150
1640 OK (3/22/2007 a)	1760 OK (7/20/2006 a)	(1640 - 1760)/(11 - 8)	-40
1360 OK (6/12/2007 a)	1760 OK (7/20/2006 a)	(1360 - 1760)/(12 - 8)	-100
1460 OK (12/29/2006 a)	1100 OK (10/14/2006 a)	(1460 - 1100)/(10 - 9)	360
1640 OK (3/22/2007 a)	1100 OK (10/14/2006 a)	(1640 - 1100)/(11 - 9)	270
1360 OK (6/12/2007 a)	1100 OK (10/14/2006 a)	(1360 - 1100)/(12 - 9)	86.6667
1640 OK (3/22/2007 a)	1460 OK (12/29/2006 a)	(1640 - 1460)/(11 - 10)	180
1360 OK (6/12/2007 a)	1460 OK (12/29/2006 a)	(1360 - 1460)/(12 - 10)	-50
1360 OK (6/12/2007 a)	1640 OK (3/22/2007 a)	(1360 - 1640)/(12 - 11)	-280

Number of Q values = 66

Ordered Q Values

n	Q
1	-1165
2	-677.5
3	-660
4	-448.333
5	-390
6	-313.333
7	-285
8	-280
9	-236.875
10	-200
11	-191
12	-190
13	-188.75
14	-185.833
15	-180
16	-176.429
17	-170.556
18	-160
19	-160
20	-156
21	-150
22	-148.636

23	-145
24	-140
25	-140
26	-135.5
27	-125.714
28	-120
29	-113.333
30	-110
31	-104.286
32	-104
33	-100
34	-100
35	-90
36	-90
37	-80
38	-60
39	-50
40	-47
41	-46.25
42	-40
43	-36.25
44	-31.6667
45	-31.1111
46	-25.7143
47	-21.1111
48	-11.6667
49	-1.42857
50	0
51	10
52	10
53	24
54	27.5
55	52.5
56	60
57	76.6667
58	86.6667
59	133.333
60	136.667
61	180
62	195
63	270
64	300
65	360
66	590

Sen's Estimator (Median Q) is -100

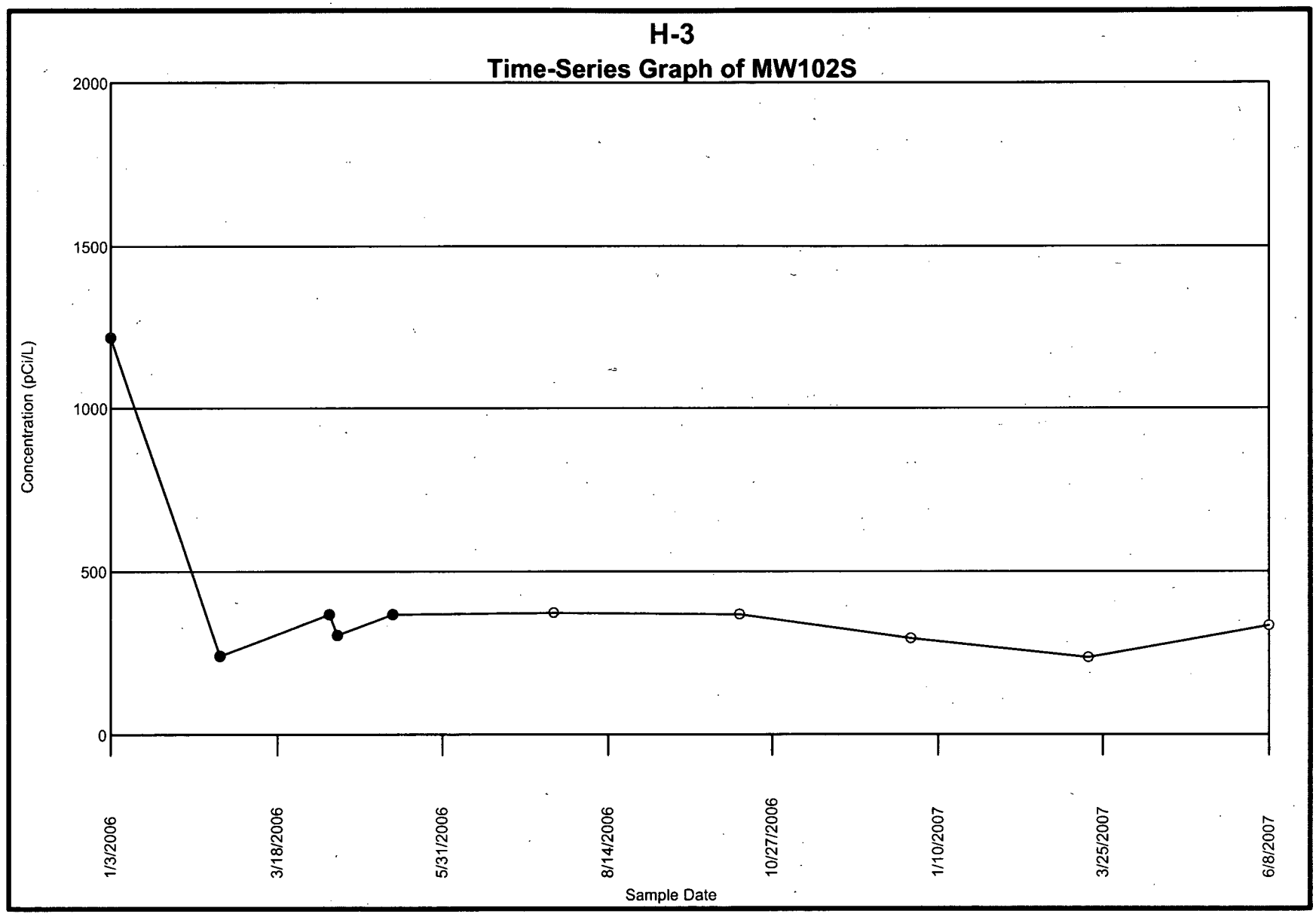
Tied Group	Value	Members
1	1640	2

Time Period	Observations
12/17/2005	1
2/18/2006	1
4/11/2006	1
4/12/2006	1
4/15/2006	1
5/20/2006	1
5/21/2006	1

7/20/2006	1
10/14/2006	1
12/29/2006	1
3/22/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 211.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.9306
M1 = (66 - 23.9306)/2.0 = 21.0347
M2 = (66 + 23.9306)/2.0 + 1 = 45.9653
Lower limit is -150 = Q(21)
Upper limit is -25.7143 = Q(46)
-25.7143 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW102S
Concentration (pCi/L)
2000
1500
1000
500
0
1/3/2006
3/18/2006
5/31/2006
8/14/2006
10/27/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW102S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
240 U (2/21/2006 a)	1220 OK (1/3/2006 a)	(240 - 1220)/(2 - 1)	-980
369 OK (4/11/2006 a)	1220 OK (1/3/2006 a)	(369 - 1220)/(3 - 1)	-425.5
307 U (4/15/2006 a)	1220 OK (1/3/2006 a)	(307 - 1220)/(4 - 1)	-304.333
370.5 OK (5/10/2006 ~)	1220 OK (1/3/2006 a)	(370.5 - 1220)/(5 - 1)	-212.375
ND<373 OK (7/21/2006 a)	1220 OK (1/3/2006 a)	(373 - 1220)/(6 - 1)	-169.4
ND<370 OK (10/13/2006 a)	1220 OK (1/3/2006 a)	(370 - 1220)/(7 - 1)	-141.667
ND<293 OK (12/29/2006 a)	1220 OK (1/3/2006 a)	(293 - 1220)/(8 - 1)	-132.429
ND<236 OK (3/19/2007 a)	1220 OK (1/3/2006 a)	(236 - 1220)/(9 - 1)	-123
ND<334 OK (6/8/2007 a)	1220 OK (1/3/2006 a)	(334 - 1220)/(10 - 1)	-98.4444
369 OK (4/11/2006 a)	240 U (2/21/2006 a)	(369 - 240)/(3 - 2)	129
307 U (4/15/2006 a)	240 U (2/21/2006 a)	(307 - 240)/(4 - 2)	33.5
370.5 OK (5/10/2006 ~)	240 U (2/21/2006 a)	(370.5 - 240)/(5 - 2)	43.5
ND<373 OK (7/21/2006 a)	240 U (2/21/2006 a)	(373 - 240)/(6 - 2)	33.25
ND<370 OK (10/13/2006 a)	240 U (2/21/2006 a)	(370 - 240)/(7 - 2)	26
ND<293 OK (12/29/2006 a)	240 U (2/21/2006 a)	(293 - 240)/(8 - 2)	8.83333
ND<236 OK (3/19/2007 a)	240 U (2/21/2006 a)	(236 - 240)/(9 - 2)	-0.571429
ND<334 OK (6/8/2007 a)	240 U (2/21/2006 a)	(334 - 240)/(10 - 2)	11.75
307 U (4/15/2006 a)	369 OK (4/11/2006 a)	(307 - 369)/(4 - 3)	-62
370.5 OK (5/10/2006 ~)	369 OK (4/11/2006 a)	(370.5 - 369)/(5 - 3)	0.75
ND<373 OK (7/21/2006 a)	369 OK (4/11/2006 a)	(373 - 369)/(6 - 3)	1.33333
ND<370 OK (10/13/2006 a)	369 OK (4/11/2006 a)	(370 - 369)/(7 - 3)	0.25
ND<293 OK (12/29/2006 a)	369 OK (4/11/2006 a)	(293 - 369)/(8 - 3)	-15.2
ND<236 OK (3/19/2007 a)	369 OK (4/11/2006 a)	(236 - 369)/(9 - 3)	-22.1667
ND<334 OK (6/8/2007 a)	369 OK (4/11/2006 a)	(334 - 369)/(10 - 3)	-5
370.5 OK (5/10/2006 ~)	307 U (4/15/2006 a)	(370.5 - 307)/(5 - 4)	63.5
ND<373 OK (7/21/2006 a)	307 U (4/15/2006 a)	(373 - 307)/(6 - 4)	33
ND<370 OK (10/13/2006 a)	307 U (4/15/2006 a)	(370 - 307)/(7 - 4)	21
ND<293 OK (12/29/2006 a)	307 U (4/15/2006 a)	(293 - 307)/(8 - 4)	-3.5
ND<236 OK (3/19/2007 a)	307 U (4/15/2006 a)	(236 - 307)/(9 - 4)	-14.2
ND<334 OK (6/8/2007 a)	307 U (4/15/2006 a)	(334 - 307)/(10 - 4)	4.5
ND<373 OK (7/21/2006 a)	370.5 OK (5/10/2006 ~)	(373 - 370.5)/(6 - 5)	2.5
ND<370 OK (10/13/2006 a)	370.5 OK (5/10/2006 ~)	(370 - 370.5)/(7 - 5)	-0.25
ND<293 OK (12/29/2006 a)	370.5 OK (5/10/2006 ~)	(293 - 370.5)/(8 - 5)	-25.8333
ND<236 OK (3/19/2007 a)	370.5 OK (5/10/2006 ~)	(236 - 370.5)/(9 - 5)	-33.625
ND<334 OK (6/8/2007 a)	370.5 OK (5/10/2006 ~)	(334 - 370.5)/(10 - 5)	-7.3
ND<370 OK (10/13/2006 a)	ND<373 OK (7/21/2006 a)	(370 - 373)/(7 - 6)	-3
ND<293 OK (12/29/2006 a)	ND<373 OK (7/21/2006 a)	(293 - 373)/(8 - 6)	-40
ND<236 OK (3/19/2007 a)	ND<373 OK (7/21/2006 a)	(236 - 373)/(9 - 6)	-45.6667
ND<334 OK (6/8/2007 a)	ND<373 OK (7/21/2006 a)	(334 - 373)/(10 - 6)	-9.75
ND<293 OK (12/29/2006 a)	ND<370 OK (10/13/2006 a)	(293 - 370)/(8 - 7)	-77
ND<236 OK (3/19/2007 a)	ND<370 OK (10/13/2006 a)	(236 - 370)/(9 - 7)	-67

ND<334 OK (6/8/2007 a)	ND<370 OK (10/13/2006 a)	(334 - 370)/(10 - 7)	-12
ND<236 OK (3/19/2007 a)	ND<293 OK (12/29/2006 a)	(236 - 293)/(9 - 8)	-57
ND<334 OK (6/8/2007 a)	ND<293 OK (12/29/2006 a)	(334 - 293)/(10 - 8)	20.5
ND<334 OK (6/8/2007 a)	ND<236 OK (3/19/2007 a)	(334 - 236)/(10 - 9)	98

Number of Q values = 45

Ordered Q Values

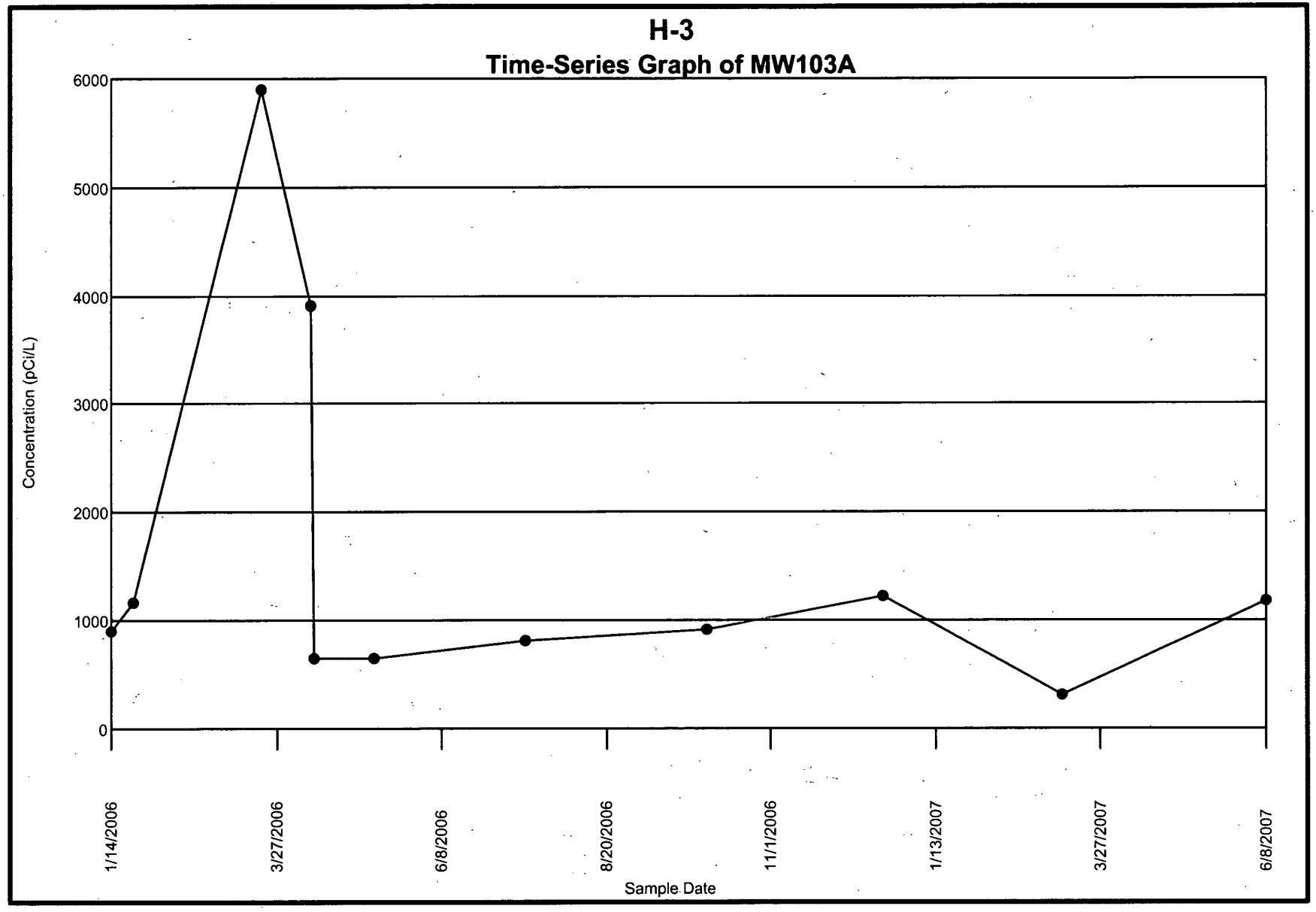
n	Q
1	-980
2	-425.5
3	-304.333
4	-212.375
5	-169.4
6	-141.667
7	-132.429
8	-123
9	-98.4444
10	-77
11	-67
12	-62
13	-57
14	-45.6667
15	-40
16	-33.625
17	-25.8333
18	-22.1667
19	-15.2
20	-14.2
21	-12
22	-9.75
23	-7.3
24	-5
25	-3.5
26	-3
27	-0.571429
28	-0.25
29	0.25
30	0.75
31	1.33333
32	2.5
33	4.5
34	8.83333
35	11.75
36	20.5
37	21
38	26
39	33
40	33.25
41	33.5
42	43.5
43	63.5
44	98
45	129

Sen's Estimator (Median Q) is -7.3

Time Period	Observations
1/3/2006	1
2/21/2006	1
4/11/2006	1
4/15/2006	1
5/10/2006	1
7/21/2006	1
10/13/2006	1
12/29/2006	1
3/19/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -57 = Q(13)
Upper limit is 4.5 = Q(33)
-57 < 0 < 4.5 indicating no trend in data.


H-3
Time-Series Graph of MW103A
Concentration (pCi/L)
6000
5000
4000
3000
2000
1000
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW103A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1160 OK (1/24/2006 a)	897 OK (1/14/2006 a)	(1160 - 897)/(2 - 1)	263
5890 OK (3/21/2006 ~)	897 OK (1/14/2006 a)	(5890 - 897)/(3 - 1)	2496.5
3910 OK (4/12/2006 a)	897 OK (1/14/2006 a)	(3910 - 897)/(4 - 1)	1004.33
649 OK (4/13/2006 a)	897 OK (1/14/2006 a)	(649 - 897)/(5 - 1)	-62
646 OK (5/10/2006 a)	897 OK (1/14/2006 a)	(646 - 897)/(6 - 1)	-50.2
814 OK (7/16/2006 a)	897 OK (1/14/2006 a)	(814 - 897)/(7 - 1)	-13.8333
911 OK (10/4/2006 a)	897 OK (1/14/2006 a)	(911 - 897)/(8 - 1)	2
1220 OK (12/21/2006 a)	897 OK (1/14/2006 a)	(1220 - 897)/(9 - 1)	40.375
314 OK (3/10/2007 a)	897 OK (1/14/2006 a)	(314 - 897)/(10 - 1)	-64.7778
1180 OK (6/8/2007 a)	897 OK (1/14/2006 a)	(1180 - 897)/(11 - 1)	28.3
5890 OK (3/21/2006 ~)	1160 OK (1/24/2006 a)	(5890 - 1160)/(3 - 2)	4730
3910 OK (4/12/2006 a)	1160 OK (1/24/2006 a)	(3910 - 1160)/(4 - 2)	1375
649 OK (4/13/2006 a)	1160 OK (1/24/2006 a)	(649 - 1160)/(5 - 2)	-170.333
646 OK (5/10/2006 a)	1160 OK (1/24/2006 a)	(646 - 1160)/(6 - 2)	-128.5
814 OK (7/16/2006 a)	1160 OK (1/24/2006 a)	(814 - 1160)/(7 - 2)	-69.2
911 OK (10/4/2006 a)	1160 OK (1/24/2006 a)	(911 - 1160)/(8 - 2)	-41.5
1220 OK (12/21/2006 a)	1160 OK (1/24/2006 a)	(1220 - 1160)/(9 - 2)	8.57143
314 OK (3/10/2007 a)	1160 OK (1/24/2006 a)	(314 - 1160)/(10 - 2)	-105.75
1180 OK (6/8/2007 a)	1160 OK (1/24/2006 a)	(1180 - 1160)/(11 - 2)	2.22222
3910 OK (4/12/2006 a)	5890 OK (3/21/2006 ~)	(3910 - 5890)/(4 - 3)	-1980
649 OK (4/13/2006 a)	5890 OK (3/21/2006 ~)	(649 - 5890)/(5 - 3)	-2620.5
646 OK (5/10/2006 a)	5890 OK (3/21/2006 ~)	(646 - 5890)/(6 - 3)	-1748
814 OK (7/16/2006 a)	5890 OK (3/21/2006 ~)	(814 - 5890)/(7 - 3)	-1269
911 OK (10/4/2006 a)	5890 OK (3/21/2006 ~)	(911 - 5890)/(8 - 3)	-995.8
1220 OK (12/21/2006 a)	5890 OK (3/21/2006 ~)	(1220 - 5890)/(9 - 3)	-778.333
314 OK (3/10/2007 a)	5890 OK (3/21/2006 ~)	(314 - 5890)/(10 - 3)	-796.571
1180 OK (6/8/2007 a)	5890 OK (3/21/2006 ~)	(1180 - 5890)/(11 - 3)	-588.75
649 OK (4/13/2006 a)	3910 OK (4/12/2006 a)	(649 - 3910)/(5 - 4)	-3261
646 OK (5/10/2006 a)	3910 OK (4/12/2006 a)	(646 - 3910)/(6 - 4)	-1632
814 OK (7/16/2006 a)	3910 OK (4/12/2006 a)	(814 - 3910)/(7 - 4)	-1032
911 OK (10/4/2006 a)	3910 OK (4/12/2006 a)	(911 - 3910)/(8 - 4)	-749.75
1220 OK (12/21/2006 a)	3910 OK (4/12/2006 a)	(1220 - 3910)/(9 - 4)	-538
314 OK (3/10/2007 a)	3910 OK (4/12/2006 a)	(314 - 3910)/(10 - 4)	-599.333
1180 OK (6/8/2007 a)	3910 OK (4/12/2006 a)	(1180 - 3910)/(11 - 4)	-390
646 OK (5/10/2006 a)	649 OK (4/13/2006 a)	(646 - 649)/(6 - 5)	-3
814 OK (7/16/2006 a)	649 OK (4/13/2006 a)	(814 - 649)/(7 - 5)	82.5
911 OK (10/4/2006 a)	649 OK (4/13/2006 a)	(911 - 649)/(8 - 5)	87.3333
1220 OK (12/21/2006 a)	649 OK (4/13/2006 a)	(1220 - 649)/(9 - 5)	142.75
314 OK (3/10/2007 a)	649 OK (4/13/2006 a)	(314 - 649)/(10 - 5)	-67
1180 OK (6/8/2007 a)	649 OK (4/13/2006 a)	(1180 - 649)/(11 - 5)	88.5
814 OK (7/16/2006 a)	646 OK (5/10/2006 a)	(814 - 646)/(7 - 6)	168
911 OK (10/4/2006 a)	646 OK (5/10/2006 a)	(911 - 646)/(8 - 6)	132.5

1220 OK (12/21/2006 a)	646 OK (5/10/2006 a)	(1220 - 646)/(9 - 6)	191.333
314 OK (3/10/2007 a)	646 OK (5/10/2006 a)	(314 - 646)/(10 - 6)	-83
1180 OK (6/8/2007 a)	646 OK (5/10/2006 a)	(1180 - 646)/(11 - 6)	106.8
911 OK (10/4/2006 a)	814 OK (7/16/2006 a)	(911 - 814)/(8 - 7)	97
1220 OK (12/21/2006 a)	814 OK (7/16/2006 a)	(1220 - 814)/(9 - 7)	203
314 OK (3/10/2007 a)	814 OK (7/16/2006 a)	(314 - 814)/(10 - 7)	-166.667
1180 OK (6/8/2007 a)	814 OK (7/16/2006 a)	(1180 - 814)/(11 - 7)	91.5
1220 OK (12/21/2006 a)	911 OK (10/4/2006 a)	(1220 - 911)/(9 - 8)	309
314 OK (3/10/2007 a)	911 OK (10/4/2006 a)	(314 - 911)/(10 - 8)	-298.5
1180 OK (6/8/2007 a)	911 OK (10/4/2006 a)	(1180 - 911)/(11 - 8)	89.6667
314 OK (3/10/2007 a)	1220 OK (12/21/2006 a)	(314 - 1220)/(10 - 9)	-906
1180 OK (6/8/2007 a)	1220 OK (12/21/2006 a)	(1180 - 1220)/(11 - 9)	-20
1180 OK (6/8/2007 a)	314 OK (3/10/2007 a)	(1180 - 314)/(11 - 10)	866

Number of Q values = 55

Ordered Q Values

n	Q
1	-3261
2	-2620.5
3	-1980
4	-1748
5	-1632
6	-1269
7	-1032
8	-995.8
9	-906
10	-796.571
11	-778.333
12	-749.75
13	-599.333
14	-588.75
15	-538
16	-390
17	-298.5
18	-170.333
19	-166.667
20	-128.5
21	-105.75
22	-83
23	-69.2
24	-67
25	-64.7778
26	-62
27	-50.2
28	-41.5
29	-20
30	-13.8333
31	-3
32	2
33	2.22222
34	8.57143

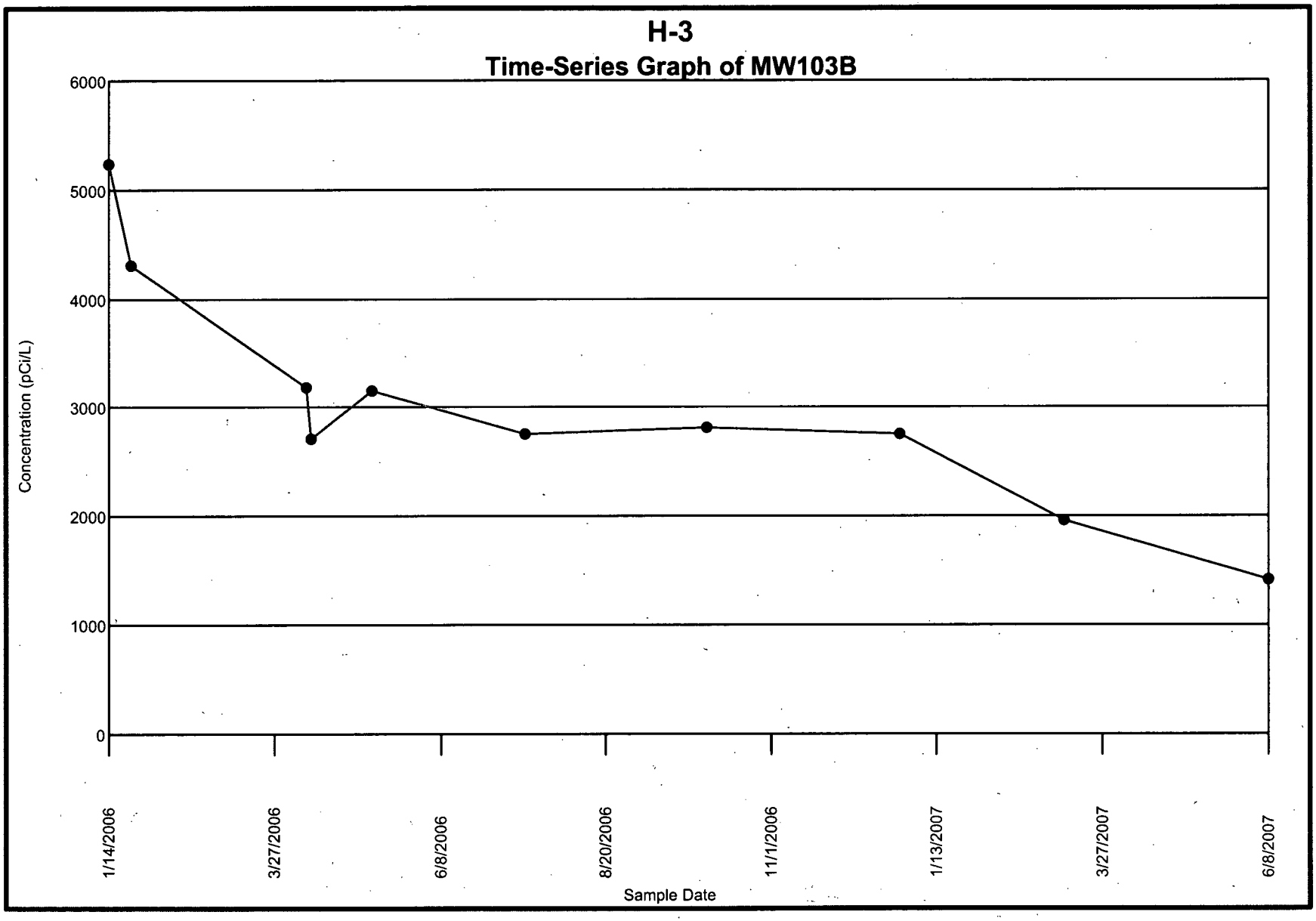
35	28.3
36	40.375
37	82.5
38	87.3333
39	88.5
40	89.6667
41	91.5
42	97
43	106.8
44	132.5
45	142.75
46	168
47	191.333
48	203
49	263
50	309
51	866
52	1004.33
53	1375
54	2496.5
55	4730

Sen's Estimator (Median Q) is -41.5

Time Period	Observations
1/14/2006	1
1/24/2006	1
3/21/2006	1
4/12/2006	1
4/13/2006	1
5/10/2006	1
7/16/2006	1
10/4/2006	1
12/21/2006	1
3/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -298.5 = Q(17)
Upper limit is 88.5 = Q(39)
-298.5 < 0 < 88.5 indicating no trend in data.


H-3
Time-Series Graph of MW103B
Concentration (pCi/L)
6000
5000
4000
3000
2000
1000
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW103B
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
4310 OK (1/24/2006 a)	5240 OK (1/14/2006 a)	(4310 - 5240)/(2 - 1)	-930
3180 OK (4/11/2006 a)	5240 OK (1/14/2006 a)	(3180 - 5240)/(3 - 1)	-1030
2715 OK (4/13/2006 ~)	5240 OK (1/14/2006 a)	(2715 - 5240)/(4 - 1)	-841.667
3150 OK (5/10/2006 a)	5240 OK (1/14/2006 a)	(3150 - 5240)/(5 - 1)	-522.5
2760 OK (7/16/2006 a)	5240 OK (1/14/2006 a)	(2760 - 5240)/(6 - 1)	-496
2810 OK (10/4/2006 a)	5240 OK (1/14/2006 a)	(2810 - 5240)/(7 - 1)	-405
2760 OK (12/28/2006 a)	5240 OK (1/14/2006 a)	(2760 - 5240)/(8 - 1)	-354.286
1960 OK (3/10/2007 a)	5240 OK (1/14/2006 a)	(1960 - 5240)/(9 - 1)	-410
1410 OK (6/8/2007 a)	5240 OK (1/14/2006 a)	(1410 - 5240)/(10 - 1)	-425.556
3180 OK (4/11/2006 a)	4310 OK (1/24/2006 a)	(3180 - 4310)/(3 - 2)	-1130
2715 OK (4/13/2006 ~)	4310 OK (1/24/2006 a)	(2715 - 4310)/(4 - 2)	-797.5
3150 OK (5/10/2006 a)	4310 OK (1/24/2006 a)	(3150 - 4310)/(5 - 2)	-386.667
2760 OK (7/16/2006 a)	4310 OK (1/24/2006 a)	(2760 - 4310)/(6 - 2)	-387.5
2810 OK (10/4/2006 a)	4310 OK (1/24/2006 a)	(2810 - 4310)/(7 - 2)	-300
2760 OK (12/28/2006 a)	4310 OK (1/24/2006 a)	(2760 - 4310)/(8 - 2)	-258.333
1960 OK (3/10/2007 a)	4310 OK (1/24/2006 a)	(1960 - 4310)/(9 - 2)	-335.714
1410 OK (6/8/2007 a)	4310 OK (1/24/2006 a)	(1410 - 4310)/(10 - 2)	-362.5
2715 OK (4/13/2006 ~)	3180 OK (4/11/2006 a)	(2715 - 3180)/(4 - 3)	-465
3150 OK (5/10/2006 a)	3180 OK (4/11/2006 a)	(3150 - 3180)/(5 - 3)	-15
2760 OK (7/16/2006 a)	3180 OK (4/11/2006 a)	(2760 - 3180)/(6 - 3)	-140
2810 OK (10/4/2006 a)	3180 OK (4/11/2006 a)	(2810 - 3180)/(7 - 3)	-92.5
2760 OK (12/28/2006 a)	3180 OK (4/11/2006 a)	(2760 - 3180)/(8 - 3)	-84
1960 OK (3/10/2007 a)	3180 OK (4/11/2006 a)	(1960 - 3180)/(9 - 3)	-203.333
1410 OK (6/8/2007 a)	3180 OK (4/11/2006 a)	(1410 - 3180)/(10 - 3)	-252.857
3150 OK (5/10/2006 a)	2715 OK (4/13/2006 ~)	(3150 - 2715)/(5 - 4)	435
2760 OK (7/16/2006 a)	2715 OK (4/13/2006 ~)	(2760 - 2715)/(6 - 4)	22.5
2810 OK (10/4/2006 a)	2715 OK (4/13/2006 ~)	(2810 - 2715)/(7 - 4)	31.6667
2760 OK (12/28/2006 a)	2715 OK (4/13/2006 ~)	(2760 - 2715)/(8 - 4)	11.25
1960 OK (3/10/2007 a)	2715 OK (4/13/2006 ~)	(1960 - 2715)/(9 - 4)	-151
1410 OK (6/8/2007 a)	2715 OK (4/13/2006 ~)	(1410 - 2715)/(10 - 4)	-217.5
2760 OK (7/16/2006 a)	3150 OK (5/10/2006 a)	(2760 - 3150)/(6 - 5)	-390
2810 OK (10/4/2006 a)	3150 OK (5/10/2006 a)	(2810 - 3150)/(7 - 5)	-170
2760 OK (12/28/2006 a)	3150 OK (5/10/2006 a)	(2760 - 3150)/(8 - 5)	-130
1960 OK (3/10/2007 a)	3150 OK (5/10/2006 a)	(1960 - 3150)/(9 - 5)	-297.5
1410 OK (6/8/2007 a)	3150 OK (5/10/2006 a)	(1410 - 3150)/(10 - 5)	-348
2810 OK (10/4/2006 a)	2760 OK (7/16/2006 a)	(2810 - 2760)/(7 - 6)	50
2760 OK (12/28/2006 a)	2760 OK (7/16/2006 a)	(2760 - 2760)/(8 - 6)	0
1960 OK (3/10/2007 a)	2760 OK (7/16/2006 a)	(1960 - 2760)/(9 - 6)	-266.667
1410 OK (6/8/2007 a)	2760 OK (7/16/2006 a)	(1410 - 2760)/(10 - 6)	-337.5
2760 OK (12/28/2006 a)	2810 OK (10/4/2006 a)	(2760 - 2810)/(8 - 7)	-50
1960 OK (3/10/2007 a)	2810 OK (10/4/2006 a)	(1960 - 2810)/(9 - 7)	-425

1410 OK (6/8/2007 a)	2810 OK (10/4/2006 a)	(1410 - 2810)/(10 - 7)	-466.667
1960 OK (3/10/2007 a)	2760 OK (12/28/2006 a)	(1960 - 2760)/(9 - 8)	-800
1410 OK (6/8/2007 a)	2760 OK (12/28/2006 a)	(1410 - 2760)/(10 - 8)	-675
1410 OK (6/8/2007 a)	1960 OK (3/10/2007 a)	(1410 - 1960)/(10 - 9)	-550

Number of Q values = 45

Ordered Q Values

n	Q
1	-1130
2	-1030
3	-930
4	-841.667
5	-800
6	-797.5
7	-675
8	-550
9	-522.5
10	-496
11	-466.667
12	-465
13	-425.556
14	-425
15	-410
16	-405
17	-390
18	-387.5
19	-386.667
20	-362.5
21	-354.286
22	-348
23	-337.5
24	-335.714
25	-300
26	-297.5
27	-266.667
28	-258.333
29	-252.857
30	-217.5
31	-203.333
32	-170
33	-151
34	-140
35	-130
36	-92.5
37	-84
38	-50
39	-15
40	0
41	11.25
42	22.5
43	31.6667
44	50
45	435

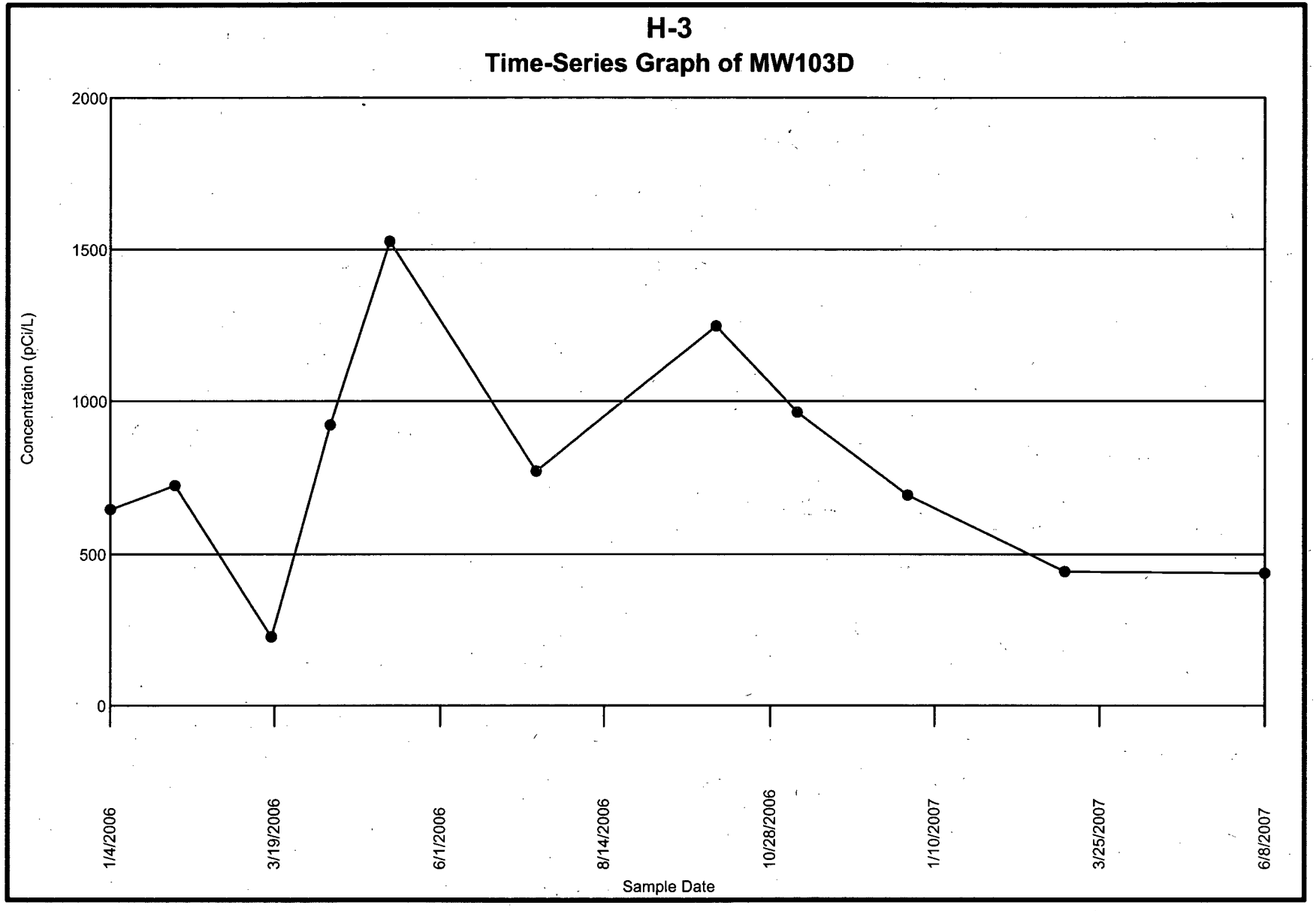
Sen's Estimator (Median Q) is -337.5

Tied Group	Value	Members
1	2760	2

Time Period	Observations
1/14/2006	1
1/24/2006	1
4/11/2006	1
4/13/2006	1
5/10/2006	1
7/16/2006	1
10/4/2006	1
12/28/2006	1
3/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -425.556 = Q(13)
Upper limit is -151 = Q(33)
-151 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW103D
Concentration (pCi/L)
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW103D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
722 OK (2/2/2006 a)	644 OK (1/4/2006 a)	(722 - 644)/(2 - 1)	78
227 U (3/18/2006 a)	644 OK (1/4/2006 a)	(227 - 644)/(3 - 1)	-208.5
922 OK (4/13/2006 a)	644 OK (1/4/2006 a)	(922 - 644)/(4 - 1)	92.6667
1530 OK (5/10/2006 a)	644 OK (1/4/2006 a)	(1530 - 644)/(5 - 1)	221.5
773 OK (7/15/2006 a)	644 OK (1/4/2006 a)	(773 - 644)/(6 - 1)	25.8
1250 OK (10/4/2006 a)	644 OK (1/4/2006 a)	(1250 - 644)/(7 - 1)	101
966 OK (11/9/2006 a)	644 OK (1/4/2006 a)	(966 - 644)/(8 - 1)	46
694 OK (12/29/2006 a)	644 OK (1/4/2006 a)	(694 - 644)/(9 - 1)	6.25
443 OK (3/10/2007 a)	644 OK (1/4/2006 a)	(443 - 644)/(10 - 1)	-22.3333
434 OK (6/8/2007 a)	644 OK (1/4/2006 a)	(434 - 644)/(11 - 1)	-21
227 U (3/18/2006 a)	722 OK (2/2/2006 a)	(227 - 722)/(3 - 2)	-495
922 OK (4/13/2006 a)	722 OK (2/2/2006 a)	(922 - 722)/(4 - 2)	100
1530 OK (5/10/2006 a)	722 OK (2/2/2006 a)	(1530 - 722)/(5 - 2)	269.333
773 OK (7/15/2006 a)	722 OK (2/2/2006 a)	(773 - 722)/(6 - 2)	12.75
1250 OK (10/4/2006 a)	722 OK (2/2/2006 a)	(1250 - 722)/(7 - 2)	105.6
966 OK (11/9/2006 a)	722 OK (2/2/2006 a)	(966 - 722)/(8 - 2)	40.6667
694 OK (12/29/2006 a)	722 OK (2/2/2006 a)	(694 - 722)/(9 - 2)	-4
443 OK (3/10/2007 a)	722 OK (2/2/2006 a)	(443 - 722)/(10 - 2)	-34.875
434 OK (6/8/2007 a)	722 OK (2/2/2006 a)	(434 - 722)/(11 - 2)	-32
922 OK (4/13/2006 a)	227 U (3/18/2006 a)	(922 - 227)/(4 - 3)	695
1530 OK (5/10/2006 a)	227 U (3/18/2006 a)	(1530 - 227)/(5 - 3)	651.5
773 OK (7/15/2006 a)	227 U (3/18/2006 a)	(773 - 227)/(6 - 3)	182
1250 OK (10/4/2006 a)	227 U (3/18/2006 a)	(1250 - 227)/(7 - 3)	255.75
966 OK (11/9/2006 a)	227 U (3/18/2006 a)	(966 - 227)/(8 - 3)	147.8
694 OK (12/29/2006 a)	227 U (3/18/2006 a)	(694 - 227)/(9 - 3)	77.8333
443 OK (3/10/2007 a)	227 U (3/18/2006 a)	(443 - 227)/(10 - 3)	30.8571
434 OK (6/8/2007 a)	227 U (3/18/2006 a)	(434 - 227)/(11 - 3)	25.875
1530 OK (5/10/2006 a)	922 OK (4/13/2006 a)	(1530 - 922)/(5 - 4)	608
773 OK (7/15/2006 a)	922 OK (4/13/2006 a)	(773 - 922)/(6 - 4)	-74.5
1250 OK (10/4/2006 a)	922 OK (4/13/2006 a)	(1250 - 922)/(7 - 4)	109.333
966 OK (11/9/2006 a)	922 OK (4/13/2006 a)	(966 - 922)/(8 - 4)	11
694 OK (12/29/2006 a)	922 OK (4/13/2006 a)	(694 - 922)/(9 - 4)	-45.6
443 OK (3/10/2007 a)	922 OK (4/13/2006 a)	(443 - 922)/(10 - 4)	-79.8333
434 OK (6/8/2007 a)	922 OK (4/13/2006 a)	(434 - 922)/(11 - 4)	-69.7143
773 OK (7/15/2006 a)	1530 OK (5/10/2006 a)	(773 - 1530)/(6 - 5)	-757
1250 OK (10/4/2006 a)	1530 OK (5/10/2006 a)	(1250 - 1530)/(7 - 5)	-140
966 OK (11/9/2006 a)	1530 OK (5/10/2006 a)	(966 - 1530)/(8 - 5)	-188
694 OK (12/29/2006 a)	1530 OK (5/10/2006 a)	(694 - 1530)/(9 - 5)	-209
443 OK (3/10/2007 a)	1530 OK (5/10/2006 a)	(443 - 1530)/(10 - 5)	-217.4
434 OK (6/8/2007 a)	1530 OK (5/10/2006 a)	(434 - 1530)/(11 - 5)	-182.667
1250 OK (10/4/2006 a)	773 OK (7/15/2006 a)	(1250 - 773)/(7 - 6)	477
966 OK (11/9/2006 a)	773 OK (7/15/2006 a)	(966 - 773)/(8 - 6)	96.5

694 OK (12/29/2006 a)	773 OK (7/15/2006 a)	(694 - 773)/(9 - 6)	-26.3333
443 OK (3/10/2007 a)	773 OK (7/15/2006 a)	(443 - 773)/(10 - 6)	-82.5
434 OK (6/8/2007 a)	773 OK (7/15/2006 a)	(434 - 773)/(11 - 6)	-67.8
966 OK (11/9/2006 a)	1250 OK (10/4/2006 a)	(966 - 1250)/(8 - 7)	-284
694 OK (12/29/2006 a)	1250 OK (10/4/2006 a)	(694 - 1250)/(9 - 7)	-278
443 OK (3/10/2007 a)	1250 OK (10/4/2006 a)	(443 - 1250)/(10 - 7)	-269
434 OK (6/8/2007 a)	1250 OK (10/4/2006 a)	(434 - 1250)/(11 - 7)	-204
694 OK (12/29/2006 a)	966 OK (11/9/2006 a)	(694 - 966)/(9 - 8)	-272
443 OK (3/10/2007 a)	966 OK (11/9/2006 a)	(443 - 966)/(10 - 8)	-261.5
434 OK (6/8/2007 a)	966 OK (11/9/2006 a)	(434 - 966)/(11 - 8)	-177.333
443 OK (3/10/2007 a)	694 OK (12/29/2006 a)	(443 - 694)/(10 - 9)	-251
434 OK (6/8/2007 a)	694 OK (12/29/2006 a)	(434 - 694)/(11 - 9)	-130
434 OK (6/8/2007 a)	443 OK (3/10/2007 a)	(434 - 443)/(11 - 10)	-9

Number of Q values = 55

Ordered Q Values

n	Q
1	-757
2	-495
3	-284
4	-278
5	-272
6	-269
7	-261.5
8	-251
9	-217.4
10	-209
11	-208.5
12	-204
13	-188
14	-182.667
15	-177.333
16	-140
17	-130
18	-82.5
19	-79.8333
20	-74.5
21	-69.7143
22	-67.8
23	-45.6
24	-34.875
25	-32
26	-26.3333
27	-22.3333
28	-21
29	-9
30	-4
31	6.25
32	11
33	12.75
34	25.8

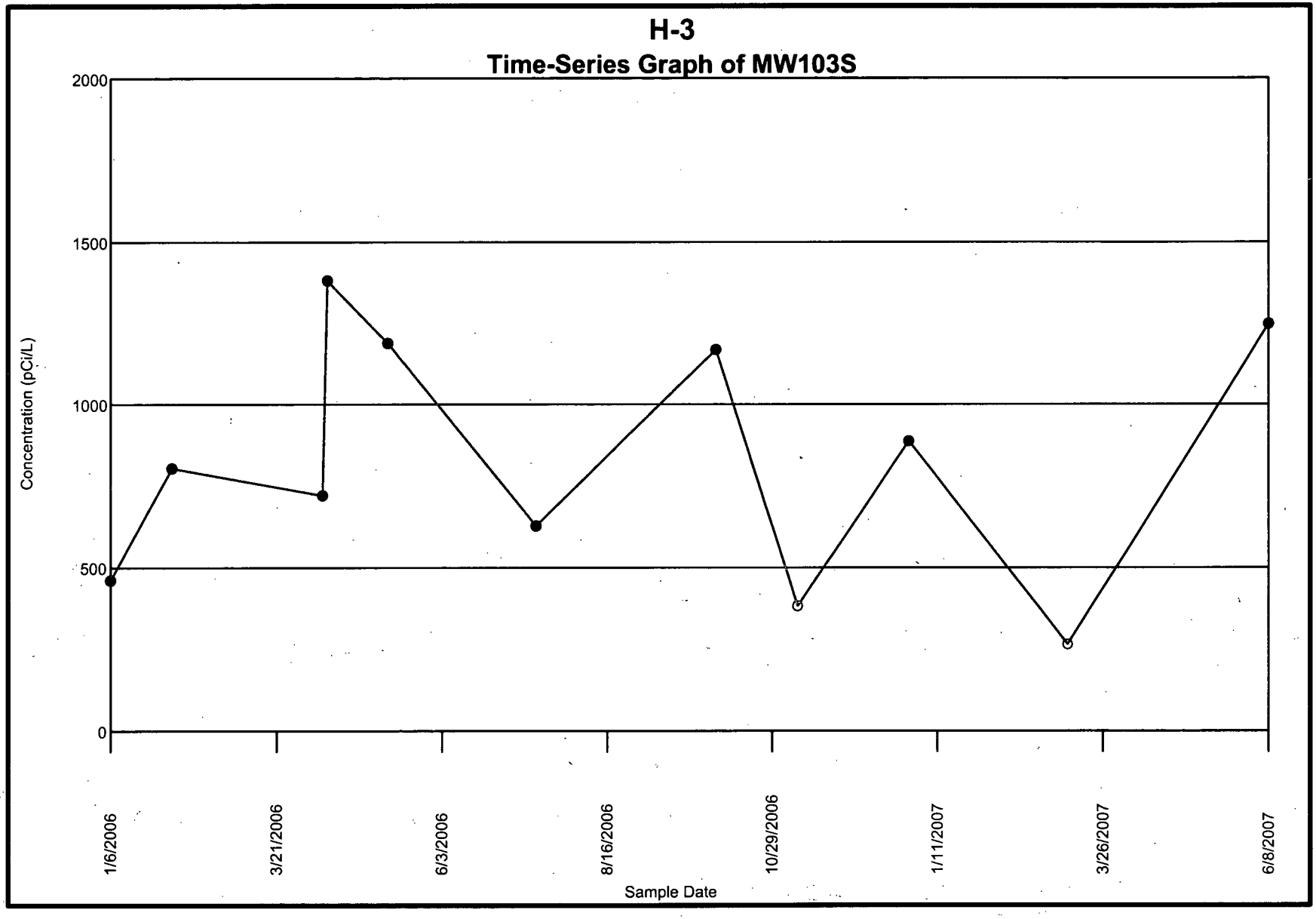
35	25.875
36	30.8571
37	40.6667
38	46
39	77.8333
40	78
41	92.6667
42	96.5
43	100
44	101
45	105.6
46	109.333
47	147.8
48	182
49	221.5
50	255.75
51	269.333
52	477
53	608
54	651.5
55	695

Sen's Estimator (Median Q) is -21

Time Period	Observations
1/4/2006	1
2/2/2006	1
3/18/2006	1
4/13/2006	1
5/10/2006	1
7/15/2006	1
10/4/2006	1
11/9/2006	1
12/29/2006	1
3/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -130 = Q(17)
Upper limit is 77.8333 = Q(39)
-130 < 0 < 77.8333 indicating no trend in data.


H-3
Time-Series Graph of MW103S
Concentration (pCi/L)
2000
1500
1000
500
0
1/6/2006
3/21/2006
6/3/2006
8/16/2006
10/29/2006
1/11/2007
3/26/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW103S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
807 OK (2/2/2006 a)	461 OK (1/6/2006 a)	(807 - 461)/(2 - 1)	346
722 OK (4/11/2006 a)	461 OK (1/6/2006 a)	(722 - 461)/(3 - 1)	130.5
1380 OK (4/13/2006 a)	461 OK (1/6/2006 a)	(1380 - 461)/(4 - 1)	306.333
1190 OK (5/10/2006 a)	461 OK (1/6/2006 a)	(1190 - 461)/(5 - 1)	182.25
630 OK (7/15/2006 a)	461 OK (1/6/2006 a)	(630 - 461)/(6 - 1)	33.8
1170 OK (10/4/2006 a)	461 OK (1/6/2006 a)	(1170 - 461)/(7 - 1)	118.167
ND<383 OK (11/9/2006 a)	461 OK (1/6/2006 a)	(383 - 461)/(8 - 1)	-11.1429
887 OK (12/29/2006 a)	461 OK (1/6/2006 a)	(887 - 461)/(9 - 1)	53.25
ND<265 OK (3/10/2007 a)	461 OK (1/6/2006 a)	(265 - 461)/(10 - 1)	-21.7778
1250 OK (6/8/2007 a)	461 OK (1/6/2006 a)	(1250 - 461)/(11 - 1)	78.9
722 OK (4/11/2006 a)	807 OK (2/2/2006 a)	(722 - 807)/(3 - 2)	-85
1380 OK (4/13/2006 a)	807 OK (2/2/2006 a)	(1380 - 807)/(4 - 2)	286.5
1190 OK (5/10/2006 a)	807 OK (2/2/2006 a)	(1190 - 807)/(5 - 2)	127.667
630 OK (7/15/2006 a)	807 OK (2/2/2006 a)	(630 - 807)/(6 - 2)	-44.25
1170 OK (10/4/2006 a)	807 OK (2/2/2006 a)	(1170 - 807)/(7 - 2)	72.6
ND<383 OK (11/9/2006 a)	807 OK (2/2/2006 a)	(383 - 807)/(8 - 2)	-70.6667
887 OK (12/29/2006 a)	807 OK (2/2/2006 a)	(887 - 807)/(9 - 2)	11.4286
ND<265 OK (3/10/2007 a)	807 OK (2/2/2006 a)	(265 - 807)/(10 - 2)	-67.75
1250 OK (6/8/2007 a)	807 OK (2/2/2006 a)	(1250 - 807)/(11 - 2)	49.2222
1380 OK (4/13/2006 a)	722 OK (4/11/2006 a)	(1380 - 722)/(4 - 3)	658
1190 OK (5/10/2006 a)	722 OK (4/11/2006 a)	(1190 - 722)/(5 - 3)	234
630 OK (7/15/2006 a)	722 OK (4/11/2006 a)	(630 - 722)/(6 - 3)	-30.6667
1170 OK (10/4/2006 a)	722 OK (4/11/2006 a)	(1170 - 722)/(7 - 3)	112
ND<383 OK (11/9/2006 a)	722 OK (4/11/2006 a)	(383 - 722)/(8 - 3)	-67.8
887 OK (12/29/2006 a)	722 OK (4/11/2006 a)	(887 - 722)/(9 - 3)	27.5
ND<265 OK (3/10/2007 a)	722 OK (4/11/2006 a)	(265 - 722)/(10 - 3)	-65.2857
1250 OK (6/8/2007 a)	722 OK (4/11/2006 a)	(1250 - 722)/(11 - 3)	66
1190 OK (5/10/2006 a)	1380 OK (4/13/2006 a)	(1190 - 1380)/(5 - 4)	-190
630 OK (7/15/2006 a)	1380 OK (4/13/2006 a)	(630 - 1380)/(6 - 4)	-375
1170 OK (10/4/2006 a)	1380 OK (4/13/2006 a)	(1170 - 1380)/(7 - 4)	-70
ND<383 OK (11/9/2006 a)	1380 OK (4/13/2006 a)	(383 - 1380)/(8 - 4)	-249.25
887 OK (12/29/2006 a)	1380 OK (4/13/2006 a)	(887 - 1380)/(9 - 4)	-98.6
ND<265 OK (3/10/2007 a)	1380 OK (4/13/2006 a)	(265 - 1380)/(10 - 4)	-185.833
1250 OK (6/8/2007 a)	1380 OK (4/13/2006 a)	(1250 - 1380)/(11 - 4)	-18.5714
630 OK (7/15/2006 a)	1190 OK (5/10/2006 a)	(630 - 1190)/(6 - 5)	-560
1170 OK (10/4/2006 a)	1190 OK (5/10/2006 a)	(1170 - 1190)/(7 - 5)	-10
ND<383 OK (11/9/2006 a)	1190 OK (5/10/2006 a)	(383 - 1190)/(8 - 5)	-269
887 OK (12/29/2006 a)	1190 OK (5/10/2006 a)	(887 - 1190)/(9 - 5)	-75.75
ND<265 OK (3/10/2007 a)	1190 OK (5/10/2006 a)	(265 - 1190)/(10 - 5)	-185
1250 OK (6/8/2007 a)	1190 OK (5/10/2006 a)	(1250 - 1190)/(11 - 5)	10
1170 OK (10/4/2006 a)	630 OK (7/15/2006 a)	(1170 - 630)/(7 - 6)	540
ND<383 OK (11/9/2006 a)	630 OK (7/15/2006 a)	(383 - 630)/(8 - 6)	-123.5

887 OK (12/29/2006 a)	630 OK (7/15/2006 a)	(887 - 630)/(9 - 6)	85.6667
ND<265 OK (3/10/2007 a)	630 OK (7/15/2006 a)	(265 - 630)/(10 - 6)	-91.25
1250 OK (6/8/2007 a)	630 OK (7/15/2006 a)	(1250 - 630)/(11 - 6)	124
ND<383 OK (11/9/2006 a)	1170 OK (10/4/2006 a)	(383 - 1170)/(8 - 7)	-787
887 OK (12/29/2006 a)	1170 OK (10/4/2006 a)	(887 - 1170)/(9 - 7)	-141.5
ND<265 OK (3/10/2007 a)	1170 OK (10/4/2006 a)	(265 - 1170)/(10 - 7)	-301.667
1250 OK (6/8/2007 a)	1170 OK (10/4/2006 a)	(1250 - 1170)/(11 - 7)	20
887 OK (12/29/2006 a)	ND<383 OK (11/9/2006 a)	(887 - 383)/(9 - 8)	504
ND<265 OK (3/10/2007 a)	ND<383 OK (11/9/2006 a)	(265 - 383)/(10 - 8)	-59
1250 OK (6/8/2007 a)	ND<383 OK (11/9/2006 a)	(1250 - 383)/(11 - 8)	289
ND<265 OK (3/10/2007 a)	887 OK (12/29/2006 a)	(265 - 887)/(10 - 9)	-622
1250 OK (6/8/2007 a)	887 OK (12/29/2006 a)	(1250 - 887)/(11 - 9)	181.5
1250 OK (6/8/2007 a)	ND<265 OK (3/10/2007 a)	(1250 - 265)/(11 - 10)	985

Number of Q values = 55

Ordered Q Values

n	Q
1	-787
2	-622
3	-560
4	-375
5	-301.667
6	-269
7	-249.25
8	-190
9	-185.833
10	-185
11	-141.5
12	-123.5
13	-98.6
14	-91.25
15	-85
16	-75.75
17	-70.6667
18	-70
19	-67.8
20	-67.75
21	-65.2857
22	-59
23	-44.25
24	-30.6667
25	-21.7778
26	-18.5714
27	-11.1429
28	-10
29	10
30	11.4286
31	20
32	27.5
33	33.8
34	49.2222

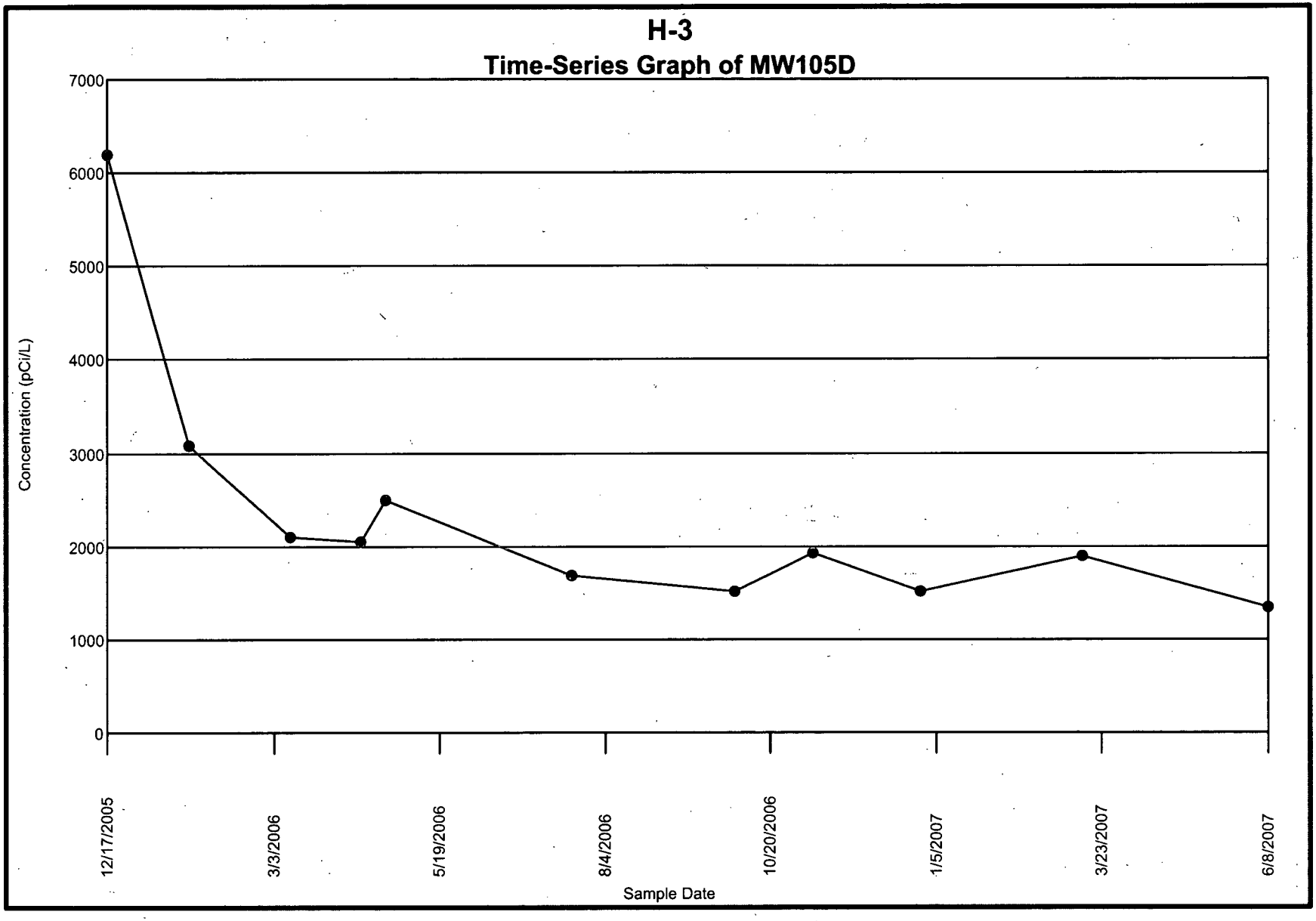
35	53.25
36	66
37	72.6
38	78.9
39	85.6667
40	112
41	118.167
42	124
43	127.667
44	130.5
45	181.5
46	182.25
47	234
48	286.5
49	289
50	306.333
51	346
52	504
53	540
54	658
55	985

Sen's Estimator (Median Q) is -10

Time Period	Observations
1/6/2006	1
2/2/2006	1
4/11/2006	1
4/13/2006	1
5/10/2006	1
7/15/2006	1
10/4/2006	1
11/9/2006	1
12/29/2006	1
3/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -70.6667 = Q(17)
Upper limit is 85.6667 = Q(39)
-70.6667 < 0 < 85.6667 indicating no trend in data.


H-3
Time-Series Graph of MW105D
Concentration (pCi/L)
7000
6000
5000
4000
3000
2000
1000
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW105D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
3080 OK (1/24/2006 a)	6185 OK (12/17/2005 ~)	(3080 - 6185)/(2 - 1)	-3105
2090 OK (3/11/2006 ~)	6185 OK (12/17/2005 ~)	(2090 - 6185)/(3 - 1)	-2047.5
2050 OK (4/13/2006 a)	6185 OK (12/17/2005 ~)	(2050 - 6185)/(4 - 1)	-1378.33
2500 OK (4/25/2006 a)	6185 OK (12/17/2005 ~)	(2500 - 6185)/(5 - 1)	-921.25
1690 OK (7/20/2006 a)	6185 OK (12/17/2005 ~)	(1690 - 6185)/(6 - 1)	-899
1510 OK (10/4/2006 a)	6185 OK (12/17/2005 ~)	(1510 - 6185)/(7 - 1)	-779.167
1920 OK (11/9/2006 a)	6185 OK (12/17/2005 ~)	(1920 - 6185)/(8 - 1)	-609.286
1520 OK (12/29/2006 a)	6185 OK (12/17/2005 ~)	(1520 - 6185)/(9 - 1)	-583.125
1900 OK (3/14/2007 a)	6185 OK (12/17/2005 ~)	(1900 - 6185)/(10 - 1)	-476.111
1340 OK (6/8/2007 a)	6185 OK (12/17/2005 ~)	(1340 - 6185)/(11 - 1)	-484.5
2090 OK (3/11/2006 ~)	3080 OK (1/24/2006 a)	(2090 - 3080)/(3 - 2)	-990
2050 OK (4/13/2006 a)	3080 OK (1/24/2006 a)	(2050 - 3080)/(4 - 2)	-515
2500 OK (4/25/2006 a)	3080 OK (1/24/2006 a)	(2500 - 3080)/(5 - 2)	-193.333
1690 OK (7/20/2006 a)	3080 OK (1/24/2006 a)	(1690 - 3080)/(6 - 2)	-347.5
1510 OK (10/4/2006 a)	3080 OK (1/24/2006 a)	(1510 - 3080)/(7 - 2)	-314
1920 OK (11/9/2006 a)	3080 OK (1/24/2006 a)	(1920 - 3080)/(8 - 2)	-193.333
1520 OK (12/29/2006 a)	3080 OK (1/24/2006 a)	(1520 - 3080)/(9 - 2)	-222.857
1900 OK (3/14/2007 a)	3080 OK (1/24/2006 a)	(1900 - 3080)/(10 - 2)	-147.5
1340 OK (6/8/2007 a)	3080 OK (1/24/2006 a)	(1340 - 3080)/(11 - 2)	-193.333
2050 OK (4/13/2006 a)	2090 OK (3/11/2006 ~)	(2050 - 2090)/(4 - 3)	-40
2500 OK (4/25/2006 a)	2090 OK (3/11/2006 ~)	(2500 - 2090)/(5 - 3)	205
1690 OK (7/20/2006 a)	2090 OK (3/11/2006 ~)	(1690 - 2090)/(6 - 3)	-133.333
1510 OK (10/4/2006 a)	2090 OK (3/11/2006 ~)	(1510 - 2090)/(7 - 3)	-145
1920 OK (11/9/2006 a)	2090 OK (3/11/2006 ~)	(1920 - 2090)/(8 - 3)	-34
1520 OK (12/29/2006 a)	2090 OK (3/11/2006 ~)	(1520 - 2090)/(9 - 3)	-95
1900 OK (3/14/2007 a)	2090 OK (3/11/2006 ~)	(1900 - 2090)/(10 - 3)	-27.1429
1340 OK (6/8/2007 a)	2090 OK (3/11/2006 ~)	(1340 - 2090)/(11 - 3)	-93.75
2500 OK (4/25/2006 a)	2050 OK (4/13/2006 a)	(2500 - 2050)/(5 - 4)	450
1690 OK (7/20/2006 a)	2050 OK (4/13/2006 a)	(1690 - 2050)/(6 - 4)	-180
1510 OK (10/4/2006 a)	2050 OK (4/13/2006 a)	(1510 - 2050)/(7 - 4)	-180
1920 OK (11/9/2006 a)	2050 OK (4/13/2006 a)	(1920 - 2050)/(8 - 4)	-32.5
1520 OK (12/29/2006 a)	2050 OK (4/13/2006 a)	(1520 - 2050)/(9 - 4)	-106
1900 OK (3/14/2007 a)	2050 OK (4/13/2006 a)	(1900 - 2050)/(10 - 4)	-25
1340 OK (6/8/2007 a)	2050 OK (4/13/2006 a)	(1340 - 2050)/(11 - 4)	-101.429
1690 OK (7/20/2006 a)	2500 OK (4/25/2006 a)	(1690 - 2500)/(6 - 5)	-810
1510 OK (10/4/2006 a)	2500 OK (4/25/2006 a)	(1510 - 2500)/(7 - 5)	-495
1920 OK (11/9/2006 a)	2500 OK (4/25/2006 a)	(1920 - 2500)/(8 - 5)	-193.333
1520 OK (12/29/2006 a)	2500 OK (4/25/2006 a)	(1520 - 2500)/(9 - 5)	-245
1900 OK (3/14/2007 a)	2500 OK (4/25/2006 a)	(1900 - 2500)/(10 - 5)	-120
1340 OK (6/8/2007 a)	2500 OK (4/25/2006 a)	(1340 - 2500)/(11 - 5)	-193.333
1510 OK (10/4/2006 a)	1690 OK (7/20/2006 a)	(1510 - 1690)/(7 - 6)	-180
1920 OK (11/9/2006 a)	1690 OK (7/20/2006 a)	(1920 - 1690)/(8 - 6)	115

1520 OK (12/29/2006 a)	1690 OK (7/20/2006 a)	(1520 - 1690)/(9 - 6)	-56.6667
1900 OK (3/14/2007 a)	1690 OK (7/20/2006 a)	(1900 - 1690)/(10 - 6)	52.5
1340 OK (6/8/2007 a)	1690 OK (7/20/2006 a)	(1340 - 1690)/(11 - 6)	-70
1920 OK (11/9/2006 a)	1510 OK (10/4/2006 a)	(1920 - 1510)/(8 - 7)	410
1520 OK (12/29/2006 a)	1510 OK (10/4/2006 a)	(1520 - 1510)/(9 - 7)	5
1900 OK (3/14/2007 a)	1510 OK (10/4/2006 a)	(1900 - 1510)/(10 - 7)	130
1340 OK (6/8/2007 a)	1510 OK (10/4/2006 a)	(1340 - 1510)/(11 - 7)	-42.5
1520 OK (12/29/2006 a)	1920 OK (11/9/2006 a)	(1520 - 1920)/(9 - 8)	-400
1900 OK (3/14/2007 a)	1920 OK (11/9/2006 a)	(1900 - 1920)/(10 - 8)	-10
1340 OK (6/8/2007 a)	1920 OK (11/9/2006 a)	(1340 - 1920)/(11 - 8)	-193.333
1900 OK (3/14/2007 a)	1520 OK (12/29/2006 a)	(1900 - 1520)/(10 - 9)	380
1340 OK (6/8/2007 a)	1520 OK (12/29/2006 a)	(1340 - 1520)/(11 - 9)	-90
1340 OK (6/8/2007 a)	1900 OK (3/14/2007 a)	(1340 - 1900)/(11 - 10)	-560

Number of Q values = 55

Ordered Q Values

n	Q
1	-3105
2	-2047.5
3	-1378.33
4	-990
5	-921.25
6	-899
7	-810
8	-779.167
9	-609.286
10	-583.125
11	-560
12	-515
13	-495
14	-484.5
15	-476.111
16	-400
17	-347.5
18	-314
19	-245
20	-222.857
21	-193.333
22	-193.333
23	-193.333
24	-193.333
25	-193.333
26	-193.333
27	-180
28	-180
29	-180
30	-147.5
31	-145
32	-133.333
33	-120
34	-106

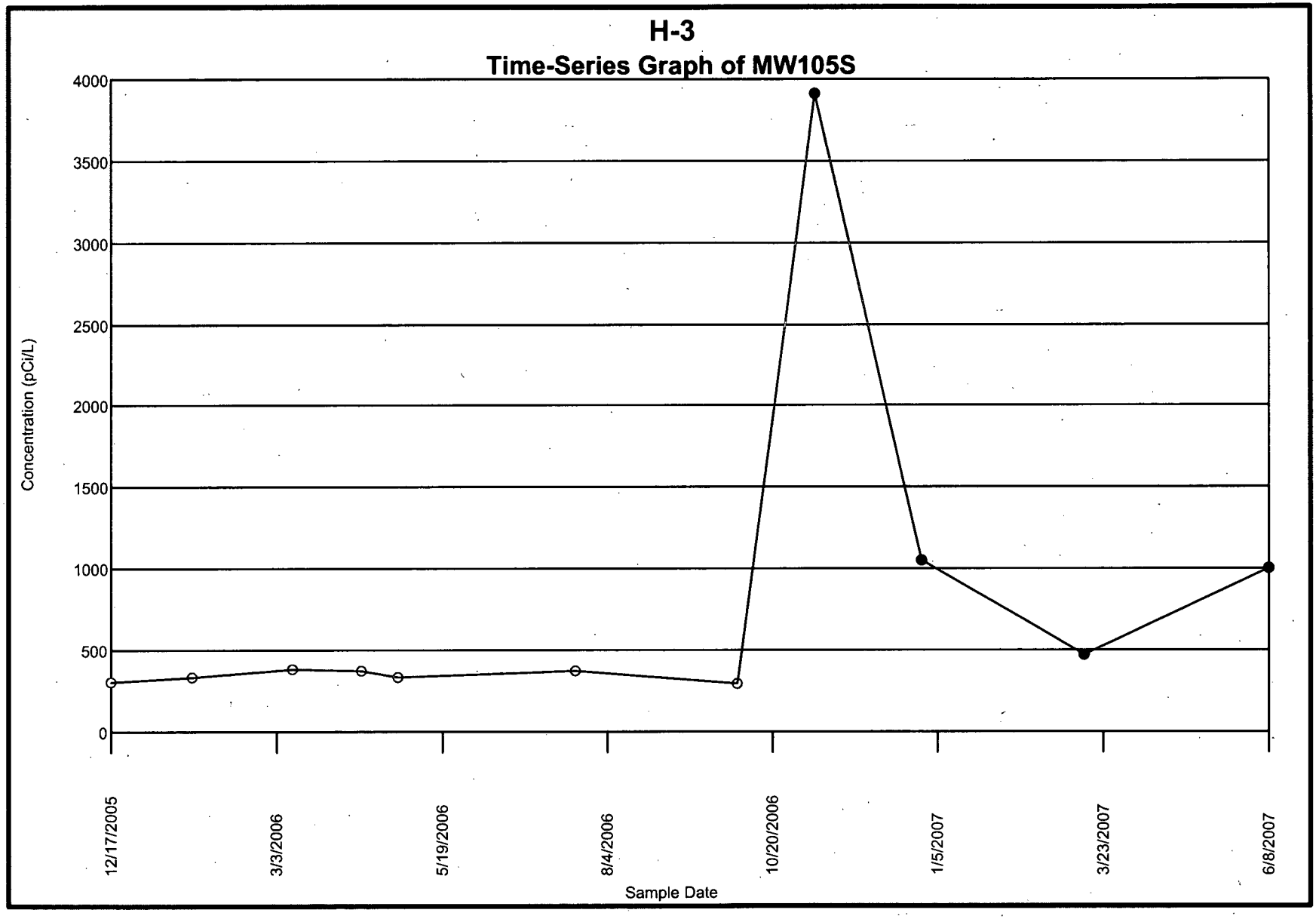
35	-101.429
36	-95
37	-93.75
38	-90
39	-70
40	-56.6667
41	-42.5
42	-40
43	-34
44	-32.5
45	-27.1429
46	-25
47	-10
48	5
49	52.5
50	115
51	130
52	205
53	380
54	410
55	450

Sen's Estimator (Median Q) is -180

Time Period	Observations
12/17/2005	1
1/24/2006	1
3/11/2006	1
4/13/2006	1
4/25/2006	1
7/20/2006	1
10/4/2006	1
11/9/2006	1
12/29/2006	1
3/14/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -347.5 = Q(17)
Upper limit is -70 = Q(39)
-70 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW105S
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW105S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<332 U (1/24/2006 a)	ND<307 U (12/17/2005 a)	(332 - 307)/(2 - 1)	25
ND<384 U (3/11/2006 a)	ND<307 U (12/17/2005 a)	(384 - 307)/(3 - 1)	38.5
ND<373 U (4/12/2006 a)	ND<307 U (12/17/2005 a)	(373 - 307)/(4 - 1)	22
ND<336 OK (4/29/2006 a)	ND<307 U (12/17/2005 a)	(336 - 307)/(5 - 1)	7.25
ND<376 OK (7/21/2006 ~)	ND<307 U (12/17/2005 a)	(376 - 307)/(6 - 1)	13.8
ND<299 OK (10/4/2006 a)	ND<307 U (12/17/2005 a)	(299 - 307)/(7 - 1)	-1.33333
3910 OK (11/9/2006 a)	ND<307 U (12/17/2005 a)	(3910 - 307)/(8 - 1)	514.714
1050 OK (12/29/2006 a)	ND<307 U (12/17/2005 a)	(1050 - 307)/(9 - 1)	92.875
476 OK (3/14/2007 a)	ND<307 U (12/17/2005 a)	(476 - 307)/(10 - 1)	18.7778
999 OK (6/8/2007 a)	ND<307 U (12/17/2005 a)	(999 - 307)/(11 - 1)	69.2
ND<384 U (3/11/2006 a)	ND<332 U (1/24/2006 a)	(384 - 332)/(3 - 2)	52
ND<373 U (4/12/2006 a)	ND<332 U (1/24/2006 a)	(373 - 332)/(4 - 2)	20.5
ND<336 OK (4/29/2006 a)	ND<332 U (1/24/2006 a)	(336 - 332)/(5 - 2)	1.33333
ND<376 OK (7/21/2006 ~)	ND<332 U (1/24/2006 a)	(376 - 332)/(6 - 2)	11
ND<299 OK (10/4/2006 a)	ND<332 U (1/24/2006 a)	(299 - 332)/(7 - 2)	-6.6
3910 OK (11/9/2006 a)	ND<332 U (1/24/2006 a)	(3910 - 332)/(8 - 2)	596.333
1050 OK (12/29/2006 a)	ND<332 U (1/24/2006 a)	(1050 - 332)/(9 - 2)	102.571
476 OK (3/14/2007 a)	ND<332 U (1/24/2006 a)	(476 - 332)/(10 - 2)	18
999 OK (6/8/2007 a)	ND<332 U (1/24/2006 a)	(999 - 332)/(11 - 2)	74.1111
ND<373 U (4/12/2006 a)	ND<384 U (3/11/2006 a)	(373 - 384)/(4 - 3)	-11
ND<336 OK (4/29/2006 a)	ND<384 U (3/11/2006 a)	(336 - 384)/(5 - 3)	-24
ND<376 OK (7/21/2006 ~)	ND<384 U (3/11/2006 a)	(376 - 384)/(6 - 3)	-2.66667
ND<299 OK (10/4/2006 a)	ND<384 U (3/11/2006 a)	(299 - 384)/(7 - 3)	-21.25
3910 OK (11/9/2006 a)	ND<384 U (3/11/2006 a)	(3910 - 384)/(8 - 3)	705.2
1050 OK (12/29/2006 a)	ND<384 U (3/11/2006 a)	(1050 - 384)/(9 - 3)	111
476 OK (3/14/2007 a)	ND<384 U (3/11/2006 a)	(476 - 384)/(10 - 3)	13.1429
999 OK (6/8/2007 a)	ND<384 U (3/11/2006 a)	(999 - 384)/(11 - 3)	76.875
ND<336 OK (4/29/2006 a)	ND<373 U (4/12/2006 a)	(336 - 373)/(5 - 4)	-37
ND<376 OK (7/21/2006 ~)	ND<373 U (4/12/2006 a)	(376 - 373)/(6 - 4)	1.5
ND<299 OK (10/4/2006 a)	ND<373 U (4/12/2006 a)	(299 - 373)/(7 - 4)	-24.6667
3910 OK (11/9/2006 a)	ND<373 U (4/12/2006 a)	(3910 - 373)/(8 - 4)	884.25
1050 OK (12/29/2006 a)	ND<373 U (4/12/2006 a)	(1050 - 373)/(9 - 4)	135.4
476 OK (3/14/2007 a)	ND<373 U (4/12/2006 a)	(476 - 373)/(10 - 4)	17.1667
999 OK (6/8/2007 a)	ND<373 U (4/12/2006 a)	(999 - 373)/(11 - 4)	89.4286
ND<376 OK (7/21/2006 ~)	ND<336 OK (4/29/2006 a)	(376 - 336)/(6 - 5)	40
ND<299 OK (10/4/2006 a)	ND<336 OK (4/29/2006 a)	(299 - 336)/(7 - 5)	-18.5
3910 OK (11/9/2006 a)	ND<336 OK (4/29/2006 a)	(3910 - 336)/(8 - 5)	1191.33
1050 OK (12/29/2006 a)	ND<336 OK (4/29/2006 a)	(1050 - 336)/(9 - 5)	178.5
476 OK (3/14/2007 a)	ND<336 OK (4/29/2006 a)	(476 - 336)/(10 - 5)	28
999 OK (6/8/2007 a)	ND<336 OK (4/29/2006 a)	(999 - 336)/(11 - 5)	110.5
ND<299 OK (10/4/2006 a)	ND<376 OK (7/21/2006 ~)	(299 - 376)/(7 - 6)	-77
3910 OK (11/9/2006 a)	ND<376 OK (7/21/2006 ~)	(3910 - 376)/(8 - 6)	1767

1050 OK (12/29/2006 a)	ND<376 OK (7/21/2006 ~)	(1050 - 376)/(9 - 6)	224.667
476 OK (3/14/2007 a)	ND<376 OK (7/21/2006 ~)	(476 - 376)/(10 - 6)	25
999 OK (6/8/2007 a)	ND<376 OK (7/21/2006 ~)	(999 - 376)/(11 - 6)	124.6
3910 OK (11/9/2006 a)	ND<299 OK (10/4/2006 a)	(3910 - 299)/(8 - 7)	3611
1050 OK (12/29/2006 a)	ND<299 OK (10/4/2006 a)	(1050 - 299)/(9 - 7)	375.5
476 OK (3/14/2007 a)	ND<299 OK (10/4/2006 a)	(476 - 299)/(10 - 7)	59
999 OK (6/8/2007 a)	ND<299 OK (10/4/2006 a)	(999 - 299)/(11 - 7)	175
1050 OK (12/29/2006 a)	3910 OK (11/9/2006 a)	(1050 - 3910)/(9 - 8)	-2860
476 OK (3/14/2007 a)	3910 OK (11/9/2006 a)	(476 - 3910)/(10 - 8)	-1717
999 OK (6/8/2007 a)	3910 OK (11/9/2006 a)	(999 - 3910)/(11 - 8)	-970.333
476 OK (3/14/2007 a)	1050 OK (12/29/2006 a)	(476 - 1050)/(10 - 9)	-574
999 OK (6/8/2007 a)	1050 OK (12/29/2006 a)	(999 - 1050)/(11 - 9)	-25.5
999 OK (6/8/2007 a)	476 OK (3/14/2007 a)	(999 - 476)/(11 - 10)	523

Number of Q values = 55

Ordered Q Values

n	Q
1	-2860
2	-1717
3	-970.333
4	-574
5	-77
6	-37
7	-25.5
8	-24.6667
9	-24
10	-21.25
11	-18.5
12	-11
13	-6.6
14	-2.66667
15	-1.33333
16	1.33333
17	1.5
18	7.25
19	11
20	13.1429
21	13.8
22	17.1667
23	18
24	18.7778
25	20.5
26	22
27	25
28	25
29	28
30	38.5
31	40
32	52
33	59
34	69.2

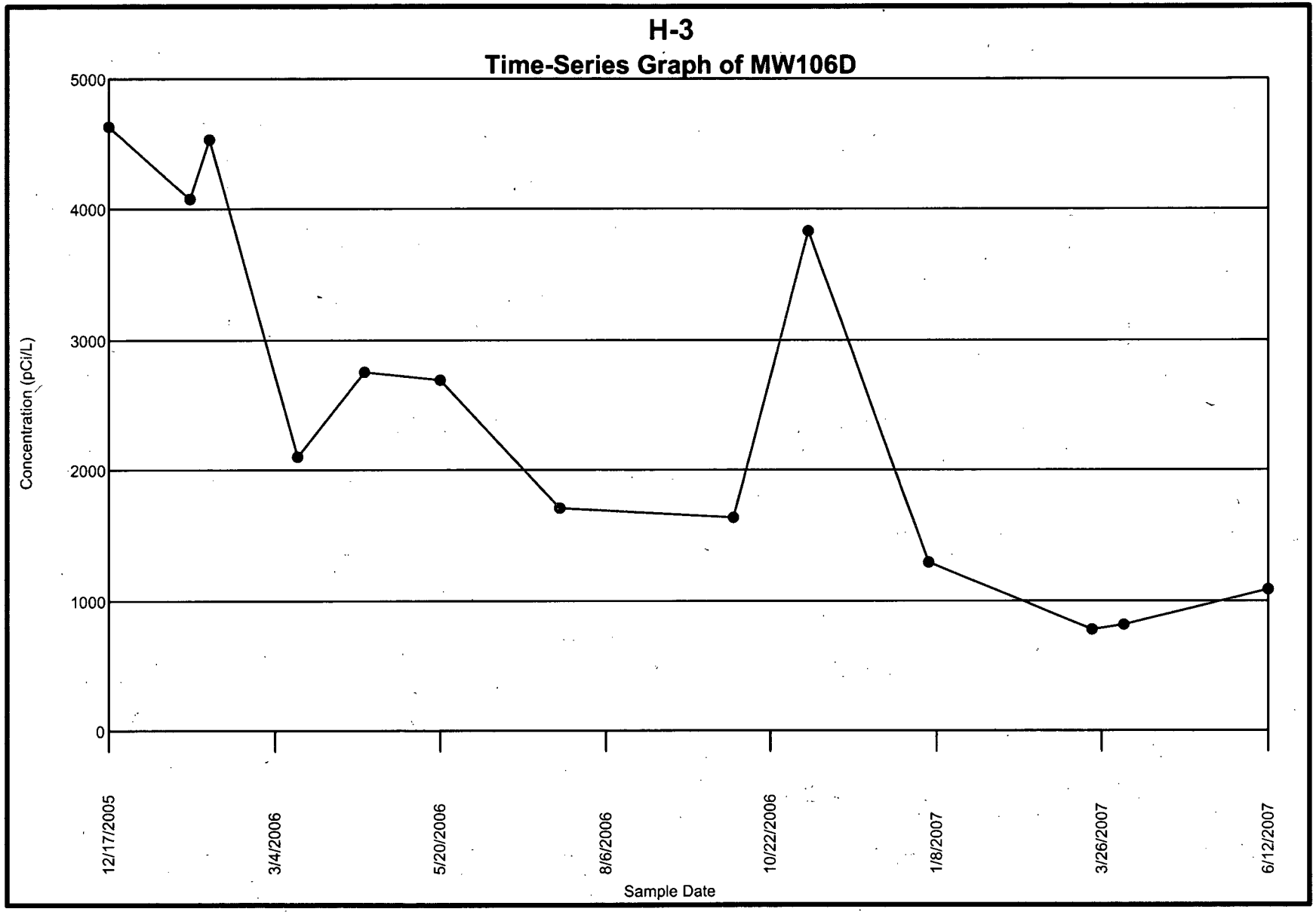
35	74.1111
36	76.875
37	89.4286
38	92.875
39	102.571
40	110.5
41	111
42	124.6
43	135.4
44	175
45	178.5
46	224.667
47	375.5
48	514.714
49	523
50	596.333
51	705.2
52	884.25
53	1191.33
54	1767
55	3611

Sen's Estimator (Median Q) is 25

Time Period	Observations
12/17/2005	1
1/24/2006	1
3/11/2006	1
4/12/2006	1
4/29/2006	1
7/21/2006	1
10/4/2006	1
11/9/2006	1
12/29/2006	1
3/14/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 1.5 = Q(17)
Upper limit is 102.571 = Q(39)
1.5 > 0 indicating an upward trend in data.


H-3
Time-Series Graph of MW106D
Concentration (pCi/L)
5000
4000
3000
2000
1000
0
12/17/2005
3/4/2006
5/20/2006
8/6/2006
10/22/2006
1/8/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW106D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
4080 OK (1/24/2006 a)	4630 OK (12/17/2005 a)	(4080 - 4630)/(2 - 1)	-550
4530 OK (2/2/2006 a)	4630 OK (12/17/2005 a)	(4530 - 4630)/(3 - 1)	-50
2100 OK (3/15/2006 a)	4630 OK (12/17/2005 a)	(2100 - 4630)/(4 - 1)	-843.333
2750 OK (4/15/2006 a)	4630 OK (12/17/2005 a)	(2750 - 4630)/(5 - 1)	-470
2690 OK (5/21/2006 a)	4630 OK (12/17/2005 a)	(2690 - 4630)/(6 - 1)	-388
1710 OK (7/16/2006 a)	4630 OK (12/17/2005 a)	(1710 - 4630)/(7 - 1)	-486.667
1640 OK (10/5/2006 a)	4630 OK (12/17/2005 a)	(1640 - 4630)/(8 - 1)	-427.143
3830 OK (11/9/2006 a)	4630 OK (12/17/2005 a)	(3830 - 4630)/(9 - 1)	-100
1290 OK (1/4/2007 a)	4630 OK (12/17/2005 a)	(1290 - 4630)/(10 - 1)	-371.111
776 OK (3/22/2007 a)	4630 OK (12/17/2005 a)	(776 - 4630)/(11 - 1)	-385.4
810 OK (4/6/2007 a)	4630 OK (12/17/2005 a)	(810 - 4630)/(12 - 1)	-347.273
1075 OK (6/12/2007 ~)	4630 OK (12/17/2005 a)	(1075 - 4630)/(13 - 1)	-296.25
4530 OK (2/2/2006 a)	4080 OK (1/24/2006 a)	(4530 - 4080)/(3 - 2)	450
2100 OK (3/15/2006 a)	4080 OK (1/24/2006 a)	(2100 - 4080)/(4 - 2)	-990
2750 OK (4/15/2006 a)	4080 OK (1/24/2006 a)	(2750 - 4080)/(5 - 2)	-443.333
2690 OK (5/21/2006 a)	4080 OK (1/24/2006 a)	(2690 - 4080)/(6 - 2)	-347.5
1710 OK (7/16/2006 a)	4080 OK (1/24/2006 a)	(1710 - 4080)/(7 - 2)	-474
1640 OK (10/5/2006 a)	4080 OK (1/24/2006 a)	(1640 - 4080)/(8 - 2)	-406.667
3830 OK (11/9/2006 a)	4080 OK (1/24/2006 a)	(3830 - 4080)/(9 - 2)	-35.7143
1290 OK (1/4/2007 a)	4080 OK (1/24/2006 a)	(1290 - 4080)/(10 - 2)	-348.75
776 OK (3/22/2007 a)	4080 OK (1/24/2006 a)	(776 - 4080)/(11 - 2)	-367.111
810 OK (4/6/2007 a)	4080 OK (1/24/2006 a)	(810 - 4080)/(12 - 2)	-327
1075 OK (6/12/2007 ~)	4080 OK (1/24/2006 a)	(1075 - 4080)/(13 - 2)	-273.182
2100 OK (3/15/2006 a)	4530 OK (2/2/2006 a)	(2100 - 4530)/(4 - 3)	-2430
2750 OK (4/15/2006 a)	4530 OK (2/2/2006 a)	(2750 - 4530)/(5 - 3)	-890
2690 OK (5/21/2006 a)	4530 OK (2/2/2006 a)	(2690 - 4530)/(6 - 3)	-613.333
1710 OK (7/16/2006 a)	4530 OK (2/2/2006 a)	(1710 - 4530)/(7 - 3)	-705
1640 OK (10/5/2006 a)	4530 OK (2/2/2006 a)	(1640 - 4530)/(8 - 3)	-578
3830 OK (11/9/2006 a)	4530 OK (2/2/2006 a)	(3830 - 4530)/(9 - 3)	-116.667
1290 OK (1/4/2007 a)	4530 OK (2/2/2006 a)	(1290 - 4530)/(10 - 3)	-462.857
776 OK (3/22/2007 a)	4530 OK (2/2/2006 a)	(776 - 4530)/(11 - 3)	-469.25
810 OK (4/6/2007 a)	4530 OK (2/2/2006 a)	(810 - 4530)/(12 - 3)	-413.333
1075 OK (6/12/2007 ~)	4530 OK (2/2/2006 a)	(1075 - 4530)/(13 - 3)	-345.5
2750 OK (4/15/2006 a)	2100 OK (3/15/2006 a)	(2750 - 2100)/(5 - 4)	650
2690 OK (5/21/2006 a)	2100 OK (3/15/2006 a)	(2690 - 2100)/(6 - 4)	295
1710 OK (7/16/2006 a)	2100 OK (3/15/2006 a)	(1710 - 2100)/(7 - 4)	-130
1640 OK (10/5/2006 a)	2100 OK (3/15/2006 a)	(1640 - 2100)/(8 - 4)	-115
3830 OK (11/9/2006 a)	2100 OK (3/15/2006 a)	(3830 - 2100)/(9 - 4)	346
1290 OK (1/4/2007 a)	2100 OK (3/15/2006 a)	(1290 - 2100)/(10 - 4)	-135
776 OK (3/22/2007 a)	2100 OK (3/15/2006 a)	(776 - 2100)/(11 - 4)	-189.143
810 OK (4/6/2007 a)	2100 OK (3/15/2006 a)	(810 - 2100)/(12 - 4)	-161.25
1075 OK (6/12/2007 ~)	2100 OK (3/15/2006 a)	(1075 - 2100)/(13 - 4)	-113.889
2690 OK (5/21/2006 a)	2750 OK (4/15/2006 a)	(2690 - 2750)/(6 - 5)	-60

1710 OK (7/16/2006 a)	2750 OK (4/15/2006 a)	(1710 - 2750)/(7 - 5)	-520
1640 OK (10/5/2006 a)	2750 OK (4/15/2006 a)	(1640 - 2750)/(8 - 5)	-370
3830 OK (11/9/2006 a)	2750 OK (4/15/2006 a)	(3830 - 2750)/(9 - 5)	270
1290 OK (1/4/2007 a)	2750 OK (4/15/2006 a)	(1290 - 2750)/(10 - 5)	-292
776 OK (3/22/2007 a)	2750 OK (4/15/2006 a)	(776 - 2750)/(11 - 5)	-329
810 OK (4/6/2007 a)	2750 OK (4/15/2006 a)	(810 - 2750)/(12 - 5)	-277.143
1075 OK (6/12/2007 ~)	2750 OK (4/15/2006 a)	(1075 - 2750)/(13 - 5)	-209.375
1710 OK (7/16/2006 a)	2690 OK (5/21/2006 a)	(1710 - 2690)/(7 - 6)	-980
1640 OK (10/5/2006 a)	2690 OK (5/21/2006 a)	(1640 - 2690)/(8 - 6)	-525
3830 OK (11/9/2006 a)	2690 OK (5/21/2006 a)	(3830 - 2690)/(9 - 6)	380
1290 OK (1/4/2007 a)	2690 OK (5/21/2006 a)	(1290 - 2690)/(10 - 6)	-350
776 OK (3/22/2007 a)	2690 OK (5/21/2006 a)	(776 - 2690)/(11 - 6)	-382.8
810 OK (4/6/2007 a)	2690 OK (5/21/2006 a)	(810 - 2690)/(12 - 6)	-313.333
1075 OK (6/12/2007 ~)	2690 OK (5/21/2006 a)	(1075 - 2690)/(13 - 6)	-230.714
1640 OK (10/5/2006 a)	1710 OK (7/16/2006 a)	(1640 - 1710)/(8 - 7)	-70
3830 OK (11/9/2006 a)	1710 OK (7/16/2006 a)	(3830 - 1710)/(9 - 7)	1060
1290 OK (1/4/2007 a)	1710 OK (7/16/2006 a)	(1290 - 1710)/(10 - 7)	-140
776 OK (3/22/2007 a)	1710 OK (7/16/2006 a)	(776 - 1710)/(11 - 7)	-233.5
810 OK (4/6/2007 a)	1710 OK (7/16/2006 a)	(810 - 1710)/(12 - 7)	-180
1075 OK (6/12/2007 ~)	1710 OK (7/16/2006 a)	(1075 - 1710)/(13 - 7)	-105.833
3830 OK (11/9/2006 a)	1640 OK (10/5/2006 a)	(3830 - 1640)/(9 - 8)	2190
1290 OK (1/4/2007 a)	1640 OK (10/5/2006 a)	(1290 - 1640)/(10 - 8)	-175
776 OK (3/22/2007 a)	1640 OK (10/5/2006 a)	(776 - 1640)/(11 - 8)	-288
810 OK (4/6/2007 a)	1640 OK (10/5/2006 a)	(810 - 1640)/(12 - 8)	-207.5
1075 OK (6/12/2007 ~)	1640 OK (10/5/2006 a)	(1075 - 1640)/(13 - 8)	-113
1290 OK (1/4/2007 a)	3830 OK (11/9/2006 a)	(1290 - 3830)/(10 - 9)	-2540
776 OK (3/22/2007 a)	3830 OK (11/9/2006 a)	(776 - 3830)/(11 - 9)	-1527
810 OK (4/6/2007 a)	3830 OK (11/9/2006 a)	(810 - 3830)/(12 - 9)	-1006.67
1075 OK (6/12/2007 ~)	3830 OK (11/9/2006 a)	(1075 - 3830)/(13 - 9)	-688.75
776 OK (3/22/2007 a)	1290 OK (1/4/2007 a)	(776 - 1290)/(11 - 10)	-514
810 OK (4/6/2007 a)	1290 OK (1/4/2007 a)	(810 - 1290)/(12 - 10)	-240
1075 OK (6/12/2007 ~)	1290 OK (1/4/2007 a)	(1075 - 1290)/(13 - 10)	-71.6667
810 OK (4/6/2007 a)	776 OK (3/22/2007 a)	(810 - 776)/(12 - 11)	34
1075 OK (6/12/2007 ~)	776 OK (3/22/2007 a)	(1075 - 776)/(13 - 11)	149.5
1075 OK (6/12/2007 ~)	810 OK (4/6/2007 a)	(1075 - 810)/(13 - 12)	265

Number of Q values = 78

Ordered Q Values

n	Q
1	-2540
2	-2430
3	-1527
4	-1006.67
5	-990
6	-980
7	-890
8	-843.333
9	-705

10	-688.75
11	-613.333
12	-578
13	-550
14	-525
15	-520
16	-514
17	-486.667
18	-474
19	-470
20	-469.25
21	-462.857
22	-443.333
23	-427.143
24	-413.333
25	-406.667
26	-388
27	-385.4
28	-382.8
29	-371.111
30	-370
31	-367.111
32	-350
33	-348.75
34	-347.5
35	-347.273
36	-345.5
37	-329
38	-327
39	-313.333
40	-296.25
41	-292
42	-288
43	-277.143
44	-273.182
45	-240
46	-233.5
47	-230.714
48	-209.375
49	-207.5
50	-189.143
51	-180
52	-175
53	-161.25
54	-140
55	-135
56	-130
57	-116.667
58	-115
59	-113.889
60	-113
61	-105.833
62	-100
63	-71.6667
64	-70
65	-60
66	-50

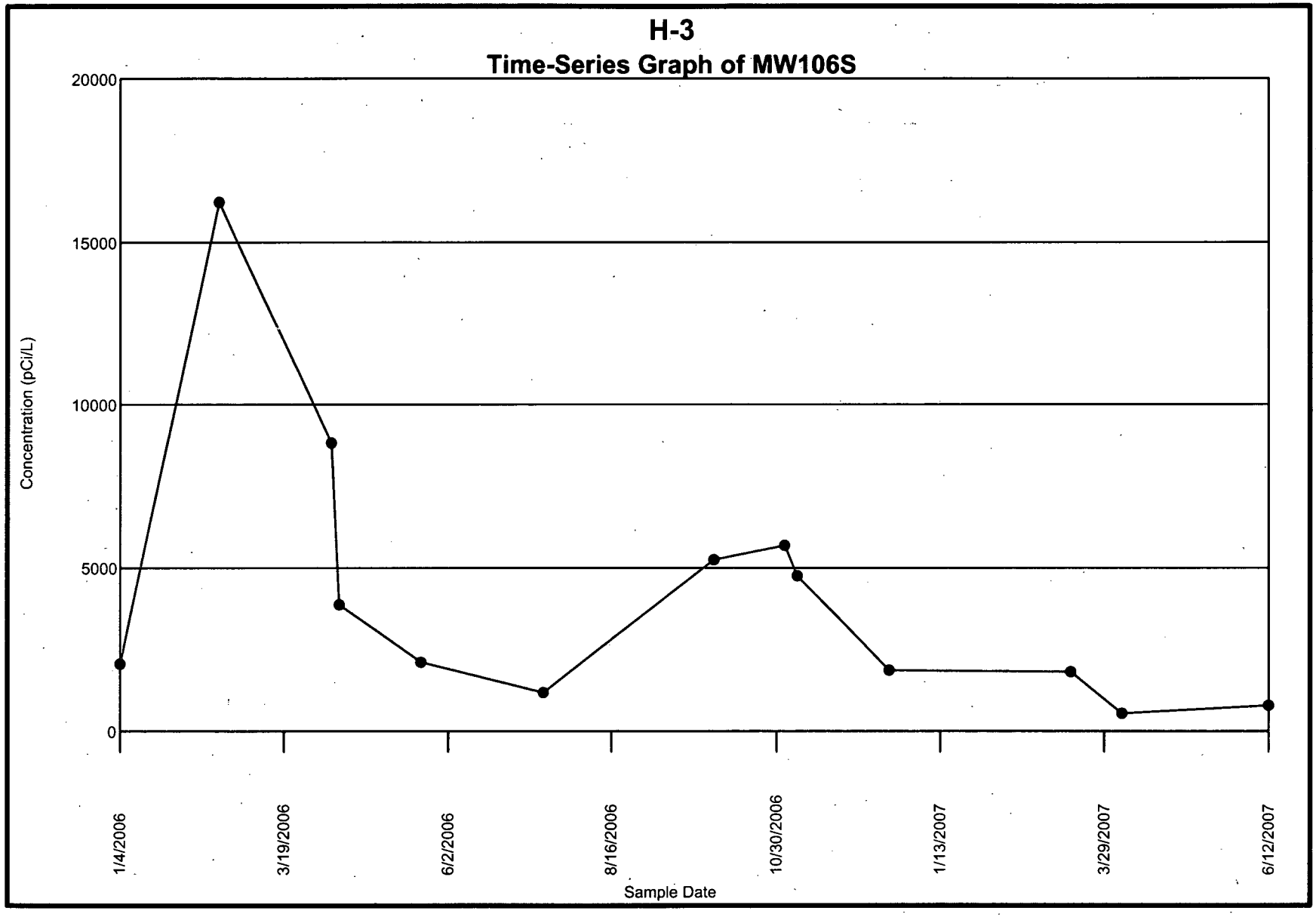
67	-35.7143
68	34
69	149.5
70	265
71	270
72	295
73	346
74	380
75	450
76	650
77	1060
78	2190

Sen's Estimator (Median Q) is -304.792

Time Period	Observations
12/17/2005	1
1/24/2006	1
2/2/2006	1
3/15/2006	1
4/15/2006	1
5/21/2006	1
7/16/2006	1
10/5/2006	1
11/9/2006	1
1/4/2007	1
3/22/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -388 = Q(26)
Upper limit is -161.25 = Q(53)
-161.25 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW106S
Concentration (pCi/L)
20000
15000
10000
5000
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW106S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
16200 OK (2/18/2006 a)	2080 OK (1/4/2006 a)	(16200 - 2080)/(2 - 1)	14120
8860 OK (4/11/2006 a)	2080 OK (1/4/2006 a)	(8860 - 2080)/(3 - 1)	3390
3880 OK (4/14/2006 a)	2080 OK (1/4/2006 a)	(3880 - 2080)/(4 - 1)	600
2135 OK (5/21/2006 ~)	2080 OK (1/4/2006 a)	(2135 - 2080)/(5 - 1)	13.75
1180 OK (7/16/2006 a)	2080 OK (1/4/2006 a)	(1180 - 2080)/(6 - 1)	-180
5260 OK (10/2/2006 a)	2080 OK (1/4/2006 a)	(5260 - 2080)/(7 - 1)	530
5680 OK (11/3/2006 a)	2080 OK (1/4/2006 a)	(5680 - 2080)/(8 - 1)	514.286
4750 OK (11/9/2006 a)	2080 OK (1/4/2006 a)	(4750 - 2080)/(9 - 1)	333.75
1870 OK (12/21/2006 a)	2080 OK (1/4/2006 a)	(1870 - 2080)/(10 - 1)	-23.3333
1800 OK (3/14/2007 a)	2080 OK (1/4/2006 a)	(1800 - 2080)/(11 - 1)	-28
551 OK (4/6/2007 ~)	2080 OK (1/4/2006 a)	(551 - 2080)/(12 - 1)	-139
809 OK (6/12/2007 a)	2080 OK (1/4/2006 a)	(809 - 2080)/(13 - 1)	-105.917
8860 OK (4/11/2006 a)	16200 OK (2/18/2006 a)	(8860 - 16200)/(3 - 2)	-7340
3880 OK (4/14/2006 a)	16200 OK (2/18/2006 a)	(3880 - 16200)/(4 - 2)	-6160
2135 OK (5/21/2006 ~)	16200 OK (2/18/2006 a)	(2135 - 16200)/(5 - 2)	-4688.33
1180 OK (7/16/2006 a)	16200 OK (2/18/2006 a)	(1180 - 16200)/(6 - 2)	-3755
5260 OK (10/2/2006 a)	16200 OK (2/18/2006 a)	(5260 - 16200)/(7 - 2)	-2188
5680 OK (11/3/2006 a)	16200 OK (2/18/2006 a)	(5680 - 16200)/(8 - 2)	-1753.33
4750 OK (11/9/2006 a)	16200 OK (2/18/2006 a)	(4750 - 16200)/(9 - 2)	-1635.71
1870 OK (12/21/2006 a)	16200 OK (2/18/2006 a)	(1870 - 16200)/(10 - 2)	-1791.25
1800 OK (3/14/2007 a)	16200 OK (2/18/2006 a)	(1800 - 16200)/(11 - 2)	-1600
551 OK (4/6/2007 ~)	16200 OK (2/18/2006 a)	(551 - 16200)/(12 - 2)	-1564.9
809 OK (6/12/2007 a)	16200 OK (2/18/2006 a)	(809 - 16200)/(13 - 2)	-1399.18
3880 OK (4/14/2006 a)	8860 OK (4/11/2006 a)	(3880 - 8860)/(4 - 3)	-4980
2135 OK (5/21/2006 ~)	8860 OK (4/11/2006 a)	(2135 - 8860)/(5 - 3)	-3362.5
1180 OK (7/16/2006 a)	8860 OK (4/11/2006 a)	(1180 - 8860)/(6 - 3)	-2560
5260 OK (10/2/2006 a)	8860 OK (4/11/2006 a)	(5260 - 8860)/(7 - 3)	-900
5680 OK (11/3/2006 a)	8860 OK (4/11/2006 a)	(5680 - 8860)/(8 - 3)	-636
4750 OK (11/9/2006 a)	8860 OK (4/11/2006 a)	(4750 - 8860)/(9 - 3)	-685
1870 OK (12/21/2006 a)	8860 OK (4/11/2006 a)	(1870 - 8860)/(10 - 3)	-998.571
1800 OK (3/14/2007 a)	8860 OK (4/11/2006 a)	(1800 - 8860)/(11 - 3)	-882.5
551 OK (4/6/2007 ~)	8860 OK (4/11/2006 a)	(551 - 8860)/(12 - 3)	-923.222
809 OK (6/12/2007 a)	8860 OK (4/11/2006 a)	(809 - 8860)/(13 - 3)	-805.1
2135 OK (5/21/2006 ~)	3880 OK (4/14/2006 a)	(2135 - 3880)/(5 - 4)	-1745
1180 OK (7/16/2006 a)	3880 OK (4/14/2006 a)	(1180 - 3880)/(6 - 4)	-1350
5260 OK (10/2/2006 a)	3880 OK (4/14/2006 a)	(5260 - 3880)/(7 - 4)	460
5680 OK (11/3/2006 a)	3880 OK (4/14/2006 a)	(5680 - 3880)/(8 - 4)	450
4750 OK (11/9/2006 a)	3880 OK (4/14/2006 a)	(4750 - 3880)/(9 - 4)	174
1870 OK (12/21/2006 a)	3880 OK (4/14/2006 a)	(1870 - 3880)/(10 - 4)	-335
1800 OK (3/14/2007 a)	3880 OK (4/14/2006 a)	(1800 - 3880)/(11 - 4)	-297.143
551 OK (4/6/2007 ~)	3880 OK (4/14/2006 a)	(551 - 3880)/(12 - 4)	-416.125
809 OK (6/12/2007 a)	3880 OK (4/14/2006 a)	(809 - 3880)/(13 - 4)	-341.222
1180 OK (7/16/2006 a)	2135 OK (5/21/2006 ~)	(1180 - 2135)/(6 - 5)	-955

5260 OK (10/2/2006 a)	2135 OK (5/21/2006 ~)	(5260 - 2135)/(7 - 5)	1562.5
5680 OK (11/3/2006 a)	2135 OK (5/21/2006 ~)	(5680 - 2135)/(8 - 5)	1181.67
4750 OK (11/9/2006 a)	2135 OK (5/21/2006 ~)	(4750 - 2135)/(9 - 5)	653.75
1870 OK (12/21/2006 a)	2135 OK (5/21/2006 ~)	(1870 - 2135)/(10 - 5)	-53
1800 OK (3/14/2007 a)	2135 OK (5/21/2006 ~)	(1800 - 2135)/(11 - 5)	-55.8333
551 OK (4/6/2007 ~)	2135 OK (5/21/2006 ~)	(551 - 2135)/(12 - 5)	-226.286
809 OK (6/12/2007 a)	2135 OK (5/21/2006 ~)	(809 - 2135)/(13 - 5)	-165.75
5260 OK (10/2/2006 a)	1180 OK (7/16/2006 a)	(5260 - 1180)/(7 - 6)	4080
5680 OK (11/3/2006 a)	1180 OK (7/16/2006 a)	(5680 - 1180)/(8 - 6)	2250
4750 OK (11/9/2006 a)	1180 OK (7/16/2006 a)	(4750 - 1180)/(9 - 6)	1190
1870 OK (12/21/2006 a)	1180 OK (7/16/2006 a)	(1870 - 1180)/(10 - 6)	172.5
1800 OK (3/14/2007 a)	1180 OK (7/16/2006 a)	(1800 - 1180)/(11 - 6)	124
551 OK (4/6/2007 ~)	1180 OK (7/16/2006 a)	(551 - 1180)/(12 - 6)	-104.833
809 OK (6/12/2007 a)	1180 OK (7/16/2006 a)	(809 - 1180)/(13 - 6)	-53
5680 OK (11/3/2006 a)	5260 OK (10/2/2006 a)	(5680 - 5260)/(8 - 7)	420
4750 OK (11/9/2006 a)	5260 OK (10/2/2006 a)	(4750 - 5260)/(9 - 7)	-255
1870 OK (12/21/2006 a)	5260 OK (10/2/2006 a)	(1870 - 5260)/(10 - 7)	-1130
1800 OK (3/14/2007 a)	5260 OK (10/2/2006 a)	(1800 - 5260)/(11 - 7)	-865
551 OK (4/6/2007 ~)	5260 OK (10/2/2006 a)	(551 - 5260)/(12 - 7)	-941.8
809 OK (6/12/2007 a)	5260 OK (10/2/2006 a)	(809 - 5260)/(13 - 7)	-741.833
4750 OK (11/9/2006 a)	5680 OK (11/3/2006 a)	(4750 - 5680)/(9 - 8)	-930
1870 OK (12/21/2006 a)	5680 OK (11/3/2006 a)	(1870 - 5680)/(10 - 8)	-1905
1800 OK (3/14/2007 a)	5680 OK (11/3/2006 a)	(1800 - 5680)/(11 - 8)	-1293.33
551 OK (4/6/2007 ~)	5680 OK (11/3/2006 a)	(551 - 5680)/(12 - 8)	-1282.25
809 OK (6/12/2007 a)	5680 OK (11/3/2006 a)	(809 - 5680)/(13 - 8)	-974.2
1870 OK (12/21/2006 a)	4750 OK (11/9/2006 a)	(1870 - 4750)/(10 - 9)	-2880
1800 OK (3/14/2007 a)	4750 OK (11/9/2006 a)	(1800 - 4750)/(11 - 9)	-1475
551 OK (4/6/2007 ~)	4750 OK (11/9/2006 a)	(551 - 4750)/(12 - 9)	-1399.67
809 OK (6/12/2007 a)	4750 OK (11/9/2006 a)	(809 - 4750)/(13 - 9)	-985.25
1800 OK (3/14/2007 a)	1870 OK (12/21/2006 a)	(1800 - 1870)/(11 - 10)	-70
551 OK (4/6/2007 ~)	1870 OK (12/21/2006 a)	(551 - 1870)/(12 - 10)	-659.5
809 OK (6/12/2007 a)	1870 OK (12/21/2006 a)	(809 - 1870)/(13 - 10)	-353.667
551 OK (4/6/2007 ~)	1800 OK (3/14/2007 a)	(551 - 1800)/(12 - 11)	-1249
809 OK (6/12/2007 a)	1800 OK (3/14/2007 a)	(809 - 1800)/(13 - 11)	-495.5
809 OK (6/12/2007 a)	551 OK (4/6/2007 ~)	(809 - 551)/(13 - 12)	258

Number of Q values = 78

Ordered Q Values

n	Q
1	-7340
2	-6160
3	-4980
4	-4688.33
5	-3755
6	-3362.5
7	-2880
8	-2560
9	-2188

10	-1905
11	-1791.25
12	-1753.33
13	-1745
14	-1635.71
15	-1600
16	-1564.9
17	-1475
18	-1399.67
19	-1399.18
20	-1350
21	-1293.33
22	-1282.25
23	-1249
24	-1130
25	-998.571
26	-985.25
27	-974.2
28	-955
29	-941.8
30	-930
31	-923.222
32	-900
33	-882.5
34	-865
35	-805.1
36	-741.833
37	-685
38	-659.5
39	-636
40	-495.5
41	-416.125
42	-353.667
43	-341.222
44	-335
45	-297.143
46	-255
47	-226.286
48	-180
49	-165.75
50	-139
51	-105.917
52	-104.833
53	-70
54	-55.8333
55	-53
56	-53
57	-28
58	-23.3333
59	13.75
60	124
61	172.5
62	174
63	258
64	333.75
65	420
66	450

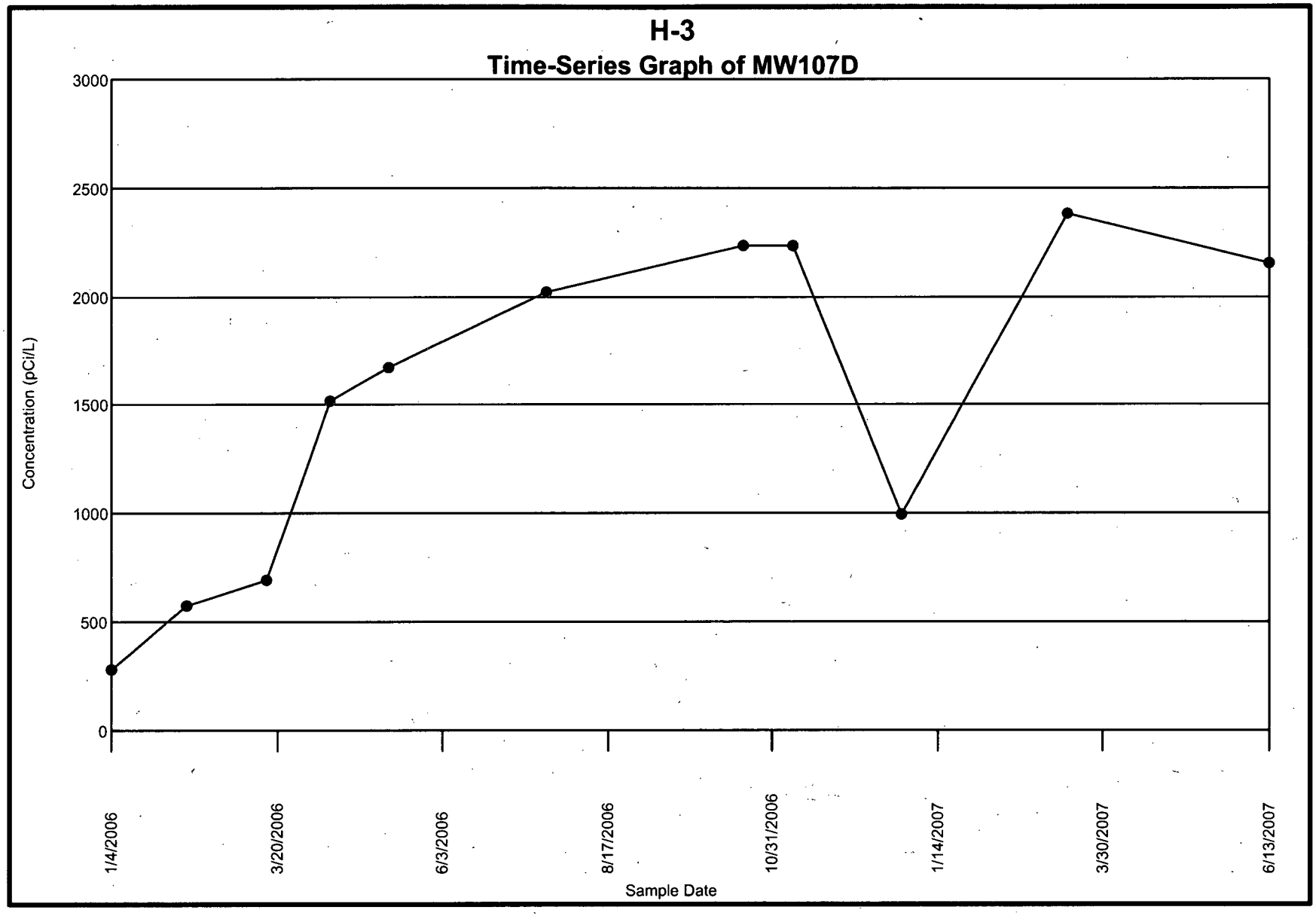
67	460
68	514.286
69	530
70	600
71	653.75
72	1181.67
73	1190
74	1562.5
75	2250
76	3390
77	4080
78	14120

Sen's Estimator (Median Q) is -565.75

Time Period	Observations
1/4/2006	1
2/18/2006	1
4/11/2006	1
4/14/2006	1
5/21/2006	1
7/16/2006	1
10/2/2006	1
11/3/2006	1
11/9/2006	1
12/21/2006	1
3/14/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -985.25 = Q(26)
Upper limit is -70 = Q(53)
-70 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW107D
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
1/4/2006
3/20/2006
6/3/2006
8/17/2006
10/31/2006
1/14/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW107D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
572 U (2/7/2006 ~)	278 U (1/4/2006 a)	(572 - 278)/(2 - 1)	294
691 OK (3/15/2006 a)	278 U (1/4/2006 a)	(691 - 278)/(3 - 1)	206.5
1520 OK (4/13/2006 a)	278 U (1/4/2006 a)	(1520 - 278)/(4 - 1)	414
1670 OK (5/10/2006 a)	278 U (1/4/2006 a)	(1670 - 278)/(5 - 1)	348
2020 OK (7/20/2006 a)	278 U (1/4/2006 a)	(2020 - 278)/(6 - 1)	348.4
2230 OK (10/18/2006 a)	278 U (1/4/2006 a)	(2230 - 278)/(7 - 1)	325.333
2230 OK (11/9/2006 a)	278 U (1/4/2006 a)	(2230 - 278)/(8 - 1)	278.857
995 OK (12/28/2006 a)	278 U (1/4/2006 a)	(995 - 278)/(9 - 1)	89.625
2380 OK (3/14/2007 a)	278 U (1/4/2006 a)	(2380 - 278)/(10 - 1)	233.556
2150 OK (6/13/2007 ~)	278 U (1/4/2006 a)	(2150 - 278)/(11 - 1)	187.2
691 OK (3/15/2006 a)	572 U (2/7/2006 ~)	(691 - 572)/(3 - 2)	119
1520 OK (4/13/2006 a)	572 U (2/7/2006 ~)	(1520 - 572)/(4 - 2)	474
1670 OK (5/10/2006 a)	572 U (2/7/2006 ~)	(1670 - 572)/(5 - 2)	366
2020 OK (7/20/2006 a)	572 U (2/7/2006 ~)	(2020 - 572)/(6 - 2)	362
2230 OK (10/18/2006 a)	572 U (2/7/2006 ~)	(2230 - 572)/(7 - 2)	331.6
2230 OK (11/9/2006 a)	572 U (2/7/2006 ~)	(2230 - 572)/(8 - 2)	276.333
995 OK (12/28/2006 a)	572 U (2/7/2006 ~)	(995 - 572)/(9 - 2)	60.4286
2380 OK (3/14/2007 a)	572 U (2/7/2006 ~)	(2380 - 572)/(10 - 2)	226
2150 OK (6/13/2007 ~)	572 U (2/7/2006 ~)	(2150 - 572)/(11 - 2)	175.333
1520 OK (4/13/2006 a)	691 OK (3/15/2006 a)	(1520 - 691)/(4 - 3)	829
1670 OK (5/10/2006 a)	691 OK (3/15/2006 a)	(1670 - 691)/(5 - 3)	489.5
2020 OK (7/20/2006 a)	691 OK (3/15/2006 a)	(2020 - 691)/(6 - 3)	443
2230 OK (10/18/2006 a)	691 OK (3/15/2006 a)	(2230 - 691)/(7 - 3)	384.75
2230 OK (11/9/2006 a)	691 OK (3/15/2006 a)	(2230 - 691)/(8 - 3)	307.8
995 OK (12/28/2006 a)	691 OK (3/15/2006 a)	(995 - 691)/(9 - 3)	50.6667
2380 OK (3/14/2007 a)	691 OK (3/15/2006 a)	(2380 - 691)/(10 - 3)	241.286
2150 OK (6/13/2007 ~)	691 OK (3/15/2006 a)	(2150 - 691)/(11 - 3)	182.375
1670 OK (5/10/2006 a)	1520 OK (4/13/2006 a)	(1670 - 1520)/(5 - 4)	150
2020 OK (7/20/2006 a)	1520 OK (4/13/2006 a)	(2020 - 1520)/(6 - 4)	250
2230 OK (10/18/2006 a)	1520 OK (4/13/2006 a)	(2230 - 1520)/(7 - 4)	236.667
2230 OK (11/9/2006 a)	1520 OK (4/13/2006 a)	(2230 - 1520)/(8 - 4)	177.5
995 OK (12/28/2006 a)	1520 OK (4/13/2006 a)	(995 - 1520)/(9 - 4)	-105
2380 OK (3/14/2007 a)	1520 OK (4/13/2006 a)	(2380 - 1520)/(10 - 4)	143.333
2150 OK (6/13/2007 ~)	1520 OK (4/13/2006 a)	(2150 - 1520)/(11 - 4)	90
2020 OK (7/20/2006 a)	1670 OK (5/10/2006 a)	(2020 - 1670)/(6 - 5)	350
2230 OK (10/18/2006 a)	1670 OK (5/10/2006 a)	(2230 - 1670)/(7 - 5)	280
2230 OK (11/9/2006 a)	1670 OK (5/10/2006 a)	(2230 - 1670)/(8 - 5)	186.667
995 OK (12/28/2006 a)	1670 OK (5/10/2006 a)	(995 - 1670)/(9 - 5)	-168.75
2380 OK (3/14/2007 a)	1670 OK (5/10/2006 a)	(2380 - 1670)/(10 - 5)	142
2150 OK (6/13/2007 ~)	1670 OK (5/10/2006 a)	(2150 - 1670)/(11 - 5)	80
2230 OK (10/18/2006 a)	2020 OK (7/20/2006 a)	(2230 - 2020)/(7 - 6)	210
2230 OK (11/9/2006 a)	2020 OK (7/20/2006 a)	(2230 - 2020)/(8 - 6)	105

995 OK (12/28/2006 a)	2020 OK (7/20/2006 a)	(995 - 2020)/(9 - 6)	-341.667
2380 OK (3/14/2007 a)	2020 OK (7/20/2006 a)	(2380 - 2020)/(10 - 6)	90
2150 OK (6/13/2007 ~)	2020 OK (7/20/2006 a)	(2150 - 2020)/(11 - 6)	26
2230 OK (11/9/2006 a)	2230 OK (10/18/2006 a)	(2230 - 2230)/(8 - 7)	0
995 OK (12/28/2006 a)	2230 OK (10/18/2006 a)	(995 - 2230)/(9 - 7)	-617.5
2380 OK (3/14/2007 a)	2230 OK (10/18/2006 a)	(2380 - 2230)/(10 - 7)	50
2150 OK (6/13/2007 ~)	2230 OK (10/18/2006 a)	(2150 - 2230)/(11 - 7)	-20
995 OK (12/28/2006 a)	2230 OK (11/9/2006 a)	(995 - 2230)/(9 - 8)	-1235
2380 OK (3/14/2007 a)	2230 OK (11/9/2006 a)	(2380 - 2230)/(10 - 8)	75
2150 OK (6/13/2007 ~)	2230 OK (11/9/2006 a)	(2150 - 2230)/(11 - 8)	-26.6667
2380 OK (3/14/2007 a)	995 OK (12/28/2006 a)	(2380 - 995)/(10 - 9)	1385
2150 OK (6/13/2007 ~)	995 OK (12/28/2006 a)	(2150 - 995)/(11 - 9)	577.5
2150 OK (6/13/2007 ~)	2380 OK (3/14/2007 a)	(2150 - 2380)/(11 - 10)	-230

Number of Q values = 55

Ordered Q Values

n	Q
1	-1235
2	-617.5
3	-341.667
4	-230
5	-168.75
6	-105
7	-26.6667
8	-20
9	0
10	26
11	50
12	50.6667
13	60.4286
14	75
15	80
16	89.625
17	90
18	90
19	105
20	119
21	142
22	143.333
23	150
24	175.333
25	177.5
26	182.375
27	186.667
28	187.2
29	206.5
30	210
31	226
32	233.556
33	236.667
34	241.286

35	250
36	276.333
37	278.857
38	280
39	294
40	307.8
41	325.333
42	331.6
43	348
44	348.4
45	350
46	362
47	366
48	384.75
49	414
50	443
51	474
52	489.5
53	577.5
54	829
55	1385

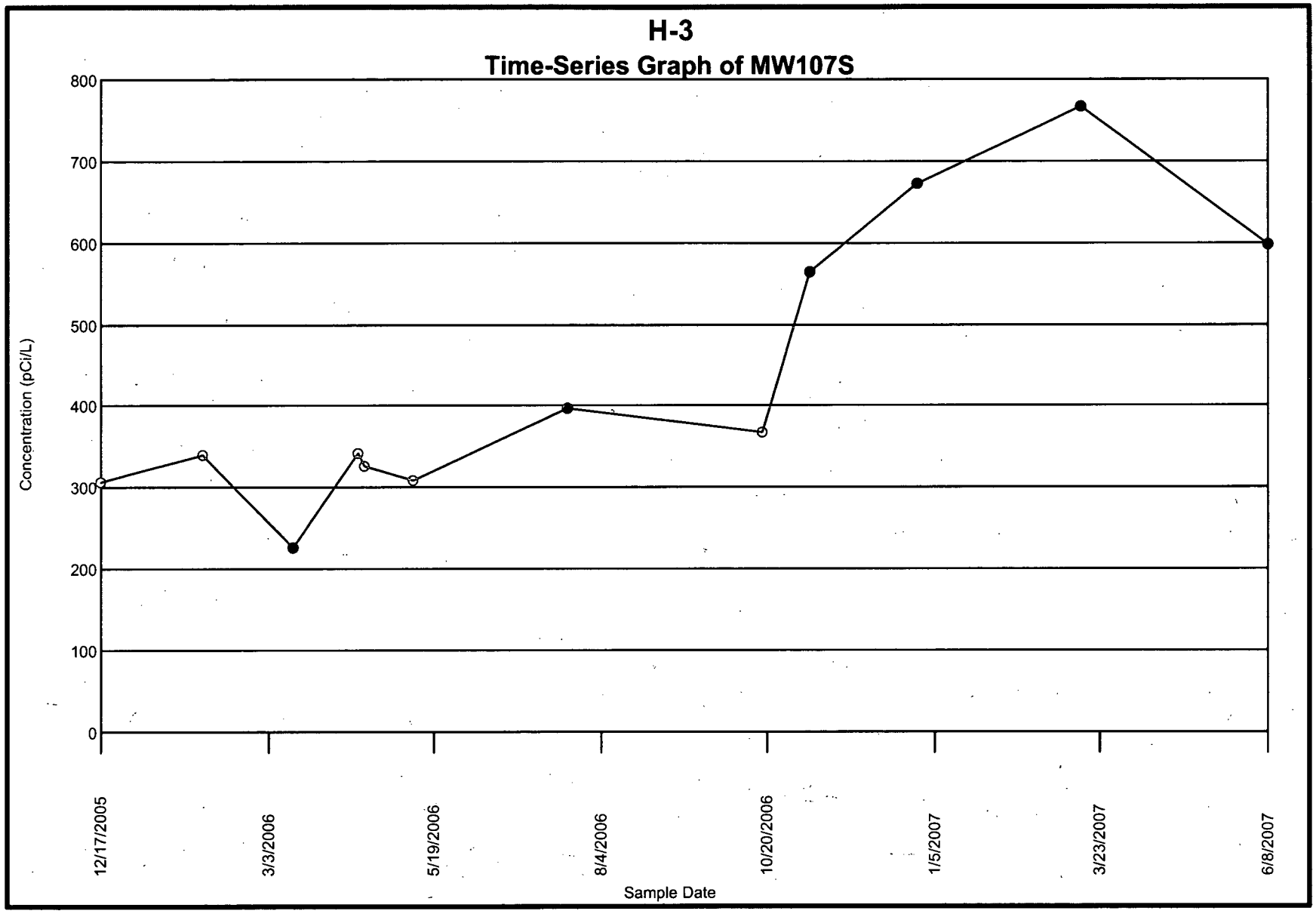
Sen's Estimator (Median Q) is 187.2

Tied Group	Value	Members
1	2230	2

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/15/2006	1
4/13/2006	1
5/10/2006	1
7/20/2006	1
10/18/2006	1
11/9/2006	1
12/28/2006	1
3/14/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is 90 = Q(17)
Upper limit is 294 = Q(39)
90 > 0 indicating an upward trend in data.


H-3
Time-Series Graph of MW107S
Concentration (pCi/L)
800
700
600
500
400
300
200
100
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW107S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<340 U (2/2/2006 a)	ND<307 U (12/17/2005 a)	(340 - 307)/(2 - 1)	33
226 U (3/15/2006 a)	ND<307 U (12/17/2005 a)	(226 - 307)/(3 - 1)	-40.5
ND<342 U (4/14/2006 a)	ND<307 U (12/17/2005 a)	(342 - 307)/(4 - 1)	11.6667
ND<327 U (4/17/2006 a)	ND<307 U (12/17/2005 a)	(327 - 307)/(5 - 1)	5
ND<308 OK (5/10/2006 a)	ND<307 U (12/17/2005 a)	(308 - 307)/(6 - 1)	0.2
398 OK (7/20/2006 ~)	ND<307 U (12/17/2005 a)	(398 - 307)/(7 - 1)	15.1667
ND<367 OK (10/18/2006 a)	ND<307 U (12/17/2005 a)	(367 - 307)/(8 - 1)	8.57143
564 OK (11/9/2006 a)	ND<307 U (12/17/2005 a)	(564 - 307)/(9 - 1)	32.125
673 OK (12/28/2006 a)	ND<307 U (12/17/2005 a)	(673 - 307)/(10 - 1)	40.6667
767 OK (3/14/2007 a)	ND<307 U (12/17/2005 a)	(767 - 307)/(11 - 1)	46
597 OK (6/8/2007 a)	ND<307 U (12/17/2005 a)	(597 - 307)/(12 - 1)	26.3636
226 U (3/15/2006 a)	ND<340 U (2/2/2006 a)	(226 - 340)/(3 - 2)	-114
ND<342 U (4/14/2006 a)	ND<340 U (2/2/2006 a)	(342 - 340)/(4 - 2)	1
ND<327 U (4/17/2006 a)	ND<340 U (2/2/2006 a)	(327 - 340)/(5 - 2)	-4.33333
ND<308 OK (5/10/2006 a)	ND<340 U (2/2/2006 a)	(308 - 340)/(6 - 2)	-8
398 OK (7/20/2006 ~)	ND<340 U (2/2/2006 a)	(398 - 340)/(7 - 2)	11.6
ND<367 OK (10/18/2006 a)	ND<340 U (2/2/2006 a)	(367 - 340)/(8 - 2)	4.5
564 OK (11/9/2006 a)	ND<340 U (2/2/2006 a)	(564 - 340)/(9 - 2)	32
673 OK (12/28/2006 a)	ND<340 U (2/2/2006 a)	(673 - 340)/(10 - 2)	41.625
767 OK (3/14/2007 a)	ND<340 U (2/2/2006 a)	(767 - 340)/(11 - 2)	47.4444
597 OK (6/8/2007 a)	ND<340 U (2/2/2006 a)	(597 - 340)/(12 - 2)	25.7
ND<342 U (4/14/2006 a)	226 U (3/15/2006 a)	(342 - 226)/(4 - 3)	116
ND<327 U (4/17/2006 a)	226 U (3/15/2006 a)	(327 - 226)/(5 - 3)	50.5
ND<308 OK (5/10/2006 a)	226 U (3/15/2006 a)	(308 - 226)/(6 - 3)	27.3333
398 OK (7/20/2006 ~)	226 U (3/15/2006 a)	(398 - 226)/(7 - 3)	43
ND<367 OK (10/18/2006 a)	226 U (3/15/2006 a)	(367 - 226)/(8 - 3)	28.2
564 OK (11/9/2006 a)	226 U (3/15/2006 a)	(564 - 226)/(9 - 3)	56.3333
673 OK (12/28/2006 a)	226 U (3/15/2006 a)	(673 - 226)/(10 - 3)	63.8571
767 OK (3/14/2007 a)	226 U (3/15/2006 a)	(767 - 226)/(11 - 3)	67.625
597 OK (6/8/2007 a)	226 U (3/15/2006 a)	(597 - 226)/(12 - 3)	41.2222
ND<327 U (4/17/2006 a)	ND<342 U (4/14/2006 a)	(327 - 342)/(5 - 4)	-15
ND<308 OK (5/10/2006 a)	ND<342 U (4/14/2006 a)	(308 - 342)/(6 - 4)	-17
398 OK (7/20/2006 ~)	ND<342 U (4/14/2006 a)	(398 - 342)/(7 - 4)	18.6667
ND<367 OK (10/18/2006 a)	ND<342 U (4/14/2006 a)	(367 - 342)/(8 - 4)	6.25
564 OK (11/9/2006 a)	ND<342 U (4/14/2006 a)	(564 - 342)/(9 - 4)	44.4
673 OK (12/28/2006 a)	ND<342 U (4/14/2006 a)	(673 - 342)/(10 - 4)	55.1667
767 OK (3/14/2007 a)	ND<342 U (4/14/2006 a)	(767 - 342)/(11 - 4)	60.7143
597 OK (6/8/2007 a)	ND<342 U (4/14/2006 a)	(597 - 342)/(12 - 4)	31.875
ND<308 OK (5/10/2006 a)	ND<327 U (4/17/2006 a)	(308 - 327)/(6 - 5)	-19
398 OK (7/20/2006 ~)	ND<327 U (4/17/2006 a)	(398 - 327)/(7 - 5)	35.5
ND<367 OK (10/18/2006 a)	ND<327 U (4/17/2006 a)	(367 - 327)/(8 - 5)	13.3333
564 OK (11/9/2006 a)	ND<327 U (4/17/2006 a)	(564 - 327)/(9 - 5)	59.25
673 OK (12/28/2006 a)	ND<327 U (4/17/2006 a)	(673 - 327)/(10 - 5)	69.2

767 OK (3/14/2007 a)	ND<327 U (4/17/2006 a)	(767 - 327)/(11 - 5)	73.3333
597 OK (6/8/2007 a)	ND<327 U (4/17/2006 a)	(597 - 327)/(12 - 5)	38.5714
398 OK (7/20/2006 ~)	ND<308 OK (5/10/2006 a)	(398 - 308)/(7 - 6)	90
ND<367 OK (10/18/2006 a)	ND<308 OK (5/10/2006 a)	(367 - 308)/(8 - 6)	29.5
564 OK (11/9/2006 a)	ND<308 OK (5/10/2006 a)	(564 - 308)/(9 - 6)	85.3333
673 OK (12/28/2006 a)	ND<308 OK (5/10/2006 a)	(673 - 308)/(10 - 6)	91.25
767 OK (3/14/2007 a)	ND<308 OK (5/10/2006 a)	(767 - 308)/(11 - 6)	91.8
597 OK (6/8/2007 a)	ND<308 OK (5/10/2006 a)	(597 - 308)/(12 - 6)	48.1667
ND<367 OK (10/18/2006 a)	398 OK (7/20/2006 ~)	(367 - 398)/(8 - 7)	-31
564 OK (11/9/2006 a)	398 OK (7/20/2006 ~)	(564 - 398)/(9 - 7)	83
673 OK (12/28/2006 a)	398 OK (7/20/2006 ~)	(673 - 398)/(10 - 7)	91.6667
767 OK (3/14/2007 a)	398 OK (7/20/2006 ~)	(767 - 398)/(11 - 7)	92.25
597 OK (6/8/2007 a)	398 OK (7/20/2006 ~)	(597 - 398)/(12 - 7)	39.8
564 OK (11/9/2006 a)	ND<367 OK (10/18/2006 a)	(564 - 367)/(9 - 8)	197
673 OK (12/28/2006 a)	ND<367 OK (10/18/2006 a)	(673 - 367)/(10 - 8)	153
767 OK (3/14/2007 a)	ND<367 OK (10/18/2006 a)	(767 - 367)/(11 - 8)	133.333
597 OK (6/8/2007 a)	ND<367 OK (10/18/2006 a)	(597 - 367)/(12 - 8)	57.5
673 OK (12/28/2006 a)	564 OK (11/9/2006 a)	(673 - 564)/(10 - 9)	109
767 OK (3/14/2007 a)	564 OK (11/9/2006 a)	(767 - 564)/(11 - 9)	101.5
597 OK (6/8/2007 a)	564 OK (11/9/2006 a)	(597 - 564)/(12 - 9)	11
767 OK (3/14/2007 a)	673 OK (12/28/2006 a)	(767 - 673)/(11 - 10)	94
597 OK (6/8/2007 a)	673 OK (12/28/2006 a)	(597 - 673)/(12 - 10)	-38
597 OK (6/8/2007 a)	767 OK (3/14/2007 a)	(597 - 767)/(12 - 11)	-170

Number of Q values = 66

Ordered Q Values

n	Q
1	-170
2	-114
3	-40.5
4	-38
5	-31
6	-19
7	-17
8	-15
9	-8
10	-4.33333
11	0.2
12	1
13	4.5
14	5
15	6.25
16	8.57143
17	11
18	11.6
19	11.6667
20	13.3333
21	15.1667
22	18.6667

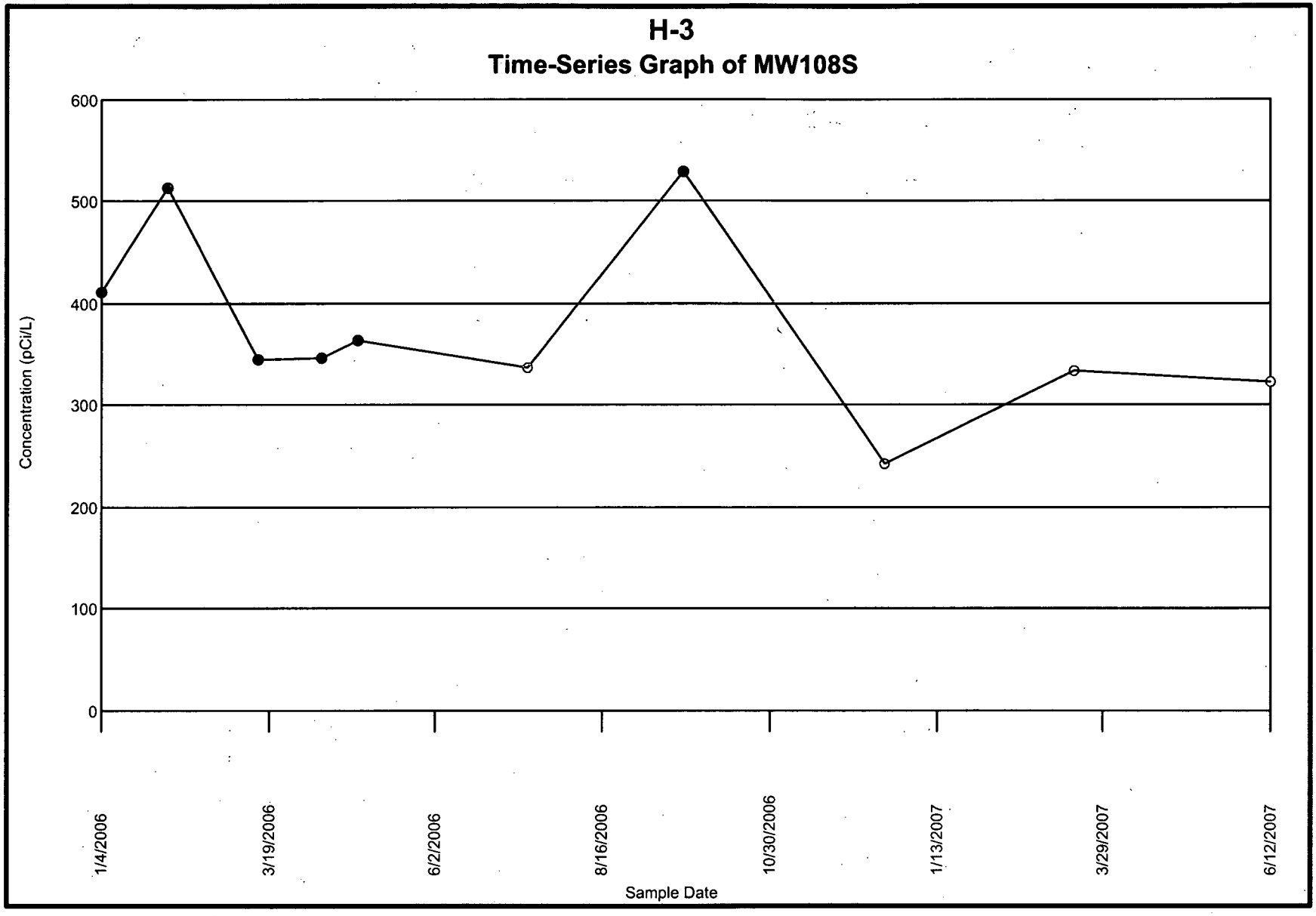
23	25.7
24	26.3636
25	27.3333
26	28.2
27	29.5
28	31.875
29	32
30	32.125
31	33
32	35.5
33	38.5714
34	39.8
35	40.6667
36	41.2222
37	41.625
38	43
39	44.4
40	46
41	47.4444
42	48.1667
43	50.5
44	55.1667
45	56.3333
46	57.5
47	59.25
48	60.7143
49	63.8571
50	67.625
51	69.2
52	73.3333
53	83
54	85.3333
55	90
56	91.25
57	91.6667
58	91.8
59	92.25
60	94
61	101.5
62	109
63	116
64	133.333
65	153
66	197

Sen's Estimator (Median Q) is 39.1857

Time Period	Observations
12/17/2005	1
2/2/2006	1
3/15/2006	1
4/14/2006	1
4/17/2006	1
5/10/2006	1
7/20/2006	1
10/18/2006	1
11/9/2006	1
12/28/2006	1

3/14/2007 1
6/8/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is 15.1667 = Q(21)
Upper limit is 57.5 = Q(46)
15.1667 > 0 indicating an upward trend in data.


H-3
Time-Series Graph of MW108S
Concentration (pCi/L)
600
500
400
300
200
100
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW108S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
513 OK (2/2/2006 a)	411 OK (1/4/2006 a)	(513 - 411)/(2 - 1)	102
345 U (3/15/2006 a)	411 OK (1/4/2006 a)	(345 - 411)/(3 - 1)	-33
347 U (4/13/2006 a)	411 OK (1/4/2006 a)	(347 - 411)/(4 - 1)	-21.3333
364 OK (4/29/2006 a)	411 OK (1/4/2006 a)	(364 - 411)/(5 - 1)	-11.75
ND<337 OK (7/14/2006 a)	411 OK (1/4/2006 a)	(337 - 411)/(6 - 1)	-14.8
529 OK (9/22/2006 a)	411 OK (1/4/2006 a)	(529 - 411)/(7 - 1)	19.6667
ND<242 OK (12/21/2006 a)	411 OK (1/4/2006 a)	(242 - 411)/(8 - 1)	-24.1429
ND<334 OK (3/16/2007 a)	411 OK (1/4/2006 a)	(334 - 411)/(9 - 1)	-9.625
ND<323 OK (6/12/2007 a)	411 OK (1/4/2006 a)	(323 - 411)/(10 - 1)	-9.77778
345 U (3/15/2006 a)	513 OK (2/2/2006 a)	(345 - 513)/(3 - 2)	-168
347 U (4/13/2006 a)	513 OK (2/2/2006 a)	(347 - 513)/(4 - 2)	-83
364 OK (4/29/2006 a)	513 OK (2/2/2006 a)	(364 - 513)/(5 - 2)	-49.6667
ND<337 OK (7/14/2006 a)	513 OK (2/2/2006 a)	(337 - 513)/(6 - 2)	-44
529 OK (9/22/2006 a)	513 OK (2/2/2006 a)	(529 - 513)/(7 - 2)	3.2
ND<242 OK (12/21/2006 a)	513 OK (2/2/2006 a)	(242 - 513)/(8 - 2)	-45.1667
ND<334 OK (3/16/2007 a)	513 OK (2/2/2006 a)	(334 - 513)/(9 - 2)	-25.5714
ND<323 OK (6/12/2007 a)	513 OK (2/2/2006 a)	(323 - 513)/(10 - 2)	-23.75
347 U (4/13/2006 a)	345 U (3/15/2006 a)	(347 - 345)/(4 - 3)	2
364 OK (4/29/2006 a)	345 U (3/15/2006 a)	(364 - 345)/(5 - 3)	9.5
ND<337 OK (7/14/2006 a)	345 U (3/15/2006 a)	(337 - 345)/(6 - 3)	-2.66667
529 OK (9/22/2006 a)	345 U (3/15/2006 a)	(529 - 345)/(7 - 3)	46
ND<242 OK (12/21/2006 a)	345 U (3/15/2006 a)	(242 - 345)/(8 - 3)	-20.6
ND<334 OK (3/16/2007 a)	345 U (3/15/2006 a)	(334 - 345)/(9 - 3)	-1.83333
ND<323 OK (6/12/2007 a)	345 U (3/15/2006 a)	(323 - 345)/(10 - 3)	-3.14286
364 OK (4/29/2006 a)	347 U (4/13/2006 a)	(364 - 347)/(5 - 4)	17
ND<337 OK (7/14/2006 a)	347 U (4/13/2006 a)	(337 - 347)/(6 - 4)	-5
529 OK (9/22/2006 a)	347 U (4/13/2006 a)	(529 - 347)/(7 - 4)	60.6667
ND<242 OK (12/21/2006 a)	347 U (4/13/2006 a)	(242 - 347)/(8 - 4)	-26.25

ND<334 OK (3/16/2007 a)	347 U (4/13/2006 a)	(334 - 347)/(9 - 4)	-2.6
ND<323 OK (6/12/2007 a)	347 U (4/13/2006 a)	(323 - 347)/(10 - 4)	-4
ND<337 OK (7/14/2006 a)	364 OK (4/29/2006 a)	(337 - 364)/(6 - 5)	-27
529 OK (9/22/2006 a)	364 OK (4/29/2006 a)	(529 - 364)/(7 - 5)	82.5
ND<242 OK (12/21/2006 a)	364 OK (4/29/2006 a)	(242 - 364)/(8 - 5)	-40.6667
ND<334 OK (3/16/2007 a)	364 OK (4/29/2006 a)	(334 - 364)/(9 - 5)	-7.5
ND<323 OK (6/12/2007 a)	364 OK (4/29/2006 a)	(323 - 364)/(10 - 5)	-8.2
529 OK (9/22/2006 a)	ND<337 OK (7/14/2006 a)	(529 - 337)/(7 - 6)	192
ND<242 OK (12/21/2006 a)	ND<337 OK (7/14/2006 a)	(242 - 337)/(8 - 6)	-47.5
ND<334 OK (3/16/2007 a)	ND<337 OK (7/14/2006 a)	(334 - 337)/(9 - 6)	-1
ND<323 OK (6/12/2007 a)	ND<337 OK (7/14/2006 a)	(323 - 337)/(10 - 6)	-3.5
ND<242 OK (12/21/2006 a)	529 OK (9/22/2006 a)	(242 - 529)/(8 - 7)	-287
ND<334 OK (3/16/2007 a)	529 OK (9/22/2006 a)	(334 - 529)/(9 - 7)	-97.5
ND<323 OK (6/12/2007 a)	529 OK (9/22/2006 a)	(323 - 529)/(10 - 7)	-68.6667
ND<334 OK (3/16/2007 a)	ND<242 OK (12/21/2006 a)	(334 - 242)/(9 - 8)	92
ND<323 OK (6/12/2007 a)	ND<242 OK (12/21/2006 a)	(323 - 242)/(10 - 8)	40.5
ND<323 OK (6/12/2007 a)	ND<334 OK (3/16/2007 a)	(323 - 334)/(10 - 9)	-11

Number of Q values = 45

Ordered Q Values

n	Q
1	-287
2	-168
3	-97.5
4	-83
5	-68.6667
6	-49.6667
7	-47.5
8	-45.1667
9	-44
10	-40.6667
11	-33
12	-27
13	-26.25

14	-25.5714
15	-24.1429
16	-23.75
17	-21.3333
18	-20.6
19	-14.8
20	-11.75
21	-11
22	-9.77778
23	-9.625
24	-8.2
25	-7.5
26	-5
27	-4
28	-3.5
29	-3.14286
30	-2.66667
31	-2.6
32	-1.83333
33	-1
34	2
35	3.2
36	9.5
37	17
38	19.6667
39	40.5
40	46
41	60.6667
42	82.5
43	92
44	102
45	192

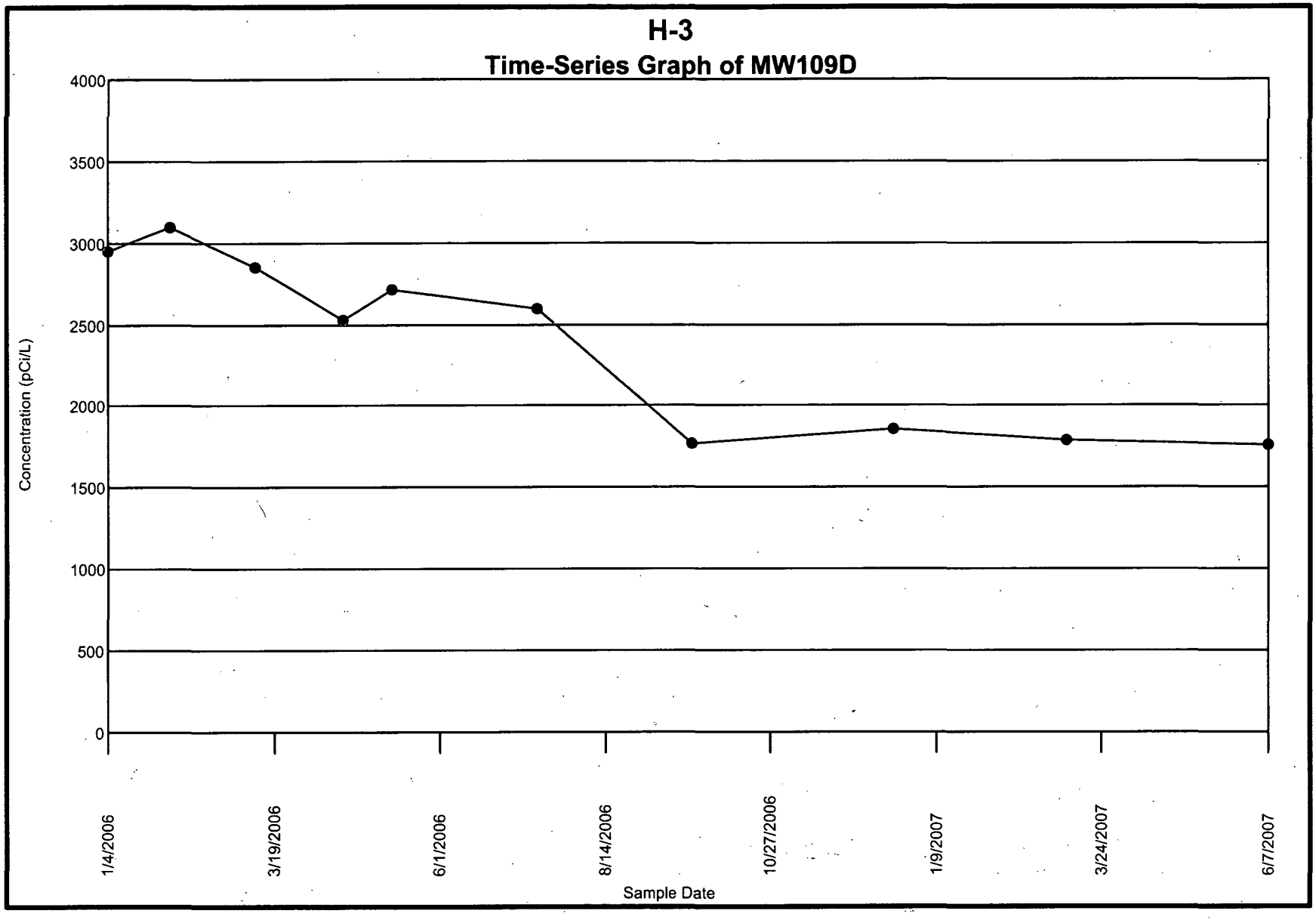
Sen's Estimator (Median Q) is -9.625

Time Period	Observations
1/4/2006	1
2/2/2006	1
3/15/2006	1
4/13/2006	1
4/29/2006	1
7/14/2006	1

9/22/2006	1
12/21/2006	1
3/16/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -26.25 = Q(13)
Upper limit is -1 = Q(33)
-1 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW109D
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/27/2006
1/9/2007
3/24/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW109D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
3100 OK (2/1/2006 a)	2950 OK (1/4/2006 a)	(3100 - 2950)/(2 - 1)	150
2850 OK (3/11/2006 a)	2950 OK (1/4/2006 a)	(2850 - 2950)/(3 - 1)	-50
2530 OK (4/19/2006 a)	2950 OK (1/4/2006 a)	(2530 - 2950)/(4 - 1)	-140
2710 OK (5/11/2006 a)	2950 OK (1/4/2006 a)	(2710 - 2950)/(5 - 1)	-60
2590 OK (7/15/2006 a)	2950 OK (1/4/2006 a)	(2590 - 2950)/(6 - 1)	-72
1770 OK (9/22/2006 a)	2950 OK (1/4/2006 a)	(1770 - 2950)/(7 - 1)	-196.667
1860 OK (12/21/2006 a)	2950 OK (1/4/2006 a)	(1860 - 2950)/(8 - 1)	-155.714
1790 OK (3/9/2007 a)	2950 OK (1/4/2006 a)	(1790 - 2950)/(9 - 1)	-145
1760 OK (6/7/2007 a)	2950 OK (1/4/2006 a)	(1760 - 2950)/(10 - 1)	-132.222
2850 OK (3/11/2006 a)	3100 OK (2/1/2006 a)	(2850 - 3100)/(3 - 2)	-250
2530 OK (4/19/2006 a)	3100 OK (2/1/2006 a)	(2530 - 3100)/(4 - 2)	-285
2710 OK (5/11/2006 a)	3100 OK (2/1/2006 a)	(2710 - 3100)/(5 - 2)	-130
2590 OK (7/15/2006 a)	3100 OK (2/1/2006 a)	(2590 - 3100)/(6 - 2)	-127.5
1770 OK (9/22/2006 a)	3100 OK (2/1/2006 a)	(1770 - 3100)/(7 - 2)	-266
1860 OK (12/21/2006 a)	3100 OK (2/1/2006 a)	(1860 - 3100)/(8 - 2)	-206.667
1790 OK (3/9/2007 a)	3100 OK (2/1/2006 a)	(1790 - 3100)/(9 - 2)	-187.143
1760 OK (6/7/2007 a)	3100 OK (2/1/2006 a)	(1760 - 3100)/(10 - 2)	-167.5
2530 OK (4/19/2006 a)	2850 OK (3/11/2006 a)	(2530 - 2850)/(4 - 3)	-320
2710 OK (5/11/2006 a)	2850 OK (3/11/2006 a)	(2710 - 2850)/(5 - 3)	-70
2590 OK (7/15/2006 a)	2850 OK (3/11/2006 a)	(2590 - 2850)/(6 - 3)	-86.6667
1770 OK (9/22/2006 a)	2850 OK (3/11/2006 a)	(1770 - 2850)/(7 - 3)	-270
1860 OK (12/21/2006 a)	2850 OK (3/11/2006 a)	(1860 - 2850)/(8 - 3)	-198
1790 OK (3/9/2007 a)	2850 OK (3/11/2006 a)	(1790 - 2850)/(9 - 3)	-176.667
1760 OK (6/7/2007 a)	2850 OK (3/11/2006 a)	(1760 - 2850)/(10 - 3)	-155.714
2710 OK (5/11/2006 a)	2530 OK (4/19/2006 a)	(2710 - 2530)/(5 - 4)	180
2590 OK (7/15/2006 a)	2530 OK (4/19/2006 a)	(2590 - 2530)/(6 - 4)	30
1770 OK (9/22/2006 a)	2530 OK (4/19/2006 a)	(1770 - 2530)/(7 - 4)	-253.333
1860 OK (12/21/2006 a)	2530 OK (4/19/2006 a)	(1860 - 2530)/(8 - 4)	-167.5
1790 OK (3/9/2007 a)	2530 OK (4/19/2006 a)	(1790 - 2530)/(9 - 4)	-148
1760 OK (6/7/2007 a)	2530 OK (4/19/2006 a)	(1760 - 2530)/(10 - 4)	-128.333
2590 OK (7/15/2006 a)	2710 OK (5/11/2006 a)	(2590 - 2710)/(6 - 5)	-120
1770 OK (9/22/2006 a)	2710 OK (5/11/2006 a)	(1770 - 2710)/(7 - 5)	-470
1860 OK (12/21/2006 a)	2710 OK (5/11/2006 a)	(1860 - 2710)/(8 - 5)	-283.333
1790 OK (3/9/2007 a)	2710 OK (5/11/2006 a)	(1790 - 2710)/(9 - 5)	-230
1760 OK (6/7/2007 a)	2710 OK (5/11/2006 a)	(1760 - 2710)/(10 - 5)	-190
1770 OK (9/22/2006 a)	2590 OK (7/15/2006 a)	(1770 - 2590)/(7 - 6)	-820
1860 OK (12/21/2006 a)	2590 OK (7/15/2006 a)	(1860 - 2590)/(8 - 6)	-365
1790 OK (3/9/2007 a)	2590 OK (7/15/2006 a)	(1790 - 2590)/(9 - 6)	-266.667
1760 OK (6/7/2007 a)	2590 OK (7/15/2006 a)	(1760 - 2590)/(10 - 6)	-207.5
1860 OK (12/21/2006 a)	1770 OK (9/22/2006 a)	(1860 - 1770)/(8 - 7)	90
1790 OK (3/9/2007 a)	1770 OK (9/22/2006 a)	(1790 - 1770)/(9 - 7)	10

1760 OK (6/7/2007 a)	1770 OK (9/22/2006 a)	(1760 - 1770)/(10 - 7)	-3.33333
1790 OK (3/9/2007 a)	1860 OK (12/21/2006 a)	(1790 - 1860)/(9 - 8)	-70
1760 OK (6/7/2007 a)	1860 OK (12/21/2006 a)	(1760 - 1860)/(10 - 8)	-50
1760 OK (6/7/2007 a)	1790 OK (3/9/2007 a)	(1760 - 1790)/(10 - 9)	-30

Number of Q values = 45

Ordered Q Values

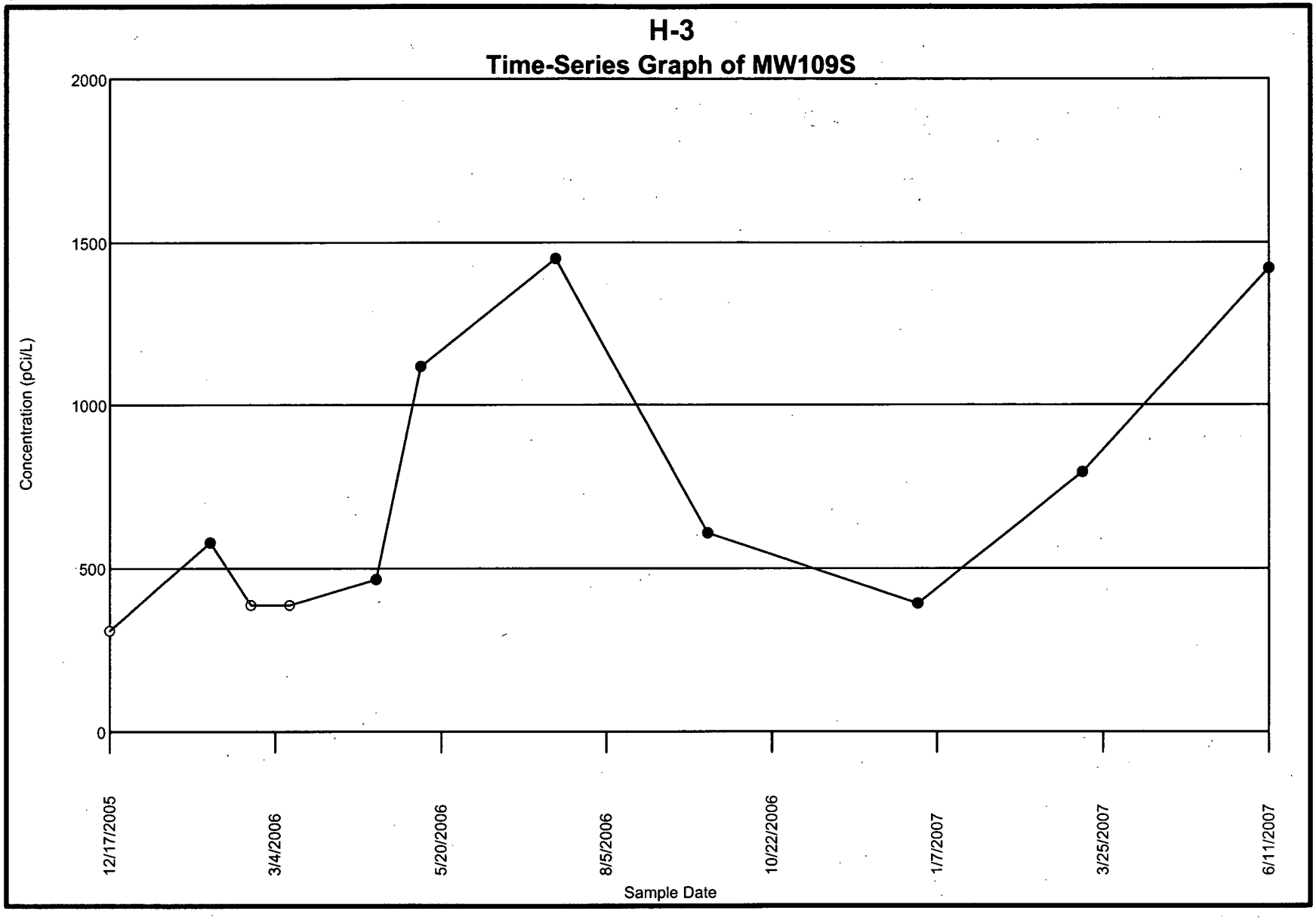
n	Q
1	-820
2	-470
3	-365
4	-320
5	-285
6	-283.333
7	-270
8	-266.667
9	-266
10	-253.333
11	-250
12	-230
13	-207.5
14	-206.667
15	-198
16	-196.667
17	-190
18	-187.143
19	-176.667
20	-167.5
21	-167.5
22	-155.714
23	-155.714
24	-148
25	-145
26	-140
27	-132.222
28	-130
29	-128.333
30	-127.5
31	-120
32	-86.6667
33	-72
34	-70
35	-70
36	-60
37	-50
38	-50
39	-30
40	-3.33333
41	10
42	30
43	90
44	150
45	180

Sen's Estimator (Median Q) is -155.714

Time Period	Observations
1/4/2006	1
2/1/2006	1
3/11/2006	1
4/19/2006	1
5/11/2006	1
7/15/2006	1
9/22/2006	1
12/21/2006	1
3/9/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -207.5 = Q(13)
Upper limit is -72 = Q(33)
-72 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW109S
Concentration (pCi/L)
2000
1500
1000
500
0
12/17/2005
3/4/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/25/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW109S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
582 OK (2/2/2006 a)	ND<312 U (12/17/2005 a)	(582 - 312)/(2 - 1)	270
ND<390 U (2/21/2006 a)	ND<312 U (12/17/2005 a)	(390 - 312)/(3 - 1)	39
ND<387 U (3/11/2006 a)	ND<312 U (12/17/2005 a)	(387 - 312)/(4 - 1)	25
466 OK (4/20/2006 a)	ND<312 U (12/17/2005 a)	(466 - 312)/(5 - 1)	38.5
1120 OK (5/11/2006 a)	ND<312 U (12/17/2005 a)	(1120 - 312)/(6 - 1)	161.6
1450 OK (7/13/2006 a)	ND<312 U (12/17/2005 a)	(1450 - 312)/(7 - 1)	189.667
611 OK (9/22/2006 a)	ND<312 U (12/17/2005 a)	(611 - 312)/(8 - 1)	42.7143
391 OK (12/29/2006 a)	ND<312 U (12/17/2005 a)	(391 - 312)/(9 - 1)	9.875
798 OK (3/16/2007 a)	ND<312 U (12/17/2005 a)	(798 - 312)/(10 - 1)	54
1420 OK (6/11/2007 a)	ND<312 U (12/17/2005 a)	(1420 - 312)/(11 - 1)	110.8
ND<390 U (2/21/2006 a)	582 OK (2/2/2006 a)	(390 - 582)/(3 - 2)	-192
ND<387 U (3/11/2006 a)	582 OK (2/2/2006 a)	(387 - 582)/(4 - 2)	-97.5
466 OK (4/20/2006 a)	582 OK (2/2/2006 a)	(466 - 582)/(5 - 2)	-38.6667
1120 OK (5/11/2006 a)	582 OK (2/2/2006 a)	(1120 - 582)/(6 - 2)	134.5
1450 OK (7/13/2006 a)	582 OK (2/2/2006 a)	(1450 - 582)/(7 - 2)	173.6
611 OK (9/22/2006 a)	582 OK (2/2/2006 a)	(611 - 582)/(8 - 2)	4.83333
391 OK (12/29/2006 a)	582 OK (2/2/2006 a)	(391 - 582)/(9 - 2)	-27.2857
798 OK (3/16/2007 a)	582 OK (2/2/2006 a)	(798 - 582)/(10 - 2)	27
1420 OK (6/11/2007 a)	582 OK (2/2/2006 a)	(1420 - 582)/(11 - 2)	93.1111
ND<387 U (3/11/2006 a)	ND<390 U (2/21/2006 a)	(387 - 390)/(4 - 3)	-3
466 OK (4/20/2006 a)	ND<390 U (2/21/2006 a)	(466 - 390)/(5 - 3)	38
1120 OK (5/11/2006 a)	ND<390 U (2/21/2006 a)	(1120 - 390)/(6 - 3)	243.333
1450 OK (7/13/2006 a)	ND<390 U (2/21/2006 a)	(1450 - 390)/(7 - 3)	265
611 OK (9/22/2006 a)	ND<390 U (2/21/2006 a)	(611 - 390)/(8 - 3)	44.2
391 OK (12/29/2006 a)	ND<390 U (2/21/2006 a)	(391 - 390)/(9 - 3)	0.166667
798 OK (3/16/2007 a)	ND<390 U (2/21/2006 a)	(798 - 390)/(10 - 3)	58.2857
1420 OK (6/11/2007 a)	ND<390 U (2/21/2006 a)	(1420 - 390)/(11 - 3)	128.75
466 OK (4/20/2006 a)	ND<387 U (3/11/2006 a)	(466 - 387)/(5 - 4)	79
1120 OK (5/11/2006 a)	ND<387 U (3/11/2006 a)	(1120 - 387)/(6 - 4)	366.5
1450 OK (7/13/2006 a)	ND<387 U (3/11/2006 a)	(1450 - 387)/(7 - 4)	354.333
611 OK (9/22/2006 a)	ND<387 U (3/11/2006 a)	(611 - 387)/(8 - 4)	56
391 OK (12/29/2006 a)	ND<387 U (3/11/2006 a)	(391 - 387)/(9 - 4)	0.8
798 OK (3/16/2007 a)	ND<387 U (3/11/2006 a)	(798 - 387)/(10 - 4)	68.5
1420 OK (6/11/2007 a)	ND<387 U (3/11/2006 a)	(1420 - 387)/(11 - 4)	147.571
1120 OK (5/11/2006 a)	466 OK (4/20/2006 a)	(1120 - 466)/(6 - 5)	654
1450 OK (7/13/2006 a)	466 OK (4/20/2006 a)	(1450 - 466)/(7 - 5)	492
611 OK (9/22/2006 a)	466 OK (4/20/2006 a)	(611 - 466)/(8 - 5)	48.3333
391 OK (12/29/2006 a)	466 OK (4/20/2006 a)	(391 - 466)/(9 - 5)	-18.75
798 OK (3/16/2007 a)	466 OK (4/20/2006 a)	(798 - 466)/(10 - 5)	66.4
1420 OK (6/11/2007 a)	466 OK (4/20/2006 a)	(1420 - 466)/(11 - 5)	159
1450 OK (7/13/2006 a)	1120 OK (5/11/2006 a)	(1450 - 1120)/(7 - 6)	330
611 OK (9/22/2006 a)	1120 OK (5/11/2006 a)	(611 - 1120)/(8 - 6)	-254.5

391 OK (12/29/2006 a)	1120 OK (5/11/2006 a)	(391 - 1120)/(9 - 6)	-243
798 OK (3/16/2007 a)	1120 OK (5/11/2006 a)	(798 - 1120)/(10 - 6)	-80.5
1420 OK (6/11/2007 a)	1120 OK (5/11/2006 a)	(1420 - 1120)/(11 - 6)	60
611 OK (9/22/2006 a)	1450 OK (7/13/2006 a)	(611 - 1450)/(8 - 7)	-839
391 OK (12/29/2006 a)	1450 OK (7/13/2006 a)	(391 - 1450)/(9 - 7)	-529.5
798 OK (3/16/2007 a)	1450 OK (7/13/2006 a)	(798 - 1450)/(10 - 7)	-217.333
1420 OK (6/11/2007 a)	1450 OK (7/13/2006 a)	(1420 - 1450)/(11 - 7)	-7.5
391 OK (12/29/2006 a)	611 OK (9/22/2006 a)	(391 - 611)/(9 - 8)	-220
798 OK (3/16/2007 a)	611 OK (9/22/2006 a)	(798 - 611)/(10 - 8)	93.5
1420 OK (6/11/2007 a)	611 OK (9/22/2006 a)	(1420 - 611)/(11 - 8)	269.667
798 OK (3/16/2007 a)	391 OK (12/29/2006 a)	(798 - 391)/(10 - 9)	407
1420 OK (6/11/2007 a)	391 OK (12/29/2006 a)	(1420 - 391)/(11 - 9)	514.5
1420 OK (6/11/2007 a)	798 OK (3/16/2007 a)	(1420 - 798)/(11 - 10)	622

Number of Q values = 55

Ordered Q Values

n	Q
1	-839
2	-529.5
3	-254.5
4	-243
5	-220
6	-217.333
7	-192
8	-97.5
9	-80.5
10	-38.6667
11	-27.2857
12	-18.75
13	-7.5
14	-3
15	0.166667
16	0.8
17	4.83333
18	9.875
19	25
20	27
21	38
22	38.5
23	39
24	42.7143
25	44.2
26	48.3333
27	54
28	56
29	58.2857
30	60
31	66.4
32	68.5
33	79
34	93.1111

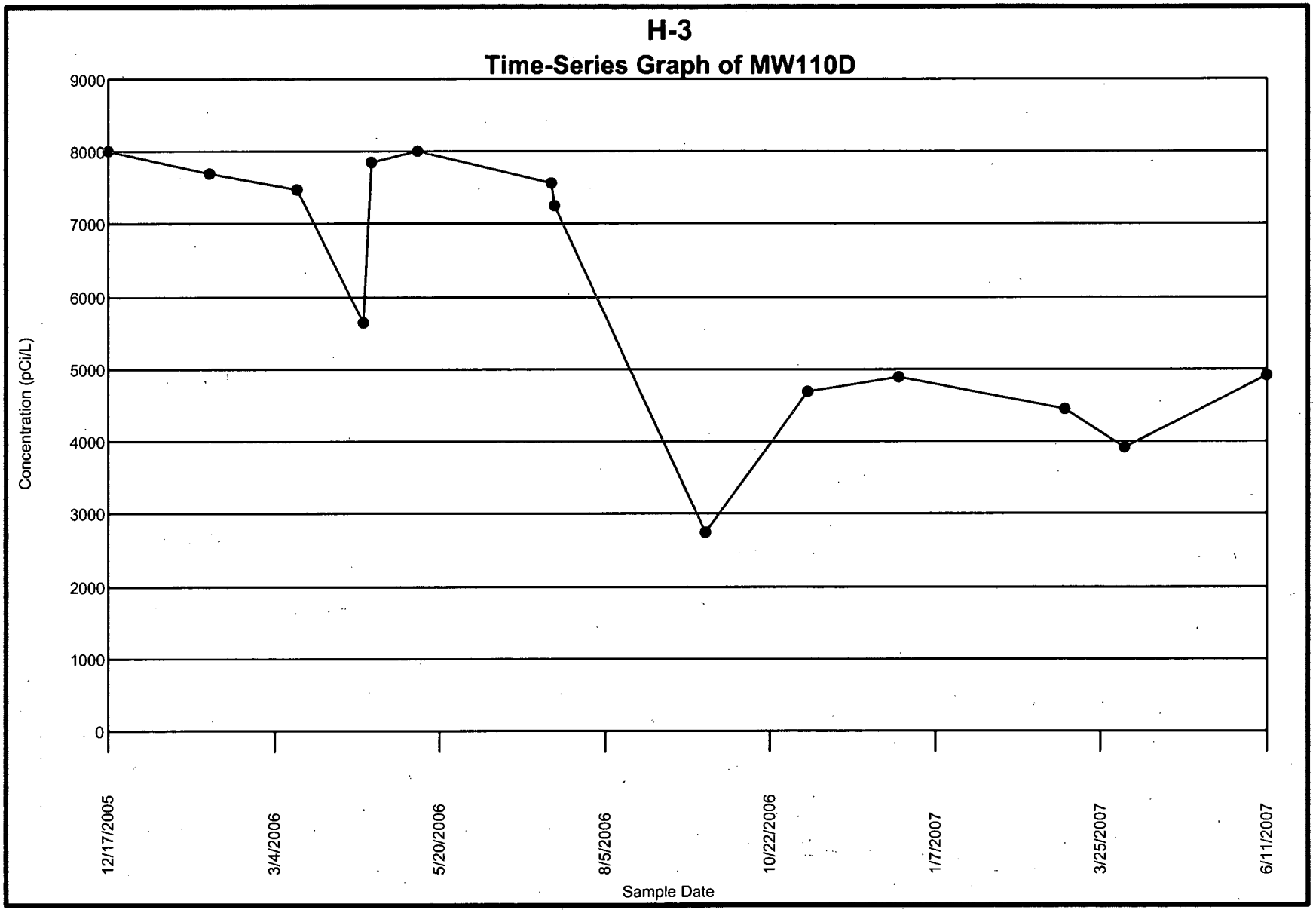
35	93.5
36	110.8
37	128.75
38	134.5
39	147.571
40	159
41	161.6
42	173.6
43	189.667
44	243.333
45	265
46	269.667
47	270
48	330
49	354.333
50	366.5
51	407
52	492
53	514.5
54	622
55	654

Sen's Estimator (Median Q) is 56

Time Period	Observations
12/17/2005	1
2/2/2006	1
2/21/2006	1
3/11/2006	1
4/20/2006	1
5/11/2006	1
7/13/2006	1
9/22/2006	1
12/29/2006	1
3/16/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 4.83333 = Q(17)
Upper limit is 147.571 = Q(39)
4.83333 > 0 indicating an upward trend in data.


H-3
Time-Series Graph of MW110D
Concentration (pCi/L)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
12/17/2005
3/4/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/25/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW110D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
7700 OK (2/2/2006 a)	8010 OK (12/17/2005 a)	(7700 - 8010)/(2 - 1)	-310
7480 OK (3/15/2006 a)	8010 OK (12/17/2005 a)	(7480 - 8010)/(3 - 1)	-265
5630 OK (4/15/2006 a)	8010 OK (12/17/2005 a)	(5630 - 8010)/(4 - 1)	-793.333
7850 OK (4/19/2006 a)	8010 OK (12/17/2005 a)	(7850 - 8010)/(5 - 1)	-40
8000 OK (5/10/2006 a)	8010 OK (12/17/2005 a)	(8000 - 8010)/(6 - 1)	-2
7570 OK (7/12/2006 a)	8010 OK (12/17/2005 a)	(7570 - 8010)/(7 - 1)	-73.3333
7260 OK (7/13/2006 a)	8010 OK (12/17/2005 a)	(7260 - 8010)/(8 - 1)	-107.143
2750 OK (9/22/2006 a)	8010 OK (12/17/2005 a)	(2750 - 8010)/(9 - 1)	-657.5
4690 OK (11/9/2006 a)	8010 OK (12/17/2005 a)	(4690 - 8010)/(10 - 1)	-368.889
4890 OK (12/21/2006 a)	8010 OK (12/17/2005 a)	(4890 - 8010)/(11 - 1)	-312
4440 OK (3/9/2007 a)	8010 OK (12/17/2005 a)	(4440 - 8010)/(12 - 1)	-324.545
3910 OK (4/6/2007 a)	8010 OK (12/17/2005 a)	(3910 - 8010)/(13 - 1)	-341.667
4910 OK (6/11/2007 a)	8010 OK (12/17/2005 a)	(4910 - 8010)/(14 - 1)	-238.462
7480 OK (3/15/2006 a)	7700 OK (2/2/2006 a)	(7480 - 7700)/(3 - 2)	-220
5630 OK (4/15/2006 a)	7700 OK (2/2/2006 a)	(5630 - 7700)/(4 - 2)	-1035
7850 OK (4/19/2006 a)	7700 OK (2/2/2006 a)	(7850 - 7700)/(5 - 2)	50
8000 OK (5/10/2006 a)	7700 OK (2/2/2006 a)	(8000 - 7700)/(6 - 2)	75
7570 OK (7/12/2006 a)	7700 OK (2/2/2006 a)	(7570 - 7700)/(7 - 2)	-26
7260 OK (7/13/2006 a)	7700 OK (2/2/2006 a)	(7260 - 7700)/(8 - 2)	-73.3333
2750 OK (9/22/2006 a)	7700 OK (2/2/2006 a)	(2750 - 7700)/(9 - 2)	-707.143
4690 OK (11/9/2006 a)	7700 OK (2/2/2006 a)	(4690 - 7700)/(10 - 2)	-376.25
4890 OK (12/21/2006 a)	7700 OK (2/2/2006 a)	(4890 - 7700)/(11 - 2)	-312.222
4440 OK (3/9/2007 a)	7700 OK (2/2/2006 a)	(4440 - 7700)/(12 - 2)	-326
3910 OK (4/6/2007 a)	7700 OK (2/2/2006 a)	(3910 - 7700)/(13 - 2)	-344.545
4910 OK (6/11/2007 a)	7700 OK (2/2/2006 a)	(4910 - 7700)/(14 - 2)	-232.5
5630 OK (4/15/2006 a)	7480 OK (3/15/2006 a)	(5630 - 7480)/(4 - 3)	-1850
7850 OK (4/19/2006 a)	7480 OK (3/15/2006 a)	(7850 - 7480)/(5 - 3)	185
8000 OK (5/10/2006 a)	7480 OK (3/15/2006 a)	(8000 - 7480)/(6 - 3)	173.333
7570 OK (7/12/2006 a)	7480 OK (3/15/2006 a)	(7570 - 7480)/(7 - 3)	22.5
7260 OK (7/13/2006 a)	7480 OK (3/15/2006 a)	(7260 - 7480)/(8 - 3)	-44
2750 OK (9/22/2006 a)	7480 OK (3/15/2006 a)	(2750 - 7480)/(9 - 3)	-788.333
4690 OK (11/9/2006 a)	7480 OK (3/15/2006 a)	(4690 - 7480)/(10 - 3)	-398.571
4890 OK (12/21/2006 a)	7480 OK (3/15/2006 a)	(4890 - 7480)/(11 - 3)	-323.75
4440 OK (3/9/2007 a)	7480 OK (3/15/2006 a)	(4440 - 7480)/(12 - 3)	-337.778
3910 OK (4/6/2007 a)	7480 OK (3/15/2006 a)	(3910 - 7480)/(13 - 3)	-357
4910 OK (6/11/2007 a)	7480 OK (3/15/2006 a)	(4910 - 7480)/(14 - 3)	-233.636
7850 OK (4/19/2006 a)	5630 OK (4/15/2006 a)	(7850 - 5630)/(5 - 4)	2220
8000 OK (5/10/2006 a)	5630 OK (4/15/2006 a)	(8000 - 5630)/(6 - 4)	1185
7570 OK (7/12/2006 a)	5630 OK (4/15/2006 a)	(7570 - 5630)/(7 - 4)	646.667
7260 OK (7/13/2006 a)	5630 OK (4/15/2006 a)	(7260 - 5630)/(8 - 4)	407.5
2750 OK (9/22/2006 a)	5630 OK (4/15/2006 a)	(2750 - 5630)/(9 - 4)	-576
4690 OK (11/9/2006 a)	5630 OK (4/15/2006 a)	(4690 - 5630)/(10 - 4)	-156.667
4890 OK (12/21/2006 a)	5630 OK (4/15/2006 a)	(4890 - 5630)/(11 - 4)	-105.714
4440 OK (3/9/2007 a)	5630 OK (4/15/2006 a)	(4440 - 5630)/(12 - 4)	-148.75

3910 OK (4/6/2007 a)	5630 OK (4/15/2006 a)	(3910 - 5630)/(13 - 4)	-191.111
4910 OK (6/11/2007 a)	5630 OK (4/15/2006 a)	(4910 - 5630)/(14 - 4)	-72
8000 OK (5/10/2006 a)	7850 OK (4/19/2006 a)	(8000 - 7850)/(6 - 5)	150
7570 OK (7/12/2006 a)	7850 OK (4/19/2006 a)	(7570 - 7850)/(7 - 5)	-140
7260 OK (7/13/2006 a)	7850 OK (4/19/2006 a)	(7260 - 7850)/(8 - 5)	-196.667
2750 OK (9/22/2006 a)	7850 OK (4/19/2006 a)	(2750 - 7850)/(9 - 5)	-1275
4690 OK (11/9/2006 a)	7850 OK (4/19/2006 a)	(4690 - 7850)/(10 - 5)	-632
4890 OK (12/21/2006 a)	7850 OK (4/19/2006 a)	(4890 - 7850)/(11 - 5)	-493.333
4440 OK (3/9/2007 a)	7850 OK (4/19/2006 a)	(4440 - 7850)/(12 - 5)	-487.143
3910 OK (4/6/2007 a)	7850 OK (4/19/2006 a)	(3910 - 7850)/(13 - 5)	-492.5
4910 OK (6/11/2007 a)	7850 OK (4/19/2006 a)	(4910 - 7850)/(14 - 5)	-326.667
7570 OK (7/12/2006 a)	8000 OK (5/10/2006 a)	(7570 - 8000)/(7 - 6)	-430
7260 OK (7/13/2006 a)	8000 OK (5/10/2006 a)	(7260 - 8000)/(8 - 6)	-370
2750 OK (9/22/2006 a)	8000 OK (5/10/2006 a)	(2750 - 8000)/(9 - 6)	-1750
4690 OK (11/9/2006 a)	8000 OK (5/10/2006 a)	(4690 - 8000)/(10 - 6)	-827.5
4890 OK (12/21/2006 a)	8000 OK (5/10/2006 a)	(4890 - 8000)/(11 - 6)	-622
4440 OK (3/9/2007 a)	8000 OK (5/10/2006 a)	(4440 - 8000)/(12 - 6)	-593.333
3910 OK (4/6/2007 a)	8000 OK (5/10/2006 a)	(3910 - 8000)/(13 - 6)	-584.286
4910 OK (6/11/2007 a)	8000 OK (5/10/2006 a)	(4910 - 8000)/(14 - 6)	-386.25
7260 OK (7/13/2006 a)	7570 OK (7/12/2006 a)	(7260 - 7570)/(8 - 7)	-310
2750 OK (9/22/2006 a)	7570 OK (7/12/2006 a)	(2750 - 7570)/(9 - 7)	-2410
4690 OK (11/9/2006 a)	7570 OK (7/12/2006 a)	(4690 - 7570)/(10 - 7)	-960
4890 OK (12/21/2006 a)	7570 OK (7/12/2006 a)	(4890 - 7570)/(11 - 7)	-670
4440 OK (3/9/2007 a)	7570 OK (7/12/2006 a)	(4440 - 7570)/(12 - 7)	-626
3910 OK (4/6/2007 a)	7570 OK (7/12/2006 a)	(3910 - 7570)/(13 - 7)	-610
4910 OK (6/11/2007 a)	7570 OK (7/12/2006 a)	(4910 - 7570)/(14 - 7)	-380
2750 OK (9/22/2006 a)	7260 OK (7/13/2006 a)	(2750 - 7260)/(9 - 8)	-4510
4690 OK (11/9/2006 a)	7260 OK (7/13/2006 a)	(4690 - 7260)/(10 - 8)	-1285
4890 OK (12/21/2006 a)	7260 OK (7/13/2006 a)	(4890 - 7260)/(11 - 8)	-790
4440 OK (3/9/2007 a)	7260 OK (7/13/2006 a)	(4440 - 7260)/(12 - 8)	-705
3910 OK (4/6/2007 a)	7260 OK (7/13/2006 a)	(3910 - 7260)/(13 - 8)	-670
4910 OK (6/11/2007 a)	7260 OK (7/13/2006 a)	(4910 - 7260)/(14 - 8)	-391.667
4690 OK (11/9/2006 a)	2750 OK (9/22/2006 a)	(4690 - 2750)/(10 - 9)	1940
4890 OK (12/21/2006 a)	2750 OK (9/22/2006 a)	(4890 - 2750)/(11 - 9)	1070
4440 OK (3/9/2007 a)	2750 OK (9/22/2006 a)	(4440 - 2750)/(12 - 9)	563.333
3910 OK (4/6/2007 a)	2750 OK (9/22/2006 a)	(3910 - 2750)/(13 - 9)	290
4910 OK (6/11/2007 a)	2750 OK (9/22/2006 a)	(4910 - 2750)/(14 - 9)	432
4890 OK (12/21/2006 a)	4690 OK (11/9/2006 a)	(4890 - 4690)/(11 - 10)	200
4440 OK (3/9/2007 a)	4690 OK (11/9/2006 a)	(4440 - 4690)/(12 - 10)	-125
3910 OK (4/6/2007 a)	4690 OK (11/9/2006 a)	(3910 - 4690)/(13 - 10)	-260
4910 OK (6/11/2007 a)	4690 OK (11/9/2006 a)	(4910 - 4690)/(14 - 10)	55
4440 OK (3/9/2007 a)	4890 OK (12/21/2006 a)	(4440 - 4890)/(12 - 11)	-450
3910 OK (4/6/2007 a)	4890 OK (12/21/2006 a)	(3910 - 4890)/(13 - 11)	-490
4910 OK (6/11/2007 a)	4890 OK (12/21/2006 a)	(4910 - 4890)/(14 - 11)	6.66667
3910 OK (4/6/2007 a)	4440 OK (3/9/2007 a)	(3910 - 4440)/(13 - 12)	-530
4910 OK (6/11/2007 a)	4440 OK (3/9/2007 a)	(4910 - 4440)/(14 - 12)	235
4910 OK (6/11/2007 a)	3910 OK (4/6/2007 a)	(4910 - 3910)/(14 - 13)	1000

Number of Q values = 91

Ordered Q Values

n	Q
1	-4510
2	-2410
3	-1850
4	-1750
5	-1285
6	-1275
7	-1035
8	-960
9	-827.5
10	-793.333
11	-790
12	-788.333
13	-707.143
14	-705
15	-670
16	-670
17	-657.5
18	-632
19	-626
20	-622
21	-610
22	-593.333
23	-584.286
24	-576
25	-530
26	-493.333
27	-492.5
28	-490
29	-487.143
30	-450
31	-430
32	-398.571
33	-391.667
34	-386.25
35	-380
36	-376.25
37	-370
38	-368.889
39	-357
40	-344.545
41	-341.667
42	-337.778
43	-326.667
44	-326
45	-324.545
46	-323.75
47	-312.222
48	-312
49	-310
50	-310
51	-265
52	-260

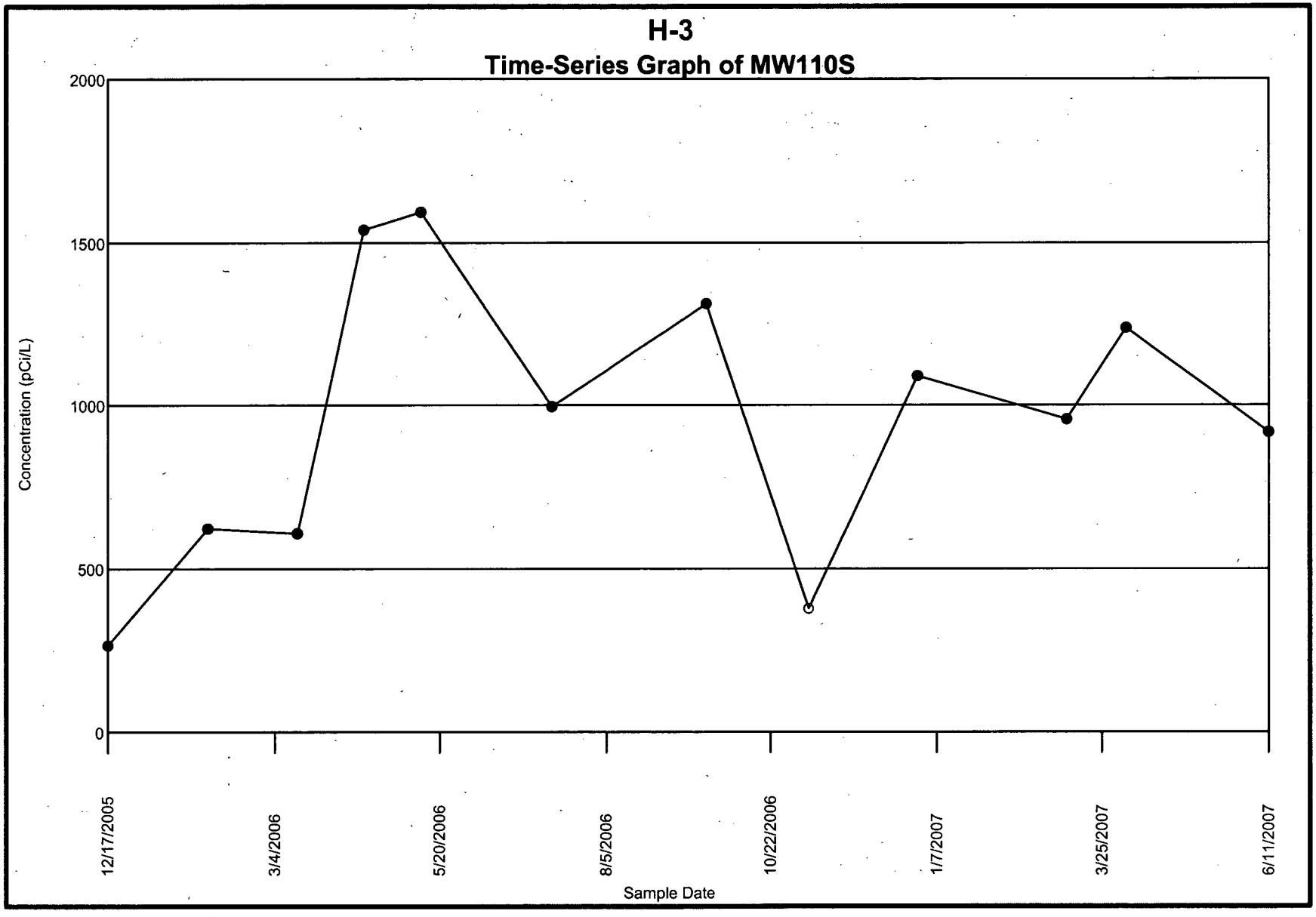
53	-238.462
54	-233.636
55	-232.5
56	-220
57	-196.667
58	-191.111
59	-156.667
60	-148.75
61	-140
62	-125
63	-107.143
64	-105.714
65	-73.3333
66	-73.3333
67	-72
68	-44
69	-40
70	-26
71	-2
72	6.66667
73	22.5
74	50
75	55
76	75
77	150
78	173.333
79	185
80	200
81	235
82	290
83	407.5
84	432
85	563.333
86	646.667
87	1000
88	1070
89	1185
90	1940
91	2220

Sen's Estimator (Median Q) is -323.75

Time Period	Observations
12/17/2005	1
2/2/2006	1
3/15/2006	1
4/15/2006	1
4/19/2006	1
5/10/2006	1
7/12/2006	1
7/13/2006	1
9/22/2006	1
11/9/2006	1
12/21/2006	1
3/9/2007	1
4/6/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is -450 = Q(30)
Upper limit is -125 = Q(62)
-125 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW110S
Concentration (pCi/L)
2000
1500
1000
500
0
12/17/2005
3/4/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/25/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW110S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
625 OK (2/1/2006 a)	266 U (12/17/2005 a)	(625 - 266)/(2 - 1)	359
608 OK (3/15/2006 a)	266 U (12/17/2005 a)	(608 - 266)/(3 - 1)	171
1540 OK (4/15/2006 a)	266 U (12/17/2005 a)	(1540 - 266)/(4 - 1)	424.667
1590 OK (5/12/2006 a)	266 U (12/17/2005 a)	(1590 - 266)/(5 - 1)	331
996 OK (7/12/2006 a)	266 U (12/17/2005 a)	(996 - 266)/(6 - 1)	146
1310 OK (9/22/2006 a)	266 U (12/17/2005 a)	(1310 - 266)/(7 - 1)	174
ND<380 OK (11/9/2006 a)	266 U (12/17/2005 a)	(380 - 266)/(8 - 1)	16.2857
1090 OK (12/29/2006 a)	266 U (12/17/2005 a)	(1090 - 266)/(9 - 1)	103
959 OK (3/9/2007 a)	266 U (12/17/2005 a)	(959 - 266)/(10 - 1)	77
1240 OK (4/6/2007 a)	266 U (12/17/2005 a)	(1240 - 266)/(11 - 1)	97.4
920 OK (6/11/2007 a)	266 U (12/17/2005 a)	(920 - 266)/(12 - 1)	59.4545
608 OK (3/15/2006 a)	625 OK (2/1/2006 a)	(608 - 625)/(3 - 2)	-17
1540 OK (4/15/2006 a)	625 OK (2/1/2006 a)	(1540 - 625)/(4 - 2)	457.5
1590 OK (5/12/2006 a)	625 OK (2/1/2006 a)	(1590 - 625)/(5 - 2)	321.667
996 OK (7/12/2006 a)	625 OK (2/1/2006 a)	(996 - 625)/(6 - 2)	92.75
1310 OK (9/22/2006 a)	625 OK (2/1/2006 a)	(1310 - 625)/(7 - 2)	137
ND<380 OK (11/9/2006 a)	625 OK (2/1/2006 a)	(380 - 625)/(8 - 2)	-40.8333
1090 OK (12/29/2006 a)	625 OK (2/1/2006 a)	(1090 - 625)/(9 - 2)	66.4286
959 OK (3/9/2007 a)	625 OK (2/1/2006 a)	(959 - 625)/(10 - 2)	41.75
1240 OK (4/6/2007 a)	625 OK (2/1/2006 a)	(1240 - 625)/(11 - 2)	68.3333
920 OK (6/11/2007 a)	625 OK (2/1/2006 a)	(920 - 625)/(12 - 2)	29.5
1540 OK (4/15/2006 a)	608 OK (3/15/2006 a)	(1540 - 608)/(4 - 3)	932
1590 OK (5/12/2006 a)	608 OK (3/15/2006 a)	(1590 - 608)/(5 - 3)	491
996 OK (7/12/2006 a)	608 OK (3/15/2006 a)	(996 - 608)/(6 - 3)	129.333
1310 OK (9/22/2006 a)	608 OK (3/15/2006 a)	(1310 - 608)/(7 - 3)	175.5
ND<380 OK (11/9/2006 a)	608 OK (3/15/2006 a)	(380 - 608)/(8 - 3)	-45.6
1090 OK (12/29/2006 a)	608 OK (3/15/2006 a)	(1090 - 608)/(9 - 3)	80.3333
959 OK (3/9/2007 a)	608 OK (3/15/2006 a)	(959 - 608)/(10 - 3)	50.1429
1240 OK (4/6/2007 a)	608 OK (3/15/2006 a)	(1240 - 608)/(11 - 3)	79
920 OK (6/11/2007 a)	608 OK (3/15/2006 a)	(920 - 608)/(12 - 3)	34.6667
1590 OK (5/12/2006 a)	1540 OK (4/15/2006 a)	(1590 - 1540)/(5 - 4)	50
996 OK (7/12/2006 a)	1540 OK (4/15/2006 a)	(996 - 1540)/(6 - 4)	-272
1310 OK (9/22/2006 a)	1540 OK (4/15/2006 a)	(1310 - 1540)/(7 - 4)	-76.6667
ND<380 OK (11/9/2006 a)	1540 OK (4/15/2006 a)	(380 - 1540)/(8 - 4)	-290
1090 OK (12/29/2006 a)	1540 OK (4/15/2006 a)	(1090 - 1540)/(9 - 4)	-90
959 OK (3/9/2007 a)	1540 OK (4/15/2006 a)	(959 - 1540)/(10 - 4)	-96.8333
1240 OK (4/6/2007 a)	1540 OK (4/15/2006 a)	(1240 - 1540)/(11 - 4)	-42.8571
920 OK (6/11/2007 a)	1540 OK (4/15/2006 a)	(920 - 1540)/(12 - 4)	-77.5
996 OK (7/12/2006 a)	1590 OK (5/12/2006 a)	(996 - 1590)/(6 - 5)	-594
1310 OK (9/22/2006 a)	1590 OK (5/12/2006 a)	(1310 - 1590)/(7 - 5)	-140
ND<380 OK (11/9/2006 a)	1590 OK (5/12/2006 a)	(380 - 1590)/(8 - 5)	-403.333
1090 OK (12/29/2006 a)	1590 OK (5/12/2006 a)	(1090 - 1590)/(9 - 5)	-125
959 OK (3/9/2007 a)	1590 OK (5/12/2006 a)	(959 - 1590)/(10 - 5)	-126.2

1240 OK (4/6/2007 a)	1590 OK (5/12/2006 a)	(1240 - 1590)/(11 - 5)	-58.3333
920 OK (6/11/2007 a)	1590 OK (5/12/2006 a)	(920 - 1590)/(12 - 5)	-95.7143
1310 OK (9/22/2006 a)	996 OK (7/12/2006 a)	(1310 - 996)/(7 - 6)	314
ND<380 OK (11/9/2006 a)	996 OK (7/12/2006 a)	(380 - 996)/(8 - 6)	-308
1090 OK (12/29/2006 a)	996 OK (7/12/2006 a)	(1090 - 996)/(9 - 6)	31.3333
959 OK (3/9/2007 a)	996 OK (7/12/2006 a)	(959 - 996)/(10 - 6)	-9.25
1240 OK (4/6/2007 a)	996 OK (7/12/2006 a)	(1240 - 996)/(11 - 6)	48.8
920 OK (6/11/2007 a)	996 OK (7/12/2006 a)	(920 - 996)/(12 - 6)	-12.6667
ND<380 OK (11/9/2006 a)	1310 OK (9/22/2006 a)	(380 - 1310)/(8 - 7)	-930
1090 OK (12/29/2006 a)	1310 OK (9/22/2006 a)	(1090 - 1310)/(9 - 7)	-110
959 OK (3/9/2007 a)	1310 OK (9/22/2006 a)	(959 - 1310)/(10 - 7)	-117
1240 OK (4/6/2007 a)	1310 OK (9/22/2006 a)	(1240 - 1310)/(11 - 7)	-17.5
920 OK (6/11/2007 a)	1310 OK (9/22/2006 a)	(920 - 1310)/(12 - 7)	-78
1090 OK (12/29/2006 a)	ND<380 OK (11/9/2006 a)	(1090 - 380)/(9 - 8)	710
959 OK (3/9/2007 a)	ND<380 OK (11/9/2006 a)	(959 - 380)/(10 - 8)	289.5
1240 OK (4/6/2007 a)	ND<380 OK (11/9/2006 a)	(1240 - 380)/(11 - 8)	286.667
920 OK (6/11/2007 a)	ND<380 OK (11/9/2006 a)	(920 - 380)/(12 - 8)	135
959 OK (3/9/2007 a)	1090 OK (12/29/2006 a)	(959 - 1090)/(10 - 9)	-131
1240 OK (4/6/2007 a)	1090 OK (12/29/2006 a)	(1240 - 1090)/(11 - 9)	75
920 OK (6/11/2007 a)	1090 OK (12/29/2006 a)	(920 - 1090)/(12 - 9)	-56.6667
1240 OK (4/6/2007 a)	959 OK (3/9/2007 a)	(1240 - 959)/(11 - 10)	281
920 OK (6/11/2007 a)	959 OK (3/9/2007 a)	(920 - 959)/(12 - 10)	-19.5
920 OK (6/11/2007 a)	1240 OK (4/6/2007 a)	(920 - 1240)/(12 - 11)	-320

Number of Q values = 66

Ordered Q Values

n	Q
1	-930
2	-594
3	-403.333
4	-320
5	-308
6	-290
7	-272
8	-140
9	-131
10	-126.2
11	-125
12	-117
13	-110
14	-96.8333
15	-95.7143
16	-90
17	-78
18	-77.5
19	-76.6667
20	-58.3333
21	-56.6667
22	-45.6

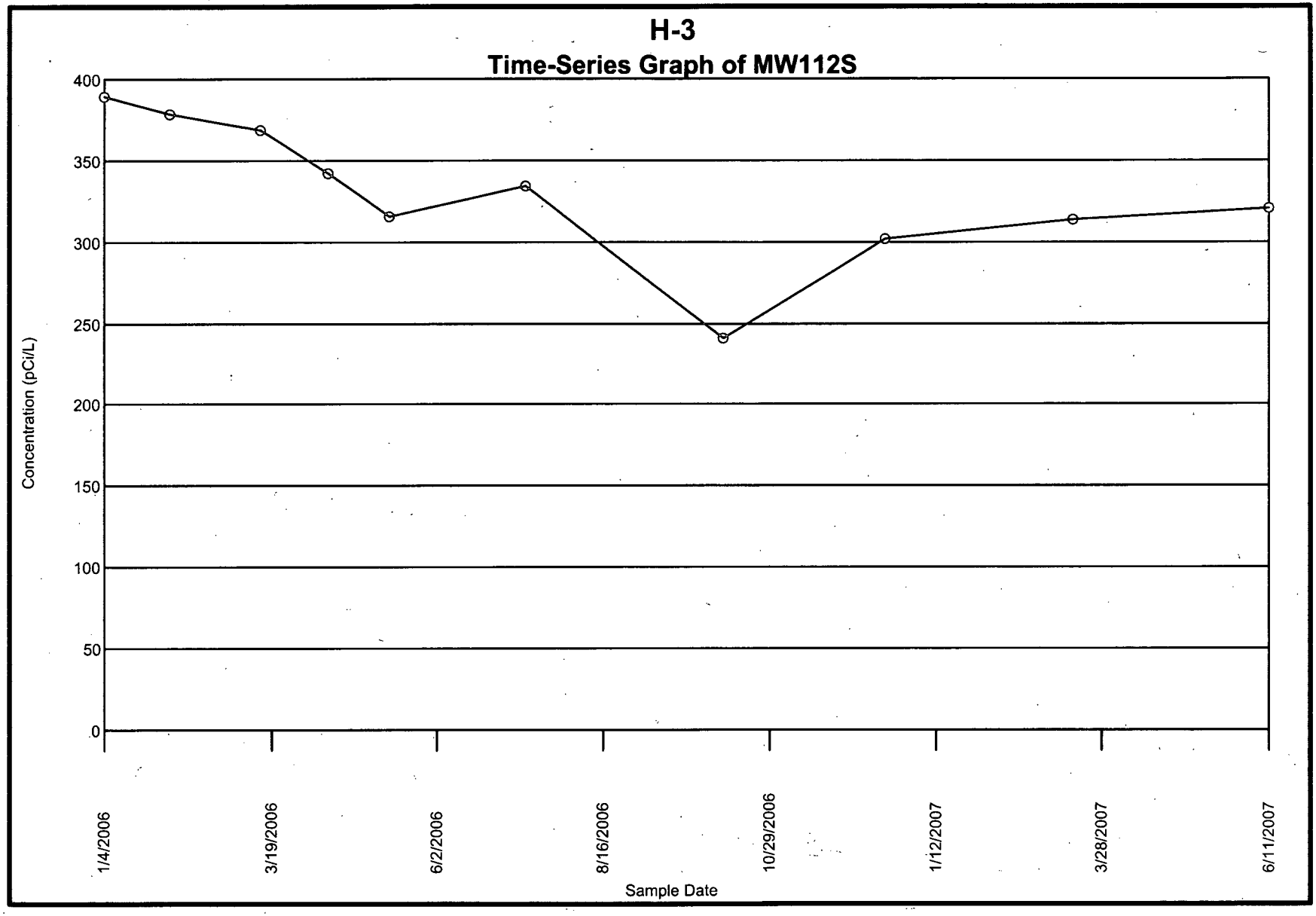
23	-42.8571
24	-40.8333
25	-19.5
26	-17.5
27	-17
28	-12.6667
29	-9.25
30	16.2857
31	29.5
32	31.3333
33	34.6667
34	41.75
35	48.8
36	50
37	50.1429
38	59.4545
39	66.4286
40	68.3333
41	75
42	77
43	79
44	80.3333
45	92.75
46	97.4
47	103
48	129.333
49	135
50	137
51	146
52	171
53	174
54	175.5
55	281
56	286.667
57	289.5
58	314
59	321.667
60	331
61	359
62	424.667
63	457.5
64	491
65	710
66	932

Sen's Estimator (Median Q) is 38.2083

Time Period	Observations
12/17/2005	1
2/1/2006	1
3/15/2006	1
4/15/2006	1
5/12/2006	1
7/12/2006	1
9/22/2006	1
11/9/2006	1
12/29/2006	1
3/9/2007	1

4/6/2007 1
6/11/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -56.6667 = Q(21)
Upper limit is 97.4 = Q(46)
-56.6667 < 0 < 97.4 indicating no trend in data.


H-3
Time-Series Graph of MW112S
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW112S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<378 U (2/2/2006 a)	ND<389 U (1/4/2006 a)	(378 - 389)/(2 - 1)	-11
ND<369 U (3/15/2006 a)	ND<389 U (1/4/2006 a)	(369 - 389)/(3 - 1)	-10
ND<342 U (4/15/2006 a)	ND<389 U (1/4/2006 a)	(342 - 389)/(4 - 1)	-15.6667
ND<315 OK (5/12/2006 a)	ND<389 U (1/4/2006 a)	(315 - 389)/(5 - 1)	-18.5
ND<334 OK (7/12/2006 a)	ND<389 U (1/4/2006 a)	(334 - 389)/(6 - 1)	-11
ND<241 OK (10/9/2006 a)	ND<389 U (1/4/2006 a)	(241 - 389)/(7 - 1)	-24.6667
ND<302 OK (12/21/2006 a)	ND<389 U (1/4/2006 a)	(302 - 389)/(8 - 1)	-12.4286
ND<314 OK (3/15/2007 a)	ND<389 U (1/4/2006 a)	(314 - 389)/(9 - 1)	-9.375
ND<320 OK (6/11/2007 a)	ND<389 U (1/4/2006 a)	(320 - 389)/(10 - 1)	-7.66667
ND<369 U (3/15/2006 a)	ND<378 U (2/2/2006 a)	(369 - 378)/(3 - 2)	-9
ND<342 U (4/15/2006 a)	ND<378 U (2/2/2006 a)	(342 - 378)/(4 - 2)	-18
ND<315 OK (5/12/2006 a)	ND<378 U (2/2/2006 a)	(315 - 378)/(5 - 2)	-21
ND<334 OK (7/12/2006 a)	ND<378 U (2/2/2006 a)	(334 - 378)/(6 - 2)	-11
ND<241 OK (10/9/2006 a)	ND<378 U (2/2/2006 a)	(241 - 378)/(7 - 2)	-27.4
ND<302 OK (12/21/2006 a)	ND<378 U (2/2/2006 a)	(302 - 378)/(8 - 2)	-12.6667
ND<314 OK (3/15/2007 a)	ND<378 U (2/2/2006 a)	(314 - 378)/(9 - 2)	-9.14286
ND<320 OK (6/11/2007 a)	ND<378 U (2/2/2006 a)	(320 - 378)/(10 - 2)	-7.25
ND<342 U (4/15/2006 a)	ND<369 U (3/15/2006 a)	(342 - 369)/(4 - 3)	-27
ND<315 OK (5/12/2006 a)	ND<369 U (3/15/2006 a)	(315 - 369)/(5 - 3)	-27
ND<334 OK (7/12/2006 a)	ND<369 U (3/15/2006 a)	(334 - 369)/(6 - 3)	-11.6667
ND<241 OK (10/9/2006 a)	ND<369 U (3/15/2006 a)	(241 - 369)/(7 - 3)	-32
ND<302 OK (12/21/2006 a)	ND<369 U (3/15/2006 a)	(302 - 369)/(8 - 3)	-13.4
ND<314 OK (3/15/2007 a)	ND<369 U (3/15/2006 a)	(314 - 369)/(9 - 3)	-9.16667
ND<320 OK (6/11/2007 a)	ND<369 U (3/15/2006 a)	(320 - 369)/(10 - 3)	-7
ND<315 OK (5/12/2006 a)	ND<342 U (4/15/2006 a)	(315 - 342)/(5 - 4)	-27
ND<334 OK (7/12/2006 a)	ND<342 U (4/15/2006 a)	(334 - 342)/(6 - 4)	-4
ND<241 OK (10/9/2006 a)	ND<342 U (4/15/2006 a)	(241 - 342)/(7 - 4)	-33.6667
ND<302 OK (12/21/2006 a)	ND<342 U (4/15/2006 a)	(302 - 342)/(8 - 4)	-10
ND<314 OK (3/15/2007 a)	ND<342 U (4/15/2006 a)	(314 - 342)/(9 - 4)	-5.6
ND<320 OK (6/11/2007 a)	ND<342 U (4/15/2006 a)	(320 - 342)/(10 - 4)	-3.66667
ND<334 OK (7/12/2006 a)	ND<315 OK (5/12/2006 a)	(334 - 315)/(6 - 5)	19
ND<241 OK (10/9/2006 a)	ND<315 OK (5/12/2006 a)	(241 - 315)/(7 - 5)	-37
ND<302 OK (12/21/2006 a)	ND<315 OK (5/12/2006 a)	(302 - 315)/(8 - 5)	-4.33333
ND<314 OK (3/15/2007 a)	ND<315 OK (5/12/2006 a)	(314 - 315)/(9 - 5)	-0.25
ND<320 OK (6/11/2007 a)	ND<315 OK (5/12/2006 a)	(320 - 315)/(10 - 5)	1
ND<241 OK (10/9/2006 a)	ND<334 OK (7/12/2006 a)	(241 - 334)/(7 - 6)	-93
ND<302 OK (12/21/2006 a)	ND<334 OK (7/12/2006 a)	(302 - 334)/(8 - 6)	-16
ND<314 OK (3/15/2007 a)	ND<334 OK (7/12/2006 a)	(314 - 334)/(9 - 6)	-6.66667
ND<320 OK (6/11/2007 a)	ND<334 OK (7/12/2006 a)	(320 - 334)/(10 - 6)	-3.5
ND<302 OK (12/21/2006 a)	ND<241 OK (10/9/2006 a)	(302 - 241)/(8 - 7)	61
ND<314 OK (3/15/2007 a)	ND<241 OK (10/9/2006 a)	(314 - 241)/(9 - 7)	36.5

ND<320 OK (6/11/2007 a)	ND<241 OK (10/9/2006 a)	(320 - 241)/(10 - 7)	26.3333
ND<314 OK (3/15/2007 a)	ND<302 OK (12/21/2006 a)	(314 - 302)/(9 - 8)	12
ND<320 OK (6/11/2007 a)	ND<302 OK (12/21/2006 a)	(320 - 302)/(10 - 8)	9
ND<320 OK (6/11/2007 a)	ND<314 OK (3/15/2007 a)	(320 - 314)/(10 - 9)	6

Number of Q values = 45

Ordered Q Values

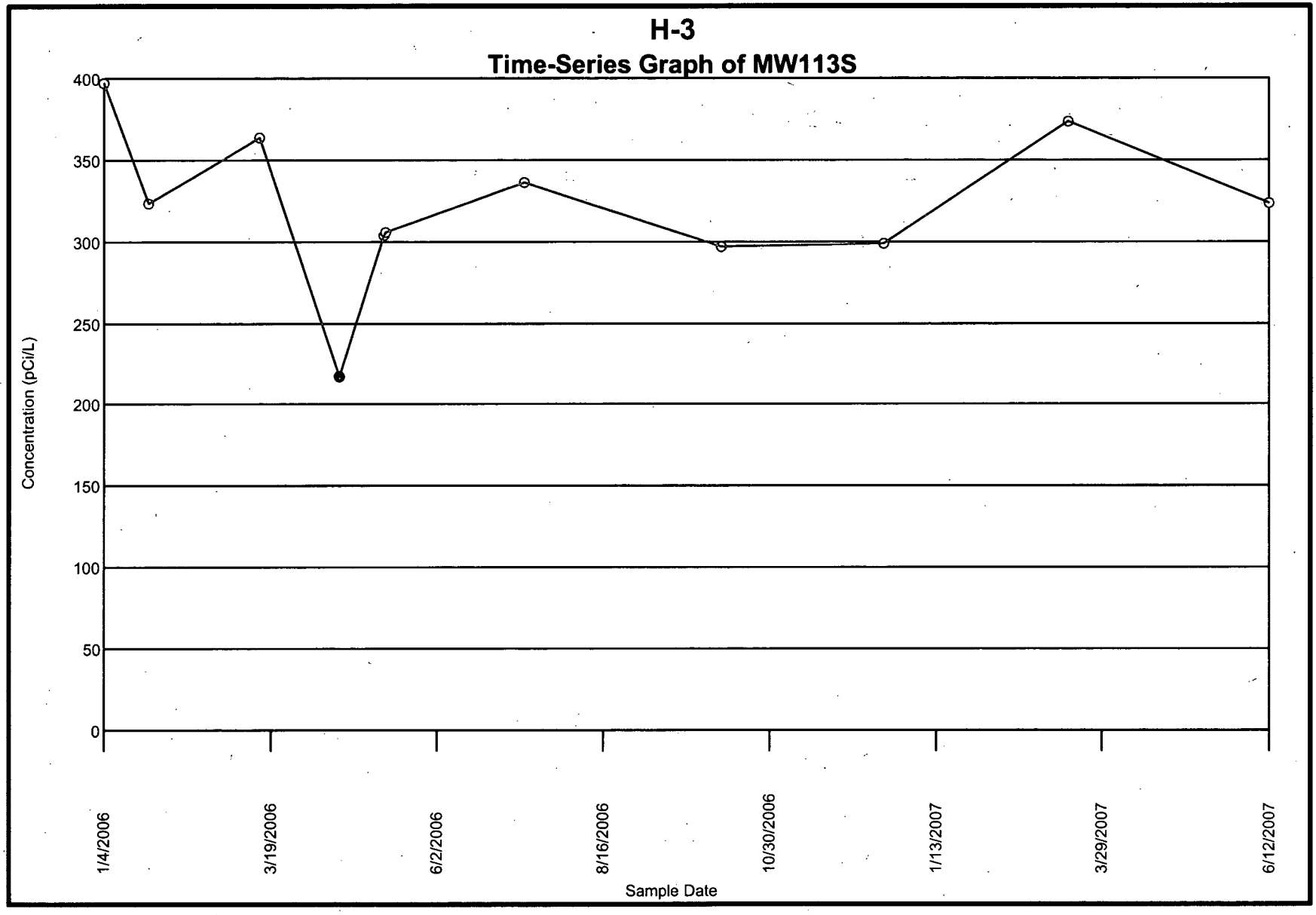
n	Q
1	-93
2	-37
3	-33.6667
4	-32
5	-27.4
6	-27
7	-27
8	-27
9	-24.6667
10	-21
11	-18.5
12	-18
13	-16
14	-15.6667
15	-13.4
16	-12.6667
17	-12.4286
18	-11.6667
19	-11
20	-11
21	-11
22	-10
23	-10
24	-9.375
25	-9.16667
26	-9.14286
27	-9
28	-7.66667
29	-7.25
30	-7
31	-6.66667
32	-5.6
33	-4.33333
34	-4
35	-3.66667
36	-3.5
37	-0.25
38	1
39	6
40	9
41	12
42	19
43	26.3333
44	36.5
45	61

Sen's Estimator (Median Q) is -10

Time Period	Observations
1/4/2006	1
2/2/2006	1
3/15/2006	1
4/15/2006	1
5/12/2006	1
7/12/2006	1
10/9/2006	1
12/21/2006	1
3/15/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -16 = Q(13)
Upper limit is -4.33333 = Q(33)
-4.33333 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW113S
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW113S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<323 U (1/24/2006 a)	ND<397 U (1/4/2006 a)	(323 - 397)/(2 - 1)	-74
ND<364 U (3/15/2006 ~)	ND<397 U (1/4/2006 a)	(364 - 397)/(3 - 1)	-16.5
217 U (4/20/2006 a)	ND<397 U (1/4/2006 a)	(217 - 397)/(4 - 1)	-60
ND<304 OK (5/10/2006 a)	ND<397 U (1/4/2006 a)	(304 - 397)/(5 - 1)	-23.25
ND<306 OK (5/11/2006 ~)	ND<397 U (1/4/2006 a)	(306 - 397)/(6 - 1)	-18.2
ND<336 OK (7/12/2006 a)	ND<397 U (1/4/2006 a)	(336 - 397)/(7 - 1)	-10.1667
ND<297 OK (10/9/2006 a)	ND<397 U (1/4/2006 a)	(297 - 397)/(8 - 1)	-14.2857
ND<299 OK (12/21/2006 a)	ND<397 U (1/4/2006 a)	(299 - 397)/(9 - 1)	-12.25
ND<373 OK (3/14/2007 a)	ND<397 U (1/4/2006 a)	(373 - 397)/(10 - 1)	-2.66667
ND<323 OK (6/12/2007 a)	ND<397 U (1/4/2006 a)	(323 - 397)/(11 - 1)	-7.4
ND<364 U (3/15/2006 ~)	ND<323 U (1/24/2006 a)	(364 - 323)/(3 - 2)	41
217 U (4/20/2006 a)	ND<323 U (1/24/2006 a)	(217 - 323)/(4 - 2)	-53
ND<304 OK (5/10/2006 a)	ND<323 U (1/24/2006 a)	(304 - 323)/(5 - 2)	-6.33333
ND<306 OK (5/11/2006 ~)	ND<323 U (1/24/2006 a)	(306 - 323)/(6 - 2)	-4.25
ND<336 OK (7/12/2006 a)	ND<323 U (1/24/2006 a)	(336 - 323)/(7 - 2)	2.6
ND<297 OK (10/9/2006 a)	ND<323 U (1/24/2006 a)	(297 - 323)/(8 - 2)	-4.33333
ND<299 OK (12/21/2006 a)	ND<323 U (1/24/2006 a)	(299 - 323)/(9 - 2)	-3.42857
ND<373 OK (3/14/2007 a)	ND<323 U (1/24/2006 a)	(373 - 323)/(10 - 2)	6.25
ND<323 OK (6/12/2007 a)	ND<323 U (1/24/2006 a)	(323 - 323)/(11 - 2)	0
217 U (4/20/2006 a)	ND<364 U (3/15/2006 ~)	(217 - 364)/(4 - 3)	-147
ND<304 OK (5/10/2006 a)	ND<364 U (3/15/2006 ~)	(304 - 364)/(5 - 3)	-30
ND<306 OK (5/11/2006 ~)	ND<364 U (3/15/2006 ~)	(306 - 364)/(6 - 3)	-19.3333
ND<336 OK (7/12/2006 a)	ND<364 U (3/15/2006 ~)	(336 - 364)/(7 - 3)	-7
ND<297 OK (10/9/2006 a)	ND<364 U (3/15/2006 ~)	(297 - 364)/(8 - 3)	-13.4
ND<299 OK (12/21/2006 a)	ND<364 U (3/15/2006 ~)	(299 - 364)/(9 - 3)	-10.8333
ND<373 OK (3/14/2007 a)	ND<364 U (3/15/2006 ~)	(373 - 364)/(10 - 3)	1.28571
ND<323 OK (6/12/2007 a)	ND<364 U (3/15/2006 ~)	(323 - 364)/(11 - 3)	-5.125
ND<304 OK (5/10/2006 a)	217 U (4/20/2006 a)	(304 - 217)/(5 - 4)	87
ND<306 OK (5/11/2006 ~)	217 U (4/20/2006 a)	(306 - 217)/(6 - 4)	44.5
ND<336 OK (7/12/2006 a)	217 U (4/20/2006 a)	(336 - 217)/(7 - 4)	39.6667
ND<297 OK (10/9/2006 a)	217 U (4/20/2006 a)	(297 - 217)/(8 - 4)	20
ND<299 OK (12/21/2006 a)	217 U (4/20/2006 a)	(299 - 217)/(9 - 4)	16.4
ND<373 OK (3/14/2007 a)	217 U (4/20/2006 a)	(373 - 217)/(10 - 4)	26
ND<323 OK (6/12/2007 a)	217 U (4/20/2006 a)	(323 - 217)/(11 - 4)	15.1429
ND<306 OK (5/11/2006 ~)	ND<304 OK (5/10/2006 a)	(306 - 304)/(6 - 5)	2
ND<336 OK (7/12/2006 a)	ND<304 OK (5/10/2006 a)	(336 - 304)/(7 - 5)	16
ND<297 OK (10/9/2006 a)	ND<304 OK (5/10/2006 a)	(297 - 304)/(8 - 5)	-2.33333
ND<299 OK (12/21/2006 a)	ND<304 OK (5/10/2006 a)	(299 - 304)/(9 - 5)	-1.25
ND<373 OK (3/14/2007 a)	ND<304 OK (5/10/2006 a)	(373 - 304)/(10 - 5)	13.8
ND<323 OK (6/12/2007 a)	ND<304 OK (5/10/2006 a)	(323 - 304)/(11 - 5)	3.16667
ND<336 OK (7/12/2006 a)	ND<306 OK (5/11/2006 ~)	(336 - 306)/(7 - 6)	30
ND<297 OK (10/9/2006 a)	ND<306 OK (5/11/2006 ~)	(297 - 306)/(8 - 6)	-4.5

ND<299 OK (12/21/2006 a)	ND<306 OK (5/11/2006 ~)	(299 - 306)/(9 - 6)	-2.33333
ND<373 OK (3/14/2007 a)	ND<306 OK (5/11/2006 ~)	(373 - 306)/(10 - 6)	16.75
ND<323 OK (6/12/2007 a)	ND<306 OK (5/11/2006 ~)	(323 - 306)/(11 - 6)	3.4
ND<297 OK (10/9/2006 a)	ND<336 OK (7/12/2006 a)	(297 - 336)/(8 - 7)	-39
ND<299 OK (12/21/2006 a)	ND<336 OK (7/12/2006 a)	(299 - 336)/(9 - 7)	-18.5
ND<373 OK (3/14/2007 a)	ND<336 OK (7/12/2006 a)	(373 - 336)/(10 - 7)	12.3333
ND<323 OK (6/12/2007 a)	ND<336 OK (7/12/2006 a)	(323 - 336)/(11 - 7)	-3.25
ND<299 OK (12/21/2006 a)	ND<297 OK (10/9/2006 a)	(299 - 297)/(9 - 8)	2
ND<373 OK (3/14/2007 a)	ND<297 OK (10/9/2006 a)	(373 - 297)/(10 - 8)	38
ND<323 OK (6/12/2007 a)	ND<297 OK (10/9/2006 a)	(323 - 297)/(11 - 8)	8.66667
ND<373 OK (3/14/2007 a)	ND<299 OK (12/21/2006 a)	(373 - 299)/(10 - 9)	74
ND<323 OK (6/12/2007 a)	ND<299 OK (12/21/2006 a)	(323 - 299)/(11 - 9)	12
ND<323 OK (6/12/2007 a)	ND<373 OK (3/14/2007 a)	(323 - 373)/(11 - 10)	-50

Number of Q values = 55

Ordered Q Values

n	Q
1	-147
2	-74
3	-60
4	-53
5	-50
6	-39
7	-30
8	-23.25
9	-19.3333
10	-18.5
11	-18.2
12	-16.5
13	-14.2857
14	-13.4
15	-12.25
16	-10.8333
17	-10.1667
18	-7.4
19	-7
20	-6.33333
21	-5.125
22	-4.5
23	-4.33333
24	-4.25
25	-3.42857
26	-3.25
27	-2.66667
28	-2.33333
29	-2.33333
30	-1.25
31	0
32	1.28571
33	2
34	2

35	2.6
36	3.16667
37	3.4
38	6.25
39	8.66667
40	12
41	12.3333
42	13.8
43	15.1429
44	16
45	16.4
46	16.75
47	20
48	26
49	30
50	38
51	39.6667
52	41
53	44.5
54	74
55	87

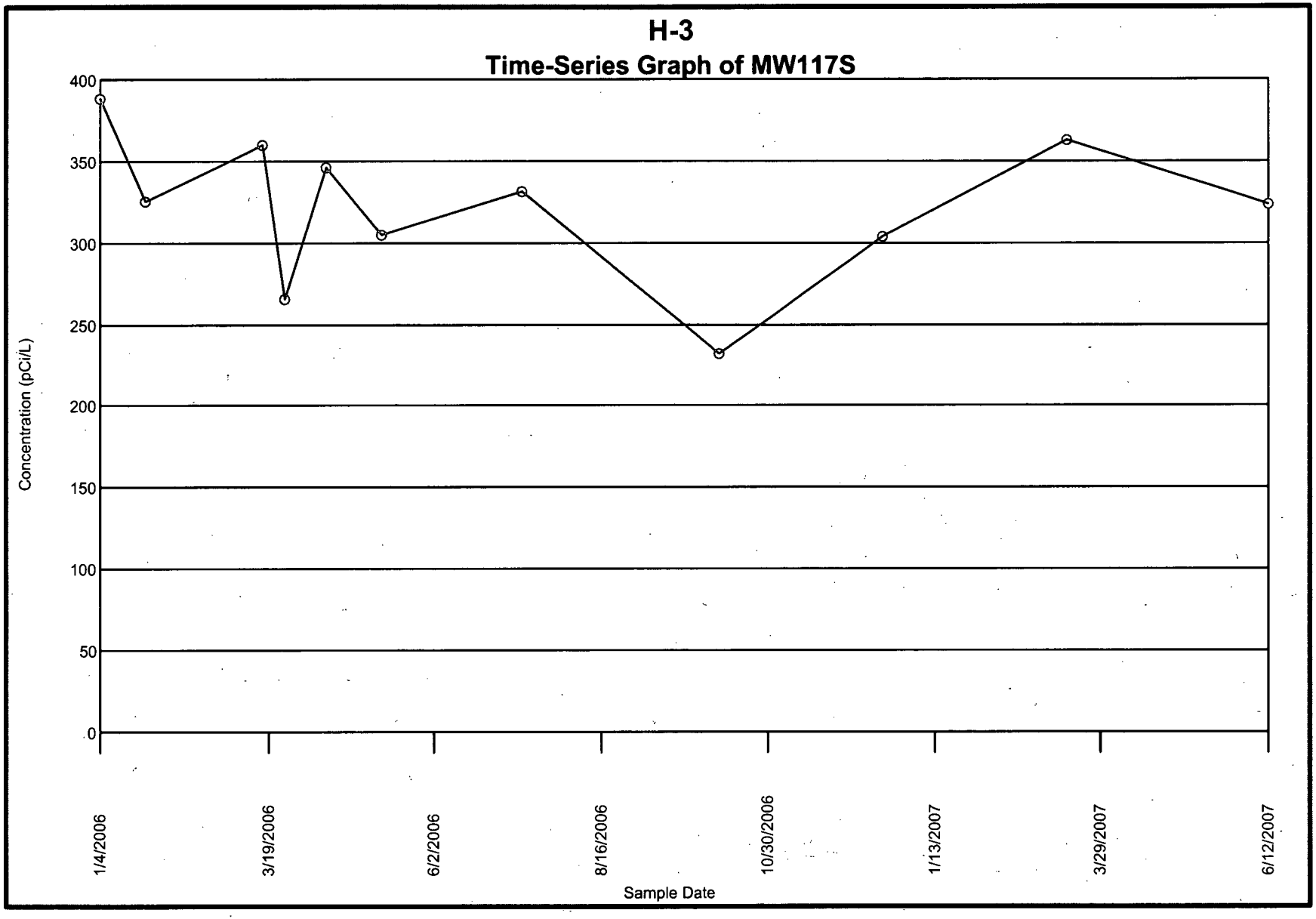
Sen's Estimator (Median Q) is -2.33333

Tied Group	Value	Members
1	323	2

Time Period	Observations
1/4/2006	1
1/24/2006	1
3/15/2006	1
4/20/2006	1
5/10/2006	1
5/11/2006	1
7/12/2006	1
10/9/2006	1
12/21/2006	1
3/14/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -10.1667 = Q(17)
Upper limit is 8.66667 = Q(39)
-10.1667 < 0 < 8.66667 indicating no trend in data.


H-3
Time-Series Graph of MW117S
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW117S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<325 U (1/24/2006 a)	ND<388 U (1/4/2006 a)	(325 - 388)/(2 - 1)	-63
ND<360 U (3/17/2006 a)	ND<388 U (1/4/2006 a)	(360 - 388)/(3 - 1)	-14
ND<265 U (3/27/2006 a)	ND<388 U (1/4/2006 a)	(265 - 388)/(4 - 1)	-41
ND<346 U (4/15/2006 a)	ND<388 U (1/4/2006 a)	(346 - 388)/(5 - 1)	-10.5
ND<305 OK (5/10/2006 a)	ND<388 U (1/4/2006 a)	(305 - 388)/(6 - 1)	-16.6
ND<331 OK (7/12/2006 a)	ND<388 U (1/4/2006 a)	(331 - 388)/(7 - 1)	-9.5
ND<232 OK (10/9/2006 a)	ND<388 U (1/4/2006 a)	(232 - 388)/(8 - 1)	-22.2857
ND<303.5 OK (12/21/2006 ~)	ND<388 U (1/4/2006 a)	(303.5 - 388)/(9 - 1)	-10.5625
ND<363 OK (3/14/2007 a)	ND<388 U (1/4/2006 a)	(363 - 388)/(10 - 1)	-2.77778
ND<323 OK (6/12/2007 a)	ND<388 U (1/4/2006 a)	(323 - 388)/(11 - 1)	-6.5
ND<360 U (3/17/2006 a)	ND<325 U (1/24/2006 a)	(360 - 325)/(3 - 2)	35
ND<265 U (3/27/2006 a)	ND<325 U (1/24/2006 a)	(265 - 325)/(4 - 2)	-30
ND<346 U (4/15/2006 a)	ND<325 U (1/24/2006 a)	(346 - 325)/(5 - 2)	7
ND<305 OK (5/10/2006 a)	ND<325 U (1/24/2006 a)	(305 - 325)/(6 - 2)	-5
ND<331 OK (7/12/2006 a)	ND<325 U (1/24/2006 a)	(331 - 325)/(7 - 2)	1.2
ND<232 OK (10/9/2006 a)	ND<325 U (1/24/2006 a)	(232 - 325)/(8 - 2)	-15.5
ND<303.5 OK (12/21/2006 ~)	ND<325 U (1/24/2006 a)	(303.5 - 325)/(9 - 2)	-3.07143
ND<363 OK (3/14/2007 a)	ND<325 U (1/24/2006 a)	(363 - 325)/(10 - 2)	4.75
ND<323 OK (6/12/2007 a)	ND<325 U (1/24/2006 a)	(323 - 325)/(11 - 2)	-0.222222
ND<265 U (3/27/2006 a)	ND<360 U (3/17/2006 a)	(265 - 360)/(4 - 3)	-95
ND<346 U (4/15/2006 a)	ND<360 U (3/17/2006 a)	(346 - 360)/(5 - 3)	-7
ND<305 OK (5/10/2006 a)	ND<360 U (3/17/2006 a)	(305 - 360)/(6 - 3)	-18.3333
ND<331 OK (7/12/2006 a)	ND<360 U (3/17/2006 a)	(331 - 360)/(7 - 3)	-7.25
ND<232 OK (10/9/2006 a)	ND<360 U (3/17/2006 a)	(232 - 360)/(8 - 3)	-25.6
ND<303.5 OK (12/21/2006 ~)	ND<360 U (3/17/2006 a)	(303.5 - 360)/(9 - 3)	-9.41667
ND<363 OK (3/14/2007 a)	ND<360 U (3/17/2006 a)	(363 - 360)/(10 - 3)	0.428571
ND<323 OK (6/12/2007 a)	ND<360 U (3/17/2006 a)	(323 - 360)/(11 - 3)	-4.625
ND<346 U (4/15/2006 a)	ND<265 U (3/27/2006 a)	(346 - 265)/(5 - 4)	81
ND<305 OK (5/10/2006 a)	ND<265 U (3/27/2006 a)	(305 - 265)/(6 - 4)	20
ND<331 OK (7/12/2006 a)	ND<265 U (3/27/2006 a)	(331 - 265)/(7 - 4)	22
ND<232 OK (10/9/2006 a)	ND<265 U (3/27/2006 a)	(232 - 265)/(8 - 4)	-8.25
ND<303.5 OK (12/21/2006 ~)	ND<265 U (3/27/2006 a)	(303.5 - 265)/(9 - 4)	7.7
ND<363 OK (3/14/2007 a)	ND<265 U (3/27/2006 a)	(363 - 265)/(10 - 4)	16.3333
ND<323 OK (6/12/2007 a)	ND<265 U (3/27/2006 a)	(323 - 265)/(11 - 4)	8.28571
ND<305 OK (5/10/2006 a)	ND<346 U (4/15/2006 a)	(305 - 346)/(6 - 5)	-41
ND<331 OK (7/12/2006 a)	ND<346 U (4/15/2006 a)	(331 - 346)/(7 - 5)	-7.5
ND<232 OK (10/9/2006 a)	ND<346 U (4/15/2006 a)	(232 - 346)/(8 - 5)	-38
ND<303.5 OK (12/21/2006 ~)	ND<346 U (4/15/2006 a)	(303.5 - 346)/(9 - 5)	-10.625
ND<363 OK (3/14/2007 a)	ND<346 U (4/15/2006 a)	(363 - 346)/(10 - 5)	3.4
ND<323 OK (6/12/2007 a)	ND<346 U (4/15/2006 a)	(323 - 346)/(11 - 5)	-3.83333
ND<331 OK (7/12/2006 a)	ND<305 OK (5/10/2006 a)	(331 - 305)/(7 - 6)	26
ND<232 OK (10/9/2006 a)	ND<305 OK (5/10/2006 a)	(232 - 305)/(8 - 6)	-36.5

ND<303.5 OK (12/21/2006 ~)	ND<305 OK (5/10/2006 a)	(303.5 - 305)/(9 - 6)	-0.5
ND<363 OK (3/14/2007 a)	ND<305 OK (5/10/2006 a)	(363 - 305)/(10 - 6)	14.5
ND<323 OK (6/12/2007 a)	ND<305 OK (5/10/2006 a)	(323 - 305)/(11 - 6)	3.6
ND<232 OK (10/9/2006 a)	ND<331 OK (7/12/2006 a)	(232 - 331)/(8 - 7)	-99
ND<303.5 OK (12/21/2006 ~)	ND<331 OK (7/12/2006 a)	(303.5 - 331)/(9 - 7)	-13.75
ND<363 OK (3/14/2007 a)	ND<331 OK (7/12/2006 a)	(363 - 331)/(10 - 7)	10.6667
ND<323 OK (6/12/2007 a)	ND<331 OK (7/12/2006 a)	(323 - 331)/(11 - 7)	-2
ND<303.5 OK (12/21/2006 ~)	ND<232 OK (10/9/2006 a)	(303.5 - 232)/(9 - 8)	71.5
ND<363 OK (3/14/2007 a)	ND<232 OK (10/9/2006 a)	(363 - 232)/(10 - 8)	65.5
ND<323 OK (6/12/2007 a)	ND<232 OK (10/9/2006 a)	(323 - 232)/(11 - 8)	30.3333
ND<363 OK (3/14/2007 a)	ND<303.5 OK (12/21/2006 ~)	(363 - 303.5)/(10 - 9)	59.5
ND<323 OK (6/12/2007 a)	ND<303.5 OK (12/21/2006 ~)	(323 - 303.5)/(11 - 9)	9.75
ND<323 OK (6/12/2007 a)	ND<363 OK (3/14/2007 a)	(323 - 363)/(11 - 10)	-40

Number of Q values = 55

Ordered Q Values

n	Q
1	-99
2	-95
3	-63
4	-41
5	-41
6	-40
7	-38
8	-36.5
9	-30
10	-25.6
11	-22.2857
12	-18.3333
13	-16.6
14	-15.5
15	-14
16	-13.75
17	-10.625
18	-10.5625
19	-10.5
20	-9.5
21	-9.41667
22	-8.25
23	-7.5
24	-7.25
25	-7
26	-6.5
27	-5
28	-4.625
29	-3.83333
30	-3.07143
31	-2.77778
32	-2
33	-0.5
34	-0.222222

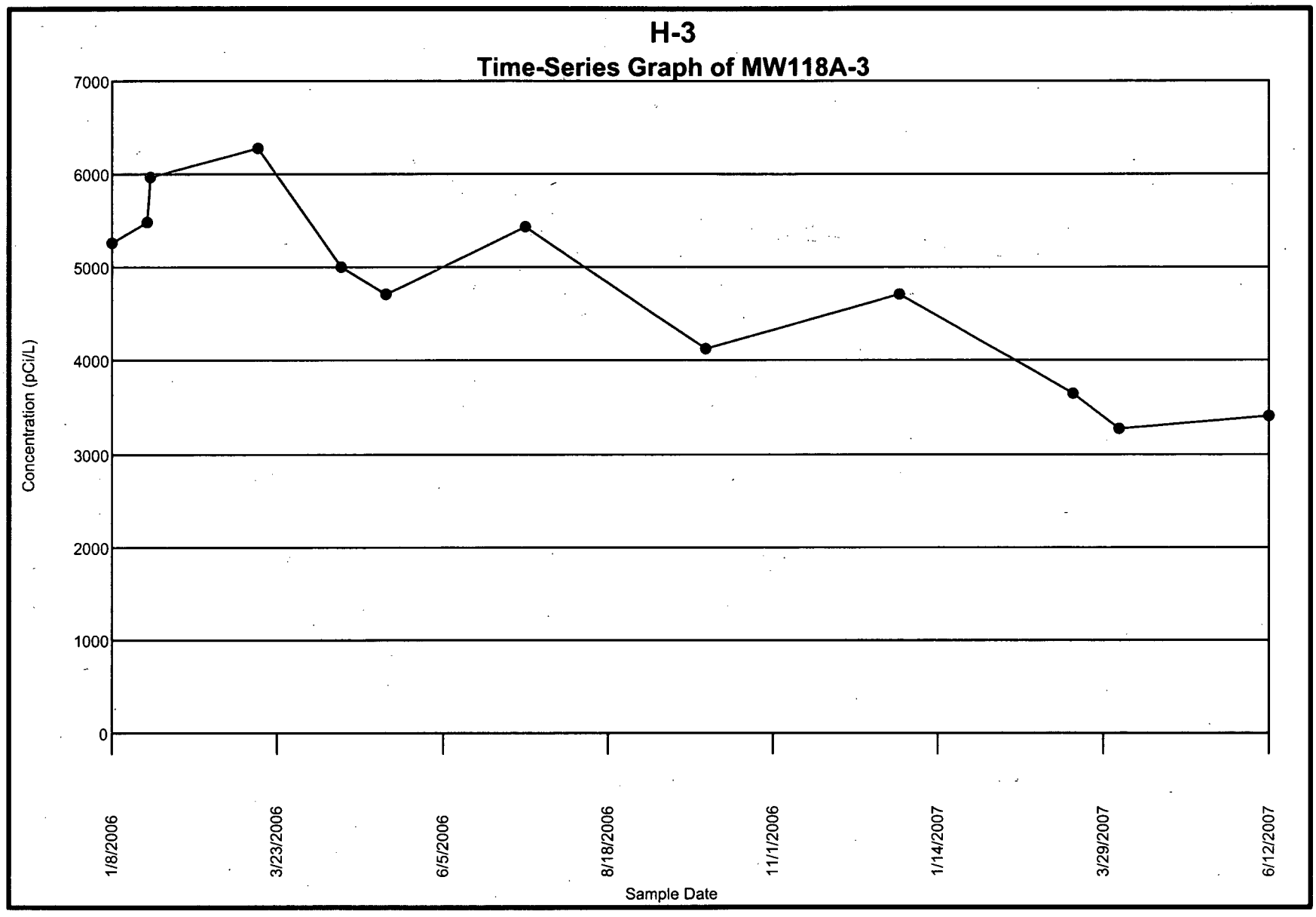
35	0.428571
36	1.2
37	3.4
38	3.6
39	4.75
40	7
41	7.7
42	8.28571
43	9.75
44	10.6667
45	14.5
46	16.3333
47	20
48	22
49	26
50	30.3333
51	35
52	59.5
53	65.5
54	71.5
55	81

Sen's Estimator (Median Q) is -4.625

Time Period	Observations
1/4/2006	1
1/24/2006	1
3/17/2006	1
3/27/2006	1
4/15/2006	1
5/10/2006	1
7/12/2006	1
10/9/2006	1
12/21/2006	1
3/14/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -10.625 = Q(17)
Upper limit is 4.75 = Q(39)
-10.625 < 0 < 4.75 indicating no trend in data.


H-3
Time-Series Graph of MW118A-3
Concentration (pCi/L)
7000
6000
5000
4000
3000
2000
1000
0
1/8/2006
3/23/2006
6/5/2006
8/18/2006
11/1/2006
1/14/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW118A-3

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
5480 OK (1/24/2006 a)	5260 OK (1/8/2006 a)	(5480 - 5260)/(2 - 1)	220
5970 OK (1/25/2006 a)	5260 OK (1/8/2006 a)	(5970 - 5260)/(3 - 1)	355
6280 OK (3/15/2006 a)	5260 OK (1/8/2006 a)	(6280 - 5260)/(4 - 1)	340
5000 OK (4/21/2006 a)	5260 OK (1/8/2006 a)	(5000 - 5260)/(5 - 1)	-65
4710 OK (5/11/2006 a)	5260 OK (1/8/2006 a)	(4710 - 5260)/(6 - 1)	-110
5430 OK (7/13/2006 a)	5260 OK (1/8/2006 a)	(5430 - 5260)/(7 - 1)	28.3333
4125 OK (10/2/2006 ~)	5260 OK (1/8/2006 a)	(4125 - 5260)/(8 - 1)	-162.143
4720 OK (12/28/2006 a)	5260 OK (1/8/2006 a)	(4720 - 5260)/(9 - 1)	-67.5
3640 OK (3/16/2007 a)	5260 OK (1/8/2006 a)	(3640 - 5260)/(10 - 1)	-180
3260 OK (4/6/2007 a)	5260 OK (1/8/2006 a)	(3260 - 5260)/(11 - 1)	-200
3410 OK (6/12/2007 ~)	5260 OK (1/8/2006 a)	(3410 - 5260)/(12 - 1)	-168.182
5970 OK (1/25/2006 a)	5480 OK (1/24/2006 a)	(5970 - 5480)/(3 - 2)	490
6280 OK (3/15/2006 a)	5480 OK (1/24/2006 a)	(6280 - 5480)/(4 - 2)	400
5000 OK (4/21/2006 a)	5480 OK (1/24/2006 a)	(5000 - 5480)/(5 - 2)	-160
4710 OK (5/11/2006 a)	5480 OK (1/24/2006 a)	(4710 - 5480)/(6 - 2)	-192.5
5430 OK (7/13/2006 a)	5480 OK (1/24/2006 a)	(5430 - 5480)/(7 - 2)	-10
4125 OK (10/2/2006 ~)	5480 OK (1/24/2006 a)	(4125 - 5480)/(8 - 2)	-225.833
4720 OK (12/28/2006 a)	5480 OK (1/24/2006 a)	(4720 - 5480)/(9 - 2)	-108.571
3640 OK (3/16/2007 a)	5480 OK (1/24/2006 a)	(3640 - 5480)/(10 - 2)	-230
3260 OK (4/6/2007 a)	5480 OK (1/24/2006 a)	(3260 - 5480)/(11 - 2)	-246.667
3410 OK (6/12/2007 ~)	5480 OK (1/24/2006 a)	(3410 - 5480)/(12 - 2)	-207
6280 OK (3/15/2006 a)	5970 OK (1/25/2006 a)	(6280 - 5970)/(4 - 3)	310
5000 OK (4/21/2006 a)	5970 OK (1/25/2006 a)	(5000 - 5970)/(5 - 3)	-485
4710 OK (5/11/2006 a)	5970 OK (1/25/2006 a)	(4710 - 5970)/(6 - 3)	-420
5430 OK (7/13/2006 a)	5970 OK (1/25/2006 a)	(5430 - 5970)/(7 - 3)	-135
4125 OK (10/2/2006 ~)	5970 OK (1/25/2006 a)	(4125 - 5970)/(8 - 3)	-369
4720 OK (12/28/2006 a)	5970 OK (1/25/2006 a)	(4720 - 5970)/(9 - 3)	-208.333
3640 OK (3/16/2007 a)	5970 OK (1/25/2006 a)	(3640 - 5970)/(10 - 3)	-332.857
3260 OK (4/6/2007 a)	5970 OK (1/25/2006 a)	(3260 - 5970)/(11 - 3)	-338.75
3410 OK (6/12/2007 ~)	5970 OK (1/25/2006 a)	(3410 - 5970)/(12 - 3)	-284.444
5000 OK (4/21/2006 a)	6280 OK (3/15/2006 a)	(5000 - 6280)/(5 - 4)	-1280
4710 OK (5/11/2006 a)	6280 OK (3/15/2006 a)	(4710 - 6280)/(6 - 4)	-785
5430 OK (7/13/2006 a)	6280 OK (3/15/2006 a)	(5430 - 6280)/(7 - 4)	-283.333
4125 OK (10/2/2006 ~)	6280 OK (3/15/2006 a)	(4125 - 6280)/(8 - 4)	-538.75
4720 OK (12/28/2006 a)	6280 OK (3/15/2006 a)	(4720 - 6280)/(9 - 4)	-312
3640 OK (3/16/2007 a)	6280 OK (3/15/2006 a)	(3640 - 6280)/(10 - 4)	-440
3260 OK (4/6/2007 a)	6280 OK (3/15/2006 a)	(3260 - 6280)/(11 - 4)	-431.429
3410 OK (6/12/2007 ~)	6280 OK (3/15/2006 a)	(3410 - 6280)/(12 - 4)	-358.75
4710 OK (5/11/2006 a)	5000 OK (4/21/2006 a)	(4710 - 5000)/(6 - 5)	-290
5430 OK (7/13/2006 a)	5000 OK (4/21/2006 a)	(5430 - 5000)/(7 - 5)	215
4125 OK (10/2/2006 ~)	5000 OK (4/21/2006 a)	(4125 - 5000)/(8 - 5)	-291.667
4720 OK (12/28/2006 a)	5000 OK (4/21/2006 a)	(4720 - 5000)/(9 - 5)	-70
3640 OK (3/16/2007 a)	5000 OK (4/21/2006 a)	(3640 - 5000)/(10 - 5)	-272

3260 OK (4/6/2007 a)	5000 OK (4/21/2006 a)	(3260 - 5000)/(11 - 5)	-290
3410 OK (6/12/2007 ~)	5000 OK (4/21/2006 a)	(3410 - 5000)/(12 - 5)	-227.143
5430 OK (7/13/2006 a)	4710 OK (5/11/2006 a)	(5430 - 4710)/(7 - 6)	720
4125 OK (10/2/2006 ~)	4710 OK (5/11/2006 a)	(4125 - 4710)/(8 - 6)	-292.5
4720 OK (12/28/2006 a)	4710 OK (5/11/2006 a)	(4720 - 4710)/(9 - 6)	3.33333
3640 OK (3/16/2007 a)	4710 OK (5/11/2006 a)	(3640 - 4710)/(10 - 6)	-267.5
3260 OK (4/6/2007 a)	4710 OK (5/11/2006 a)	(3260 - 4710)/(11 - 6)	-290
3410 OK (6/12/2007 ~)	4710 OK (5/11/2006 a)	(3410 - 4710)/(12 - 6)	-216.667
4125 OK (10/2/2006 ~)	5430 OK (7/13/2006 a)	(4125 - 5430)/(8 - 7)	-1305
4720 OK (12/28/2006 a)	5430 OK (7/13/2006 a)	(4720 - 5430)/(9 - 7)	-355
3640 OK (3/16/2007 a)	5430 OK (7/13/2006 a)	(3640 - 5430)/(10 - 7)	-596.667
3260 OK (4/6/2007 a)	5430 OK (7/13/2006 a)	(3260 - 5430)/(11 - 7)	-542.5
3410 OK (6/12/2007 ~)	5430 OK (7/13/2006 a)	(3410 - 5430)/(12 - 7)	-404
4720 OK (12/28/2006 a)	4125 OK (10/2/2006 ~)	(4720 - 4125)/(9 - 8)	595
3640 OK (3/16/2007 a)	4125 OK (10/2/2006 ~)	(3640 - 4125)/(10 - 8)	-242.5
3260 OK (4/6/2007 a)	4125 OK (10/2/2006 ~)	(3260 - 4125)/(11 - 8)	-288.333
3410 OK (6/12/2007 ~)	4125 OK (10/2/2006 ~)	(3410 - 4125)/(12 - 8)	-178.75
3640 OK (3/16/2007 a)	4720 OK (12/28/2006 a)	(3640 - 4720)/(10 - 9)	-1080
3260 OK (4/6/2007 a)	4720 OK (12/28/2006 a)	(3260 - 4720)/(11 - 9)	-730
3410 OK (6/12/2007 ~)	4720 OK (12/28/2006 a)	(3410 - 4720)/(12 - 9)	-436.667
3260 OK (4/6/2007 a)	3640 OK (3/16/2007 a)	(3260 - 3640)/(11 - 10)	-380
3410 OK (6/12/2007 ~)	3640 OK (3/16/2007 a)	(3410 - 3640)/(12 - 10)	-115
3410 OK (6/12/2007 ~)	3260 OK (4/6/2007 a)	(3410 - 3260)/(12 - 11)	150

Number of Q values = 66

Ordered Q Values

n	Q
1	-1305
2	-1280
3	-1080
4	-785
5	-730
6	-596.667
7	-542.5
8	-538.75
9	-485
10	-440
11	-436.667
12	-431.429
13	-420
14	-404
15	-380
16	-369
17	-358.75
18	-355
19	-338.75
20	-332.857
21	-312
22	-292.5

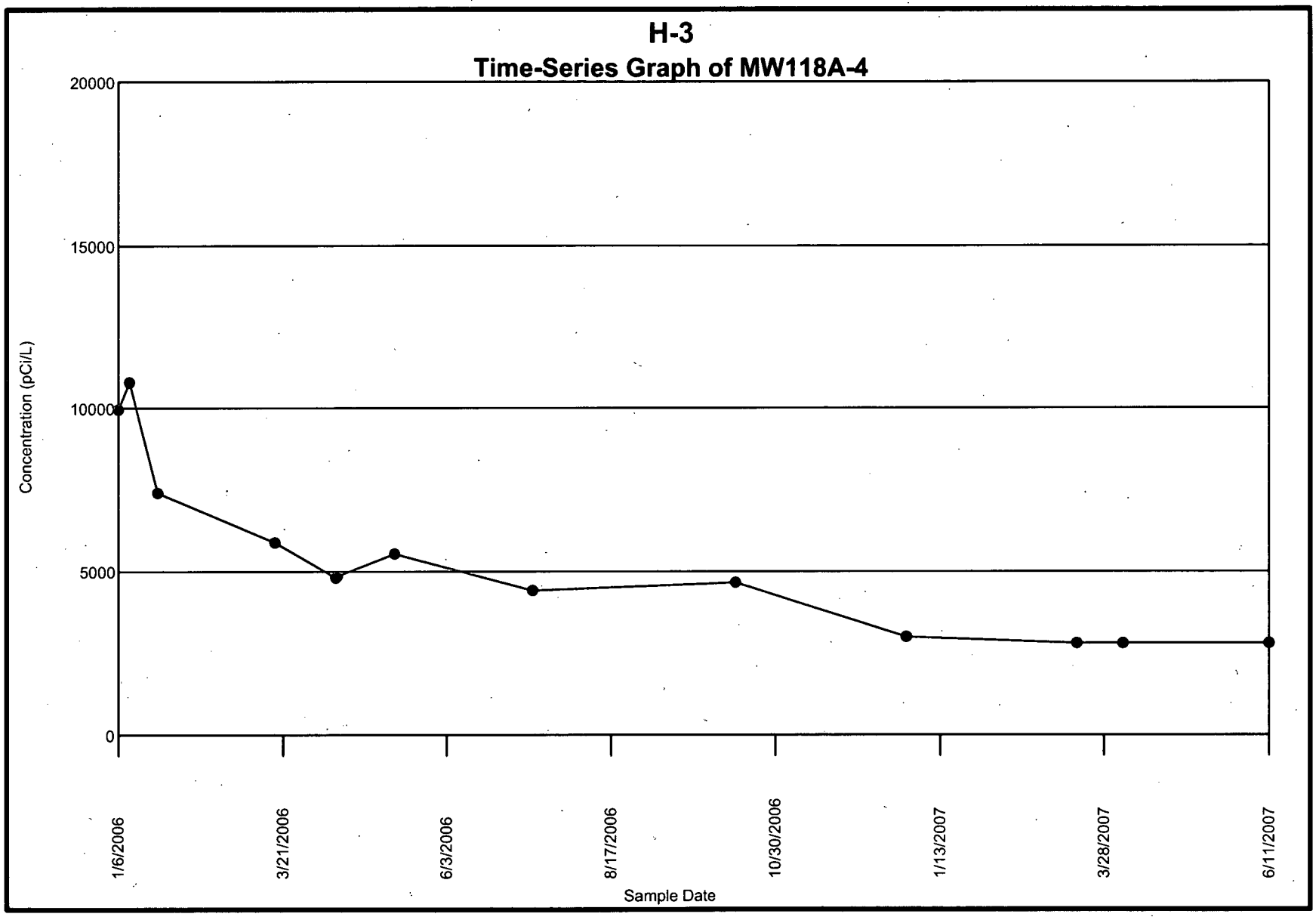
23	-291.667
24	-290
25	-290
26	-290
27	-288.333
28	-284.444
29	-283.333
30	-272
31	-267.5
32	-246.667
33	-242.5
34	-230
35	-227.143
36	-225.833
37	-216.667
38	-208.333
39	-207
40	-200
41	-192.5
42	-180
43	-178.75
44	-168.182
45	-162.143
46	-160
47	-135
48	-115
49	-110
50	-108.571
51	-70
52	-67.5
53	-65
54	-10
55	3.33333
56	28.3333
57	150
58	215
59	220
60	310
61	340
62	355
63	400
64	490
65	595
66	720

Sen's Estimator (Median Q) is -236.25

Time Period	Observations
1/8/2006	1
1/24/2006	1
1/25/2006	1
3/15/2006	1
4/21/2006	1
5/11/2006	1
7/13/2006	1
10/2/2006	1
12/28/2006	1
3/16/2007	1

4/6/2007 1
6/12/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -312 = Q(21)
Upper limit is -160 = Q(46)
-160 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW118A-4
Concentration (pCi/L)
20000
15000
10000
5000
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW118A-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
10800 OK (1/11/2006 a)	9960 OK (1/6/2006 ~)	(10800 - 9960)/(2 - 1)	840
7430 OK (1/24/2006 a)	9960 OK (1/6/2006 ~)	(7430 - 9960)/(3 - 1)	-1265
5880 OK (3/18/2006 a)	9960 OK (1/6/2006 ~)	(5880 - 9960)/(4 - 1)	-1360
4820 OK (4/14/2006 a)	9960 OK (1/6/2006 ~)	(4820 - 9960)/(5 - 1)	-1285
4870 OK (4/15/2006 a)	9960 OK (1/6/2006 ~)	(4870 - 9960)/(6 - 1)	-1018
5570 OK (5/11/2006 a)	9960 OK (1/6/2006 ~)	(5570 - 9960)/(7 - 1)	-731.667
4410 OK (7/13/2006 a)	9960 OK (1/6/2006 ~)	(4410 - 9960)/(8 - 1)	-792.857
4650 OK (10/13/2006 a)	9960 OK (1/6/2006 ~)	(4650 - 9960)/(9 - 1)	-663.75
2995 OK (12/29/2006 ~)	9960 OK (1/6/2006 ~)	(2995 - 9960)/(10 - 1)	-773.889
2810 OK (3/16/2007 a)	9960 OK (1/6/2006 ~)	(2810 - 9960)/(11 - 1)	-715
2790 OK (4/6/2007 a)	9960 OK (1/6/2006 ~)	(2790 - 9960)/(12 - 1)	-651.818
2780 OK (6/11/2007 a)	9960 OK (1/6/2006 ~)	(2780 - 9960)/(13 - 1)	-598.333
7430 OK (1/24/2006 a)	10800 OK (1/11/2006 a)	(7430 - 10800)/(3 - 2)	-3370
5880 OK (3/18/2006 a)	10800 OK (1/11/2006 a)	(5880 - 10800)/(4 - 2)	-2460
4820 OK (4/14/2006 a)	10800 OK (1/11/2006 a)	(4820 - 10800)/(5 - 2)	-1993.33
4870 OK (4/15/2006 a)	10800 OK (1/11/2006 a)	(4870 - 10800)/(6 - 2)	-1482.5
5570 OK (5/11/2006 a)	10800 OK (1/11/2006 a)	(5570 - 10800)/(7 - 2)	-1046
4410 OK (7/13/2006 a)	10800 OK (1/11/2006 a)	(4410 - 10800)/(8 - 2)	-1065
4650 OK (10/13/2006 a)	10800 OK (1/11/2006 a)	(4650 - 10800)/(9 - 2)	-878.571
2995 OK (12/29/2006 ~)	10800 OK (1/11/2006 a)	(2995 - 10800)/(10 - 2)	-975.625
2810 OK (3/16/2007 a)	10800 OK (1/11/2006 a)	(2810 - 10800)/(11 - 2)	-887.778
2790 OK (4/6/2007 a)	10800 OK (1/11/2006 a)	(2790 - 10800)/(12 - 2)	-801
2780 OK (6/11/2007 a)	10800 OK (1/11/2006 a)	(2780 - 10800)/(13 - 2)	-729.091
5880 OK (3/18/2006 a)	7430 OK (1/24/2006 a)	(5880 - 7430)/(4 - 3)	-1550
4820 OK (4/14/2006 a)	7430 OK (1/24/2006 a)	(4820 - 7430)/(5 - 3)	-1305
4870 OK (4/15/2006 a)	7430 OK (1/24/2006 a)	(4870 - 7430)/(6 - 3)	-853.333
5570 OK (5/11/2006 a)	7430 OK (1/24/2006 a)	(5570 - 7430)/(7 - 3)	-465
4410 OK (7/13/2006 a)	7430 OK (1/24/2006 a)	(4410 - 7430)/(8 - 3)	-604
4650 OK (10/13/2006 a)	7430 OK (1/24/2006 a)	(4650 - 7430)/(9 - 3)	-463.333
2995 OK (12/29/2006 ~)	7430 OK (1/24/2006 a)	(2995 - 7430)/(10 - 3)	-633.571
2810 OK (3/16/2007 a)	7430 OK (1/24/2006 a)	(2810 - 7430)/(11 - 3)	-577.5
2790 OK (4/6/2007 a)	7430 OK (1/24/2006 a)	(2790 - 7430)/(12 - 3)	-515.556
2780 OK (6/11/2007 a)	7430 OK (1/24/2006 a)	(2780 - 7430)/(13 - 3)	-465
4820 OK (4/14/2006 a)	5880 OK (3/18/2006 a)	(4820 - 5880)/(5 - 4)	-1060
4870 OK (4/15/2006 a)	5880 OK (3/18/2006 a)	(4870 - 5880)/(6 - 4)	-505
5570 OK (5/11/2006 a)	5880 OK (3/18/2006 a)	(5570 - 5880)/(7 - 4)	-103.333
4410 OK (7/13/2006 a)	5880 OK (3/18/2006 a)	(4410 - 5880)/(8 - 4)	-367.5
4650 OK (10/13/2006 a)	5880 OK (3/18/2006 a)	(4650 - 5880)/(9 - 4)	-246
2995 OK (12/29/2006 ~)	5880 OK (3/18/2006 a)	(2995 - 5880)/(10 - 4)	-480.833
2810 OK (3/16/2007 a)	5880 OK (3/18/2006 a)	(2810 - 5880)/(11 - 4)	-438.571
2790 OK (4/6/2007 a)	5880 OK (3/18/2006 a)	(2790 - 5880)/(12 - 4)	-386.25
2780 OK (6/11/2007 a)	5880 OK (3/18/2006 a)	(2780 - 5880)/(13 - 4)	-344.444
4870 OK (4/15/2006 a)	4820 OK (4/14/2006 a)	(4870 - 4820)/(6 - 5)	50

5570 OK (5/11/2006 a)	4820 OK (4/14/2006 a)	(5570 - 4820)/(7 - 5)	375
4410 OK (7/13/2006 a)	4820 OK (4/14/2006 a)	(4410 - 4820)/(8 - 5)	-136.667
4650 OK (10/13/2006 a)	4820 OK (4/14/2006 a)	(4650 - 4820)/(9 - 5)	-42.5
2995 OK (12/29/2006 ~)	4820 OK (4/14/2006 a)	(2995 - 4820)/(10 - 5)	-365
2810 OK (3/16/2007 a)	4820 OK (4/14/2006 a)	(2810 - 4820)/(11 - 5)	-335
2790 OK (4/6/2007 a)	4820 OK (4/14/2006 a)	(2790 - 4820)/(12 - 5)	-290
2780 OK (6/11/2007 a)	4820 OK (4/14/2006 a)	(2780 - 4820)/(13 - 5)	-255
5570 OK (5/11/2006 a)	4870 OK (4/15/2006 a)	(5570 - 4870)/(7 - 6)	700
4410 OK (7/13/2006 a)	4870 OK (4/15/2006 a)	(4410 - 4870)/(8 - 6)	-230
4650 OK (10/13/2006 a)	4870 OK (4/15/2006 a)	(4650 - 4870)/(9 - 6)	-73.3333
2995 OK (12/29/2006 ~)	4870 OK (4/15/2006 a)	(2995 - 4870)/(10 - 6)	-468.75
2810 OK (3/16/2007 a)	4870 OK (4/15/2006 a)	(2810 - 4870)/(11 - 6)	-412
2790 OK (4/6/2007 a)	4870 OK (4/15/2006 a)	(2790 - 4870)/(12 - 6)	-346.667
2780 OK (6/11/2007 a)	4870 OK (4/15/2006 a)	(2780 - 4870)/(13 - 6)	-298.571
4410 OK (7/13/2006 a)	5570 OK (5/11/2006 a)	(4410 - 5570)/(8 - 7)	-1160
4650 OK (10/13/2006 a)	5570 OK (5/11/2006 a)	(4650 - 5570)/(9 - 7)	-460
2995 OK (12/29/2006 ~)	5570 OK (5/11/2006 a)	(2995 - 5570)/(10 - 7)	-858.333
2810 OK (3/16/2007 a)	5570 OK (5/11/2006 a)	(2810 - 5570)/(11 - 7)	-690
2790 OK (4/6/2007 a)	5570 OK (5/11/2006 a)	(2790 - 5570)/(12 - 7)	-556
2780 OK (6/11/2007 a)	5570 OK (5/11/2006 a)	(2780 - 5570)/(13 - 7)	-465
4650 OK (10/13/2006 a)	4410 OK (7/13/2006 a)	(4650 - 4410)/(9 - 8)	240
2995 OK (12/29/2006 ~)	4410 OK (7/13/2006 a)	(2995 - 4410)/(10 - 8)	-707.5
2810 OK (3/16/2007 a)	4410 OK (7/13/2006 a)	(2810 - 4410)/(11 - 8)	-533.333
2790 OK (4/6/2007 a)	4410 OK (7/13/2006 a)	(2790 - 4410)/(12 - 8)	-405
2780 OK (6/11/2007 a)	4410 OK (7/13/2006 a)	(2780 - 4410)/(13 - 8)	-326
2995 OK (12/29/2006 ~)	4650 OK (10/13/2006 a)	(2995 - 4650)/(10 - 9)	-1655
2810 OK (3/16/2007 a)	4650 OK (10/13/2006 a)	(2810 - 4650)/(11 - 9)	-920
2790 OK (4/6/2007 a)	4650 OK (10/13/2006 a)	(2790 - 4650)/(12 - 9)	-620
2780 OK (6/11/2007 a)	4650 OK (10/13/2006 a)	(2780 - 4650)/(13 - 9)	-467.5
2810 OK (3/16/2007 a)	2995 OK (12/29/2006 ~)	(2810 - 2995)/(11 - 10)	-185
2790 OK (4/6/2007 a)	2995 OK (12/29/2006 ~)	(2790 - 2995)/(12 - 10)	-102.5
2780 OK (6/11/2007 a)	2995 OK (12/29/2006 ~)	(2780 - 2995)/(13 - 10)	-71.6667
2790 OK (4/6/2007 a)	2810 OK (3/16/2007 a)	(2790 - 2810)/(12 - 11)	-20
2780 OK (6/11/2007 a)	2810 OK (3/16/2007 a)	(2780 - 2810)/(13 - 11)	-15
2780 OK (6/11/2007 a)	2790 OK (4/6/2007 a)	(2780 - 2790)/(13 - 12)	-10

Number of Q values = 78

Ordered Q Values

n	Q
1	-3370
2	-2460
3	-1993.33
4	-1655
5	-1550
6	-1482.5
7	-1360
8	-1305
9	-1285

10	-1265
11	-1160
12	-1065
13	-1060
14	-1046
15	-1018
16	-975.625
17	-920
18	-887.778
19	-878.571
20	-858.333
21	-853.333
22	-801
23	-792.857
24	-773.889
25	-731.667
26	-729.091
27	-715
28	-707.5
29	-690
30	-663.75
31	-651.818
32	-633.571
33	-620
34	-604
35	-598.333
36	-577.5
37	-556
38	-533.333
39	-515.556
40	-505
41	-480.833
42	-468.75
43	-467.5
44	-465
45	-465
46	-465
47	-463.333
48	-460
49	-438.571
50	-412
51	-405
52	-386.25
53	-367.5
54	-365
55	-346.667
56	-344.444
57	-335
58	-326
59	-298.571
60	-290
61	-255
62	-246
63	-230
64	-185
65	-136.667
66	-103.333

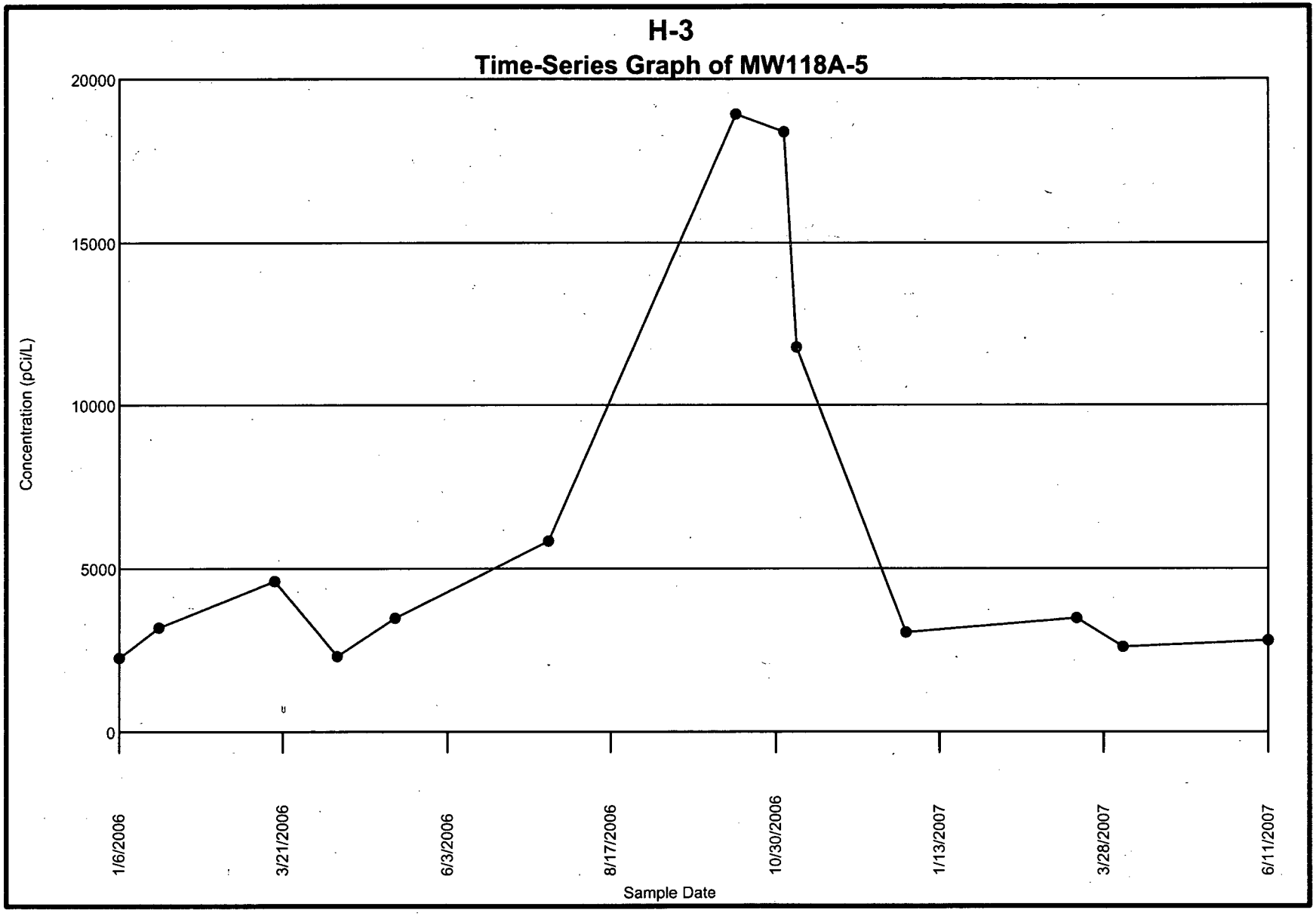
67	-102.5
68	-73.3333
69	-71.6667
70	-42.5
71	-20
72	-15
73	-10
74	50
75	240
76	375
77	700
78	840

Sen's Estimator (Median Q) is -510.278

Time Period	Observations
1/6/2006	1
1/11/2006	1
1/24/2006	1
3/18/2006	1
4/14/2006	1
4/15/2006	1
5/11/2006	1
7/13/2006	1
10/13/2006	1
12/29/2006	1
3/16/2007	1
4/6/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -729.091 = Q(26)
Upper limit is -367.5 = Q(53)
-367.5 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW118A-5
Concentration (pCi/L)
20000
15000
10000
5000
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW118A-5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
3180 OK (1/24/2006 a)	2280 OK (1/6/2006 a)	(3180 - 2280)/(2 - 1)	900
4620 OK (3/18/2006 a)	2280 OK (1/6/2006 a)	(4620 - 2280)/(3 - 1)	1170
2300 OK (4/15/2006 a)	2280 OK (1/6/2006 a)	(2300 - 2280)/(4 - 1)	6.66667
3470 OK (5/11/2006 a)	2280 OK (1/6/2006 a)	(3470 - 2280)/(5 - 1)	297.5
5860 OK (7/20/2006 a)	2280 OK (1/6/2006 a)	(5860 - 2280)/(6 - 1)	716
18900 OK (10/13/2006 a)	2280 OK (1/6/2006 a)	(18900 - 2280)/(7 - 1)	2770
18400 OK (11/3/2006 a)	2280 OK (1/6/2006 a)	(18400 - 2280)/(8 - 1)	2302.86
11800 OK (11/9/2006 a)	2280 OK (1/6/2006 a)	(11800 - 2280)/(9 - 1)	1190
3070 OK (12/29/2006 a)	2280 OK (1/6/2006 a)	(3070 - 2280)/(10 - 1)	87.7778
3500 OK (3/16/2007 a)	2280 OK (1/6/2006 a)	(3500 - 2280)/(11 - 1)	122
2610 OK (4/6/2007 a)	2280 OK (1/6/2006 a)	(2610 - 2280)/(12 - 1)	30
2780 OK (6/11/2007 a)	2280 OK (1/6/2006 a)	(2780 - 2280)/(13 - 1)	41.6667
4620 OK (3/18/2006 a)	3180 OK (1/24/2006 a)	(4620 - 3180)/(3 - 2)	1440
2300 OK (4/15/2006 a)	3180 OK (1/24/2006 a)	(2300 - 3180)/(4 - 2)	-440
3470 OK (5/11/2006 a)	3180 OK (1/24/2006 a)	(3470 - 3180)/(5 - 2)	96.6667
5860 OK (7/20/2006 a)	3180 OK (1/24/2006 a)	(5860 - 3180)/(6 - 2)	670
18900 OK (10/13/2006 a)	3180 OK (1/24/2006 a)	(18900 - 3180)/(7 - 2)	3144
18400 OK (11/3/2006 a)	3180 OK (1/24/2006 a)	(18400 - 3180)/(8 - 2)	2536.67
11800 OK (11/9/2006 a)	3180 OK (1/24/2006 a)	(11800 - 3180)/(9 - 2)	1231.43
3070 OK (12/29/2006 a)	3180 OK (1/24/2006 a)	(3070 - 3180)/(10 - 2)	-13.75
3500 OK (3/16/2007 a)	3180 OK (1/24/2006 a)	(3500 - 3180)/(11 - 2)	35.5556
2610 OK (4/6/2007 a)	3180 OK (1/24/2006 a)	(2610 - 3180)/(12 - 2)	-57
2780 OK (6/11/2007 a)	3180 OK (1/24/2006 a)	(2780 - 3180)/(13 - 2)	-36.3636
2300 OK (4/15/2006 a)	4620 OK (3/18/2006 a)	(2300 - 4620)/(4 - 3)	-2320
3470 OK (5/11/2006 a)	4620 OK (3/18/2006 a)	(3470 - 4620)/(5 - 3)	-575
5860 OK (7/20/2006 a)	4620 OK (3/18/2006 a)	(5860 - 4620)/(6 - 3)	413.333
18900 OK (10/13/2006 a)	4620 OK (3/18/2006 a)	(18900 - 4620)/(7 - 3)	3570
18400 OK (11/3/2006 a)	4620 OK (3/18/2006 a)	(18400 - 4620)/(8 - 3)	2756
11800 OK (11/9/2006 a)	4620 OK (3/18/2006 a)	(11800 - 4620)/(9 - 3)	1196.67
3070 OK (12/29/2006 a)	4620 OK (3/18/2006 a)	(3070 - 4620)/(10 - 3)	-221.429
3500 OK (3/16/2007 a)	4620 OK (3/18/2006 a)	(3500 - 4620)/(11 - 3)	-140
2610 OK (4/6/2007 a)	4620 OK (3/18/2006 a)	(2610 - 4620)/(12 - 3)	-223.333
2780 OK (6/11/2007 a)	4620 OK (3/18/2006 a)	(2780 - 4620)/(13 - 3)	-184
3470 OK (5/11/2006 a)	2300 OK (4/15/2006 a)	(3470 - 2300)/(5 - 4)	1170
5860 OK (7/20/2006 a)	2300 OK (4/15/2006 a)	(5860 - 2300)/(6 - 4)	1780
18900 OK (10/13/2006 a)	2300 OK (4/15/2006 a)	(18900 - 2300)/(7 - 4)	5533.33
18400 OK (11/3/2006 a)	2300 OK (4/15/2006 a)	(18400 - 2300)/(8 - 4)	4025
11800 OK (11/9/2006 a)	2300 OK (4/15/2006 a)	(11800 - 2300)/(9 - 4)	1900
3070 OK (12/29/2006 a)	2300 OK (4/15/2006 a)	(3070 - 2300)/(10 - 4)	128.333
3500 OK (3/16/2007 a)	2300 OK (4/15/2006 a)	(3500 - 2300)/(11 - 4)	171.429
2610 OK (4/6/2007 a)	2300 OK (4/15/2006 a)	(2610 - 2300)/(12 - 4)	38.75
2780 OK (6/11/2007 a)	2300 OK (4/15/2006 a)	(2780 - 2300)/(13 - 4)	53.3333
5860 OK (7/20/2006 a)	3470 OK (5/11/2006 a)	(5860 - 3470)/(6 - 5)	2390

18900 OK (10/13/2006 a)	3470 OK (5/11/2006 a)	(18900 - 3470)/(7 - 5)	7715
18400 OK (11/3/2006 a)	3470 OK (5/11/2006 a)	(18400 - 3470)/(8 - 5)	4976.67
11800 OK (11/9/2006 a)	3470 OK (5/11/2006 a)	(11800 - 3470)/(9 - 5)	2082.5
3070 OK (12/29/2006 a)	3470 OK (5/11/2006 a)	(3070 - 3470)/(10 - 5)	-80
3500 OK (3/16/2007 a)	3470 OK (5/11/2006 a)	(3500 - 3470)/(11 - 5)	5
2610 OK (4/6/2007 a)	3470 OK (5/11/2006 a)	(2610 - 3470)/(12 - 5)	-122.857
2780 OK (6/11/2007 a)	3470 OK (5/11/2006 a)	(2780 - 3470)/(13 - 5)	-86.25
18900 OK (10/13/2006 a)	5860 OK (7/20/2006 a)	(18900 - 5860)/(7 - 6)	13040
18400 OK (11/3/2006 a)	5860 OK (7/20/2006 a)	(18400 - 5860)/(8 - 6)	6270
11800 OK (11/9/2006 a)	5860 OK (7/20/2006 a)	(11800 - 5860)/(9 - 6)	1980
3070 OK (12/29/2006 a)	5860 OK (7/20/2006 a)	(3070 - 5860)/(10 - 6)	-697.5
3500 OK (3/16/2007 a)	5860 OK (7/20/2006 a)	(3500 - 5860)/(11 - 6)	-472
2610 OK (4/6/2007 a)	5860 OK (7/20/2006 a)	(2610 - 5860)/(12 - 6)	-541.667
2780 OK (6/11/2007 a)	5860 OK (7/20/2006 a)	(2780 - 5860)/(13 - 6)	-440
18400 OK (11/3/2006 a)	18900 OK (10/13/2006 a)	(18400 - 18900)/(8 - 7)	-500
11800 OK (11/9/2006 a)	18900 OK (10/13/2006 a)	(11800 - 18900)/(9 - 7)	-3550
3070 OK (12/29/2006 a)	18900 OK (10/13/2006 a)	(3070 - 18900)/(10 - 7)	-5276.67
3500 OK (3/16/2007 a)	18900 OK (10/13/2006 a)	(3500 - 18900)/(11 - 7)	-3850
2610 OK (4/6/2007 a)	18900 OK (10/13/2006 a)	(2610 - 18900)/(12 - 7)	-3258
2780 OK (6/11/2007 a)	18900 OK (10/13/2006 a)	(2780 - 18900)/(13 - 7)	-2686.67
11800 OK (11/9/2006 a)	18400 OK (11/3/2006 a)	(11800 - 18400)/(9 - 8)	-6600
3070 OK (12/29/2006 a)	18400 OK (11/3/2006 a)	(3070 - 18400)/(10 - 8)	-7665
3500 OK (3/16/2007 a)	18400 OK (11/3/2006 a)	(3500 - 18400)/(11 - 8)	-4966.67
2610 OK (4/6/2007 a)	18400 OK (11/3/2006 a)	(2610 - 18400)/(12 - 8)	-3947.5
2780 OK (6/11/2007 a)	18400 OK (11/3/2006 a)	(2780 - 18400)/(13 - 8)	-3124
3070 OK (12/29/2006 a)	11800 OK (11/9/2006 a)	(3070 - 11800)/(10 - 9)	-8730
3500 OK (3/16/2007 a)	11800 OK (11/9/2006 a)	(3500 - 11800)/(11 - 9)	-4150
2610 OK (4/6/2007 a)	11800 OK (11/9/2006 a)	(2610 - 11800)/(12 - 9)	-3063.33
2780 OK (6/11/2007 a)	11800 OK (11/9/2006 a)	(2780 - 11800)/(13 - 9)	-2255
3500 OK (3/16/2007 a)	3070 OK (12/29/2006 a)	(3500 - 3070)/(11 - 10)	430
2610 OK (4/6/2007 a)	3070 OK (12/29/2006 a)	(2610 - 3070)/(12 - 10)	-230
2780 OK (6/11/2007 a)	3070 OK (12/29/2006 a)	(2780 - 3070)/(13 - 10)	-96.6667
2610 OK (4/6/2007 a)	3500 OK (3/16/2007 a)	(2610 - 3500)/(12 - 11)	-890
2780 OK (6/11/2007 a)	3500 OK (3/16/2007 a)	(2780 - 3500)/(13 - 11)	-360
2780 OK (6/11/2007 a)	2610 OK (4/6/2007 a)	(2780 - 2610)/(13 - 12)	170

Number of Q values = 78

Ordered Q Values

n	Q
1	-8730
2	-7665
3	-6600
4	-5276.67
5	-4966.67
6	-4150
7	-3947.5
8	-3850
9	-3550

10	-3258
11	-3124
12	-3063.33
13	-2686.67
14	-2320
15	-2255
16	-890
17	-697.5
18	-575
19	-541.667
20	-500
21	-472
22	-440
23	-440
24	-360
25	-230
26	-223.333
27	-221.429
28	-184
29	-140
30	-122.857
31	-96.6667
32	-86.25
33	-80
34	-57
35	-36.3636
36	-13.75
37	5
38	6.66667
39	30
40	35.5556
41	38.75
42	41.6667
43	53.3333
44	87.7778
45	96.6667
46	122
47	128.333
48	170
49	171.429
50	297.5
51	413.333
52	430
53	670
54	716
55	900
56	1170
57	1170
58	1190
59	1196.67
60	1231.43
61	1440
62	1780
63	1900
64	1980
65	2082.5
66	2302.86

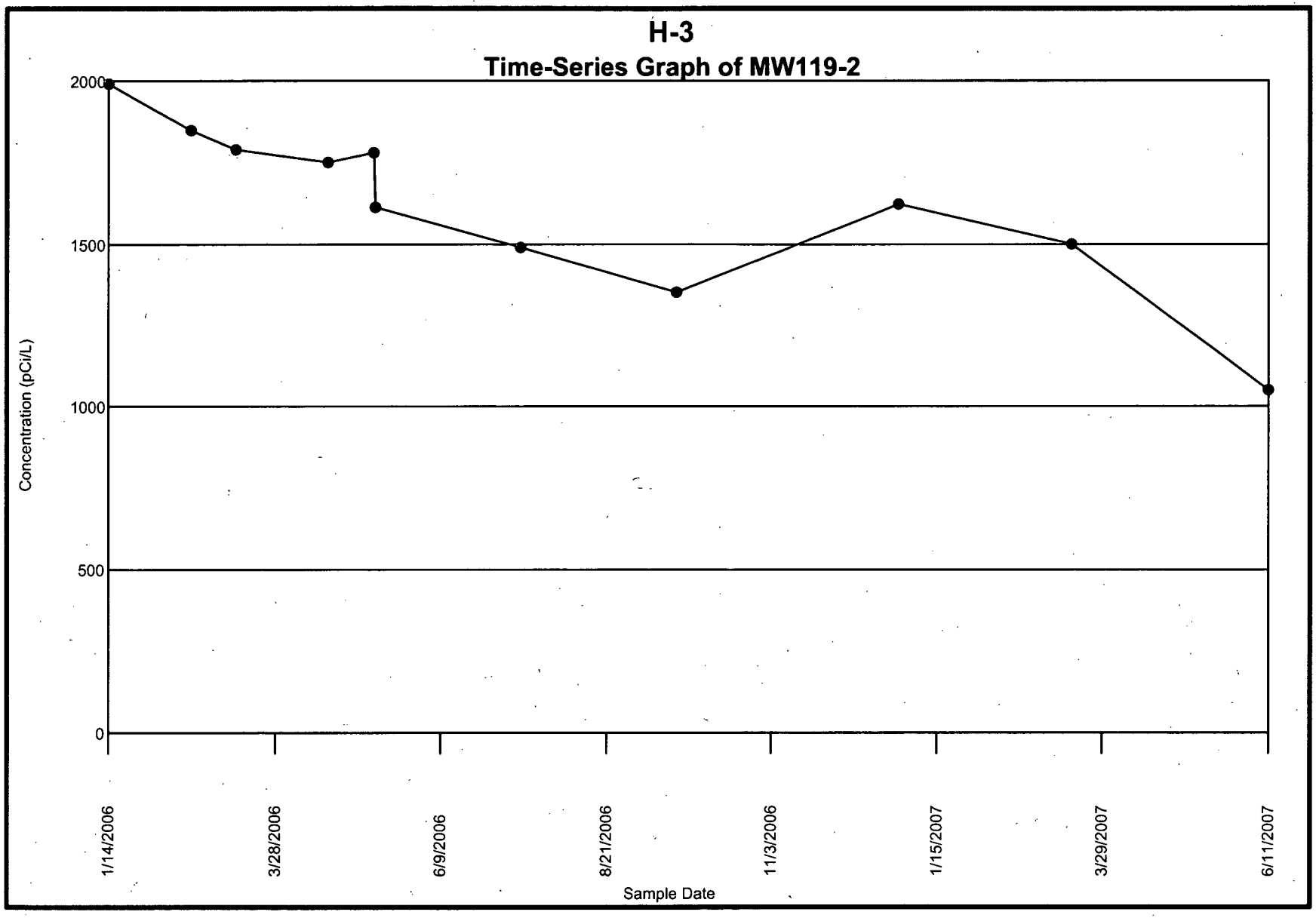
67	2390
68	2536.67
69	2756
70	2770
71	3144
72	3570
73	4025
74	4976.67
75	5533.33
76	6270
77	7715
78	13040

Sen's Estimator (Median Q) is 32.7778

Time Period	Observations
1/6/2006	1
1/24/2006	1
3/18/2006	1
4/15/2006	1
5/11/2006	1
7/20/2006	1
10/13/2006	1
11/3/2006	1
11/9/2006	1
12/29/2006	1
3/16/2007	1
4/6/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -223.333 = Q(26)
Upper limit is 670 = Q(53)
-223.333 < 0 < 670 indicating no trend in data.


H-3
Time-Series Graph of MW119-2
Concentration (pCi/L)
2000
1500
1000
500
0
1/14/2006
3/28/2006
6/9/2006
8/21/2006
11/3/2006
1/15/2007
3/29/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW119-2

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1850 OK (2/19/2006 a)	1990 OK (1/14/2006 a)	(1850 - 1990)/(2 - 1)	-140
1790 OK (3/11/2006 a)	1990 OK (1/14/2006 a)	(1790 - 1990)/(3 - 1)	-100
1750 OK (4/21/2006 a)	1990 OK (1/14/2006 a)	(1750 - 1990)/(4 - 1)	-80
1780 OK (5/11/2006 a)	1990 OK (1/14/2006 a)	(1780 - 1990)/(5 - 1)	-52.5
1610 OK (5/12/2006 a)	1990 OK (1/14/2006 a)	(1610 - 1990)/(6 - 1)	-76
1490 OK (7/15/2006 a)	1990 OK (1/14/2006 a)	(1490 - 1990)/(7 - 1)	-83.3333
1350 OK (9/22/2006 a)	1990 OK (1/14/2006 a)	(1350 - 1990)/(8 - 1)	-91.4286
1620 OK (12/29/2006 a)	1990 OK (1/14/2006 a)	(1620 - 1990)/(9 - 1)	-46.25
1500 OK (3/16/2007 a)	1990 OK (1/14/2006 a)	(1500 - 1990)/(10 - 1)	-54.4444
1050 OK (6/11/2007 a)	1990 OK (1/14/2006 a)	(1050 - 1990)/(11 - 1)	-94
1790 OK (3/11/2006 a)	1850 OK (2/19/2006 a)	(1790 - 1850)/(3 - 2)	-60
1750 OK (4/21/2006 a)	1850 OK (2/19/2006 a)	(1750 - 1850)/(4 - 2)	-50
1780 OK (5/11/2006 a)	1850 OK (2/19/2006 a)	(1780 - 1850)/(5 - 2)	-23.3333
1610 OK (5/12/2006 a)	1850 OK (2/19/2006 a)	(1610 - 1850)/(6 - 2)	-60
1490 OK (7/15/2006 a)	1850 OK (2/19/2006 a)	(1490 - 1850)/(7 - 2)	-72
1350 OK (9/22/2006 a)	1850 OK (2/19/2006 a)	(1350 - 1850)/(8 - 2)	-83.3333
1620 OK (12/29/2006 a)	1850 OK (2/19/2006 a)	(1620 - 1850)/(9 - 2)	-32.8571
1500 OK (3/16/2007 a)	1850 OK (2/19/2006 a)	(1500 - 1850)/(10 - 2)	-43.75
1050 OK (6/11/2007 a)	1850 OK (2/19/2006 a)	(1050 - 1850)/(11 - 2)	-88.8889
1750 OK (4/21/2006 a)	1790 OK (3/11/2006 a)	(1750 - 1790)/(4 - 3)	-40
1780 OK (5/11/2006 a)	1790 OK (3/11/2006 a)	(1780 - 1790)/(5 - 3)	-5
1610 OK (5/12/2006 a)	1790 OK (3/11/2006 a)	(1610 - 1790)/(6 - 3)	-60
1490 OK (7/15/2006 a)	1790 OK (3/11/2006 a)	(1490 - 1790)/(7 - 3)	-75
1350 OK (9/22/2006 a)	1790 OK (3/11/2006 a)	(1350 - 1790)/(8 - 3)	-88
1620 OK (12/29/2006 a)	1790 OK (3/11/2006 a)	(1620 - 1790)/(9 - 3)	-28.3333
1500 OK (3/16/2007 a)	1790 OK (3/11/2006 a)	(1500 - 1790)/(10 - 3)	-41.4286
1050 OK (6/11/2007 a)	1790 OK (3/11/2006 a)	(1050 - 1790)/(11 - 3)	-92.5
1780 OK (5/11/2006 a)	1750 OK (4/21/2006 a)	(1780 - 1750)/(5 - 4)	30
1610 OK (5/12/2006 a)	1750 OK (4/21/2006 a)	(1610 - 1750)/(6 - 4)	-70
1490 OK (7/15/2006 a)	1750 OK (4/21/2006 a)	(1490 - 1750)/(7 - 4)	-86.6667
1350 OK (9/22/2006 a)	1750 OK (4/21/2006 a)	(1350 - 1750)/(8 - 4)	-100
1620 OK (12/29/2006 a)	1750 OK (4/21/2006 a)	(1620 - 1750)/(9 - 4)	-26
1500 OK (3/16/2007 a)	1750 OK (4/21/2006 a)	(1500 - 1750)/(10 - 4)	-41.6667
1050 OK (6/11/2007 a)	1750 OK (4/21/2006 a)	(1050 - 1750)/(11 - 4)	-100
1610 OK (5/12/2006 a)	1780 OK (5/11/2006 a)	(1610 - 1780)/(6 - 5)	-170
1490 OK (7/15/2006 a)	1780 OK (5/11/2006 a)	(1490 - 1780)/(7 - 5)	-145
1350 OK (9/22/2006 a)	1780 OK (5/11/2006 a)	(1350 - 1780)/(8 - 5)	-143.333
1620 OK (12/29/2006 a)	1780 OK (5/11/2006 a)	(1620 - 1780)/(9 - 5)	-40
1500 OK (3/16/2007 a)	1780 OK (5/11/2006 a)	(1500 - 1780)/(10 - 5)	-56
1050 OK (6/11/2007 a)	1780 OK (5/11/2006 a)	(1050 - 1780)/(11 - 5)	-121.667
1490 OK (7/15/2006 a)	1610 OK (5/12/2006 a)	(1490 - 1610)/(7 - 6)	-120
1350 OK (9/22/2006 a)	1610 OK (5/12/2006 a)	(1350 - 1610)/(8 - 6)	-130

1620 OK (12/29/2006 a)	1610 OK (5/12/2006 a)	(1620 - 1610)/(9 - 6)	3.33333
1500 OK (3/16/2007 a)	1610 OK (5/12/2006 a)	(1500 - 1610)/(10 - 6)	-27.5
1050 OK (6/11/2007 a)	1610 OK (5/12/2006 a)	(1050 - 1610)/(11 - 6)	-112
1350 OK (9/22/2006 a)	1490 OK (7/15/2006 a)	(1350 - 1490)/(8 - 7)	-140
1620 OK (12/29/2006 a)	1490 OK (7/15/2006 a)	(1620 - 1490)/(9 - 7)	65
1500 OK (3/16/2007 a)	1490 OK (7/15/2006 a)	(1500 - 1490)/(10 - 7)	3.33333
1050 OK (6/11/2007 a)	1490 OK (7/15/2006 a)	(1050 - 1490)/(11 - 7)	-110
1620 OK (12/29/2006 a)	1350 OK (9/22/2006 a)	(1620 - 1350)/(9 - 8)	270
1500 OK (3/16/2007 a)	1350 OK (9/22/2006 a)	(1500 - 1350)/(10 - 8)	75
1050 OK (6/11/2007 a)	1350 OK (9/22/2006 a)	(1050 - 1350)/(11 - 8)	-100
1500 OK (3/16/2007 a)	1620 OK (12/29/2006 a)	(1500 - 1620)/(10 - 9)	-120
1050 OK (6/11/2007 a)	1620 OK (12/29/2006 a)	(1050 - 1620)/(11 - 9)	-285
1050 OK (6/11/2007 a)	1500 OK (3/16/2007 a)	(1050 - 1500)/(11 - 10)	-450

Number of Q values = 55

Ordered Q Values

n	Q
1	-450
2	-285
3	-170
4	-145
5	-143.333
6	-140
7	-140
8	-130
9	-121.667
10	-120
11	-120
12	-112
13	-110
14	-100
15	-100
16	-100
17	-100
18	-94
19	-92.5
20	-91.4286
21	-88.8889
22	-88
23	-86.6667
24	-83.3333
25	-83.3333
26	-80
27	-76
28	-75
29	-72
30	-70
31	-60
32	-60
33	-60
34	-56

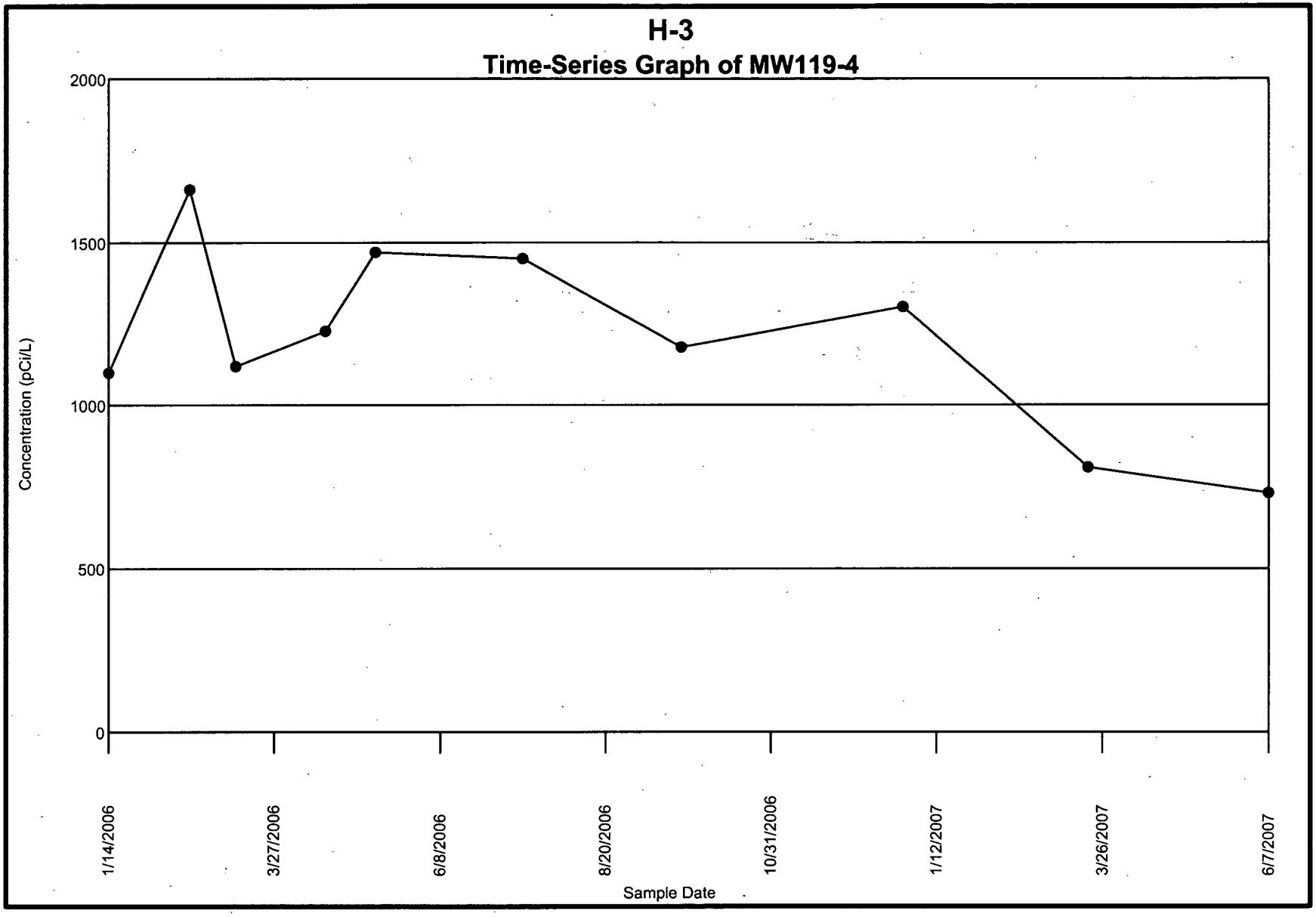
35	-54.4444
36	-52.5
37	-50
38	-46.25
39	-43.75
40	-41.6667
41	-41.4286
42	-40
43	-40
44	-32.8571
45	-28.3333
46	-27.5
47	-26
48	-23.3333
49	-5
50	3.33333
51	3.33333
52	30
53	65
54	75
55	270

Sen's Estimator (Median Q) is -75

Time Period	Observations
1/14/2006	1
2/19/2006	1
3/11/2006	1
4/21/2006	1
5/11/2006	1
5/12/2006	1
7/15/2006	1
9/22/2006	1
12/29/2006	1
3/16/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -100 = Q(17)
Upper limit is -43.75 = Q(39)
-43.75 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW119-4
Concentration (pCi/L)
2000
1500
1000
500
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
10/31/2006
1/12/2007
3/26/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW119-4

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1660 OK (2/19/2006 a)	1100 OK (1/14/2006 a)	(1660 - 1100)/(2 - 1)	560
1120 OK (3/11/2006 a)	1100 OK (1/14/2006 a)	(1120 - 1100)/(3 - 1)	10
1230 OK (4/19/2006 a)	1100 OK (1/14/2006 a)	(1230 - 1100)/(4 - 1)	43.3333
1470 OK (5/11/2006 a)	1100 OK (1/14/2006 a)	(1470 - 1100)/(5 - 1)	92.5
1450 OK (7/15/2006 a)	1100 OK (1/14/2006 a)	(1450 - 1100)/(6 - 1)	70
1180 OK (9/22/2006 a)	1100 OK (1/14/2006 a)	(1180 - 1100)/(7 - 1)	13.3333
1300 OK (12/29/2006 a)	1100 OK (1/14/2006 a)	(1300 - 1100)/(8 - 1)	28.5714
809 OK (3/20/2007 a)	1100 OK (1/14/2006 a)	(809 - 1100)/(9 - 1)	-36.375
732 OK (6/7/2007 a)	1100 OK (1/14/2006 a)	(732 - 1100)/(10 - 1)	-40.8889
1120 OK (3/11/2006 a)	1660 OK (2/19/2006 a)	(1120 - 1660)/(3 - 2)	-540
1230 OK (4/19/2006 a)	1660 OK (2/19/2006 a)	(1230 - 1660)/(4 - 2)	-215
1470 OK (5/11/2006 a)	1660 OK (2/19/2006 a)	(1470 - 1660)/(5 - 2)	-63.3333
1450 OK (7/15/2006 a)	1660 OK (2/19/2006 a)	(1450 - 1660)/(6 - 2)	-52.5
1180 OK (9/22/2006 a)	1660 OK (2/19/2006 a)	(1180 - 1660)/(7 - 2)	-96
1300 OK (12/29/2006 a)	1660 OK (2/19/2006 a)	(1300 - 1660)/(8 - 2)	-60
809 OK (3/20/2007 a)	1660 OK (2/19/2006 a)	(809 - 1660)/(9 - 2)	-121.571
732 OK (6/7/2007 a)	1660 OK (2/19/2006 a)	(732 - 1660)/(10 - 2)	-116
1230 OK (4/19/2006 a)	1120 OK (3/11/2006 a)	(1230 - 1120)/(4 - 3)	110
1470 OK (5/11/2006 a)	1120 OK (3/11/2006 a)	(1470 - 1120)/(5 - 3)	175
1450 OK (7/15/2006 a)	1120 OK (3/11/2006 a)	(1450 - 1120)/(6 - 3)	110
1180 OK (9/22/2006 a)	1120 OK (3/11/2006 a)	(1180 - 1120)/(7 - 3)	15
1300 OK (12/29/2006 a)	1120 OK (3/11/2006 a)	(1300 - 1120)/(8 - 3)	36
809 OK (3/20/2007 a)	1120 OK (3/11/2006 a)	(809 - 1120)/(9 - 3)	-51.8333
732 OK (6/7/2007 a)	1120 OK (3/11/2006 a)	(732 - 1120)/(10 - 3)	-55.4286
1470 OK (5/11/2006 a)	1230 OK (4/19/2006 a)	(1470 - 1230)/(5 - 4)	240
1450 OK (7/15/2006 a)	1230 OK (4/19/2006 a)	(1450 - 1230)/(6 - 4)	110
1180 OK (9/22/2006 a)	1230 OK (4/19/2006 a)	(1180 - 1230)/(7 - 4)	-16.6667
1300 OK (12/29/2006 a)	1230 OK (4/19/2006 a)	(1300 - 1230)/(8 - 4)	17.5
809 OK (3/20/2007 a)	1230 OK (4/19/2006 a)	(809 - 1230)/(9 - 4)	-84.2
732 OK (6/7/2007 a)	1230 OK (4/19/2006 a)	(732 - 1230)/(10 - 4)	-83
1450 OK (7/15/2006 a)	1470 OK (5/11/2006 a)	(1450 - 1470)/(6 - 5)	-20
1180 OK (9/22/2006 a)	1470 OK (5/11/2006 a)	(1180 - 1470)/(7 - 5)	-145
1300 OK (12/29/2006 a)	1470 OK (5/11/2006 a)	(1300 - 1470)/(8 - 5)	-56.6667
809 OK (3/20/2007 a)	1470 OK (5/11/2006 a)	(809 - 1470)/(9 - 5)	-165.25
732 OK (6/7/2007 a)	1470 OK (5/11/2006 a)	(732 - 1470)/(10 - 5)	-147.6
1180 OK (9/22/2006 a)	1450 OK (7/15/2006 a)	(1180 - 1450)/(7 - 6)	-270
1300 OK (12/29/2006 a)	1450 OK (7/15/2006 a)	(1300 - 1450)/(8 - 6)	-75
809 OK (3/20/2007 a)	1450 OK (7/15/2006 a)	(809 - 1450)/(9 - 6)	-213.667
732 OK (6/7/2007 a)	1450 OK (7/15/2006 a)	(732 - 1450)/(10 - 6)	-179.5
1300 OK (12/29/2006 a)	1180 OK (9/22/2006 a)	(1300 - 1180)/(8 - 7)	120
809 OK (3/20/2007 a)	1180 OK (9/22/2006 a)	(809 - 1180)/(9 - 7)	-185.5

732 OK (6/7/2007 a)	1180 OK (9/22/2006 a)	(732 - 1180)/(10 - 7)	-149.333
809 OK (3/20/2007 a)	1300 OK (12/29/2006 a)	(809 - 1300)/(9 - 8)	-491
732 OK (6/7/2007 a)	1300 OK (12/29/2006 a)	(732 - 1300)/(10 - 8)	-284
732 OK (6/7/2007 a)	809 OK (3/20/2007 a)	(732 - 809)/(10 - 9)	-77

Number of Q values = 45

Ordered Q Values

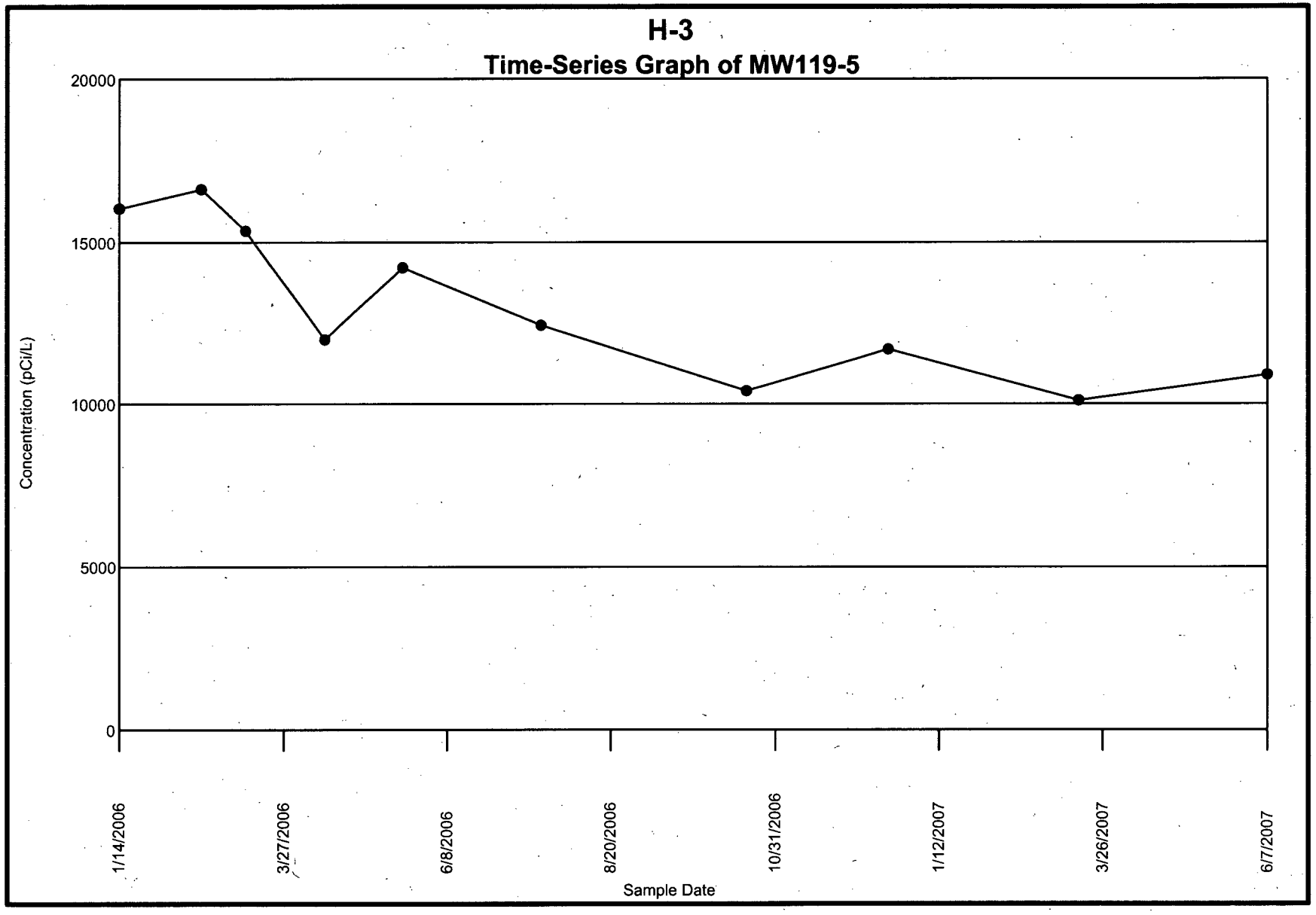
n	Q
1	-540
2	-491
3	-284
4	-270
5	-215
6	-213.667
7	-185.5
8	-179.5
9	-165.25
10	-149.333
11	-147.6
12	-145
13	-121.571
14	-116
15	-96
16	-84.2
17	-83
18	-77
19	-75
20	-63.3333
21	-60
22	-56.6667
23	-55.4286
24	-52.5
25	-51.8333
26	-40.8889
27	-36.375
28	-20
29	-16.6667
30	10
31	13.3333
32	15
33	17.5
34	28.5714
35	36
36	43.3333
37	70
38	92.5
39	110
40	110
41	110
42	120
43	175
44	240
45	560

Sen's Estimator (Median Q) is -55.4286

Time Period	Observations
1/14/2006	1
2/19/2006	1
3/11/2006	1
4/19/2006	1
5/11/2006	1
7/15/2006	1
9/22/2006	1
12/29/2006	1
3/20/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -121.571 = Q(13)
Upper limit is 17.5 = Q(33)
-121.571 < 0 < 17.5 indicating no trend in data.


H-3
Time-Series Graph of MW119-5
Concentration (pCi/L)
20000
15000
10000
5000
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
10/31/2006
1/12/2007
3/26/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW119-5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
16600 OK (2/19/2006 a)	16000 OK (1/14/2006 a)	(16600 - 16000)/(2 - 1)	600
15333.3 OK (3/11/2006 ~)	16000 OK (1/14/2006 a)	(15333.3 - 16000)/(3 - 1)	-333.333
12000 OK (4/15/2006 a)	16000 OK (1/14/2006 a)	(12000 - 16000)/(4 - 1)	-1333.33
14200 OK (5/20/2006 a)	16000 OK (1/14/2006 a)	(14200 - 16000)/(5 - 1)	-450
12450 OK (7/20/2006 ~)	16000 OK (1/14/2006 a)	(12450 - 16000)/(6 - 1)	-710
10400 OK (10/19/2006 a)	16000 OK (1/14/2006 a)	(10400 - 16000)/(7 - 1)	-933.333
11700 OK (12/21/2006 a)	16000 OK (1/14/2006 a)	(11700 - 16000)/(8 - 1)	-614.286
10100 OK (3/16/2007 a)	16000 OK (1/14/2006 a)	(10100 - 16000)/(9 - 1)	-737.5
10900 OK (6/7/2007 a)	16000 OK (1/14/2006 a)	(10900 - 16000)/(10 - 1)	-566.667
15333.3 OK (3/11/2006 ~)	16600 OK (2/19/2006 a)	(15333.3 - 16600)/(3 - 2)	-1266.67
12000 OK (4/15/2006 a)	16600 OK (2/19/2006 a)	(12000 - 16600)/(4 - 2)	-2300
14200 OK (5/20/2006 a)	16600 OK (2/19/2006 a)	(14200 - 16600)/(5 - 2)	-800
12450 OK (7/20/2006 ~)	16600 OK (2/19/2006 a)	(12450 - 16600)/(6 - 2)	-1037.5
10400 OK (10/19/2006 a)	16600 OK (2/19/2006 a)	(10400 - 16600)/(7 - 2)	-1240
11700 OK (12/21/2006 a)	16600 OK (2/19/2006 a)	(11700 - 16600)/(8 - 2)	-816.667
10100 OK (3/16/2007 a)	16600 OK (2/19/2006 a)	(10100 - 16600)/(9 - 2)	-928.571
10900 OK (6/7/2007 a)	16600 OK (2/19/2006 a)	(10900 - 16600)/(10 - 2)	-712.5
12000 OK (4/15/2006 a)	15333.3 OK (3/11/2006 ~)	(12000 - 15333.3)/(4 - 3)	-3333.33
14200 OK (5/20/2006 a)	15333.3 OK (3/11/2006 ~)	(14200 - 15333.3)/(5 - 3)	-566.667
12450 OK (7/20/2006 ~)	15333.3 OK (3/11/2006 ~)	(12450 - 15333.3)/(6 - 3)	-961.111
10400 OK (10/19/2006 a)	15333.3 OK (3/11/2006 ~)	(10400 - 15333.3)/(7 - 3)	-1233.33
11700 OK (12/21/2006 a)	15333.3 OK (3/11/2006 ~)	(11700 - 15333.3)/(8 - 3)	-726.667
10100 OK (3/16/2007 a)	15333.3 OK (3/11/2006 ~)	(10100 - 15333.3)/(9 - 3)	-872.222
10900 OK (6/7/2007 a)	15333.3 OK (3/11/2006 ~)	(10900 - 15333.3)/(10 - 3)	-633.333
14200 OK (5/20/2006 a)	12000 OK (4/15/2006 a)	(14200 - 12000)/(5 - 4)	2200
12450 OK (7/20/2006 ~)	12000 OK (4/15/2006 a)	(12450 - 12000)/(6 - 4)	225
10400 OK (10/19/2006 a)	12000 OK (4/15/2006 a)	(10400 - 12000)/(7 - 4)	-533.333
11700 OK (12/21/2006 a)	12000 OK (4/15/2006 a)	(11700 - 12000)/(8 - 4)	-75
10100 OK (3/16/2007 a)	12000 OK (4/15/2006 a)	(10100 - 12000)/(9 - 4)	-380
10900 OK (6/7/2007 a)	12000 OK (4/15/2006 a)	(10900 - 12000)/(10 - 4)	-183.333
12450 OK (7/20/2006 ~)	14200 OK (5/20/2006 a)	(12450 - 14200)/(6 - 5)	-1750
10400 OK (10/19/2006 a)	14200 OK (5/20/2006 a)	(10400 - 14200)/(7 - 5)	-1900
11700 OK (12/21/2006 a)	14200 OK (5/20/2006 a)	(11700 - 14200)/(8 - 5)	-833.333
10100 OK (3/16/2007 a)	14200 OK (5/20/2006 a)	(10100 - 14200)/(9 - 5)	-1025
10900 OK (6/7/2007 a)	14200 OK (5/20/2006 a)	(10900 - 14200)/(10 - 5)	-660
10400 OK (10/19/2006 a)	12450 OK (7/20/2006 ~)	(10400 - 12450)/(7 - 6)	-2050
11700 OK (12/21/2006 a)	12450 OK (7/20/2006 ~)	(11700 - 12450)/(8 - 6)	-375
10100 OK (3/16/2007 a)	12450 OK (7/20/2006 ~)	(10100 - 12450)/(9 - 6)	-783.333
10900 OK (6/7/2007 a)	12450 OK (7/20/2006 ~)	(10900 - 12450)/(10 - 6)	-387.5
11700 OK (12/21/2006 a)	10400 OK (10/19/2006 a)	(11700 - 10400)/(8 - 7)	1300
10100 OK (3/16/2007 a)	10400 OK (10/19/2006 a)	(10100 - 10400)/(9 - 7)	-150

10900 OK (6/7/2007 a)	10400 OK (10/19/2006 a)	(10900 - 10400)/(10 - 7)	166.667
10100 OK (3/16/2007 a)	11700 OK (12/21/2006 a)	(10100 - 11700)/(9 - 8)	-1600
10900 OK (6/7/2007 a)	11700 OK (12/21/2006 a)	(10900 - 11700)/(10 - 8)	-400
10900 OK (6/7/2007 a)	10100 OK (3/16/2007 a)	(10900 - 10100)/(10 - 9)	800

Number of Q values = 45

Ordered Q Values

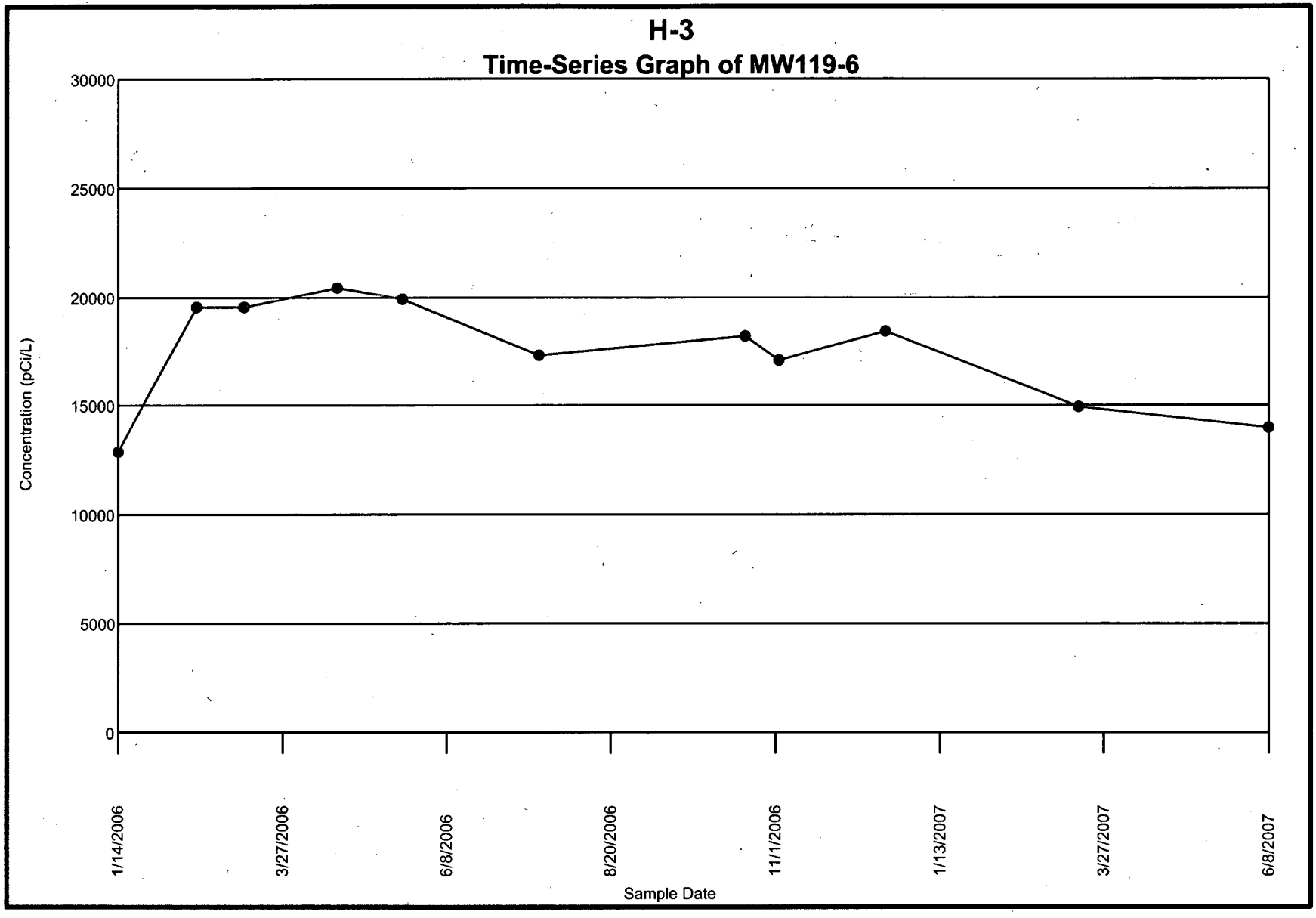
n	Q
1	-3333.33
2	-2300
3	-2050
4	-1900
5	-1750
6	-1600
7	-1333.33
8	-1266.67
9	-1240
10	-1233.33
11	-1037.5
12	-1025
13	-961.111
14	-933.333
15	-928.571
16	-872.222
17	-833.333
18	-816.667
19	-800
20	-783.333
21	-737.5
22	-726.667
23	-712.5
24	-710
25	-660
26	-633.333
27	-614.286
28	-566.667
29	-566.667
30	-533.333
31	-450
32	-400
33	-387.5
34	-380
35	-375
36	-333.333
37	-183.333
38	-150
39	-75
40	166.667
41	225
42	600
43	800
44	1300
45	2200

Sen's Estimator (Median Q) is -712.5

Time Period	Observations
1/14/2006	1
2/19/2006	1
3/11/2006	1
4/15/2006	1
5/20/2006	1
7/20/2006	1
10/19/2006	1
12/21/2006	1
3/16/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -961.111 = Q(13)
Upper limit is -387.5 = Q(33)
-387.5 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW119-6
Concentration (pCi/L)
30000
25000
20000
15000
10000
5000
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW119-6
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
19500 OK (2/18/2006 a)	12900 OK (1/14/2006 a)	(19500 - 12900)/(2 - 1)	6600
19500 OK (3/11/2006 a)	12900 OK (1/14/2006 a)	(19500 - 12900)/(3 - 1)	3300
20400 OK (4/21/2006 ~)	12900 OK (1/14/2006 a)	(20400 - 12900)/(4 - 1)	2500
19900 OK (5/20/2006 a)	12900 OK (1/14/2006 a)	(19900 - 12900)/(5 - 1)	1750
17300 OK (7/20/2006 a)	12900 OK (1/14/2006 a)	(17300 - 12900)/(6 - 1)	880
18200 OK (10/19/2006 a)	12900 OK (1/14/2006 a)	(18200 - 12900)/(7 - 1)	883.333
17100 OK (11/3/2006 a)	12900 OK (1/14/2006 a)	(17100 - 12900)/(8 - 1)	600
18400 OK (12/20/2006 a)	12900 OK (1/14/2006 a)	(18400 - 12900)/(9 - 1)	687.5
15000 OK (3/16/2007 a)	12900 OK (1/14/2006 a)	(15000 - 12900)/(10 - 1)	233.333
14000 OK (6/8/2007 a)	12900 OK (1/14/2006 a)	(14000 - 12900)/(11 - 1)	110
19500 OK (3/11/2006 a)	19500 OK (2/18/2006 a)	(19500 - 19500)/(3 - 2)	0
20400 OK (4/21/2006 ~)	19500 OK (2/18/2006 a)	(20400 - 19500)/(4 - 2)	450
19900 OK (5/20/2006 a)	19500 OK (2/18/2006 a)	(19900 - 19500)/(5 - 2)	133.333
17300 OK (7/20/2006 a)	19500 OK (2/18/2006 a)	(17300 - 19500)/(6 - 2)	-550
18200 OK (10/19/2006 a)	19500 OK (2/18/2006 a)	(18200 - 19500)/(7 - 2)	-260
17100 OK (11/3/2006 a)	19500 OK (2/18/2006 a)	(17100 - 19500)/(8 - 2)	-400
18400 OK (12/20/2006 a)	19500 OK (2/18/2006 a)	(18400 - 19500)/(9 - 2)	-157.143
15000 OK (3/16/2007 a)	19500 OK (2/18/2006 a)	(15000 - 19500)/(10 - 2)	-562.5
14000 OK (6/8/2007 a)	19500 OK (2/18/2006 a)	(14000 - 19500)/(11 - 2)	-611.111
20400 OK (4/21/2006 ~)	19500 OK (3/11/2006 a)	(20400 - 19500)/(4 - 3)	900
19900 OK (5/20/2006 a)	19500 OK (3/11/2006 a)	(19900 - 19500)/(5 - 3)	200
17300 OK (7/20/2006 a)	19500 OK (3/11/2006 a)	(17300 - 19500)/(6 - 3)	-733.333
18200 OK (10/19/2006 a)	19500 OK (3/11/2006 a)	(18200 - 19500)/(7 - 3)	-325
17100 OK (11/3/2006 a)	19500 OK (3/11/2006 a)	(17100 - 19500)/(8 - 3)	-480
18400 OK (12/20/2006 a)	19500 OK (3/11/2006 a)	(18400 - 19500)/(9 - 3)	-183.333
15000 OK (3/16/2007 a)	19500 OK (3/11/2006 a)	(15000 - 19500)/(10 - 3)	-642.857
14000 OK (6/8/2007 a)	19500 OK (3/11/2006 a)	(14000 - 19500)/(11 - 3)	-687.5
19900 OK (5/20/2006 a)	20400 OK (4/21/2006 ~)	(19900 - 20400)/(5 - 4)	-500
17300 OK (7/20/2006 a)	20400 OK (4/21/2006 ~)	(17300 - 20400)/(6 - 4)	-1550
18200 OK (10/19/2006 a)	20400 OK (4/21/2006 ~)	(18200 - 20400)/(7 - 4)	-733.333
17100 OK (11/3/2006 a)	20400 OK (4/21/2006 ~)	(17100 - 20400)/(8 - 4)	-825
18400 OK (12/20/2006 a)	20400 OK (4/21/2006 ~)	(18400 - 20400)/(9 - 4)	-400
15000 OK (3/16/2007 a)	20400 OK (4/21/2006 ~)	(15000 - 20400)/(10 - 4)	-900
14000 OK (6/8/2007 a)	20400 OK (4/21/2006 ~)	(14000 - 20400)/(11 - 4)	-914.286
17300 OK (7/20/2006 a)	19900 OK (5/20/2006 a)	(17300 - 19900)/(6 - 5)	-2600
18200 OK (10/19/2006 a)	19900 OK (5/20/2006 a)	(18200 - 19900)/(7 - 5)	-850
17100 OK (11/3/2006 a)	19900 OK (5/20/2006 a)	(17100 - 19900)/(8 - 5)	-933.333
18400 OK (12/20/2006 a)	19900 OK (5/20/2006 a)	(18400 - 19900)/(9 - 5)	-375
15000 OK (3/16/2007 a)	19900 OK (5/20/2006 a)	(15000 - 19900)/(10 - 5)	-980
14000 OK (6/8/2007 a)	19900 OK (5/20/2006 a)	(14000 - 19900)/(11 - 5)	-983.333
18200 OK (10/19/2006 a)	17300 OK (7/20/2006 a)	(18200 - 17300)/(7 - 6)	900
17100 OK (11/3/2006 a)	17300 OK (7/20/2006 a)	(17100 - 17300)/(8 - 6)	-100

18400 OK (12/20/2006 a)	17300 OK (7/20/2006 a)	(18400 - 17300)/(9 - 6)	366.667
15000 OK (3/16/2007 a)	17300 OK (7/20/2006 a)	(15000 - 17300)/(10 - 6)	-575
14000 OK (6/8/2007 a)	17300 OK (7/20/2006 a)	(14000 - 17300)/(11 - 6)	-660
17100 OK (11/3/2006 a)	18200 OK (10/19/2006 a)	(17100 - 18200)/(8 - 7)	-1100
18400 OK (12/20/2006 a)	18200 OK (10/19/2006 a)	(18400 - 18200)/(9 - 7)	100
15000 OK (3/16/2007 a)	18200 OK (10/19/2006 a)	(15000 - 18200)/(10 - 7)	-1066.67
14000 OK (6/8/2007 a)	18200 OK (10/19/2006 a)	(14000 - 18200)/(11 - 7)	-1050
18400 OK (12/20/2006 a)	17100 OK (11/3/2006 a)	(18400 - 17100)/(9 - 8)	1300
15000 OK (3/16/2007 a)	17100 OK (11/3/2006 a)	(15000 - 17100)/(10 - 8)	-1050
14000 OK (6/8/2007 a)	17100 OK (11/3/2006 a)	(14000 - 17100)/(11 - 8)	-1033.33
15000 OK (3/16/2007 a)	18400 OK (12/20/2006 a)	(15000 - 18400)/(10 - 9)	-3400
14000 OK (6/8/2007 a)	18400 OK (12/20/2006 a)	(14000 - 18400)/(11 - 9)	-2200
14000 OK (6/8/2007 a)	15000 OK (3/16/2007 a)	(14000 - 15000)/(11 - 10)	-1000

Number of Q values = 55

Ordered Q Values

n	Q
1	-3400
2	-2600
3	-2200
4	-1550
5	-1100
6	-1066.67
7	-1050
8	-1050
9	-1033.33
10	-1000
11	-983.333
12	-980
13	-933.333
14	-914.286
15	-900
16	-850
17	-825
18	-733.333
19	-733.333
20	-687.5
21	-660
22	-642.857
23	-611.111
24	-575
25	-562.5
26	-550
27	-500
28	-480
29	-400
30	-400
31	-375
32	-325
33	-260
34	-183.333

35	-157.143
36	-100
37	0
38	100
39	110
40	133.333
41	200
42	233.333
43	366.667
44	450
45	600
46	687.5
47	880
48	883.333
49	900
50	900
51	1300
52	1750
53	2500
54	3300
55	6600

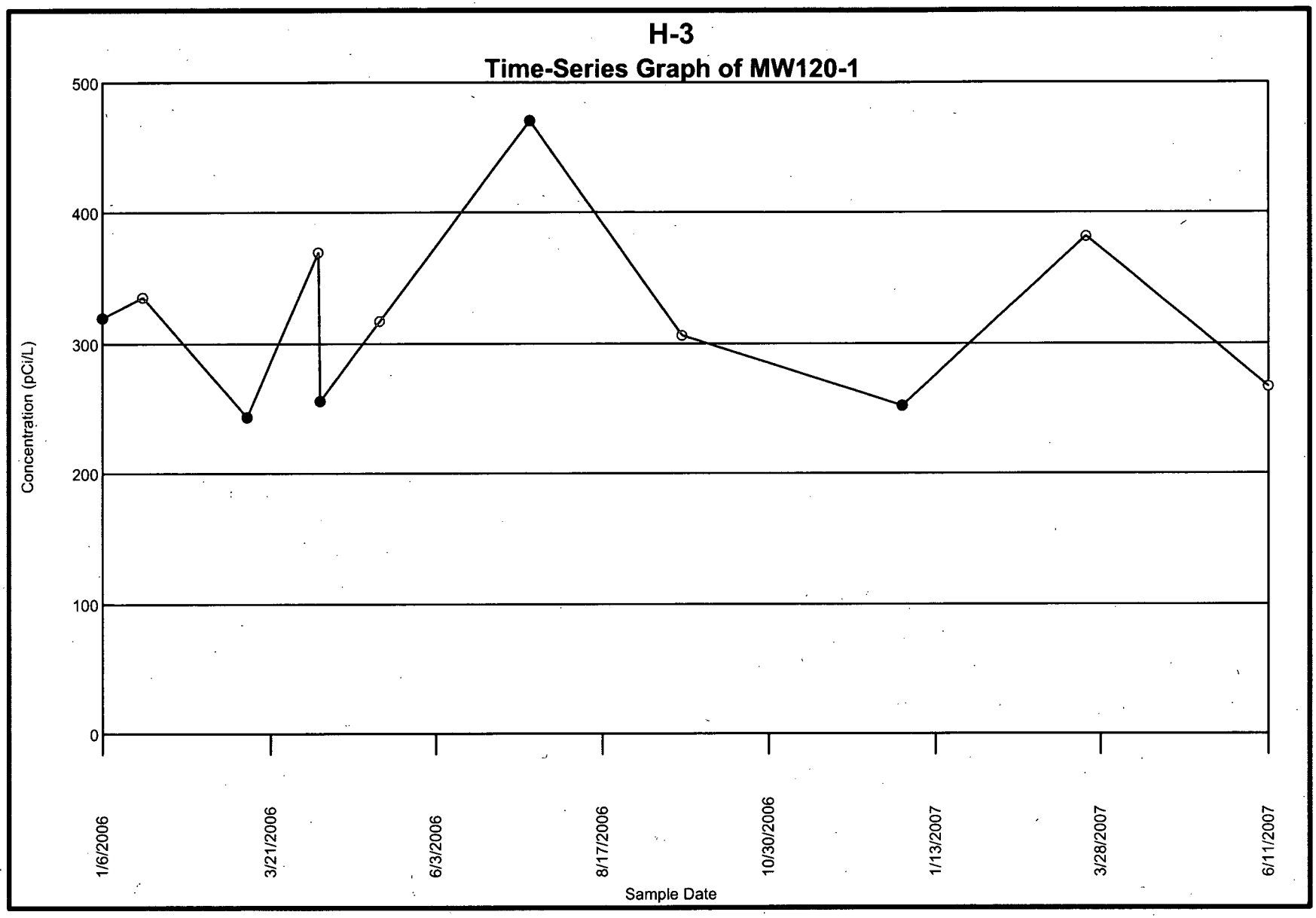
Sen's Estimator (Median Q) is -480

Tied Group	Value	Members
1	19500	2

Time Period	Observations
1/14/2006	1
2/18/2006	1
3/11/2006	1
4/21/2006	1
5/20/2006	1
7/20/2006	1
10/19/2006	1
11/3/2006	1
12/20/2006	1
3/16/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -825 = Q(17)
Upper limit is 110 = Q(39)
-825 < 0 < 110 indicating no trend in data.


H-3
Time-Series Graph of MW120-1
Concentration (pCi/L)
500
400
300
200
100
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW120-1

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<335 U (1/24/2006 a)	320 OK (1/6/2006 a)	(335 - 320)/(2 - 1)	15
243 U (3/11/2006 a)	320 OK (1/6/2006 a)	(243 - 320)/(3 - 1)	-38.5
ND<370 U (4/12/2006 a)	320 OK (1/6/2006 a)	(370 - 320)/(4 - 1)	16.6667
255 U (4/13/2006 a)	320 OK (1/6/2006 a)	(255 - 320)/(5 - 1)	-16.25
ND<317 OK (5/10/2006 a)	320 OK (1/6/2006 a)	(317 - 320)/(6 - 1)	-0.6
471 OK (7/16/2006 a)	320 OK (1/6/2006 a)	(471 - 320)/(7 - 1)	25.1667
ND<306 OK (9/22/2006 a)	320 OK (1/6/2006 a)	(306 - 320)/(8 - 1)	-2
252 OK (12/29/2006 a)	320 OK (1/6/2006 a)	(252 - 320)/(9 - 1)	-8.5
ND<382 OK (3/22/2007 a)	320 OK (1/6/2006 a)	(382 - 320)/(10 - 1)	6.88889
ND<267 OK (6/11/2007 a)	320 OK (1/6/2006 a)	(267 - 320)/(11 - 1)	-5.3
243 U (3/11/2006 a)	ND<335 U (1/24/2006 a)	(243 - 335)/(3 - 2)	-92
ND<370 U (4/12/2006 a)	ND<335 U (1/24/2006 a)	(370 - 335)/(4 - 2)	17.5
255 U (4/13/2006 a)	ND<335 U (1/24/2006 a)	(255 - 335)/(5 - 2)	-26.6667
ND<317 OK (5/10/2006 a)	ND<335 U (1/24/2006 a)	(317 - 335)/(6 - 2)	-4.5
471 OK (7/16/2006 a)	ND<335 U (1/24/2006 a)	(471 - 335)/(7 - 2)	27.2
ND<306 OK (9/22/2006 a)	ND<335 U (1/24/2006 a)	(306 - 335)/(8 - 2)	-4.83333
252 OK (12/29/2006 a)	ND<335 U (1/24/2006 a)	(252 - 335)/(9 - 2)	-11.8571
ND<382 OK (3/22/2007 a)	ND<335 U (1/24/2006 a)	(382 - 335)/(10 - 2)	5.875
ND<267 OK (6/11/2007 a)	ND<335 U (1/24/2006 a)	(267 - 335)/(11 - 2)	-7.55556
ND<370 U (4/12/2006 a)	243 U (3/11/2006 a)	(370 - 243)/(4 - 3)	127
255 U (4/13/2006 a)	243 U (3/11/2006 a)	(255 - 243)/(5 - 3)	6
ND<317 OK (5/10/2006 a)	243 U (3/11/2006 a)	(317 - 243)/(6 - 3)	24.6667
471 OK (7/16/2006 a)	243 U (3/11/2006 a)	(471 - 243)/(7 - 3)	57
ND<306 OK (9/22/2006 a)	243 U (3/11/2006 a)	(306 - 243)/(8 - 3)	12.6
252 OK (12/29/2006 a)	243 U (3/11/2006 a)	(252 - 243)/(9 - 3)	1.5
ND<382 OK (3/22/2007 a)	243 U (3/11/2006 a)	(382 - 243)/(10 - 3)	19.8571
ND<267 OK (6/11/2007 a)	243 U (3/11/2006 a)	(267 - 243)/(11 - 3)	3
255 U (4/13/2006 a)	ND<370 U (4/12/2006 a)	(255 - 370)/(5 - 4)	-115
ND<317 OK (5/10/2006 a)	ND<370 U (4/12/2006 a)	(317 - 370)/(6 - 4)	-26.5
471 OK (7/16/2006 a)	ND<370 U (4/12/2006 a)	(471 - 370)/(7 - 4)	33.6667
ND<306 OK (9/22/2006 a)	ND<370 U (4/12/2006 a)	(306 - 370)/(8 - 4)	-16
252 OK (12/29/2006 a)	ND<370 U (4/12/2006 a)	(252 - 370)/(9 - 4)	-23.6
ND<382 OK (3/22/2007 a)	ND<370 U (4/12/2006 a)	(382 - 370)/(10 - 4)	2
ND<267 OK (6/11/2007 a)	ND<370 U (4/12/2006 a)	(267 - 370)/(11 - 4)	-14.7143
ND<317 OK (5/10/2006 a)	255 U (4/13/2006 a)	(317 - 255)/(6 - 5)	62
471 OK (7/16/2006 a)	255 U (4/13/2006 a)	(471 - 255)/(7 - 5)	108
ND<306 OK (9/22/2006 a)	255 U (4/13/2006 a)	(306 - 255)/(8 - 5)	17
252 OK (12/29/2006 a)	255 U (4/13/2006 a)	(252 - 255)/(9 - 5)	-0.75
ND<382 OK (3/22/2007 a)	255 U (4/13/2006 a)	(382 - 255)/(10 - 5)	25.4
ND<267 OK (6/11/2007 a)	255 U (4/13/2006 a)	(267 - 255)/(11 - 5)	2
471 OK (7/16/2006 a)	ND<317 OK (5/10/2006 a)	(471 - 317)/(7 - 6)	154
ND<306 OK (9/22/2006 a)	ND<317 OK (5/10/2006 a)	(306 - 317)/(8 - 6)	-5.5

252 OK (12/29/2006 a)	ND<317 OK (5/10/2006 a)	(252 - 317)/(9 - 6)	-21.6667
ND<382 OK (3/22/2007 a)	ND<317 OK (5/10/2006 a)	(382 - 317)/(10 - 6)	16.25
ND<267 OK (6/11/2007 a)	ND<317 OK (5/10/2006 a)	(267 - 317)/(11 - 6)	-10
ND<306 OK (9/22/2006 a)	471 OK (7/16/2006 a)	(306 - 471)/(8 - 7)	-165
252 OK (12/29/2006 a)	471 OK (7/16/2006 a)	(252 - 471)/(9 - 7)	-109.5
ND<382 OK (3/22/2007 a)	471 OK (7/16/2006 a)	(382 - 471)/(10 - 7)	-29.6667
ND<267 OK (6/11/2007 a)	471 OK (7/16/2006 a)	(267 - 471)/(11 - 7)	-51
252 OK (12/29/2006 a)	ND<306 OK (9/22/2006 a)	(252 - 306)/(9 - 8)	-54
ND<382 OK (3/22/2007 a)	ND<306 OK (9/22/2006 a)	(382 - 306)/(10 - 8)	38
ND<267 OK (6/11/2007 a)	ND<306 OK (9/22/2006 a)	(267 - 306)/(11 - 8)	-13
ND<382 OK (3/22/2007 a)	252 OK (12/29/2006 a)	(382 - 252)/(10 - 9)	130
ND<267 OK (6/11/2007 a)	252 OK (12/29/2006 a)	(267 - 252)/(11 - 9)	7.5
ND<267 OK (6/11/2007 a)	ND<382 OK (3/22/2007 a)	(267 - 382)/(11 - 10)	-115

Number of Q values = 55

Ordered Q Values

n	Q
1	-165
2	-115
3	-115
4	-109.5
5	-92
6	-54
7	-51
8	-38.5
9	-29.6667
10	-26.6667
11	-26.5
12	-23.6
13	-21.6667
14	-16.25
15	-16
16	-14.7143
17	-13
18	-11.8571
19	-10
20	-8.5
21	-7.55556
22	-5.5
23	-5.3
24	-4.83333
25	-4.5
26	-2
27	-0.75
28	-0.6
29	1.5
30	2
31	2
32	3
33	5.875
34	6

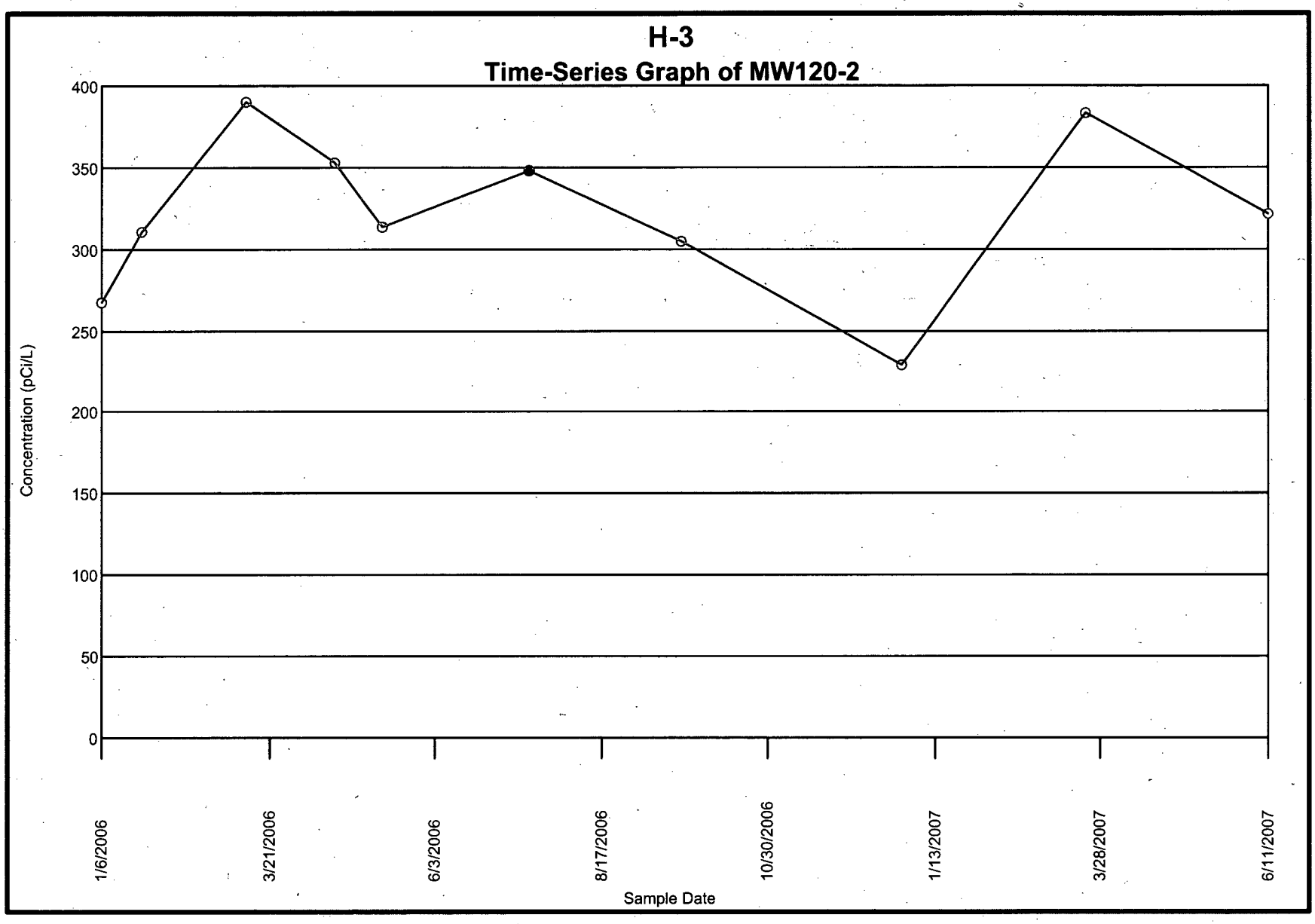
35	6.88889
36	7.5
37	12.6
38	15
39	16.25
40	16.6667
41	17
42	17.5
43	19.8571
44	24.6667
45	25.1667
46	25.4
47	27.2
48	33.6667
49	38
50	57
51	62
52	108
53	127
54	130
55	154

Sen's Estimator (Median Q) is -0.6

Time Period	Observations
1/6/2006	1
1/24/2006	1
3/11/2006	1
4/12/2006	1
4/13/2006	1
5/10/2006	1
7/16/2006	1
9/22/2006	1
12/29/2006	1
3/22/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -13 = Q(17)
Upper limit is 16.25 = Q(39)
-13 < 0 < 16.25 indicating no trend in data.


H-3
Time-Series Graph of MW120-2
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW120-2

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<311 U (1/24/2006 a)	ND<267 U (1/6/2006 a)	(311 - 267)/(2 - 1)	44
ND<390 U (3/11/2006 a)	ND<267 U (1/6/2006 a)	(390 - 267)/(3 - 1)	61.5
ND<353 U (4/20/2006 a)	ND<267 U (1/6/2006 a)	(353 - 267)/(4 - 1)	28.6667
ND<314 OK (5/11/2006 a)	ND<267 U (1/6/2006 a)	(314 - 267)/(5 - 1)	11.75
348 OK (7/16/2006 a)	ND<267 U (1/6/2006 a)	(348 - 267)/(6 - 1)	16.2
ND<305 OK (9/22/2006 a)	ND<267 U (1/6/2006 a)	(305 - 267)/(7 - 1)	6.33333
ND<229 OK (12/29/2006 a)	ND<267 U (1/6/2006 a)	(229 - 267)/(8 - 1)	-5.42857
ND<383 OK (3/22/2007 a)	ND<267 U (1/6/2006 a)	(383 - 267)/(9 - 1)	14.5
ND<321 OK (6/11/2007 a)	ND<267 U (1/6/2006 a)	(321 - 267)/(10 - 1)	6
ND<390 U (3/11/2006 a)	ND<311 U (1/24/2006 a)	(390 - 311)/(3 - 2)	79
ND<353 U (4/20/2006 a)	ND<311 U (1/24/2006 a)	(353 - 311)/(4 - 2)	21
ND<314 OK (5/11/2006 a)	ND<311 U (1/24/2006 a)	(314 - 311)/(5 - 2)	1
348 OK (7/16/2006 a)	ND<311 U (1/24/2006 a)	(348 - 311)/(6 - 2)	9.25
ND<305 OK (9/22/2006 a)	ND<311 U (1/24/2006 a)	(305 - 311)/(7 - 2)	-1.2
ND<229 OK (12/29/2006 a)	ND<311 U (1/24/2006 a)	(229 - 311)/(8 - 2)	-13.6667
ND<383 OK (3/22/2007 a)	ND<311 U (1/24/2006 a)	(383 - 311)/(9 - 2)	10.2857
ND<321 OK (6/11/2007 a)	ND<311 U (1/24/2006 a)	(321 - 311)/(10 - 2)	1.25
ND<353 U (4/20/2006 a)	ND<390 U (3/11/2006 a)	(353 - 390)/(4 - 3)	-37
ND<314 OK (5/11/2006 a)	ND<390 U (3/11/2006 a)	(314 - 390)/(5 - 3)	-38
348 OK (7/16/2006 a)	ND<390 U (3/11/2006 a)	(348 - 390)/(6 - 3)	-14
ND<305 OK (9/22/2006 a)	ND<390 U (3/11/2006 a)	(305 - 390)/(7 - 3)	-21.25
ND<229 OK (12/29/2006 a)	ND<390 U (3/11/2006 a)	(229 - 390)/(8 - 3)	-32.2
ND<383 OK (3/22/2007 a)	ND<390 U (3/11/2006 a)	(383 - 390)/(9 - 3)	-1.16667
ND<321 OK (6/11/2007 a)	ND<390 U (3/11/2006 a)	(321 - 390)/(10 - 3)	-9.85714
ND<314 OK (5/11/2006 a)	ND<353 U (4/20/2006 a)	(314 - 353)/(5 - 4)	-39
348 OK (7/16/2006 a)	ND<353 U (4/20/2006 a)	(348 - 353)/(6 - 4)	-2.5
ND<305 OK (9/22/2006 a)	ND<353 U (4/20/2006 a)	(305 - 353)/(7 - 4)	-16
ND<229 OK (12/29/2006 a)	ND<353 U (4/20/2006 a)	(229 - 353)/(8 - 4)	-31
ND<383 OK (3/22/2007 a)	ND<353 U (4/20/2006 a)	(383 - 353)/(9 - 4)	6
ND<321 OK (6/11/2007 a)	ND<353 U (4/20/2006 a)	(321 - 353)/(10 - 4)	-5.33333
348 OK (7/16/2006 a)	ND<314 OK (5/11/2006 a)	(348 - 314)/(6 - 5)	34
ND<305 OK (9/22/2006 a)	ND<314 OK (5/11/2006 a)	(305 - 314)/(7 - 5)	-4.5
ND<229 OK (12/29/2006 a)	ND<314 OK (5/11/2006 a)	(229 - 314)/(8 - 5)	-28.3333
ND<383 OK (3/22/2007 a)	ND<314 OK (5/11/2006 a)	(383 - 314)/(9 - 5)	17.25
ND<321 OK (6/11/2007 a)	ND<314 OK (5/11/2006 a)	(321 - 314)/(10 - 5)	1.4
ND<305 OK (9/22/2006 a)	348 OK (7/16/2006 a)	(305 - 348)/(7 - 6)	-43
ND<229 OK (12/29/2006 a)	348 OK (7/16/2006 a)	(229 - 348)/(8 - 6)	-59.5
ND<383 OK (3/22/2007 a)	348 OK (7/16/2006 a)	(383 - 348)/(9 - 6)	11.6667
ND<321 OK (6/11/2007 a)	348 OK (7/16/2006 a)	(321 - 348)/(10 - 6)	-6.75
ND<229 OK (12/29/2006 a)	ND<305 OK (9/22/2006 a)	(229 - 305)/(8 - 7)	-76
ND<383 OK (3/22/2007 a)	ND<305 OK (9/22/2006 a)	(383 - 305)/(9 - 7)	39

ND<321 OK (6/11/2007 a)	ND<305 OK (9/22/2006 a)	(321 - 305)/(10 - 7)	5.33333
ND<383 OK (3/22/2007 a)	ND<229 OK (12/29/2006 a)	(383 - 229)/(9 - 8)	154
ND<321 OK (6/11/2007 a)	ND<229 OK (12/29/2006 a)	(321 - 229)/(10 - 8)	46
ND<321 OK (6/11/2007 a)	ND<383 OK (3/22/2007 a)	(321 - 383)/(10 - 9)	-62

Number of Q values = 45

Ordered Q Values

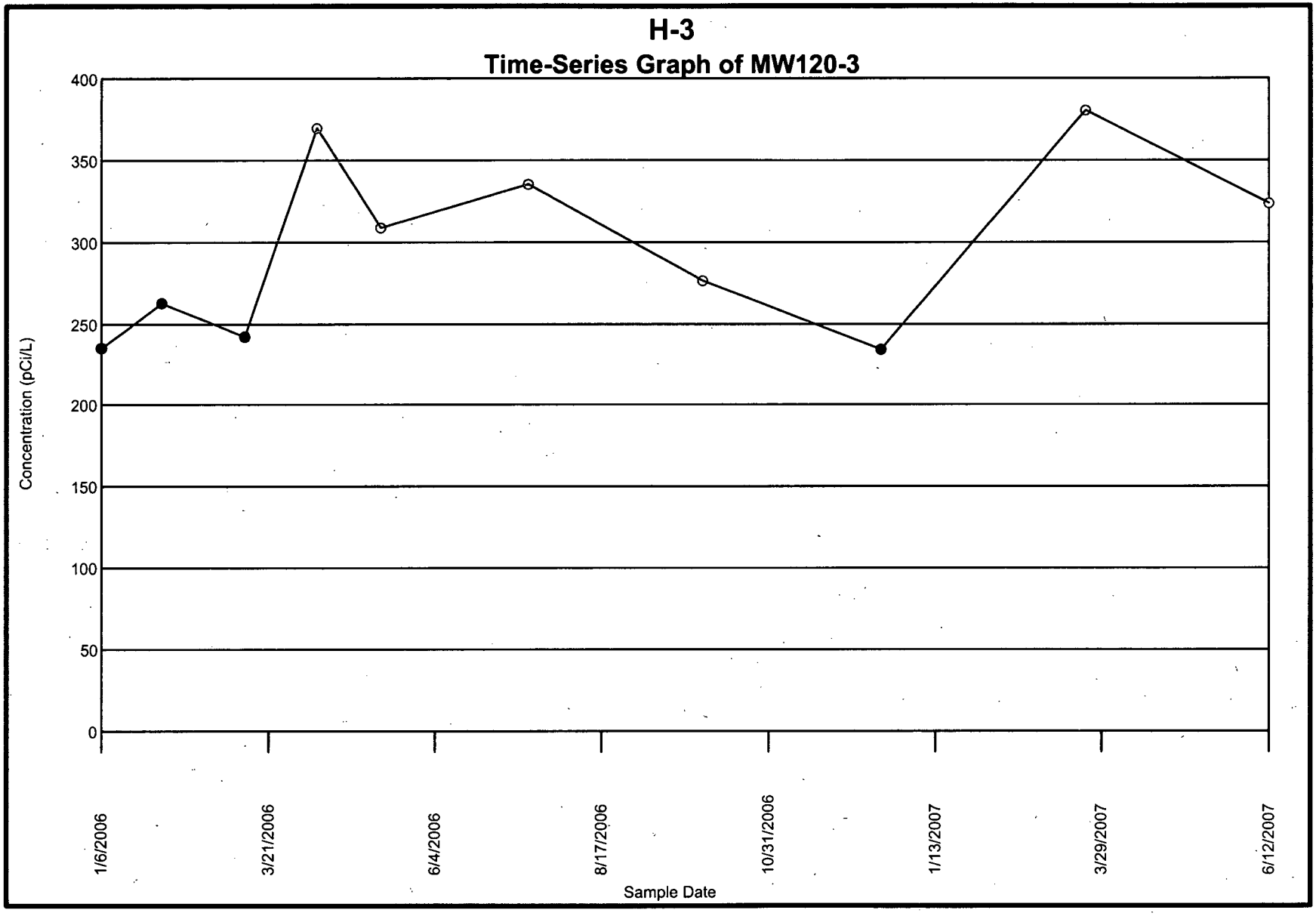
n	Q
1	-76
2	-62
3	-59.5
4	-43
5	-39
6	-38
7	-37
8	-32.2
9	-31
10	-28.3333
11	-21.25
12	-16
13	-14
14	-13.6667
15	-9.85714
16	-6.75
17	-5.42857
18	-5.33333
19	-4.5
20	-2.5
21	-1.2
22	-1.16667
23	1
24	1.25
25	1.4
26	5.33333
27	6
28	6
29	6.33333
30	9.25
31	10.2857
32	11.6667
33	11.75
34	14.5
35	16.2
36	17.25
37	21
38	28.6667
39	34
40	39
41	44
42	46
43	61.5
44	79
45	154

Sen's Estimator (Median Q) is 1

Time Period	Observations
1/6/2006	1
1/24/2006	1
3/11/2006	1
4/20/2006	1
5/11/2006	1
7/16/2006	1
9/22/2006	1
12/29/2006	1
3/22/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -14 = Q(13)
Upper limit is 11.75 = Q(33)
-14 < 0 < 11.75 indicating no trend in data.


H-3
Time-Series Graph of MW120-3
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/6/2006
3/21/2006
6/4/2006
8/17/2006
10/31/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW120-3

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
262 U (2/2/2006 a)	235 U (1/6/2006 a)	(262 - 235)/(2 - 1)	27
242 U (3/11/2006 a)	235 U (1/6/2006 a)	(242 - 235)/(3 - 1)	3.5
ND<370 U (4/12/2006 a)	235 U (1/6/2006 a)	(370 - 235)/(4 - 1)	45
ND<309 OK (5/11/2006 a)	235 U (1/6/2006 a)	(309 - 235)/(5 - 1)	18.5
ND<335 OK (7/16/2006 a)	235 U (1/6/2006 a)	(335 - 235)/(6 - 1)	20
ND<276 OK (10/2/2006 a)	235 U (1/6/2006 a)	(276 - 235)/(7 - 1)	6.83333
234 OK (12/21/2006 a)	235 U (1/6/2006 a)	(234 - 235)/(8 - 1)	-0.142857
ND<380.5 OK (3/22/2007 ~)	235 U (1/6/2006 a)	(380.5 - 235)/(9 - 1)	18.1875
ND<323 OK (6/12/2007 a)	235 U (1/6/2006 a)	(323 - 235)/(10 - 1)	9.77778
242 U (3/11/2006 a)	262 U (2/2/2006 a)	(242 - 262)/(3 - 2)	-20
ND<370 U (4/12/2006 a)	262 U (2/2/2006 a)	(370 - 262)/(4 - 2)	54
ND<309 OK (5/11/2006 a)	262 U (2/2/2006 a)	(309 - 262)/(5 - 2)	15.6667
ND<335 OK (7/16/2006 a)	262 U (2/2/2006 a)	(335 - 262)/(6 - 2)	18.25
ND<276 OK (10/2/2006 a)	262 U (2/2/2006 a)	(276 - 262)/(7 - 2)	2.8
234 OK (12/21/2006 a)	262 U (2/2/2006 a)	(234 - 262)/(8 - 2)	-4.66667
ND<380.5 OK (3/22/2007 ~)	262 U (2/2/2006 a)	(380.5 - 262)/(9 - 2)	16.9286
ND<323 OK (6/12/2007 a)	262 U (2/2/2006 a)	(323 - 262)/(10 - 2)	7.625
ND<370 U (4/12/2006 a)	242 U (3/11/2006 a)	(370 - 242)/(4 - 3)	128
ND<309 OK (5/11/2006 a)	242 U (3/11/2006 a)	(309 - 242)/(5 - 3)	33.5
ND<335 OK (7/16/2006 a)	242 U (3/11/2006 a)	(335 - 242)/(6 - 3)	31
ND<276 OK (10/2/2006 a)	242 U (3/11/2006 a)	(276 - 242)/(7 - 3)	8.5
234 OK (12/21/2006 a)	242 U (3/11/2006 a)	(234 - 242)/(8 - 3)	-1.6
ND<380.5 OK (3/22/2007 ~)	242 U (3/11/2006 a)	(380.5 - 242)/(9 - 3)	23.0833
ND<323 OK (6/12/2007 a)	242 U (3/11/2006 a)	(323 - 242)/(10 - 3)	11.5714
ND<309 OK (5/11/2006 a)	ND<370 U (4/12/2006 a)	(309 - 370)/(5 - 4)	-61
ND<335 OK (7/16/2006 a)	ND<370 U (4/12/2006 a)	(335 - 370)/(6 - 4)	-17.5
ND<276 OK (10/2/2006 a)	ND<370 U (4/12/2006 a)	(276 - 370)/(7 - 4)	-31.3333
234 OK (12/21/2006 a)	ND<370 U (4/12/2006 a)	(234 - 370)/(8 - 4)	-34

ND<380.5 OK (3/22/2007 ~)	ND<370 U (4/12/2006 a)	(380.5 - 370)/(9 - 4)	2.1
ND<323 OK (6/12/2007 a)	ND<370 U (4/12/2006 a)	(323 - 370)/(10 - 4)	-7.83333
ND<335 OK (7/16/2006 a)	ND<309 OK (5/11/2006 a)	(335 - 309)/(6 - 5)	26
ND<276 OK (10/2/2006 a)	ND<309 OK (5/11/2006 a)	(276 - 309)/(7 - 5)	-16.5
234 OK (12/21/2006 a)	ND<309 OK (5/11/2006 a)	(234 - 309)/(8 - 5)	-25
ND<380.5 OK (3/22/2007 ~)	ND<309 OK (5/11/2006 a)	(380.5 - 309)/(9 - 5)	17.875
ND<323 OK (6/12/2007 a)	ND<309 OK (5/11/2006 a)	(323 - 309)/(10 - 5)	2.8
ND<276 OK (10/2/2006 a)	ND<335 OK (7/16/2006 a)	(276 - 335)/(7 - 6)	-59
234 OK (12/21/2006 a)	ND<335 OK (7/16/2006 a)	(234 - 335)/(8 - 6)	-50.5
ND<380.5 OK (3/22/2007 ~)	ND<335 OK (7/16/2006 a)	(380.5 - 335)/(9 - 6)	15.1667
ND<323 OK (6/12/2007 a)	ND<335 OK (7/16/2006 a)	(323 - 335)/(10 - 6)	-3
234 OK (12/21/2006 a)	ND<276 OK (10/2/2006 a)	(234 - 276)/(8 - 7)	-42
ND<380.5 OK (3/22/2007 ~)	ND<276 OK (10/2/2006 a)	(380.5 - 276)/(9 - 7)	52.25
ND<323 OK (6/12/2007 a)	ND<276 OK (10/2/2006 a)	(323 - 276)/(10 - 7)	15.6667
ND<380.5 OK (3/22/2007 ~)	234 OK (12/21/2006 a)	(380.5 - 234)/(9 - 8)	146.5
ND<323 OK (6/12/2007 a)	234 OK (12/21/2006 a)	(323 - 234)/(10 - 8)	44.5
ND<323 OK (6/12/2007 a)	ND<380.5 OK (3/22/2007 ~)	(323 - 380.5)/(10 - 9)	-57.5

Number of Q values = 45

Ordered Q Values

n	Q
1	-61
2	-59
3	-57.5
4	-50.5
5	-42
6	-34
7	-31.3333
8	-25
9	-20
10	-17.5
11	-16.5
12	-7.83333
13	-4.66667

14	-3
15	-1.6
16	-0.142857
17	2.1
18	2.8
19	2.8
20	3.5
21	6.83333
22	7.625
23	8.5
24	9.77778
25	11.5714
26	15.1667
27	15.6667
28	15.6667
29	16.9286
30	17.875
31	18.1875
32	18.25
33	18.5
34	20
35	23.0833
36	26
37	27
38	31
39	33.5
40	44.5
41	45
42	52.25
43	54
44	128
45	146.5

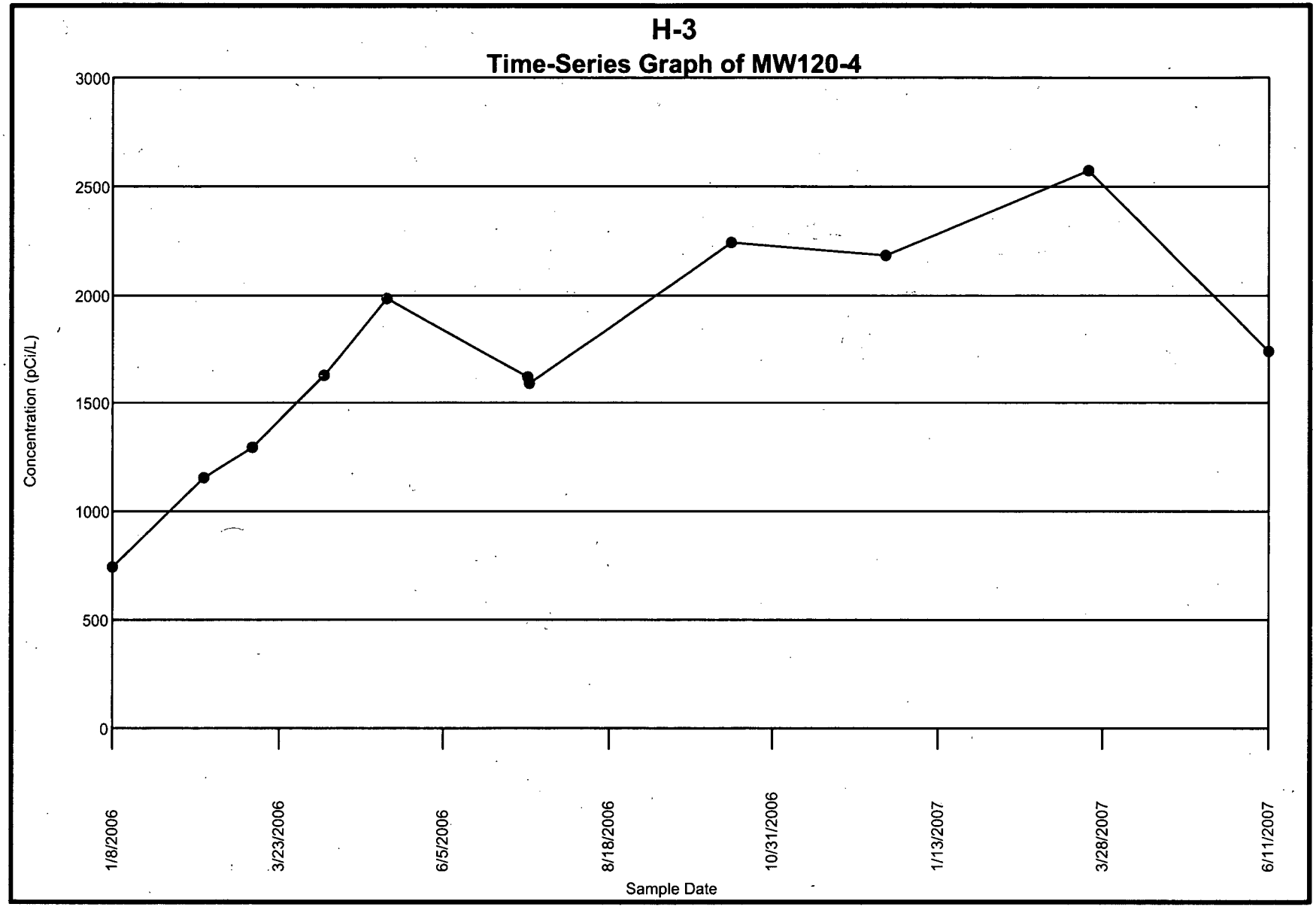
Sen's Estimator (Median Q) is 8.5

Time Period	Observations
1/6/2006	1
2/2/2006	1
3/11/2006	1
4/12/2006	1
5/11/2006	1
7/16/2006	1

10/2/2006	1
12/21/2006	1
3/22/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -4.66667 = Q(13)
Upper limit is 18.5 = Q(33)
-4.66667 < 0 < 18.5 indicating no trend in data.


H-3
Time-Series Graph of MW120-4
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
1/8/2006
3/23/2006
6/5/2006
8/18/2006
10/31/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW120-4

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1160 OK (2/18/2006 a)	743 OK (1/8/2006 a)	(1160 - 743)/(2 - 1)	417
1300 OK (3/11/2006 a)	743 OK (1/8/2006 a)	(1300 - 743)/(3 - 1)	278.5
1630 OK (4/12/2006 a)	743 OK (1/8/2006 a)	(1630 - 743)/(4 - 1)	295.667
1980 OK (5/11/2006 a)	743 OK (1/8/2006 a)	(1980 - 743)/(5 - 1)	309.25
1620 OK (7/13/2006 a)	743 OK (1/8/2006 a)	(1620 - 743)/(6 - 1)	175.4
1590 OK (7/14/2006 a)	743 OK (1/8/2006 a)	(1590 - 743)/(7 - 1)	141.167
2240 OK (10/13/2006 a)	743 OK (1/8/2006 a)	(2240 - 743)/(8 - 1)	213.857
2180 OK (12/21/2006 a)	743 OK (1/8/2006 a)	(2180 - 743)/(9 - 1)	179.625
2570 OK (3/22/2007 a)	743 OK (1/8/2006 a)	(2570 - 743)/(10 - 1)	203
1740 OK (6/11/2007 a)	743 OK (1/8/2006 a)	(1740 - 743)/(11 - 1)	99.7
1300 OK (3/11/2006 a)	1160 OK (2/18/2006 a)	(1300 - 1160)/(3 - 2)	140
1630 OK (4/12/2006 a)	1160 OK (2/18/2006 a)	(1630 - 1160)/(4 - 2)	235
1980 OK (5/11/2006 a)	1160 OK (2/18/2006 a)	(1980 - 1160)/(5 - 2)	273.333
1620 OK (7/13/2006 a)	1160 OK (2/18/2006 a)	(1620 - 1160)/(6 - 2)	115
1590 OK (7/14/2006 a)	1160 OK (2/18/2006 a)	(1590 - 1160)/(7 - 2)	86
2240 OK (10/13/2006 a)	1160 OK (2/18/2006 a)	(2240 - 1160)/(8 - 2)	180
2180 OK (12/21/2006 a)	1160 OK (2/18/2006 a)	(2180 - 1160)/(9 - 2)	145.714
2570 OK (3/22/2007 a)	1160 OK (2/18/2006 a)	(2570 - 1160)/(10 - 2)	176.25
1740 OK (6/11/2007 a)	1160 OK (2/18/2006 a)	(1740 - 1160)/(11 - 2)	64.4444
1630 OK (4/12/2006 a)	1300 OK (3/11/2006 a)	(1630 - 1300)/(4 - 3)	330
1980 OK (5/11/2006 a)	1300 OK (3/11/2006 a)	(1980 - 1300)/(5 - 3)	340
1620 OK (7/13/2006 a)	1300 OK (3/11/2006 a)	(1620 - 1300)/(6 - 3)	106.667
1590 OK (7/14/2006 a)	1300 OK (3/11/2006 a)	(1590 - 1300)/(7 - 3)	72.5
2240 OK (10/13/2006 a)	1300 OK (3/11/2006 a)	(2240 - 1300)/(8 - 3)	188
2180 OK (12/21/2006 a)	1300 OK (3/11/2006 a)	(2180 - 1300)/(9 - 3)	146.667
2570 OK (3/22/2007 a)	1300 OK (3/11/2006 a)	(2570 - 1300)/(10 - 3)	181.429
1740 OK (6/11/2007 a)	1300 OK (3/11/2006 a)	(1740 - 1300)/(11 - 3)	55
1980 OK (5/11/2006 a)	1630 OK (4/12/2006 a)	(1980 - 1630)/(5 - 4)	350
1620 OK (7/13/2006 a)	1630 OK (4/12/2006 a)	(1620 - 1630)/(6 - 4)	-5
1590 OK (7/14/2006 a)	1630 OK (4/12/2006 a)	(1590 - 1630)/(7 - 4)	-13.3333
2240 OK (10/13/2006 a)	1630 OK (4/12/2006 a)	(2240 - 1630)/(8 - 4)	152.5
2180 OK (12/21/2006 a)	1630 OK (4/12/2006 a)	(2180 - 1630)/(9 - 4)	110
2570 OK (3/22/2007 a)	1630 OK (4/12/2006 a)	(2570 - 1630)/(10 - 4)	156.667
1740 OK (6/11/2007 a)	1630 OK (4/12/2006 a)	(1740 - 1630)/(11 - 4)	15.7143
1620 OK (7/13/2006 a)	1980 OK (5/11/2006 a)	(1620 - 1980)/(6 - 5)	-360
1590 OK (7/14/2006 a)	1980 OK (5/11/2006 a)	(1590 - 1980)/(7 - 5)	-195
2240 OK (10/13/2006 a)	1980 OK (5/11/2006 a)	(2240 - 1980)/(8 - 5)	86.6667
2180 OK (12/21/2006 a)	1980 OK (5/11/2006 a)	(2180 - 1980)/(9 - 5)	50
2570 OK (3/22/2007 a)	1980 OK (5/11/2006 a)	(2570 - 1980)/(10 - 5)	118
1740 OK (6/11/2007 a)	1980 OK (5/11/2006 a)	(1740 - 1980)/(11 - 5)	-40
1590 OK (7/14/2006 a)	1620 OK (7/13/2006 a)	(1590 - 1620)/(7 - 6)	-30
2240 OK (10/13/2006 a)	1620 OK (7/13/2006 a)	(2240 - 1620)/(8 - 6)	310

2180 OK (12/21/2006 a)	1620 OK (7/13/2006 a)	(2180 - 1620)/(9 - 6)	186.667
2570 OK (3/22/2007 a)	1620 OK (7/13/2006 a)	(2570 - 1620)/(10 - 6)	237.5
1740 OK (6/11/2007 a)	1620 OK (7/13/2006 a)	(1740 - 1620)/(11 - 6)	24
2240 OK (10/13/2006 a)	1590 OK (7/14/2006 a)	(2240 - 1590)/(8 - 7)	650
2180 OK (12/21/2006 a)	1590 OK (7/14/2006 a)	(2180 - 1590)/(9 - 7)	295
2570 OK (3/22/2007 a)	1590 OK (7/14/2006 a)	(2570 - 1590)/(10 - 7)	326.667
1740 OK (6/11/2007 a)	1590 OK (7/14/2006 a)	(1740 - 1590)/(11 - 7)	37.5
2180 OK (12/21/2006 a)	2240 OK (10/13/2006 a)	(2180 - 2240)/(9 - 8)	-60
2570 OK (3/22/2007 a)	2240 OK (10/13/2006 a)	(2570 - 2240)/(10 - 8)	165
1740 OK (6/11/2007 a)	2240 OK (10/13/2006 a)	(1740 - 2240)/(11 - 8)	-166.667
2570 OK (3/22/2007 a)	2180 OK (12/21/2006 a)	(2570 - 2180)/(10 - 9)	390
1740 OK (6/11/2007 a)	2180 OK (12/21/2006 a)	(1740 - 2180)/(11 - 9)	-220
1740 OK (6/11/2007 a)	2570 OK (3/22/2007 a)	(1740 - 2570)/(11 - 10)	-830

Number of Q values = 55

Ordered Q Values

n	Q
1	-830
2	-360
3	-220
4	-195
5	-166.667
6	-60
7	-40
8	-30
9	-13.3333
10	-5
11	15.7143
12	24
13	37.5
14	50
15	55
16	64.4444
17	72.5
18	86
19	86.6667
20	99.7
21	106.667
22	110
23	115
24	118
25	140
26	141.167
27	145.714
28	146.667
29	152.5
30	156.667
31	165
32	175.4
33	176.25
34	179.625

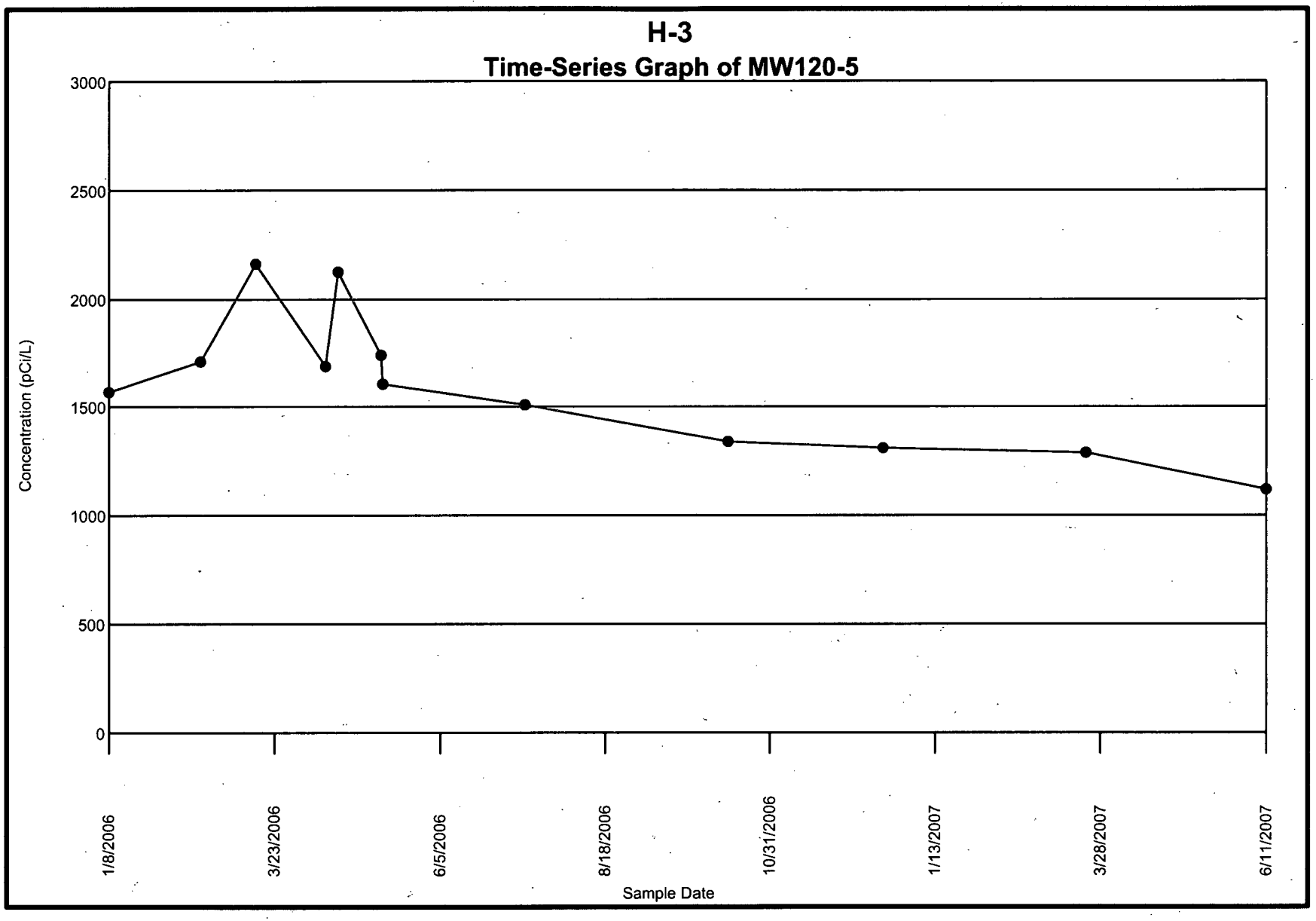
35	180
36	181.429
37	186.667
38	188
39	203
40	213.857
41	235
42	237.5
43	273.333
44	278.5
45	295
46	295.667
47	309.25
48	310
49	326.667
50	330
51	340
52	350
53	390
54	417
55	650

Sen's Estimator (Median Q) is 146.667

Time Period	Observations
1/8/2006	1
2/18/2006	1
3/11/2006	1
4/12/2006	1
5/11/2006	1
7/13/2006	1
7/14/2006	1
10/13/2006	1
12/21/2006	1
3/22/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 72.5 = Q(17)
Upper limit is 203 = Q(39)
72.5 > 0 indicating an upward trend in data.


H-3
Time-Series Graph of MW120-5
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
1/8/2006
3/23/2006
6/5/2006
8/18/2006
10/31/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW120-5
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1710 OK (2/18/2006 a)	1570 OK (1/8/2006 a)	(1710 - 1570)/(2 - 1)	140
2160 OK (3/15/2006 a)	1570 OK (1/8/2006 a)	(2160 - 1570)/(3 - 1)	295
1690 OK (4/15/2006 a)	1570 OK (1/8/2006 a)	(1690 - 1570)/(4 - 1)	40
2120 OK (4/21/2006 a)	1570 OK (1/8/2006 a)	(2120 - 1570)/(5 - 1)	137.5
1740 OK (5/10/2006 a)	1570 OK (1/8/2006 a)	(1740 - 1570)/(6 - 1)	34
1610 OK (5/11/2006 ~)	1570 OK (1/8/2006 a)	(1610 - 1570)/(7 - 1)	6.66667
1510 OK (7/13/2006 a)	1570 OK (1/8/2006 a)	(1510 - 1570)/(8 - 1)	-8.57143
1340 OK (10/13/2006 a)	1570 OK (1/8/2006 a)	(1340 - 1570)/(9 - 1)	-28.75
1310 OK (12/21/2006 a)	1570 OK (1/8/2006 a)	(1310 - 1570)/(10 - 1)	-28.8889
1290 OK (3/22/2007 a)	1570 OK (1/8/2006 a)	(1290 - 1570)/(11 - 1)	-28
1120 OK (6/11/2007 a)	1570 OK (1/8/2006 a)	(1120 - 1570)/(12 - 1)	-40.9091
2160 OK (3/15/2006 a)	1710 OK (2/18/2006 a)	(2160 - 1710)/(3 - 2)	450
1690 OK (4/15/2006 a)	1710 OK (2/18/2006 a)	(1690 - 1710)/(4 - 2)	-10
2120 OK (4/21/2006 a)	1710 OK (2/18/2006 a)	(2120 - 1710)/(5 - 2)	136.667
1740 OK (5/10/2006 a)	1710 OK (2/18/2006 a)	(1740 - 1710)/(6 - 2)	7.5
1610 OK (5/11/2006 ~)	1710 OK (2/18/2006 a)	(1610 - 1710)/(7 - 2)	-20
1510 OK (7/13/2006 a)	1710 OK (2/18/2006 a)	(1510 - 1710)/(8 - 2)	-33.3333
1340 OK (10/13/2006 a)	1710 OK (2/18/2006 a)	(1340 - 1710)/(9 - 2)	-52.8571
1310 OK (12/21/2006 a)	1710 OK (2/18/2006 a)	(1310 - 1710)/(10 - 2)	-50
1290 OK (3/22/2007 a)	1710 OK (2/18/2006 a)	(1290 - 1710)/(11 - 2)	-46.6667
1120 OK (6/11/2007 a)	1710 OK (2/18/2006 a)	(1120 - 1710)/(12 - 2)	-59
1690 OK (4/15/2006 a)	2160 OK (3/15/2006 a)	(1690 - 2160)/(4 - 3)	-470
2120 OK (4/21/2006 a)	2160 OK (3/15/2006 a)	(2120 - 2160)/(5 - 3)	-20
1740 OK (5/10/2006 a)	2160 OK (3/15/2006 a)	(1740 - 2160)/(6 - 3)	-140
1610 OK (5/11/2006 ~)	2160 OK (3/15/2006 a)	(1610 - 2160)/(7 - 3)	-137.5
1510 OK (7/13/2006 a)	2160 OK (3/15/2006 a)	(1510 - 2160)/(8 - 3)	-130
1340 OK (10/13/2006 a)	2160 OK (3/15/2006 a)	(1340 - 2160)/(9 - 3)	-136.667
1310 OK (12/21/2006 a)	2160 OK (3/15/2006 a)	(1310 - 2160)/(10 - 3)	-121.429
1290 OK (3/22/2007 a)	2160 OK (3/15/2006 a)	(1290 - 2160)/(11 - 3)	-108.75
1120 OK (6/11/2007 a)	2160 OK (3/15/2006 a)	(1120 - 2160)/(12 - 3)	-115.556
2120 OK (4/21/2006 a)	1690 OK (4/15/2006 a)	(2120 - 1690)/(5 - 4)	430
1740 OK (5/10/2006 a)	1690 OK (4/15/2006 a)	(1740 - 1690)/(6 - 4)	25
1610 OK (5/11/2006 ~)	1690 OK (4/15/2006 a)	(1610 - 1690)/(7 - 4)	-26.6667
1510 OK (7/13/2006 a)	1690 OK (4/15/2006 a)	(1510 - 1690)/(8 - 4)	-45
1340 OK (10/13/2006 a)	1690 OK (4/15/2006 a)	(1340 - 1690)/(9 - 4)	-70
1310 OK (12/21/2006 a)	1690 OK (4/15/2006 a)	(1310 - 1690)/(10 - 4)	-63.3333
1290 OK (3/22/2007 a)	1690 OK (4/15/2006 a)	(1290 - 1690)/(11 - 4)	-57.1429
1120 OK (6/11/2007 a)	1690 OK (4/15/2006 a)	(1120 - 1690)/(12 - 4)	-71.25
1740 OK (5/10/2006 a)	2120 OK (4/21/2006 a)	(1740 - 2120)/(6 - 5)	-380
1610 OK (5/11/2006 ~)	2120 OK (4/21/2006 a)	(1610 - 2120)/(7 - 5)	-255
1510 OK (7/13/2006 a)	2120 OK (4/21/2006 a)	(1510 - 2120)/(8 - 5)	-203.333
1340 OK (10/13/2006 a)	2120 OK (4/21/2006 a)	(1340 - 2120)/(9 - 5)	-195
1310 OK (12/21/2006 a)	2120 OK (4/21/2006 a)	(1310 - 2120)/(10 - 5)	-162

1290 OK (3/22/2007 a)	2120 OK (4/21/2006 a)	(1290 - 2120)/(11 - 5)	-138.333
1120 OK (6/11/2007 a)	2120 OK (4/21/2006 a)	(1120 - 2120)/(12 - 5)	-142.857
1610 OK (5/11/2006 ~)	1740 OK (5/10/2006 a)	(1610 - 1740)/(7 - 6)	-130
1510 OK (7/13/2006 a)	1740 OK (5/10/2006 a)	(1510 - 1740)/(8 - 6)	-115
1340 OK (10/13/2006 a)	1740 OK (5/10/2006 a)	(1340 - 1740)/(9 - 6)	-133.333
1310 OK (12/21/2006 a)	1740 OK (5/10/2006 a)	(1310 - 1740)/(10 - 6)	-107.5
1290 OK (3/22/2007 a)	1740 OK (5/10/2006 a)	(1290 - 1740)/(11 - 6)	-90
1120 OK (6/11/2007 a)	1740 OK (5/10/2006 a)	(1120 - 1740)/(12 - 6)	-103.333
1510 OK (7/13/2006 a)	1610 OK (5/11/2006 ~)	(1510 - 1610)/(8 - 7)	-100
1340 OK (10/13/2006 a)	1610 OK (5/11/2006 ~)	(1340 - 1610)/(9 - 7)	-135
1310 OK (12/21/2006 a)	1610 OK (5/11/2006 ~)	(1310 - 1610)/(10 - 7)	-100
1290 OK (3/22/2007 a)	1610 OK (5/11/2006 ~)	(1290 - 1610)/(11 - 7)	-80
1120 OK (6/11/2007 a)	1610 OK (5/11/2006 ~)	(1120 - 1610)/(12 - 7)	-98
1340 OK (10/13/2006 a)	1510 OK (7/13/2006 a)	(1340 - 1510)/(9 - 8)	-170
1310 OK (12/21/2006 a)	1510 OK (7/13/2006 a)	(1310 - 1510)/(10 - 8)	-100
1290 OK (3/22/2007 a)	1510 OK (7/13/2006 a)	(1290 - 1510)/(11 - 8)	-73.3333
1120 OK (6/11/2007 a)	1510 OK (7/13/2006 a)	(1120 - 1510)/(12 - 8)	-97.5
1310 OK (12/21/2006 a)	1340 OK (10/13/2006 a)	(1310 - 1340)/(10 - 9)	-30
1290 OK (3/22/2007 a)	1340 OK (10/13/2006 a)	(1290 - 1340)/(11 - 9)	-25
1120 OK (6/11/2007 a)	1340 OK (10/13/2006 a)	(1120 - 1340)/(12 - 9)	-73.3333
1290 OK (3/22/2007 a)	1310 OK (12/21/2006 a)	(1290 - 1310)/(11 - 10)	-20
1120 OK (6/11/2007 a)	1310 OK (12/21/2006 a)	(1120 - 1310)/(12 - 10)	-95
1120 OK (6/11/2007 a)	1290 OK (3/22/2007 a)	(1120 - 1290)/(12 - 11)	-170

Number of Q values = 66

Ordered Q Values

n	Q
1	-470
2	-380
3	-255
4	-203.333
5	-195
6	-170
7	-170
8	-162
9	-142.857
10	-140
11	-138.333
12	-137.5
13	-136.667
14	-135
15	-133.333
16	-130
17	-130
18	-121.429
19	-115.556
20	-115
21	-108.75
22	-107.5

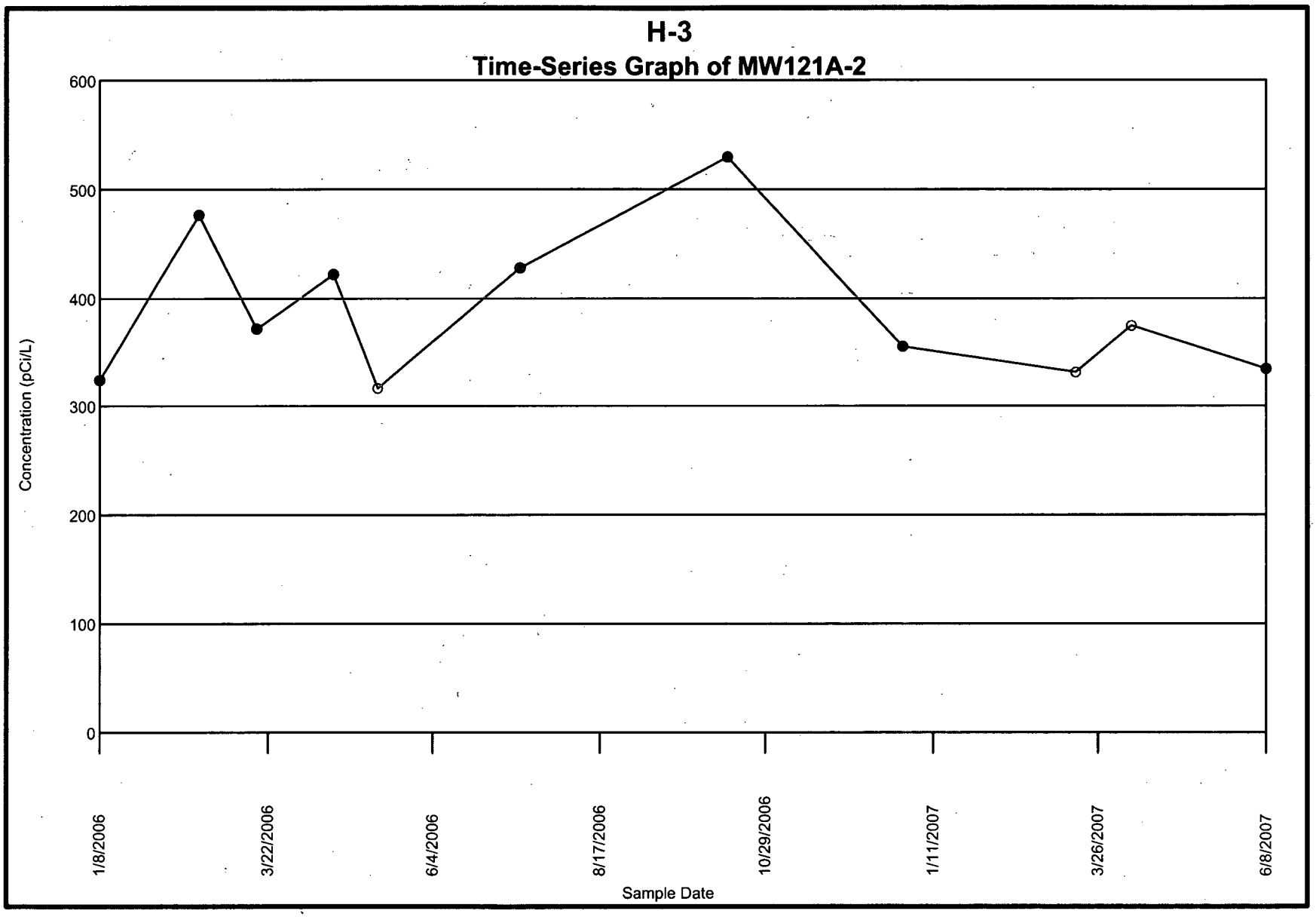
23	-103.333
24	-100
25	-100
26	-100
27	-98
28	-97.5
29	-95
30	-90
31	-80
32	-73.3333
33	-73.3333
34	-71.25
35	-70
36	-63.3333
37	-59
38	-57.1429
39	-52.8571
40	-50
41	-46.6667
42	-45
43	-40.9091
44	-33.3333
45	-30
46	-28.8889
47	-28.75
48	-28
49	-26.6667
50	-25
51	-20
52	-20
53	-20
54	-10
55	-8.57143
56	6.66667
57	7.5
58	25
59	34
60	40
61	136.667
62	137.5
63	140
64	295
65	430
66	450

Sen's Estimator (Median Q) is -72.2917

Time Period	Observations
1/8/2006	1
2/18/2006	1
3/15/2006	1
4/15/2006	1
4/21/2006	1
5/10/2006	1
5/11/2006	1
7/13/2006	1
10/13/2006	1
12/21/2006	1

3/22/2007 1
6/11/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -108.75 = Q(21)
Upper limit is -28.8889 = Q(46)
-28.8889 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW121A-2
Concentration (pCi/L)
600
500
400
300
200
100
0
1/8/2006
3/22/2006
6/4/2006
8/17/2006
10/29/2006
1/11/2007
3/26/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW121A-2

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
476 OK (2/21/2006 a)	325 OK (1/8/2006 a)	(476 - 325)/(2 - 1)	151
371 OK (3/18/2006 a)	325 OK (1/8/2006 a)	(371 - 325)/(3 - 1)	23
422 OK (4/21/2006 a)	325 OK (1/8/2006 a)	(422 - 325)/(4 - 1)	32.3333
ND<317 OK (5/11/2006 a)	325 OK (1/8/2006 a)	(317 - 325)/(5 - 1)	-2
428 OK (7/13/2006 a)	325 OK (1/8/2006 a)	(428 - 325)/(6 - 1)	20.6
529 OK (10/13/2006 a)	325 OK (1/8/2006 a)	(529 - 325)/(7 - 1)	34
356 OK (12/29/2006 a)	325 OK (1/8/2006 a)	(356 - 325)/(8 - 1)	4.42857
ND<331 OK (3/16/2007 a)	325 OK (1/8/2006 a)	(331 - 325)/(9 - 1)	0.75
ND<375 OK (4/10/2007 a)	325 OK (1/8/2006 a)	(375 - 325)/(10 - 1)	5.55556
334 OK (6/8/2007 a)	325 OK (1/8/2006 a)	(334 - 325)/(11 - 1)	0.9
371 OK (3/18/2006 a)	476 OK (2/21/2006 a)	(371 - 476)/(3 - 2)	-105
422 OK (4/21/2006 a)	476 OK (2/21/2006 a)	(422 - 476)/(4 - 2)	-27
ND<317 OK (5/11/2006 a)	476 OK (2/21/2006 a)	(317 - 476)/(5 - 2)	-53
428 OK (7/13/2006 a)	476 OK (2/21/2006 a)	(428 - 476)/(6 - 2)	-12
529 OK (10/13/2006 a)	476 OK (2/21/2006 a)	(529 - 476)/(7 - 2)	10.6
356 OK (12/29/2006 a)	476 OK (2/21/2006 a)	(356 - 476)/(8 - 2)	-20
ND<331 OK (3/16/2007 a)	476 OK (2/21/2006 a)	(331 - 476)/(9 - 2)	-20.7143
ND<375 OK (4/10/2007 a)	476 OK (2/21/2006 a)	(375 - 476)/(10 - 2)	-12.625
334 OK (6/8/2007 a)	476 OK (2/21/2006 a)	(334 - 476)/(11 - 2)	-15.7778
422 OK (4/21/2006 a)	371 OK (3/18/2006 a)	(422 - 371)/(4 - 3)	51
ND<317 OK (5/11/2006 a)	371 OK (3/18/2006 a)	(317 - 371)/(5 - 3)	-27
428 OK (7/13/2006 a)	371 OK (3/18/2006 a)	(428 - 371)/(6 - 3)	19
529 OK (10/13/2006 a)	371 OK (3/18/2006 a)	(529 - 371)/(7 - 3)	39.5
356 OK (12/29/2006 a)	371 OK (3/18/2006 a)	(356 - 371)/(8 - 3)	-3
ND<331 OK (3/16/2007 a)	371 OK (3/18/2006 a)	(331 - 371)/(9 - 3)	-6.66667
ND<375 OK (4/10/2007 a)	371 OK (3/18/2006 a)	(375 - 371)/(10 - 3)	0.571429
334 OK (6/8/2007 a)	371 OK (3/18/2006 a)	(334 - 371)/(11 - 3)	-4.625
ND<317 OK (5/11/2006 a)	422 OK (4/21/2006 a)	(317 - 422)/(5 - 4)	-105
428 OK (7/13/2006 a)	422 OK (4/21/2006 a)	(428 - 422)/(6 - 4)	3
529 OK (10/13/2006 a)	422 OK (4/21/2006 a)	(529 - 422)/(7 - 4)	35.6667
356 OK (12/29/2006 a)	422 OK (4/21/2006 a)	(356 - 422)/(8 - 4)	-16.5
ND<331 OK (3/16/2007 a)	422 OK (4/21/2006 a)	(331 - 422)/(9 - 4)	-18.2
ND<375 OK (4/10/2007 a)	422 OK (4/21/2006 a)	(375 - 422)/(10 - 4)	-7.83333
334 OK (6/8/2007 a)	422 OK (4/21/2006 a)	(334 - 422)/(11 - 4)	-12.5714
428 OK (7/13/2006 a)	ND<317 OK (5/11/2006 a)	(428 - 317)/(6 - 5)	111
529 OK (10/13/2006 a)	ND<317 OK (5/11/2006 a)	(529 - 317)/(7 - 5)	106
356 OK (12/29/2006 a)	ND<317 OK (5/11/2006 a)	(356 - 317)/(8 - 5)	13
ND<331 OK (3/16/2007 a)	ND<317 OK (5/11/2006 a)	(331 - 317)/(9 - 5)	3.5
ND<375 OK (4/10/2007 a)	ND<317 OK (5/11/2006 a)	(375 - 317)/(10 - 5)	11.6
334 OK (6/8/2007 a)	ND<317 OK (5/11/2006 a)	(334 - 317)/(11 - 5)	2.83333
529 OK (10/13/2006 a)	428 OK (7/13/2006 a)	(529 - 428)/(7 - 6)	101
356 OK (12/29/2006 a)	428 OK (7/13/2006 a)	(356 - 428)/(8 - 6)	-36

ND<331 OK (3/16/2007 a)	428 OK (7/13/2006 a)	(331 - 428)/(9 - 6)	-32.3333
ND<375 OK (4/10/2007 a)	428 OK (7/13/2006 a)	(375 - 428)/(10 - 6)	-13.25
334 OK (6/8/2007 a)	428 OK (7/13/2006 a)	(334 - 428)/(11 - 6)	-18.8
356 OK (12/29/2006 a)	529 OK (10/13/2006 a)	(356 - 529)/(8 - 7)	-173
ND<331 OK (3/16/2007 a)	529 OK (10/13/2006 a)	(331 - 529)/(9 - 7)	-99
ND<375 OK (4/10/2007 a)	529 OK (10/13/2006 a)	(375 - 529)/(10 - 7)	-51.3333
334 OK (6/8/2007 a)	529 OK (10/13/2006 a)	(334 - 529)/(11 - 7)	-48.75
ND<331 OK (3/16/2007 a)	356 OK (12/29/2006 a)	(331 - 356)/(9 - 8)	-25
ND<375 OK (4/10/2007 a)	356 OK (12/29/2006 a)	(375 - 356)/(10 - 8)	9.5
334 OK (6/8/2007 a)	356 OK (12/29/2006 a)	(334 - 356)/(11 - 8)	-7.33333
ND<375 OK (4/10/2007 a)	ND<331 OK (3/16/2007 a)	(375 - 331)/(10 - 9)	44
334 OK (6/8/2007 a)	ND<331 OK (3/16/2007 a)	(334 - 331)/(11 - 9)	1.5
334 OK (6/8/2007 a)	ND<375 OK (4/10/2007 a)	(334 - 375)/(11 - 10)	-41

Number of Q values = 55

Ordered Q Values

n	Q
1	-173
2	-105
3	-105
4	-99
5	-53
6	-51.3333
7	-48.75
8	-41
9	-36
10	-32.3333
11	-27
12	-27
13	-25
14	-20.7143
15	-20
16	-18.8
17	-18.2
18	-16.5
19	-15.7778
20	-13.25
21	-12.625
22	-12.5714
23	-12
24	-7.83333
25	-7.33333
26	-6.66667
27	-4.625
28	-3
29	-2
30	0.571429
31	0.75
32	0.9
33	1.5
34	2.83333

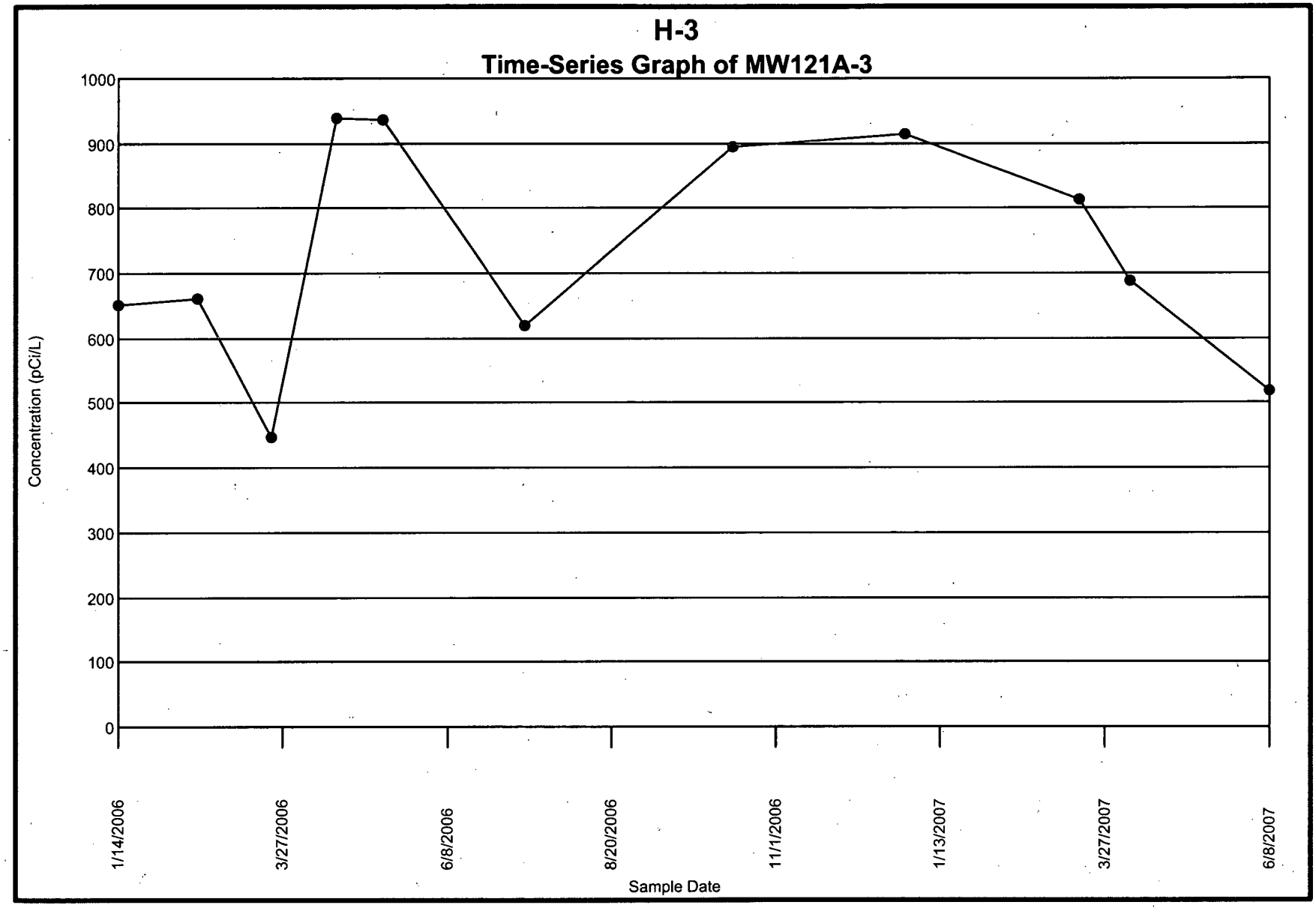
35	3
36	3.5
37	4.42857
38	5.55556
39	9.5
40	10.6
41	11.6
42	13
43	19
44	20.6
45	23
46	32.3333
47	34
48	35.6667
49	39.5
50	44
51	51
52	101
53	106
54	111
55	151

Sen's Estimator (Median Q) is -3

Time Period	Observations
1/8/2006	1
2/21/2006	1
3/18/2006	1
4/21/2006	1
5/11/2006	1
7/13/2006	1
10/13/2006	1
12/29/2006	1
3/16/2007	1
4/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -18.2 = Q(17)
Upper limit is 9.5 = Q(39)
-18.2 < 0 < 9.5 indicating no trend in data.


H-3
Time-Series Graph of MW121A-3
Concentration (pCi/L)
1000
900
800
700
600
500
400
300
200
100
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW121A-3

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
662 OK (2/18/2006 a)	650 OK (1/14/2006 a)	(662 - 650)/(2 - 1)	12
447 OK (3/23/2006 a)	650 OK (1/14/2006 a)	(447 - 650)/(3 - 1)	-101.5
938 OK (4/21/2006 a)	650 OK (1/14/2006 a)	(938 - 650)/(4 - 1)	96
937 OK (5/11/2006 a)	650 OK (1/14/2006 a)	(937 - 650)/(5 - 1)	71.75
619 OK (7/13/2006 a)	650 OK (1/14/2006 a)	(619 - 650)/(6 - 1)	-6.2
895 OK (10/13/2006 a)	650 OK (1/14/2006 a)	(895 - 650)/(7 - 1)	40.8333
913 OK (12/29/2006 a)	650 OK (1/14/2006 a)	(913 - 650)/(8 - 1)	37.5714
814 OK (3/16/2007 a)	650 OK (1/14/2006 a)	(814 - 650)/(9 - 1)	20.5
688 OK (4/7/2007 a)	650 OK (1/14/2006 a)	(688 - 650)/(10 - 1)	4.22222
518 OK (6/8/2007 a)	650 OK (1/14/2006 a)	(518 - 650)/(11 - 1)	-13.2
447 OK (3/23/2006 a)	662 OK (2/18/2006 a)	(447 - 662)/(3 - 2)	-215
938 OK (4/21/2006 a)	662 OK (2/18/2006 a)	(938 - 662)/(4 - 2)	138
937 OK (5/11/2006 a)	662 OK (2/18/2006 a)	(937 - 662)/(5 - 2)	91.6667
619 OK (7/13/2006 a)	662 OK (2/18/2006 a)	(619 - 662)/(6 - 2)	-10.75
895 OK (10/13/2006 a)	662 OK (2/18/2006 a)	(895 - 662)/(7 - 2)	46.6
913 OK (12/29/2006 a)	662 OK (2/18/2006 a)	(913 - 662)/(8 - 2)	41.8333
814 OK (3/16/2007 a)	662 OK (2/18/2006 a)	(814 - 662)/(9 - 2)	21.7143
688 OK (4/7/2007 a)	662 OK (2/18/2006 a)	(688 - 662)/(10 - 2)	3.25
518 OK (6/8/2007 a)	662 OK (2/18/2006 a)	(518 - 662)/(11 - 2)	-16
938 OK (4/21/2006 a)	447 OK (3/23/2006 a)	(938 - 447)/(4 - 3)	491
937 OK (5/11/2006 a)	447 OK (3/23/2006 a)	(937 - 447)/(5 - 3)	245
619 OK (7/13/2006 a)	447 OK (3/23/2006 a)	(619 - 447)/(6 - 3)	57.3333
895 OK (10/13/2006 a)	447 OK (3/23/2006 a)	(895 - 447)/(7 - 3)	112
913 OK (12/29/2006 a)	447 OK (3/23/2006 a)	(913 - 447)/(8 - 3)	93.2
814 OK (3/16/2007 a)	447 OK (3/23/2006 a)	(814 - 447)/(9 - 3)	61.1667
688 OK (4/7/2007 a)	447 OK (3/23/2006 a)	(688 - 447)/(10 - 3)	34.4286
518 OK (6/8/2007 a)	447 OK (3/23/2006 a)	(518 - 447)/(11 - 3)	8.875
937 OK (5/11/2006 a)	938 OK (4/21/2006 a)	(937 - 938)/(5 - 4)	-1
619 OK (7/13/2006 a)	938 OK (4/21/2006 a)	(619 - 938)/(6 - 4)	-159.5
895 OK (10/13/2006 a)	938 OK (4/21/2006 a)	(895 - 938)/(7 - 4)	-14.3333
913 OK (12/29/2006 a)	938 OK (4/21/2006 a)	(913 - 938)/(8 - 4)	-6.25
814 OK (3/16/2007 a)	938 OK (4/21/2006 a)	(814 - 938)/(9 - 4)	-24.8
688 OK (4/7/2007 a)	938 OK (4/21/2006 a)	(688 - 938)/(10 - 4)	-41.6667
518 OK (6/8/2007 a)	938 OK (4/21/2006 a)	(518 - 938)/(11 - 4)	-60
619 OK (7/13/2006 a)	937 OK (5/11/2006 a)	(619 - 937)/(6 - 5)	-318
895 OK (10/13/2006 a)	937 OK (5/11/2006 a)	(895 - 937)/(7 - 5)	-21
913 OK (12/29/2006 a)	937 OK (5/11/2006 a)	(913 - 937)/(8 - 5)	-8
814 OK (3/16/2007 a)	937 OK (5/11/2006 a)	(814 - 937)/(9 - 5)	-30.75
688 OK (4/7/2007 a)	937 OK (5/11/2006 a)	(688 - 937)/(10 - 5)	-49.8
518 OK (6/8/2007 a)	937 OK (5/11/2006 a)	(518 - 937)/(11 - 5)	-69.8333
895 OK (10/13/2006 a)	619 OK (7/13/2006 a)	(895 - 619)/(7 - 6)	276
913 OK (12/29/2006 a)	619 OK (7/13/2006 a)	(913 - 619)/(8 - 6)	147

814 OK (3/16/2007 a)	619 OK (7/13/2006 a)	(814 - 619)/(9 - 6)	65
688 OK (4/7/2007 a)	619 OK (7/13/2006 a)	(688 - 619)/(10 - 6)	17.25
518 OK (6/8/2007 a)	619 OK (7/13/2006 a)	(518 - 619)/(11 - 6)	-20.2
913 OK (12/29/2006 a)	895 OK (10/13/2006 a)	(913 - 895)/(8 - 7)	18
814 OK (3/16/2007 a)	895 OK (10/13/2006 a)	(814 - 895)/(9 - 7)	-40.5
688 OK (4/7/2007 a)	895 OK (10/13/2006 a)	(688 - 895)/(10 - 7)	-69
518 OK (6/8/2007 a)	895 OK (10/13/2006 a)	(518 - 895)/(11 - 7)	-94.25
814 OK (3/16/2007 a)	913 OK (12/29/2006 a)	(814 - 913)/(9 - 8)	-99
688 OK (4/7/2007 a)	913 OK (12/29/2006 a)	(688 - 913)/(10 - 8)	-112.5
518 OK (6/8/2007 a)	913 OK (12/29/2006 a)	(518 - 913)/(11 - 8)	-131.667
688 OK (4/7/2007 a)	814 OK (3/16/2007 a)	(688 - 814)/(10 - 9)	-126
518 OK (6/8/2007 a)	814 OK (3/16/2007 a)	(518 - 814)/(11 - 9)	-148
518 OK (6/8/2007 a)	688 OK (4/7/2007 a)	(518 - 688)/(11 - 10)	-170

Number of Q values = 55

Ordered Q Values

n	Q
1	-318
2	-215
3	-170
4	-159.5
5	-148
6	-131.667
7	-126
8	-112.5
9	-101.5
10	-99
11	-94.25
12	-69.8333
13	-69
14	-60
15	-49.8
16	-41.6667
17	-40.5
18	-30.75
19	-24.8
20	-21
21	-20.2
22	-16
23	-14.3333
24	-13.2
25	-10.75
26	-8
27	-6.25
28	-6.2
29	-1
30	3.25
31	4.22222
32	8.875
33	12
34	17.25

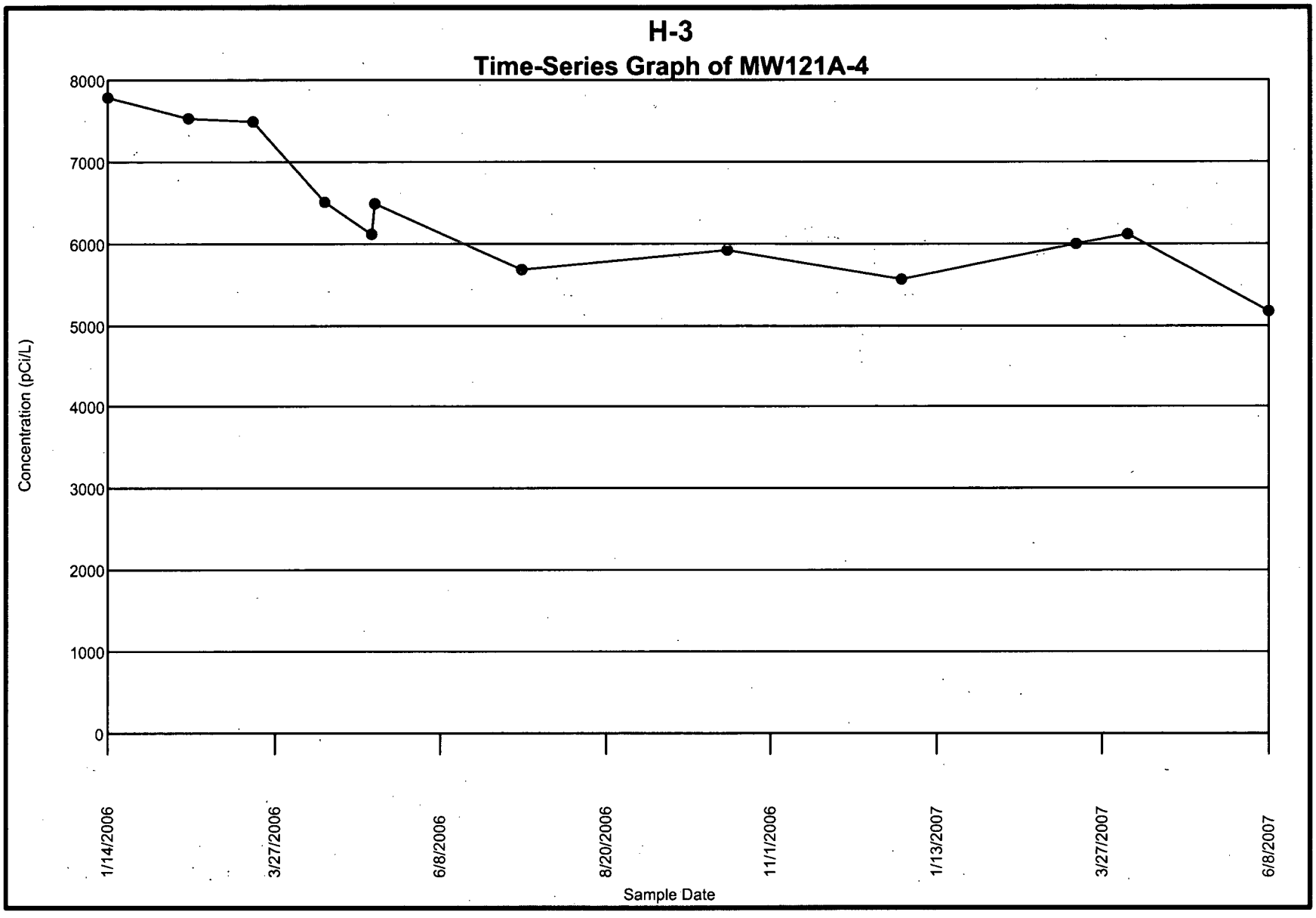
35	18
36	20.5
37	21.7143
38	34.4286
39	37.5714
40	40.8333
41	41.8333
42	46.6
43	57.3333
44	61.1667
45	65
46	71.75
47	91.6667
48	93.2
49	96
50	112
51	138
52	147
53	245
54	276
55	491

Sen's Estimator (Median Q) is -6.2

Time Period	Observations
1/14/2006	1
2/18/2006	1
3/23/2006	1
4/21/2006	1
5/11/2006	1
7/13/2006	1
10/13/2006	1
12/29/2006	1
3/16/2007	1
4/7/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -40.5 = Q(17)
Upper limit is 37.5714 = Q(39)
-40.5 < 0 < 37.5714 indicating no trend in data.


H-3
Time-Series Graph of MW121A-4
Concentration (pCi/L)
8000
7000
6000
5000
4000
3000
2000
1000
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW121A-4

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
7520 OK (2/18/2006 a)	7780 OK (1/14/2006 a)	(7520 - 7780)/(2 - 1)	-260
7480 OK (3/18/2006 a)	7780 OK (1/14/2006 a)	(7480 - 7780)/(3 - 1)	-150
6500 OK (4/19/2006 a)	7780 OK (1/14/2006 a)	(6500 - 7780)/(4 - 1)	-426.667
6120 OK (5/10/2006 a)	7780 OK (1/14/2006 a)	(6120 - 7780)/(5 - 1)	-415
6480 OK (5/11/2006 a)	7780 OK (1/14/2006 a)	(6480 - 7780)/(6 - 1)	-260
5680 OK (7/15/2006 a)	7780 OK (1/14/2006 a)	(5680 - 7780)/(7 - 1)	-350
5910 OK (10/13/2006 a)	7780 OK (1/14/2006 a)	(5910 - 7780)/(8 - 1)	-267.143
5560 OK (12/29/2006 a)	7780 OK (1/14/2006 a)	(5560 - 7780)/(9 - 1)	-277.5
6000 OK (3/16/2007 a)	7780 OK (1/14/2006 a)	(6000 - 7780)/(10 - 1)	-197.778
6120 OK (4/7/2007 a)	7780 OK (1/14/2006 a)	(6120 - 7780)/(11 - 1)	-166
5170 OK (6/8/2007 a)	7780 OK (1/14/2006 a)	(5170 - 7780)/(12 - 1)	-237.273
7480 OK (3/18/2006 a)	7520 OK (2/18/2006 a)	(7480 - 7520)/(3 - 2)	-40
6500 OK (4/19/2006 a)	7520 OK (2/18/2006 a)	(6500 - 7520)/(4 - 2)	-510
6120 OK (5/10/2006 a)	7520 OK (2/18/2006 a)	(6120 - 7520)/(5 - 2)	-466.667
6480 OK (5/11/2006 a)	7520 OK (2/18/2006 a)	(6480 - 7520)/(6 - 2)	-260
5680 OK (7/15/2006 a)	7520 OK (2/18/2006 a)	(5680 - 7520)/(7 - 2)	-368
5910 OK (10/13/2006 a)	7520 OK (2/18/2006 a)	(5910 - 7520)/(8 - 2)	-268.333
5560 OK (12/29/2006 a)	7520 OK (2/18/2006 a)	(5560 - 7520)/(9 - 2)	-280
6000 OK (3/16/2007 a)	7520 OK (2/18/2006 a)	(6000 - 7520)/(10 - 2)	-190
6120 OK (4/7/2007 a)	7520 OK (2/18/2006 a)	(6120 - 7520)/(11 - 2)	-155.556
5170 OK (6/8/2007 a)	7520 OK (2/18/2006 a)	(5170 - 7520)/(12 - 2)	-235
6500 OK (4/19/2006 a)	7480 OK (3/18/2006 a)	(6500 - 7480)/(4 - 3)	-980
6120 OK (5/10/2006 a)	7480 OK (3/18/2006 a)	(6120 - 7480)/(5 - 3)	-680
6480 OK (5/11/2006 a)	7480 OK (3/18/2006 a)	(6480 - 7480)/(6 - 3)	-333.333
5680 OK (7/15/2006 a)	7480 OK (3/18/2006 a)	(5680 - 7480)/(7 - 3)	-450
5910 OK (10/13/2006 a)	7480 OK (3/18/2006 a)	(5910 - 7480)/(8 - 3)	-314
5560 OK (12/29/2006 a)	7480 OK (3/18/2006 a)	(5560 - 7480)/(9 - 3)	-320
6000 OK (3/16/2007 a)	7480 OK (3/18/2006 a)	(6000 - 7480)/(10 - 3)	-211.429
6120 OK (4/7/2007 a)	7480 OK (3/18/2006 a)	(6120 - 7480)/(11 - 3)	-170
5170 OK (6/8/2007 a)	7480 OK (3/18/2006 a)	(5170 - 7480)/(12 - 3)	-256.667
6120 OK (5/10/2006 a)	6500 OK (4/19/2006 a)	(6120 - 6500)/(5 - 4)	-380
6480 OK (5/11/2006 a)	6500 OK (4/19/2006 a)	(6480 - 6500)/(6 - 4)	-10
5680 OK (7/15/2006 a)	6500 OK (4/19/2006 a)	(5680 - 6500)/(7 - 4)	-273.333
5910 OK (10/13/2006 a)	6500 OK (4/19/2006 a)	(5910 - 6500)/(8 - 4)	-147.5
5560 OK (12/29/2006 a)	6500 OK (4/19/2006 a)	(5560 - 6500)/(9 - 4)	-188
6000 OK (3/16/2007 a)	6500 OK (4/19/2006 a)	(6000 - 6500)/(10 - 4)	-83.3333
6120 OK (4/7/2007 a)	6500 OK (4/19/2006 a)	(6120 - 6500)/(11 - 4)	-54.2857
5170 OK (6/8/2007 a)	6500 OK (4/19/2006 a)	(5170 - 6500)/(12 - 4)	-166.25
6480 OK (5/11/2006 a)	6120 OK (5/10/2006 a)	(6480 - 6120)/(6 - 5)	360
5680 OK (7/15/2006 a)	6120 OK (5/10/2006 a)	(5680 - 6120)/(7 - 5)	-220
5910 OK (10/13/2006 a)	6120 OK (5/10/2006 a)	(5910 - 6120)/(8 - 5)	-70
5560 OK (12/29/2006 a)	6120 OK (5/10/2006 a)	(5560 - 6120)/(9 - 5)	-140
6000 OK (3/16/2007 a)	6120 OK (5/10/2006 a)	(6000 - 6120)/(10 - 5)	-24

6120 OK (4/7/2007 a)	6120 OK (5/10/2006 a)	(6120 - 6120)/(11 - 5)	0
5170 OK (6/8/2007 a)	6120 OK (5/10/2006 a)	(5170 - 6120)/(12 - 5)	-135.714
5680 OK (7/15/2006 a)	6480 OK (5/11/2006 a)	(5680 - 6480)/(7 - 6)	-800
5910 OK (10/13/2006 a)	6480 OK (5/11/2006 a)	(5910 - 6480)/(8 - 6)	-285
5560 OK (12/29/2006 a)	6480 OK (5/11/2006 a)	(5560 - 6480)/(9 - 6)	-306.667
6000 OK (3/16/2007 a)	6480 OK (5/11/2006 a)	(6000 - 6480)/(10 - 6)	-120
6120 OK (4/7/2007 a)	6480 OK (5/11/2006 a)	(6120 - 6480)/(11 - 6)	-72
5170 OK (6/8/2007 a)	6480 OK (5/11/2006 a)	(5170 - 6480)/(12 - 6)	-218.333
5910 OK (10/13/2006 a)	5680 OK (7/15/2006 a)	(5910 - 5680)/(8 - 7)	230
5560 OK (12/29/2006 a)	5680 OK (7/15/2006 a)	(5560 - 5680)/(9 - 7)	-60
6000 OK (3/16/2007 a)	5680 OK (7/15/2006 a)	(6000 - 5680)/(10 - 7)	106.667
6120 OK (4/7/2007 a)	5680 OK (7/15/2006 a)	(6120 - 5680)/(11 - 7)	110
5170 OK (6/8/2007 a)	5680 OK (7/15/2006 a)	(5170 - 5680)/(12 - 7)	-102
5560 OK (12/29/2006 a)	5910 OK (10/13/2006 a)	(5560 - 5910)/(9 - 8)	-350
6000 OK (3/16/2007 a)	5910 OK (10/13/2006 a)	(6000 - 5910)/(10 - 8)	45
6120 OK (4/7/2007 a)	5910 OK (10/13/2006 a)	(6120 - 5910)/(11 - 8)	70
5170 OK (6/8/2007 a)	5910 OK (10/13/2006 a)	(5170 - 5910)/(12 - 8)	-185
6000 OK (3/16/2007 a)	5560 OK (12/29/2006 a)	(6000 - 5560)/(10 - 9)	440
6120 OK (4/7/2007 a)	5560 OK (12/29/2006 a)	(6120 - 5560)/(11 - 9)	280
5170 OK (6/8/2007 a)	5560 OK (12/29/2006 a)	(5170 - 5560)/(12 - 9)	-130
6120 OK (4/7/2007 a)	6000 OK (3/16/2007 a)	(6120 - 6000)/(11 - 10)	120
5170 OK (6/8/2007 a)	6000 OK (3/16/2007 a)	(5170 - 6000)/(12 - 10)	-415
5170 OK (6/8/2007 a)	6120 OK (4/7/2007 a)	(5170 - 6120)/(12 - 11)	-950

Number of Q values = 66

Ordered Q Values

n	Q
1	-980
2	-950
3	-800
4	-680
5	-510
6	-466.667
7	-450
8	-426.667
9	-415
10	-415
11	-380
12	-368
13	-350
14	-350
15	-333.333
16	-320
17	-314
18	-306.667
19	-285
20	-280
21	-277.5
22	-273.333

23	-268.333
24	-267.143
25	-260
26	-260
27	-260
28	-256.667
29	-237.273
30	-235
31	-220
32	-218.333
33	-211.429
34	-197.778
35	-190
36	-188
37	-185
38	-170
39	-166.25
40	-166
41	-155.556
42	-150
43	-147.5
44	-140
45	-135.714
46	-130
47	-120
48	-102
49	-83.3333
50	-72
51	-70
52	-60
53	-54.2857
54	-40
55	-24
56	-10
57	0
58	45
59	70
60	106.667
61	110
62	120
63	230
64	280
65	360
66	440

Sen's Estimator (Median Q) is -204.603

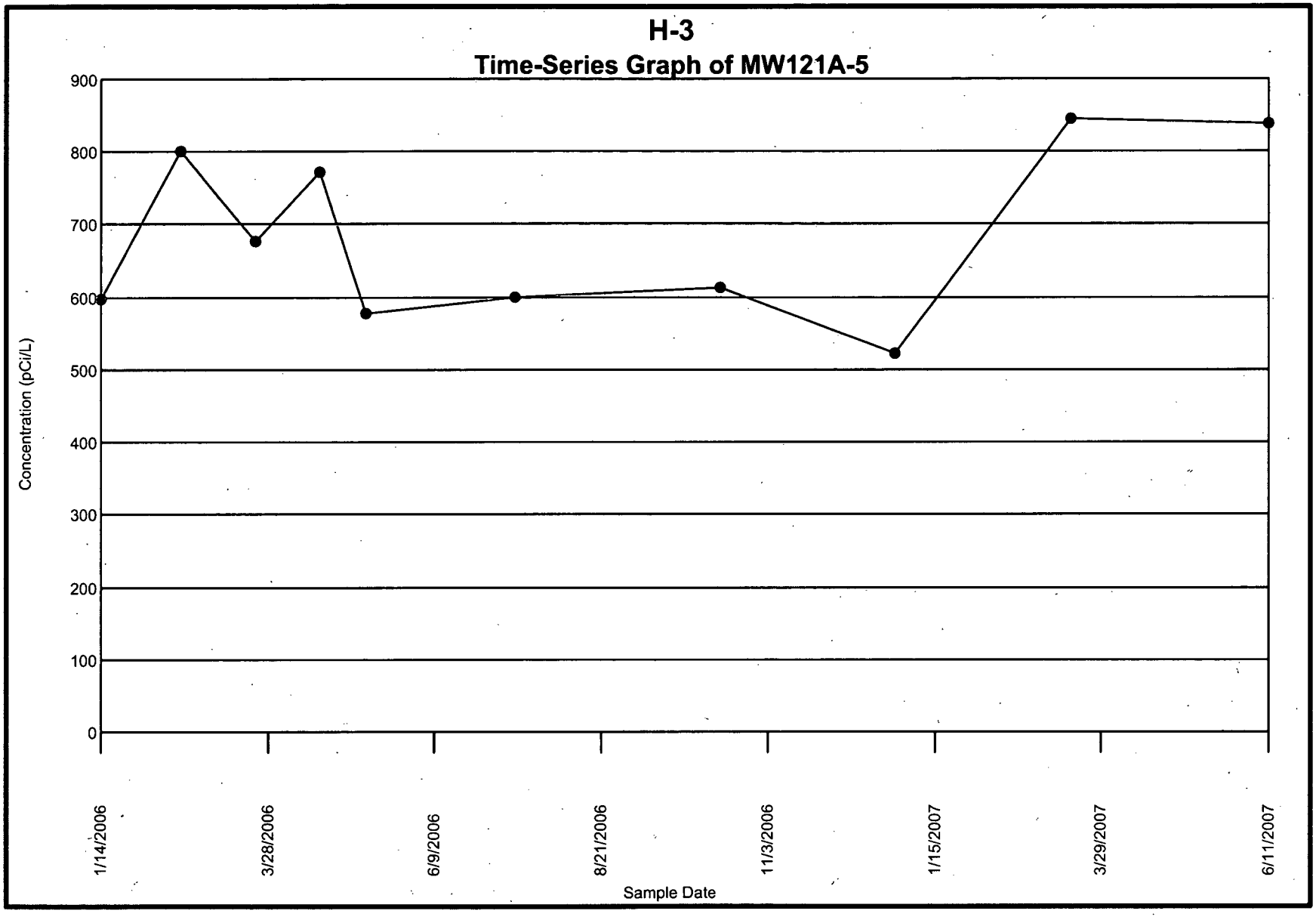
Tied Group	Value	Members
1	6120	2

Time Period	Observations
1/14/2006	1
2/18/2006	1
3/18/2006	1
4/19/2006	1
5/10/2006	1
5/11/2006	1
7/15/2006	1

10/13/2006	1
12/29/2006	1
3/16/2007	1
4/7/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 211.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.9306
M1 = (66 - 23.9306)/2.0 = 21.0347
M2 = (66 + 23.9306)/2.0 + 1 = 45.9653
Lower limit is -277.5 = Q(21)
Upper limit is -130 = Q(46)
-130 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW121A-5
Concentration (pCi/L)
900
800
700
600
500
400
300
200
100
0
1/14/2006
3/28/2006
6/9/2006
8/21/2006
11/3/2006
1/15/2007
3/29/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW121A-5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
800 OK (2/18/2006 a)	598 OK (1/14/2006 a)	(800 - 598)/(2 - 1)	202
677 OK (3/23/2006 a)	598 OK (1/14/2006 a)	(677 - 598)/(3 - 1)	39.5
771 OK (4/20/2006 a)	598 OK (1/14/2006 a)	(771 - 598)/(4 - 1)	57.6667
578 OK (5/10/2006 a)	598 OK (1/14/2006 a)	(578 - 598)/(5 - 1)	-5
599 OK (7/15/2006 a)	598 OK (1/14/2006 a)	(599 - 598)/(6 - 1)	0.2
612 OK (10/13/2006 a)	598 OK (1/14/2006 a)	(612 - 598)/(7 - 1)	2.33333
521 OK (12/29/2006 a)	598 OK (1/14/2006 a)	(521 - 598)/(8 - 1)	-11
844 OK (3/16/2007 a)	598 OK (1/14/2006 a)	(844 - 598)/(9 - 1)	30.75
839 OK (6/11/2007 a)	598 OK (1/14/2006 a)	(839 - 598)/(10 - 1)	26.7778
677 OK (3/23/2006 a)	800 OK (2/18/2006 a)	(677 - 800)/(3 - 2)	-123
771 OK (4/20/2006 a)	800 OK (2/18/2006 a)	(771 - 800)/(4 - 2)	-14.5
578 OK (5/10/2006 a)	800 OK (2/18/2006 a)	(578 - 800)/(5 - 2)	-74
599 OK (7/15/2006 a)	800 OK (2/18/2006 a)	(599 - 800)/(6 - 2)	-50.25
612 OK (10/13/2006 a)	800 OK (2/18/2006 a)	(612 - 800)/(7 - 2)	-37.6
521 OK (12/29/2006 a)	800 OK (2/18/2006 a)	(521 - 800)/(8 - 2)	-46.5
844 OK (3/16/2007 a)	800 OK (2/18/2006 a)	(844 - 800)/(9 - 2)	6.28571
839 OK (6/11/2007 a)	800 OK (2/18/2006 a)	(839 - 800)/(10 - 2)	4.875
771 OK (4/20/2006 a)	677 OK (3/23/2006 a)	(771 - 677)/(4 - 3)	94
578 OK (5/10/2006 a)	677 OK (3/23/2006 a)	(578 - 677)/(5 - 3)	-49.5
599 OK (7/15/2006 a)	677 OK (3/23/2006 a)	(599 - 677)/(6 - 3)	-26
612 OK (10/13/2006 a)	677 OK (3/23/2006 a)	(612 - 677)/(7 - 3)	-16.25
521 OK (12/29/2006 a)	677 OK (3/23/2006 a)	(521 - 677)/(8 - 3)	-31.2
844 OK (3/16/2007 a)	677 OK (3/23/2006 a)	(844 - 677)/(9 - 3)	27.8333
839 OK (6/11/2007 a)	677 OK (3/23/2006 a)	(839 - 677)/(10 - 3)	23.1429
578 OK (5/10/2006 a)	771 OK (4/20/2006 a)	(578 - 771)/(5 - 4)	-193
599 OK (7/15/2006 a)	771 OK (4/20/2006 a)	(599 - 771)/(6 - 4)	-86
612 OK (10/13/2006 a)	771 OK (4/20/2006 a)	(612 - 771)/(7 - 4)	-53
521 OK (12/29/2006 a)	771 OK (4/20/2006 a)	(521 - 771)/(8 - 4)	-62.5
844 OK (3/16/2007 a)	771 OK (4/20/2006 a)	(844 - 771)/(9 - 4)	14.6
839 OK (6/11/2007 a)	771 OK (4/20/2006 a)	(839 - 771)/(10 - 4)	11.3333
599 OK (7/15/2006 a)	578 OK (5/10/2006 a)	(599 - 578)/(6 - 5)	21
612 OK (10/13/2006 a)	578 OK (5/10/2006 a)	(612 - 578)/(7 - 5)	17
521 OK (12/29/2006 a)	578 OK (5/10/2006 a)	(521 - 578)/(8 - 5)	-19
844 OK (3/16/2007 a)	578 OK (5/10/2006 a)	(844 - 578)/(9 - 5)	66.5
839 OK (6/11/2007 a)	578 OK (5/10/2006 a)	(839 - 578)/(10 - 5)	52.2
612 OK (10/13/2006 a)	599 OK (7/15/2006 a)	(612 - 599)/(7 - 6)	13
521 OK (12/29/2006 a)	599 OK (7/15/2006 a)	(521 - 599)/(8 - 6)	-39
844 OK (3/16/2007 a)	599 OK (7/15/2006 a)	(844 - 599)/(9 - 6)	81.6667
839 OK (6/11/2007 a)	599 OK (7/15/2006 a)	(839 - 599)/(10 - 6)	60
521 OK (12/29/2006 a)	612 OK (10/13/2006 a)	(521 - 612)/(8 - 7)	-91
844 OK (3/16/2007 a)	612 OK (10/13/2006 a)	(844 - 612)/(9 - 7)	116

839 OK (6/11/2007 a)	612 OK (10/13/2006 a)	(839 - 612)/(10 - 7)	75.6667
844 OK (3/16/2007 a)	521 OK (12/29/2006 a)	(844 - 521)/(9 - 8)	323
839 OK (6/11/2007 a)	521 OK (12/29/2006 a)	(839 - 521)/(10 - 8)	159
839 OK (6/11/2007 a)	844 OK (3/16/2007 a)	(839 - 844)/(10 - 9)	-5

Number of Q values = 45

Ordered Q Values

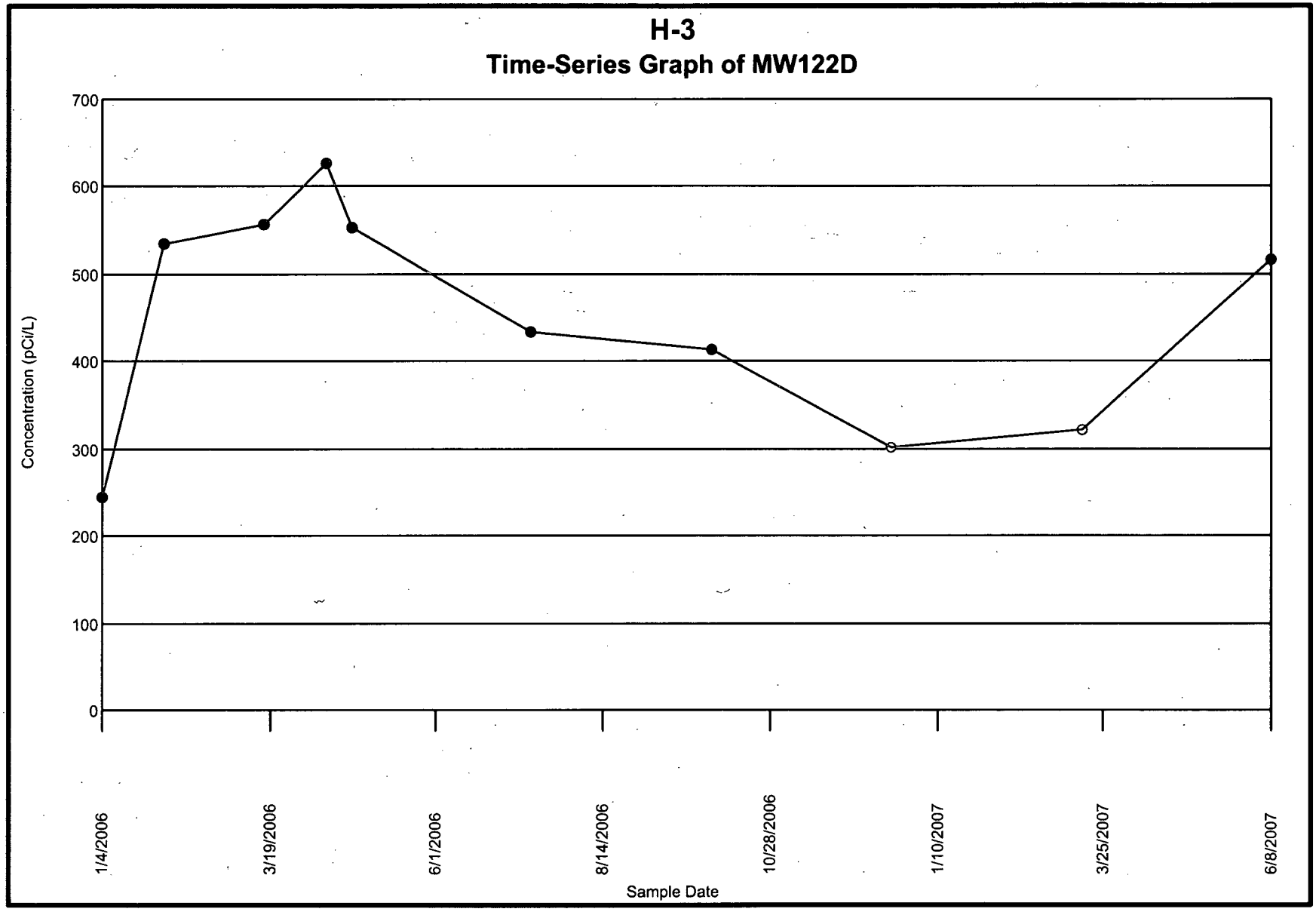
n	Q
1	-193
2	-123
3	-91
4	-86
5	-74
6	-62.5
7	-53
8	-50.25
9	-49.5
10	-46.5
11	-39
12	-37.6
13	-31.2
14	-26
15	-19
16	-16.25
17	-14.5
18	-11
19	-5
20	-5
21	0.2
22	2.33333
23	4.875
24	6.28571
25	11.3333
26	13
27	14.6
28	17
29	21
30	23.1429
31	26.7778
32	27.8333
33	30.75
34	39.5
35	52.2
36	57.6667
37	60
38	66.5
39	75.6667
40	81.6667
41	94
42	116
43	159
44	202
45	323

Sen's Estimator (Median Q) is 4.875

Time Period	Observations
1/14/2006	1
2/18/2006	1
3/23/2006	1
4/20/2006	1
5/10/2006	1
7/15/2006	1
10/13/2006	1
12/29/2006	1
3/16/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -31.2 = Q(13)
Upper limit is 30.75 = Q(33)
-31.2 < 0 < 30.75 indicating no trend in data.


H-3
Time-Series Graph of MW122D
Concentration (pCi/L)
700
600
500
400
300
200
100
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW122D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
535 OK (2/1/2006 a)	244 U (1/4/2006 a)	(535 - 244)/(2 - 1)	291
556 OK (3/17/2006 a)	244 U (1/4/2006 a)	(556 - 244)/(3 - 1)	156
627 OK (4/13/2006 a)	244 U (1/4/2006 a)	(627 - 244)/(4 - 1)	127.667
553 OK (4/25/2006 a)	244 U (1/4/2006 a)	(553 - 244)/(5 - 1)	77.25
433 OK (7/14/2006 a)	244 U (1/4/2006 a)	(433 - 244)/(6 - 1)	37.8
413 OK (10/2/2006 a)	244 U (1/4/2006 a)	(413 - 244)/(7 - 1)	28.1667
ND<302 OK (12/21/2006 a)	244 U (1/4/2006 a)	(302 - 244)/(8 - 1)	8.28571
ND<321 OK (3/16/2007 a)	244 U (1/4/2006 a)	(321 - 244)/(9 - 1)	9.625
516 OK (6/8/2007 a)	244 U (1/4/2006 a)	(516 - 244)/(10 - 1)	30.2222
556 OK (3/17/2006 a)	535 OK (2/1/2006 a)	(556 - 535)/(3 - 2)	21
627 OK (4/13/2006 a)	535 OK (2/1/2006 a)	(627 - 535)/(4 - 2)	46
553 OK (4/25/2006 a)	535 OK (2/1/2006 a)	(553 - 535)/(5 - 2)	6
433 OK (7/14/2006 a)	535 OK (2/1/2006 a)	(433 - 535)/(6 - 2)	-25.5
413 OK (10/2/2006 a)	535 OK (2/1/2006 a)	(413 - 535)/(7 - 2)	-24.4
ND<302 OK (12/21/2006 a)	535 OK (2/1/2006 a)	(302 - 535)/(8 - 2)	-38.8333
ND<321 OK (3/16/2007 a)	535 OK (2/1/2006 a)	(321 - 535)/(9 - 2)	-30.5714
516 OK (6/8/2007 a)	535 OK (2/1/2006 a)	(516 - 535)/(10 - 2)	-2.375
627 OK (4/13/2006 a)	556 OK (3/17/2006 a)	(627 - 556)/(4 - 3)	71
553 OK (4/25/2006 a)	556 OK (3/17/2006 a)	(553 - 556)/(5 - 3)	-1.5
433 OK (7/14/2006 a)	556 OK (3/17/2006 a)	(433 - 556)/(6 - 3)	-41
413 OK (10/2/2006 a)	556 OK (3/17/2006 a)	(413 - 556)/(7 - 3)	-35.75
ND<302 OK (12/21/2006 a)	556 OK (3/17/2006 a)	(302 - 556)/(8 - 3)	-50.8
ND<321 OK (3/16/2007 a)	556 OK (3/17/2006 a)	(321 - 556)/(9 - 3)	-39.1667
516 OK (6/8/2007 a)	556 OK (3/17/2006 a)	(516 - 556)/(10 - 3)	-5.71429
553 OK (4/25/2006 a)	627 OK (4/13/2006 a)	(553 - 627)/(5 - 4)	-74
433 OK (7/14/2006 a)	627 OK (4/13/2006 a)	(433 - 627)/(6 - 4)	-97
413 OK (10/2/2006 a)	627 OK (4/13/2006 a)	(413 - 627)/(7 - 4)	-71.3333
ND<302 OK (12/21/2006 a)	627 OK (4/13/2006 a)	(302 - 627)/(8 - 4)	-81.25

ND<321 OK (3/16/2007 a)	627 OK (4/13/2006 a)	(321 - 627)/(9 - 4)	-61.2
516 OK (6/8/2007 a)	627 OK (4/13/2006 a)	(516 - 627)/(10 - 4)	-18.5
433 OK (7/14/2006 a)	553 OK (4/25/2006 a)	(433 - 553)/(6 - 5)	-120
413 OK (10/2/2006 a)	553 OK (4/25/2006 a)	(413 - 553)/(7 - 5)	-70
ND<302 OK (12/21/2006 a)	553 OK (4/25/2006 a)	(302 - 553)/(8 - 5)	-83.6667
ND<321 OK (3/16/2007 a)	553 OK (4/25/2006 a)	(321 - 553)/(9 - 5)	-58
516 OK (6/8/2007 a)	553 OK (4/25/2006 a)	(516 - 553)/(10 - 5)	-7.4
413 OK (10/2/2006 a)	433 OK (7/14/2006 a)	(413 - 433)/(7 - 6)	-20
ND<302 OK (12/21/2006 a)	433 OK (7/14/2006 a)	(302 - 433)/(8 - 6)	-65.5
ND<321 OK (3/16/2007 a)	433 OK (7/14/2006 a)	(321 - 433)/(9 - 6)	-37.3333
516 OK (6/8/2007 a)	433 OK (7/14/2006 a)	(516 - 433)/(10 - 6)	20.75
ND<302 OK (12/21/2006 a)	413 OK (10/2/2006 a)	(302 - 413)/(8 - 7)	-111
ND<321 OK (3/16/2007 a)	413 OK (10/2/2006 a)	(321 - 413)/(9 - 7)	-46
516 OK (6/8/2007 a)	413 OK (10/2/2006 a)	(516 - 413)/(10 - 7)	34.3333
ND<321 OK (3/16/2007 a)	ND<302 OK (12/21/2006 a)	(321 - 302)/(9 - 8)	19
516 OK (6/8/2007 a)	ND<302 OK (12/21/2006 a)	(516 - 302)/(10 - 8)	107
516 OK (6/8/2007 a)	ND<321 OK (3/16/2007 a)	(516 - 321)/(10 - 9)	195

Number of Q values = 45

Ordered Q Values

n	Q
1	-120
2	-111
3	-97
4	-83.6667
5	-81.25
6	-74
7	-71.3333
8	-70
9	-65.5
10	-61.2
11	-58
12	-50.8
13	-46

14	-41
15	-39.1667
16	-38.8333
17	-37.3333
18	-35.75
19	-30.5714
20	-25.5
21	-24.4
22	-20
23	-18.5
24	-7.4
25	-5.71429
26	-2.375
27	-1.5
28	6
29	8.28571
30	9.625
31	19
32	20.75
33	21
34	28.1667
35	30.2222
36	34.3333
37	37.8
38	46
39	71
40	77.25
41	107
42	127.667
43	156
44	195
45	291

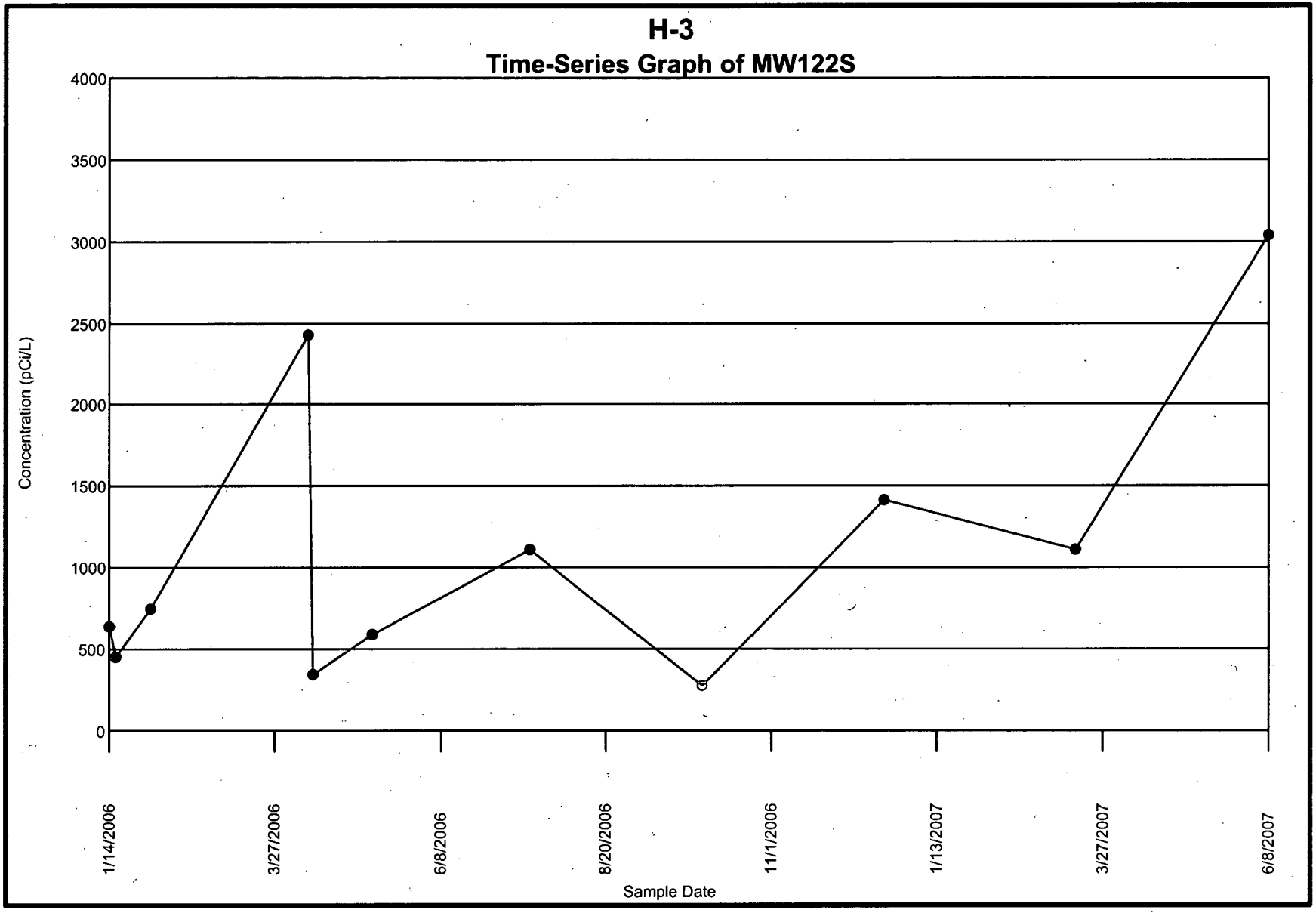
Sen's Estimator (Median Q) is -18.5

Time Period	Observations
1/4/2006	1
2/1/2006	1
3/17/2006	1
4/13/2006	1
4/25/2006	1
7/14/2006	1

10/2/2006	1
12/21/2006	1
3/16/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -46 = Q(13)
Upper limit is 21 = Q(33)
-46 < 0 < 21 indicating no trend in data.


H-3
Time-Series Graph of MW122S
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW122S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
454 OK (1/17/2006 a)	640 OK (1/14/2006 a)	(454 - 640)/(2 - 1)	-186
744 OK (2/1/2006 a)	640 OK (1/14/2006 a)	(744 - 640)/(3 - 1)	52
2430 OK (4/12/2006 a)	640 OK (1/14/2006 a)	(2430 - 640)/(4 - 1)	596.667
346 OK (4/14/2006 a)	640 OK (1/14/2006 a)	(346 - 640)/(5 - 1)	-73.5
594 OK (5/10/2006 a)	640 OK (1/14/2006 a)	(594 - 640)/(6 - 1)	-9.2
1110 OK (7/18/2006 a)	640 OK (1/14/2006 a)	(1110 - 640)/(7 - 1)	78.3333
ND<275 OK (10/2/2006 a)	640 OK (1/14/2006 a)	(275 - 640)/(8 - 1)	-52.1429
1420 OK (12/21/2006 a)	640 OK (1/14/2006 a)	(1420 - 640)/(9 - 1)	97.5
1110 OK (3/15/2007 a)	640 OK (1/14/2006 a)	(1110 - 640)/(10 - 1)	52.2222
3040 OK (6/8/2007 a)	640 OK (1/14/2006 a)	(3040 - 640)/(11 - 1)	240
744 OK (2/1/2006 a)	454 OK (1/17/2006 a)	(744 - 454)/(3 - 2)	290
2430 OK (4/12/2006 a)	454 OK (1/17/2006 a)	(2430 - 454)/(4 - 2)	988
346 OK (4/14/2006 a)	454 OK (1/17/2006 a)	(346 - 454)/(5 - 2)	-36
594 OK (5/10/2006 a)	454 OK (1/17/2006 a)	(594 - 454)/(6 - 2)	35
1110 OK (7/18/2006 a)	454 OK (1/17/2006 a)	(1110 - 454)/(7 - 2)	131.2
ND<275 OK (10/2/2006 a)	454 OK (1/17/2006 a)	(275 - 454)/(8 - 2)	-29.8333
1420 OK (12/21/2006 a)	454 OK (1/17/2006 a)	(1420 - 454)/(9 - 2)	138
1110 OK (3/15/2007 a)	454 OK (1/17/2006 a)	(1110 - 454)/(10 - 2)	82
3040 OK (6/8/2007 a)	454 OK (1/17/2006 a)	(3040 - 454)/(11 - 2)	287.333
2430 OK (4/12/2006 a)	744 OK (2/1/2006 a)	(2430 - 744)/(4 - 3)	1686
346 OK (4/14/2006 a)	744 OK (2/1/2006 a)	(346 - 744)/(5 - 3)	-199
594 OK (5/10/2006 a)	744 OK (2/1/2006 a)	(594 - 744)/(6 - 3)	-50
1110 OK (7/18/2006 a)	744 OK (2/1/2006 a)	(1110 - 744)/(7 - 3)	91.5
ND<275 OK (10/2/2006 a)	744 OK (2/1/2006 a)	(275 - 744)/(8 - 3)	-93.8
1420 OK (12/21/2006 a)	744 OK (2/1/2006 a)	(1420 - 744)/(9 - 3)	112.667
1110 OK (3/15/2007 a)	744 OK (2/1/2006 a)	(1110 - 744)/(10 - 3)	52.2857
3040 OK (6/8/2007 a)	744 OK (2/1/2006 a)	(3040 - 744)/(11 - 3)	287
346 OK (4/14/2006 a)	2430 OK (4/12/2006 a)	(346 - 2430)/(5 - 4)	-2084
594 OK (5/10/2006 a)	2430 OK (4/12/2006 a)	(594 - 2430)/(6 - 4)	-918
1110 OK (7/18/2006 a)	2430 OK (4/12/2006 a)	(1110 - 2430)/(7 - 4)	-440
ND<275 OK (10/2/2006 a)	2430 OK (4/12/2006 a)	(275 - 2430)/(8 - 4)	-538.75
1420 OK (12/21/2006 a)	2430 OK (4/12/2006 a)	(1420 - 2430)/(9 - 4)	-202
1110 OK (3/15/2007 a)	2430 OK (4/12/2006 a)	(1110 - 2430)/(10 - 4)	-220
3040 OK (6/8/2007 a)	2430 OK (4/12/2006 a)	(3040 - 2430)/(11 - 4)	87.1429
594 OK (5/10/2006 a)	346 OK (4/14/2006 a)	(594 - 346)/(6 - 5)	248
1110 OK (7/18/2006 a)	346 OK (4/14/2006 a)	(1110 - 346)/(7 - 5)	382
ND<275 OK (10/2/2006 a)	346 OK (4/14/2006 a)	(275 - 346)/(8 - 5)	-23.6667
1420 OK (12/21/2006 a)	346 OK (4/14/2006 a)	(1420 - 346)/(9 - 5)	268.5
1110 OK (3/15/2007 a)	346 OK (4/14/2006 a)	(1110 - 346)/(10 - 5)	152.8
3040 OK (6/8/2007 a)	346 OK (4/14/2006 a)	(3040 - 346)/(11 - 5)	449
1110 OK (7/18/2006 a)	594 OK (5/10/2006 a)	(1110 - 594)/(7 - 6)	516
ND<275 OK (10/2/2006 a)	594 OK (5/10/2006 a)	(275 - 594)/(8 - 6)	-159.5

1420 OK (12/21/2006 a)	594 OK (5/10/2006 a)	(1420 - 594)/(9 - 6)	275.333
1110 OK (3/15/2007 a)	594 OK (5/10/2006 a)	(1110 - 594)/(10 - 6)	129
3040 OK (6/8/2007 a)	594 OK (5/10/2006 a)	(3040 - 594)/(11 - 6)	489.2
ND<275 OK (10/2/2006 a)	1110 OK (7/18/2006 a)	(275 - 1110)/(8 - 7)	-835
1420 OK (12/21/2006 a)	1110 OK (7/18/2006 a)	(1420 - 1110)/(9 - 7)	155
1110 OK (3/15/2007 a)	1110 OK (7/18/2006 a)	(1110 - 1110)/(10 - 7)	0
3040 OK (6/8/2007 a)	1110 OK (7/18/2006 a)	(3040 - 1110)/(11 - 7)	482.5
1420 OK (12/21/2006 a)	ND<275 OK (10/2/2006 a)	(1420 - 275)/(9 - 8)	1145
1110 OK (3/15/2007 a)	ND<275 OK (10/2/2006 a)	(1110 - 275)/(10 - 8)	417.5
3040 OK (6/8/2007 a)	ND<275 OK (10/2/2006 a)	(3040 - 275)/(11 - 8)	921.667
1110 OK (3/15/2007 a)	1420 OK (12/21/2006 a)	(1110 - 1420)/(10 - 9)	-310
3040 OK (6/8/2007 a)	1420 OK (12/21/2006 a)	(3040 - 1420)/(11 - 9)	810
3040 OK (6/8/2007 a)	1110 OK (3/15/2007 a)	(3040 - 1110)/(11 - 10)	1930

Number of Q values = 55

Ordered Q Values

n	Q
1	-2084
2	-918
3	-835
4	-538.75
5	-440
6	-310
7	-220
8	-202
9	-199
10	-186
11	-159.5
12	-93.8
13	-73.5
14	-52.1429
15	-50
16	-36
17	-29.8333
18	-23.6667
19	-9.2
20	0
21	35
22	52
23	52.2222
24	52.2857
25	78.3333
26	82
27	87.1429
28	91.5
29	97.5
30	112.667
31	129
32	131.2
33	138
34	152.8

35	155
36	240
37	248
38	268.5
39	275.333
40	287
41	287.333
42	290
43	382
44	417.5
45	449
46	482.5
47	489.2
48	516
49	596.667
50	810
51	921.667
52	988
53	1145
54	1686
55	1930

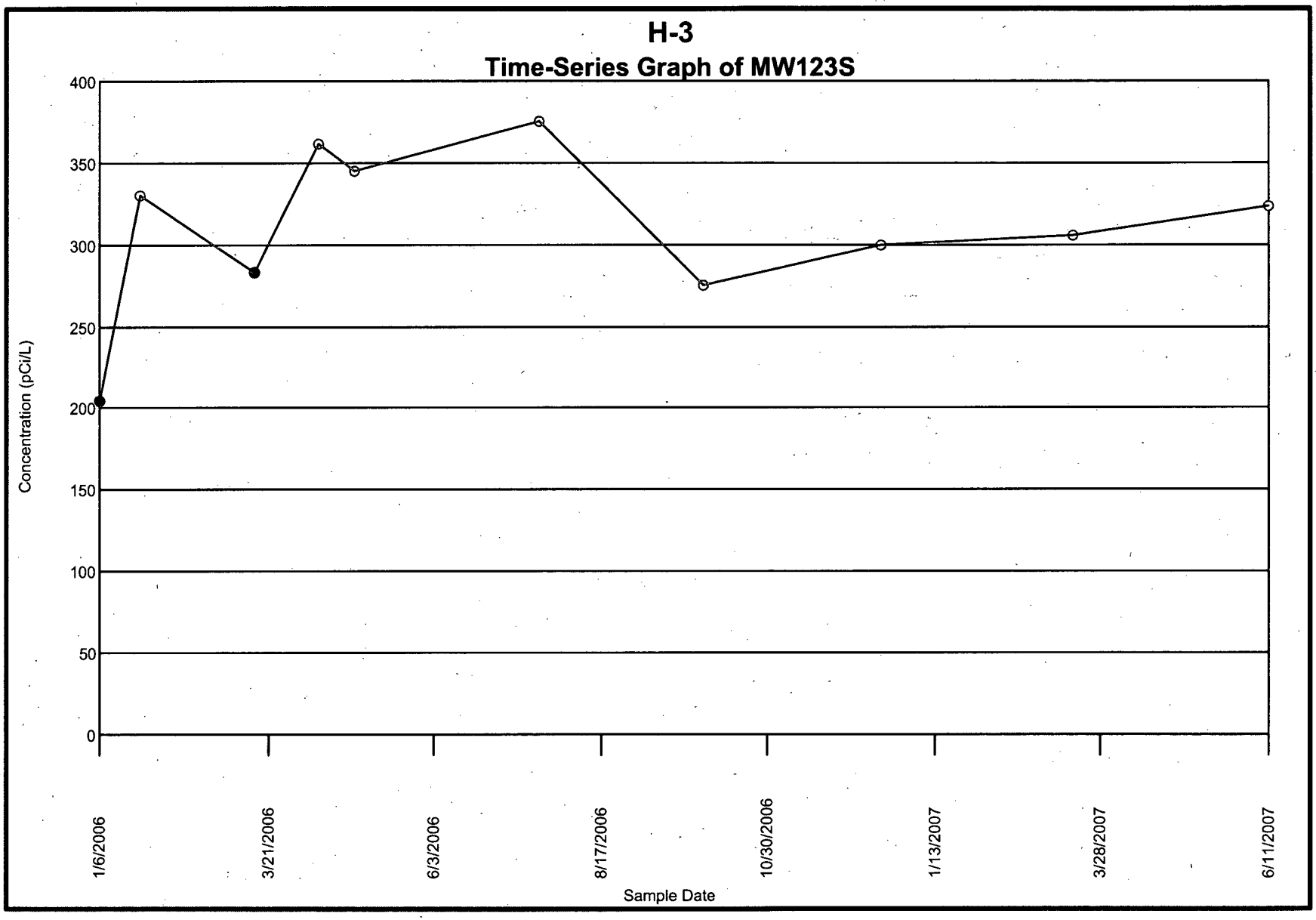
Sen's Estimator (Median Q) is 91.5

Tied Group	Value	Members
1	1110	2

Time Period	Observations
1/14/2006	1
1/17/2006	1
2/1/2006	1
4/12/2006	1
4/14/2006	1
5/10/2006	1
7/18/2006	1
10/2/2006	1
12/21/2006	1
3/15/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -29.8333 = Q(17)
Upper limit is 275.333 = Q(39)
-29.8333 < 0 < 275.333 indicating no trend in data.


H-3
Time-Series Graph of MW123S
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW123S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<330 U (1/24/2006 a)	204 U (1/6/2006 a)	(330 - 204)/(2 - 1)	126
283 U (3/15/2006 a)	204 U (1/6/2006 a)	(283 - 204)/(3 - 1)	39.5
ND<362 U (4/13/2006 a)	204 U (1/6/2006 a)	(362 - 204)/(4 - 1)	52.6667
ND<345 OK (4/29/2006 a)	204 U (1/6/2006 a)	(345 - 204)/(5 - 1)	35.25
ND<375 OK (7/21/2006 a)	204 U (1/6/2006 a)	(375 - 204)/(6 - 1)	34.2
ND<275 OK (10/2/2006 a)	204 U (1/6/2006 a)	(275 - 204)/(7 - 1)	11.8333
ND<300 OK (12/20/2006 a)	204 U (1/6/2006 a)	(300 - 204)/(8 - 1)	13.7143
ND<305.5 OK (3/16/2007 ~)	204 U (1/6/2006 a)	(305.5 - 204)/(9 - 1)	12.6875
ND<323 OK (6/11/2007 a)	204 U (1/6/2006 a)	(323 - 204)/(10 - 1)	13.2222
283 U (3/15/2006 a)	ND<330 U (1/24/2006 a)	(283 - 330)/(3 - 2)	-47
ND<362 U (4/13/2006 a)	ND<330 U (1/24/2006 a)	(362 - 330)/(4 - 2)	16
ND<345 OK (4/29/2006 a)	ND<330 U (1/24/2006 a)	(345 - 330)/(5 - 2)	5
ND<375 OK (7/21/2006 a)	ND<330 U (1/24/2006 a)	(375 - 330)/(6 - 2)	11.25
ND<275 OK (10/2/2006 a)	ND<330 U (1/24/2006 a)	(275 - 330)/(7 - 2)	-11
ND<300 OK (12/20/2006 a)	ND<330 U (1/24/2006 a)	(300 - 330)/(8 - 2)	-5
ND<305.5 OK (3/16/2007 ~)	ND<330 U (1/24/2006 a)	(305.5 - 330)/(9 - 2)	-3.5
ND<323 OK (6/11/2007 a)	ND<330 U (1/24/2006 a)	(323 - 330)/(10 - 2)	-0.875
ND<362 U (4/13/2006 a)	283 U (3/15/2006 a)	(362 - 283)/(4 - 3)	79
ND<345 OK (4/29/2006 a)	283 U (3/15/2006 a)	(345 - 283)/(5 - 3)	31
ND<375 OK (7/21/2006 a)	283 U (3/15/2006 a)	(375 - 283)/(6 - 3)	30.6667
ND<275 OK (10/2/2006 a)	283 U (3/15/2006 a)	(275 - 283)/(7 - 3)	-2
ND<300 OK (12/20/2006 a)	283 U (3/15/2006 a)	(300 - 283)/(8 - 3)	3.4
ND<305.5 OK (3/16/2007 ~)	283 U (3/15/2006 a)	(305.5 - 283)/(9 - 3)	3.75
ND<323 OK (6/11/2007 a)	283 U (3/15/2006 a)	(323 - 283)/(10 - 3)	5.71429
ND<345 OK (4/29/2006 a)	ND<362 U (4/13/2006 a)	(345 - 362)/(5 - 4)	-17
ND<375 OK (7/21/2006 a)	ND<362 U (4/13/2006 a)	(375 - 362)/(6 - 4)	6.5
ND<275 OK (10/2/2006 a)	ND<362 U (4/13/2006 a)	(275 - 362)/(7 - 4)	-29
ND<300 OK (12/20/2006 a)	ND<362 U (4/13/2006 a)	(300 - 362)/(8 - 4)	-15.5

ND<305.5 OK (3/16/2007 ~)	ND<362 U (4/13/2006 a)	(305.5 - 362)/(9 - 4)	-11.3
ND<323 OK (6/11/2007 a)	ND<362 U (4/13/2006 a)	(323 - 362)/(10 - 4)	-6.5
ND<375 OK (7/21/2006 a)	ND<345 OK (4/29/2006 a)	(375 - 345)/(6 - 5)	30
ND<275 OK (10/2/2006 a)	ND<345 OK (4/29/2006 a)	(275 - 345)/(7 - 5)	-35
ND<300 OK (12/20/2006 a)	ND<345 OK (4/29/2006 a)	(300 - 345)/(8 - 5)	-15
ND<305.5 OK (3/16/2007 ~)	ND<345 OK (4/29/2006 a)	(305.5 - 345)/(9 - 5)	-9.875
ND<323 OK (6/11/2007 a)	ND<345 OK (4/29/2006 a)	(323 - 345)/(10 - 5)	-4.4
ND<275 OK (10/2/2006 a)	ND<375 OK (7/21/2006 a)	(275 - 375)/(7 - 6)	-100
ND<300 OK (12/20/2006 a)	ND<375 OK (7/21/2006 a)	(300 - 375)/(8 - 6)	-37.5
ND<305.5 OK (3/16/2007 ~)	ND<375 OK (7/21/2006 a)	(305.5 - 375)/(9 - 6)	-23.1667
ND<323 OK (6/11/2007 a)	ND<375 OK (7/21/2006 a)	(323 - 375)/(10 - 6)	-13
ND<300 OK (12/20/2006 a)	ND<275 OK (10/2/2006 a)	(300 - 275)/(8 - 7)	25
ND<305.5 OK (3/16/2007 ~)	ND<275 OK (10/2/2006 a)	(305.5 - 275)/(9 - 7)	15.25
ND<323 OK (6/11/2007 a)	ND<275 OK (10/2/2006 a)	(323 - 275)/(10 - 7)	16
ND<305.5 OK (3/16/2007 ~)	ND<300 OK (12/20/2006 a)	(305.5 - 300)/(9 - 8)	5.5
ND<323 OK (6/11/2007 a)	ND<300 OK (12/20/2006 a)	(323 - 300)/(10 - 8)	11.5
ND<323 OK (6/11/2007 a)	ND<305.5 OK (3/16/2007 ~)	(323 - 305.5)/(10 - 9)	17.5

Number of Q values = 45

Ordered Q Values

n	Q
1	-100
2	-47
3	-37.5
4	-35
5	-29
6	-23.1667
7	-17
8	-15.5
9	-15
10	-13
11	-11.3
12	-11
13	-9.875

14	-6.5
15	-5
16	-4.4
17	-3.5
18	-2
19	-0.875
20	3.4
21	3.75
22	5
23	5.5
24	5.71429
25	6.5
26	11.25
27	11.5
28	11.8333
29	12.6875
30	13.2222
31	13.7143
32	15.25
33	16
34	16
35	17.5
36	25
37	30
38	30.6667
39	31
40	34.2
41	35.25
42	39.5
43	52.6667
44	79
45	126

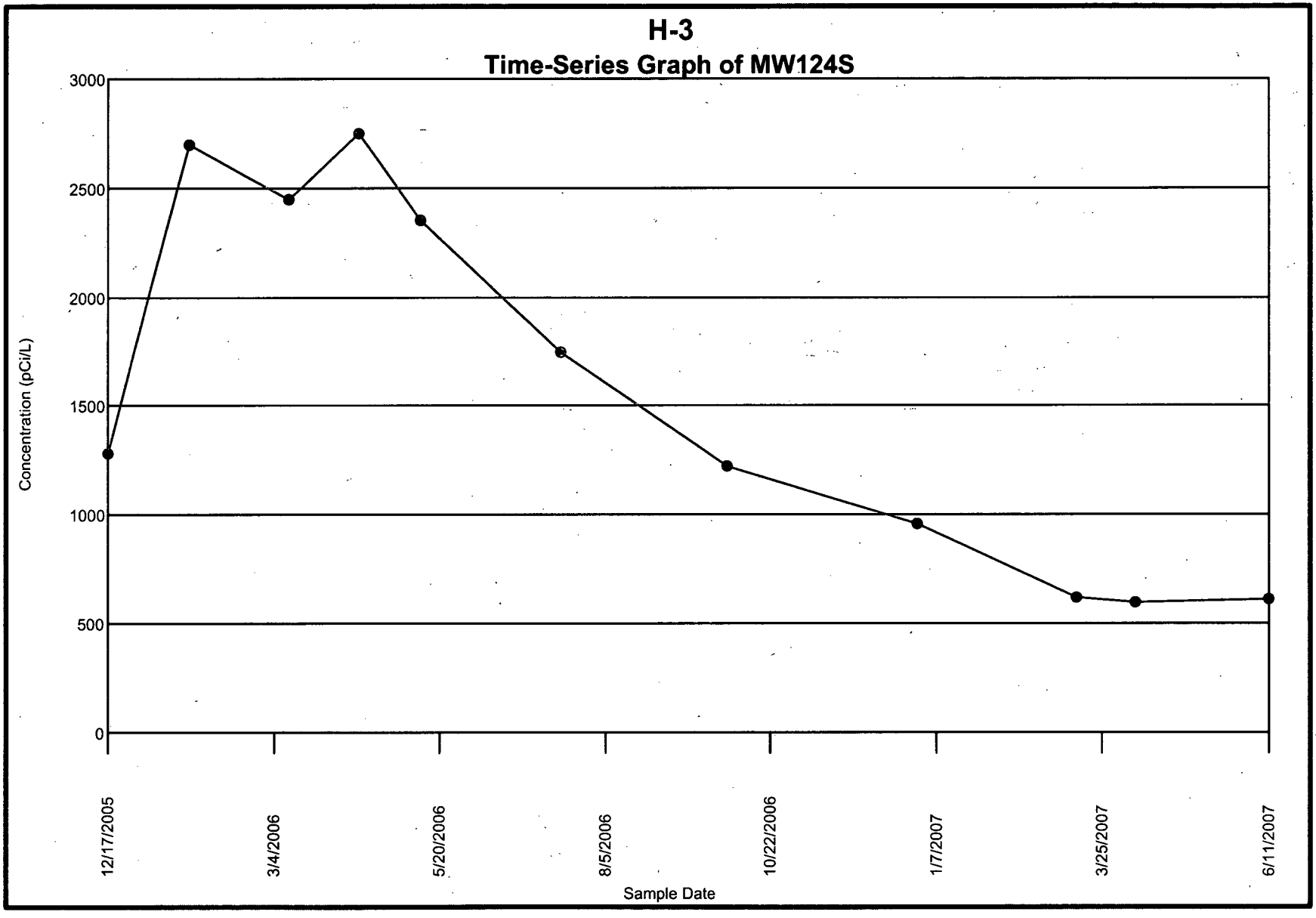
Sen's Estimator (Median Q) is 5.5

Time Period	Observations
1/6/2006	1
1/24/2006	1
3/15/2006	1
4/13/2006	1
4/29/2006	1
7/21/2006	1

10/2/2006	1
12/20/2006	1
3/16/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -9.875 = Q(13)
Upper limit is 16 = Q(33)
-9.875 < 0 < 16 indicating no trend in data.


H-3
Time-Series Graph of MW124S
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
12/17/2005
3/4/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/25/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW124S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
2700 OK (1/24/2006 a)	1280 OK (12/17/2005 a)	(2700 - 1280)/(2 - 1)	1420
2450 OK (3/11/2006 a)	1280 OK (12/17/2005 a)	(2450 - 1280)/(3 - 1)	585
2750 OK (4/13/2006 a)	1280 OK (12/17/2005 a)	(2750 - 1280)/(4 - 1)	490
2350 OK (5/12/2006 a)	1280 OK (12/17/2005 a)	(2350 - 1280)/(5 - 1)	267.5
1750 OK (7/16/2006 a)	1280 OK (12/17/2005 a)	(1750 - 1280)/(6 - 1)	94
1220 OK (10/2/2006 a)	1280 OK (12/17/2005 a)	(1220 - 1280)/(7 - 1)	-10
961 OK (12/29/2006 a)	1280 OK (12/17/2005 a)	(961 - 1280)/(8 - 1)	-45.5714
620 OK (3/14/2007 a)	1280 OK (12/17/2005 a)	(620 - 1280)/(9 - 1)	-82.5
600 OK (4/10/2007 a)	1280 OK (12/17/2005 a)	(600 - 1280)/(10 - 1)	-75.5556
615 OK (6/11/2007 a)	1280 OK (12/17/2005 a)	(615 - 1280)/(11 - 1)	-66.5
2450 OK (3/11/2006 a)	2700 OK (1/24/2006 a)	(2450 - 2700)/(3 - 2)	-250
2750 OK (4/13/2006 a)	2700 OK (1/24/2006 a)	(2750 - 2700)/(4 - 2)	25
2350 OK (5/12/2006 a)	2700 OK (1/24/2006 a)	(2350 - 2700)/(5 - 2)	-116.667
1750 OK (7/16/2006 a)	2700 OK (1/24/2006 a)	(1750 - 2700)/(6 - 2)	-237.5
1220 OK (10/2/2006 a)	2700 OK (1/24/2006 a)	(1220 - 2700)/(7 - 2)	-296
961 OK (12/29/2006 a)	2700 OK (1/24/2006 a)	(961 - 2700)/(8 - 2)	-289.833
620 OK (3/14/2007 a)	2700 OK (1/24/2006 a)	(620 - 2700)/(9 - 2)	-297.143
600 OK (4/10/2007 a)	2700 OK (1/24/2006 a)	(600 - 2700)/(10 - 2)	-262.5
615 OK (6/11/2007 a)	2700 OK (1/24/2006 a)	(615 - 2700)/(11 - 2)	-231.667
2750 OK (4/13/2006 a)	2450 OK (3/11/2006 a)	(2750 - 2450)/(4 - 3)	300
2350 OK (5/12/2006 a)	2450 OK (3/11/2006 a)	(2350 - 2450)/(5 - 3)	-50
1750 OK (7/16/2006 a)	2450 OK (3/11/2006 a)	(1750 - 2450)/(6 - 3)	-233.333
1220 OK (10/2/2006 a)	2450 OK (3/11/2006 a)	(1220 - 2450)/(7 - 3)	-307.5
961 OK (12/29/2006 a)	2450 OK (3/11/2006 a)	(961 - 2450)/(8 - 3)	-297.8
620 OK (3/14/2007 a)	2450 OK (3/11/2006 a)	(620 - 2450)/(9 - 3)	-305
600 OK (4/10/2007 a)	2450 OK (3/11/2006 a)	(600 - 2450)/(10 - 3)	-264.286
615 OK (6/11/2007 a)	2450 OK (3/11/2006 a)	(615 - 2450)/(11 - 3)	-229.375
2350 OK (5/12/2006 a)	2750 OK (4/13/2006 a)	(2350 - 2750)/(5 - 4)	-400
1750 OK (7/16/2006 a)	2750 OK (4/13/2006 a)	(1750 - 2750)/(6 - 4)	-500
1220 OK (10/2/2006 a)	2750 OK (4/13/2006 a)	(1220 - 2750)/(7 - 4)	-510
961 OK (12/29/2006 a)	2750 OK (4/13/2006 a)	(961 - 2750)/(8 - 4)	-447.25
620 OK (3/14/2007 a)	2750 OK (4/13/2006 a)	(620 - 2750)/(9 - 4)	-426
600 OK (4/10/2007 a)	2750 OK (4/13/2006 a)	(600 - 2750)/(10 - 4)	-358.333
615 OK (6/11/2007 a)	2750 OK (4/13/2006 a)	(615 - 2750)/(11 - 4)	-305
1750 OK (7/16/2006 a)	2350 OK (5/12/2006 a)	(1750 - 2350)/(6 - 5)	-600
1220 OK (10/2/2006 a)	2350 OK (5/12/2006 a)	(1220 - 2350)/(7 - 5)	-565
961 OK (12/29/2006 a)	2350 OK (5/12/2006 a)	(961 - 2350)/(8 - 5)	-463
620 OK (3/14/2007 a)	2350 OK (5/12/2006 a)	(620 - 2350)/(9 - 5)	-432.5
600 OK (4/10/2007 a)	2350 OK (5/12/2006 a)	(600 - 2350)/(10 - 5)	-350
615 OK (6/11/2007 a)	2350 OK (5/12/2006 a)	(615 - 2350)/(11 - 5)	-289.167
1220 OK (10/2/2006 a)	1750 OK (7/16/2006 a)	(1220 - 1750)/(7 - 6)	-530
961 OK (12/29/2006 a)	1750 OK (7/16/2006 a)	(961 - 1750)/(8 - 6)	-394.5

620 OK (3/14/2007 a)	1750 OK (7/16/2006 a)	(620 - 1750)/(9 - 6)	-376.667
600 OK (4/10/2007 a)	1750 OK (7/16/2006 a)	(600 - 1750)/(10 - 6)	-287.5
615 OK (6/11/2007 a)	1750 OK (7/16/2006 a)	(615 - 1750)/(11 - 6)	-227
961 OK (12/29/2006 a)	1220 OK (10/2/2006 a)	(961 - 1220)/(8 - 7)	-259
620 OK (3/14/2007 a)	1220 OK (10/2/2006 a)	(620 - 1220)/(9 - 7)	-300
600 OK (4/10/2007 a)	1220 OK (10/2/2006 a)	(600 - 1220)/(10 - 7)	-206.667
615 OK (6/11/2007 a)	1220 OK (10/2/2006 a)	(615 - 1220)/(11 - 7)	-151.25
620 OK (3/14/2007 a)	961 OK (12/29/2006 a)	(620 - 961)/(9 - 8)	-341
600 OK (4/10/2007 a)	961 OK (12/29/2006 a)	(600 - 961)/(10 - 8)	-180.5
615 OK (6/11/2007 a)	961 OK (12/29/2006 a)	(615 - 961)/(11 - 8)	-115.333
600 OK (4/10/2007 a)	620 OK (3/14/2007 a)	(600 - 620)/(10 - 9)	-20
615 OK (6/11/2007 a)	620 OK (3/14/2007 a)	(615 - 620)/(11 - 9)	-2.5
615 OK (6/11/2007 a)	600 OK (4/10/2007 a)	(615 - 600)/(11 - 10)	15

Number of Q values = 55

Ordered Q Values

n	Q
1	-600
2	-565
3	-530
4	-510
5	-500
6	-463
7	-447.25
8	-432.5
9	-426
10	-400
11	-394.5
12	-376.667
13	-358.333
14	-350
15	-341
16	-307.5
17	-305
18	-305
19	-300
20	-297.8
21	-297.143
22	-296
23	-289.833
24	-289.167
25	-287.5
26	-264.286
27	-262.5
28	-259
29	-250
30	-237.5
31	-233.333
32	-231.667
33	-229.375
34	-227

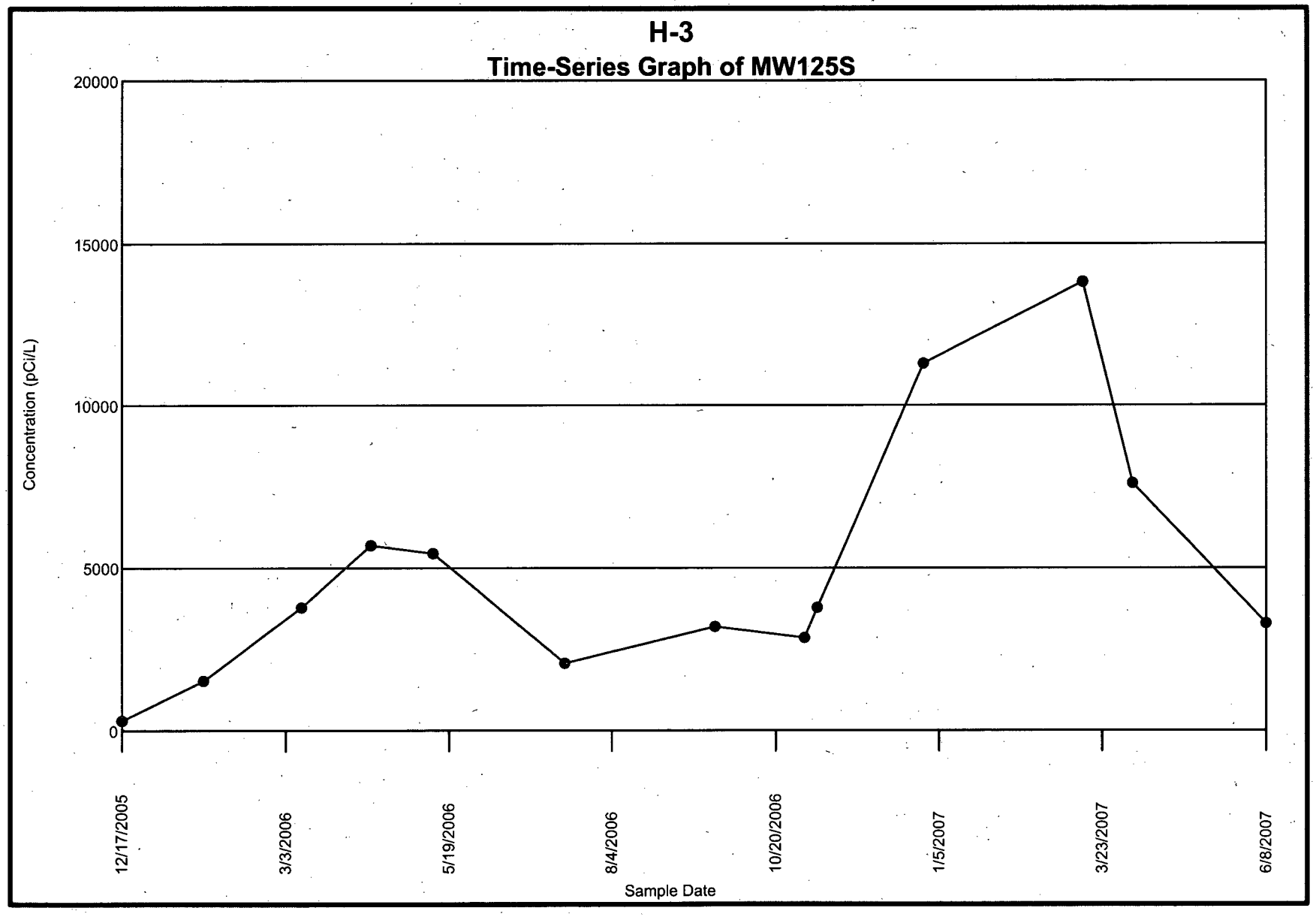
35	-206.667
36	-180.5
37	-151.25
38	-116.667
39	-115.333
40	-82.5
41	-75.5556
42	-66.5
43	-50
44	-45.5714
45	-20
46	-10
47	-2.5
48	15
49	25
50	94
51	267.5
52	300
53	490
54	585
55	1420

Sen's Estimator (Median Q) is -259

Time Period	Observations
12/17/2005	1
1/24/2006	1
3/11/2006	1
4/13/2006	1
5/12/2006	1
7/16/2006	1
10/2/2006	1
12/29/2006	1
3/14/2007	1
4/10/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -305 = Q(17)
Upper limit is -115.333 = Q(39)
-115.333 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW125S
Concentration (pCi/L)
20000
15000
10000
5000
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW125S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1520 OK (1/24/2006 a)	288 U (12/17/2005 a)	(1520 - 288)/(2 - 1)	1232
3780 OK (3/11/2006 a)	288 U (12/17/2005 a)	(3780 - 288)/(3 - 1)	1746
5690 OK (4/13/2006 a)	288 U (12/17/2005 a)	(5690 - 288)/(4 - 1)	1800.67
5475 OK (5/12/2006 ~)	288 U (12/17/2005 a)	(5475 - 288)/(5 - 1)	1296.75
2070 OK (7/13/2006 ~)	288 U (12/17/2005 a)	(2070 - 288)/(6 - 1)	356.4
3200 OK (9/22/2006 a)	288 U (12/17/2005 a)	(3200 - 288)/(7 - 1)	485.333
2850 OK (11/3/2006 a)	288 U (12/17/2005 a)	(2850 - 288)/(8 - 1)	366
3770 OK (11/9/2006 a)	288 U (12/17/2005 a)	(3770 - 288)/(9 - 1)	435.25
11300 OK (12/29/2006 a)	288 U (12/17/2005 a)	(11300 - 288)/(10 - 1)	1223.56
13800 OK (3/14/2007 a)	288 U (12/17/2005 a)	(13800 - 288)/(11 - 1)	1351.2
7640 OK (4/6/2007 a)	288 U (12/17/2005 a)	(7640 - 288)/(12 - 1)	668.364
3270 OK (6/8/2007 a)	288 U (12/17/2005 a)	(3270 - 288)/(13 - 1)	248.5
3780 OK (3/11/2006 a)	1520 OK (1/24/2006 a)	(3780 - 1520)/(3 - 2)	2260
5690 OK (4/13/2006 a)	1520 OK (1/24/2006 a)	(5690 - 1520)/(4 - 2)	2085
5475 OK (5/12/2006 ~)	1520 OK (1/24/2006 a)	(5475 - 1520)/(5 - 2)	1318.33
2070 OK (7/13/2006 ~)	1520 OK (1/24/2006 a)	(2070 - 1520)/(6 - 2)	137.5
3200 OK (9/22/2006 a)	1520 OK (1/24/2006 a)	(3200 - 1520)/(7 - 2)	336
2850 OK (11/3/2006 a)	1520 OK (1/24/2006 a)	(2850 - 1520)/(8 - 2)	221.667
3770 OK (11/9/2006 a)	1520 OK (1/24/2006 a)	(3770 - 1520)/(9 - 2)	321.429
11300 OK (12/29/2006 a)	1520 OK (1/24/2006 a)	(11300 - 1520)/(10 - 2)	1222.5
13800 OK (3/14/2007 a)	1520 OK (1/24/2006 a)	(13800 - 1520)/(11 - 2)	1364.44
7640 OK (4/6/2007 a)	1520 OK (1/24/2006 a)	(7640 - 1520)/(12 - 2)	612
3270 OK (6/8/2007 a)	1520 OK (1/24/2006 a)	(3270 - 1520)/(13 - 2)	159.091
5690 OK (4/13/2006 a)	3780 OK (3/11/2006 a)	(5690 - 3780)/(4 - 3)	1910
5475 OK (5/12/2006 ~)	3780 OK (3/11/2006 a)	(5475 - 3780)/(5 - 3)	847.5
2070 OK (7/13/2006 ~)	3780 OK (3/11/2006 a)	(2070 - 3780)/(6 - 3)	-570
3200 OK (9/22/2006 a)	3780 OK (3/11/2006 a)	(3200 - 3780)/(7 - 3)	-145
2850 OK (11/3/2006 a)	3780 OK (3/11/2006 a)	(2850 - 3780)/(8 - 3)	-186
3770 OK (11/9/2006 a)	3780 OK (3/11/2006 a)	(3770 - 3780)/(9 - 3)	-1.66667
11300 OK (12/29/2006 a)	3780 OK (3/11/2006 a)	(11300 - 3780)/(10 - 3)	1074.29
13800 OK (3/14/2007 a)	3780 OK (3/11/2006 a)	(13800 - 3780)/(11 - 3)	1252.5
7640 OK (4/6/2007 a)	3780 OK (3/11/2006 a)	(7640 - 3780)/(12 - 3)	428.889
3270 OK (6/8/2007 a)	3780 OK (3/11/2006 a)	(3270 - 3780)/(13 - 3)	-51
5475 OK (5/12/2006 ~)	5690 OK (4/13/2006 a)	(5475 - 5690)/(5 - 4)	-215
2070 OK (7/13/2006 ~)	5690 OK (4/13/2006 a)	(2070 - 5690)/(6 - 4)	-1810
3200 OK (9/22/2006 a)	5690 OK (4/13/2006 a)	(3200 - 5690)/(7 - 4)	-830
2850 OK (11/3/2006 a)	5690 OK (4/13/2006 a)	(2850 - 5690)/(8 - 4)	-710
3770 OK (11/9/2006 a)	5690 OK (4/13/2006 a)	(3770 - 5690)/(9 - 4)	-384
11300 OK (12/29/2006 a)	5690 OK (4/13/2006 a)	(11300 - 5690)/(10 - 4)	935
13800 OK (3/14/2007 a)	5690 OK (4/13/2006 a)	(13800 - 5690)/(11 - 4)	1158.57
7640 OK (4/6/2007 a)	5690 OK (4/13/2006 a)	(7640 - 5690)/(12 - 4)	243.75
3270 OK (6/8/2007 a)	5690 OK (4/13/2006 a)	(3270 - 5690)/(13 - 4)	-268.889
2070 OK (7/13/2006 ~)	5475 OK (5/12/2006 ~)	(2070 - 5475)/(6 - 5)	-3405

3200 OK (9/22/2006 a)	5475 OK (5/12/2006 ~)	(3200 - 5475)/(7 - 5)	-1137.5
2850 OK (11/3/2006 a)	5475 OK (5/12/2006 ~)	(2850 - 5475)/(8 - 5)	-875
3770 OK (11/9/2006 a)	5475 OK (5/12/2006 ~)	(3770 - 5475)/(9 - 5)	-426.25
11300 OK (12/29/2006 a)	5475 OK (5/12/2006 ~)	(11300 - 5475)/(10 - 5)	1165
13800 OK (3/14/2007 a)	5475 OK (5/12/2006 ~)	(13800 - 5475)/(11 - 5)	1387.5
7640 OK (4/6/2007 a)	5475 OK (5/12/2006 ~)	(7640 - 5475)/(12 - 5)	309.286
3270 OK (6/8/2007 a)	5475 OK (5/12/2006 ~)	(3270 - 5475)/(13 - 5)	-275.625
3200 OK (9/22/2006 a)	2070 OK (7/13/2006 ~)	(3200 - 2070)/(7 - 6)	1130
2850 OK (11/3/2006 a)	2070 OK (7/13/2006 ~)	(2850 - 2070)/(8 - 6)	390
3770 OK (11/9/2006 a)	2070 OK (7/13/2006 ~)	(3770 - 2070)/(9 - 6)	566.667
11300 OK (12/29/2006 a)	2070 OK (7/13/2006 ~)	(11300 - 2070)/(10 - 6)	2307.5
13800 OK (3/14/2007 a)	2070 OK (7/13/2006 ~)	(13800 - 2070)/(11 - 6)	2346
7640 OK (4/6/2007 a)	2070 OK (7/13/2006 ~)	(7640 - 2070)/(12 - 6)	928.333
3270 OK (6/8/2007 a)	2070 OK (7/13/2006 ~)	(3270 - 2070)/(13 - 6)	171.429
2850 OK (11/3/2006 a)	3200 OK (9/22/2006 a)	(2850 - 3200)/(8 - 7)	-350
3770 OK (11/9/2006 a)	3200 OK (9/22/2006 a)	(3770 - 3200)/(9 - 7)	285
11300 OK (12/29/2006 a)	3200 OK (9/22/2006 a)	(11300 - 3200)/(10 - 7)	2700
13800 OK (3/14/2007 a)	3200 OK (9/22/2006 a)	(13800 - 3200)/(11 - 7)	2650
7640 OK (4/6/2007 a)	3200 OK (9/22/2006 a)	(7640 - 3200)/(12 - 7)	888
3270 OK (6/8/2007 a)	3200 OK (9/22/2006 a)	(3270 - 3200)/(13 - 7)	11.6667
3770 OK (11/9/2006 a)	2850 OK (11/3/2006 a)	(3770 - 2850)/(9 - 8)	920
11300 OK (12/29/2006 a)	2850 OK (11/3/2006 a)	(11300 - 2850)/(10 - 8)	4225
13800 OK (3/14/2007 a)	2850 OK (11/3/2006 a)	(13800 - 2850)/(11 - 8)	3650
7640 OK (4/6/2007 a)	2850 OK (11/3/2006 a)	(7640 - 2850)/(12 - 8)	1197.5
3270 OK (6/8/2007 a)	2850 OK (11/3/2006 a)	(3270 - 2850)/(13 - 8)	84
11300 OK (12/29/2006 a)	3770 OK (11/9/2006 a)	(11300 - 3770)/(10 - 9)	7530
13800 OK (3/14/2007 a)	3770 OK (11/9/2006 a)	(13800 - 3770)/(11 - 9)	5015
7640 OK (4/6/2007 a)	3770 OK (11/9/2006 a)	(7640 - 3770)/(12 - 9)	1290
3270 OK (6/8/2007 a)	3770 OK (11/9/2006 a)	(3270 - 3770)/(13 - 9)	-125
13800 OK (3/14/2007 a)	11300 OK (12/29/2006 a)	(13800 - 11300)/(11 - 10)	2500
7640 OK (4/6/2007 a)	11300 OK (12/29/2006 a)	(7640 - 11300)/(12 - 10)	-1830
3270 OK (6/8/2007 a)	11300 OK (12/29/2006 a)	(3270 - 11300)/(13 - 10)	-2676.67
7640 OK (4/6/2007 a)	13800 OK (3/14/2007 a)	(7640 - 13800)/(12 - 11)	-6160
3270 OK (6/8/2007 a)	13800 OK (3/14/2007 a)	(3270 - 13800)/(13 - 11)	-5265
3270 OK (6/8/2007 a)	7640 OK (4/6/2007 a)	(3270 - 7640)/(13 - 12)	-4370

Number of Q values = 78

Ordered Q Values

n	Q
1	-6160
2	-5265
3	-4370
4	-3405
5	-2676.67
6	-1830
7	-1810
8	-1137.5
9	-875

10	-830
11	-710
12	-570
13	-426.25
14	-384
15	-350
16	-275.625
17	-268.889
18	-215
19	-186
20	-145
21	-125
22	-51
23	-1.66667
24	11.6667
25	84
26	137.5
27	159.091
28	171.429
29	221.667
30	243.75
31	248.5
32	285
33	309.286
34	321.429
35	336
36	356.4
37	366
38	390
39	428.889
40	435.25
41	485.333
42	566.667
43	612
44	668.364
45	847.5
46	888
47	920
48	928.333
49	935
50	1074.29
51	1130
52	1158.57
53	1165
54	1197.5
55	1222.5
56	1223.56
57	1232
58	1252.5
59	1290
60	1296.75
61	1318.33
62	1351.2
63	1364.44
64	1387.5
65	1746
66	1800.67

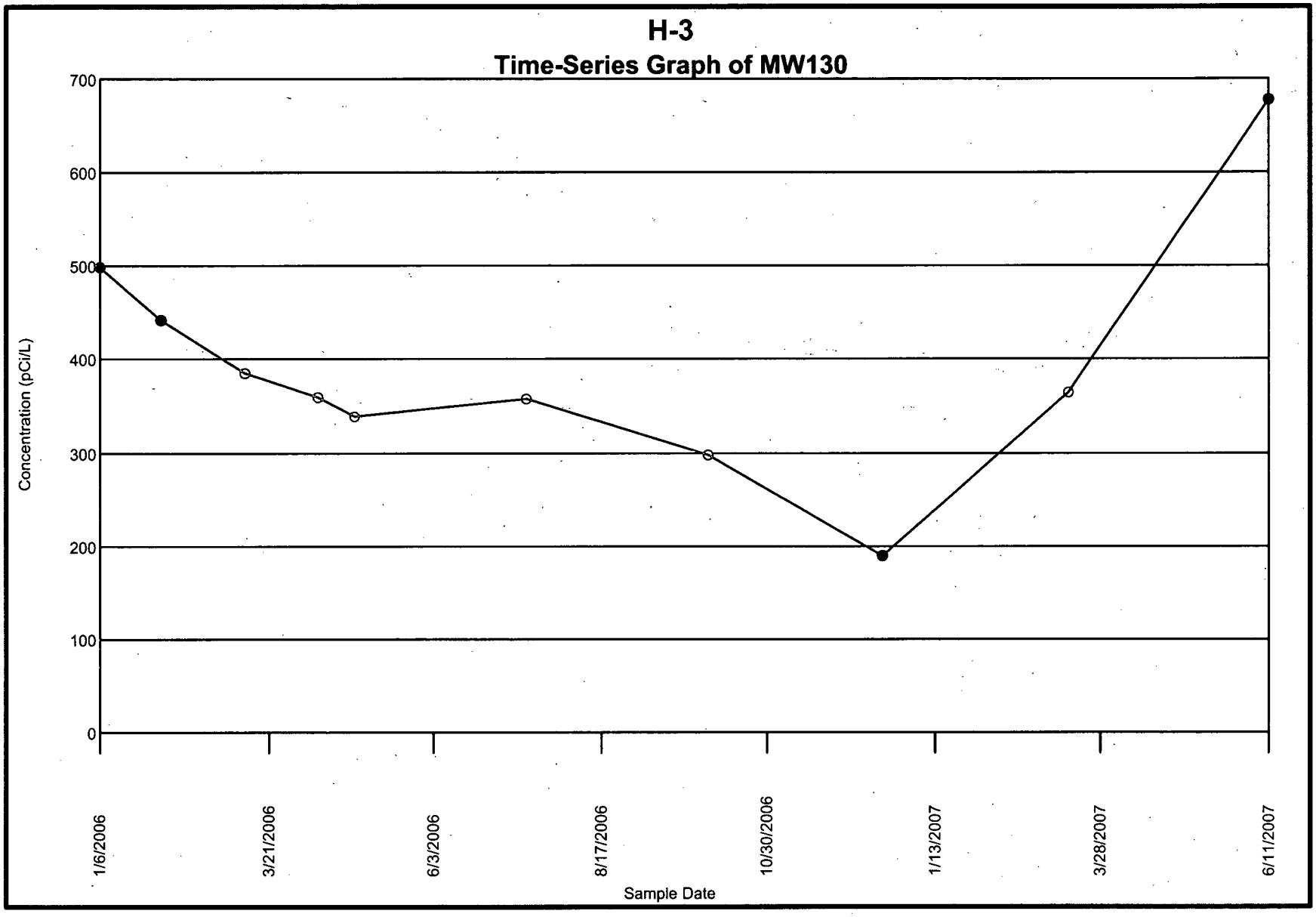
67	1910
68	2085
69	2260
70	2307.5
71	2346
72	2500
73	2650
74	2700
75	3650
76	4225
77	5015
78	7530

Sen's Estimator (Median Q) is 432.069

Time Period	Observations
12/17/2005	1
1/24/2006	1
3/11/2006	1
4/13/2006	1
5/12/2006	1
7/13/2006	1
9/22/2006	1
11/3/2006	1
11/9/2006	1
12/29/2006	1
3/14/2007	1
4/6/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is 137.5 = Q(26)
Upper limit is 1165 = Q(53)
137.5 > 0 indicating an upward trend in data.


H-3
Time-Series Graph of MW130
Concentration (pCi/L)
700
600
500
400
300
200
100
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW130

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
441.667 OK (2/2/2006 ~)	499 OK (1/6/2006 a)	(441.667 - 499)/(2 - 1)	-57.3333
ND<386 U (3/11/2006 a)	499 OK (1/6/2006 a)	(386 - 499)/(3 - 1)	-56.5
ND<360 U (4/13/2006 a)	499 OK (1/6/2006 a)	(360 - 499)/(4 - 1)	-46.3333
ND<339 OK (4/29/2006 a)	499 OK (1/6/2006 a)	(339 - 499)/(5 - 1)	-40
ND<357 OK (7/15/2006 a)	499 OK (1/6/2006 a)	(357 - 499)/(6 - 1)	-28.4
ND<297 OK (10/4/2006 a)	499 OK (1/6/2006 a)	(297 - 499)/(7 - 1)	-33.6667
189 OK (12/21/2006 a)	499 OK (1/6/2006 a)	(189 - 499)/(8 - 1)	-44.2857
ND<365 OK (3/14/2007 a)	499 OK (1/6/2006 a)	(365 - 499)/(9 - 1)	-16.75
677 OK (6/11/2007 a)	499 OK (1/6/2006 a)	(677 - 499)/(10 - 1)	19.7778
ND<386 U (3/11/2006 a)	441.667 OK (2/2/2006 ~)	(386 - 441.667)/(3 - 2)	-55.6667
ND<360 U (4/13/2006 a)	441.667 OK (2/2/2006 ~)	(360 - 441.667)/(4 - 2)	-40.8333
ND<339 OK (4/29/2006 a)	441.667 OK (2/2/2006 ~)	(339 - 441.667)/(5 - 2)	-34.2222
ND<357 OK (7/15/2006 a)	441.667 OK (2/2/2006 ~)	(357 - 441.667)/(6 - 2)	-21.1667
ND<297 OK (10/4/2006 a)	441.667 OK (2/2/2006 ~)	(297 - 441.667)/(7 - 2)	-28.9333
189 OK (12/21/2006 a)	441.667 OK (2/2/2006 ~)	(189 - 441.667)/(8 - 2)	-42.1111
ND<365 OK (3/14/2007 a)	441.667 OK (2/2/2006 ~)	(365 - 441.667)/(9 - 2)	-10.9524
677 OK (6/11/2007 a)	441.667 OK (2/2/2006 ~)	(677 - 441.667)/(10 - 2)	29.4167
ND<360 U (4/13/2006 a)	ND<386 U (3/11/2006 a)	(360 - 386)/(4 - 3)	-26
ND<339 OK (4/29/2006 a)	ND<386 U (3/11/2006 a)	(339 - 386)/(5 - 3)	-23.5
ND<357 OK (7/15/2006 a)	ND<386 U (3/11/2006 a)	(357 - 386)/(6 - 3)	-9.66667
ND<297 OK (10/4/2006 a)	ND<386 U (3/11/2006 a)	(297 - 386)/(7 - 3)	-22.25
189 OK (12/21/2006 a)	ND<386 U (3/11/2006 a)	(189 - 386)/(8 - 3)	-39.4
ND<365 OK (3/14/2007 a)	ND<386 U (3/11/2006 a)	(365 - 386)/(9 - 3)	-3.5
677 OK (6/11/2007 a)	ND<386 U (3/11/2006 a)	(677 - 386)/(10 - 3)	41.5714
ND<339 OK (4/29/2006 a)	ND<360 U (4/13/2006 a)	(339 - 360)/(5 - 4)	-21
ND<357 OK (7/15/2006 a)	ND<360 U (4/13/2006 a)	(357 - 360)/(6 - 4)	-1.5
ND<297 OK (10/4/2006 a)	ND<360 U (4/13/2006 a)	(297 - 360)/(7 - 4)	-21
189 OK (12/21/2006 a)	ND<360 U (4/13/2006 a)	(189 - 360)/(8 - 4)	-42.75
ND<365 OK (3/14/2007 a)	ND<360 U (4/13/2006 a)	(365 - 360)/(9 - 4)	1
677 OK (6/11/2007 a)	ND<360 U (4/13/2006 a)	(677 - 360)/(10 - 4)	52.8333
ND<357 OK (7/15/2006 a)	ND<339 OK (4/29/2006 a)	(357 - 339)/(6 - 5)	18
ND<297 OK (10/4/2006 a)	ND<339 OK (4/29/2006 a)	(297 - 339)/(7 - 5)	-21
189 OK (12/21/2006 a)	ND<339 OK (4/29/2006 a)	(189 - 339)/(8 - 5)	-50
ND<365 OK (3/14/2007 a)	ND<339 OK (4/29/2006 a)	(365 - 339)/(9 - 5)	6.5
677 OK (6/11/2007 a)	ND<339 OK (4/29/2006 a)	(677 - 339)/(10 - 5)	67.6
ND<297 OK (10/4/2006 a)	ND<357 OK (7/15/2006 a)	(297 - 357)/(7 - 6)	-60
189 OK (12/21/2006 a)	ND<357 OK (7/15/2006 a)	(189 - 357)/(8 - 6)	-84
ND<365 OK (3/14/2007 a)	ND<357 OK (7/15/2006 a)	(365 - 357)/(9 - 6)	2.66667
677 OK (6/11/2007 a)	ND<357 OK (7/15/2006 a)	(677 - 357)/(10 - 6)	80
189 OK (12/21/2006 a)	ND<297 OK (10/4/2006 a)	(189 - 297)/(8 - 7)	-108
ND<365 OK (3/14/2007 a)	ND<297 OK (10/4/2006 a)	(365 - 297)/(9 - 7)	34

677 OK (6/11/2007 a)	ND<297 OK (10/4/2006 a)	(677 - 297)/(10 - 7)	126.667
ND<365 OK (3/14/2007 a)	189 OK (12/21/2006 a)	(365 - 189)/(9 - 8)	176
677 OK (6/11/2007 a)	189 OK (12/21/2006 a)	(677 - 189)/(10 - 8)	244
677 OK (6/11/2007 a)	ND<365 OK (3/14/2007 a)	(677 - 365)/(10 - 9)	312

Number of Q values = 45

Ordered Q Values

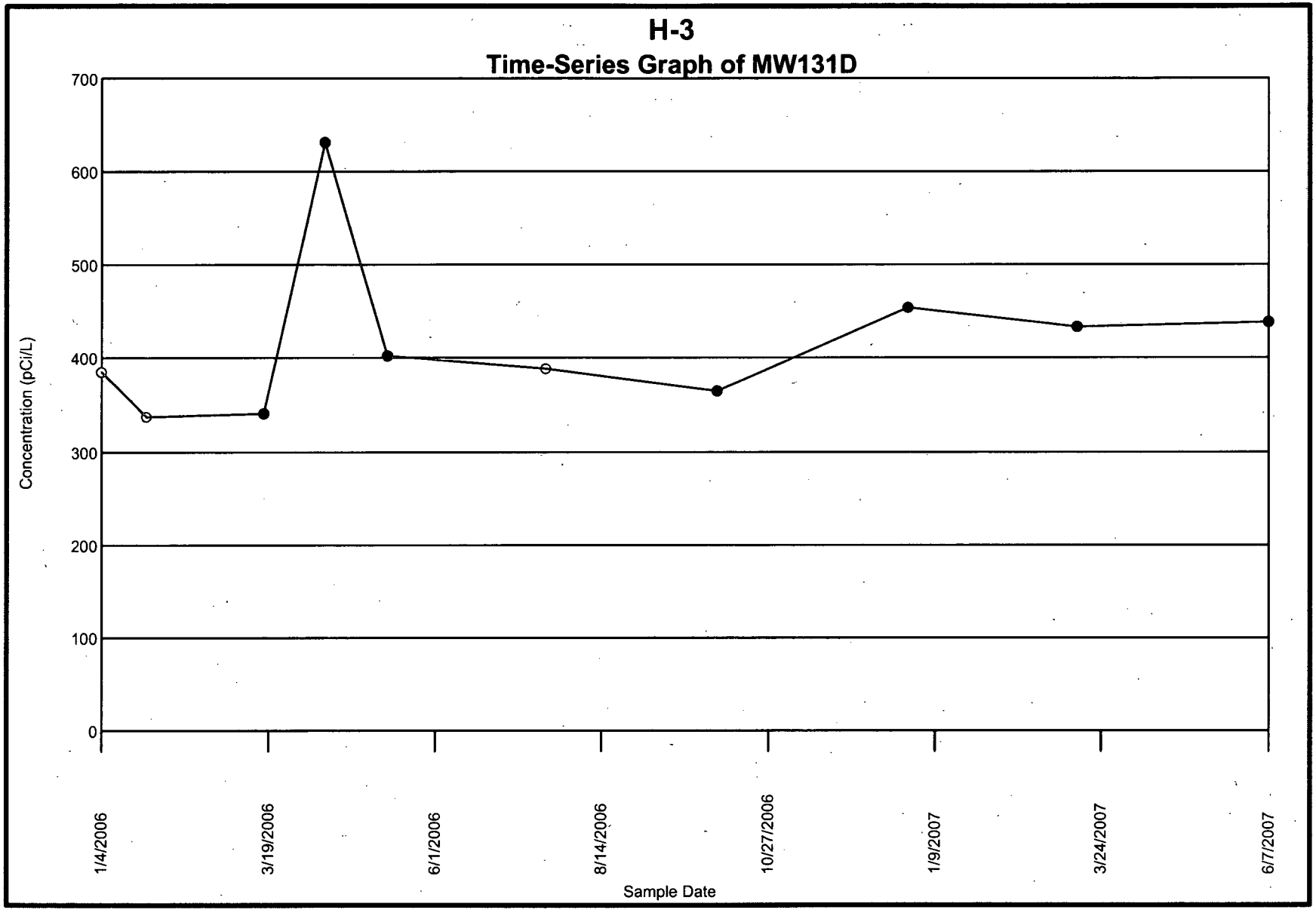
n	Q
1	-108
2	-84
3	-60
4	-57.3333
5	-56.5
6	-55.6667
7	-50
8	-46.3333
9	-44.2857
10	-42.75
11	-42.1111
12	-40.8333
13	-40
14	-39.4
15	-34.2222
16	-33.6667
17	-28.9333
18	-28.4
19	-26
20	-23.5
21	-22.25
22	-21.1667
23	-21
24	-21
25	-21
26	-16.75
27	-10.9524
28	-9.66667
29	-3.5
30	-1.5
31	1
32	2.66667
33	6.5
34	18
35	19.7778
36	29.4167
37	34
38	41.5714
39	52.8333
40	67.6
41	80
42	126.667
43	176
44	244
45	312

Sen's Estimator (Median Q) is -21

Time Period	Observations
1/6/2006	1
2/2/2006	1
3/11/2006	1
4/13/2006	1
4/29/2006	1
7/15/2006	1
10/4/2006	1
12/21/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -40 = Q(13)
Upper limit is 6.5 = Q(33)
-40 < 0 < 6.5 indicating no trend in data.


H-3
Time-Series Graph of MW131D
Concentration (pCi/L)
700
600
500
400
300
200
100
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/27/2006
1/9/2007
3/24/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW131D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<337 U (1/24/2006 a)	ND<386 U (1/4/2006 a)	(337 - 386)/(2 - 1)	-49
340 U (3/17/2006 a)	ND<386 U (1/4/2006 a)	(340 - 386)/(3 - 1)	-23
632 OK (4/13/2006 a)	ND<386 U (1/4/2006 a)	(632 - 386)/(4 - 1)	82
402 OK (5/11/2006 a)	ND<386 U (1/4/2006 a)	(402 - 386)/(5 - 1)	4
ND<388 OK (7/21/2006 a)	ND<386 U (1/4/2006 a)	(388 - 386)/(6 - 1)	0.4
364 OK (10/5/2006 a)	ND<386 U (1/4/2006 a)	(364 - 386)/(7 - 1)	-3.66667
454 OK (12/29/2006 a)	ND<386 U (1/4/2006 a)	(454 - 386)/(8 - 1)	9.71429
433 OK (3/14/2007 a)	ND<386 U (1/4/2006 a)	(433 - 386)/(9 - 1)	5.875
438 OK (6/7/2007 a)	ND<386 U (1/4/2006 a)	(438 - 386)/(10 - 1)	5.77778
340 U (3/17/2006 a)	ND<337 U (1/24/2006 a)	(340 - 337)/(3 - 2)	3
632 OK (4/13/2006 a)	ND<337 U (1/24/2006 a)	(632 - 337)/(4 - 2)	147.5
402 OK (5/11/2006 a)	ND<337 U (1/24/2006 a)	(402 - 337)/(5 - 2)	21.6667
ND<388 OK (7/21/2006 a)	ND<337 U (1/24/2006 a)	(388 - 337)/(6 - 2)	12.75
364 OK (10/5/2006 a)	ND<337 U (1/24/2006 a)	(364 - 337)/(7 - 2)	5.4
454 OK (12/29/2006 a)	ND<337 U (1/24/2006 a)	(454 - 337)/(8 - 2)	19.5
433 OK (3/14/2007 a)	ND<337 U (1/24/2006 a)	(433 - 337)/(9 - 2)	13.7143
438 OK (6/7/2007 a)	ND<337 U (1/24/2006 a)	(438 - 337)/(10 - 2)	12.625
632 OK (4/13/2006 a)	340 U (3/17/2006 a)	(632 - 340)/(4 - 3)	292
402 OK (5/11/2006 a)	340 U (3/17/2006 a)	(402 - 340)/(5 - 3)	31
ND<388 OK (7/21/2006 a)	340 U (3/17/2006 a)	(388 - 340)/(6 - 3)	16
364 OK (10/5/2006 a)	340 U (3/17/2006 a)	(364 - 340)/(7 - 3)	6
454 OK (12/29/2006 a)	340 U (3/17/2006 a)	(454 - 340)/(8 - 3)	22.8
433 OK (3/14/2007 a)	340 U (3/17/2006 a)	(433 - 340)/(9 - 3)	15.5
438 OK (6/7/2007 a)	340 U (3/17/2006 a)	(438 - 340)/(10 - 3)	14
402 OK (5/11/2006 a)	632 OK (4/13/2006 a)	(402 - 632)/(5 - 4)	-230
ND<388 OK (7/21/2006 a)	632 OK (4/13/2006 a)	(388 - 632)/(6 - 4)	-122
364 OK (10/5/2006 a)	632 OK (4/13/2006 a)	(364 - 632)/(7 - 4)	-89.3333
454 OK (12/29/2006 a)	632 OK (4/13/2006 a)	(454 - 632)/(8 - 4)	-44.5
433 OK (3/14/2007 a)	632 OK (4/13/2006 a)	(433 - 632)/(9 - 4)	-39.8
438 OK (6/7/2007 a)	632 OK (4/13/2006 a)	(438 - 632)/(10 - 4)	-32.3333
ND<388 OK (7/21/2006 a)	402 OK (5/11/2006 a)	(388 - 402)/(6 - 5)	-14
364 OK (10/5/2006 a)	402 OK (5/11/2006 a)	(364 - 402)/(7 - 5)	-19
454 OK (12/29/2006 a)	402 OK (5/11/2006 a)	(454 - 402)/(8 - 5)	17.3333
433 OK (3/14/2007 a)	402 OK (5/11/2006 a)	(433 - 402)/(9 - 5)	7.75
438 OK (6/7/2007 a)	402 OK (5/11/2006 a)	(438 - 402)/(10 - 5)	7.2
364 OK (10/5/2006 a)	ND<388 OK (7/21/2006 a)	(364 - 388)/(7 - 6)	-24
454 OK (12/29/2006 a)	ND<388 OK (7/21/2006 a)	(454 - 388)/(8 - 6)	33
433 OK (3/14/2007 a)	ND<388 OK (7/21/2006 a)	(433 - 388)/(9 - 6)	15
438 OK (6/7/2007 a)	ND<388 OK (7/21/2006 a)	(438 - 388)/(10 - 6)	12.5
454 OK (12/29/2006 a)	364 OK (10/5/2006 a)	(454 - 364)/(8 - 7)	90
433 OK (3/14/2007 a)	364 OK (10/5/2006 a)	(433 - 364)/(9 - 7)	34.5

438 OK (6/7/2007 a)	364 OK (10/5/2006 a)	(438 - 364)/(10 - 7)	24.6667
433 OK (3/14/2007 a)	454 OK (12/29/2006 a)	(433 - 454)/(9 - 8)	-21
438 OK (6/7/2007 a)	454 OK (12/29/2006 a)	(438 - 454)/(10 - 8)	-8
438 OK (6/7/2007 a)	433 OK (3/14/2007 a)	(438 - 433)/(10 - 9)	5

Number of Q values = 45

Ordered Q Values

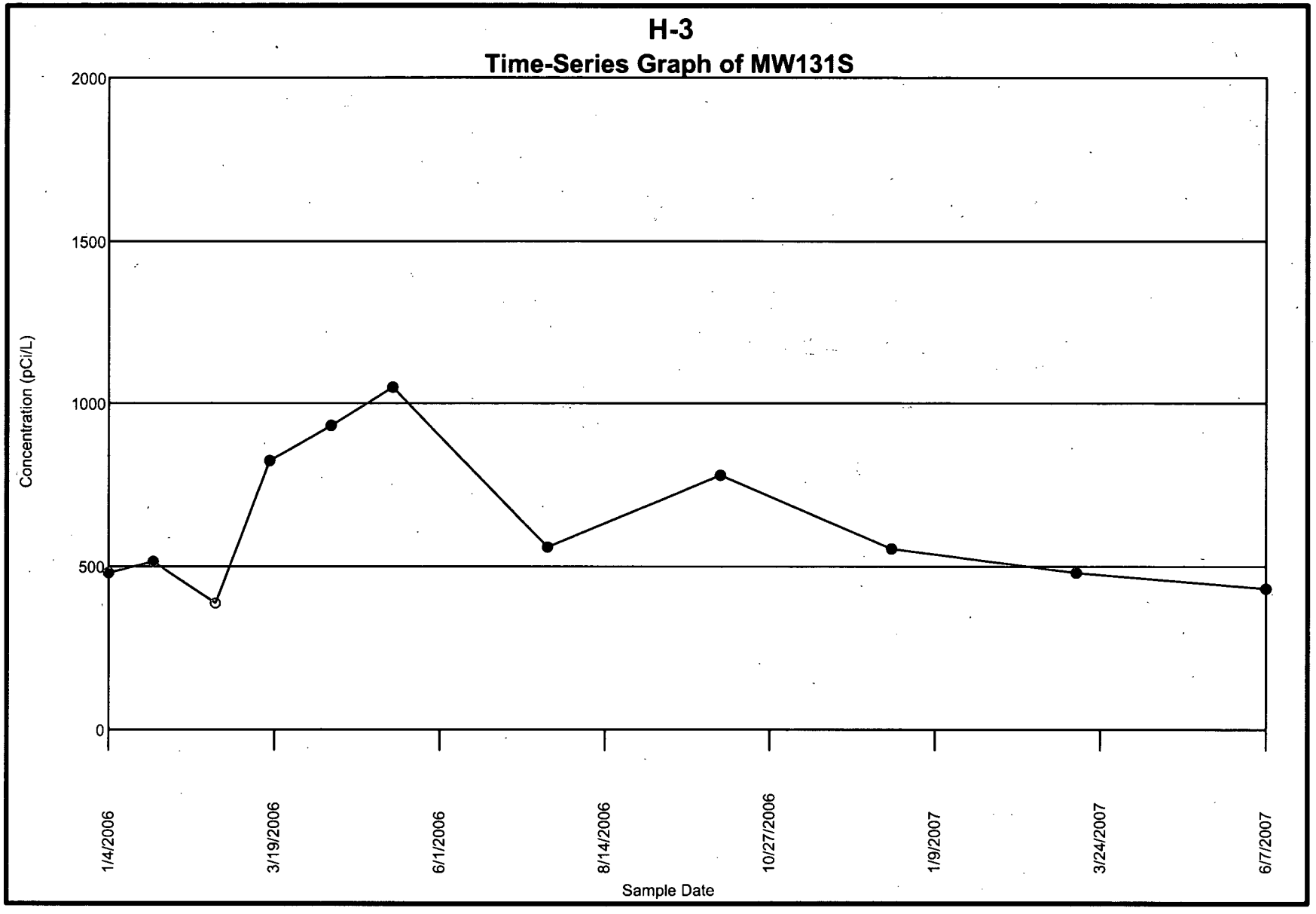
n	Q
1	-230
2	-122
3	-89.3333
4	-49
5	-44.5
6	-39.8
7	-32.3333
8	-24
9	-23
10	-21
11	-19
12	-14
13	-8
14	-3.66667
15	0.4
16	3
17	4
18	5
19	5.4
20	5.77778
21	5.875
22	6
23	7.2
24	7.75
25	9.71429
26	12.5
27	12.625
28	12.75
29	13.7143
30	14
31	15
32	15.5
33	16
34	17.3333
35	19.5
36	21.6667
37	22.8
38	24.6667
39	31
40	33
41	34.5
42	82
43	90
44	147.5
45	292

Sen's Estimator (Median Q) is 7.2

Time Period	Observations
1/4/2006	1
1/24/2006	1
3/17/2006	1
4/13/2006	1
5/11/2006	1
7/21/2006	1
10/5/2006	1
12/29/2006	1
3/14/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -8 = Q(13)
Upper limit is 16 = Q(33)
-8 < 0 < 16 indicating no trend in data.


H-3
Time-Series Graph of MW131S
Concentration (pCi/L)
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/27/2006
1/9/2007
3/24/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW131S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
516 OK (1/24/2006 a)	484 OK (1/4/2006 a)	(516 - 484)/(2 - 1)	32
ND<390 U (2/21/2006 a)	484 OK (1/4/2006 a)	(390 - 484)/(3 - 1)	-47
824 OK (3/17/2006 a)	484 OK (1/4/2006 a)	(824 - 484)/(4 - 1)	113.333
933 OK (4/13/2006 a)	484 OK (1/4/2006 a)	(933 - 484)/(5 - 1)	112.25
1050 OK (5/11/2006 a)	484 OK (1/4/2006 a)	(1050 - 484)/(6 - 1)	113.2
562 OK (7/20/2006 a)	484 OK (1/4/2006 a)	(562 - 484)/(7 - 1)	13
781 OK (10/5/2006 a)	484 OK (1/4/2006 a)	(781 - 484)/(8 - 1)	42.4286
553 OK (12/21/2006 a)	484 OK (1/4/2006 a)	(553 - 484)/(9 - 1)	8.625
484 OK (3/14/2007 a)	484 OK (1/4/2006 a)	(484 - 484)/(10 - 1)	0
430 OK (6/7/2007 a)	484 OK (1/4/2006 a)	(430 - 484)/(11 - 1)	-5.4
ND<390 U (2/21/2006 a)	516 OK (1/24/2006 a)	(390 - 516)/(3 - 2)	-126
824 OK (3/17/2006 a)	516 OK (1/24/2006 a)	(824 - 516)/(4 - 2)	154
933 OK (4/13/2006 a)	516 OK (1/24/2006 a)	(933 - 516)/(5 - 2)	139
1050 OK (5/11/2006 a)	516 OK (1/24/2006 a)	(1050 - 516)/(6 - 2)	133.5
562 OK (7/20/2006 a)	516 OK (1/24/2006 a)	(562 - 516)/(7 - 2)	9.2
781 OK (10/5/2006 a)	516 OK (1/24/2006 a)	(781 - 516)/(8 - 2)	44.1667
553 OK (12/21/2006 a)	516 OK (1/24/2006 a)	(553 - 516)/(9 - 2)	5.28571
484 OK (3/14/2007 a)	516 OK (1/24/2006 a)	(484 - 516)/(10 - 2)	-4
430 OK (6/7/2007 a)	516 OK (1/24/2006 a)	(430 - 516)/(11 - 2)	-9.55556
824 OK (3/17/2006 a)	ND<390 U (2/21/2006 a)	(824 - 390)/(4 - 3)	434
933 OK (4/13/2006 a)	ND<390 U (2/21/2006 a)	(933 - 390)/(5 - 3)	271.5
1050 OK (5/11/2006 a)	ND<390 U (2/21/2006 a)	(1050 - 390)/(6 - 3)	220
562 OK (7/20/2006 a)	ND<390 U (2/21/2006 a)	(562 - 390)/(7 - 3)	43
781 OK (10/5/2006 a)	ND<390 U (2/21/2006 a)	(781 - 390)/(8 - 3)	78.2
553 OK (12/21/2006 a)	ND<390 U (2/21/2006 a)	(553 - 390)/(9 - 3)	27.1667
484 OK (3/14/2007 a)	ND<390 U (2/21/2006 a)	(484 - 390)/(10 - 3)	13.4286
430 OK (6/7/2007 a)	ND<390 U (2/21/2006 a)	(430 - 390)/(11 - 3)	5
933 OK (4/13/2006 a)	824 OK (3/17/2006 a)	(933 - 824)/(5 - 4)	109
1050 OK (5/11/2006 a)	824 OK (3/17/2006 a)	(1050 - 824)/(6 - 4)	113
562 OK (7/20/2006 a)	824 OK (3/17/2006 a)	(562 - 824)/(7 - 4)	-87.3333
781 OK (10/5/2006 a)	824 OK (3/17/2006 a)	(781 - 824)/(8 - 4)	-10.75
553 OK (12/21/2006 a)	824 OK (3/17/2006 a)	(553 - 824)/(9 - 4)	-54.2
484 OK (3/14/2007 a)	824 OK (3/17/2006 a)	(484 - 824)/(10 - 4)	-56.6667
430 OK (6/7/2007 a)	824 OK (3/17/2006 a)	(430 - 824)/(11 - 4)	-56.2857
1050 OK (5/11/2006 a)	933 OK (4/13/2006 a)	(1050 - 933)/(6 - 5)	117
562 OK (7/20/2006 a)	933 OK (4/13/2006 a)	(562 - 933)/(7 - 5)	-185.5
781 OK (10/5/2006 a)	933 OK (4/13/2006 a)	(781 - 933)/(8 - 5)	-50.6667
553 OK (12/21/2006 a)	933 OK (4/13/2006 a)	(553 - 933)/(9 - 5)	-95
484 OK (3/14/2007 a)	933 OK (4/13/2006 a)	(484 - 933)/(10 - 5)	-89.8
430 OK (6/7/2007 a)	933 OK (4/13/2006 a)	(430 - 933)/(11 - 5)	-83.8333
562 OK (7/20/2006 a)	1050 OK (5/11/2006 a)	(562 - 1050)/(7 - 6)	-488
781 OK (10/5/2006 a)	1050 OK (5/11/2006 a)	(781 - 1050)/(8 - 6)	-134.5

553 OK (12/21/2006 a)	1050 OK (5/11/2006 a)	(553 - 1050)/(9 - 6)	-165.667
484 OK (3/14/2007 a)	1050 OK (5/11/2006 a)	(484 - 1050)/(10 - 6)	-141.5
430 OK (6/7/2007 a)	1050 OK (5/11/2006 a)	(430 - 1050)/(11 - 6)	-124
781 OK (10/5/2006 a)	562 OK (7/20/2006 a)	(781 - 562)/(8 - 7)	219
553 OK (12/21/2006 a)	562 OK (7/20/2006 a)	(553 - 562)/(9 - 7)	-4.5
484 OK (3/14/2007 a)	562 OK (7/20/2006 a)	(484 - 562)/(10 - 7)	-26
430 OK (6/7/2007 a)	562 OK (7/20/2006 a)	(430 - 562)/(11 - 7)	-33
553 OK (12/21/2006 a)	781 OK (10/5/2006 a)	(553 - 781)/(9 - 8)	-228
484 OK (3/14/2007 a)	781 OK (10/5/2006 a)	(484 - 781)/(10 - 8)	-148.5
430 OK (6/7/2007 a)	781 OK (10/5/2006 a)	(430 - 781)/(11 - 8)	-117
484 OK (3/14/2007 a)	553 OK (12/21/2006 a)	(484 - 553)/(10 - 9)	-69
430 OK (6/7/2007 a)	553 OK (12/21/2006 a)	(430 - 553)/(11 - 9)	-61.5
430 OK (6/7/2007 a)	484 OK (3/14/2007 a)	(430 - 484)/(11 - 10)	-54

Number of Q values = 55

Ordered Q Values

n	Q
1	-488
2	-228
3	-185.5
4	-165.667
5	-148.5
6	-141.5
7	-134.5
8	-126
9	-124
10	-117
11	-95
12	-89.8
13	-87.3333
14	-83.8333
15	-69
16	-61.5
17	-56.6667
18	-56.2857
19	-54.2
20	-54
21	-50.6667
22	-47
23	-33
24	-26
25	-10.75
26	-9.55556
27	-5.4
28	-4.5
29	-4
30	0
31	5
32	5.28571
33	8.625
34	9.2

35	13
36	13.4286
37	27.1667
38	32
39	42.4286
40	43
41	44.1667
42	78.2
43	109
44	112.25
45	113
46	113.2
47	113.333
48	117
49	133.5
50	139
51	154
52	219
53	220
54	271.5
55	434

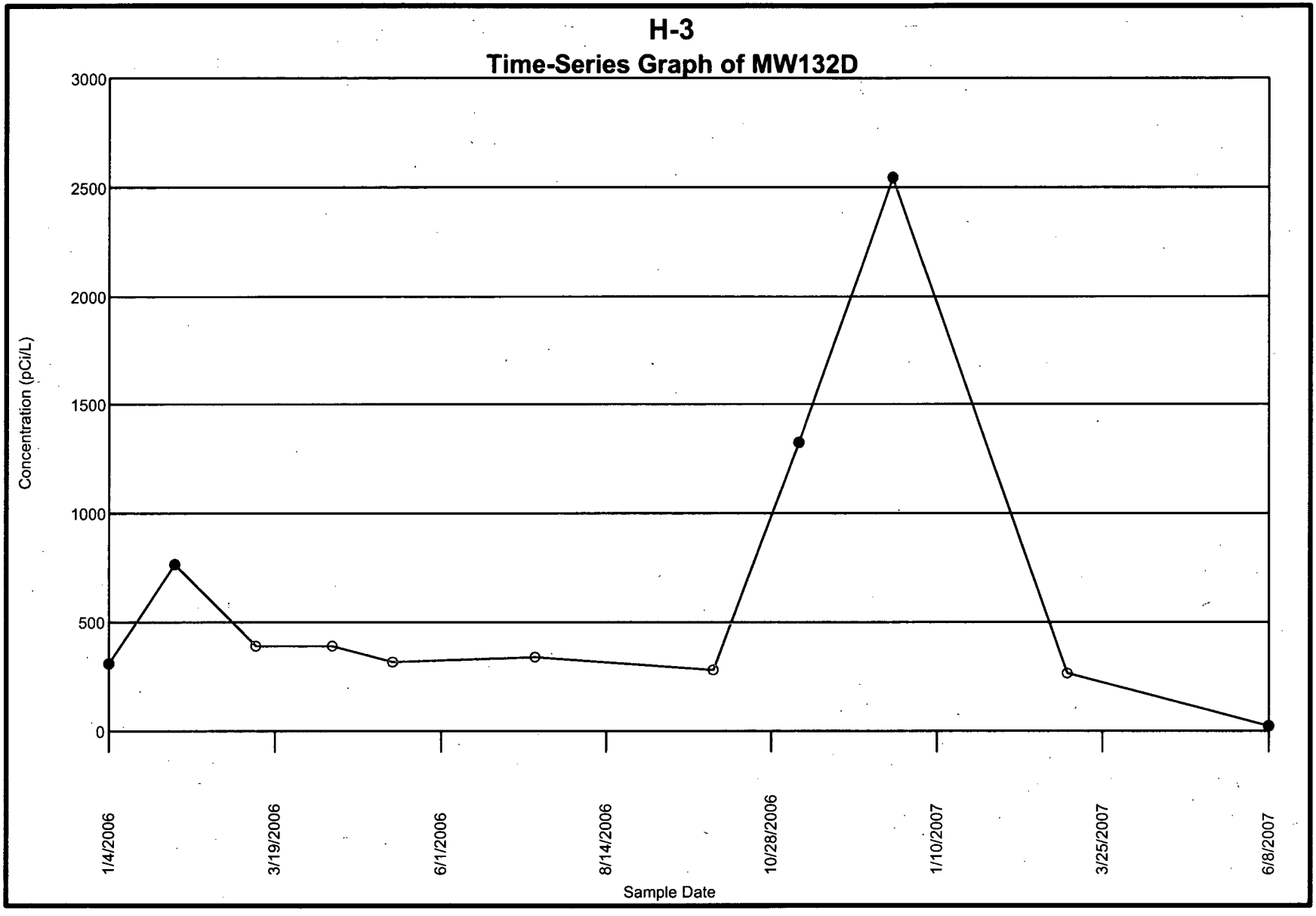
Sen's Estimator (Median Q) is -4.5

Tied Group	Value	Members
1	484	2

Time Period	Observations
1/4/2006	1
1/24/2006	1
2/21/2006	1
3/17/2006	1
4/13/2006	1
5/11/2006	1
7/20/2006	1
10/5/2006	1
12/21/2006	1
3/14/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -56.6667 = Q(17)
Upper limit is 42.4286 = Q(39)
-56.6667 < 0 < 42.4286 indicating no trend in data.


H-3
Time-Series Graph of MW132D
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW132D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
765 OK (2/2/2006 a)	309 U (1/4/2006 a)	(765 - 309)/(2 - 1)	456
ND<389 U (3/11/2006 a)	309 U (1/4/2006 a)	(389 - 309)/(3 - 1)	40
ND<394 U (4/14/2006 a)	309 U (1/4/2006 a)	(394 - 309)/(4 - 1)	28.3333
ND<319 OK (5/11/2006 a)	309 U (1/4/2006 a)	(319 - 309)/(5 - 1)	2.5
ND<340 OK (7/14/2006 a)	309 U (1/4/2006 a)	(340 - 309)/(6 - 1)	6.2
ND<279 OK (10/2/2006 a)	309 U (1/4/2006 a)	(279 - 309)/(7 - 1)	-5
1330 OK (11/9/2006 a)	309 U (1/4/2006 a)	(1330 - 309)/(8 - 1)	145.857
2540 OK (12/21/2006 a)	309 U (1/4/2006 a)	(2540 - 309)/(9 - 1)	278.875
ND<264 OK (3/10/2007 a)	309 U (1/4/2006 a)	(264 - 309)/(10 - 1)	-5
ND<329 OK (6/8/2007 a)	309 U (1/4/2006 a)	(329 - 309)/(11 - 1)	2
ND<389 U (3/11/2006 a)	765 OK (2/2/2006 a)	(389 - 765)/(3 - 2)	-376
ND<394 U (4/14/2006 a)	765 OK (2/2/2006 a)	(394 - 765)/(4 - 2)	-185.5
ND<319 OK (5/11/2006 a)	765 OK (2/2/2006 a)	(319 - 765)/(5 - 2)	-148.667
ND<340 OK (7/14/2006 a)	765 OK (2/2/2006 a)	(340 - 765)/(6 - 2)	-106.25
ND<279 OK (10/2/2006 a)	765 OK (2/2/2006 a)	(279 - 765)/(7 - 2)	-97.2
1330 OK (11/9/2006 a)	765 OK (2/2/2006 a)	(1330 - 765)/(8 - 2)	94.1667
2540 OK (12/21/2006 a)	765 OK (2/2/2006 a)	(2540 - 765)/(9 - 2)	253.571
ND<264 OK (3/10/2007 a)	765 OK (2/2/2006 a)	(264 - 765)/(10 - 2)	-62.625
ND<329 OK (6/8/2007 a)	765 OK (2/2/2006 a)	(329 - 765)/(11 - 2)	-48.4444
ND<394 U (4/14/2006 a)	ND<389 U (3/11/2006 a)	(394 - 389)/(4 - 3)	5
ND<319 OK (5/11/2006 a)	ND<389 U (3/11/2006 a)	(319 - 389)/(5 - 3)	-35
ND<340 OK (7/14/2006 a)	ND<389 U (3/11/2006 a)	(340 - 389)/(6 - 3)	-16.3333
ND<279 OK (10/2/2006 a)	ND<389 U (3/11/2006 a)	(279 - 389)/(7 - 3)	-27.5
1330 OK (11/9/2006 a)	ND<389 U (3/11/2006 a)	(1330 - 389)/(8 - 3)	188.2
2540 OK (12/21/2006 a)	ND<389 U (3/11/2006 a)	(2540 - 389)/(9 - 3)	358.5
ND<264 OK (3/10/2007 a)	ND<389 U (3/11/2006 a)	(264 - 389)/(10 - 3)	-17.8571
ND<329 OK (6/8/2007 a)	ND<389 U (3/11/2006 a)	(329 - 389)/(11 - 3)	-7.5
ND<319 OK (5/11/2006 a)	ND<394 U (4/14/2006 a)	(319 - 394)/(5 - 4)	-75
ND<340 OK (7/14/2006 a)	ND<394 U (4/14/2006 a)	(340 - 394)/(6 - 4)	-27
ND<279 OK (10/2/2006 a)	ND<394 U (4/14/2006 a)	(279 - 394)/(7 - 4)	-38.3333
1330 OK (11/9/2006 a)	ND<394 U (4/14/2006 a)	(1330 - 394)/(8 - 4)	234
2540 OK (12/21/2006 a)	ND<394 U (4/14/2006 a)	(2540 - 394)/(9 - 4)	429.2
ND<264 OK (3/10/2007 a)	ND<394 U (4/14/2006 a)	(264 - 394)/(10 - 4)	-21.6667
ND<329 OK (6/8/2007 a)	ND<394 U (4/14/2006 a)	(329 - 394)/(11 - 4)	-9.28571
ND<340 OK (7/14/2006 a)	ND<319 OK (5/11/2006 a)	(340 - 319)/(6 - 5)	21
ND<279 OK (10/2/2006 a)	ND<319 OK (5/11/2006 a)	(279 - 319)/(7 - 5)	-20
1330 OK (11/9/2006 a)	ND<319 OK (5/11/2006 a)	(1330 - 319)/(8 - 5)	337
2540 OK (12/21/2006 a)	ND<319 OK (5/11/2006 a)	(2540 - 319)/(9 - 5)	555.25
ND<264 OK (3/10/2007 a)	ND<319 OK (5/11/2006 a)	(264 - 319)/(10 - 5)	-11
ND<329 OK (6/8/2007 a)	ND<319 OK (5/11/2006 a)	(329 - 319)/(11 - 5)	1.66667
ND<279 OK (10/2/2006 a)	ND<340 OK (7/14/2006 a)	(279 - 340)/(7 - 6)	-61
1330 OK (11/9/2006 a)	ND<340 OK (7/14/2006 a)	(1330 - 340)/(8 - 6)	495

2540 OK (12/21/2006 a)	ND<340 OK (7/14/2006 a)	(2540 - 340)/(9 - 6)	733.333
ND<264 OK (3/10/2007 a)	ND<340 OK (7/14/2006 a)	(264 - 340)/(10 - 6)	-19
ND<329 OK (6/8/2007 a)	ND<340 OK (7/14/2006 a)	(329 - 340)/(11 - 6)	-2.2
1330 OK (11/9/2006 a)	ND<279 OK (10/2/2006 a)	(1330 - 279)/(8 - 7)	1051
2540 OK (12/21/2006 a)	ND<279 OK (10/2/2006 a)	(2540 - 279)/(9 - 7)	1130.5
ND<264 OK (3/10/2007 a)	ND<279 OK (10/2/2006 a)	(264 - 279)/(10 - 7)	-5
ND<329 OK (6/8/2007 a)	ND<279 OK (10/2/2006 a)	(329 - 279)/(11 - 7)	12.5
2540 OK (12/21/2006 a)	1330 OK (11/9/2006 a)	(2540 - 1330)/(9 - 8)	1210
ND<264 OK (3/10/2007 a)	1330 OK (11/9/2006 a)	(264 - 1330)/(10 - 8)	-533
ND<329 OK (6/8/2007 a)	1330 OK (11/9/2006 a)	(329 - 1330)/(11 - 8)	-333.667
ND<264 OK (3/10/2007 a)	2540 OK (12/21/2006 a)	(264 - 2540)/(10 - 9)	-2276
ND<329 OK (6/8/2007 a)	2540 OK (12/21/2006 a)	(329 - 2540)/(11 - 9)	-1105.5
ND<329 OK (6/8/2007 a)	ND<264 OK (3/10/2007 a)	(329 - 264)/(11 - 10)	65

Number of Q values = 55

Ordered Q Values

n	Q
1	-2276
2	-1105.5
3	-533
4	-376
5	-333.667
6	-185.5
7	-148.667
8	-106.25
9	-97.2
10	-75
11	-62.625
12	-61
13	-48.4444
14	-38.3333
15	-35
16	-27.5
17	-27
18	-21.6667
19	-20
20	-19
21	-17.8571
22	-16.3333
23	-11
24	-9.28571
25	-7.5
26	-5
27	-5
28	-5
29	-2.2
30	1.66667
31	2
32	2.5
33	5
34	6.2

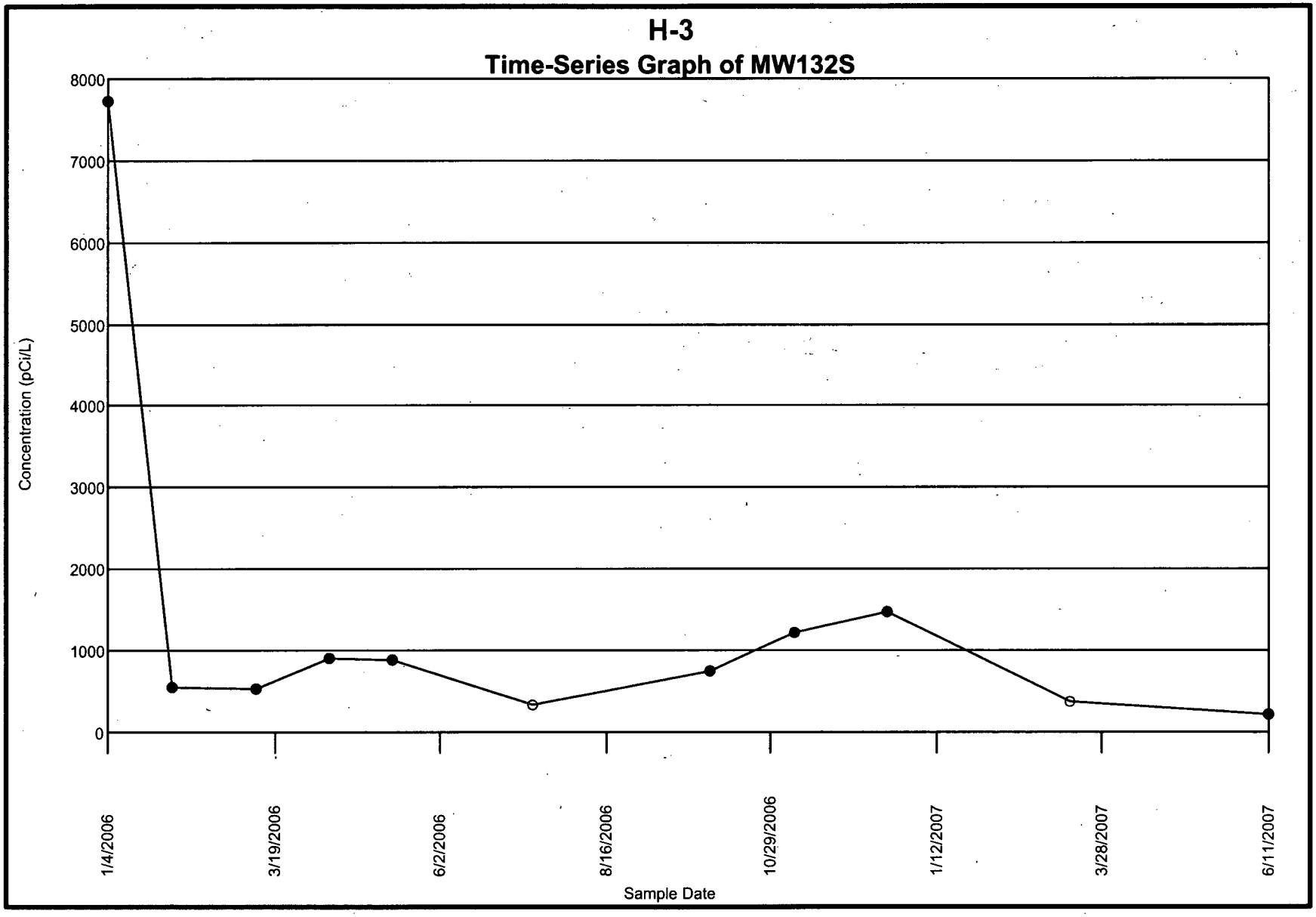
35	12.5
36	21
37	28.3333
38	40
39	65
40	94.1667
41	145.857
42	188.2
43	234
44	253.571
45	278.875
46	337
47	358.5
48	429.2
49	456
50	495
51	555.25
52	733.333
53	1051
54	1130.5
55	1210

Sen's Estimator (Median Q) is -5

Time Period	Observations
1/4/2006	1
2/2/2006	1
3/11/2006	1
4/14/2006	1
5/11/2006	1
7/14/2006	1
10/2/2006	1
11/9/2006	1
12/21/2006	1
3/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -27 = Q(17)
Upper limit is 65 = Q(39)
-27 < 0 < 65 indicating no trend in data.


H-3
Time-Series Graph of MW132S
Concentration (pCi/L)
8000
7000
6000
5000
4000
3000
2000
1000
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW132S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
553 OK (2/2/2006 a)	7720 OK (1/4/2006 a)	(553 - 7720)/(2 - 1)	-7167
535 OK (3/11/2006 a)	7720 OK (1/4/2006 a)	(535 - 7720)/(3 - 1)	-3592.5
901 OK (4/13/2006 a)	7720 OK (1/4/2006 a)	(901 - 7720)/(4 - 1)	-2273
882 OK (5/12/2006 a)	7720 OK (1/4/2006 a)	(882 - 7720)/(5 - 1)	-1709.5
ND<327 OK (7/14/2006 a)	7720 OK (1/4/2006 a)	(327 - 7720)/(6 - 1)	-1478.6
750 OK (10/2/2006 a)	7720 OK (1/4/2006 a)	(750 - 7720)/(7 - 1)	-1161.67
1225 OK (11/9/2006 ~)	7720 OK (1/4/2006 a)	(1225 - 7720)/(8 - 1)	-927.857
1480 OK (12/21/2006 a)	7720 OK (1/4/2006 a)	(1480 - 7720)/(9 - 1)	-780
ND<368 OK (3/14/2007 a)	7720 OK (1/4/2006 a)	(368 - 7720)/(10 - 1)	-816.889
ND<317.5 OK (6/11/2007 ~)	7720 OK (1/4/2006 a)	(317.5 - 7720)/(11 - 1)	-740.25
535 OK (3/11/2006 a)	553 OK (2/2/2006 a)	(535 - 553)/(3 - 2)	-18
901 OK (4/13/2006 a)	553 OK (2/2/2006 a)	(901 - 553)/(4 - 2)	174
882 OK (5/12/2006 a)	553 OK (2/2/2006 a)	(882 - 553)/(5 - 2)	109.667
ND<327 OK (7/14/2006 a)	553 OK (2/2/2006 a)	(327 - 553)/(6 - 2)	-56.5
750 OK (10/2/2006 a)	553 OK (2/2/2006 a)	(750 - 553)/(7 - 2)	39.4
1225 OK (11/9/2006 ~)	553 OK (2/2/2006 a)	(1225 - 553)/(8 - 2)	112
1480 OK (12/21/2006 a)	553 OK (2/2/2006 a)	(1480 - 553)/(9 - 2)	132.429
ND<368 OK (3/14/2007 a)	553 OK (2/2/2006 a)	(368 - 553)/(10 - 2)	-23.125
ND<317.5 OK (6/11/2007 ~)	553 OK (2/2/2006 a)	(317.5 - 553)/(11 - 2)	-26.1667
901 OK (4/13/2006 a)	535 OK (3/11/2006 a)	(901 - 535)/(4 - 3)	366
882 OK (5/12/2006 a)	535 OK (3/11/2006 a)	(882 - 535)/(5 - 3)	173.5
ND<327 OK (7/14/2006 a)	535 OK (3/11/2006 a)	(327 - 535)/(6 - 3)	-69.3333
750 OK (10/2/2006 a)	535 OK (3/11/2006 a)	(750 - 535)/(7 - 3)	53.75
1225 OK (11/9/2006 ~)	535 OK (3/11/2006 a)	(1225 - 535)/(8 - 3)	138
1480 OK (12/21/2006 a)	535 OK (3/11/2006 a)	(1480 - 535)/(9 - 3)	157.5
ND<368 OK (3/14/2007 a)	535 OK (3/11/2006 a)	(368 - 535)/(10 - 3)	-23.8571
ND<317.5 OK (6/11/2007 ~)	535 OK (3/11/2006 a)	(317.5 - 535)/(11 - 3)	-27.1875
882 OK (5/12/2006 a)	901 OK (4/13/2006 a)	(882 - 901)/(5 - 4)	-19

ND<327 OK (7/14/2006 a)	901 OK (4/13/2006 a)	(327 - 901)/(6 - 4)	-287
750 OK (10/2/2006 a)	901 OK (4/13/2006 a)	(750 - 901)/(7 - 4)	-50.3333
1225 OK (11/9/2006 ~)	901 OK (4/13/2006 a)	(1225 - 901)/(8 - 4)	81
1480 OK (12/21/2006 a)	901 OK (4/13/2006 a)	(1480 - 901)/(9 - 4)	115.8
ND<368 OK (3/14/2007 a)	901 OK (4/13/2006 a)	(368 - 901)/(10 - 4)	-88.8333
ND<317.5 OK (6/11/2007 ~)	901 OK (4/13/2006 a)	(317.5 - 901)/(11 - 4)	-83.3571
ND<327 OK (7/14/2006 a)	882 OK (5/12/2006 a)	(327 - 882)/(6 - 5)	-555
750 OK (10/2/2006 a)	882 OK (5/12/2006 a)	(750 - 882)/(7 - 5)	-66
1225 OK (11/9/2006 ~)	882 OK (5/12/2006 a)	(1225 - 882)/(8 - 5)	114.333
1480 OK (12/21/2006 a)	882 OK (5/12/2006 a)	(1480 - 882)/(9 - 5)	149.5
ND<368 OK (3/14/2007 a)	882 OK (5/12/2006 a)	(368 - 882)/(10 - 5)	-102.8
ND<317.5 OK (6/11/2007 ~)	882 OK (5/12/2006 a)	(317.5 - 882)/(11 - 5)	-94.0833
750 OK (10/2/2006 a)	ND<327 OK (7/14/2006 a)	(750 - 327)/(7 - 6)	423
1225 OK (11/9/2006 ~)	ND<327 OK (7/14/2006 a)	(1225 - 327)/(8 - 6)	449
1480 OK (12/21/2006 a)	ND<327 OK (7/14/2006 a)	(1480 - 327)/(9 - 6)	384.333
ND<368 OK (3/14/2007 a)	ND<327 OK (7/14/2006 a)	(368 - 327)/(10 - 6)	10.25
ND<317.5 OK (6/11/2007 ~)	ND<327 OK (7/14/2006 a)	(317.5 - 327)/(11 - 6)	-1.9
1225 OK (11/9/2006 ~)	750 OK (10/2/2006 a)	(1225 - 750)/(8 - 7)	475
1480 OK (12/21/2006 a)	750 OK (10/2/2006 a)	(1480 - 750)/(9 - 7)	365
ND<368 OK (3/14/2007 a)	750 OK (10/2/2006 a)	(368 - 750)/(10 - 7)	-127.333
ND<317.5 OK (6/11/2007 ~)	750 OK (10/2/2006 a)	(317.5 - 750)/(11 - 7)	-108.125
1480 OK (12/21/2006 a)	1225 OK (11/9/2006 ~)	(1480 - 1225)/(9 - 8)	255
ND<368 OK (3/14/2007 a)	1225 OK (11/9/2006 ~)	(368 - 1225)/(10 - 8)	-428.5
ND<317.5 OK (6/11/2007 ~)	1225 OK (11/9/2006 ~)	(317.5 - 1225)/(11 - 8)	-302.5
ND<368 OK (3/14/2007 a)	1480 OK (12/21/2006 a)	(368 - 1480)/(10 - 9)	-1112
ND<317.5 OK (6/11/2007 ~)	1480 OK (12/21/2006 a)	(317.5 - 1480)/(11 - 9)	-581.25
ND<317.5 OK (6/11/2007 ~)	ND<368 OK (3/14/2007 a)	(317.5 - 368)/(11 - 10)	-50.5

Number of Q values = 55

Ordered Q Values

n	Q
1	-7167
2	-3592.5

3	-2273
4	-1709.5
5	-1478.6
6	-1161.67
7	-1112
8	-927.857
9	-816.889
10	-780
11	-740.25
12	-581.25
13	-555
14	-428.5
15	-302.5
16	-287
17	-127.333
18	-108.125
19	-102.8
20	-94.0833
21	-88.8333
22	-83.3571
23	-69.3333
24	-66
25	-56.5
26	-50.5
27	-50.3333
28	-27.1875
29	-26.1667
30	-23.8571
31	-23.125
32	-19
33	-18
34	-1.9
35	10.25
36	39.4
37	53.75
38	81
39	109.667
40	112
41	114.333
42	115.8
43	132.429

44	138
45	149.5
46	157.5
47	173.5
48	174
49	255
50	365
51	366
52	384.333
53	423
54	449
55	475

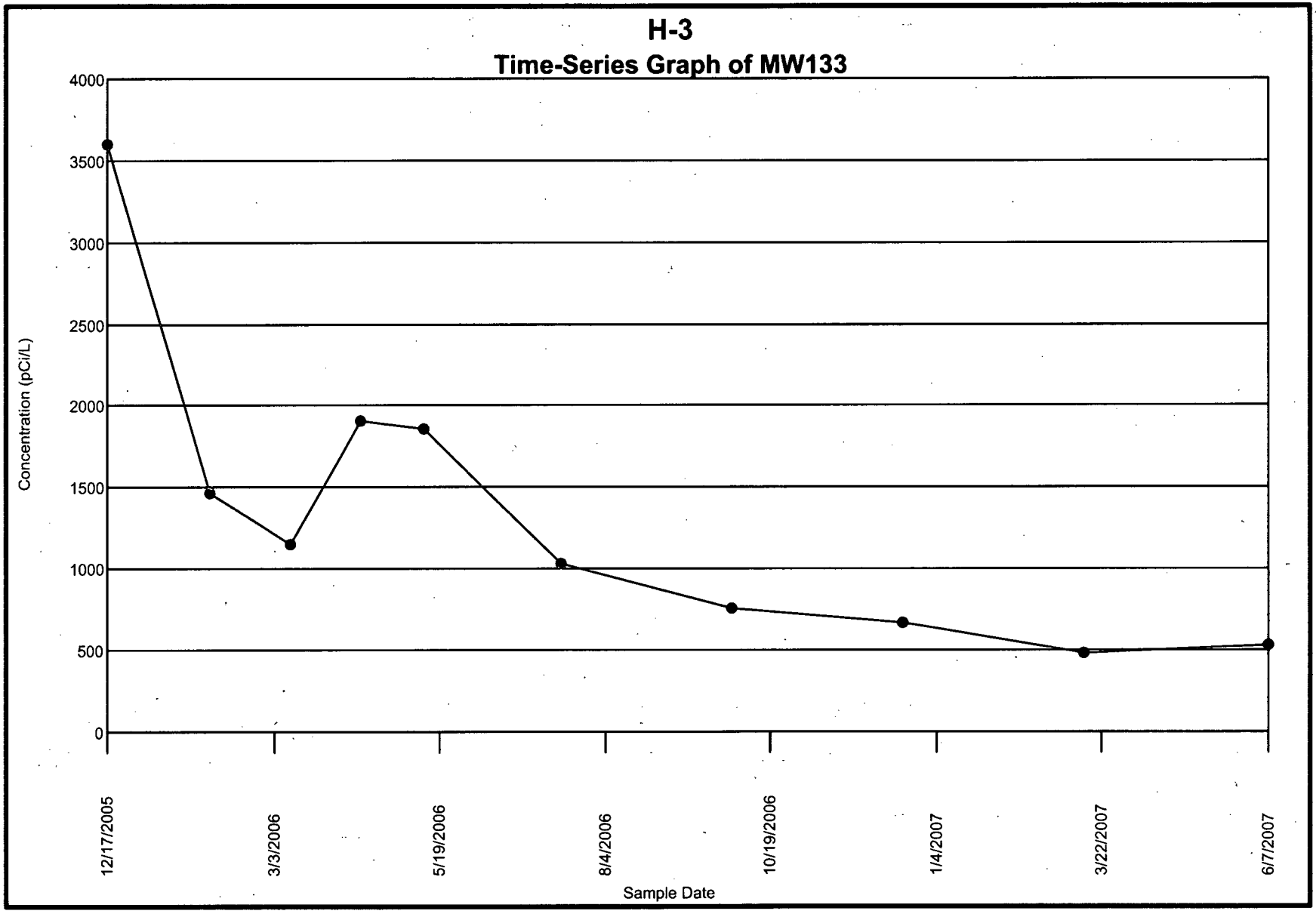
Sen's Estimator (Median Q) is -27.1875

Time Period	Observations
1/4/2006	1
2/2/2006	1
3/11/2006	1
4/13/2006	1
5/12/2006	1
7/14/2006	1
10/2/2006	1
11/9/2006	1
12/21/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357

M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -127.333 = Q(17)
Upper limit is 109.667 = Q(39)
-127.333 < 0 < 109.667 indicating no trend in data.


H-3
Time-Series Graph of MW133
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/19/2006
1/4/2007
3/22/2007
6/7/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW133
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1460 OK (2/2/2006 a)	3600 OK (12/17/2005 ~)	(1460 - 3600)/(2 - 1)	-2140
1150 OK (3/11/2006 ~)	3600 OK (12/17/2005 ~)	(1150 - 3600)/(3 - 1)	-1225
1910 OK (4/13/2006 a)	3600 OK (12/17/2005 ~)	(1910 - 3600)/(4 - 1)	-563.333
1860 OK (5/12/2006 a)	3600 OK (12/17/2005 ~)	(1860 - 3600)/(5 - 1)	-435
1030 OK (7/15/2006 a)	3600 OK (12/17/2005 ~)	(1030 - 3600)/(6 - 1)	-514
759.5 OK (10/2/2006 ~)	3600 OK (12/17/2005 ~)	(759.5 - 3600)/(7 - 1)	-473.417
664 OK (12/20/2006 a)	3600 OK (12/17/2005 ~)	(664 - 3600)/(8 - 1)	-419.429
486 OK (3/14/2007 a)	3600 OK (12/17/2005 ~)	(486 - 3600)/(9 - 1)	-389.25
533 OK (6/7/2007 a)	3600 OK (12/17/2005 ~)	(533 - 3600)/(10 - 1)	-340.778
1150 OK (3/11/2006 ~)	1460 OK (2/2/2006 a)	(1150 - 1460)/(3 - 2)	-310
1910 OK (4/13/2006 a)	1460 OK (2/2/2006 a)	(1910 - 1460)/(4 - 2)	225
1860 OK (5/12/2006 a)	1460 OK (2/2/2006 a)	(1860 - 1460)/(5 - 2)	133.333
1030 OK (7/15/2006 a)	1460 OK (2/2/2006 a)	(1030 - 1460)/(6 - 2)	-107.5
759.5 OK (10/2/2006 ~)	1460 OK (2/2/2006 a)	(759.5 - 1460)/(7 - 2)	-140.1
664 OK (12/20/2006 a)	1460 OK (2/2/2006 a)	(664 - 1460)/(8 - 2)	-132.667
486 OK (3/14/2007 a)	1460 OK (2/2/2006 a)	(486 - 1460)/(9 - 2)	-139.143
533 OK (6/7/2007 a)	1460 OK (2/2/2006 a)	(533 - 1460)/(10 - 2)	-115.875
1910 OK (4/13/2006 a)	1150 OK (3/11/2006 ~)	(1910 - 1150)/(4 - 3)	760
1860 OK (5/12/2006 a)	1150 OK (3/11/2006 ~)	(1860 - 1150)/(5 - 3)	355
1030 OK (7/15/2006 a)	1150 OK (3/11/2006 ~)	(1030 - 1150)/(6 - 3)	-40
759.5 OK (10/2/2006 ~)	1150 OK (3/11/2006 ~)	(759.5 - 1150)/(7 - 3)	-97.625
664 OK (12/20/2006 a)	1150 OK (3/11/2006 ~)	(664 - 1150)/(8 - 3)	-97.2
486 OK (3/14/2007 a)	1150 OK (3/11/2006 ~)	(486 - 1150)/(9 - 3)	-110.667
533 OK (6/7/2007 a)	1150 OK (3/11/2006 ~)	(533 - 1150)/(10 - 3)	-88.1429
1860 OK (5/12/2006 a)	1910 OK (4/13/2006 a)	(1860 - 1910)/(5 - 4)	-50
1030 OK (7/15/2006 a)	1910 OK (4/13/2006 a)	(1030 - 1910)/(6 - 4)	-440
759.5 OK (10/2/2006 ~)	1910 OK (4/13/2006 a)	(759.5 - 1910)/(7 - 4)	-383.5
664 OK (12/20/2006 a)	1910 OK (4/13/2006 a)	(664 - 1910)/(8 - 4)	-311.5
486 OK (3/14/2007 a)	1910 OK (4/13/2006 a)	(486 - 1910)/(9 - 4)	-284.8
533 OK (6/7/2007 a)	1910 OK (4/13/2006 a)	(533 - 1910)/(10 - 4)	-229.5
1030 OK (7/15/2006 a)	1860 OK (5/12/2006 a)	(1030 - 1860)/(6 - 5)	-830
759.5 OK (10/2/2006 ~)	1860 OK (5/12/2006 a)	(759.5 - 1860)/(7 - 5)	-550.25
664 OK (12/20/2006 a)	1860 OK (5/12/2006 a)	(664 - 1860)/(8 - 5)	-398.667
486 OK (3/14/2007 a)	1860 OK (5/12/2006 a)	(486 - 1860)/(9 - 5)	-343.5
533 OK (6/7/2007 a)	1860 OK (5/12/2006 a)	(533 - 1860)/(10 - 5)	-265.4
759.5 OK (10/2/2006 ~)	1030 OK (7/15/2006 a)	(759.5 - 1030)/(7 - 6)	-270.5
664 OK (12/20/2006 a)	1030 OK (7/15/2006 a)	(664 - 1030)/(8 - 6)	-183
486 OK (3/14/2007 a)	1030 OK (7/15/2006 a)	(486 - 1030)/(9 - 6)	-181.333
533 OK (6/7/2007 a)	1030 OK (7/15/2006 a)	(533 - 1030)/(10 - 6)	-124.25
664 OK (12/20/2006 a)	759.5 OK (10/2/2006 ~)	(664 - 759.5)/(8 - 7)	-95.5
486 OK (3/14/2007 a)	759.5 OK (10/2/2006 ~)	(486 - 759.5)/(9 - 7)	-136.75

533 OK (6/7/2007 a)	759.5 OK (10/2/2006 ~)	(533 - 759.5)/(10 - 7)	-75.5
486 OK (3/14/2007 a)	664 OK (12/20/2006 a)	(486 - 664)/(9 - 8)	-178
533 OK (6/7/2007 a)	664 OK (12/20/2006 a)	(533 - 664)/(10 - 8)	-65.5
533 OK (6/7/2007 a)	486 OK (3/14/2007 a)	(533 - 486)/(10 - 9)	47

Number of Q values = 45

Ordered Q Values

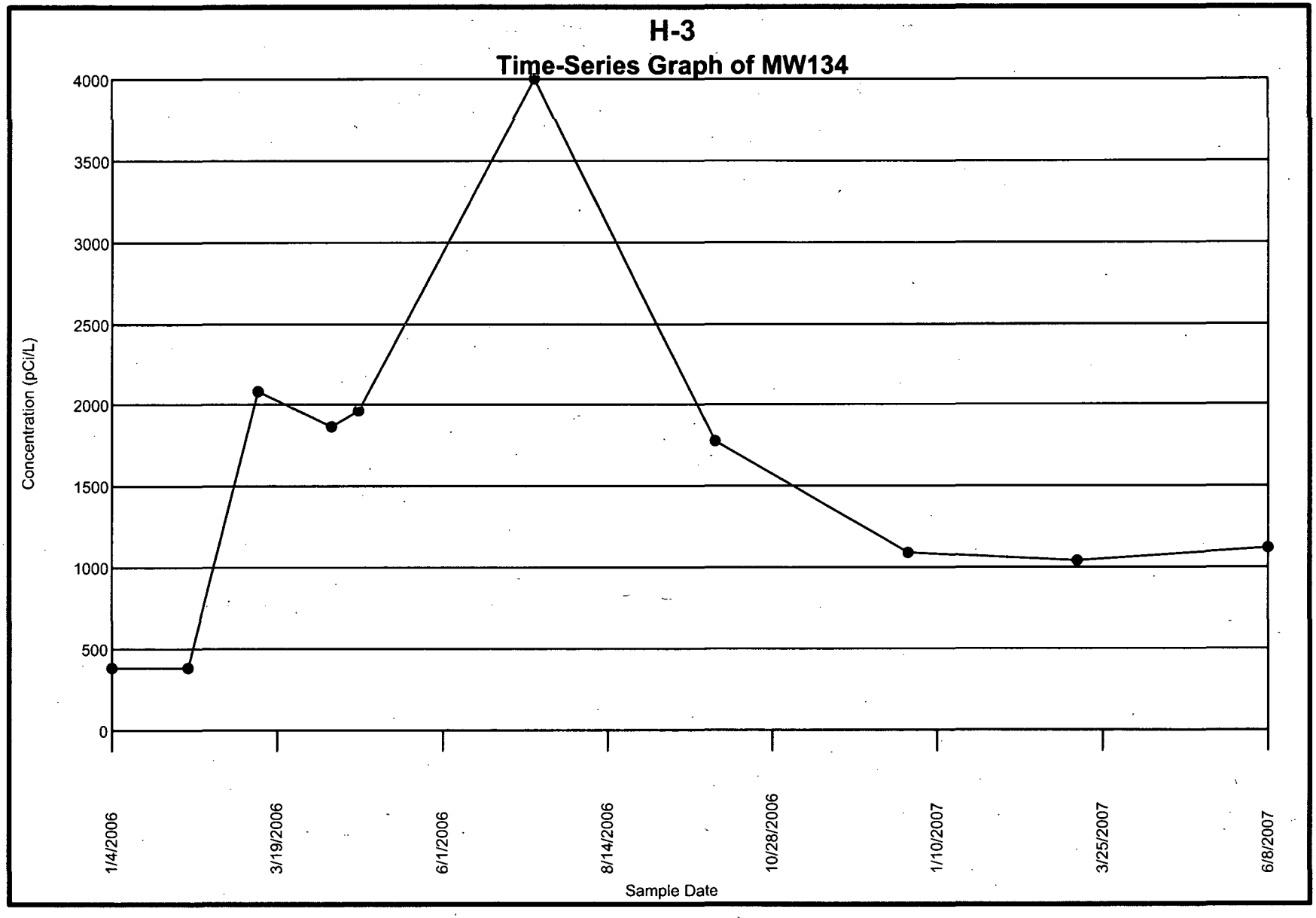
n	Q
1	-2140
2	-1225
3	-830
4	-563.333
5	-550.25
6	-514
7	-473.417
8	-440
9	-435
10	-419.429
11	-398.667
12	-389.25
13	-383.5
14	-343.5
15	-340.778
16	-311.5
17	-310
18	-284.8
19	-270.5
20	-265.4
21	-229.5
22	-183
23	-181.333
24	-178
25	-140.1
26	-139.143
27	-136.75
28	-132.667
29	-124.25
30	-115.875
31	-110.667
32	-107.5
33	-97.625
34	-97.2
35	-95.5
36	-88.1429
37	-75.5
38	-65.5
39	-50
40	-40
41	47
42	133.333
43	225
44	355
45	760

Sen's Estimator (Median Q) is -181.333

Time Period	Observations
12/17/2005	1
2/2/2006	1
3/11/2006	1
4/13/2006	1
5/12/2006	1
7/15/2006	1
10/2/2006	1
12/20/2006	1
3/14/2007	1
6/7/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -383.5 = Q(13)
Upper limit is -97.625 = Q(33)
-97.625 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW134
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW134

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
386 OK (2/7/2006 a)	382 U (1/4/2006 a)	(386 - 382)/(2 - 1)	4
2080 OK (3/11/2006 a)	382 U (1/4/2006 a)	(2080 - 382)/(3 - 1)	849
1870 OK (4/13/2006 a)	382 U (1/4/2006 a)	(1870 - 382)/(4 - 1)	496
1970 OK (4/25/2006 a)	382 U (1/4/2006 a)	(1970 - 382)/(5 - 1)	397
4000 OK (7/13/2006 a)	382 U (1/4/2006 a)	(4000 - 382)/(6 - 1)	723.6
1780 OK (10/2/2006 a)	382 U (1/4/2006 a)	(1780 - 382)/(7 - 1)	233
1090 OK (12/28/2006 a)	382 U (1/4/2006 a)	(1090 - 382)/(8 - 1)	101.143
1040 OK (3/14/2007 a)	382 U (1/4/2006 a)	(1040 - 382)/(9 - 1)	82.25
1120 OK (6/8/2007 a)	382 U (1/4/2006 a)	(1120 - 382)/(10 - 1)	82
2080 OK (3/11/2006 a)	386 OK (2/7/2006 a)	(2080 - 386)/(3 - 2)	1694
1870 OK (4/13/2006 a)	386 OK (2/7/2006 a)	(1870 - 386)/(4 - 2)	742
1970 OK (4/25/2006 a)	386 OK (2/7/2006 a)	(1970 - 386)/(5 - 2)	528
4000 OK (7/13/2006 a)	386 OK (2/7/2006 a)	(4000 - 386)/(6 - 2)	903.5
1780 OK (10/2/2006 a)	386 OK (2/7/2006 a)	(1780 - 386)/(7 - 2)	278.8
1090 OK (12/28/2006 a)	386 OK (2/7/2006 a)	(1090 - 386)/(8 - 2)	117.333
1040 OK (3/14/2007 a)	386 OK (2/7/2006 a)	(1040 - 386)/(9 - 2)	93.4286
1120 OK (6/8/2007 a)	386 OK (2/7/2006 a)	(1120 - 386)/(10 - 2)	91.75
1870 OK (4/13/2006 a)	2080 OK (3/11/2006 a)	(1870 - 2080)/(4 - 3)	-210
1970 OK (4/25/2006 a)	2080 OK (3/11/2006 a)	(1970 - 2080)/(5 - 3)	-55
4000 OK (7/13/2006 a)	2080 OK (3/11/2006 a)	(4000 - 2080)/(6 - 3)	640
1780 OK (10/2/2006 a)	2080 OK (3/11/2006 a)	(1780 - 2080)/(7 - 3)	-75
1090 OK (12/28/2006 a)	2080 OK (3/11/2006 a)	(1090 - 2080)/(8 - 3)	-198
1040 OK (3/14/2007 a)	2080 OK (3/11/2006 a)	(1040 - 2080)/(9 - 3)	-173.333
1120 OK (6/8/2007 a)	2080 OK (3/11/2006 a)	(1120 - 2080)/(10 - 3)	-137.143
1970 OK (4/25/2006 a)	1870 OK (4/13/2006 a)	(1970 - 1870)/(5 - 4)	100
4000 OK (7/13/2006 a)	1870 OK (4/13/2006 a)	(4000 - 1870)/(6 - 4)	1065
1780 OK (10/2/2006 a)	1870 OK (4/13/2006 a)	(1780 - 1870)/(7 - 4)	-30
1090 OK (12/28/2006 a)	1870 OK (4/13/2006 a)	(1090 - 1870)/(8 - 4)	-195
1040 OK (3/14/2007 a)	1870 OK (4/13/2006 a)	(1040 - 1870)/(9 - 4)	-166
1120 OK (6/8/2007 a)	1870 OK (4/13/2006 a)	(1120 - 1870)/(10 - 4)	-125
4000 OK (7/13/2006 a)	1970 OK (4/25/2006 a)	(4000 - 1970)/(6 - 5)	2030
1780 OK (10/2/2006 a)	1970 OK (4/25/2006 a)	(1780 - 1970)/(7 - 5)	-95
1090 OK (12/28/2006 a)	1970 OK (4/25/2006 a)	(1090 - 1970)/(8 - 5)	-293.333
1040 OK (3/14/2007 a)	1970 OK (4/25/2006 a)	(1040 - 1970)/(9 - 5)	-232.5
1120 OK (6/8/2007 a)	1970 OK (4/25/2006 a)	(1120 - 1970)/(10 - 5)	-170
1780 OK (10/2/2006 a)	4000 OK (7/13/2006 a)	(1780 - 4000)/(7 - 6)	-2220
1090 OK (12/28/2006 a)	4000 OK (7/13/2006 a)	(1090 - 4000)/(8 - 6)	-1455
1040 OK (3/14/2007 a)	4000 OK (7/13/2006 a)	(1040 - 4000)/(9 - 6)	-986.667
1120 OK (6/8/2007 a)	4000 OK (7/13/2006 a)	(1120 - 4000)/(10 - 6)	-720
1090 OK (12/28/2006 a)	1780 OK (10/2/2006 a)	(1090 - 1780)/(8 - 7)	-690
1040 OK (3/14/2007 a)	1780 OK (10/2/2006 a)	(1040 - 1780)/(9 - 7)	-370

1120 OK (6/8/2007 a)	1780 OK (10/2/2006 a)	(1120 - 1780)/(10 - 7)	-220
1040 OK (3/14/2007 a)	1090 OK (12/28/2006 a)	(1040 - 1090)/(9 - 8)	-50
1120 OK (6/8/2007 a)	1090 OK (12/28/2006 a)	(1120 - 1090)/(10 - 8)	15
1120 OK (6/8/2007 a)	1040 OK (3/14/2007 a)	(1120 - 1040)/(10 - 9)	80

Number of Q values = 45

Ordered Q Values

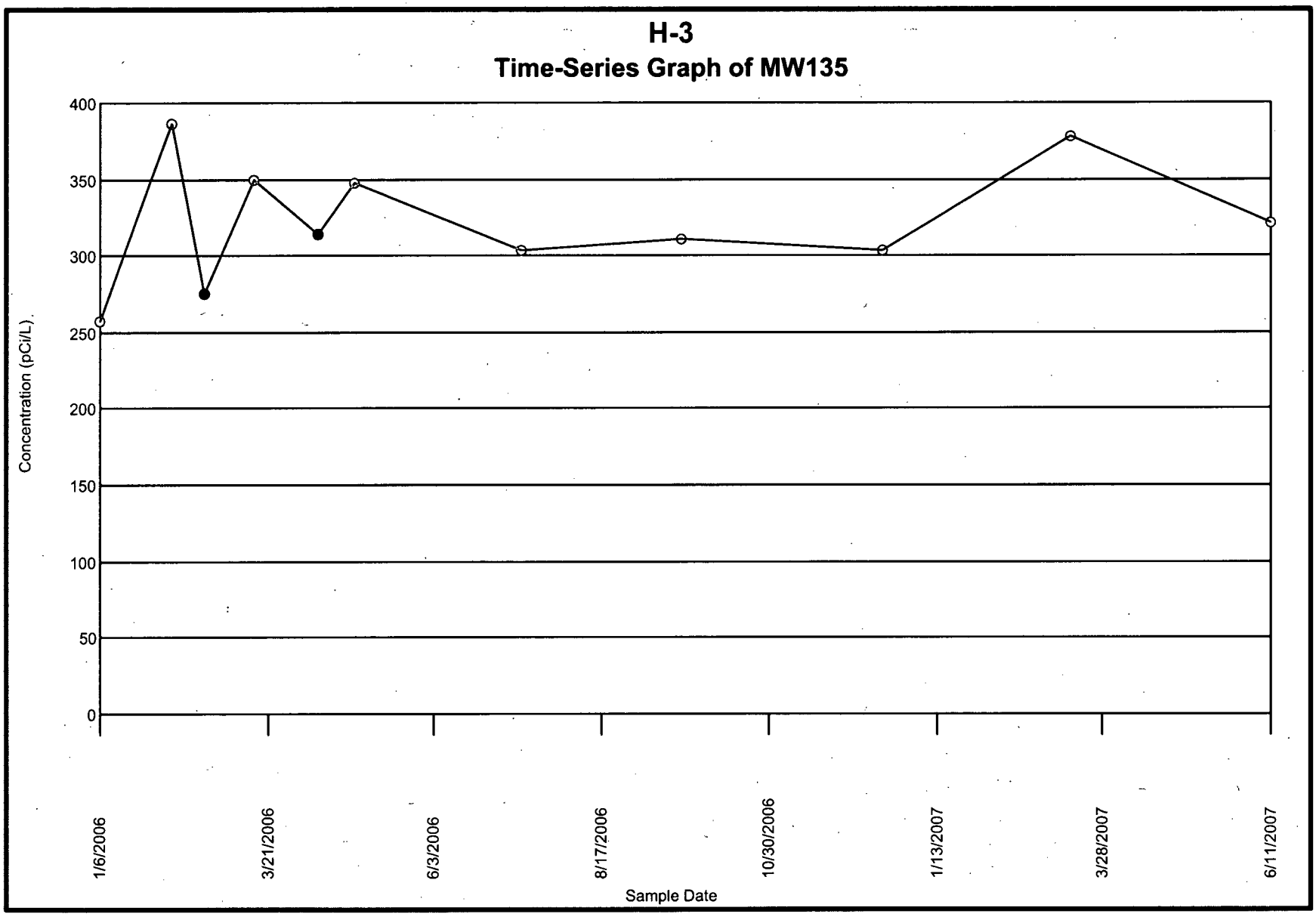
n	Q
1	-2220
2	-1455
3	-986.667
4	-720
5	-690
6	-370
7	-293.333
8	-232.5
9	-220
10	-210
11	-198
12	-195
13	-173.333
14	-170
15	-166
16	-137.143
17	-125
18	-95
19	-75
20	-55
21	-50
22	-30
23	4
24	15
25	80
26	82
27	82.25
28	91.75
29	93.4286
30	100
31	101.143
32	117.333
33	233
34	278.8
35	397
36	496
37	528
38	640
39	723.6
40	742
41	849
42	903.5
43	1065
44	1694
45	2030

Sen's Estimator (Median Q) is 4

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/11/2006	1
4/13/2006	1
4/25/2006	1
7/13/2006	1
10/2/2006	1
12/28/2006	1
3/14/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -173.333 = Q(13)
Upper limit is 233 = Q(33)
-173.333 < 0 < 233 indicating no trend in data.


H-3
Time-Series Graph of MW135
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/6/2006
3/21/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW135
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<386 U (2/7/2006 a)	ND<257 U (1/6/2006 a)	(386 - 257)/(2 - 1)	129
275 U (2/21/2006 a)	ND<257 U (1/6/2006 a)	(275 - 257)/(3 - 1)	9
ND<350 U (3/15/2006 a)	ND<257 U (1/6/2006 a)	(350 - 257)/(4 - 1)	31
314 U (4/13/2006 a)	ND<257 U (1/6/2006 a)	(314 - 257)/(5 - 1)	14.25
ND<347 OK (4/29/2006 a)	ND<257 U (1/6/2006 a)	(347 - 257)/(6 - 1)	18
ND<303 OK (7/13/2006 a)	ND<257 U (1/6/2006 a)	(303 - 257)/(7 - 1)	7.66667
ND<311 OK (9/22/2006 a)	ND<257 U (1/6/2006 a)	(311 - 257)/(8 - 1)	7.71429
ND<303.5 OK (12/20/2006 ~)	ND<257 U (1/6/2006 a)	(303.5 - 257)/(9 - 1)	5.8125
ND<378 OK (3/14/2007 a)	ND<257 U (1/6/2006 a)	(378 - 257)/(10 - 1)	13.4444
ND<321 OK (6/11/2007 a)	ND<257 U (1/6/2006 a)	(321 - 257)/(11 - 1)	6.4
275 U (2/21/2006 a)	ND<386 U (2/7/2006 a)	(275 - 386)/(3 - 2)	-111
ND<350 U (3/15/2006 a)	ND<386 U (2/7/2006 a)	(350 - 386)/(4 - 2)	-18
314 U (4/13/2006 a)	ND<386 U (2/7/2006 a)	(314 - 386)/(5 - 2)	-24
ND<347 OK (4/29/2006 a)	ND<386 U (2/7/2006 a)	(347 - 386)/(6 - 2)	-9.75
ND<303 OK (7/13/2006 a)	ND<386 U (2/7/2006 a)	(303 - 386)/(7 - 2)	-16.6
ND<311 OK (9/22/2006 a)	ND<386 U (2/7/2006 a)	(311 - 386)/(8 - 2)	-12.5
ND<303.5 OK (12/20/2006 ~)	ND<386 U (2/7/2006 a)	(303.5 - 386)/(9 - 2)	-11.7857
ND<378 OK (3/14/2007 a)	ND<386 U (2/7/2006 a)	(378 - 386)/(10 - 2)	-1
ND<321 OK (6/11/2007 a)	ND<386 U (2/7/2006 a)	(321 - 386)/(11 - 2)	-7.22222
ND<350 U (3/15/2006 a)	275 U (2/21/2006 a)	(350 - 275)/(4 - 3)	75
314 U (4/13/2006 a)	275 U (2/21/2006 a)	(314 - 275)/(5 - 3)	19.5
ND<347 OK (4/29/2006 a)	275 U (2/21/2006 a)	(347 - 275)/(6 - 3)	24
ND<303 OK (7/13/2006 a)	275 U (2/21/2006 a)	(303 - 275)/(7 - 3)	7
ND<311 OK (9/22/2006 a)	275 U (2/21/2006 a)	(311 - 275)/(8 - 3)	7.2
ND<303.5 OK (12/20/2006 ~)	275 U (2/21/2006 a)	(303.5 - 275)/(9 - 3)	4.75
ND<378 OK (3/14/2007 a)	275 U (2/21/2006 a)	(378 - 275)/(10 - 3)	14.7143
ND<321 OK (6/11/2007 a)	275 U (2/21/2006 a)	(321 - 275)/(11 - 3)	5.75
314 U (4/13/2006 a)	ND<350 U (3/15/2006 a)	(314 - 350)/(5 - 4)	-36
ND<347 OK (4/29/2006 a)	ND<350 U (3/15/2006 a)	(347 - 350)/(6 - 4)	-1.5
ND<303 OK (7/13/2006 a)	ND<350 U (3/15/2006 a)	(303 - 350)/(7 - 4)	-15.6667
ND<311 OK (9/22/2006 a)	ND<350 U (3/15/2006 a)	(311 - 350)/(8 - 4)	-9.75
ND<303.5 OK (12/20/2006 ~)	ND<350 U (3/15/2006 a)	(303.5 - 350)/(9 - 4)	-9.3
ND<378 OK (3/14/2007 a)	ND<350 U (3/15/2006 a)	(378 - 350)/(10 - 4)	4.66667
ND<321 OK (6/11/2007 a)	ND<350 U (3/15/2006 a)	(321 - 350)/(11 - 4)	-4.14286
ND<347 OK (4/29/2006 a)	314 U (4/13/2006 a)	(347 - 314)/(6 - 5)	33
ND<303 OK (7/13/2006 a)	314 U (4/13/2006 a)	(303 - 314)/(7 - 5)	-5.5
ND<311 OK (9/22/2006 a)	314 U (4/13/2006 a)	(311 - 314)/(8 - 5)	-1
ND<303.5 OK (12/20/2006 ~)	314 U (4/13/2006 a)	(303.5 - 314)/(9 - 5)	-2.625
ND<378 OK (3/14/2007 a)	314 U (4/13/2006 a)	(378 - 314)/(10 - 5)	12.8
ND<321 OK (6/11/2007 a)	314 U (4/13/2006 a)	(321 - 314)/(11 - 5)	1.16667
ND<303 OK (7/13/2006 a)	ND<347 OK (4/29/2006 a)	(303 - 347)/(7 - 6)	-44
ND<311 OK (9/22/2006 a)	ND<347 OK (4/29/2006 a)	(311 - 347)/(8 - 6)	-18

ND<303.5 OK (12/20/2006 ~)	ND<347 OK (4/29/2006 a)	(303.5 - 347)/(9 - 6)	-14.5
ND<378 OK (3/14/2007 a)	ND<347 OK (4/29/2006 a)	(378 - 347)/(10 - 6)	7.75
ND<321 OK (6/11/2007 a)	ND<347 OK (4/29/2006 a)	(321 - 347)/(11 - 6)	-5.2
ND<311 OK (9/22/2006 a)	ND<303 OK (7/13/2006 a)	(311 - 303)/(8 - 7)	8
ND<303.5 OK (12/20/2006 ~)	ND<303 OK (7/13/2006 a)	(303.5 - 303)/(9 - 7)	0.25
ND<378 OK (3/14/2007 a)	ND<303 OK (7/13/2006 a)	(378 - 303)/(10 - 7)	25
ND<321 OK (6/11/2007 a)	ND<303 OK (7/13/2006 a)	(321 - 303)/(11 - 7)	4.5
ND<303.5 OK (12/20/2006 ~)	ND<311 OK (9/22/2006 a)	(303.5 - 311)/(9 - 8)	-7.5
ND<378 OK (3/14/2007 a)	ND<311 OK (9/22/2006 a)	(378 - 311)/(10 - 8)	33.5
ND<321 OK (6/11/2007 a)	ND<311 OK (9/22/2006 a)	(321 - 311)/(11 - 8)	3.33333
ND<378 OK (3/14/2007 a)	ND<303.5 OK (12/20/2006 ~)	(378 - 303.5)/(10 - 9)	74.5
ND<321 OK (6/11/2007 a)	ND<303.5 OK (12/20/2006 ~)	(321 - 303.5)/(11 - 9)	8.75
ND<321 OK (6/11/2007 a)	ND<378 OK (3/14/2007 a)	(321 - 378)/(11 - 10)	-57

Number of Q values = 55

Ordered Q Values

n	Q
1	-111
2	-57
3	-44
4	-36
5	-24
6	-18
7	-18
8	-16.6
9	-15.6667
10	-14.5
11	-12.5
12	-11.7857
13	-9.75
14	-9.75
15	-9.3
16	-7.5
17	-7.22222
18	-5.5
19	-5.2
20	-4.14286
21	-2.625
22	-1.5
23	-1
24	-1
25	0.25
26	1.16667
27	3.33333
28	4.5
29	4.66667
30	4.75
31	5.75
32	5.8125
33	6.4
34	7

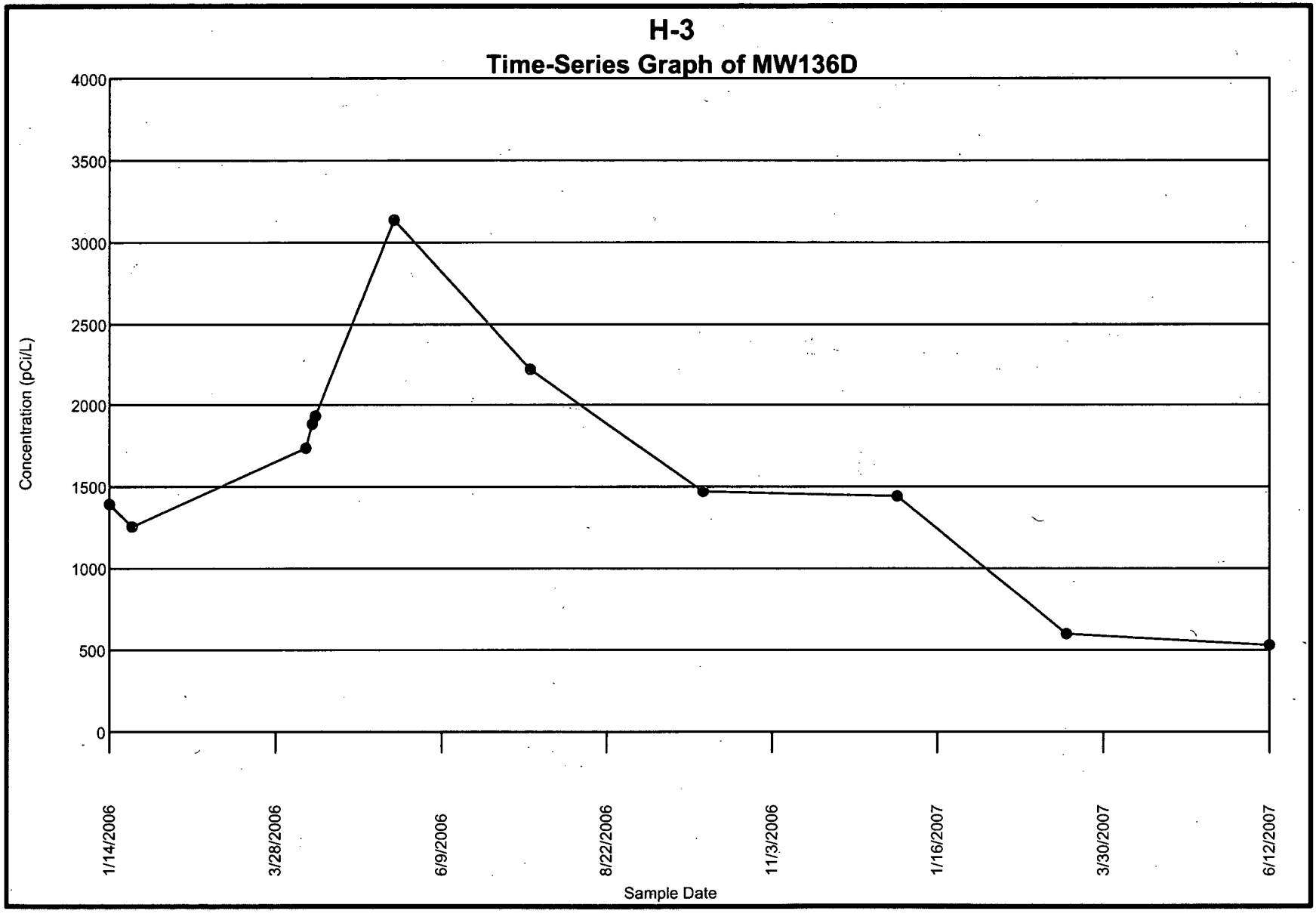
35	7.2
36	7.66667
37	7.71429
38	7.75
39	8
40	8.75
41	9
42	12.8
43	13.4444
44	14.25
45	14.7143
46	18
47	19.5
48	24
49	25
50	31
51	33
52	33.5
53	74.5
54	75
55	129

Sen's Estimator (Median Q) is 4.5

Time Period	Observations
1/6/2006	1
2/7/2006	1
2/21/2006	1
3/15/2006	1
4/13/2006	1
4/29/2006	1
7/13/2006	1
9/22/2006	1
12/20/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -7.22222 = Q(17)
Upper limit is 8 = Q(39)
-7.22222 < 0 < 8 indicating no trend in data.


H-3
Time-Series Graph of MW136D
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
1/14/2006
3/28/2006
6/9/2006
8/22/2006
11/3/2006
1/16/2007
3/30/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW136D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1260 OK (1/24/2006 a)	1400 OK (1/14/2006 a)	(1260 - 1400)/(2 - 1)	-140
1740 OK (4/11/2006 a)	1400 OK (1/14/2006 a)	(1740 - 1400)/(3 - 1)	170
1890 OK (4/14/2006 a)	1400 OK (1/14/2006 a)	(1890 - 1400)/(4 - 1)	163.333
1940 OK (4/15/2006 a)	1400 OK (1/14/2006 a)	(1940 - 1400)/(5 - 1)	135
3140 OK (5/20/2006 a)	1400 OK (1/14/2006 a)	(3140 - 1400)/(6 - 1)	348
2220 OK (7/20/2006 a)	1400 OK (1/14/2006 a)	(2220 - 1400)/(7 - 1)	136.667
1470 OK (10/4/2006 a)	1400 OK (1/14/2006 a)	(1470 - 1400)/(8 - 1)	10
1440 OK (12/29/2006 a)	1400 OK (1/14/2006 a)	(1440 - 1400)/(9 - 1)	5
596 OK (3/14/2007 ~)	1400 OK (1/14/2006 a)	(596 - 1400)/(10 - 1)	-89.3333
535 OK (6/12/2007 a)	1400 OK (1/14/2006 a)	(535 - 1400)/(11 - 1)	-86.5
1740 OK (4/11/2006 a)	1260 OK (1/24/2006 a)	(1740 - 1260)/(3 - 2)	480
1890 OK (4/14/2006 a)	1260 OK (1/24/2006 a)	(1890 - 1260)/(4 - 2)	315
1940 OK (4/15/2006 a)	1260 OK (1/24/2006 a)	(1940 - 1260)/(5 - 2)	226.667
3140 OK (5/20/2006 a)	1260 OK (1/24/2006 a)	(3140 - 1260)/(6 - 2)	470
2220 OK (7/20/2006 a)	1260 OK (1/24/2006 a)	(2220 - 1260)/(7 - 2)	192
1470 OK (10/4/2006 a)	1260 OK (1/24/2006 a)	(1470 - 1260)/(8 - 2)	35
1440 OK (12/29/2006 a)	1260 OK (1/24/2006 a)	(1440 - 1260)/(9 - 2)	25.7143
596 OK (3/14/2007 ~)	1260 OK (1/24/2006 a)	(596 - 1260)/(10 - 2)	-83
535 OK (6/12/2007 a)	1260 OK (1/24/2006 a)	(535 - 1260)/(11 - 2)	-80.5556
1890 OK (4/14/2006 a)	1740 OK (4/11/2006 a)	(1890 - 1740)/(4 - 3)	150
1940 OK (4/15/2006 a)	1740 OK (4/11/2006 a)	(1940 - 1740)/(5 - 3)	100
3140 OK (5/20/2006 a)	1740 OK (4/11/2006 a)	(3140 - 1740)/(6 - 3)	466.667
2220 OK (7/20/2006 a)	1740 OK (4/11/2006 a)	(2220 - 1740)/(7 - 3)	120
1470 OK (10/4/2006 a)	1740 OK (4/11/2006 a)	(1470 - 1740)/(8 - 3)	-54
1440 OK (12/29/2006 a)	1740 OK (4/11/2006 a)	(1440 - 1740)/(9 - 3)	-50
596 OK (3/14/2007 ~)	1740 OK (4/11/2006 a)	(596 - 1740)/(10 - 3)	-163.429
535 OK (6/12/2007 a)	1740 OK (4/11/2006 a)	(535 - 1740)/(11 - 3)	-150.625
1940 OK (4/15/2006 a)	1890 OK (4/14/2006 a)	(1940 - 1890)/(5 - 4)	50
3140 OK (5/20/2006 a)	1890 OK (4/14/2006 a)	(3140 - 1890)/(6 - 4)	625
2220 OK (7/20/2006 a)	1890 OK (4/14/2006 a)	(2220 - 1890)/(7 - 4)	110
1470 OK (10/4/2006 a)	1890 OK (4/14/2006 a)	(1470 - 1890)/(8 - 4)	-105
1440 OK (12/29/2006 a)	1890 OK (4/14/2006 a)	(1440 - 1890)/(9 - 4)	-90
596 OK (3/14/2007 ~)	1890 OK (4/14/2006 a)	(596 - 1890)/(10 - 4)	-215.667
535 OK (6/12/2007 a)	1890 OK (4/14/2006 a)	(535 - 1890)/(11 - 4)	-193.571
3140 OK (5/20/2006 a)	1940 OK (4/15/2006 a)	(3140 - 1940)/(6 - 5)	1200
2220 OK (7/20/2006 a)	1940 OK (4/15/2006 a)	(2220 - 1940)/(7 - 5)	140
1470 OK (10/4/2006 a)	1940 OK (4/15/2006 a)	(1470 - 1940)/(8 - 5)	-156.667
1440 OK (12/29/2006 a)	1940 OK (4/15/2006 a)	(1440 - 1940)/(9 - 5)	-125
596 OK (3/14/2007 ~)	1940 OK (4/15/2006 a)	(596 - 1940)/(10 - 5)	-268.8
535 OK (6/12/2007 a)	1940 OK (4/15/2006 a)	(535 - 1940)/(11 - 5)	-234.167
2220 OK (7/20/2006 a)	3140 OK (5/20/2006 a)	(2220 - 3140)/(7 - 6)	-920
1470 OK (10/4/2006 a)	3140 OK (5/20/2006 a)	(1470 - 3140)/(8 - 6)	-835

1440 OK (12/29/2006 a)	3140 OK (5/20/2006 a)	(1440 - 3140)/(9 - 6)	-566.667
596 OK (3/14/2007 ~)	3140 OK (5/20/2006 a)	(596 - 3140)/(10 - 6)	-636
535 OK (6/12/2007 a)	3140 OK (5/20/2006 a)	(535 - 3140)/(11 - 6)	-521
1470 OK (10/4/2006 a)	2220 OK (7/20/2006 a)	(1470 - 2220)/(8 - 7)	-750
1440 OK (12/29/2006 a)	2220 OK (7/20/2006 a)	(1440 - 2220)/(9 - 7)	-390
596 OK (3/14/2007 ~)	2220 OK (7/20/2006 a)	(596 - 2220)/(10 - 7)	-541.333
535 OK (6/12/2007 a)	2220 OK (7/20/2006 a)	(535 - 2220)/(11 - 7)	-421.25
1440 OK (12/29/2006 a)	1470 OK (10/4/2006 a)	(1440 - 1470)/(9 - 8)	-30
596 OK (3/14/2007 ~)	1470 OK (10/4/2006 a)	(596 - 1470)/(10 - 8)	-437
535 OK (6/12/2007 a)	1470 OK (10/4/2006 a)	(535 - 1470)/(11 - 8)	-311.667
596 OK (3/14/2007 ~)	1440 OK (12/29/2006 a)	(596 - 1440)/(10 - 9)	-844
535 OK (6/12/2007 a)	1440 OK (12/29/2006 a)	(535 - 1440)/(11 - 9)	-452.5
535 OK (6/12/2007 a)	596 OK (3/14/2007 ~)	(535 - 596)/(11 - 10)	-61

Number of Q values = 55

Ordered Q Values

n	Q
1	-920
2	-844
3	-835
4	-750
5	-636
6	-566.667
7	-541.333
8	-521
9	-452.5
10	-437
11	-421.25
12	-390
13	-311.667
14	-268.8
15	-234.167
16	-215.667
17	-193.571
18	-163.429
19	-156.667
20	-150.625
21	-140
22	-125
23	-105
24	-90
25	-89.3333
26	-86.5
27	-83
28	-80.5556
29	-61
30	-54
31	-50
32	-30
33	5
34	10

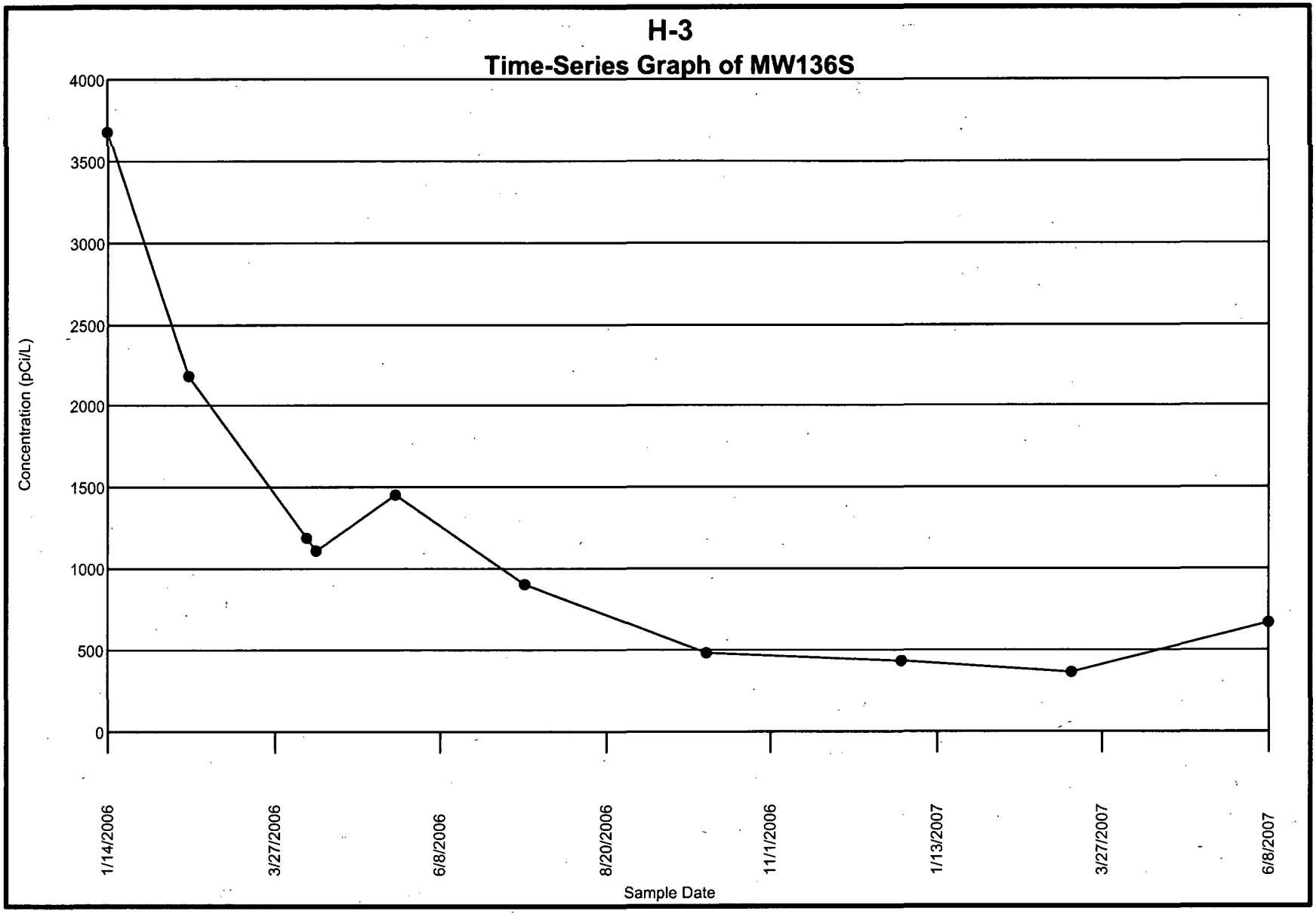
35	25.7143
36	35
37	50
38	100
39	110
40	120
41	135
42	136.667
43	140
44	150
45	163.333
46	170
47	192
48	226.667
49	315
50	348
51	466.667
52	470
53	480
54	625
55	1200

Sen's Estimator (Median Q) is -80.5556

Time Period	Observations
1/14/2006	1
1/24/2006	1
4/11/2006	1
4/14/2006	1
4/15/2006	1
5/20/2006	1
7/20/2006	1
10/4/2006	1
12/29/2006	1
3/14/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -193.571 = Q(17)
Upper limit is 110 = Q(39)
-193.571 < 0 < 110 indicating no trend in data.


H-3
Time-Series Graph of MW136S
Concentration (pCi/L)
4000
3500
3000
2500
2000
1500
1000
500
0
1/14/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW136S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
2180 OK (2/18/2006 a)	3680 OK (1/14/2006 a)	(2180 - 3680)/(2 - 1)	-1500
1190 OK (4/11/2006 a)	3680 OK (1/14/2006 a)	(1190 - 3680)/(3 - 1)	-1245
1110 OK (4/15/2006 a)	3680 OK (1/14/2006 a)	(1110 - 3680)/(4 - 1)	-856.667
1450 OK (5/20/2006 a)	3680 OK (1/14/2006 a)	(1450 - 3680)/(5 - 1)	-557.5
902 OK (7/16/2006 a)	3680 OK (1/14/2006 a)	(902 - 3680)/(6 - 1)	-555.6
478 OK (10/4/2006 a)	3680 OK (1/14/2006 a)	(478 - 3680)/(7 - 1)	-533.667
430 OK (12/29/2006 a)	3680 OK (1/14/2006 a)	(430 - 3680)/(8 - 1)	-464.286
359 OK (3/14/2007 a)	3680 OK (1/14/2006 a)	(359 - 3680)/(9 - 1)	-415.125
667 OK (6/8/2007 a)	3680 OK (1/14/2006 a)	(667 - 3680)/(10 - 1)	-334.778
1190 OK (4/11/2006 a)	2180 OK (2/18/2006 a)	(1190 - 2180)/(3 - 2)	-990
1110 OK (4/15/2006 a)	2180 OK (2/18/2006 a)	(1110 - 2180)/(4 - 2)	-535
1450 OK (5/20/2006 a)	2180 OK (2/18/2006 a)	(1450 - 2180)/(5 - 2)	-243.333
902 OK (7/16/2006 a)	2180 OK (2/18/2006 a)	(902 - 2180)/(6 - 2)	-319.5
478 OK (10/4/2006 a)	2180 OK (2/18/2006 a)	(478 - 2180)/(7 - 2)	-340.4
430 OK (12/29/2006 a)	2180 OK (2/18/2006 a)	(430 - 2180)/(8 - 2)	-291.667
359 OK (3/14/2007 a)	2180 OK (2/18/2006 a)	(359 - 2180)/(9 - 2)	-260.143
667 OK (6/8/2007 a)	2180 OK (2/18/2006 a)	(667 - 2180)/(10 - 2)	-189.125
1110 OK (4/15/2006 a)	1190 OK (4/11/2006 a)	(1110 - 1190)/(4 - 3)	-80
1450 OK (5/20/2006 a)	1190 OK (4/11/2006 a)	(1450 - 1190)/(5 - 3)	130
902 OK (7/16/2006 a)	1190 OK (4/11/2006 a)	(902 - 1190)/(6 - 3)	-96
478 OK (10/4/2006 a)	1190 OK (4/11/2006 a)	(478 - 1190)/(7 - 3)	-178
430 OK (12/29/2006 a)	1190 OK (4/11/2006 a)	(430 - 1190)/(8 - 3)	-152
359 OK (3/14/2007 a)	1190 OK (4/11/2006 a)	(359 - 1190)/(9 - 3)	-138.5
667 OK (6/8/2007 a)	1190 OK (4/11/2006 a)	(667 - 1190)/(10 - 3)	-74.7143
1450 OK (5/20/2006 a)	1110 OK (4/15/2006 a)	(1450 - 1110)/(5 - 4)	340
902 OK (7/16/2006 a)	1110 OK (4/15/2006 a)	(902 - 1110)/(6 - 4)	-104
478 OK (10/4/2006 a)	1110 OK (4/15/2006 a)	(478 - 1110)/(7 - 4)	-210.667
430 OK (12/29/2006 a)	1110 OK (4/15/2006 a)	(430 - 1110)/(8 - 4)	-170
359 OK (3/14/2007 a)	1110 OK (4/15/2006 a)	(359 - 1110)/(9 - 4)	-150.2
667 OK (6/8/2007 a)	1110 OK (4/15/2006 a)	(667 - 1110)/(10 - 4)	-73.8333
902 OK (7/16/2006 a)	1450 OK (5/20/2006 a)	(902 - 1450)/(6 - 5)	-548
478 OK (10/4/2006 a)	1450 OK (5/20/2006 a)	(478 - 1450)/(7 - 5)	-486
430 OK (12/29/2006 a)	1450 OK (5/20/2006 a)	(430 - 1450)/(8 - 5)	-340
359 OK (3/14/2007 a)	1450 OK (5/20/2006 a)	(359 - 1450)/(9 - 5)	-272.75
667 OK (6/8/2007 a)	1450 OK (5/20/2006 a)	(667 - 1450)/(10 - 5)	-156.6
478 OK (10/4/2006 a)	902 OK (7/16/2006 a)	(478 - 902)/(7 - 6)	-424
430 OK (12/29/2006 a)	902 OK (7/16/2006 a)	(430 - 902)/(8 - 6)	-236
359 OK (3/14/2007 a)	902 OK (7/16/2006 a)	(359 - 902)/(9 - 6)	-181
667 OK (6/8/2007 a)	902 OK (7/16/2006 a)	(667 - 902)/(10 - 6)	-58.75
430 OK (12/29/2006 a)	478 OK (10/4/2006 a)	(430 - 478)/(8 - 7)	-48
359 OK (3/14/2007 a)	478 OK (10/4/2006 a)	(359 - 478)/(9 - 7)	-59.5

667 OK (6/8/2007 a)	478 OK (10/4/2006 a)	(667 - 478)/(10 - 7)	63
359 OK (3/14/2007 a)	430 OK (12/29/2006 a)	(359 - 430)/(9 - 8)	-71
667 OK (6/8/2007 a)	430 OK (12/29/2006 a)	(667 - 430)/(10 - 8)	118.5
667 OK (6/8/2007 a)	359 OK (3/14/2007 a)	(667 - 359)/(10 - 9)	308

Number of Q values = 45

Ordered Q Values

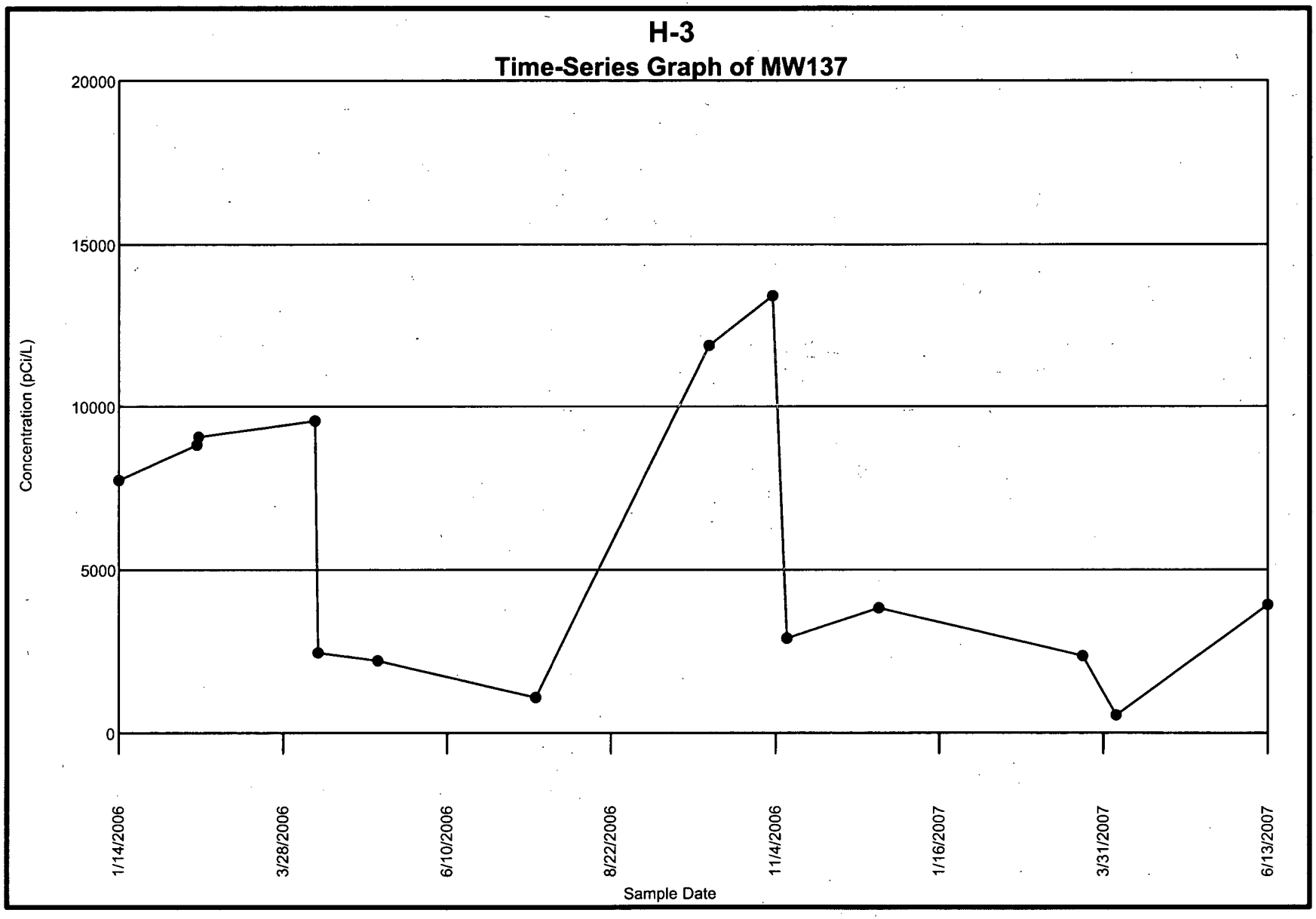
n	Q
1	-1500
2	-1245
3	-990
4	-856.667
5	-557.5
6	-555.6
7	-548
8	-535
9	-533.667
10	-486
11	-464.286
12	-424
13	-415.125
14	-340.4
15	-340
16	-334.778
17	-319.5
18	-291.667
19	-272.75
20	-260.143
21	-243.333
22	-236
23	-210.667
24	-189.125
25	-181
26	-178
27	-170
28	-156.6
29	-152
30	-150.2
31	-138.5
32	-104
33	-96
34	-80
35	-74.7143
36	-73.8333
37	-71
38	-59.5
39	-58.75
40	-48
41	63
42	118.5
43	130
44	308
45	340

Sen's Estimator (Median Q) is -210.667

Time Period	Observations
1/14/2006	1
2/18/2006	1
4/11/2006	1
4/15/2006	1
5/20/2006	1
7/16/2006	1
10/4/2006	1
12/29/2006	1
3/14/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -415.125 = Q(13)
Upper limit is -96 = Q(33)
-96 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW137
Concentration (pCi/L)
20000
15000
10000
5000
0
1/14/2006
3/28/2006
6/10/2006
8/22/2006
11/4/2006
1/16/2007
3/31/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW137

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
8860 OK (2/18/2006 a)	7760 OK (1/14/2006 a)	(8860 - 7760)/(2 - 1)	1100
9110 OK (2/19/2006 a)	7760 OK (1/14/2006 a)	(9110 - 7760)/(3 - 1)	675
9580 OK (4/12/2006 ~)	7760 OK (1/14/2006 a)	(9580 - 7760)/(4 - 1)	606.667
2440 OK (4/13/2006 a)	7760 OK (1/14/2006 a)	(2440 - 7760)/(5 - 1)	-1330
2220 OK (5/10/2006 a)	7760 OK (1/14/2006 a)	(2220 - 7760)/(6 - 1)	-1108
1095 OK (7/20/2006 ~)	7760 OK (1/14/2006 a)	(1095 - 7760)/(7 - 1)	-1110.83
11900 OK (10/5/2006 a)	7760 OK (1/14/2006 a)	(11900 - 7760)/(8 - 1)	591.429
13400 OK (11/3/2006 a)	7760 OK (1/14/2006 a)	(13400 - 7760)/(9 - 1)	705
2880 OK (11/9/2006 a)	7760 OK (1/14/2006 a)	(2880 - 7760)/(10 - 1)	-542.222
3820 OK (12/21/2006 a)	7760 OK (1/14/2006 a)	(3820 - 7760)/(11 - 1)	-394
2380 OK (3/22/2007 a)	7760 OK (1/14/2006 a)	(2380 - 7760)/(12 - 1)	-489.091
531 OK (4/6/2007 a)	7760 OK (1/14/2006 a)	(531 - 7760)/(13 - 1)	-602.417
3920 OK (6/13/2007 a)	7760 OK (1/14/2006 a)	(3920 - 7760)/(14 - 1)	-295.385
9110 OK (2/19/2006 a)	8860 OK (2/18/2006 a)	(9110 - 8860)/(3 - 2)	250
9580 OK (4/12/2006 ~)	8860 OK (2/18/2006 a)	(9580 - 8860)/(4 - 2)	360
2440 OK (4/13/2006 a)	8860 OK (2/18/2006 a)	(2440 - 8860)/(5 - 2)	-2140
2220 OK (5/10/2006 a)	8860 OK (2/18/2006 a)	(2220 - 8860)/(6 - 2)	-1660
1095 OK (7/20/2006 ~)	8860 OK (2/18/2006 a)	(1095 - 8860)/(7 - 2)	-1553
11900 OK (10/5/2006 a)	8860 OK (2/18/2006 a)	(11900 - 8860)/(8 - 2)	506.667
13400 OK (11/3/2006 a)	8860 OK (2/18/2006 a)	(13400 - 8860)/(9 - 2)	648.571
2880 OK (11/9/2006 a)	8860 OK (2/18/2006 a)	(2880 - 8860)/(10 - 2)	-747.5
3820 OK (12/21/2006 a)	8860 OK (2/18/2006 a)	(3820 - 8860)/(11 - 2)	-560
2380 OK (3/22/2007 a)	8860 OK (2/18/2006 a)	(2380 - 8860)/(12 - 2)	-648
531 OK (4/6/2007 a)	8860 OK (2/18/2006 a)	(531 - 8860)/(13 - 2)	-757.182
3920 OK (6/13/2007 a)	8860 OK (2/18/2006 a)	(3920 - 8860)/(14 - 2)	-411.667
9580 OK (4/12/2006 ~)	9110 OK (2/19/2006 a)	(9580 - 9110)/(4 - 3)	470
2440 OK (4/13/2006 a)	9110 OK (2/19/2006 a)	(2440 - 9110)/(5 - 3)	-3335
2220 OK (5/10/2006 a)	9110 OK (2/19/2006 a)	(2220 - 9110)/(6 - 3)	-2296.67
1095 OK (7/20/2006 ~)	9110 OK (2/19/2006 a)	(1095 - 9110)/(7 - 3)	-2003.75
11900 OK (10/5/2006 a)	9110 OK (2/19/2006 a)	(11900 - 9110)/(8 - 3)	558
13400 OK (11/3/2006 a)	9110 OK (2/19/2006 a)	(13400 - 9110)/(9 - 3)	715
2880 OK (11/9/2006 a)	9110 OK (2/19/2006 a)	(2880 - 9110)/(10 - 3)	-890
3820 OK (12/21/2006 a)	9110 OK (2/19/2006 a)	(3820 - 9110)/(11 - 3)	-661.25
2380 OK (3/22/2007 a)	9110 OK (2/19/2006 a)	(2380 - 9110)/(12 - 3)	-747.778
531 OK (4/6/2007 a)	9110 OK (2/19/2006 a)	(531 - 9110)/(13 - 3)	-857.9
3920 OK (6/13/2007 a)	9110 OK (2/19/2006 a)	(3920 - 9110)/(14 - 3)	-471.818
2440 OK (4/13/2006 a)	9580 OK (4/12/2006 ~)	(2440 - 9580)/(5 - 4)	-7140
2220 OK (5/10/2006 a)	9580 OK (4/12/2006 ~)	(2220 - 9580)/(6 - 4)	-3680
1095 OK (7/20/2006 ~)	9580 OK (4/12/2006 ~)	(1095 - 9580)/(7 - 4)	-2828.33
11900 OK (10/5/2006 a)	9580 OK (4/12/2006 ~)	(11900 - 9580)/(8 - 4)	580
13400 OK (11/3/2006 a)	9580 OK (4/12/2006 ~)	(13400 - 9580)/(9 - 4)	764
2880 OK (11/9/2006 a)	9580 OK (4/12/2006 ~)	(2880 - 9580)/(10 - 4)	-1116.67
3820 OK (12/21/2006 a)	9580 OK (4/12/2006 ~)	(3820 - 9580)/(11 - 4)	-822.857
2380 OK (3/22/2007 a)	9580 OK (4/12/2006 ~)	(2380 - 9580)/(12 - 4)	-900

531 OK (4/6/2007 a)	9580 OK (4/12/2006 ~)	(531 - 9580)/(13 - 4)	-1005.44
3920 OK (6/13/2007 a)	9580 OK (4/12/2006 ~)	(3920 - 9580)/(14 - 4)	-566
2220 OK (5/10/2006 a)	2440 OK (4/13/2006 a)	(2220 - 2440)/(6 - 5)	-220
1095 OK (7/20/2006 ~)	2440 OK (4/13/2006 a)	(1095 - 2440)/(7 - 5)	-672.5
11900 OK (10/5/2006 a)	2440 OK (4/13/2006 a)	(11900 - 2440)/(8 - 5)	3153.33
13400 OK (11/3/2006 a)	2440 OK (4/13/2006 a)	(13400 - 2440)/(9 - 5)	2740
2880 OK (11/9/2006 a)	2440 OK (4/13/2006 a)	(2880 - 2440)/(10 - 5)	88
3820 OK (12/21/2006 a)	2440 OK (4/13/2006 a)	(3820 - 2440)/(11 - 5)	230
2380 OK (3/22/2007 a)	2440 OK (4/13/2006 a)	(2380 - 2440)/(12 - 5)	-8.57143
531 OK (4/6/2007 a)	2440 OK (4/13/2006 a)	(531 - 2440)/(13 - 5)	-238.625
3920 OK (6/13/2007 a)	2440 OK (4/13/2006 a)	(3920 - 2440)/(14 - 5)	164.444
1095 OK (7/20/2006 ~)	2220 OK (5/10/2006 a)	(1095 - 2220)/(7 - 6)	-1125
11900 OK (10/5/2006 a)	2220 OK (5/10/2006 a)	(11900 - 2220)/(8 - 6)	4840
13400 OK (11/3/2006 a)	2220 OK (5/10/2006 a)	(13400 - 2220)/(9 - 6)	3726.67
2880 OK (11/9/2006 a)	2220 OK (5/10/2006 a)	(2880 - 2220)/(10 - 6)	165
3820 OK (12/21/2006 a)	2220 OK (5/10/2006 a)	(3820 - 2220)/(11 - 6)	320
2380 OK (3/22/2007 a)	2220 OK (5/10/2006 a)	(2380 - 2220)/(12 - 6)	26.6667
531 OK (4/6/2007 a)	2220 OK (5/10/2006 a)	(531 - 2220)/(13 - 6)	-241.286
3920 OK (6/13/2007 a)	2220 OK (5/10/2006 a)	(3920 - 2220)/(14 - 6)	212.5
11900 OK (10/5/2006 a)	1095 OK (7/20/2006 ~)	(11900 - 1095)/(8 - 7)	10805
13400 OK (11/3/2006 a)	1095 OK (7/20/2006 ~)	(13400 - 1095)/(9 - 7)	6152.5
2880 OK (11/9/2006 a)	1095 OK (7/20/2006 ~)	(2880 - 1095)/(10 - 7)	595
3820 OK (12/21/2006 a)	1095 OK (7/20/2006 ~)	(3820 - 1095)/(11 - 7)	681.25
2380 OK (3/22/2007 a)	1095 OK (7/20/2006 ~)	(2380 - 1095)/(12 - 7)	257
531 OK (4/6/2007 a)	1095 OK (7/20/2006 ~)	(531 - 1095)/(13 - 7)	-94
3920 OK (6/13/2007 a)	1095 OK (7/20/2006 ~)	(3920 - 1095)/(14 - 7)	403.571
13400 OK (11/3/2006 a)	11900 OK (10/5/2006 a)	(13400 - 11900)/(9 - 8)	1500
2880 OK (11/9/2006 a)	11900 OK (10/5/2006 a)	(2880 - 11900)/(10 - 8)	-4510
3820 OK (12/21/2006 a)	11900 OK (10/5/2006 a)	(3820 - 11900)/(11 - 8)	-2693.33
2380 OK (3/22/2007 a)	11900 OK (10/5/2006 a)	(2380 - 11900)/(12 - 8)	-2380
531 OK (4/6/2007 a)	11900 OK (10/5/2006 a)	(531 - 11900)/(13 - 8)	-2273.8
3920 OK (6/13/2007 a)	11900 OK (10/5/2006 a)	(3920 - 11900)/(14 - 8)	-1330
2880 OK (11/9/2006 a)	13400 OK (11/3/2006 a)	(2880 - 13400)/(10 - 9)	-10520
3820 OK (12/21/2006 a)	13400 OK (11/3/2006 a)	(3820 - 13400)/(11 - 9)	-4790
2380 OK (3/22/2007 a)	13400 OK (11/3/2006 a)	(2380 - 13400)/(12 - 9)	-3673.33
531 OK (4/6/2007 a)	13400 OK (11/3/2006 a)	(531 - 13400)/(13 - 9)	-3217.25
3920 OK (6/13/2007 a)	13400 OK (11/3/2006 a)	(3920 - 13400)/(14 - 9)	-1896
3820 OK (12/21/2006 a)	2880 OK (11/9/2006 a)	(3820 - 2880)/(11 - 10)	940
2380 OK (3/22/2007 a)	2880 OK (11/9/2006 a)	(2380 - 2880)/(12 - 10)	-250
531 OK (4/6/2007 a)	2880 OK (11/9/2006 a)	(531 - 2880)/(13 - 10)	-783
3920 OK (6/13/2007 a)	2880 OK (11/9/2006 a)	(3920 - 2880)/(14 - 10)	260
2380 OK (3/22/2007 a)	3820 OK (12/21/2006 a)	(2380 - 3820)/(12 - 11)	-1440
531 OK (4/6/2007 a)	3820 OK (12/21/2006 a)	(531 - 3820)/(13 - 11)	-1644.5
3920 OK (6/13/2007 a)	3820 OK (12/21/2006 a)	(3920 - 3820)/(14 - 11)	33.3333
531 OK (4/6/2007 a)	2380 OK (3/22/2007 a)	(531 - 2380)/(13 - 12)	-1849
3920 OK (6/13/2007 a)	2380 OK (3/22/2007 a)	(3920 - 2380)/(14 - 12)	770
3920 OK (6/13/2007 a)	531 OK (4/6/2007 a)	(3920 - 531)/(14 - 13)	3389

Number of Q values = 91

Ordered Q Values

n	Q
1	-10520
2	-7140
3	-4790
4	-4510
5	-3680
6	-3673.33
7	-3335
8	-3217.25
9	-2828.33
10	-2693.33
11	-2380
12	-2296.67
13	-2273.8
14	-2140
15	-2003.75
16	-1896
17	-1849
18	-1660
19	-1644.5
20	-1553
21	-1440
22	-1330
23	-1330
24	-1125
25	-1116.67
26	-1110.83
27	-1108
28	-1005.44
29	-900
30	-890
31	-857.9
32	-822.857
33	-783
34	-757.182
35	-747.778
36	-747.5
37	-672.5
38	-661.25
39	-648
40	-602.417
41	-566
42	-560
43	-542.222
44	-489.091
45	-471.818
46	-411.667
47	-394
48	-295.385
49	-250
50	-241.286
51	-238.625
52	-220

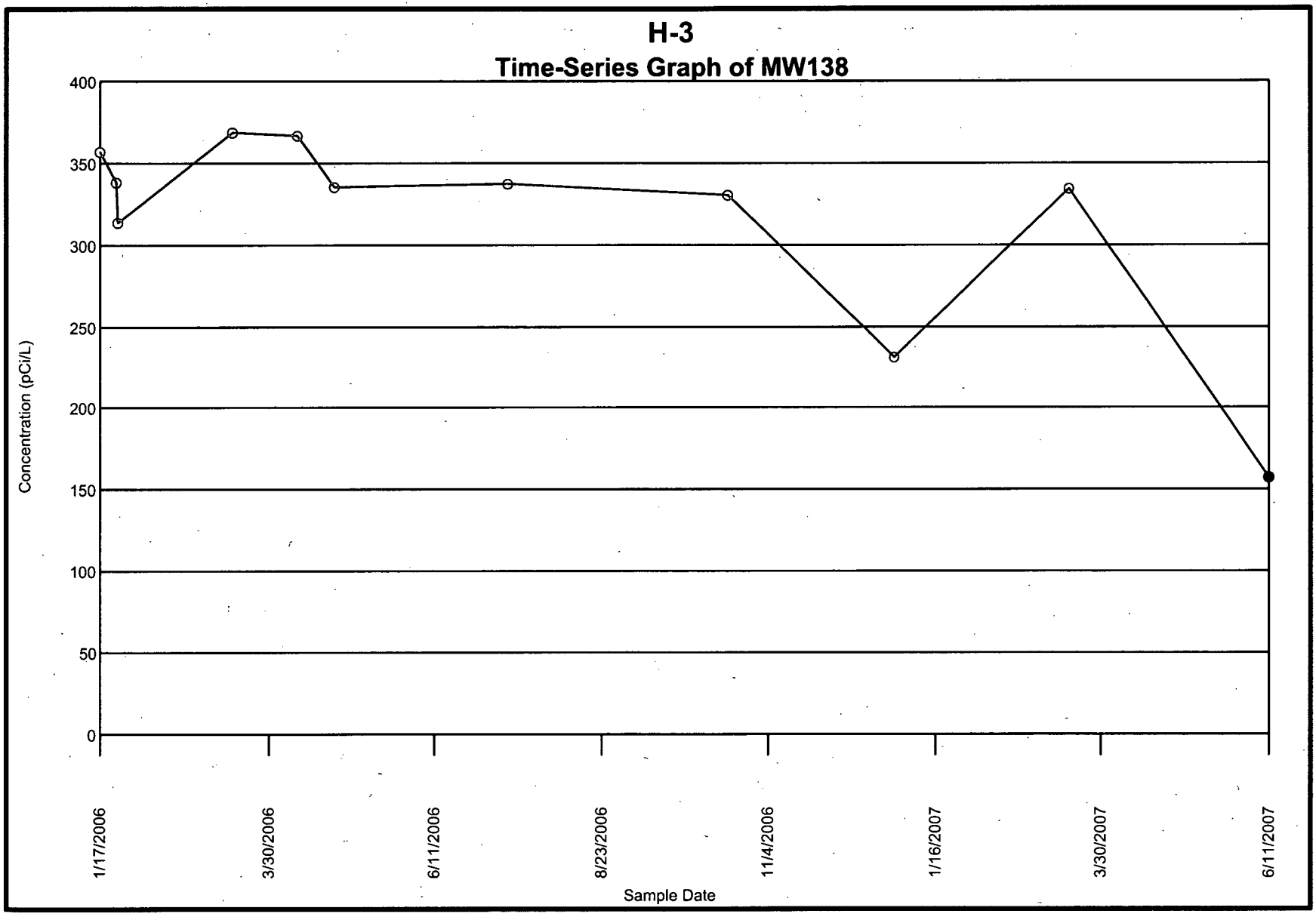
53	-94
54	-8.57143
55	26.6667
56	33.3333
57	88
58	164.444
59	165
60	212.5
61	230
62	250
63	257
64	260
65	320
66	360
67	403.571
68	470
69	506.667
70	558
71	580
72	591.429
73	595
74	606.667
75	648.571
76	675
77	681.25
78	705
79	715
80	764
81	770
82	940
83	1100
84	1500
85	2740
86	3153.33
87	3389
88	3726.67
89	4840
90	6152.5
91	10805

Sen's Estimator (Median Q) is -411.667

Time Period	Observations
1/14/2006	1
2/18/2006	1
2/19/2006	1
4/12/2006	1
4/13/2006	1
5/10/2006	1
7/20/2006	1
10/5/2006	1
11/3/2006	1
11/9/2006	1
12/21/2006	1
3/22/2007	1
4/6/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is -890 = Q(30)
Upper limit is 250 = Q(62)
-890 < 0 < 250 indicating no trend in data.


H-3
Time-Series Graph of MW138
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
1/17/2006
3/30/2006
6/11/2006
8/23/2006
11/4/2006
1/16/2007
3/30/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW138

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<338 U (1/24/2006 a)	ND<357 U (1/17/2006 a)	(338 - 357)/(2 - 1)	-19
ND<314 U (1/25/2006 a)	ND<357 U (1/17/2006 a)	(314 - 357)/(3 - 1)	-21.5
ND<369 U (3/15/2006 a)	ND<357 U (1/17/2006 a)	(369 - 357)/(4 - 1)	4
ND<367 U (4/13/2006 ~)	ND<357 U (1/17/2006 a)	(367 - 357)/(5 - 1)	2.5
ND<335 OK (4/29/2006 ~)	ND<357 U (1/17/2006 a)	(335 - 357)/(6 - 1)	-4.4
ND<337 OK (7/14/2006 a)	ND<357 U (1/17/2006 a)	(337 - 357)/(7 - 1)	-3.33333
ND<330 OK (10/18/2006 ~)	ND<357 U (1/17/2006 a)	(330 - 357)/(8 - 1)	-3.85714
ND<231 OK (12/29/2006 a)	ND<357 U (1/17/2006 a)	(231 - 357)/(9 - 1)	-15.75
ND<334 OK (3/16/2007 a)	ND<357 U (1/17/2006 a)	(334 - 357)/(10 - 1)	-2.55556
156.765 OK (6/11/2007 ~)	ND<357 U (1/17/2006 a)	(156.765 - 357)/(11 - 1)	-20.0235
ND<314 U (1/25/2006 a)	ND<338 U (1/24/2006 a)	(314 - 338)/(3 - 2)	-24
ND<369 U (3/15/2006 a)	ND<338 U (1/24/2006 a)	(369 - 338)/(4 - 2)	15.5
ND<367 U (4/13/2006 ~)	ND<338 U (1/24/2006 a)	(367 - 338)/(5 - 2)	9.66667
ND<335 OK (4/29/2006 ~)	ND<338 U (1/24/2006 a)	(335 - 338)/(6 - 2)	-0.75
ND<337 OK (7/14/2006 a)	ND<338 U (1/24/2006 a)	(337 - 338)/(7 - 2)	-0.2
ND<330 OK (10/18/2006 ~)	ND<338 U (1/24/2006 a)	(330 - 338)/(8 - 2)	-1.33333
ND<231 OK (12/29/2006 a)	ND<338 U (1/24/2006 a)	(231 - 338)/(9 - 2)	-15.2857
ND<334 OK (3/16/2007 a)	ND<338 U (1/24/2006 a)	(334 - 338)/(10 - 2)	-0.5
156.765 OK (6/11/2007 ~)	ND<338 U (1/24/2006 a)	(156.765 - 338)/(11 - 2)	-20.1372
ND<369 U (3/15/2006 a)	ND<314 U (1/25/2006 a)	(369 - 314)/(4 - 3)	55
ND<367 U (4/13/2006 ~)	ND<314 U (1/25/2006 a)	(367 - 314)/(5 - 3)	26.5
ND<335 OK (4/29/2006 ~)	ND<314 U (1/25/2006 a)	(335 - 314)/(6 - 3)	7
ND<337 OK (7/14/2006 a)	ND<314 U (1/25/2006 a)	(337 - 314)/(7 - 3)	5.75
ND<330 OK (10/18/2006 ~)	ND<314 U (1/25/2006 a)	(330 - 314)/(8 - 3)	3.2
ND<231 OK (12/29/2006 a)	ND<314 U (1/25/2006 a)	(231 - 314)/(9 - 3)	-13.8333
ND<334 OK (3/16/2007 a)	ND<314 U (1/25/2006 a)	(334 - 314)/(10 - 3)	2.85714
156.765 OK (6/11/2007 ~)	ND<314 U (1/25/2006 a)	(156.765 - 314)/(11 - 3)	-19.6544
ND<367 U (4/13/2006 ~)	ND<369 U (3/15/2006 a)	(367 - 369)/(5 - 4)	-2
ND<335 OK (4/29/2006 ~)	ND<369 U (3/15/2006 a)	(335 - 369)/(6 - 4)	-17
ND<337 OK (7/14/2006 a)	ND<369 U (3/15/2006 a)	(337 - 369)/(7 - 4)	-10.6667
ND<330 OK (10/18/2006 ~)	ND<369 U (3/15/2006 a)	(330 - 369)/(8 - 4)	-9.75
ND<231 OK (12/29/2006 a)	ND<369 U (3/15/2006 a)	(231 - 369)/(9 - 4)	-27.6
ND<334 OK (3/16/2007 a)	ND<369 U (3/15/2006 a)	(334 - 369)/(10 - 4)	-5.83333
156.765 OK (6/11/2007 ~)	ND<369 U (3/15/2006 a)	(156.765 - 369)/(11 - 4)	-30.3193
ND<335 OK (4/29/2006 ~)	ND<367 U (4/13/2006 ~)	(335 - 367)/(6 - 5)	-32
ND<337 OK (7/14/2006 a)	ND<367 U (4/13/2006 ~)	(337 - 367)/(7 - 5)	-15
ND<330 OK (10/18/2006 ~)	ND<367 U (4/13/2006 ~)	(330 - 367)/(8 - 5)	-12.3333
ND<231 OK (12/29/2006 a)	ND<367 U (4/13/2006 ~)	(231 - 367)/(9 - 5)	-34
ND<334 OK (3/16/2007 a)	ND<367 U (4/13/2006 ~)	(334 - 367)/(10 - 5)	-6.6
156.765 OK (6/11/2007 ~)	ND<367 U (4/13/2006 ~)	(156.765 - 367)/(11 - 5)	-35.0392
ND<337 OK (7/14/2006 a)	ND<335 OK (4/29/2006 ~)	(337 - 335)/(7 - 6)	2
ND<330 OK (10/18/2006 ~)	ND<335 OK (4/29/2006 ~)	(330 - 335)/(8 - 6)	-2.5

ND<231 OK (12/29/2006 a)	ND<335 OK (4/29/2006 ~)	(231 - 335)/(9 - 6)	-34.6667
ND<334 OK (3/16/2007 a)	ND<335 OK (4/29/2006 ~)	(334 - 335)/(10 - 6)	-0.25
156.765 OK (6/11/2007 ~)	ND<335 OK (4/29/2006 ~)	(156.765 - 335)/(11 - 6)	-35.647
ND<330 OK (10/18/2006 ~)	ND<337 OK (7/14/2006 a)	(330 - 337)/(8 - 7)	-7
ND<231 OK (12/29/2006 a)	ND<337 OK (7/14/2006 a)	(231 - 337)/(9 - 7)	-53
ND<334 OK (3/16/2007 a)	ND<337 OK (7/14/2006 a)	(334 - 337)/(10 - 7)	-1
156.765 OK (6/11/2007 ~)	ND<337 OK (7/14/2006 a)	(156.765 - 337)/(11 - 7)	-45.0588
ND<231 OK (12/29/2006 a)	ND<330 OK (10/18/2006 ~)	(231 - 330)/(9 - 8)	-99
ND<334 OK (3/16/2007 a)	ND<330 OK (10/18/2006 ~)	(334 - 330)/(10 - 8)	2
156.765 OK (6/11/2007 ~)	ND<330 OK (10/18/2006 ~)	(156.765 - 330)/(11 - 8)	-57.745
ND<334 OK (3/16/2007 a)	ND<231 OK (12/29/2006 a)	(334 - 231)/(10 - 9)	103
156.765 OK (6/11/2007 ~)	ND<231 OK (12/29/2006 a)	(156.765 - 231)/(11 - 9)	-37.1175
156.765 OK (6/11/2007 ~)	ND<334 OK (3/16/2007 a)	(156.765 - 334)/(11 - 10)	-177.235

Number of Q values = 55

Ordered Q Values

n	Q
1	-177.235
2	-99
3	-57.745
4	-53
5	-45.0588
6	-37.1175
7	-35.647
8	-35.0392
9	-34.6667
10	-34
11	-32
12	-30.3193
13	-27.6
14	-24
15	-21.5
16	-20.1372
17	-20.0235
18	-19.6544
19	-19
20	-17
21	-15.75
22	-15.2857
23	-15
24	-13.8333
25	-12.3333
26	-10.6667
27	-9.75
28	-7
29	-6.6
30	-5.83333
31	-4.4
32	-3.85714
33	-3.33333
34	-2.55556

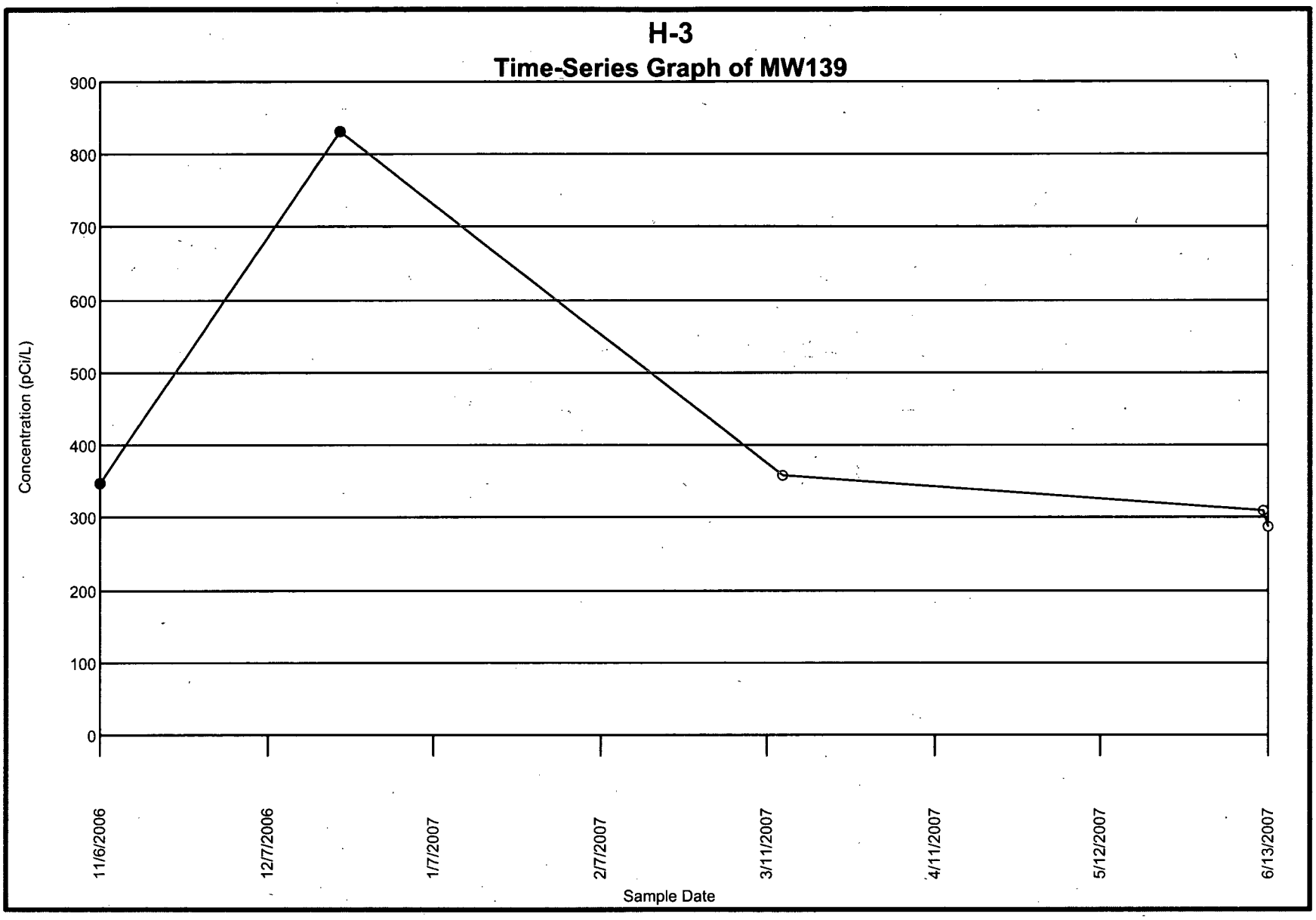
35	-2.5
36	-2
37	-1.33333
38	-1
39	-0.75
40	-0.5
41	-0.25
42	-0.2
43	2
44	2
45	2.5
46	2.85714
47	3.2
48	4
49	5.75
50	7
51	9.66667
52	15.5
53	26.5
54	55
55	103

Sen's Estimator (Median Q) is -7

Time Period	Observations
1/17/2006	1
1/24/2006	1
1/25/2006	1
3/15/2006	1
4/13/2006	1
4/29/2006	1
7/14/2006	1
10/18/2006	1
12/29/2006	1
3/16/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -20.0235 = Q(17)
Upper limit is -0.75 = Q(39)
-0.75 < 0 indicating a downward trend in data.


H-3
Time-Series Graph of MW139
Concentration (pCi/L)
900
800
700
600
500
400
300
200
100
0
11/6/2006
12/7/2006
1/7/2007
2/7/2007
3/11/2007
4/11/2007
5/12/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW139

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
832 OK (12/21/2006 a)	346.5 OK (11/6/2006 ~)	(832 - 346.5)/(2 - 1)	485.5
ND<359 OK (3/14/2007 a)	346.5 OK (11/6/2006 ~)	(359 - 346.5)/(3 - 1)	6.25
ND<310 OK (6/12/2007 a)	346.5 OK (11/6/2006 ~)	(310 - 346.5)/(4 - 1)	-12.1667
ND<287 OK (6/13/2007 a)	346.5 OK (11/6/2006 ~)	(287 - 346.5)/(5 - 1)	-14.875
ND<359 OK (3/14/2007 a)	832 OK (12/21/2006 a)	(359 - 832)/(3 - 2)	-473
ND<310 OK (6/12/2007 a)	832 OK (12/21/2006 a)	(310 - 832)/(4 - 2)	-261
ND<287 OK (6/13/2007 a)	832 OK (12/21/2006 a)	(287 - 832)/(5 - 2)	-181.667
ND<310 OK (6/12/2007 a)	ND<359 OK (3/14/2007 a)	(310 - 359)/(4 - 3)	-49
ND<287 OK (6/13/2007 a)	ND<359 OK (3/14/2007 a)	(287 - 359)/(5 - 3)	-36
ND<287 OK (6/13/2007 a)	ND<310 OK (6/12/2007 a)	(287 - 310)/(5 - 4)	-23

Number of Q values = 10

Ordered Q Values

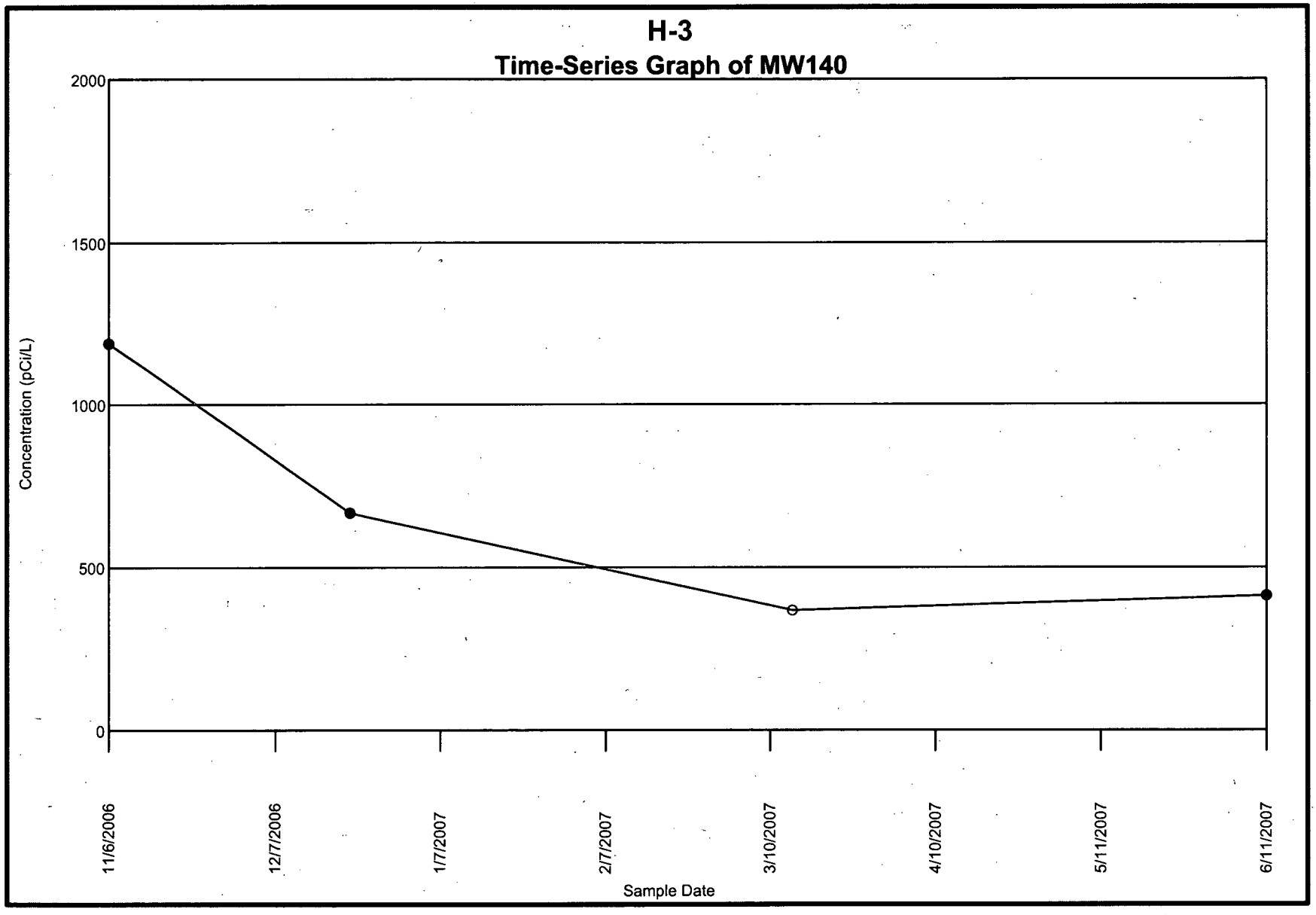
n	Q
1	-473
2	-261
3	-181.667
4	-49
5	-36
6	-23
7	-14.875
8	-12.1667
9	6.25
10	485.5

Sen's Estimator (Median Q) is -29.5

Time Period	Observations
11/6/2006	1
12/21/2006	1
3/14/2007	1
6/12/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 300
b = 540
c = 40
Group Variance = 16.6667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 6.71508
M1 = (10 - 6.71508)/2.0 = 1.64246
M2 = (10 + 6.71508)/2.0 + 1 = 9.35754
Lower limit is -261 = Q(2)
Upper limit is 6.25 = Q(9)
-261 < 0 < 6.25 indicating no trend in data.


H-3
Time-Series Graph of MW140
Concentration (pCi/L)
2000
1500
1000
500
0
11/6/2006
12/7/2006
1/7/2007
2/7/2007
3/10/2007
4/10/2007
5/11/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW140

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
669 OK (12/21/2006 a)	1190 OK (11/6/2006 a)	(669 - 1190)/(2 - 1)	-521
ND<367 OK (3/14/2007 a)	1190 OK (11/6/2006 a)	(367 - 1190)/(3 - 1)	-411.5
412 OK (6/11/2007 a)	1190 OK (11/6/2006 a)	(412 - 1190)/(4 - 1)	-259.333
ND<367 OK (3/14/2007 a)	669 OK (12/21/2006 a)	(367 - 669)/(3 - 2)	-302
412 OK (6/11/2007 a)	669 OK (12/21/2006 a)	(412 - 669)/(4 - 2)	-128.5
412 OK (6/11/2007 a)	ND<367 OK (3/14/2007 a)	(412 - 367)/(4 - 3)	45

Number of Q values = 6

Ordered Q Values

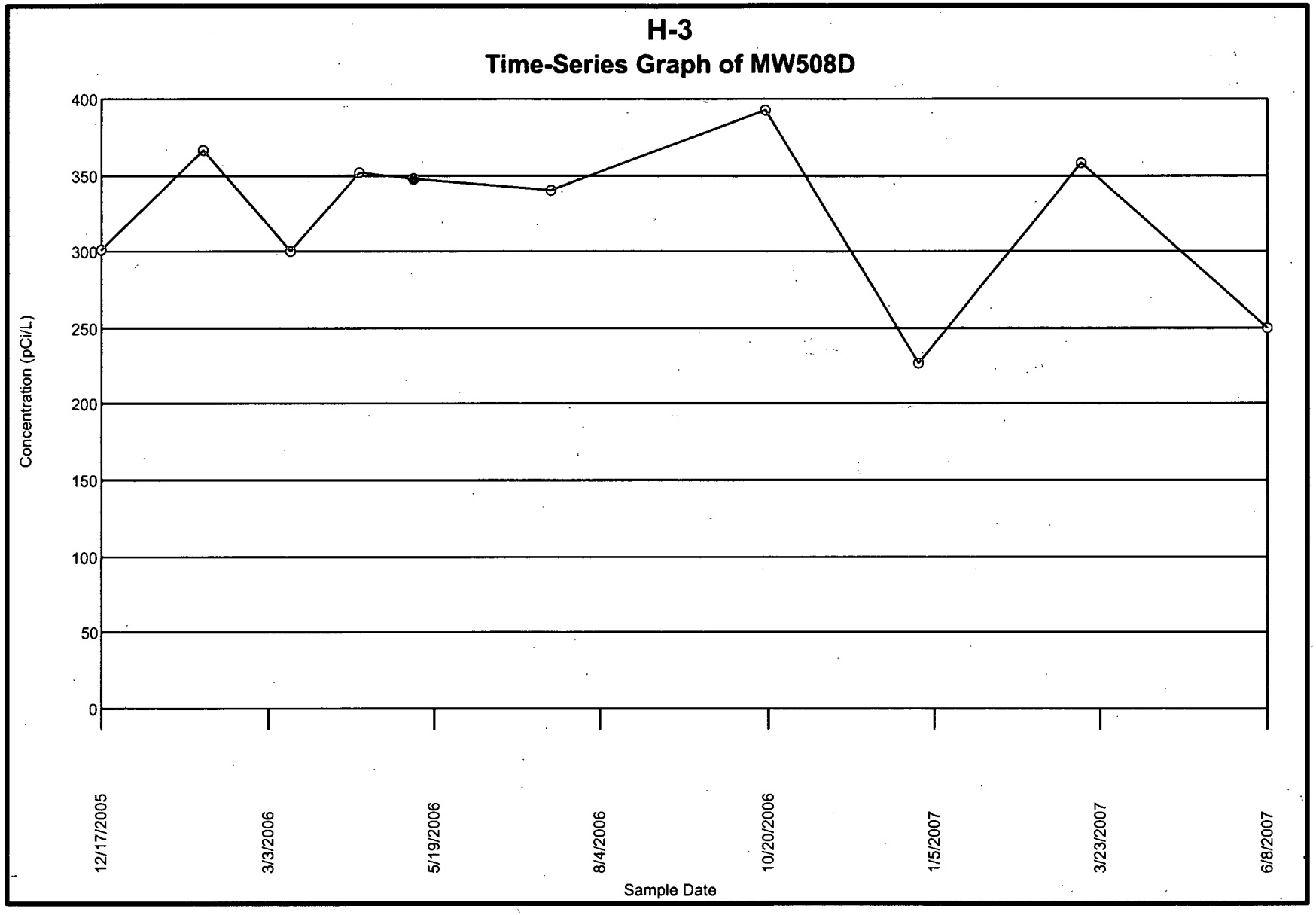
n	Q
1	-521
2	-411.5
3	-302
4	-259.333
5	-128.5
6	45

Sen's Estimator (Median Q) is -280.667

Time Period	Observations
11/6/2006	1
12/21/2006	1
3/14/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 156
b = 216
c = 24
Group Variance = 8.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.84232
M1 = (6 - 4.84232)/2.0 = 0.578842
M2 = (6 + 4.84232)/2.0 + 1 = 6.42116
Lower limit is -521 = Q(1)
Upper limit is 45 = Q(6)
-521 < 0 < 45 indicating no trend in data.


H-3
Time-Series Graph of MW508D
Concentration (pCi/L)
400
350
300
250
200
150
100
50
0
12/17/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW508D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<366.5 U (2/2/2006 ~)	ND<301 U (12/17/2005 a)	(366.5 - 301)/(2 - 1)	65.5
ND<300 U (3/14/2006 a)	ND<301 U (12/17/2005 a)	(300 - 301)/(3 - 1)	-0.5
ND<352 U (4/15/2006 a)	ND<301 U (12/17/2005 a)	(352 - 301)/(4 - 1)	17
348 OK (5/10/2006 a)	ND<301 U (12/17/2005 a)	(348 - 301)/(5 - 1)	11.75
ND<340 OK (7/13/2006 a)	ND<301 U (12/17/2005 a)	(340 - 301)/(6 - 1)	7.8
ND<393 OK (10/19/2006 a)	ND<301 U (12/17/2005 a)	(393 - 301)/(7 - 1)	15.3333
ND<227 OK (12/29/2006 a)	ND<301 U (12/17/2005 a)	(227 - 301)/(8 - 1)	-10.5714
ND<358 OK (3/14/2007 a)	ND<301 U (12/17/2005 a)	(358 - 301)/(9 - 1)	7.125
ND<250 OK (6/8/2007 a)	ND<301 U (12/17/2005 a)	(250 - 301)/(10 - 1)	-5.66667
ND<300 U (3/14/2006 a)	ND<366.5 U (2/2/2006 ~)	(300 - 366.5)/(3 - 2)	-66.5
ND<352 U (4/15/2006 a)	ND<366.5 U (2/2/2006 ~)	(352 - 366.5)/(4 - 2)	-7.25
348 OK (5/10/2006 a)	ND<366.5 U (2/2/2006 ~)	(348 - 366.5)/(5 - 2)	-6.16667
ND<340 OK (7/13/2006 a)	ND<366.5 U (2/2/2006 ~)	(340 - 366.5)/(6 - 2)	-6.625
ND<393 OK (10/19/2006 a)	ND<366.5 U (2/2/2006 ~)	(393 - 366.5)/(7 - 2)	5.3
ND<227 OK (12/29/2006 a)	ND<366.5 U (2/2/2006 ~)	(227 - 366.5)/(8 - 2)	-23.25
ND<358 OK (3/14/2007 a)	ND<366.5 U (2/2/2006 ~)	(358 - 366.5)/(9 - 2)	-1.21429
ND<250 OK (6/8/2007 a)	ND<366.5 U (2/2/2006 ~)	(250 - 366.5)/(10 - 2)	-14.5625
ND<352 U (4/15/2006 a)	ND<300 U (3/14/2006 a)	(352 - 300)/(4 - 3)	52
348 OK (5/10/2006 a)	ND<300 U (3/14/2006 a)	(348 - 300)/(5 - 3)	24
ND<340 OK (7/13/2006 a)	ND<300 U (3/14/2006 a)	(340 - 300)/(6 - 3)	13.3333
ND<393 OK (10/19/2006 a)	ND<300 U (3/14/2006 a)	(393 - 300)/(7 - 3)	23.25
ND<227 OK (12/29/2006 a)	ND<300 U (3/14/2006 a)	(227 - 300)/(8 - 3)	-14.6
ND<358 OK (3/14/2007 a)	ND<300 U (3/14/2006 a)	(358 - 300)/(9 - 3)	9.66667
ND<250 OK (6/8/2007 a)	ND<300 U (3/14/2006 a)	(250 - 300)/(10 - 3)	-7.14286
348 OK (5/10/2006 a)	ND<352 U (4/15/2006 a)	(348 - 352)/(5 - 4)	-4
ND<340 OK (7/13/2006 a)	ND<352 U (4/15/2006 a)	(340 - 352)/(6 - 4)	-6
ND<393 OK (10/19/2006 a)	ND<352 U (4/15/2006 a)	(393 - 352)/(7 - 4)	13.6667
ND<227 OK (12/29/2006 a)	ND<352 U (4/15/2006 a)	(227 - 352)/(8 - 4)	-31.25

ND<358 OK (3/14/2007 a)	ND<352 U (4/15/2006 a)	(358 - 352)/(9 - 4)	1.2
ND<250 OK (6/8/2007 a)	ND<352 U (4/15/2006 a)	(250 - 352)/(10 - 4)	-17
ND<340 OK (7/13/2006 a)	348 OK (5/10/2006 a)	(340 - 348)/(6 - 5)	-8
ND<393 OK (10/19/2006 a)	348 OK (5/10/2006 a)	(393 - 348)/(7 - 5)	22.5
ND<227 OK (12/29/2006 a)	348 OK (5/10/2006 a)	(227 - 348)/(8 - 5)	-40.3333
ND<358 OK (3/14/2007 a)	348 OK (5/10/2006 a)	(358 - 348)/(9 - 5)	2.5
ND<250 OK (6/8/2007 a)	348 OK (5/10/2006 a)	(250 - 348)/(10 - 5)	-19.6
ND<393 OK (10/19/2006 a)	ND<340 OK (7/13/2006 a)	(393 - 340)/(7 - 6)	53
ND<227 OK (12/29/2006 a)	ND<340 OK (7/13/2006 a)	(227 - 340)/(8 - 6)	-56.5
ND<358 OK (3/14/2007 a)	ND<340 OK (7/13/2006 a)	(358 - 340)/(9 - 6)	6
ND<250 OK (6/8/2007 a)	ND<340 OK (7/13/2006 a)	(250 - 340)/(10 - 6)	-22.5
ND<227 OK (12/29/2006 a)	ND<393 OK (10/19/2006 a)	(227 - 393)/(8 - 7)	-166
ND<358 OK (3/14/2007 a)	ND<393 OK (10/19/2006 a)	(358 - 393)/(9 - 7)	-17.5
ND<250 OK (6/8/2007 a)	ND<393 OK (10/19/2006 a)	(250 - 393)/(10 - 7)	-47.6667
ND<358 OK (3/14/2007 a)	ND<227 OK (12/29/2006 a)	(358 - 227)/(9 - 8)	131
ND<250 OK (6/8/2007 a)	ND<227 OK (12/29/2006 a)	(250 - 227)/(10 - 8)	11.5
ND<250 OK (6/8/2007 a)	ND<358 OK (3/14/2007 a)	(250 - 358)/(10 - 9)	-108

Number of Q values = 45

Ordered Q Values

n	Q
1	-166
2	-108
3	-66.5
4	-56.5
5	-47.6667
6	-40.3333
7	-31.25
8	-23.25
9	-22.5
10	-19.6
11	-17.5
12	-17
13	-14.6

14	-14.5625
15	-10.5714
16	-8
17	-7.25
18	-7.14286
19	-6.625
20	-6.16667
21	-6
22	-5.66667
23	-4
24	-1.21429
25	-0.5
26	1.2
27	2.5
28	5.3
29	6
30	7.125
31	7.8
32	9.66667
33	11.5
34	11.75
35	13.3333
36	13.6667
37	15.3333
38	17
39	22.5
40	23.25
41	24
42	52
43	53
44	65.5
45	131

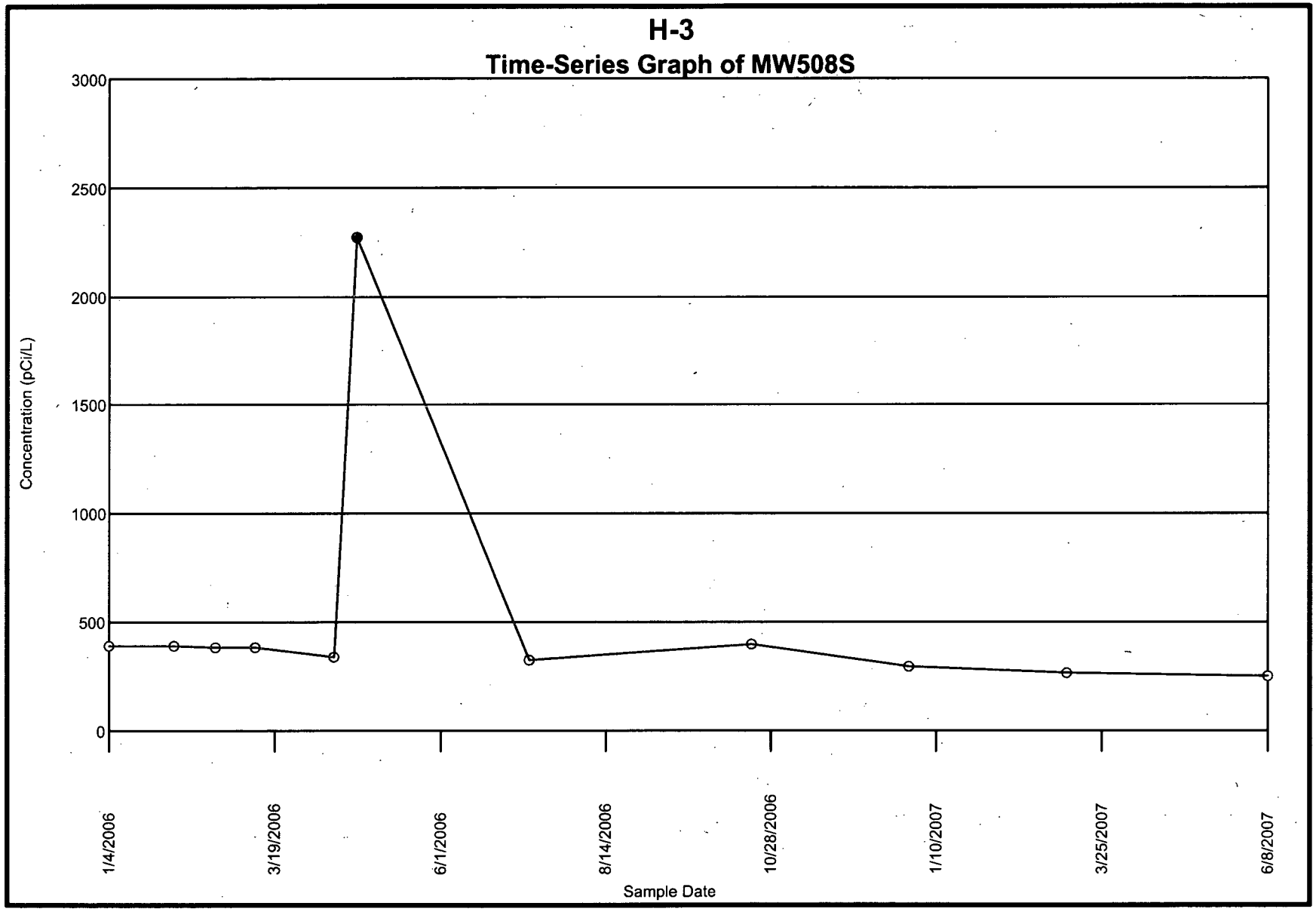
Sen's Estimator (Median Q) is -4

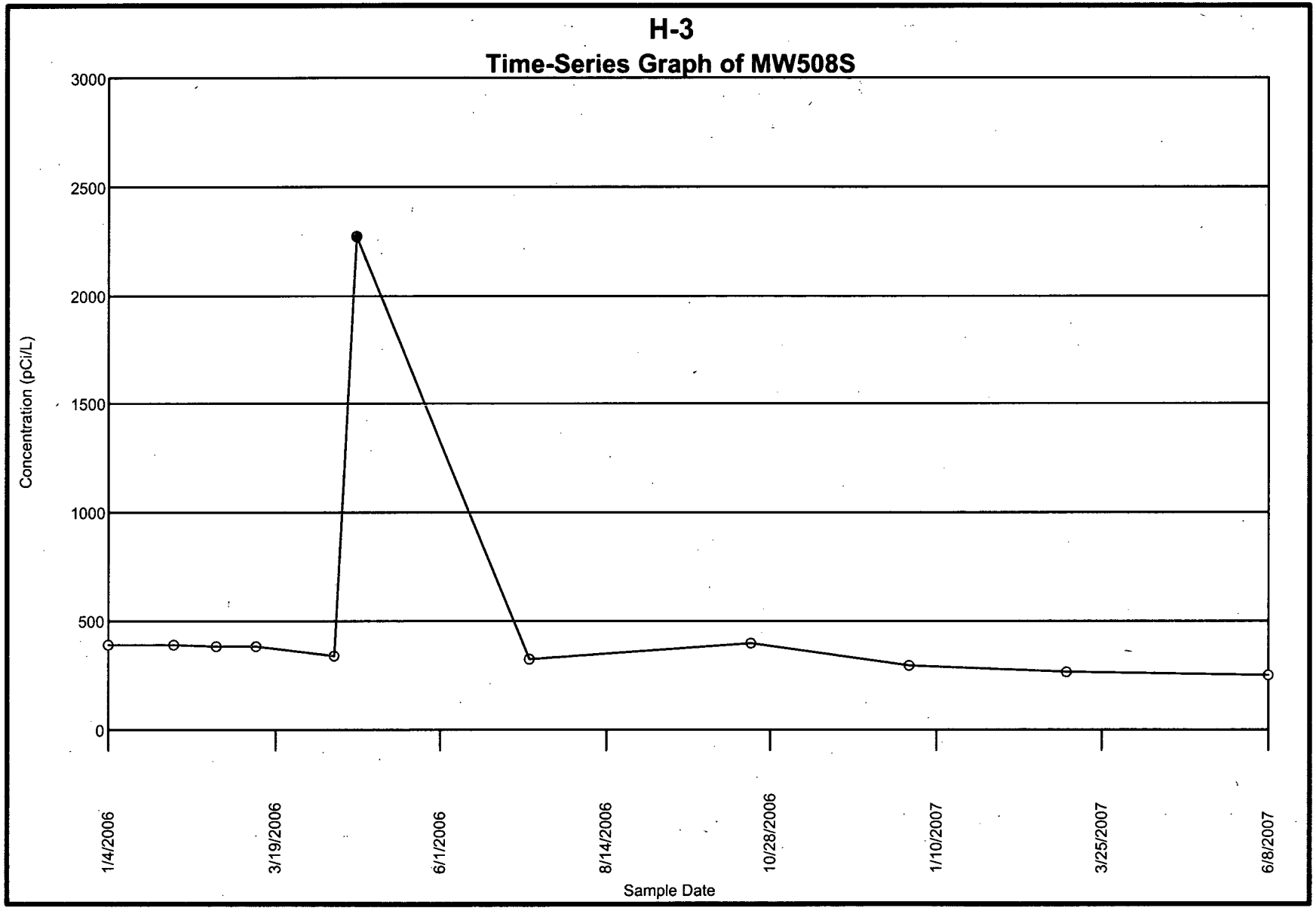
Time Period	Observations
12/17/2005	1
2/2/2006	1
3/14/2006	1
4/15/2006	1
5/10/2006	1
7/13/2006	1

10/19/2006	1
12/29/2006	1
3/14/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -14.6 = Q(13)
Upper limit is 11.5 = Q(33)
-14.6 < 0 < 11.5 indicating no trend in data.


H-3
Time-Series Graph of MW508S
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date


H-3
Time-Series Graph of MW508S
Concentration (pCi/L)
3000
2500
2000
1500
1000
500
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: H-3
Location: MW508S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<392 U (2/2/2006 a)	ND<392.5 U (1/4/2006 ~)	(392 - 392.5)/(2 - 1)	-0.5
ND<384 U (2/21/2006 ~)	ND<392.5 U (1/4/2006 ~)	(384 - 392.5)/(3 - 1)	-4.25
ND<380 U (3/11/2006 a)	ND<392.5 U (1/4/2006 ~)	(380 - 392.5)/(4 - 1)	-4.16667
ND<338 U (4/15/2006 a)	ND<392.5 U (1/4/2006 ~)	(338 - 392.5)/(5 - 1)	-13.625
2270 OK (4/25/2006 a)	ND<392.5 U (1/4/2006 ~)	(2270 - 392.5)/(6 - 1)	375.5
ND<326 OK (7/12/2006 a)	ND<392.5 U (1/4/2006 ~)	(326 - 392.5)/(7 - 1)	-11.0833
ND<398 OK (10/19/2006 a)	ND<392.5 U (1/4/2006 ~)	(398 - 392.5)/(8 - 1)	0.785714
ND<292 OK (12/29/2006 a)	ND<392.5 U (1/4/2006 ~)	(292 - 392.5)/(9 - 1)	-12.5625
ND<262 OK (3/10/2007 a)	ND<392.5 U (1/4/2006 ~)	(262 - 392.5)/(10 - 1)	-14.5
ND<251 OK (6/8/2007 a)	ND<392.5 U (1/4/2006 ~)	(251 - 392.5)/(11 - 1)	-14.15
ND<384 U (2/21/2006 ~)	ND<392 U (2/2/2006 a)	(384 - 392)/(3 - 2)	-8
ND<380 U (3/11/2006 a)	ND<392 U (2/2/2006 a)	(380 - 392)/(4 - 2)	-6
ND<338 U (4/15/2006 a)	ND<392 U (2/2/2006 a)	(338 - 392)/(5 - 2)	-18
2270 OK (4/25/2006 a)	ND<392 U (2/2/2006 a)	(2270 - 392)/(6 - 2)	469.5
ND<326 OK (7/12/2006 a)	ND<392 U (2/2/2006 a)	(326 - 392)/(7 - 2)	-13.2
ND<398 OK (10/19/2006 a)	ND<392 U (2/2/2006 a)	(398 - 392)/(8 - 2)	1
ND<292 OK (12/29/2006 a)	ND<392 U (2/2/2006 a)	(292 - 392)/(9 - 2)	-14.2857
ND<262 OK (3/10/2007 a)	ND<392 U (2/2/2006 a)	(262 - 392)/(10 - 2)	-16.25
ND<251 OK (6/8/2007 a)	ND<392 U (2/2/2006 a)	(251 - 392)/(11 - 2)	-15.6667
ND<380 U (3/11/2006 a)	ND<384 U (2/21/2006 ~)	(380 - 384)/(4 - 3)	-4
ND<338 U (4/15/2006 a)	ND<384 U (2/21/2006 ~)	(338 - 384)/(5 - 3)	-23
2270 OK (4/25/2006 a)	ND<384 U (2/21/2006 ~)	(2270 - 384)/(6 - 3)	628.667
ND<326 OK (7/12/2006 a)	ND<384 U (2/21/2006 ~)	(326 - 384)/(7 - 3)	-14.5
ND<398 OK (10/19/2006 a)	ND<384 U (2/21/2006 ~)	(398 - 384)/(8 - 3)	2.8
ND<292 OK (12/29/2006 a)	ND<384 U (2/21/2006 ~)	(292 - 384)/(9 - 3)	-15.3333
ND<262 OK (3/10/2007 a)	ND<384 U (2/21/2006 ~)	(262 - 384)/(10 - 3)	-17.4286
ND<251 OK (6/8/2007 a)	ND<384 U (2/21/2006 ~)	(251 - 384)/(11 - 3)	-16.625
ND<338 U (4/15/2006 a)	ND<380 U (3/11/2006 a)	(338 - 380)/(5 - 4)	-42

2270 OK (4/25/2006 a)	ND<380 U (3/11/2006 a)	(2270 - 380)/(6 - 4)	945
ND<326 OK (7/12/2006 a)	ND<380 U (3/11/2006 a)	(326 - 380)/(7 - 4)	-18
ND<398 OK (10/19/2006 a)	ND<380 U (3/11/2006 a)	(398 - 380)/(8 - 4)	4.5
ND<292 OK (12/29/2006 a)	ND<380 U (3/11/2006 a)	(292 - 380)/(9 - 4)	-17.6
ND<262 OK (3/10/2007 a)	ND<380 U (3/11/2006 a)	(262 - 380)/(10 - 4)	-19.6667
ND<251 OK (6/8/2007 a)	ND<380 U (3/11/2006 a)	(251 - 380)/(11 - 4)	-18.4286
2270 OK (4/25/2006 a)	ND<338 U (4/15/2006 a)	(2270 - 338)/(6 - 5)	1932
ND<326 OK (7/12/2006 a)	ND<338 U (4/15/2006 a)	(326 - 338)/(7 - 5)	-6
ND<398 OK (10/19/2006 a)	ND<338 U (4/15/2006 a)	(398 - 338)/(8 - 5)	20
ND<292 OK (12/29/2006 a)	ND<338 U (4/15/2006 a)	(292 - 338)/(9 - 5)	-11.5
ND<262 OK (3/10/2007 a)	ND<338 U (4/15/2006 a)	(262 - 338)/(10 - 5)	-15.2
ND<251 OK (6/8/2007 a)	ND<338 U (4/15/2006 a)	(251 - 338)/(11 - 5)	-14.5
ND<326 OK (7/12/2006 a)	2270 OK (4/25/2006 a)	(326 - 2270)/(7 - 6)	-1944
ND<398 OK (10/19/2006 a)	2270 OK (4/25/2006 a)	(398 - 2270)/(8 - 6)	-936
ND<292 OK (12/29/2006 a)	2270 OK (4/25/2006 a)	(292 - 2270)/(9 - 6)	-659.333
ND<262 OK (3/10/2007 a)	2270 OK (4/25/2006 a)	(262 - 2270)/(10 - 6)	-502
ND<251 OK (6/8/2007 a)	2270 OK (4/25/2006 a)	(251 - 2270)/(11 - 6)	-403.8
ND<398 OK (10/19/2006 a)	ND<326 OK (7/12/2006 a)	(398 - 326)/(8 - 7)	72
ND<292 OK (12/29/2006 a)	ND<326 OK (7/12/2006 a)	(292 - 326)/(9 - 7)	-17
ND<262 OK (3/10/2007 a)	ND<326 OK (7/12/2006 a)	(262 - 326)/(10 - 7)	-21.3333
ND<251 OK (6/8/2007 a)	ND<326 OK (7/12/2006 a)	(251 - 326)/(11 - 7)	-18.75
ND<292 OK (12/29/2006 a)	ND<398 OK (10/19/2006 a)	(292 - 398)/(9 - 8)	-106
ND<262 OK (3/10/2007 a)	ND<398 OK (10/19/2006 a)	(262 - 398)/(10 - 8)	-68
ND<251 OK (6/8/2007 a)	ND<398 OK (10/19/2006 a)	(251 - 398)/(11 - 8)	-49
ND<262 OK (3/10/2007 a)	ND<292 OK (12/29/2006 a)	(262 - 292)/(10 - 9)	-30
ND<251 OK (6/8/2007 a)	ND<292 OK (12/29/2006 a)	(251 - 292)/(11 - 9)	-20.5
ND<251 OK (6/8/2007 a)	ND<262 OK (3/10/2007 a)	(251 - 262)/(11 - 10)	-11

Number of Q values = 55

Ordered Q Values

n	Q
1	-1944
2	-936

3	-659.333
4	-502
5	-403.8
6	-106
7	-68
8	-49
9	-42
10	-30
11	-23
12	-21.3333
13	-20.5
14	-19.6667
15	-18.75
16	-18.4286
17	-18
18	-18
19	-17.6
20	-17.4286
21	-17
22	-16.625
23	-16.25
24	-15.6667
25	-15.3333
26	-15.2
27	-14.5
28	-14.5
29	-14.5
30	-14.2857
31	-14.15
32	-13.625
33	-13.2
34	-12.5625
35	-11.5
36	-11.0833
37	-11
38	-8
39	-6
40	-6
41	-4.25
42	-4.16667
43	-4

44	-0.5
45	0.785714
46	1
47	2.8
48	4.5
49	20
50	72
51	375.5
52	469.5
53	628.667
54	945
55	1932

Sen's Estimator (Median Q) is -14.5

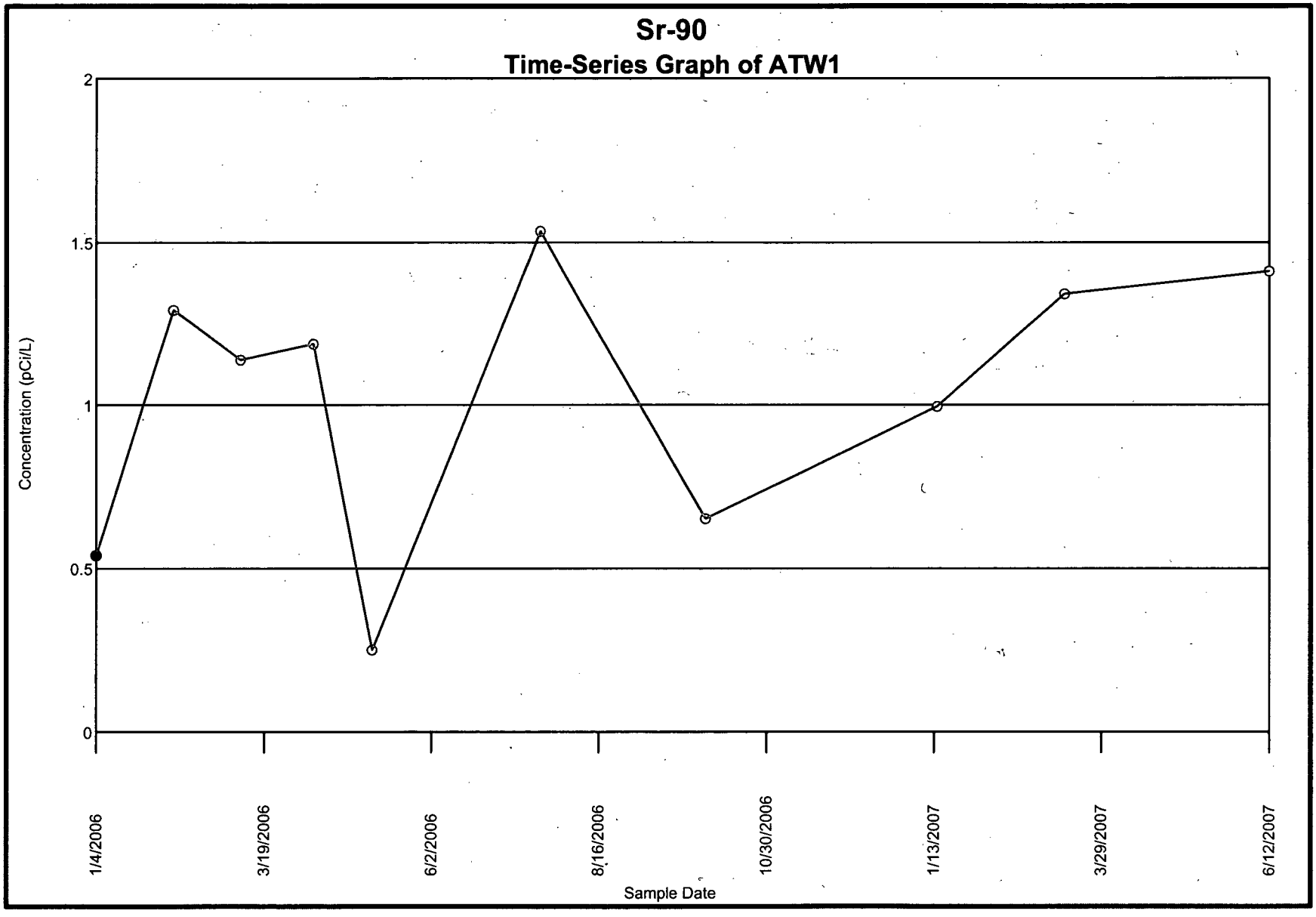
Time Period	Observations
1/4/2006	1
2/2/2006	1
2/21/2006	1
3/11/2006	1
4/15/2006	1
4/25/2006	1
7/12/2006	1
10/19/2006	1
12/29/2006	1
3/10/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357

M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -18 = Q(17)
Upper limit is -6 = Q(39)
-6 < 0 indicating a downward trend in data.

Trend Analysis – Strontium-90
Q4 2005 through June 2007


Sr-90
Time-Series Graph of ATW1
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: ATW1

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.29 U (2/7/2006 a)	0.54 U (1/4/2006 a)	(1.29 - 0.54)/(2 - 1)	0.75
ND<1.14 U (3/9/2006 a)	0.54 U (1/4/2006 a)	(1.14 - 0.54)/(3 - 1)	0.3
ND<1.19 U (4/11/2006 a)	0.54 U (1/4/2006 a)	(1.19 - 0.54)/(4 - 1)	0.216667
ND<0.251 OK (5/7/2006 a)	0.54 U (1/4/2006 a)	(0.251 - 0.54)/(5 - 1)	-0.07225
ND<1.535 OK (7/21/2006 ~)	0.54 U (1/4/2006 a)	(1.535 - 0.54)/(6 - 1)	0.199
ND<0.654 OK (10/3/2006 a)	0.54 U (1/4/2006 a)	(0.654 - 0.54)/(7 - 1)	0.019
ND<0.996 OK (1/15/2007 a)	0.54 U (1/4/2006 a)	(0.996 - 0.54)/(8 - 1)	0.0651429
ND<1.34 OK (3/13/2007 a)	0.54 U (1/4/2006 a)	(1.34 - 0.54)/(9 - 1)	0.1
ND<1.41 OK (6/12/2007 a)	0.54 U (1/4/2006 a)	(1.41 - 0.54)/(10 - 1)	0.0966667
ND<1.14 U (3/9/2006 a)	ND<1.29 U (2/7/2006 a)	(1.14 - 1.29)/(3 - 2)	-0.15
ND<1.19 U (4/11/2006 a)	ND<1.29 U (2/7/2006 a)	(1.19 - 1.29)/(4 - 2)	-0.05
ND<0.251 OK (5/7/2006 a)	ND<1.29 U (2/7/2006 a)	(0.251 - 1.29)/(5 - 2)	-0.346333
ND<1.535 OK (7/21/2006 ~)	ND<1.29 U (2/7/2006 a)	(1.535 - 1.29)/(6 - 2)	0.06125
ND<0.654 OK (10/3/2006 a)	ND<1.29 U (2/7/2006 a)	(0.654 - 1.29)/(7 - 2)	-0.1272
ND<0.996 OK (1/15/2007 a)	ND<1.29 U (2/7/2006 a)	(0.996 - 1.29)/(8 - 2)	-0.049
ND<1.34 OK (3/13/2007 a)	ND<1.29 U (2/7/2006 a)	(1.34 - 1.29)/(9 - 2)	0.00714286
ND<1.41 OK (6/12/2007 a)	ND<1.29 U (2/7/2006 a)	(1.41 - 1.29)/(10 - 2)	0.015
ND<1.19 U (4/11/2006 a)	ND<1.14 U (3/9/2006 a)	(1.19 - 1.14)/(4 - 3)	0.05
ND<0.251 OK (5/7/2006 a)	ND<1.14 U (3/9/2006 a)	(0.251 - 1.14)/(5 - 3)	-0.4445
ND<1.535 OK (7/21/2006 ~)	ND<1.14 U (3/9/2006 a)	(1.535 - 1.14)/(6 - 3)	0.131667
ND<0.654 OK (10/3/2006 a)	ND<1.14 U (3/9/2006 a)	(0.654 - 1.14)/(7 - 3)	-0.1215
ND<0.996 OK (1/15/2007 a)	ND<1.14 U (3/9/2006 a)	(0.996 - 1.14)/(8 - 3)	-0.0288
ND<1.34 OK (3/13/2007 a)	ND<1.14 U (3/9/2006 a)	(1.34 - 1.14)/(9 - 3)	0.0333333
ND<1.41 OK (6/12/2007 a)	ND<1.14 U (3/9/2006 a)	(1.41 - 1.14)/(10 - 3)	0.0385714
ND<0.251 OK (5/7/2006 a)	ND<1.19 U (4/11/2006 a)	(0.251 - 1.19)/(5 - 4)	-0.939
ND<1.535 OK (7/21/2006 ~)	ND<1.19 U (4/11/2006 a)	(1.535 - 1.19)/(6 - 4)	0.1725
ND<0.654 OK (10/3/2006 a)	ND<1.19 U (4/11/2006 a)	(0.654 - 1.19)/(7 - 4)	-0.178667
ND<0.996 OK (1/15/2007 a)	ND<1.19 U (4/11/2006 a)	(0.996 - 1.19)/(8 - 4)	-0.0485
ND<1.34 OK (3/13/2007 a)	ND<1.19 U (4/11/2006 a)	(1.34 - 1.19)/(9 - 4)	0.03
ND<1.41 OK (6/12/2007 a)	ND<1.19 U (4/11/2006 a)	(1.41 - 1.19)/(10 - 4)	0.0366667
ND<1.535 OK (7/21/2006 ~)	ND<0.251 OK (5/7/2006 a)	(1.535 - 0.251)/(6 - 5)	1.284
ND<0.654 OK (10/3/2006 a)	ND<0.251 OK (5/7/2006 a)	(0.654 - 0.251)/(7 - 5)	0.2015
ND<0.996 OK (1/15/2007 a)	ND<0.251 OK (5/7/2006 a)	(0.996 - 0.251)/(8 - 5)	0.248333
ND<1.34 OK (3/13/2007 a)	ND<0.251 OK (5/7/2006 a)	(1.34 - 0.251)/(9 - 5)	0.27225
ND<1.41 OK (6/12/2007 a)	ND<0.251 OK (5/7/2006 a)	(1.41 - 0.251)/(10 - 5)	0.2318
ND<0.654 OK (10/3/2006 a)	ND<1.535 OK (7/21/2006 ~)	(0.654 - 1.535)/(7 - 6)	-0.881
ND<0.996 OK (1/15/2007 a)	ND<1.535 OK (7/21/2006 ~)	(0.996 - 1.535)/(8 - 6)	-0.2695
ND<1.34 OK (3/13/2007 a)	ND<1.535 OK (7/21/2006 ~)	(1.34 - 1.535)/(9 - 6)	-0.065
ND<1.41 OK (6/12/2007 a)	ND<1.535 OK (7/21/2006 ~)	(1.41 - 1.535)/(10 - 6)	-0.03125
ND<0.996 OK (1/15/2007 a)	ND<0.654 OK (10/3/2006 a)	(0.996 - 0.654)/(8 - 7)	0.342
ND<1.34 OK (3/13/2007 a)	ND<0.654 OK (10/3/2006 a)	(1.34 - 0.654)/(9 - 7)	0.343

ND<1.41 OK (6/12/2007 a)	ND<0.654 OK (10/3/2006 a)	(1.41 - 0.654)/(10 - 7)	0.252
ND<1.34 OK (3/13/2007 a)	ND<0.996 OK (1/15/2007 a)	(1.34 - 0.996)/(9 - 8)	0.344
ND<1.41 OK (6/12/2007 a)	ND<0.996 OK (1/15/2007 a)	(1.41 - 0.996)/(10 - 8)	0.207
ND<1.41 OK (6/12/2007 a)	ND<1.34 OK (3/13/2007 a)	(1.41 - 1.34)/(10 - 9)	0.07

Number of Q values = 45

Ordered Q Values

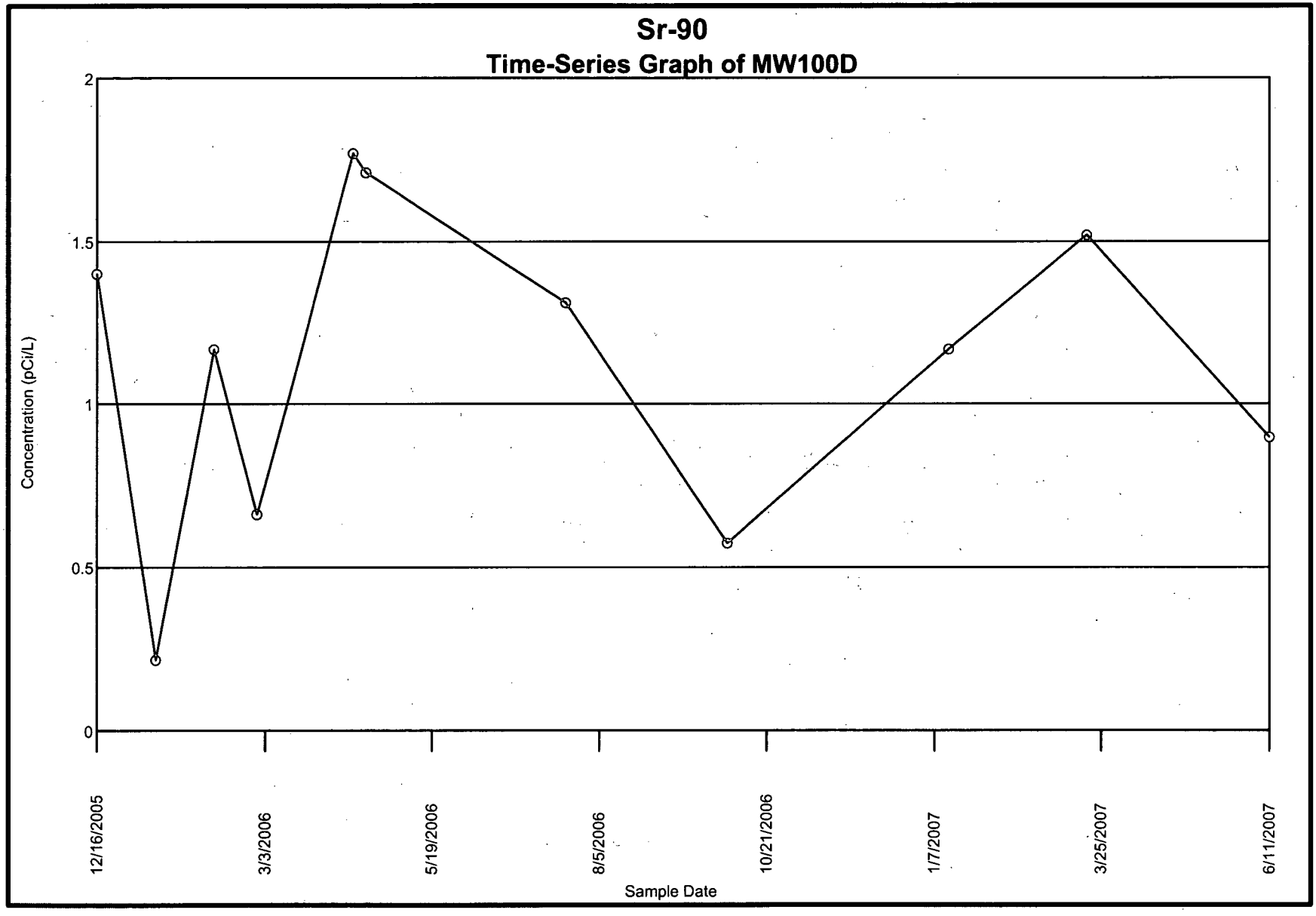
n	Q
1	-0.939
2	-0.881
3	-0.4445
4	-0.346333
5	-0.2695
6	-0.178667
7	-0.15
8	-0.1272
9	-0.1215
10	-0.07225
11	-0.065
12	-0.05
13	-0.049
14	-0.0485
15	-0.03125
16	-0.0288
17	0.00714286
18	0.015
19	0.019
20	0.03
21	0.0333333
22	0.0366667
23	0.0385714
24	0.05
25	0.06125
26	0.0651429
27	0.07
28	0.0966667
29	0.1
30	0.131667
31	0.1725
32	0.199
33	0.2015
34	0.207
35	0.216667
36	0.2318
37	0.248333
38	0.252
39	0.27225
40	0.3
41	0.342
42	0.343
43	0.344
44	0.75
45	1.284

Sen's Estimator (Median Q) is 0.0385714

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/9/2006	1
4/11/2006	1
5/7/2006	1
7/21/2006	1
10/3/2006	1
1/15/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.049 = Q(13)
Upper limit is 0.2015 = Q(33)
-0.049 < 0 < 0.2015 indicating no trend in data.


Sr-90
Time-Series Graph of MW100D
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/19/2006
8/5/2006
10/21/2006
1/7/2007
3/25/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW100D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.214 U (1/12/2006 a)	ND<1.4 U (12/16/2005 a)	(0.214 - 1.4)/(2 - 1)	-1.186
ND<1.17 U (2/8/2006 a)	ND<1.4 U (12/16/2005 a)	(1.17 - 1.4)/(3 - 1)	-0.115
ND<0.665 U (2/28/2006 a)	ND<1.4 U (12/16/2005 a)	(0.665 - 1.4)/(4 - 1)	-0.245
ND<1.77 U (4/13/2006 a)	ND<1.4 U (12/16/2005 a)	(1.77 - 1.4)/(5 - 1)	0.0925
ND<1.71 OK (4/19/2006 a)	ND<1.4 U (12/16/2005 a)	(1.71 - 1.4)/(6 - 1)	0.062
ND<1.31 OK (7/21/2006 a)	ND<1.4 U (12/16/2005 a)	(1.31 - 1.4)/(7 - 1)	-0.015
ND<0.575 OK (10/3/2006 a)	ND<1.4 U (12/16/2005 a)	(0.575 - 1.4)/(8 - 1)	-0.117857
ND<1.17 OK (1/14/2007 a)	ND<1.4 U (12/16/2005 a)	(1.17 - 1.4)/(9 - 1)	-0.02875
ND<1.52 OK (3/19/2007 a)	ND<1.4 U (12/16/2005 a)	(1.52 - 1.4)/(10 - 1)	0.0133333
ND<0.899 OK (6/11/2007 a)	ND<1.4 U (12/16/2005 a)	(0.899 - 1.4)/(11 - 1)	-0.0501
ND<1.17 U (2/8/2006 a)	ND<0.214 U (1/12/2006 a)	(1.17 - 0.214)/(3 - 2)	0.956
ND<0.665 U (2/28/2006 a)	ND<0.214 U (1/12/2006 a)	(0.665 - 0.214)/(4 - 2)	0.2255
ND<1.77 U (4/13/2006 a)	ND<0.214 U (1/12/2006 a)	(1.77 - 0.214)/(5 - 2)	0.518667
ND<1.71 OK (4/19/2006 a)	ND<0.214 U (1/12/2006 a)	(1.71 - 0.214)/(6 - 2)	0.374
ND<1.31 OK (7/21/2006 a)	ND<0.214 U (1/12/2006 a)	(1.31 - 0.214)/(7 - 2)	0.2192
ND<0.575 OK (10/3/2006 a)	ND<0.214 U (1/12/2006 a)	(0.575 - 0.214)/(8 - 2)	0.0601667
ND<1.17 OK (1/14/2007 a)	ND<0.214 U (1/12/2006 a)	(1.17 - 0.214)/(9 - 2)	0.136571
ND<1.52 OK (3/19/2007 a)	ND<0.214 U (1/12/2006 a)	(1.52 - 0.214)/(10 - 2)	0.16325
ND<0.899 OK (6/11/2007 a)	ND<0.214 U (1/12/2006 a)	(0.899 - 0.214)/(11 - 2)	0.0761111
ND<0.665 U (2/28/2006 a)	ND<1.17 U (2/8/2006 a)	(0.665 - 1.17)/(4 - 3)	-0.505
ND<1.77 U (4/13/2006 a)	ND<1.17 U (2/8/2006 a)	(1.77 - 1.17)/(5 - 3)	0.3
ND<1.71 OK (4/19/2006 a)	ND<1.17 U (2/8/2006 a)	(1.71 - 1.17)/(6 - 3)	0.18
ND<1.31 OK (7/21/2006 a)	ND<1.17 U (2/8/2006 a)	(1.31 - 1.17)/(7 - 3)	0.035
ND<0.575 OK (10/3/2006 a)	ND<1.17 U (2/8/2006 a)	(0.575 - 1.17)/(8 - 3)	-0.119
ND<1.17 OK (1/14/2007 a)	ND<1.17 U (2/8/2006 a)	(1.17 - 1.17)/(9 - 3)	0
ND<1.52 OK (3/19/2007 a)	ND<1.17 U (2/8/2006 a)	(1.52 - 1.17)/(10 - 3)	0.05
ND<0.899 OK (6/11/2007 a)	ND<1.17 U (2/8/2006 a)	(0.899 - 1.17)/(11 - 3)	-0.033875
ND<1.77 U (4/13/2006 a)	ND<0.665 U (2/28/2006 a)	(1.77 - 0.665)/(5 - 4)	1.105
ND<1.71 OK (4/19/2006 a)	ND<0.665 U (2/28/2006 a)	(1.71 - 0.665)/(6 - 4)	0.5225
ND<1.31 OK (7/21/2006 a)	ND<0.665 U (2/28/2006 a)	(1.31 - 0.665)/(7 - 4)	0.215
ND<0.575 OK (10/3/2006 a)	ND<0.665 U (2/28/2006 a)	(0.575 - 0.665)/(8 - 4)	-0.0225
ND<1.17 OK (1/14/2007 a)	ND<0.665 U (2/28/2006 a)	(1.17 - 0.665)/(9 - 4)	0.101
ND<1.52 OK (3/19/2007 a)	ND<0.665 U (2/28/2006 a)	(1.52 - 0.665)/(10 - 4)	0.1425
ND<0.899 OK (6/11/2007 a)	ND<0.665 U (2/28/2006 a)	(0.899 - 0.665)/(11 - 4)	0.0334286
ND<1.71 OK (4/19/2006 a)	ND<1.77 U (4/13/2006 a)	(1.71 - 1.77)/(6 - 5)	-0.06
ND<1.31 OK (7/21/2006 a)	ND<1.77 U (4/13/2006 a)	(1.31 - 1.77)/(7 - 5)	-0.23
ND<0.575 OK (10/3/2006 a)	ND<1.77 U (4/13/2006 a)	(0.575 - 1.77)/(8 - 5)	-0.398333
ND<1.17 OK (1/14/2007 a)	ND<1.77 U (4/13/2006 a)	(1.17 - 1.77)/(9 - 5)	-0.15
ND<1.52 OK (3/19/2007 a)	ND<1.77 U (4/13/2006 a)	(1.52 - 1.77)/(10 - 5)	-0.05
ND<0.899 OK (6/11/2007 a)	ND<1.77 U (4/13/2006 a)	(0.899 - 1.77)/(11 - 5)	-0.145167
ND<1.31 OK (7/21/2006 a)	ND<1.71 OK (4/19/2006 a)	(1.31 - 1.71)/(7 - 6)	-0.4
ND<0.575 OK (10/3/2006 a)	ND<1.71 OK (4/19/2006 a)	(0.575 - 1.71)/(8 - 6)	-0.5675

ND<1.17 OK (1/14/2007 a)	ND<1.71 OK (4/19/2006 a)	(1.17 - 1.71)/(9 - 6)	-0.18
ND<1.52 OK (3/19/2007 a)	ND<1.71 OK (4/19/2006 a)	(1.52 - 1.71)/(10 - 6)	-0.0475
ND<0.899 OK (6/11/2007 a)	ND<1.71 OK (4/19/2006 a)	(0.899 - 1.71)/(11 - 6)	-0.1622
ND<0.575 OK (10/3/2006 a)	ND<1.31 OK (7/21/2006 a)	(0.575 - 1.31)/(8 - 7)	-0.735
ND<1.17 OK (1/14/2007 a)	ND<1.31 OK (7/21/2006 a)	(1.17 - 1.31)/(9 - 7)	-0.07
ND<1.52 OK (3/19/2007 a)	ND<1.31 OK (7/21/2006 a)	(1.52 - 1.31)/(10 - 7)	0.07
ND<0.899 OK (6/11/2007 a)	ND<1.31 OK (7/21/2006 a)	(0.899 - 1.31)/(11 - 7)	-0.10275
ND<1.17 OK (1/14/2007 a)	ND<0.575 OK (10/3/2006 a)	(1.17 - 0.575)/(9 - 8)	0.595
ND<1.52 OK (3/19/2007 a)	ND<0.575 OK (10/3/2006 a)	(1.52 - 0.575)/(10 - 8)	0.4725
ND<0.899 OK (6/11/2007 a)	ND<0.575 OK (10/3/2006 a)	(0.899 - 0.575)/(11 - 8)	0.108
ND<1.52 OK (3/19/2007 a)	ND<1.17 OK (1/14/2007 a)	(1.52 - 1.17)/(10 - 9)	0.35
ND<0.899 OK (6/11/2007 a)	ND<1.17 OK (1/14/2007 a)	(0.899 - 1.17)/(11 - 9)	-0.1355
ND<0.899 OK (6/11/2007 a)	ND<1.52 OK (3/19/2007 a)	(0.899 - 1.52)/(11 - 10)	-0.621

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.186
2	-0.735
3	-0.621
4	-0.5675
5	-0.505
6	-0.4
7	-0.398333
8	-0.245
9	-0.23
10	-0.18
11	-0.1622
12	-0.15
13	-0.145167
14	-0.1355
15	-0.119
16	-0.117857
17	-0.115
18	-0.10275
19	-0.07
20	-0.06
21	-0.0501
22	-0.05
23	-0.0475
24	-0.033875
25	-0.02875
26	-0.0225
27	-0.015
28	0
29	0.0133333
30	0.0334286
31	0.035
32	0.05
33	0.0601667
34	0.062

35	0.07
36	0.0761111
37	0.0925
38	0.101
39	0.108
40	0.136571
41	0.1425
42	0.16325
43	0.18
44	0.215
45	0.2192
46	0.2255
47	0.3
48	0.35
49	0.374
50	0.4725
51	0.518667
52	0.5225
53	0.595
54	0.956
55	1.105

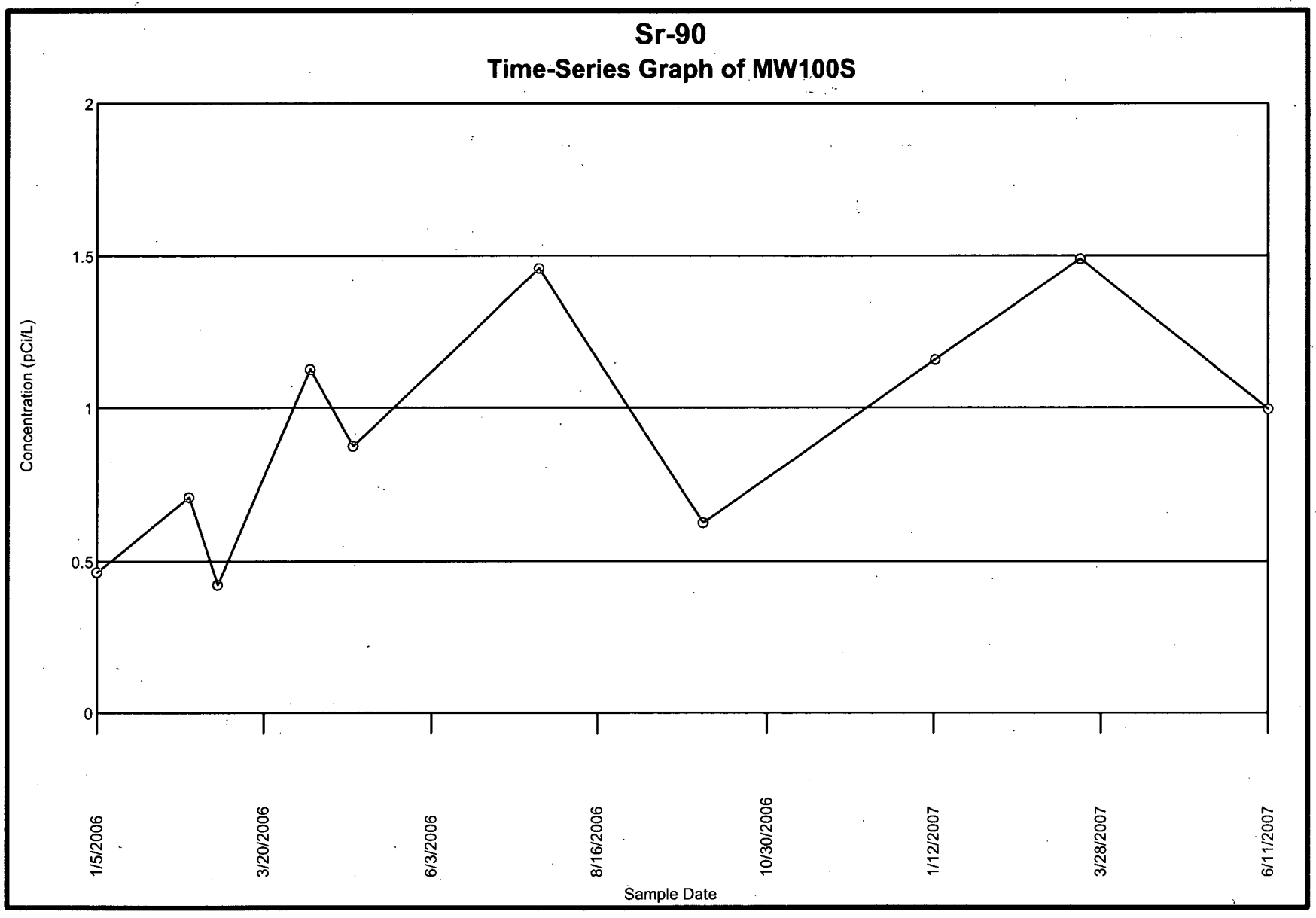
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	1.17	2

Time Period	Observations
12/16/2005	1
1/12/2006	1
2/8/2006	1
2/28/2006	1
4/13/2006	1
4/19/2006	1
7/21/2006	1
10/3/2006	1
1/14/2007	1
3/19/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -0.115 = Q(17)
Upper limit is 0.108 = Q(39)
-0.115 < 0 < 0.108 indicating no trend in data.


Sr-90
Time-Series Graph of MW100S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/16/2006
10/30/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW100S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.711 U (2/15/2006 a)	ND<0.461 U (1/5/2006 a)	(0.711 - 0.461)/(2 - 1)	0.25
ND<0.418 U (2/28/2006 a)	ND<0.461 U (1/5/2006 a)	(0.418 - 0.461)/(3 - 1)	-0.0215
ND<1.13 U (4/10/2006 a)	ND<0.461 U (1/5/2006 a)	(1.13 - 0.461)/(4 - 1)	0.223
ND<0.878 OK (4/29/2006 a)	ND<0.461 U (1/5/2006 a)	(0.878 - 0.461)/(5 - 1)	0.10425
ND<1.46 OK (7/21/2006 a)	ND<0.461 U (1/5/2006 a)	(1.46 - 0.461)/(6 - 1)	0.1998
ND<0.625 OK (10/2/2006 a)	ND<0.461 U (1/5/2006 a)	(0.625 - 0.461)/(7 - 1)	0.0273333
ND<1.16 OK (1/14/2007 a)	ND<0.461 U (1/5/2006 a)	(1.16 - 0.461)/(8 - 1)	0.0998571
ND<1.49 OK (3/19/2007 a)	ND<0.461 U (1/5/2006 a)	(1.49 - 0.461)/(9 - 1)	0.128625
ND<0.999 OK (6/11/2007 a)	ND<0.461 U (1/5/2006 a)	(0.999 - 0.461)/(10 - 1)	0.0597778
ND<0.418 U (2/28/2006 a)	ND<0.711 U (2/15/2006 a)	(0.418 - 0.711)/(3 - 2)	-0.293
ND<1.13 U (4/10/2006 a)	ND<0.711 U (2/15/2006 a)	(1.13 - 0.711)/(4 - 2)	0.2095
ND<0.878 OK (4/29/2006 a)	ND<0.711 U (2/15/2006 a)	(0.878 - 0.711)/(5 - 2)	0.0556667
ND<1.46 OK (7/21/2006 a)	ND<0.711 U (2/15/2006 a)	(1.46 - 0.711)/(6 - 2)	0.18725
ND<0.625 OK (10/2/2006 a)	ND<0.711 U (2/15/2006 a)	(0.625 - 0.711)/(7 - 2)	-0.0172
ND<1.16 OK (1/14/2007 a)	ND<0.711 U (2/15/2006 a)	(1.16 - 0.711)/(8 - 2)	0.0748333
ND<1.49 OK (3/19/2007 a)	ND<0.711 U (2/15/2006 a)	(1.49 - 0.711)/(9 - 2)	0.111286
ND<0.999 OK (6/11/2007 a)	ND<0.711 U (2/15/2006 a)	(0.999 - 0.711)/(10 - 2)	0.036
ND<1.13 U (4/10/2006 a)	ND<0.418 U (2/28/2006 a)	(1.13 - 0.418)/(4 - 3)	0.712
ND<0.878 OK (4/29/2006 a)	ND<0.418 U (2/28/2006 a)	(0.878 - 0.418)/(5 - 3)	0.23
ND<1.46 OK (7/21/2006 a)	ND<0.418 U (2/28/2006 a)	(1.46 - 0.418)/(6 - 3)	0.347333
ND<0.625 OK (10/2/2006 a)	ND<0.418 U (2/28/2006 a)	(0.625 - 0.418)/(7 - 3)	0.05175
ND<1.16 OK (1/14/2007 a)	ND<0.418 U (2/28/2006 a)	(1.16 - 0.418)/(8 - 3)	0.1484
ND<1.49 OK (3/19/2007 a)	ND<0.418 U (2/28/2006 a)	(1.49 - 0.418)/(9 - 3)	0.178667
ND<0.999 OK (6/11/2007 a)	ND<0.418 U (2/28/2006 a)	(0.999 - 0.418)/(10 - 3)	0.083
ND<0.878 OK (4/29/2006 a)	ND<1.13 U (4/10/2006 a)	(0.878 - 1.13)/(5 - 4)	-0.252
ND<1.46 OK (7/21/2006 a)	ND<1.13 U (4/10/2006 a)	(1.46 - 1.13)/(6 - 4)	0.165
ND<0.625 OK (10/2/2006 a)	ND<1.13 U (4/10/2006 a)	(0.625 - 1.13)/(7 - 4)	-0.168333
ND<1.16 OK (1/14/2007 a)	ND<1.13 U (4/10/2006 a)	(1.16 - 1.13)/(8 - 4)	0.0075

ND<1.49 OK (3/19/2007 a)	ND<1.13 U (4/10/2006 a)	(1.49 - 1.13)/(9 - 4)	0.072
ND<0.999 OK (6/11/2007 a)	ND<1.13 U (4/10/2006 a)	(0.999 - 1.13)/(10 - 4)	-0.0218333
ND<1.46 OK (7/21/2006 a)	ND<0.878 OK (4/29/2006 a)	(1.46 - 0.878)/(6 - 5)	0.582
ND<0.625 OK (10/2/2006 a)	ND<0.878 OK (4/29/2006 a)	(0.625 - 0.878)/(7 - 5)	-0.1265
ND<1.16 OK (1/14/2007 a)	ND<0.878 OK (4/29/2006 a)	(1.16 - 0.878)/(8 - 5)	0.094
ND<1.49 OK (3/19/2007 a)	ND<0.878 OK (4/29/2006 a)	(1.49 - 0.878)/(9 - 5)	0.153
ND<0.999 OK (6/11/2007 a)	ND<0.878 OK (4/29/2006 a)	(0.999 - 0.878)/(10 - 5)	0.0242
ND<0.625 OK (10/2/2006 a)	ND<1.46 OK (7/21/2006 a)	(0.625 - 1.46)/(7 - 6)	-0.835
ND<1.16 OK (1/14/2007 a)	ND<1.46 OK (7/21/2006 a)	(1.16 - 1.46)/(8 - 6)	-0.15
ND<1.49 OK (3/19/2007 a)	ND<1.46 OK (7/21/2006 a)	(1.49 - 1.46)/(9 - 6)	0.01
ND<0.999 OK (6/11/2007 a)	ND<1.46 OK (7/21/2006 a)	(0.999 - 1.46)/(10 - 6)	-0.11525
ND<1.16 OK (1/14/2007 a)	ND<0.625 OK (10/2/2006 a)	(1.16 - 0.625)/(8 - 7)	0.535
ND<1.49 OK (3/19/2007 a)	ND<0.625 OK (10/2/2006 a)	(1.49 - 0.625)/(9 - 7)	0.4325
ND<0.999 OK (6/11/2007 a)	ND<0.625 OK (10/2/2006 a)	(0.999 - 0.625)/(10 - 7)	0.124667
ND<1.49 OK (3/19/2007 a)	ND<1.16 OK (1/14/2007 a)	(1.49 - 1.16)/(9 - 8)	0.33
ND<0.999 OK (6/11/2007 a)	ND<1.16 OK (1/14/2007 a)	(0.999 - 1.16)/(10 - 8)	-0.0805
ND<0.999 OK (6/11/2007 a)	ND<1.49 OK (3/19/2007 a)	(0.999 - 1.49)/(10 - 9)	-0.491

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.835
2	-0.491
3	-0.293
4	-0.252
5	-0.168333
6	-0.15
7	-0.1265
8	-0.11525
9	-0.0805
10	-0.0218333
11	-0.0215
12	-0.0172
13	0.0075

14	0.01
15	0.0242
16	0.0273333
17	0.036
18	0.05175
19	0.0556667
20	0.0597778
21	0.072
22	0.0748333
23	0.083
24	0.094
25	0.0998571
26	0.10425
27	0.111286
28	0.124667
29	0.128625
30	0.1484
31	0.153
32	0.165
33	0.178667
34	0.18725
35	0.1998
36	0.2095
37	0.223
38	0.23
39	0.25
40	0.33
41	0.347333
42	0.4325
43	0.535
44	0.582
45	0.712

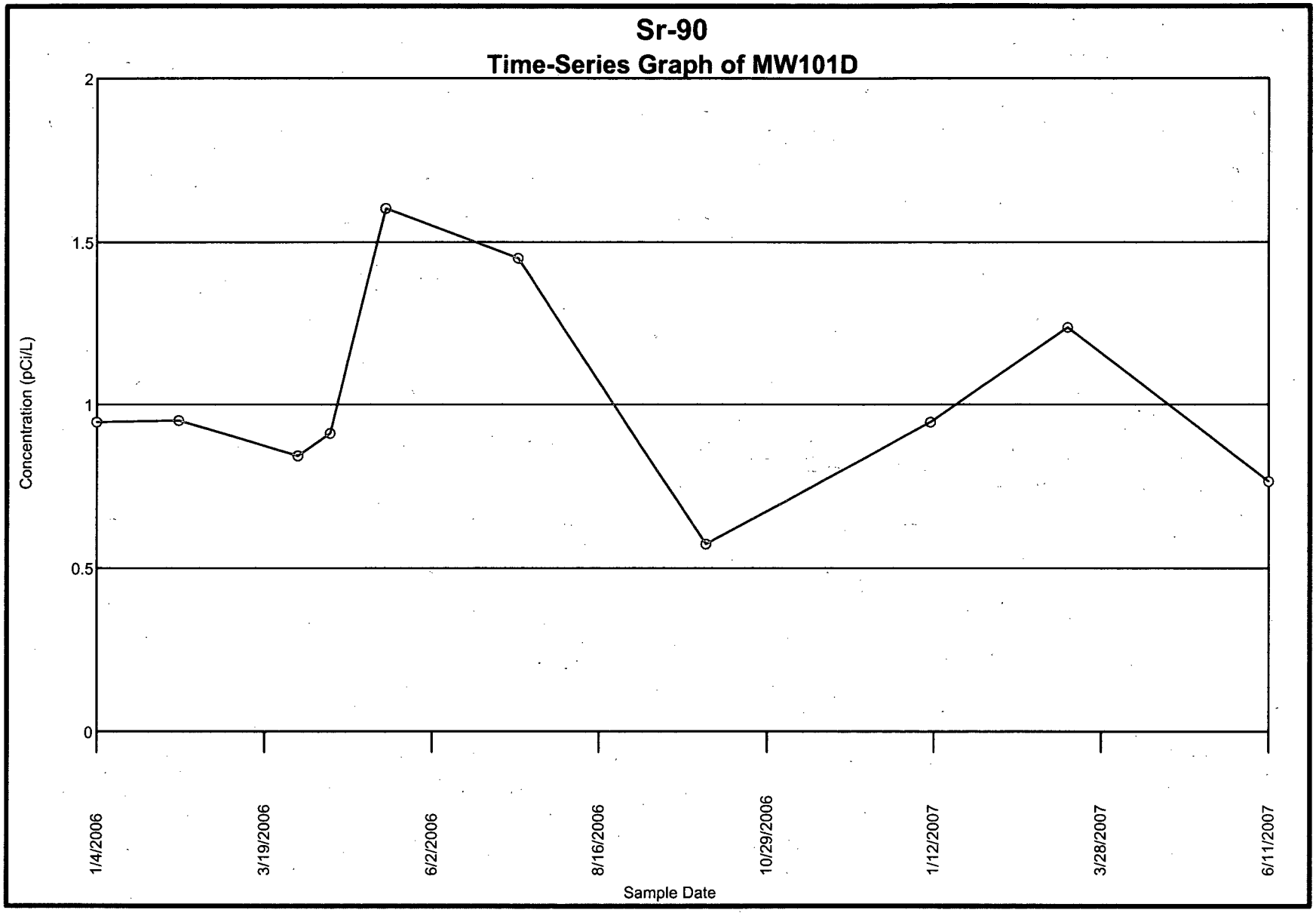
Sen's Estimator (Median Q) is 0.083

Time Period	Observations
1/5/2006	1
2/15/2006	1
2/28/2006	1
4/10/2006	1
4/29/2006	1
7/21/2006	1

10/2/2006	1
1/14/2007	1
3/19/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is 0.0075 = Q(13)
Upper limit is 0.178667 = Q(33)
0.0075 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW101D
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW101D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.955 U (2/9/2006 a)	ND<0.949 U (1/4/2006 a)	(0.955 - 0.949)/(2 - 1)	0.006
ND<0.845 U (4/4/2006 a)	ND<0.949 U (1/4/2006 a)	(0.845 - 0.949)/(3 - 1)	-0.052
ND<0.914 U (4/18/2006 a)	ND<0.949 U (1/4/2006 a)	(0.914 - 0.949)/(4 - 1)	-0.0116667
ND<1.6 OK (5/13/2006 a)	ND<0.949 U (1/4/2006 a)	(1.6 - 0.949)/(5 - 1)	0.16275
ND<1.45 OK (7/11/2006 a)	ND<0.949 U (1/4/2006 a)	(1.45 - 0.949)/(6 - 1)	0.1002
ND<0.575 OK (10/3/2006 ~)	ND<0.949 U (1/4/2006 a)	(0.575 - 0.949)/(7 - 1)	-0.0623333
ND<0.948 OK (1/11/2007 a)	ND<0.949 U (1/4/2006 a)	(0.948 - 0.949)/(8 - 1)	-0.000142857
ND<1.24 OK (3/13/2007 a)	ND<0.949 U (1/4/2006 a)	(1.24 - 0.949)/(9 - 1)	0.036375
ND<0.766 OK (6/11/2007 a)	ND<0.949 U (1/4/2006 a)	(0.766 - 0.949)/(10 - 1)	-0.0203333
ND<0.845 U (4/4/2006 a)	ND<0.955 U (2/9/2006 a)	(0.845 - 0.955)/(3 - 2)	-0.11
ND<0.914 U (4/18/2006 a)	ND<0.955 U (2/9/2006 a)	(0.914 - 0.955)/(4 - 2)	-0.0205
ND<1.6 OK (5/13/2006 a)	ND<0.955 U (2/9/2006 a)	(1.6 - 0.955)/(5 - 2)	0.215
ND<1.45 OK (7/11/2006 a)	ND<0.955 U (2/9/2006 a)	(1.45 - 0.955)/(6 - 2)	0.12375
ND<0.575 OK (10/3/2006 ~)	ND<0.955 U (2/9/2006 a)	(0.575 - 0.955)/(7 - 2)	-0.076
ND<0.948 OK (1/11/2007 a)	ND<0.955 U (2/9/2006 a)	(0.948 - 0.955)/(8 - 2)	-0.00116667
ND<1.24 OK (3/13/2007 a)	ND<0.955 U (2/9/2006 a)	(1.24 - 0.955)/(9 - 2)	0.0407143
ND<0.766 OK (6/11/2007 a)	ND<0.955 U (2/9/2006 a)	(0.766 - 0.955)/(10 - 2)	-0.023625
ND<0.914 U (4/18/2006 a)	ND<0.845 U (4/4/2006 a)	(0.914 - 0.845)/(4 - 3)	0.069
ND<1.6 OK (5/13/2006 a)	ND<0.845 U (4/4/2006 a)	(1.6 - 0.845)/(5 - 3)	0.3775
ND<1.45 OK (7/11/2006 a)	ND<0.845 U (4/4/2006 a)	(1.45 - 0.845)/(6 - 3)	0.201667
ND<0.575 OK (10/3/2006 ~)	ND<0.845 U (4/4/2006 a)	(0.575 - 0.845)/(7 - 3)	-0.0675
ND<0.948 OK (1/11/2007 a)	ND<0.845 U (4/4/2006 a)	(0.948 - 0.845)/(8 - 3)	0.0206
ND<1.24 OK (3/13/2007 a)	ND<0.845 U (4/4/2006 a)	(1.24 - 0.845)/(9 - 3)	0.0658333
ND<0.766 OK (6/11/2007 a)	ND<0.845 U (4/4/2006 a)	(0.766 - 0.845)/(10 - 3)	-0.0112857
ND<1.6 OK (5/13/2006 a)	ND<0.914 U (4/18/2006 a)	(1.6 - 0.914)/(5 - 4)	0.686
ND<1.45 OK (7/11/2006 a)	ND<0.914 U (4/18/2006 a)	(1.45 - 0.914)/(6 - 4)	0.268
ND<0.575 OK (10/3/2006 ~)	ND<0.914 U (4/18/2006 a)	(0.575 - 0.914)/(7 - 4)	-0.113
ND<0.948 OK (1/11/2007 a)	ND<0.914 U (4/18/2006 a)	(0.948 - 0.914)/(8 - 4)	0.0085

ND<1.24 OK (3/13/2007 a)	ND<0.914 U (4/18/2006 a)	(1.24 - 0.914)/(9 - 4)	0.0652
ND<0.766 OK (6/11/2007 a)	ND<0.914 U (4/18/2006 a)	(0.766 - 0.914)/(10 - 4)	-0.0246667
ND<1.45 OK (7/11/2006 a)	ND<1.6 OK (5/13/2006 a)	(1.45 - 1.6)/(6 - 5)	-0.15
ND<0.575 OK (10/3/2006 ~)	ND<1.6 OK (5/13/2006 a)	(0.575 - 1.6)/(7 - 5)	-0.5125
ND<0.948 OK (1/11/2007 a)	ND<1.6 OK (5/13/2006 a)	(0.948 - 1.6)/(8 - 5)	-0.217333
ND<1.24 OK (3/13/2007 a)	ND<1.6 OK (5/13/2006 a)	(1.24 - 1.6)/(9 - 5)	-0.09
ND<0.766 OK (6/11/2007 a)	ND<1.6 OK (5/13/2006 a)	(0.766 - 1.6)/(10 - 5)	-0.1668
ND<0.575 OK (10/3/2006 ~)	ND<1.45 OK (7/11/2006 a)	(0.575 - 1.45)/(7 - 6)	-0.875
ND<0.948 OK (1/11/2007 a)	ND<1.45 OK (7/11/2006 a)	(0.948 - 1.45)/(8 - 6)	-0.251
ND<1.24 OK (3/13/2007 a)	ND<1.45 OK (7/11/2006 a)	(1.24 - 1.45)/(9 - 6)	-0.07
ND<0.766 OK (6/11/2007 a)	ND<1.45 OK (7/11/2006 a)	(0.766 - 1.45)/(10 - 6)	-0.171
ND<0.948 OK (1/11/2007 a)	ND<0.575 OK (10/3/2006 ~)	(0.948 - 0.575)/(8 - 7)	0.373
ND<1.24 OK (3/13/2007 a)	ND<0.575 OK (10/3/2006 ~)	(1.24 - 0.575)/(9 - 7)	0.3325
ND<0.766 OK (6/11/2007 a)	ND<0.575 OK (10/3/2006 ~)	(0.766 - 0.575)/(10 - 7)	0.0636667
ND<1.24 OK (3/13/2007 a)	ND<0.948 OK (1/11/2007 a)	(1.24 - 0.948)/(9 - 8)	0.292
ND<0.766 OK (6/11/2007 a)	ND<0.948 OK (1/11/2007 a)	(0.766 - 0.948)/(10 - 8)	-0.091
ND<0.766 OK (6/11/2007 a)	ND<1.24 OK (3/13/2007 a)	(0.766 - 1.24)/(10 - 9)	-0.474

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.875
2	-0.5125
3	-0.474
4	-0.251
5	-0.217333
6	-0.171
7	-0.1668
8	-0.15
9	-0.113
10	-0.11
11	-0.091
12	-0.09
13	-0.076

14	-0.07
15	-0.0675
16	-0.0623333
17	-0.052
18	-0.0246667
19	-0.023625
20	-0.0205
21	-0.0203333
22	-0.0116667
23	-0.0112857
24	-0.00116667
25	-0.000142857
26	0.006
27	0.0085
28	0.0206
29	0.036375
30	0.0407143
31	0.0636667
32	0.0652
33	0.0658333
34	0.069
35	0.1002
36	0.12375
37	0.16275
38	0.201667
39	0.215
40	0.268
41	0.292
42	0.3325
43	0.373
44	0.3775
45	0.686

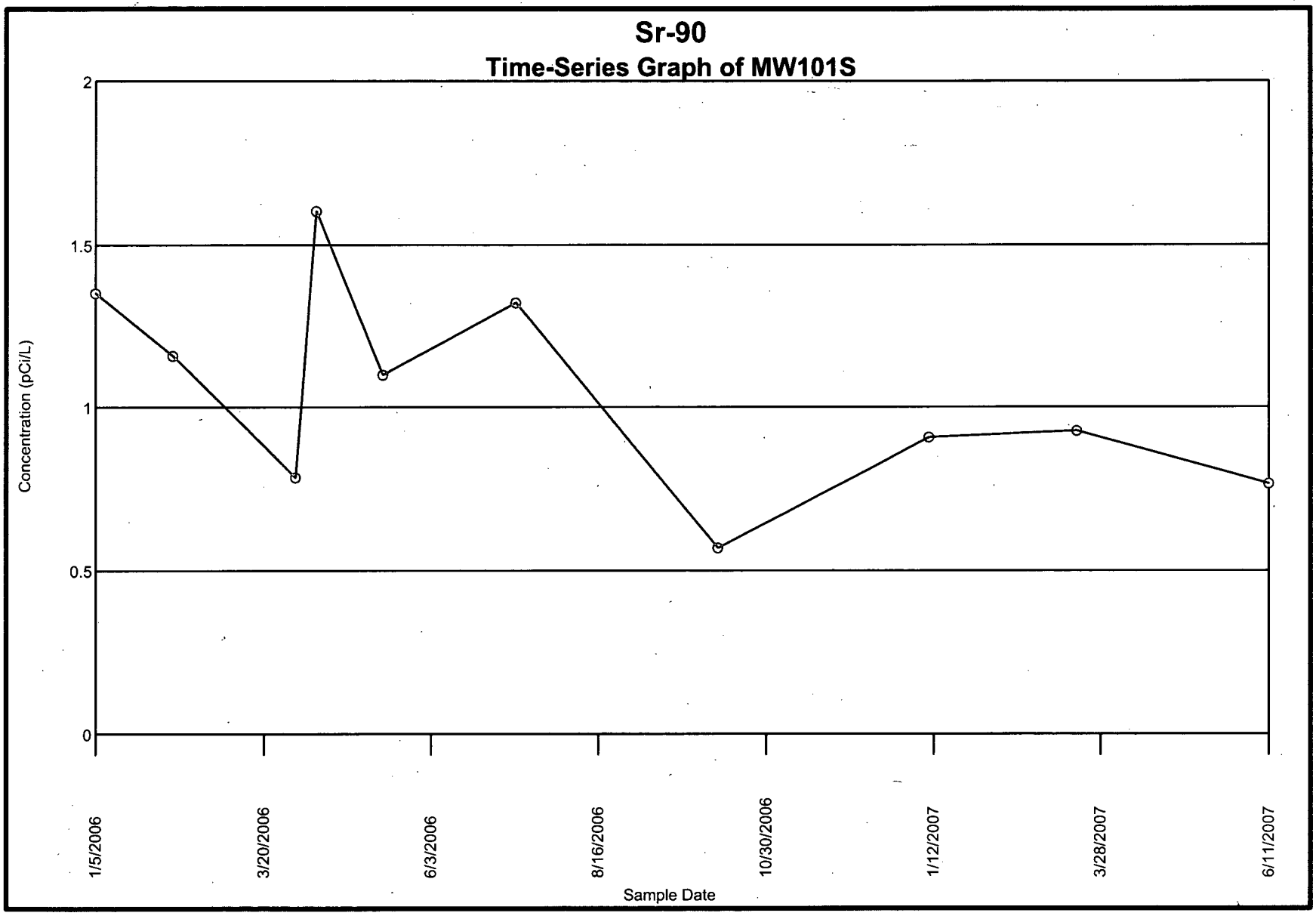
Sen's Estimator (Median Q) is -0.0112857

Time Period	Observations
1/4/2006	1
2/9/2006	1
4/4/2006	1
4/18/2006	1
5/13/2006	1
7/11/2006	1

10/3/2006	1
1/11/2007	1
3/13/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.076 = Q(13)
Upper limit is 0.0658333 = Q(33)
-0.076 < 0 < 0.0658333 indicating no trend in data.


Sr-90
Time-Series Graph of MW101S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/16/2006
10/30/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW101S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.16 U (2/8/2006 a)	ND<1.35 U (1/5/2006 a)	(1.16 - 1.35)/(2 - 1)	-0.19
ND<0.788 U (4/4/2006 a)	ND<1.35 U (1/5/2006 a)	(0.788 - 1.35)/(3 - 1)	-0.281
ND<1.6 U (4/13/2006 a)	ND<1.35 U (1/5/2006 a)	(1.6 - 1.35)/(4 - 1)	0.0833333
ND<1.1 OK (5/13/2006 a)	ND<1.35 U (1/5/2006 a)	(1.1 - 1.35)/(5 - 1)	-0.0625
ND<1.32 OK (7/11/2006 a)	ND<1.35 U (1/5/2006 a)	(1.32 - 1.35)/(6 - 1)	-0.006
ND<0.569 OK (10/9/2006 a)	ND<1.35 U (1/5/2006 a)	(0.569 - 1.35)/(7 - 1)	-0.130167
ND<0.9105 OK (1/11/2007 ~)	ND<1.35 U (1/5/2006 a)	(0.9105 - 1.35)/(8 - 1)	-0.0627857
ND<0.9285 OK (3/18/2007 ~)	ND<1.35 U (1/5/2006 a)	(0.9285 - 1.35)/(9 - 1)	-0.0526875
ND<0.768 OK (6/11/2007 a)	ND<1.35 U (1/5/2006 a)	(0.768 - 1.35)/(10 - 1)	-0.0646667
ND<0.788 U (4/4/2006 a)	ND<1.16 U (2/8/2006 a)	(0.788 - 1.16)/(3 - 2)	-0.372
ND<1.6 U (4/13/2006 a)	ND<1.16 U (2/8/2006 a)	(1.6 - 1.16)/(4 - 2)	0.22
ND<1.1 OK (5/13/2006 a)	ND<1.16 U (2/8/2006 a)	(1.1 - 1.16)/(5 - 2)	-0.02
ND<1.32 OK (7/11/2006 a)	ND<1.16 U (2/8/2006 a)	(1.32 - 1.16)/(6 - 2)	0.04
ND<0.569 OK (10/9/2006 a)	ND<1.16 U (2/8/2006 a)	(0.569 - 1.16)/(7 - 2)	-0.1182
ND<0.9105 OK (1/11/2007 ~)	ND<1.16 U (2/8/2006 a)	(0.9105 - 1.16)/(8 - 2)	-0.0415833
ND<0.9285 OK (3/18/2007 ~)	ND<1.16 U (2/8/2006 a)	(0.9285 - 1.16)/(9 - 2)	-0.0330714
ND<0.768 OK (6/11/2007 a)	ND<1.16 U (2/8/2006 a)	(0.768 - 1.16)/(10 - 2)	-0.049
ND<1.6 U (4/13/2006 a)	ND<0.788 U (4/4/2006 a)	(1.6 - 0.788)/(4 - 3)	0.812
ND<1.1 OK (5/13/2006 a)	ND<0.788 U (4/4/2006 a)	(1.1 - 0.788)/(5 - 3)	0.156
ND<1.32 OK (7/11/2006 a)	ND<0.788 U (4/4/2006 a)	(1.32 - 0.788)/(6 - 3)	0.177333
ND<0.569 OK (10/9/2006 a)	ND<0.788 U (4/4/2006 a)	(0.569 - 0.788)/(7 - 3)	-0.05475
ND<0.9105 OK (1/11/2007 ~)	ND<0.788 U (4/4/2006 a)	(0.9105 - 0.788)/(8 - 3)	0.0245
ND<0.9285 OK (3/18/2007 ~)	ND<0.788 U (4/4/2006 a)	(0.9285 - 0.788)/(9 - 3)	0.0234167
ND<0.768 OK (6/11/2007 a)	ND<0.788 U (4/4/2006 a)	(0.768 - 0.788)/(10 - 3)	-0.00285714
ND<1.1 OK (5/13/2006 a)	ND<1.6 U (4/13/2006 a)	(1.1 - 1.6)/(5 - 4)	-0.5
ND<1.32 OK (7/11/2006 a)	ND<1.6 U (4/13/2006 a)	(1.32 - 1.6)/(6 - 4)	-0.14
ND<0.569 OK (10/9/2006 a)	ND<1.6 U (4/13/2006 a)	(0.569 - 1.6)/(7 - 4)	-0.343667
ND<0.9105 OK (1/11/2007 ~)	ND<1.6 U (4/13/2006 a)	(0.9105 - 1.6)/(8 - 4)	-0.172375
ND<0.9285 OK (3/18/2007 ~)	ND<1.6 U (4/13/2006 a)	(0.9285 - 1.6)/(9 - 4)	-0.1343
ND<0.768 OK (6/11/2007 a)	ND<1.6 U (4/13/2006 a)	(0.768 - 1.6)/(10 - 4)	-0.138667
ND<1.32 OK (7/11/2006 a)	ND<1.1 OK (5/13/2006 a)	(1.32 - 1.1)/(6 - 5)	0.22
ND<0.569 OK (10/9/2006 a)	ND<1.1 OK (5/13/2006 a)	(0.569 - 1.1)/(7 - 5)	-0.2655
ND<0.9105 OK (1/11/2007 ~)	ND<1.1 OK (5/13/2006 a)	(0.9105 - 1.1)/(8 - 5)	-0.0631667
ND<0.9285 OK (3/18/2007 ~)	ND<1.1 OK (5/13/2006 a)	(0.9285 - 1.1)/(9 - 5)	-0.042875
ND<0.768 OK (6/11/2007 a)	ND<1.1 OK (5/13/2006 a)	(0.768 - 1.1)/(10 - 5)	-0.0664
ND<0.569 OK (10/9/2006 a)	ND<1.32 OK (7/11/2006 a)	(0.569 - 1.32)/(7 - 6)	-0.751
ND<0.9105 OK (1/11/2007 ~)	ND<1.32 OK (7/11/2006 a)	(0.9105 - 1.32)/(8 - 6)	-0.20475
ND<0.9285 OK (3/18/2007 ~)	ND<1.32 OK (7/11/2006 a)	(0.9285 - 1.32)/(9 - 6)	-0.1305
ND<0.768 OK (6/11/2007 a)	ND<1.32 OK (7/11/2006 a)	(0.768 - 1.32)/(10 - 6)	-0.138
ND<0.9105 OK (1/11/2007 ~)	ND<0.569 OK (10/9/2006 a)	(0.9105 - 0.569)/(8 - 7)	0.3415
ND<0.9285 OK (3/18/2007 ~)	ND<0.569 OK (10/9/2006 a)	(0.9285 - 0.569)/(9 - 7)	0.17975

ND<0.768 OK (6/11/2007 a)	ND<0.569 OK (10/9/2006 a)	(0.768 - 0.569)/(10 - 7)	0.0663333
ND<0.9285 OK (3/18/2007 ~)	ND<0.9105 OK (1/11/2007 ~)	(0.9285 - 0.9105)/(9 - 8)	0.018
ND<0.768 OK (6/11/2007 a)	ND<0.9105 OK (1/11/2007 ~)	(0.768 - 0.9105)/(10 - 8)	-0.07125
ND<0.768 OK (6/11/2007 a)	ND<0.9285 OK (3/18/2007 ~)	(0.768 - 0.9285)/(10 - 9)	-0.1605

Number of Q values = 45

Ordered Q Values

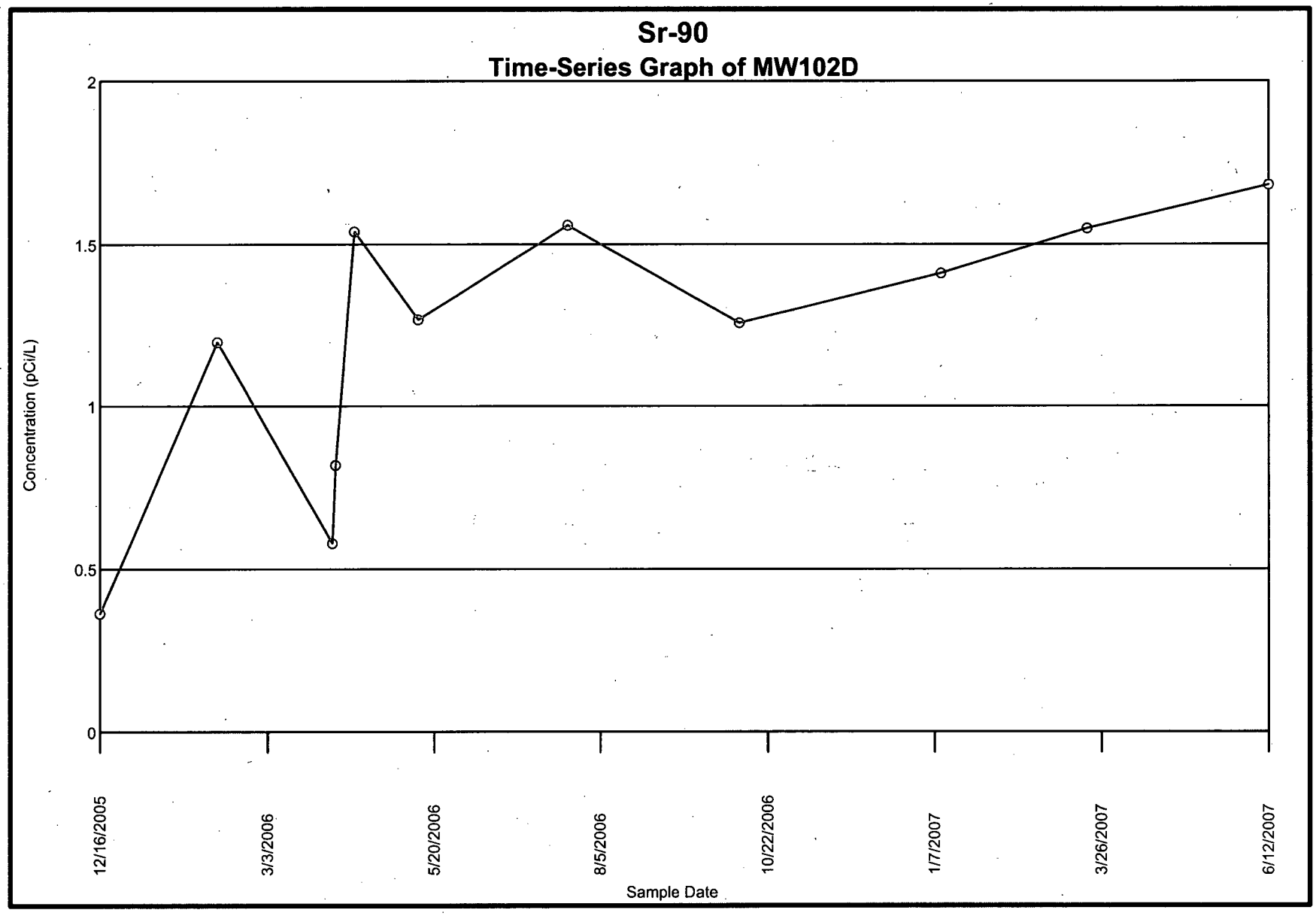
n	Q
1	-0.751
2	-0.5
3	-0.372
4	-0.343667
5	-0.281
6	-0.2655
7	-0.20475
8	-0.19
9	-0.172375
10	-0.1605
11	-0.14
12	-0.138667
13	-0.138
14	-0.1343
15	-0.1305
16	-0.130167
17	-0.1182
18	-0.07125
19	-0.0664
20	-0.0646667
21	-0.0631667
22	-0.0627857
23	-0.0625
24	-0.05475
25	-0.0526875
26	-0.049
27	-0.042875
28	-0.0415833
29	-0.0330714
30	-0.02
31	-0.006
32	-0.00285714
33	0.018
34	0.0234167
35	0.0245
36	0.04
37	0.0663333
38	0.0833333
39	0.156
40	0.177333
41	0.17975
42	0.22
43	0.22
44	0.3415
45	0.812

Sen's Estimator (Median Q) is -0.0625

Time Period	Observations
1/5/2006	1
2/8/2006	1
4/4/2006	1
4/13/2006	1
5/13/2006	1
7/11/2006	1
10/9/2006	1
1/11/2007	1
3/18/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.138 = Q(13)
Upper limit is 0.018 = Q(33)
-0.138 < 0 < 0.018 indicating no trend in data.


Sr-90
Time-Series Graph of MW102D
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW102D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.2 U (2/8/2006 a)	ND<0.3655 U (12/16/2005 ~)	(1.2 - 0.3655)/(2 - 1)	0.8345
ND<0.579 U (4/3/2006 a)	ND<0.3655 U (12/16/2005 ~)	(0.579 - 0.3655)/(3 - 1)	0.10675
ND<0.821 U (4/4/2006 a)	ND<0.3655 U (12/16/2005 ~)	(0.821 - 0.3655)/(4 - 1)	0.151833
ND<1.54 U (4/13/2006 a)	ND<0.3655 U (12/16/2005 ~)	(1.54 - 0.3655)/(5 - 1)	0.293625
ND<1.27 OK (5/13/2006 a)	ND<0.3655 U (12/16/2005 ~)	(1.27 - 0.3655)/(6 - 1)	0.1809
ND<1.56 OK (7/21/2006 a)	ND<0.3655 U (12/16/2005 ~)	(1.56 - 0.3655)/(7 - 1)	0.199083
ND<1.26 OK (10/9/2006 a)	ND<0.3655 U (12/16/2005 ~)	(1.26 - 0.3655)/(8 - 1)	0.127786
ND<1.41 OK (1/11/2007 a)	ND<0.3655 U (12/16/2005 ~)	(1.41 - 0.3655)/(9 - 1)	0.130563
ND<1.55 OK (3/20/2007 a)	ND<0.3655 U (12/16/2005 ~)	(1.55 - 0.3655)/(10 - 1)	0.131611
ND<1.68 OK (6/12/2007 a)	ND<0.3655 U (12/16/2005 ~)	(1.68 - 0.3655)/(11 - 1)	0.13145
ND<0.579 U (4/3/2006 a)	ND<1.2 U (2/8/2006 a)	(0.579 - 1.2)/(3 - 2)	-0.621
ND<0.821 U (4/4/2006 a)	ND<1.2 U (2/8/2006 a)	(0.821 - 1.2)/(4 - 2)	-0.1895
ND<1.54 U (4/13/2006 a)	ND<1.2 U (2/8/2006 a)	(1.54 - 1.2)/(5 - 2)	0.113333
ND<1.27 OK (5/13/2006 a)	ND<1.2 U (2/8/2006 a)	(1.27 - 1.2)/(6 - 2)	0.0175
ND<1.56 OK (7/21/2006 a)	ND<1.2 U (2/8/2006 a)	(1.56 - 1.2)/(7 - 2)	0.072
ND<1.26 OK (10/9/2006 a)	ND<1.2 U (2/8/2006 a)	(1.26 - 1.2)/(8 - 2)	0.01
ND<1.41 OK (1/11/2007 a)	ND<1.2 U (2/8/2006 a)	(1.41 - 1.2)/(9 - 2)	0.03
ND<1.55 OK (3/20/2007 a)	ND<1.2 U (2/8/2006 a)	(1.55 - 1.2)/(10 - 2)	0.04375
ND<1.68 OK (6/12/2007 a)	ND<1.2 U (2/8/2006 a)	(1.68 - 1.2)/(11 - 2)	0.0533333
ND<0.821 U (4/4/2006 a)	ND<0.579 U (4/3/2006 a)	(0.821 - 0.579)/(4 - 3)	0.242
ND<1.54 U (4/13/2006 a)	ND<0.579 U (4/3/2006 a)	(1.54 - 0.579)/(5 - 3)	0.4805
ND<1.27 OK (5/13/2006 a)	ND<0.579 U (4/3/2006 a)	(1.27 - 0.579)/(6 - 3)	0.230333
ND<1.56 OK (7/21/2006 a)	ND<0.579 U (4/3/2006 a)	(1.56 - 0.579)/(7 - 3)	0.24525
ND<1.26 OK (10/9/2006 a)	ND<0.579 U (4/3/2006 a)	(1.26 - 0.579)/(8 - 3)	0.1362
ND<1.41 OK (1/11/2007 a)	ND<0.579 U (4/3/2006 a)	(1.41 - 0.579)/(9 - 3)	0.1385
ND<1.55 OK (3/20/2007 a)	ND<0.579 U (4/3/2006 a)	(1.55 - 0.579)/(10 - 3)	0.138714
ND<1.68 OK (6/12/2007 a)	ND<0.579 U (4/3/2006 a)	(1.68 - 0.579)/(11 - 3)	0.137625
ND<1.54 U (4/13/2006 a)	ND<0.821 U (4/4/2006 a)	(1.54 - 0.821)/(5 - 4)	0.719
ND<1.27 OK (5/13/2006 a)	ND<0.821 U (4/4/2006 a)	(1.27 - 0.821)/(6 - 4)	0.2245
ND<1.56 OK (7/21/2006 a)	ND<0.821 U (4/4/2006 a)	(1.56 - 0.821)/(7 - 4)	0.246333
ND<1.26 OK (10/9/2006 a)	ND<0.821 U (4/4/2006 a)	(1.26 - 0.821)/(8 - 4)	0.10975
ND<1.41 OK (1/11/2007 a)	ND<0.821 U (4/4/2006 a)	(1.41 - 0.821)/(9 - 4)	0.1178
ND<1.55 OK (3/20/2007 a)	ND<0.821 U (4/4/2006 a)	(1.55 - 0.821)/(10 - 4)	0.1215
ND<1.68 OK (6/12/2007 a)	ND<0.821 U (4/4/2006 a)	(1.68 - 0.821)/(11 - 4)	0.122714
ND<1.27 OK (5/13/2006 a)	ND<1.54 U (4/13/2006 a)	(1.27 - 1.54)/(6 - 5)	-0.27
ND<1.56 OK (7/21/2006 a)	ND<1.54 U (4/13/2006 a)	(1.56 - 1.54)/(7 - 5)	0.01
ND<1.26 OK (10/9/2006 a)	ND<1.54 U (4/13/2006 a)	(1.26 - 1.54)/(8 - 5)	-0.0933333
ND<1.41 OK (1/11/2007 a)	ND<1.54 U (4/13/2006 a)	(1.41 - 1.54)/(9 - 5)	-0.0325
ND<1.55 OK (3/20/2007 a)	ND<1.54 U (4/13/2006 a)	(1.55 - 1.54)/(10 - 5)	0.002
ND<1.68 OK (6/12/2007 a)	ND<1.54 U (4/13/2006 a)	(1.68 - 1.54)/(11 - 5)	0.0233333
ND<1.56 OK (7/21/2006 a)	ND<1.27 OK (5/13/2006 a)	(1.56 - 1.27)/(7 - 6)	0.29
ND<1.26 OK (10/9/2006 a)	ND<1.27 OK (5/13/2006 a)	(1.26 - 1.27)/(8 - 6)	-0.005

ND<1.41 OK (1/11/2007 a)	ND<1.27 OK (5/13/2006 a)	(1.41 - 1.27)/(9 - 6)	0.0466667
ND<1.55 OK (3/20/2007 a)	ND<1.27 OK (5/13/2006 a)	(1.55 - 1.27)/(10 - 6)	0.07
ND<1.68 OK (6/12/2007 a)	ND<1.27 OK (5/13/2006 a)	(1.68 - 1.27)/(11 - 6)	0.082
ND<1.26 OK (10/9/2006 a)	ND<1.56 OK (7/21/2006 a)	(1.26 - 1.56)/(8 - 7)	-0.3
ND<1.41 OK (1/11/2007 a)	ND<1.56 OK (7/21/2006 a)	(1.41 - 1.56)/(9 - 7)	-0.075
ND<1.55 OK (3/20/2007 a)	ND<1.56 OK (7/21/2006 a)	(1.55 - 1.56)/(10 - 7)	-0.00333333
ND<1.68 OK (6/12/2007 a)	ND<1.56 OK (7/21/2006 a)	(1.68 - 1.56)/(11 - 7)	0.03
ND<1.41 OK (1/11/2007 a)	ND<1.26 OK (10/9/2006 a)	(1.41 - 1.26)/(9 - 8)	0.15
ND<1.55 OK (3/20/2007 a)	ND<1.26 OK (10/9/2006 a)	(1.55 - 1.26)/(10 - 8)	0.145
ND<1.68 OK (6/12/2007 a)	ND<1.26 OK (10/9/2006 a)	(1.68 - 1.26)/(11 - 8)	0.14
ND<1.55 OK (3/20/2007 a)	ND<1.41 OK (1/11/2007 a)	(1.55 - 1.41)/(10 - 9)	0.14
ND<1.68 OK (6/12/2007 a)	ND<1.41 OK (1/11/2007 a)	(1.68 - 1.41)/(11 - 9)	0.135
ND<1.68 OK (6/12/2007 a)	ND<1.55 OK (3/20/2007 a)	(1.68 - 1.55)/(11 - 10)	0.13

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.621
2	-0.3
3	-0.27
4	-0.1895
5	-0.0933333
6	-0.075
7	-0.0325
8	-0.005
9	-0.00333333
10	0.002
11	0.01
12	0.01
13	0.0175
14	0.0233333
15	0.03
16	0.03
17	0.04375
18	0.0466667
19	0.0533333
20	0.07
21	0.072
22	0.082
23	0.10675
24	0.10975
25	0.113333
26	0.1178
27	0.1215
28	0.122714
29	0.127786
30	0.13
31	0.130563
32	0.13145
33	0.131611
34	0.135

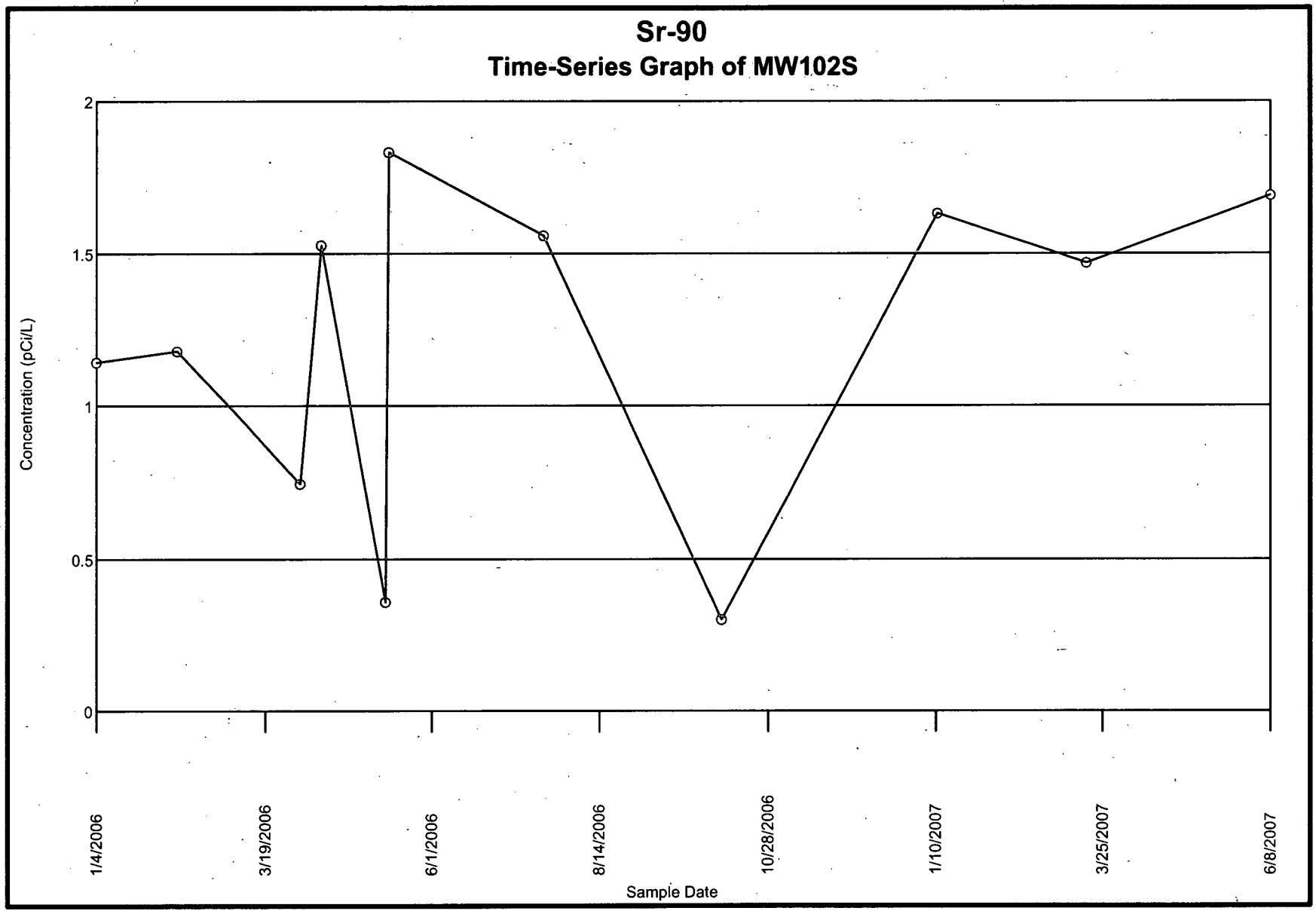
35	0.1362
36	0.137625
37	0.1385
38	0.138714
39	0.14
40	0.14
41	0.145
42	0.15
43	0.151833
44	0.1809
45	0.199083
46	0.2245
47	0.230333
48	0.242
49	0.24525
50	0.246333
51	0.29
52	0.293625
53	0.4805
54	0.719
55	0.8345

Sen's Estimator (Median Q) is 0.122714

Time Period	Observations
12/16/2005	1
2/8/2006	1
4/3/2006	1
4/4/2006	1
4/13/2006	1
5/13/2006	1
7/21/2006	1
10/9/2006	1
1/11/2007	1
3/20/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 0.04375 = Q(17)
Upper limit is 0.14 = Q(39)
0.04375 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW102S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW102S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.18 U (2/8/2006 a)	ND<1.145 U (1/4/2006 ~)	(1.18 - 1.145)/(2 - 1)	0.035
ND<0.743 U (4/4/2006 a)	ND<1.145 U (1/4/2006 ~)	(0.743 - 1.145)/(3 - 1)	-0.201
ND<1.53 U (4/13/2006 a)	ND<1.145 U (1/4/2006 ~)	(1.53 - 1.145)/(4 - 1)	0.128333
ND<0.358 OK (5/12/2006 a)	ND<1.145 U (1/4/2006 ~)	(0.358 - 1.145)/(5 - 1)	-0.19675
ND<1.83 OK (5/13/2006 a)	ND<1.145 U (1/4/2006 ~)	(1.83 - 1.145)/(6 - 1)	0.137
ND<1.56 OK (7/21/2006 a)	ND<1.145 U (1/4/2006 ~)	(1.56 - 1.145)/(7 - 1)	0.0691667
ND<0.299 OK (10/8/2006 a)	ND<1.145 U (1/4/2006 ~)	(0.299 - 1.145)/(8 - 1)	-0.120857
ND<1.63 OK (1/11/2007 a)	ND<1.145 U (1/4/2006 ~)	(1.63 - 1.145)/(9 - 1)	0.060625
ND<1.47 OK (3/19/2007 a)	ND<1.145 U (1/4/2006 ~)	(1.47 - 1.145)/(10 - 1)	0.0361111
ND<1.69 OK (6/8/2007 a)	ND<1.145 U (1/4/2006 ~)	(1.69 - 1.145)/(11 - 1)	0.0545
ND<0.743 U (4/4/2006 a)	ND<1.18 U (2/8/2006 a)	(0.743 - 1.18)/(3 - 2)	-0.437
ND<1.53 U (4/13/2006 a)	ND<1.18 U (2/8/2006 a)	(1.53 - 1.18)/(4 - 2)	0.175
ND<0.358 OK (5/12/2006 a)	ND<1.18 U (2/8/2006 a)	(0.358 - 1.18)/(5 - 2)	-0.274
ND<1.83 OK (5/13/2006 a)	ND<1.18 U (2/8/2006 a)	(1.83 - 1.18)/(6 - 2)	0.1625
ND<1.56 OK (7/21/2006 a)	ND<1.18 U (2/8/2006 a)	(1.56 - 1.18)/(7 - 2)	0.076
ND<0.299 OK (10/8/2006 a)	ND<1.18 U (2/8/2006 a)	(0.299 - 1.18)/(8 - 2)	-0.146833
ND<1.63 OK (1/11/2007 a)	ND<1.18 U (2/8/2006 a)	(1.63 - 1.18)/(9 - 2)	0.0642857
ND<1.47 OK (3/19/2007 a)	ND<1.18 U (2/8/2006 a)	(1.47 - 1.18)/(10 - 2)	0.03625
ND<1.69 OK (6/8/2007 a)	ND<1.18 U (2/8/2006 a)	(1.69 - 1.18)/(11 - 2)	0.0566667
ND<1.53 U (4/13/2006 a)	ND<0.743 U (4/4/2006 a)	(1.53 - 0.743)/(4 - 3)	0.787
ND<0.358 OK (5/12/2006 a)	ND<0.743 U (4/4/2006 a)	(0.358 - 0.743)/(5 - 3)	-0.1925
ND<1.83 OK (5/13/2006 a)	ND<0.743 U (4/4/2006 a)	(1.83 - 0.743)/(6 - 3)	0.362333
ND<1.56 OK (7/21/2006 a)	ND<0.743 U (4/4/2006 a)	(1.56 - 0.743)/(7 - 3)	0.20425
ND<0.299 OK (10/8/2006 a)	ND<0.743 U (4/4/2006 a)	(0.299 - 0.743)/(8 - 3)	-0.0888
ND<1.63 OK (1/11/2007 a)	ND<0.743 U (4/4/2006 a)	(1.63 - 0.743)/(9 - 3)	0.147833
ND<1.47 OK (3/19/2007 a)	ND<0.743 U (4/4/2006 a)	(1.47 - 0.743)/(10 - 3)	0.103857
ND<1.69 OK (6/8/2007 a)	ND<0.743 U (4/4/2006 a)	(1.69 - 0.743)/(11 - 3)	0.118375
ND<0.358 OK (5/12/2006 a)	ND<1.53 U (4/13/2006 a)	(0.358 - 1.53)/(5 - 4)	-1.172

ND<1.83 OK (5/13/2006 a)	ND<1.53 U (4/13/2006 a)	(1.83 - 1.53)/(6 - 4)	0.15
ND<1.56 OK (7/21/2006 a)	ND<1.53 U (4/13/2006 a)	(1.56 - 1.53)/(7 - 4)	0.01
ND<0.299 OK (10/8/2006 a)	ND<1.53 U (4/13/2006 a)	(0.299 - 1.53)/(8 - 4)	-0.30775
ND<1.63 OK (1/11/2007 a)	ND<1.53 U (4/13/2006 a)	(1.63 - 1.53)/(9 - 4)	0.02
ND<1.47 OK (3/19/2007 a)	ND<1.53 U (4/13/2006 a)	(1.47 - 1.53)/(10 - 4)	-0.01
ND<1.69 OK (6/8/2007 a)	ND<1.53 U (4/13/2006 a)	(1.69 - 1.53)/(11 - 4)	0.0228571
ND<1.83 OK (5/13/2006 a)	ND<0.358 OK (5/12/2006 a)	(1.83 - 0.358)/(6 - 5)	1.472
ND<1.56 OK (7/21/2006 a)	ND<0.358 OK (5/12/2006 a)	(1.56 - 0.358)/(7 - 5)	0.601
ND<0.299 OK (10/8/2006 a)	ND<0.358 OK (5/12/2006 a)	(0.299 - 0.358)/(8 - 5)	-0.0196667
ND<1.63 OK (1/11/2007 a)	ND<0.358 OK (5/12/2006 a)	(1.63 - 0.358)/(9 - 5)	0.318
ND<1.47 OK (3/19/2007 a)	ND<0.358 OK (5/12/2006 a)	(1.47 - 0.358)/(10 - 5)	0.2224
ND<1.69 OK (6/8/2007 a)	ND<0.358 OK (5/12/2006 a)	(1.69 - 0.358)/(11 - 5)	0.222
ND<1.56 OK (7/21/2006 a)	ND<1.83 OK (5/13/2006 a)	(1.56 - 1.83)/(7 - 6)	-0.27
ND<0.299 OK (10/8/2006 a)	ND<1.83 OK (5/13/2006 a)	(0.299 - 1.83)/(8 - 6)	-0.7655
ND<1.63 OK (1/11/2007 a)	ND<1.83 OK (5/13/2006 a)	(1.63 - 1.83)/(9 - 6)	-0.0666667
ND<1.47 OK (3/19/2007 a)	ND<1.83 OK (5/13/2006 a)	(1.47 - 1.83)/(10 - 6)	-0.09
ND<1.69 OK (6/8/2007 a)	ND<1.83 OK (5/13/2006 a)	(1.69 - 1.83)/(11 - 6)	-0.028
ND<0.299 OK (10/8/2006 a)	ND<1.56 OK (7/21/2006 a)	(0.299 - 1.56)/(8 - 7)	-1.261
ND<1.63 OK (1/11/2007 a)	ND<1.56 OK (7/21/2006 a)	(1.63 - 1.56)/(9 - 7)	0.035
ND<1.47 OK (3/19/2007 a)	ND<1.56 OK (7/21/2006 a)	(1.47 - 1.56)/(10 - 7)	-0.03
ND<1.69 OK (6/8/2007 a)	ND<1.56 OK (7/21/2006 a)	(1.69 - 1.56)/(11 - 7)	0.0325
ND<1.63 OK (1/11/2007 a)	ND<0.299 OK (10/8/2006 a)	(1.63 - 0.299)/(9 - 8)	1.331
ND<1.47 OK (3/19/2007 a)	ND<0.299 OK (10/8/2006 a)	(1.47 - 0.299)/(10 - 8)	0.5855
ND<1.69 OK (6/8/2007 a)	ND<0.299 OK (10/8/2006 a)	(1.69 - 0.299)/(11 - 8)	0.463667
ND<1.47 OK (3/19/2007 a)	ND<1.63 OK (1/11/2007 a)	(1.47 - 1.63)/(10 - 9)	-0.16
ND<1.69 OK (6/8/2007 a)	ND<1.63 OK (1/11/2007 a)	(1.69 - 1.63)/(11 - 9)	0.03
ND<1.69 OK (6/8/2007 a)	ND<1.47 OK (3/19/2007 a)	(1.69 - 1.47)/(11 - 10)	0.22

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.261
2	-1.172

3	-0.7655
4	-0.437
5	-0.30775
6	-0.274
7	-0.27
8	-0.201
9	-0.19675
10	-0.1925
11	-0.16
12	-0.146833
13	-0.120857
14	-0.09
15	-0.0888
16	-0.0666667
17	-0.03
18	-0.028
19	-0.0196667
20	-0.01
21	0.01
22	0.02
23	0.0228571
24	0.03
25	0.0325
26	0.035
27	0.035
28	0.0361111
29	0.03625
30	0.0545
31	0.0566667
32	0.060625
33	0.0642857
34	0.0691667
35	0.076
36	0.103857
37	0.118375
38	0.128333
39	0.137
40	0.147833
41	0.15
42	0.1625
43	0.175

44	0.20425
45	0.22
46	0.222
47	0.2224
48	0.318
49	0.362333
50	0.463667
51	0.5855
52	0.601
53	0.787
54	1.331
55	1.472

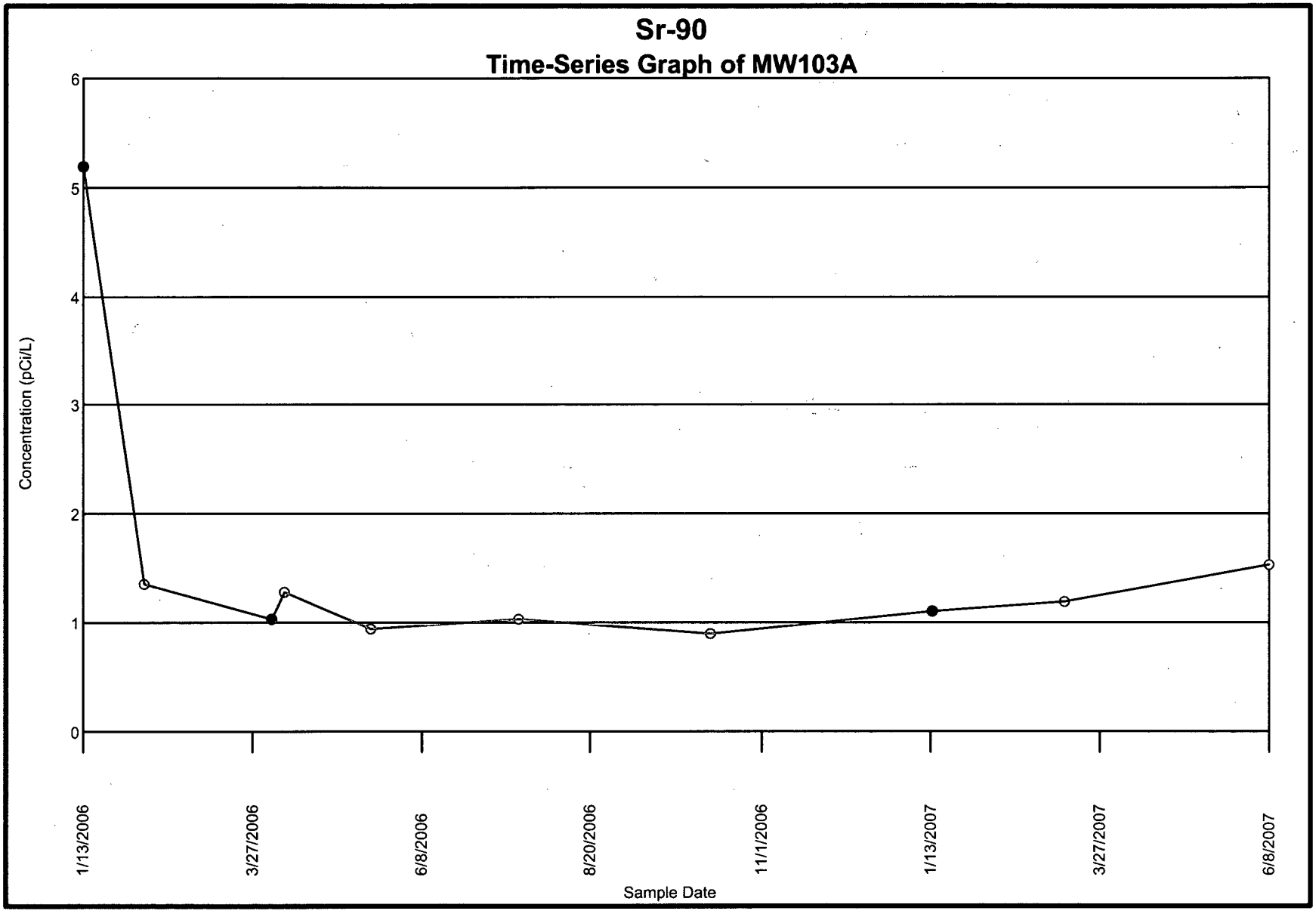
Sen's Estimator (Median Q) is 0.0361111

Time Period	Observations
1/4/2006	1
2/8/2006	1
4/4/2006	1
4/13/2006	1
5/12/2006	1
5/13/2006	1
7/21/2006	1
10/8/2006	1
1/11/2007	1
3/19/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357

M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.03 = Q(17)
Upper limit is 0.137 = Q(39)
-0.03 < 0 < 0.137 indicating no trend in data.


Sr-90
Time-Series Graph of MW103A
Concentration (pCi/L)
0
1
2
3
4
5
6
1/13/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW103A

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.36 U (2/8/2006 a)	5.19 OK (1/13/2006 a)	(1.36 - 5.19)/(2 - 1)	-3.83
1.0345 OK (4/4/2006 ~)	5.19 OK (1/13/2006 a)	(1.0345 - 5.19)/(3 - 1)	-2.07775
ND<1.28 U (4/10/2006 a)	5.19 OK (1/13/2006 a)	(1.28 - 5.19)/(4 - 1)	-1.30333
ND<0.95 OK (5/17/2006 a)	5.19 OK (1/13/2006 a)	(0.95 - 5.19)/(5 - 1)	-1.06
ND<1.03 OK (7/20/2006 a)	5.19 OK (1/13/2006 a)	(1.03 - 5.19)/(6 - 1)	-0.832
ND<0.9 OK (10/10/2006 a)	5.19 OK (1/13/2006 a)	(0.9 - 5.19)/(7 - 1)	-0.715
1.1 OK (1/14/2007 a)	5.19 OK (1/13/2006 a)	(1.1 - 5.19)/(8 - 1)	-0.584286
ND<1.19 OK (3/12/2007 a)	5.19 OK (1/13/2006 a)	(1.19 - 5.19)/(9 - 1)	-0.5
ND<1.54 OK (6/8/2007 a)	5.19 OK (1/13/2006 a)	(1.54 - 5.19)/(10 - 1)	-0.405556
1.0345 OK (4/4/2006 ~)	ND<1.36 U (2/8/2006 a)	(1.0345 - 1.36)/(3 - 2)	-0.3255
ND<1.28 U (4/10/2006 a)	ND<1.36 U (2/8/2006 a)	(1.28 - 1.36)/(4 - 2)	-0.04
ND<0.95 OK (5/17/2006 a)	ND<1.36 U (2/8/2006 a)	(0.95 - 1.36)/(5 - 2)	-0.136667
ND<1.03 OK (7/20/2006 a)	ND<1.36 U (2/8/2006 a)	(1.03 - 1.36)/(6 - 2)	-0.0825
ND<0.9 OK (10/10/2006 a)	ND<1.36 U (2/8/2006 a)	(0.9 - 1.36)/(7 - 2)	-0.092
1.1 OK (1/14/2007 a)	ND<1.36 U (2/8/2006 a)	(1.1 - 1.36)/(8 - 2)	-0.0433333
ND<1.19 OK (3/12/2007 a)	ND<1.36 U (2/8/2006 a)	(1.19 - 1.36)/(9 - 2)	-0.0242857
ND<1.54 OK (6/8/2007 a)	ND<1.36 U (2/8/2006 a)	(1.54 - 1.36)/(10 - 2)	0.0225
ND<1.28 U (4/10/2006 a)	1.0345 OK (4/4/2006 ~)	(1.28 - 1.0345)/(4 - 3)	0.2455
ND<0.95 OK (5/17/2006 a)	1.0345 OK (4/4/2006 ~)	(0.95 - 1.0345)/(5 - 3)	-0.04225
ND<1.03 OK (7/20/2006 a)	1.0345 OK (4/4/2006 ~)	(1.03 - 1.0345)/(6 - 3)	-0.0015
ND<0.9 OK (10/10/2006 a)	1.0345 OK (4/4/2006 ~)	(0.9 - 1.0345)/(7 - 3)	-0.033625
1.1 OK (1/14/2007 a)	1.0345 OK (4/4/2006 ~)	(1.1 - 1.0345)/(8 - 3)	0.0131
ND<1.19 OK (3/12/2007 a)	1.0345 OK (4/4/2006 ~)	(1.19 - 1.0345)/(9 - 3)	0.0259167
ND<1.54 OK (6/8/2007 a)	1.0345 OK (4/4/2006 ~)	(1.54 - 1.0345)/(10 - 3)	0.0722143
ND<0.95 OK (5/17/2006 a)	ND<1.28 U (4/10/2006 a)	(0.95 - 1.28)/(5 - 4)	-0.33
ND<1.03 OK (7/20/2006 a)	ND<1.28 U (4/10/2006 a)	(1.03 - 1.28)/(6 - 4)	-0.125
ND<0.9 OK (10/10/2006 a)	ND<1.28 U (4/10/2006 a)	(0.9 - 1.28)/(7 - 4)	-0.126667
1.1 OK (1/14/2007 a)	ND<1.28 U (4/10/2006 a)	(1.1 - 1.28)/(8 - 4)	-0.045
ND<1.19 OK (3/12/2007 a)	ND<1.28 U (4/10/2006 a)	(1.19 - 1.28)/(9 - 4)	-0.018
ND<1.54 OK (6/8/2007 a)	ND<1.28 U (4/10/2006 a)	(1.54 - 1.28)/(10 - 4)	0.0433333
ND<1.03 OK (7/20/2006 a)	ND<0.95 OK (5/17/2006 a)	(1.03 - 0.95)/(6 - 5)	0.08
ND<0.9 OK (10/10/2006 a)	ND<0.95 OK (5/17/2006 a)	(0.9 - 0.95)/(7 - 5)	-0.025
1.1 OK (1/14/2007 a)	ND<0.95 OK (5/17/2006 a)	(1.1 - 0.95)/(8 - 5)	0.05
ND<1.19 OK (3/12/2007 a)	ND<0.95 OK (5/17/2006 a)	(1.19 - 0.95)/(9 - 5)	0.06
ND<1.54 OK (6/8/2007 a)	ND<0.95 OK (5/17/2006 a)	(1.54 - 0.95)/(10 - 5)	0.118
ND<0.9 OK (10/10/2006 a)	ND<1.03 OK (7/20/2006 a)	(0.9 - 1.03)/(7 - 6)	-0.13
1.1 OK (1/14/2007 a)	ND<1.03 OK (7/20/2006 a)	(1.1 - 1.03)/(8 - 6)	0.035
ND<1.19 OK (3/12/2007 a)	ND<1.03 OK (7/20/2006 a)	(1.19 - 1.03)/(9 - 6)	0.0533333
ND<1.54 OK (6/8/2007 a)	ND<1.03 OK (7/20/2006 a)	(1.54 - 1.03)/(10 - 6)	0.1275
1.1 OK (1/14/2007 a)	ND<0.9 OK (10/10/2006 a)	(1.1 - 0.9)/(8 - 7)	0.2
ND<1.19 OK (3/12/2007 a)	ND<0.9 OK (10/10/2006 a)	(1.19 - 0.9)/(9 - 7)	0.145

ND<1.54 OK (6/8/2007 a)	ND<0.9 OK (10/10/2006 a)	(1.54 - 0.9)/(10 - 7)	0.213333
ND<1.19 OK (3/12/2007 a)	1.1 OK (1/14/2007 a)	(1.19 - 1.1)/(9 - 8)	0.09
ND<1.54 OK (6/8/2007 a)	1.1 OK (1/14/2007 a)	(1.54 - 1.1)/(10 - 8)	0.22
ND<1.54 OK (6/8/2007 a)	ND<1.19 OK (3/12/2007 a)	(1.54 - 1.19)/(10 - 9)	0.35

Number of Q values = 45

Ordered Q Values

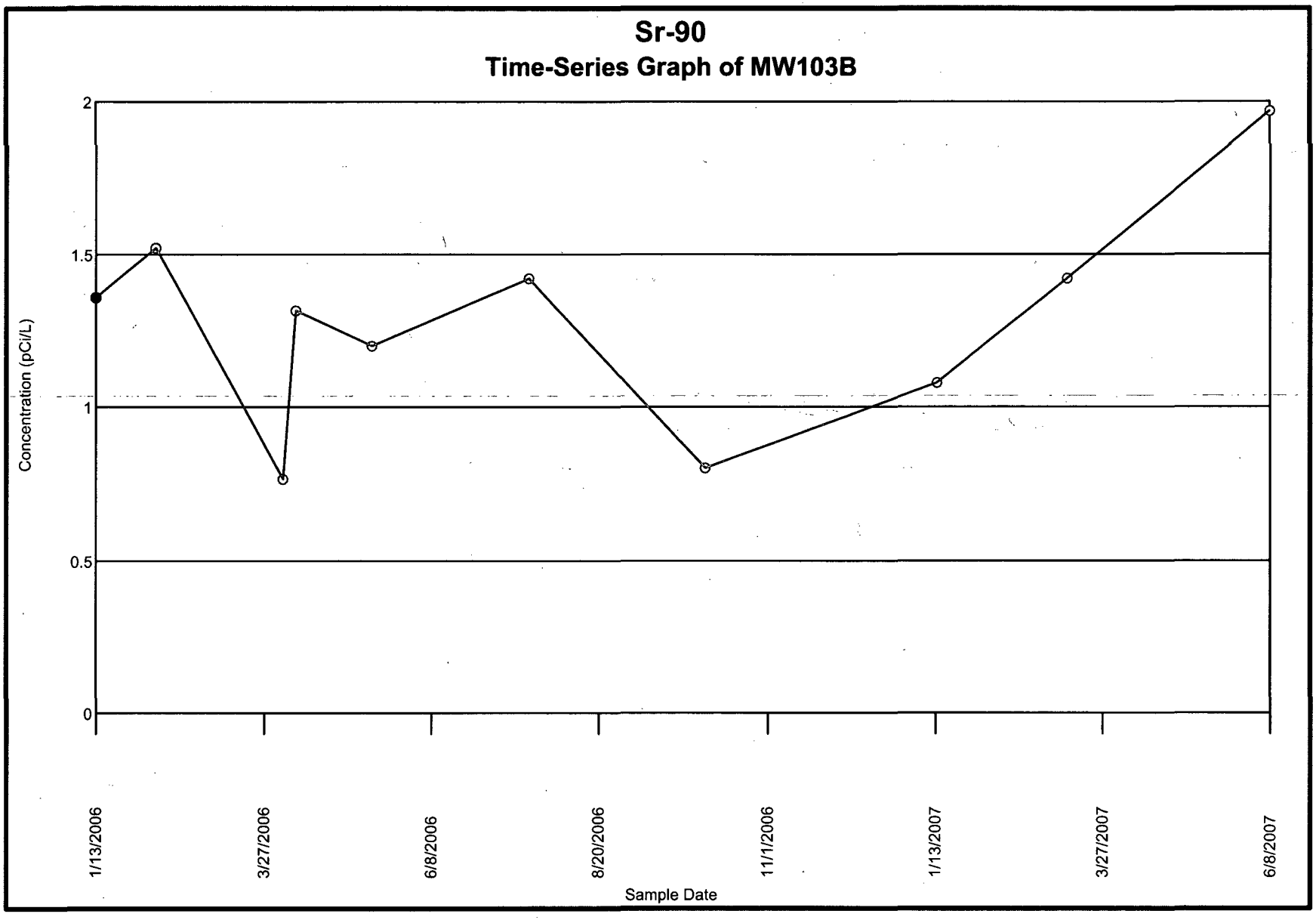
n	Q
1	-3.83
2	-2.07775
3	-1.30333
4	-1.06
5	-0.832
6	-0.715
7	-0.584286
8	-0.5
9	-0.405556
10	-0.33
11	-0.3255
12	-0.136667
13	-0.13
14	-0.126667
15	-0.125
16	-0.092
17	-0.0825
18	-0.045
19	-0.0433333
20	-0.04225
21	-0.04
22	-0.033625
23	-0.025
24	-0.0242857
25	-0.018
26	-0.0015
27	0.0131
28	0.0225
29	0.0259167
30	0.035
31	0.0433333
32	0.05
33	0.0533333
34	0.06
35	0.0722143
36	0.08
37	0.09
38	0.118
39	0.1275
40	0.145
41	0.2
42	0.213333
43	0.22
44	0.2455
45	0.35

Sen's Estimator (Median Q) is -0.025

Time Period	Observations
1/13/2006	1
2/8/2006	1
4/4/2006	1
4/10/2006	1
5/17/2006	1
7/20/2006	1
10/10/2006	1
1/14/2007	1
3/12/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.13 = Q(13)
Upper limit is 0.0533333 = Q(33)
-0.13 < 0 < 0.0533333 indicating no trend in data.


Sr-90
Time-Series Graph of MW103B
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW103B
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.52 U (2/8/2006 a)	1.36 U (1/13/2006 a)	(1.52 - 1.36)/(2 - 1)	0.16
ND<0.769 U (4/4/2006 a)	1.36 U (1/13/2006 a)	(0.769 - 1.36)/(3 - 1)	-0.2955
ND<1.32 U (4/10/2006 ~)	1.36 U (1/13/2006 a)	(1.32 - 1.36)/(4 - 1)	-0.0133333
ND<1.2 OK (5/13/2006 a)	1.36 U (1/13/2006 a)	(1.2 - 1.36)/(5 - 1)	-0.04
ND<1.42 OK (7/20/2006 a)	1.36 U (1/13/2006 a)	(1.42 - 1.36)/(6 - 1)	0.012
ND<0.804 OK (10/5/2006 a)	1.36 U (1/13/2006 a)	(0.804 - 1.36)/(7 - 1)	-0.0926667
ND<1.08 OK (1/14/2007 a)	1.36 U (1/13/2006 a)	(1.08 - 1.36)/(8 - 1)	-0.04
ND<1.42 OK (3/12/2007 a)	1.36 U (1/13/2006 a)	(1.42 - 1.36)/(9 - 1)	0.0075
ND<1.97 OK (6/8/2007 a)	1.36 U (1/13/2006 a)	(1.97 - 1.36)/(10 - 1)	0.0677778
ND<0.769 U (4/4/2006 a)	ND<1.52 U (2/8/2006 a)	(0.769 - 1.52)/(3 - 2)	-0.751
ND<1.32 U (4/10/2006 ~)	ND<1.52 U (2/8/2006 a)	(1.32 - 1.52)/(4 - 2)	-0.1
ND<1.2 OK (5/13/2006 a)	ND<1.52 U (2/8/2006 a)	(1.2 - 1.52)/(5 - 2)	-0.106667
ND<1.42 OK (7/20/2006 a)	ND<1.52 U (2/8/2006 a)	(1.42 - 1.52)/(6 - 2)	-0.025
ND<0.804 OK (10/5/2006 a)	ND<1.52 U (2/8/2006 a)	(0.804 - 1.52)/(7 - 2)	-0.1432
ND<1.08 OK (1/14/2007 a)	ND<1.52 U (2/8/2006 a)	(1.08 - 1.52)/(8 - 2)	-0.0733333
ND<1.42 OK (3/12/2007 a)	ND<1.52 U (2/8/2006 a)	(1.42 - 1.52)/(9 - 2)	-0.0142857
ND<1.97 OK (6/8/2007 a)	ND<1.52 U (2/8/2006 a)	(1.97 - 1.52)/(10 - 2)	0.05625
ND<1.32 U (4/10/2006 ~)	ND<0.769 U (4/4/2006 a)	(1.32 - 0.769)/(4 - 3)	0.551
ND<1.2 OK (5/13/2006 a)	ND<0.769 U (4/4/2006 a)	(1.2 - 0.769)/(5 - 3)	0.2155
ND<1.42 OK (7/20/2006 a)	ND<0.769 U (4/4/2006 a)	(1.42 - 0.769)/(6 - 3)	0.217
ND<0.804 OK (10/5/2006 a)	ND<0.769 U (4/4/2006 a)	(0.804 - 0.769)/(7 - 3)	0.00875
ND<1.08 OK (1/14/2007 a)	ND<0.769 U (4/4/2006 a)	(1.08 - 0.769)/(8 - 3)	0.0622
ND<1.42 OK (3/12/2007 a)	ND<0.769 U (4/4/2006 a)	(1.42 - 0.769)/(9 - 3)	0.1085
ND<1.97 OK (6/8/2007 a)	ND<0.769 U (4/4/2006 a)	(1.97 - 0.769)/(10 - 3)	0.171571
ND<1.2 OK (5/13/2006 a)	ND<1.32 U (4/10/2006 ~)	(1.2 - 1.32)/(5 - 4)	-0.12
ND<1.42 OK (7/20/2006 a)	ND<1.32 U (4/10/2006 ~)	(1.42 - 1.32)/(6 - 4)	0.05
ND<0.804 OK (10/5/2006 a)	ND<1.32 U (4/10/2006 ~)	(0.804 - 1.32)/(7 - 4)	-0.172
ND<1.08 OK (1/14/2007 a)	ND<1.32 U (4/10/2006 ~)	(1.08 - 1.32)/(8 - 4)	-0.06

ND<1.42 OK (3/12/2007 a)	ND<1.32 U (4/10/2006 ~)	(1.42 - 1.32)/(9 - 4)	0.02
ND<1.97 OK (6/8/2007 a)	ND<1.32 U (4/10/2006 ~)	(1.97 - 1.32)/(10 - 4)	0.108333
ND<1.42 OK (7/20/2006 a)	ND<1.2 OK (5/13/2006 a)	(1.42 - 1.2)/(6 - 5)	0.22
ND<0.804 OK (10/5/2006 a)	ND<1.2 OK (5/13/2006 a)	(0.804 - 1.2)/(7 - 5)	-0.198
ND<1.08 OK (1/14/2007 a)	ND<1.2 OK (5/13/2006 a)	(1.08 - 1.2)/(8 - 5)	-0.04
ND<1.42 OK (3/12/2007 a)	ND<1.2 OK (5/13/2006 a)	(1.42 - 1.2)/(9 - 5)	0.055
ND<1.97 OK (6/8/2007 a)	ND<1.2 OK (5/13/2006 a)	(1.97 - 1.2)/(10 - 5)	0.154
ND<0.804 OK (10/5/2006 a)	ND<1.42 OK (7/20/2006 a)	(0.804 - 1.42)/(7 - 6)	-0.616
ND<1.08 OK (1/14/2007 a)	ND<1.42 OK (7/20/2006 a)	(1.08 - 1.42)/(8 - 6)	-0.17
ND<1.42 OK (3/12/2007 a)	ND<1.42 OK (7/20/2006 a)	(1.42 - 1.42)/(9 - 6)	0
ND<1.97 OK (6/8/2007 a)	ND<1.42 OK (7/20/2006 a)	(1.97 - 1.42)/(10 - 6)	0.1375
ND<1.08 OK (1/14/2007 a)	ND<0.804 OK (10/5/2006 a)	(1.08 - 0.804)/(8 - 7)	0.276
ND<1.42 OK (3/12/2007 a)	ND<0.804 OK (10/5/2006 a)	(1.42 - 0.804)/(9 - 7)	0.308
ND<1.97 OK (6/8/2007 a)	ND<0.804 OK (10/5/2006 a)	(1.97 - 0.804)/(10 - 7)	0.388667
ND<1.42 OK (3/12/2007 a)	ND<1.08 OK (1/14/2007 a)	(1.42 - 1.08)/(9 - 8)	0.34
ND<1.97 OK (6/8/2007 a)	ND<1.08 OK (1/14/2007 a)	(1.97 - 1.08)/(10 - 8)	0.445
ND<1.97 OK (6/8/2007 a)	ND<1.42 OK (3/12/2007 a)	(1.97 - 1.42)/(10 - 9)	0.55

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.751
2	-0.616
3	-0.2955
4	-0.198
5	-0.172
6	-0.17
7	-0.1432
8	-0.12
9	-0.106667
10	-0.1
11	-0.0926667
12	-0.0733333
13	-0.06

14	-0.04
15	-0.04
16	-0.04
17	-0.025
18	-0.0142857
19	-0.0133333
20	0
21	0.0075
22	0.00875
23	0.012
24	0.02
25	0.05
26	0.055
27	0.05625
28	0.0622
29	0.0677778
30	0.108333
31	0.1085
32	0.1375
33	0.154
34	0.16
35	0.171571
36	0.2155
37	0.217
38	0.22
39	0.276
40	0.308
41	0.34
42	0.388667
43	0.445
44	0.55
45	0.551

Sen's Estimator (Median Q) is 0.012

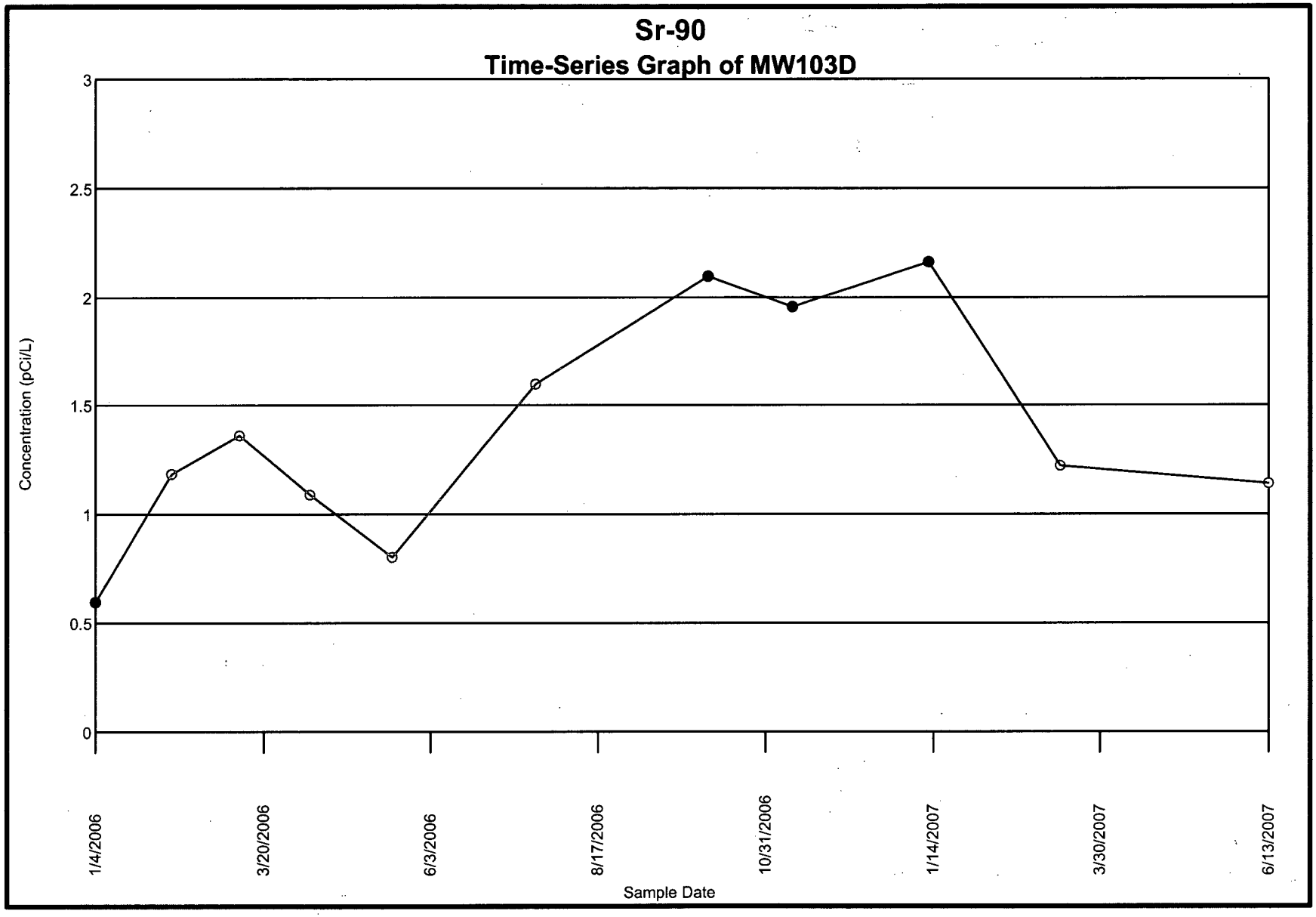
Tied Group	Value	Members
1	1.42	2

Time Period	Observations
1/13/2006	1
2/8/2006	1
4/4/2006	1

4/10/2006	1
5/13/2006	1
7/20/2006	1
10/5/2006	1
1/14/2007	1
3/12/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.06 = Q(13)
Upper limit is 0.154 = Q(33)
-0.06 < 0 < 0.154 indicating no trend in data.


Sr-90
Time-Series Graph of MW103D
Concentration (pCi/L)
3
2.5
2
1.5
1
0.5
0
1/4/2006
3/20/2006
6/3/2006
8/17/2006
10/31/2006
1/14/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW103D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.19 U (2/7/2006 a)	0.594 U (1/4/2006 a)	(1.19 - 0.594)/(2 - 1)	0.596
ND<1.36 U (3/9/2006 a)	0.594 U (1/4/2006 a)	(1.36 - 0.594)/(3 - 1)	0.383
ND<1.09 U (4/10/2006 a)	0.594 U (1/4/2006 a)	(1.09 - 0.594)/(4 - 1)	0.165333
ND<0.802 OK (5/17/2006 a)	0.594 U (1/4/2006 a)	(0.802 - 0.594)/(5 - 1)	0.052
ND<1.6 OK (7/20/2006 a)	0.594 U (1/4/2006 a)	(1.6 - 0.594)/(6 - 1)	0.2012
2.09 OK (10/5/2006 a)	0.594 U (1/4/2006 a)	(2.09 - 0.594)/(7 - 1)	0.249333
1.95 OK (11/12/2006 a)	0.594 U (1/4/2006 a)	(1.95 - 0.594)/(8 - 1)	0.193714
2.16 OK (1/12/2007 a)	0.594 U (1/4/2006 a)	(2.16 - 0.594)/(9 - 1)	0.19575
ND<1.22 OK (3/12/2007 a)	0.594 U (1/4/2006 a)	(1.22 - 0.594)/(10 - 1)	0.0695556
ND<1.14 OK (6/13/2007 a)	0.594 U (1/4/2006 a)	(1.14 - 0.594)/(11 - 1)	0.0546
ND<1.36 U (3/9/2006 a)	ND<1.19 U (2/7/2006 a)	(1.36 - 1.19)/(3 - 2)	0.17
ND<1.09 U (4/10/2006 a)	ND<1.19 U (2/7/2006 a)	(1.09 - 1.19)/(4 - 2)	-0.05
ND<0.802 OK (5/17/2006 a)	ND<1.19 U (2/7/2006 a)	(0.802 - 1.19)/(5 - 2)	-0.129333
ND<1.6 OK (7/20/2006 a)	ND<1.19 U (2/7/2006 a)	(1.6 - 1.19)/(6 - 2)	0.1025
2.09 OK (10/5/2006 a)	ND<1.19 U (2/7/2006 a)	(2.09 - 1.19)/(7 - 2)	0.18
1.95 OK (11/12/2006 a)	ND<1.19 U (2/7/2006 a)	(1.95 - 1.19)/(8 - 2)	0.126667
2.16 OK (1/12/2007 a)	ND<1.19 U (2/7/2006 a)	(2.16 - 1.19)/(9 - 2)	0.138571
ND<1.22 OK (3/12/2007 a)	ND<1.19 U (2/7/2006 a)	(1.22 - 1.19)/(10 - 2)	0.00375
ND<1.14 OK (6/13/2007 a)	ND<1.19 U (2/7/2006 a)	(1.14 - 1.19)/(11 - 2)	-0.00555556
ND<1.09 U (4/10/2006 a)	ND<1.36 U (3/9/2006 a)	(1.09 - 1.36)/(4 - 3)	-0.27
ND<0.802 OK (5/17/2006 a)	ND<1.36 U (3/9/2006 a)	(0.802 - 1.36)/(5 - 3)	-0.279
ND<1.6 OK (7/20/2006 a)	ND<1.36 U (3/9/2006 a)	(1.6 - 1.36)/(6 - 3)	0.08
2.09 OK (10/5/2006 a)	ND<1.36 U (3/9/2006 a)	(2.09 - 1.36)/(7 - 3)	0.1825
1.95 OK (11/12/2006 a)	ND<1.36 U (3/9/2006 a)	(1.95 - 1.36)/(8 - 3)	0.118
2.16 OK (1/12/2007 a)	ND<1.36 U (3/9/2006 a)	(2.16 - 1.36)/(9 - 3)	0.133333
ND<1.22 OK (3/12/2007 a)	ND<1.36 U (3/9/2006 a)	(1.22 - 1.36)/(10 - 3)	-0.02
ND<1.14 OK (6/13/2007 a)	ND<1.36 U (3/9/2006 a)	(1.14 - 1.36)/(11 - 3)	-0.0275
ND<0.802 OK (5/17/2006 a)	ND<1.09 U (4/10/2006 a)	(0.802 - 1.09)/(5 - 4)	-0.288
ND<1.6 OK (7/20/2006 a)	ND<1.09 U (4/10/2006 a)	(1.6 - 1.09)/(6 - 4)	0.255
2.09 OK (10/5/2006 a)	ND<1.09 U (4/10/2006 a)	(2.09 - 1.09)/(7 - 4)	0.333333
1.95 OK (11/12/2006 a)	ND<1.09 U (4/10/2006 a)	(1.95 - 1.09)/(8 - 4)	0.215
2.16 OK (1/12/2007 a)	ND<1.09 U (4/10/2006 a)	(2.16 - 1.09)/(9 - 4)	0.214
ND<1.22 OK (3/12/2007 a)	ND<1.09 U (4/10/2006 a)	(1.22 - 1.09)/(10 - 4)	0.0216667
ND<1.14 OK (6/13/2007 a)	ND<1.09 U (4/10/2006 a)	(1.14 - 1.09)/(11 - 4)	0.00714286
ND<1.6 OK (7/20/2006 a)	ND<0.802 OK (5/17/2006 a)	(1.6 - 0.802)/(6 - 5)	0.798
2.09 OK (10/5/2006 a)	ND<0.802 OK (5/17/2006 a)	(2.09 - 0.802)/(7 - 5)	0.644
1.95 OK (11/12/2006 a)	ND<0.802 OK (5/17/2006 a)	(1.95 - 0.802)/(8 - 5)	0.382667
2.16 OK (1/12/2007 a)	ND<0.802 OK (5/17/2006 a)	(2.16 - 0.802)/(9 - 5)	0.3395
ND<1.22 OK (3/12/2007 a)	ND<0.802 OK (5/17/2006 a)	(1.22 - 0.802)/(10 - 5)	0.0836
ND<1.14 OK (6/13/2007 a)	ND<0.802 OK (5/17/2006 a)	(1.14 - 0.802)/(11 - 5)	0.0563333
2.09 OK (10/5/2006 a)	ND<1.6 OK (7/20/2006 a)	(2.09 - 1.6)/(7 - 6)	0.49
1.95 OK (11/12/2006 a)	ND<1.6 OK (7/20/2006 a)	(1.95 - 1.6)/(8 - 6)	0.175

2.16 OK (1/12/2007 a)	ND<1.6 OK (7/20/2006 a)	(2.16 - 1.6)/(9 - 6)	0.186667
ND<1.22 OK (3/12/2007 a)	ND<1.6 OK (7/20/2006 a)	(1.22 - 1.6)/(10 - 6)	-0.095
ND<1.14 OK (6/13/2007 a)	ND<1.6 OK (7/20/2006 a)	(1.14 - 1.6)/(11 - 6)	-0.092
1.95 OK (11/12/2006 a)	2.09 OK (10/5/2006 a)	(1.95 - 2.09)/(8 - 7)	-0.14
2.16 OK (1/12/2007 a)	2.09 OK (10/5/2006 a)	(2.16 - 2.09)/(9 - 7)	0.035
ND<1.22 OK (3/12/2007 a)	2.09 OK (10/5/2006 a)	(1.22 - 2.09)/(10 - 7)	-0.29
ND<1.14 OK (6/13/2007 a)	2.09 OK (10/5/2006 a)	(1.14 - 2.09)/(11 - 7)	-0.2375
2.16 OK (1/12/2007 a)	1.95 OK (11/12/2006 a)	(2.16 - 1.95)/(9 - 8)	0.21
ND<1.22 OK (3/12/2007 a)	1.95 OK (11/12/2006 a)	(1.22 - 1.95)/(10 - 8)	-0.365
ND<1.14 OK (6/13/2007 a)	1.95 OK (11/12/2006 a)	(1.14 - 1.95)/(11 - 8)	-0.27
ND<1.22 OK (3/12/2007 a)	2.16 OK (1/12/2007 a)	(1.22 - 2.16)/(10 - 9)	-0.94
ND<1.14 OK (6/13/2007 a)	2.16 OK (1/12/2007 a)	(1.14 - 2.16)/(11 - 9)	-0.51
ND<1.14 OK (6/13/2007 a)	ND<1.22 OK (3/12/2007 a)	(1.14 - 1.22)/(11 - 10)	-0.08

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.94
2	-0.51
3	-0.365
4	-0.29
5	-0.288
6	-0.279
7	-0.27
8	-0.27
9	-0.2375
10	-0.14
11	-0.129333
12	-0.095
13	-0.092
14	-0.08
15	-0.05
16	-0.0275
17	-0.02
18	-0.00555556
19	0.00375
20	0.00714286
21	0.0216667
22	0.035
23	0.052
24	0.0546
25	0.0563333
26	0.0695556
27	0.08
28	0.0836
29	0.1025
30	0.118
31	0.126667
32	0.133333
33	0.138571
34	0.165333

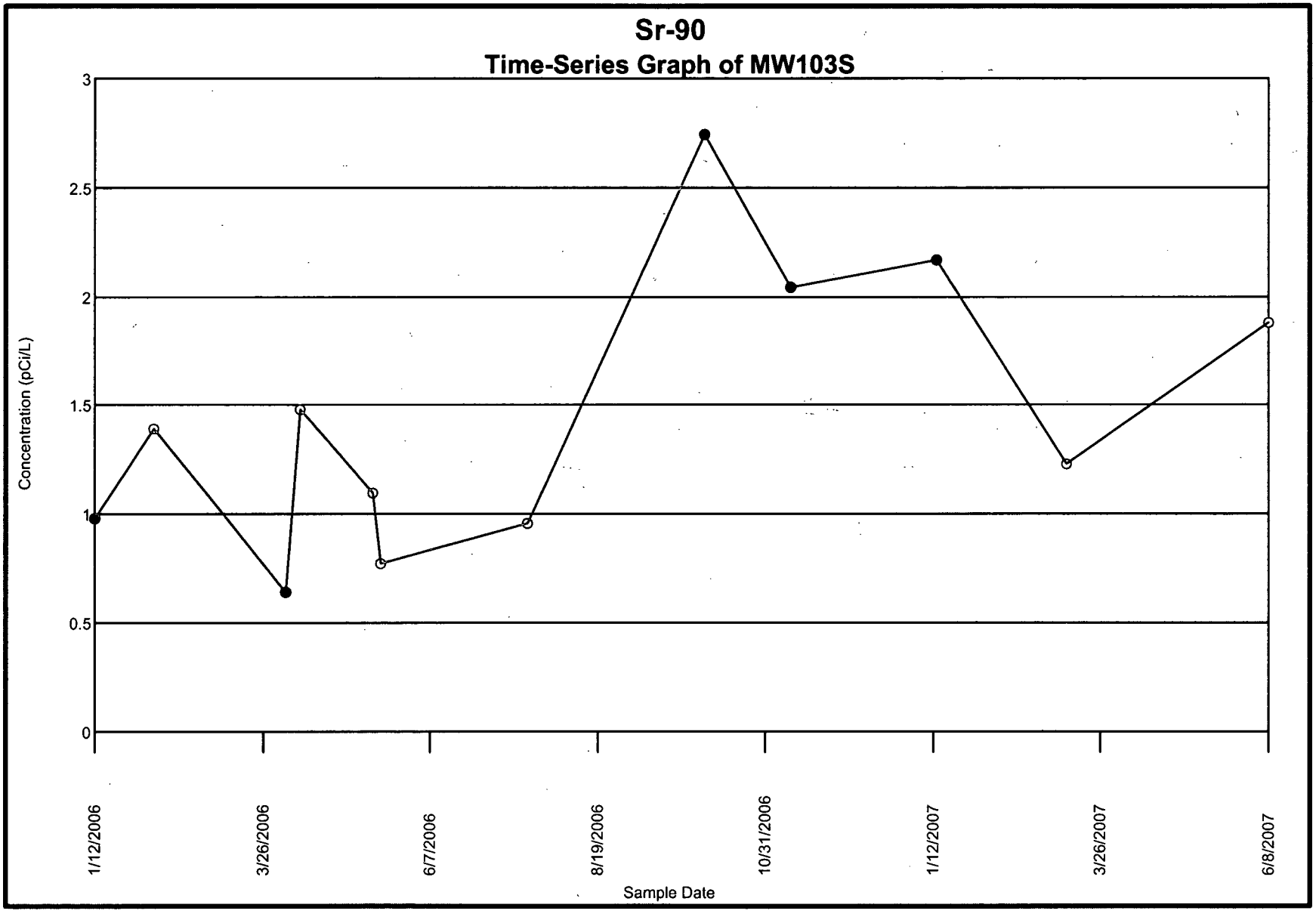
35	0.17
36	0.175
37	0.18
38	0.1825
39	0.186667
40	0.193714
41	0.19575
42	0.2012
43	0.21
44	0.214
45	0.215
46	0.249333
47	0.255
48	0.333333
49	0.3395
50	0.382667
51	0.383
52	0.49
53	0.596
54	0.644
55	0.798

Sen's Estimator (Median Q) is 0.0836

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/9/2006	1
4/10/2006	1
5/17/2006	1
7/20/2006	1
10/5/2006	1
11/12/2006	1
1/12/2007	1
3/12/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.02 = Q(17)
Upper limit is 0.186667 = Q(39)
-0.02 < 0 < 0.186667 indicating no trend in data.


Sr-90
Time-Series Graph of MW103S
Concentration (pCi/L)
3
2.5
2
1.5
1
0.5
0
1/12/2006
3/26/2006
6/7/2006
8/19/2006
10/31/2006
1/12/2007
3/26/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW103S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.39 U (2/7/2006 a)	0.979 OK (1/12/2006 a)	(1.39 - 0.979)/(2 - 1)	0.411
0.644 U (4/5/2006 a)	0.979 OK (1/12/2006 a)	(0.644 - 0.979)/(3 - 1)	-0.1675
ND<1.48 U (4/11/2006 a)	0.979 OK (1/12/2006 a)	(1.48 - 0.979)/(4 - 1)	0.167
ND<1.1 OK (5/13/2006 a)	0.979 OK (1/12/2006 a)	(1.1 - 0.979)/(5 - 1)	0.03025
ND<0.774 OK (5/17/2006 a)	0.979 OK (1/12/2006 a)	(0.774 - 0.979)/(6 - 1)	-0.041
ND<0.957 OK (7/20/2006 a)	0.979 OK (1/12/2006 a)	(0.957 - 0.979)/(7 - 1)	-0.00366667
2.74 OK (10/5/2006 a)	0.979 OK (1/12/2006 a)	(2.74 - 0.979)/(8 - 1)	0.251571
2.04 OK (11/12/2006 a)	0.979 OK (1/12/2006 a)	(2.04 - 0.979)/(9 - 1)	0.132625
2.17 OK (1/14/2007 a)	0.979 OK (1/12/2006 a)	(2.17 - 0.979)/(10 - 1)	0.132333
ND<1.23 OK (3/12/2007 a)	0.979 OK (1/12/2006 a)	(1.23 - 0.979)/(11 - 1)	0.0251
ND<1.88 OK (6/8/2007 a)	0.979 OK (1/12/2006 a)	(1.88 - 0.979)/(12 - 1)	0.0819091
0.644 U (4/5/2006 a)	ND<1.39 U (2/7/2006 a)	(0.644 - 1.39)/(3 - 2)	-0.746
ND<1.48 U (4/11/2006 a)	ND<1.39 U (2/7/2006 a)	(1.48 - 1.39)/(4 - 2)	0.045
ND<1.1 OK (5/13/2006 a)	ND<1.39 U (2/7/2006 a)	(1.1 - 1.39)/(5 - 2)	-0.0966667
ND<0.774 OK (5/17/2006 a)	ND<1.39 U (2/7/2006 a)	(0.774 - 1.39)/(6 - 2)	-0.154
ND<0.957 OK (7/20/2006 a)	ND<1.39 U (2/7/2006 a)	(0.957 - 1.39)/(7 - 2)	-0.0866
2.74 OK (10/5/2006 a)	ND<1.39 U (2/7/2006 a)	(2.74 - 1.39)/(8 - 2)	0.225
2.04 OK (11/12/2006 a)	ND<1.39 U (2/7/2006 a)	(2.04 - 1.39)/(9 - 2)	0.0928571
2.17 OK (1/14/2007 a)	ND<1.39 U (2/7/2006 a)	(2.17 - 1.39)/(10 - 2)	0.0975
ND<1.23 OK (3/12/2007 a)	ND<1.39 U (2/7/2006 a)	(1.23 - 1.39)/(11 - 2)	-0.0177778
ND<1.88 OK (6/8/2007 a)	ND<1.39 U (2/7/2006 a)	(1.88 - 1.39)/(12 - 2)	0.049
ND<1.48 U (4/11/2006 a)	0.644 U (4/5/2006 a)	(1.48 - 0.644)/(4 - 3)	0.836
ND<1.1 OK (5/13/2006 a)	0.644 U (4/5/2006 a)	(1.1 - 0.644)/(5 - 3)	0.228
ND<0.774 OK (5/17/2006 a)	0.644 U (4/5/2006 a)	(0.774 - 0.644)/(6 - 3)	0.0433333
ND<0.957 OK (7/20/2006 a)	0.644 U (4/5/2006 a)	(0.957 - 0.644)/(7 - 3)	0.07825
2.74 OK (10/5/2006 a)	0.644 U (4/5/2006 a)	(2.74 - 0.644)/(8 - 3)	0.4192
2.04 OK (11/12/2006 a)	0.644 U (4/5/2006 a)	(2.04 - 0.644)/(9 - 3)	0.232667
2.17 OK (1/14/2007 a)	0.644 U (4/5/2006 a)	(2.17 - 0.644)/(10 - 3)	0.218
ND<1.23 OK (3/12/2007 a)	0.644 U (4/5/2006 a)	(1.23 - 0.644)/(11 - 3)	0.07325

ND<1.88 OK (6/8/2007 a)	0.644 U (4/5/2006 a)	(1.88 - 0.644)/(12 - 3)	0.137333
ND<1.1 OK (5/13/2006 a)	ND<1.48 U (4/11/2006 a)	(1.1 - 1.48)/(5 - 4)	-0.38
ND<0.774 OK (5/17/2006 a)	ND<1.48 U (4/11/2006 a)	(0.774 - 1.48)/(6 - 4)	-0.353
ND<0.957 OK (7/20/2006 a)	ND<1.48 U (4/11/2006 a)	(0.957 - 1.48)/(7 - 4)	-0.174333
2.74 OK (10/5/2006 a)	ND<1.48 U (4/11/2006 a)	(2.74 - 1.48)/(8 - 4)	0.315
2.04 OK (11/12/2006 a)	ND<1.48 U (4/11/2006 a)	(2.04 - 1.48)/(9 - 4)	0.112
2.17 OK (1/14/2007 a)	ND<1.48 U (4/11/2006 a)	(2.17 - 1.48)/(10 - 4)	0.115
ND<1.23 OK (3/12/2007 a)	ND<1.48 U (4/11/2006 a)	(1.23 - 1.48)/(11 - 4)	-0.0357143
ND<1.88 OK (6/8/2007 a)	ND<1.48 U (4/11/2006 a)	(1.88 - 1.48)/(12 - 4)	0.05
ND<0.774 OK (5/17/2006 a)	ND<1.1 OK (5/13/2006 a)	(0.774 - 1.1)/(6 - 5)	-0.326
ND<0.957 OK (7/20/2006 a)	ND<1.1 OK (5/13/2006 a)	(0.957 - 1.1)/(7 - 5)	-0.0715
2.74 OK (10/5/2006 a)	ND<1.1 OK (5/13/2006 a)	(2.74 - 1.1)/(8 - 5)	0.546667
2.04 OK (11/12/2006 a)	ND<1.1 OK (5/13/2006 a)	(2.04 - 1.1)/(9 - 5)	0.235
2.17 OK (1/14/2007 a)	ND<1.1 OK (5/13/2006 a)	(2.17 - 1.1)/(10 - 5)	0.214
ND<1.23 OK (3/12/2007 a)	ND<1.1 OK (5/13/2006 a)	(1.23 - 1.1)/(11 - 5)	0.0216667
ND<1.88 OK (6/8/2007 a)	ND<1.1 OK (5/13/2006 a)	(1.88 - 1.1)/(12 - 5)	0.111429
ND<0.957 OK (7/20/2006 a)	ND<0.774 OK (5/17/2006 a)	(0.957 - 0.774)/(7 - 6)	0.183
2.74 OK (10/5/2006 a)	ND<0.774 OK (5/17/2006 a)	(2.74 - 0.774)/(8 - 6)	0.983
2.04 OK (11/12/2006 a)	ND<0.774 OK (5/17/2006 a)	(2.04 - 0.774)/(9 - 6)	0.422
2.17 OK (1/14/2007 a)	ND<0.774 OK (5/17/2006 a)	(2.17 - 0.774)/(10 - 6)	0.349
ND<1.23 OK (3/12/2007 a)	ND<0.774 OK (5/17/2006 a)	(1.23 - 0.774)/(11 - 6)	0.0912
ND<1.88 OK (6/8/2007 a)	ND<0.774 OK (5/17/2006 a)	(1.88 - 0.774)/(12 - 6)	0.184333
2.74 OK (10/5/2006 a)	ND<0.957 OK (7/20/2006 a)	(2.74 - 0.957)/(8 - 7)	1.783
2.04 OK (11/12/2006 a)	ND<0.957 OK (7/20/2006 a)	(2.04 - 0.957)/(9 - 7)	0.5415
2.17 OK (1/14/2007 a)	ND<0.957 OK (7/20/2006 a)	(2.17 - 0.957)/(10 - 7)	0.404333
ND<1.23 OK (3/12/2007 a)	ND<0.957 OK (7/20/2006 a)	(1.23 - 0.957)/(11 - 7)	0.06825
ND<1.88 OK (6/8/2007 a)	ND<0.957 OK (7/20/2006 a)	(1.88 - 0.957)/(12 - 7)	0.1846
2.04 OK (11/12/2006 a)	2.74 OK (10/5/2006 a)	(2.04 - 2.74)/(9 - 8)	-0.7
2.17 OK (1/14/2007 a)	2.74 OK (10/5/2006 a)	(2.17 - 2.74)/(10 - 8)	-0.285
ND<1.23 OK (3/12/2007 a)	2.74 OK (10/5/2006 a)	(1.23 - 2.74)/(11 - 8)	-0.503333
ND<1.88 OK (6/8/2007 a)	2.74 OK (10/5/2006 a)	(1.88 - 2.74)/(12 - 8)	-0.215
2.17 OK (1/14/2007 a)	2.04 OK (11/12/2006 a)	(2.17 - 2.04)/(10 - 9)	0.13
ND<1.23 OK (3/12/2007 a)	2.04 OK (11/12/2006 a)	(1.23 - 2.04)/(11 - 9)	-0.405
ND<1.88 OK (6/8/2007 a)	2.04 OK (11/12/2006 a)	(1.88 - 2.04)/(12 - 9)	-0.0533333

ND<1.23 OK (3/12/2007 a)	2.17 OK (1/14/2007 a)	(1.23 - 2.17)/(11 - 10)	-0.94
ND<1.88 OK (6/8/2007 a)	2.17 OK (1/14/2007 a)	(1.88 - 2.17)/(12 - 10)	-0.145
ND<1.88 OK (6/8/2007 a)	ND<1.23 OK (3/12/2007 a)	(1.88 - 1.23)/(12 - 11)	0.65

Number of Q values = 66

Ordered Q Values

n	Q
1	-0.94
2	-0.746
3	-0.7
4	-0.503333
5	-0.405
6	-0.38
7	-0.353
8	-0.326
9	-0.285
10	-0.215
11	-0.174333
12	-0.1675
13	-0.154
14	-0.145
15	-0.0966667
16	-0.0866
17	-0.0715
18	-0.0533333
19	-0.041
20	-0.0357143
21	-0.0177778
22	-0.00366667
23	0.0216667
24	0.0251
25	0.03025
26	0.0433333
27	0.045
28	0.049
29	0.05
30	0.06825
31	0.07325

32	0.07825
33	0.0819091
34	0.0912
35	0.0928571
36	0.0975
37	0.111429
38	0.112
39	0.115
40	0.13
41	0.132333
42	0.132625
43	0.137333
44	0.167
45	0.183
46	0.184333
47	0.1846
48	0.214
49	0.218
50	0.225
51	0.228
52	0.232667
53	0.235
54	0.251571
55	0.315
56	0.349
57	0.404333
58	0.411
59	0.4192
60	0.422
61	0.5415
62	0.546667
63	0.65
64	0.836
65	0.983
66	1.783

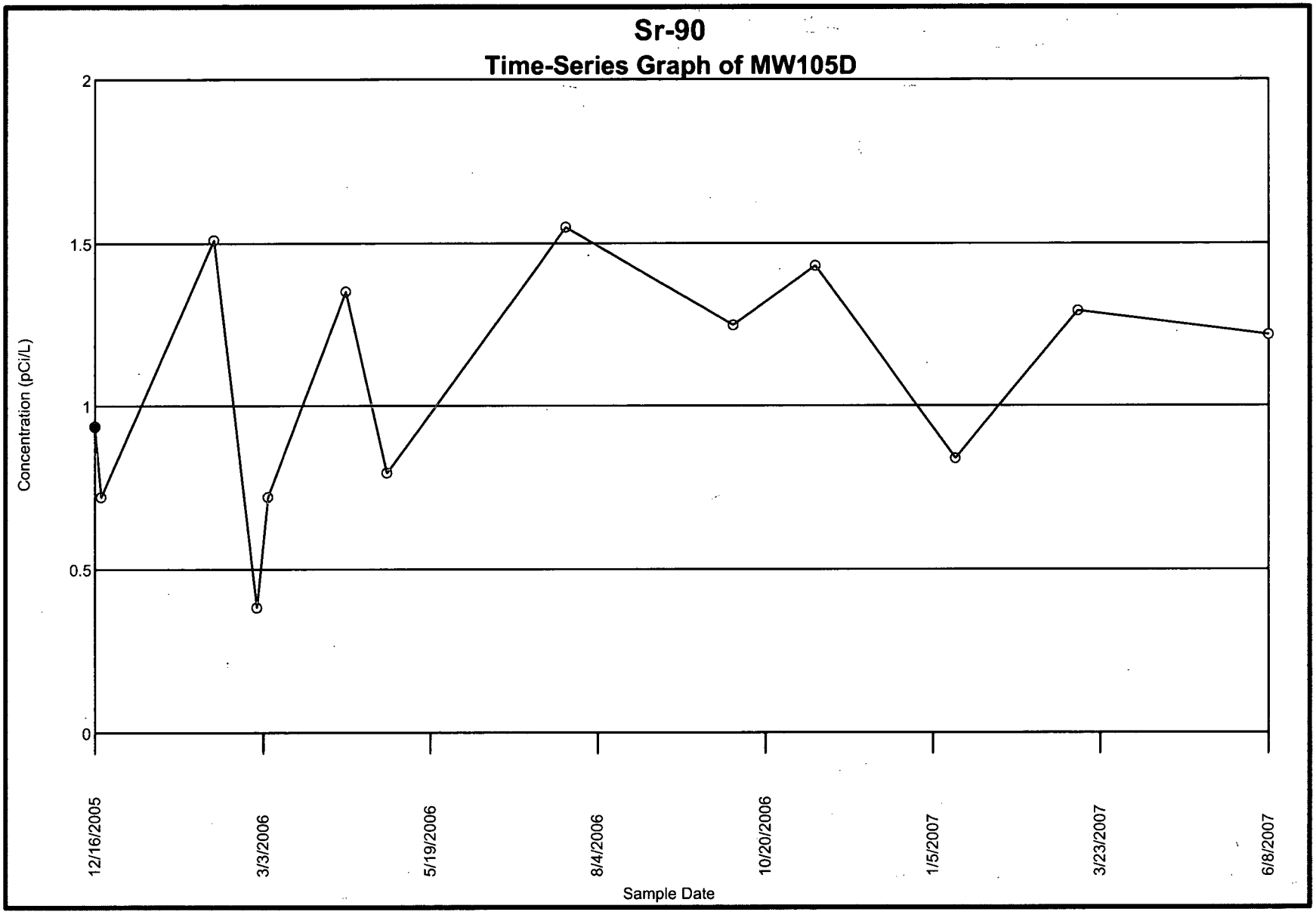
Sen's Estimator (Median Q) is 0.0865545

Time Period	Observations
1/12/2006	1
2/7/2006	1
4/5/2006	1

4/11/2006	1
5/13/2006	1
5/17/2006	1
7/20/2006	1
10/5/2006	1
11/12/2006	1
1/14/2007	1
3/12/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.0177778 = Q(21)
Upper limit is 0.184333 = Q(46)
-0.0177778 < 0 < 0.184333 indicating no trend in data.


Sr-90
Time-Series Graph of MW105D
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW105D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.721 U (12/19/2005 a)	0.938 U (12/16/2005 a)	(0.721 - 0.938)/(2 - 1)	-0.217
ND<1.51 U (2/8/2006 a)	0.938 U (12/16/2005 a)	(1.51 - 0.938)/(3 - 1)	0.286
ND<0.381 U (2/28/2006 ~)	0.938 U (12/16/2005 a)	(0.381 - 0.938)/(4 - 1)	-0.185667
ND<0.721 U (3/5/2006 a)	0.938 U (12/16/2005 a)	(0.721 - 0.938)/(5 - 1)	-0.05425
ND<1.35 U (4/10/2006 a)	0.938 U (12/16/2005 a)	(1.35 - 0.938)/(6 - 1)	0.0824
ND<0.797 OK (4/29/2006 a)	0.938 U (12/16/2005 a)	(0.797 - 0.938)/(7 - 1)	-0.0235
ND<1.55 OK (7/20/2006 a)	0.938 U (12/16/2005 a)	(1.55 - 0.938)/(8 - 1)	0.0874286
ND<1.25 OK (10/5/2006 a)	0.938 U (12/16/2005 a)	(1.25 - 0.938)/(9 - 1)	0.039
ND<1.43 OK (11/12/2006 a)	0.938 U (12/16/2005 a)	(1.43 - 0.938)/(10 - 1)	0.0546667
ND<0.84 OK (1/15/2007 a)	0.938 U (12/16/2005 a)	(0.84 - 0.938)/(11 - 1)	-0.0098
ND<1.29 OK (3/13/2007 a)	0.938 U (12/16/2005 a)	(1.29 - 0.938)/(12 - 1)	0.032
ND<1.22 OK (6/8/2007 a)	0.938 U (12/16/2005 a)	(1.22 - 0.938)/(13 - 1)	0.0235
ND<1.51 U (2/8/2006 a)	ND<0.721 U (12/19/2005 a)	(1.51 - 0.721)/(3 - 2)	0.789
ND<0.381 U (2/28/2006 ~)	ND<0.721 U (12/19/2005 a)	(0.381 - 0.721)/(4 - 2)	-0.17
ND<0.721 U (3/5/2006 a)	ND<0.721 U (12/19/2005 a)	(0.721 - 0.721)/(5 - 2)	0
ND<1.35 U (4/10/2006 a)	ND<0.721 U (12/19/2005 a)	(1.35 - 0.721)/(6 - 2)	0.15725
ND<0.797 OK (4/29/2006 a)	ND<0.721 U (12/19/2005 a)	(0.797 - 0.721)/(7 - 2)	0.0152
ND<1.55 OK (7/20/2006 a)	ND<0.721 U (12/19/2005 a)	(1.55 - 0.721)/(8 - 2)	0.138167
ND<1.25 OK (10/5/2006 a)	ND<0.721 U (12/19/2005 a)	(1.25 - 0.721)/(9 - 2)	0.0755714
ND<1.43 OK (11/12/2006 a)	ND<0.721 U (12/19/2005 a)	(1.43 - 0.721)/(10 - 2)	0.088625
ND<0.84 OK (1/15/2007 a)	ND<0.721 U (12/19/2005 a)	(0.84 - 0.721)/(11 - 2)	0.0132222
ND<1.29 OK (3/13/2007 a)	ND<0.721 U (12/19/2005 a)	(1.29 - 0.721)/(12 - 2)	0.0569
ND<1.22 OK (6/8/2007 a)	ND<0.721 U (12/19/2005 a)	(1.22 - 0.721)/(13 - 2)	0.0453636
ND<0.381 U (2/28/2006 ~)	ND<1.51 U (2/8/2006 a)	(0.381 - 1.51)/(4 - 3)	-1.129
ND<0.721 U (3/5/2006 a)	ND<1.51 U (2/8/2006 a)	(0.721 - 1.51)/(5 - 3)	-0.3945
ND<1.35 U (4/10/2006 a)	ND<1.51 U (2/8/2006 a)	(1.35 - 1.51)/(6 - 3)	-0.0533333
ND<0.797 OK (4/29/2006 a)	ND<1.51 U (2/8/2006 a)	(0.797 - 1.51)/(7 - 3)	-0.17825
ND<1.55 OK (7/20/2006 a)	ND<1.51 U (2/8/2006 a)	(1.55 - 1.51)/(8 - 3)	0.008
ND<1.25 OK (10/5/2006 a)	ND<1.51 U (2/8/2006 a)	(1.25 - 1.51)/(9 - 3)	-0.0433333
ND<1.43 OK (11/12/2006 a)	ND<1.51 U (2/8/2006 a)	(1.43 - 1.51)/(10 - 3)	-0.0114286
ND<0.84 OK (1/15/2007 a)	ND<1.51 U (2/8/2006 a)	(0.84 - 1.51)/(11 - 3)	-0.08375
ND<1.29 OK (3/13/2007 a)	ND<1.51 U (2/8/2006 a)	(1.29 - 1.51)/(12 - 3)	-0.0244444
ND<1.22 OK (6/8/2007 a)	ND<1.51 U (2/8/2006 a)	(1.22 - 1.51)/(13 - 3)	-0.029
ND<0.721 U (3/5/2006 a)	ND<0.381 U (2/28/2006 ~)	(0.721 - 0.381)/(5 - 4)	0.34
ND<1.35 U (4/10/2006 a)	ND<0.381 U (2/28/2006 ~)	(1.35 - 0.381)/(6 - 4)	0.4845
ND<0.797 OK (4/29/2006 a)	ND<0.381 U (2/28/2006 ~)	(0.797 - 0.381)/(7 - 4)	0.138667
ND<1.55 OK (7/20/2006 a)	ND<0.381 U (2/28/2006 ~)	(1.55 - 0.381)/(8 - 4)	0.29225
ND<1.25 OK (10/5/2006 a)	ND<0.381 U (2/28/2006 ~)	(1.25 - 0.381)/(9 - 4)	0.1738
ND<1.43 OK (11/12/2006 a)	ND<0.381 U (2/28/2006 ~)	(1.43 - 0.381)/(10 - 4)	0.174833
ND<0.84 OK (1/15/2007 a)	ND<0.381 U (2/28/2006 ~)	(0.84 - 0.381)/(11 - 4)	0.0655714
ND<1.29 OK (3/13/2007 a)	ND<0.381 U (2/28/2006 ~)	(1.29 - 0.381)/(12 - 4)	0.113625
ND<1.22 OK (6/8/2007 a)	ND<0.381 U (2/28/2006 ~)	(1.22 - 0.381)/(13 - 4)	0.0932222
ND<1.35 U (4/10/2006 a)	ND<0.721 U (3/5/2006 a)	(1.35 - 0.721)/(6 - 5)	0.629

ND<0.797 OK (4/29/2006 a)	ND<0.721 U (3/5/2006 a)	(0.797 - 0.721)/(7 - 5)	0.038
ND<1.55 OK (7/20/2006 a)	ND<0.721 U (3/5/2006 a)	(1.55 - 0.721)/(8 - 5)	0.276333
ND<1.25 OK (10/5/2006 a)	ND<0.721 U (3/5/2006 a)	(1.25 - 0.721)/(9 - 5)	0.13225
ND<1.43 OK (11/12/2006 a)	ND<0.721 U (3/5/2006 a)	(1.43 - 0.721)/(10 - 5)	0.1418
ND<0.84 OK (1/15/2007 a)	ND<0.721 U (3/5/2006 a)	(0.84 - 0.721)/(11 - 5)	0.0198333
ND<1.29 OK (3/13/2007 a)	ND<0.721 U (3/5/2006 a)	(1.29 - 0.721)/(12 - 5)	0.0812857
ND<1.22 OK (6/8/2007 a)	ND<0.721 U (3/5/2006 a)	(1.22 - 0.721)/(13 - 5)	0.062375
ND<0.797 OK (4/29/2006 a)	ND<1.35 U (4/10/2006 a)	(0.797 - 1.35)/(7 - 6)	-0.553
ND<1.55 OK (7/20/2006 a)	ND<1.35 U (4/10/2006 a)	(1.55 - 1.35)/(8 - 6)	0.1
ND<1.25 OK (10/5/2006 a)	ND<1.35 U (4/10/2006 a)	(1.25 - 1.35)/(9 - 6)	-0.0333333
ND<1.43 OK (11/12/2006 a)	ND<1.35 U (4/10/2006 a)	(1.43 - 1.35)/(10 - 6)	0.02
ND<0.84 OK (1/15/2007 a)	ND<1.35 U (4/10/2006 a)	(0.84 - 1.35)/(11 - 6)	-0.102
ND<1.29 OK (3/13/2007 a)	ND<1.35 U (4/10/2006 a)	(1.29 - 1.35)/(12 - 6)	-0.01
ND<1.22 OK (6/8/2007 a)	ND<1.35 U (4/10/2006 a)	(1.22 - 1.35)/(13 - 6)	-0.0185714
ND<1.55 OK (7/20/2006 a)	ND<0.797 OK (4/29/2006 a)	(1.55 - 0.797)/(8 - 7)	0.753
ND<1.25 OK (10/5/2006 a)	ND<0.797 OK (4/29/2006 a)	(1.25 - 0.797)/(9 - 7)	0.2265
ND<1.43 OK (11/12/2006 a)	ND<0.797 OK (4/29/2006 a)	(1.43 - 0.797)/(10 - 7)	0.211
ND<0.84 OK (1/15/2007 a)	ND<0.797 OK (4/29/2006 a)	(0.84 - 0.797)/(11 - 7)	0.01075
ND<1.29 OK (3/13/2007 a)	ND<0.797 OK (4/29/2006 a)	(1.29 - 0.797)/(12 - 7)	0.0986
ND<1.22 OK (6/8/2007 a)	ND<0.797 OK (4/29/2006 a)	(1.22 - 0.797)/(13 - 7)	0.0705
ND<1.25 OK (10/5/2006 a)	ND<1.55 OK (7/20/2006 a)	(1.25 - 1.55)/(9 - 8)	-0.3
ND<1.43 OK (11/12/2006 a)	ND<1.55 OK (7/20/2006 a)	(1.43 - 1.55)/(10 - 8)	-0.06
ND<0.84 OK (1/15/2007 a)	ND<1.55 OK (7/20/2006 a)	(0.84 - 1.55)/(11 - 8)	-0.236667
ND<1.29 OK (3/13/2007 a)	ND<1.55 OK (7/20/2006 a)	(1.29 - 1.55)/(12 - 8)	-0.065
ND<1.22 OK (6/8/2007 a)	ND<1.55 OK (7/20/2006 a)	(1.22 - 1.55)/(13 - 8)	-0.066
ND<1.43 OK (11/12/2006 a)	ND<1.25 OK (10/5/2006 a)	(1.43 - 1.25)/(10 - 9)	0.18
ND<0.84 OK (1/15/2007 a)	ND<1.25 OK (10/5/2006 a)	(0.84 - 1.25)/(11 - 9)	-0.205
ND<1.29 OK (3/13/2007 a)	ND<1.25 OK (10/5/2006 a)	(1.29 - 1.25)/(12 - 9)	0.0133333
ND<1.22 OK (6/8/2007 a)	ND<1.25 OK (10/5/2006 a)	(1.22 - 1.25)/(13 - 9)	-0.0075
ND<0.84 OK (1/15/2007 a)	ND<1.43 OK (11/12/2006 a)	(0.84 - 1.43)/(11 - 10)	-0.59
ND<1.29 OK (3/13/2007 a)	ND<1.43 OK (11/12/2006 a)	(1.29 - 1.43)/(12 - 10)	-0.07
ND<1.22 OK (6/8/2007 a)	ND<1.43 OK (11/12/2006 a)	(1.22 - 1.43)/(13 - 10)	-0.07
ND<1.29 OK (3/13/2007 a)	ND<0.84 OK (1/15/2007 a)	(1.29 - 0.84)/(12 - 11)	0.45
ND<1.22 OK (6/8/2007 a)	ND<0.84 OK (1/15/2007 a)	(1.22 - 0.84)/(13 - 11)	0.19
ND<1.22 OK (6/8/2007 a)	ND<1.29 OK (3/13/2007 a)	(1.22 - 1.29)/(13 - 12)	-0.07

Number of Q values = 78

Ordered Q Values

n	Q
1	-1.129
2	-0.59
3	-0.553
4	-0.3945
5	-0.3
6	-0.236667
7	-0.217
8	-0.205
9	-0.185667

10	-0.17825
11	-0.17
12	-0.102
13	-0.08375
14	-0.07
15	-0.07
16	-0.07
17	-0.066
18	-0.065
19	-0.06
20	-0.05425
21	-0.0533333
22	-0.0433333
23	-0.0333333
24	-0.029
25	-0.0244444
26	-0.0235
27	-0.0185714
28	-0.0114286
29	-0.01
30	-0.0098
31	-0.0075
32	0
33	0.008
34	0.01075
35	0.0132222
36	0.0133333
37	0.0152
38	0.0198333
39	0.02
40	0.0235
41	0.032
42	0.038
43	0.039
44	0.0453636
45	0.0546667
46	0.0569
47	0.062375
48	0.0655714
49	0.0705
50	0.0755714
51	0.0812857
52	0.0824
53	0.0874286
54	0.088625
55	0.0932222
56	0.0986
57	0.1
58	0.113625
59	0.13225
60	0.138167
61	0.138667
62	0.1418
63	0.15725
64	0.1738
65	0.174833
66	0.18

67	0.19
68	0.211
69	0.2265
70	0.276333
71	0.286
72	0.29225
73	0.34
74	0.45
75	0.4845
76	0.629
77	0.753
78	0.789

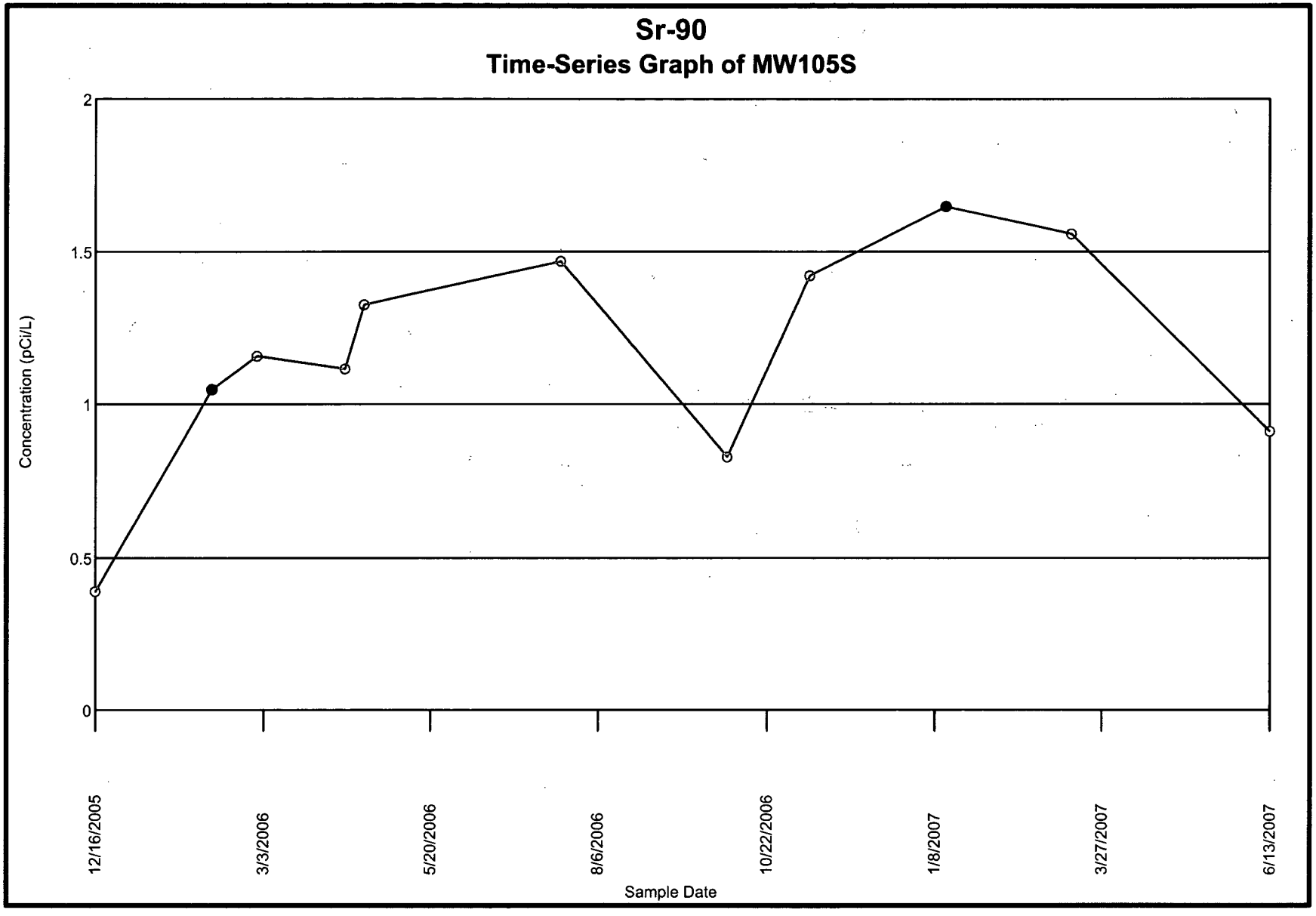
Sen's Estimator (Median Q) is 0.02175

Tied Group	Value	Members
1	0.721	2

Time Period	Observations
12/16/2005	1
12/19/2005	1
2/8/2006	1
2/28/2006	1
3/5/2006	1
4/10/2006	1
4/29/2006	1
7/20/2006	1
10/5/2006	1
11/12/2006	1
1/15/2007	1
3/13/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is -0.0235 = Q(26)
Upper limit is 0.0874286 = Q(53)
-0.0235 < 0 < 0.0874286 indicating no trend in data.


Sr-90
Time-Series Graph of MW105S
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/20/2006
8/6/2006
10/22/2006
1/8/2007
3/27/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW105S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1.05 U (2/8/2006 a)	ND<0.386 U (12/16/2005 a)	(1.05 - 0.386)/(2 - 1)	0.664
ND<1.16 U (3/1/2006 ~)	ND<0.386 U (12/16/2005 a)	(1.16 - 0.386)/(3 - 1)	0.387
ND<1.12 U (4/10/2006 a)	ND<0.386 U (12/16/2005 a)	(1.12 - 0.386)/(4 - 1)	0.244667
ND<1.33 OK (4/19/2006 a)	ND<0.386 U (12/16/2005 a)	(1.33 - 0.386)/(5 - 1)	0.236
ND<1.47 OK (7/20/2006 ~)	ND<0.386 U (12/16/2005 a)	(1.47 - 0.386)/(6 - 1)	0.2168
ND<0.831 OK (10/5/2006 a)	ND<0.386 U (12/16/2005 a)	(0.831 - 0.386)/(7 - 1)	0.0741667
ND<1.42 OK (11/12/2006 a)	ND<0.386 U (12/16/2005 a)	(1.42 - 0.386)/(8 - 1)	0.147714
1.65 OK (1/14/2007 a)	ND<0.386 U (12/16/2005 a)	(1.65 - 0.386)/(9 - 1)	0.158
ND<1.56 OK (3/13/2007 a)	ND<0.386 U (12/16/2005 a)	(1.56 - 0.386)/(10 - 1)	0.130444
ND<0.912 OK (6/13/2007 a)	ND<0.386 U (12/16/2005 a)	(0.912 - 0.386)/(11 - 1)	0.0526
ND<1.16 U (3/1/2006 ~)	1.05 U (2/8/2006 a)	(1.16 - 1.05)/(3 - 2)	0.11
ND<1.12 U (4/10/2006 a)	1.05 U (2/8/2006 a)	(1.12 - 1.05)/(4 - 2)	0.035
ND<1.33 OK (4/19/2006 a)	1.05 U (2/8/2006 a)	(1.33 - 1.05)/(5 - 2)	0.0933333
ND<1.47 OK (7/20/2006 ~)	1.05 U (2/8/2006 a)	(1.47 - 1.05)/(6 - 2)	0.105
ND<0.831 OK (10/5/2006 a)	1.05 U (2/8/2006 a)	(0.831 - 1.05)/(7 - 2)	-0.0438
ND<1.42 OK (11/12/2006 a)	1.05 U (2/8/2006 a)	(1.42 - 1.05)/(8 - 2)	0.0616667
1.65 OK (1/14/2007 a)	1.05 U (2/8/2006 a)	(1.65 - 1.05)/(9 - 2)	0.0857143
ND<1.56 OK (3/13/2007 a)	1.05 U (2/8/2006 a)	(1.56 - 1.05)/(10 - 2)	0.06375
ND<0.912 OK (6/13/2007 a)	1.05 U (2/8/2006 a)	(0.912 - 1.05)/(11 - 2)	-0.0153333
ND<1.12 U (4/10/2006 a)	ND<1.16 U (3/1/2006 ~)	(1.12 - 1.16)/(4 - 3)	-0.04
ND<1.33 OK (4/19/2006 a)	ND<1.16 U (3/1/2006 ~)	(1.33 - 1.16)/(5 - 3)	0.085
ND<1.47 OK (7/20/2006 ~)	ND<1.16 U (3/1/2006 ~)	(1.47 - 1.16)/(6 - 3)	0.103333
ND<0.831 OK (10/5/2006 a)	ND<1.16 U (3/1/2006 ~)	(0.831 - 1.16)/(7 - 3)	-0.08225
ND<1.42 OK (11/12/2006 a)	ND<1.16 U (3/1/2006 ~)	(1.42 - 1.16)/(8 - 3)	0.052
1.65 OK (1/14/2007 a)	ND<1.16 U (3/1/2006 ~)	(1.65 - 1.16)/(9 - 3)	0.0816667
ND<1.56 OK (3/13/2007 a)	ND<1.16 U (3/1/2006 ~)	(1.56 - 1.16)/(10 - 3)	0.0571429
ND<0.912 OK (6/13/2007 a)	ND<1.16 U (3/1/2006 ~)	(0.912 - 1.16)/(11 - 3)	-0.031
ND<1.33 OK (4/19/2006 a)	ND<1.12 U (4/10/2006 a)	(1.33 - 1.12)/(5 - 4)	0.21

ND<1.47 OK (7/20/2006 ~)	ND<1.12 U (4/10/2006 a)	(1.47 - 1.12)/(6 - 4)	0.175
ND<0.831 OK (10/5/2006 a)	ND<1.12 U (4/10/2006 a)	(0.831 - 1.12)/(7 - 4)	-0.0963333
ND<1.42 OK (11/12/2006 a)	ND<1.12 U (4/10/2006 a)	(1.42 - 1.12)/(8 - 4)	0.075
1.65 OK (1/14/2007 a)	ND<1.12 U (4/10/2006 a)	(1.65 - 1.12)/(9 - 4)	0.106
ND<1.56 OK (3/13/2007 a)	ND<1.12 U (4/10/2006 a)	(1.56 - 1.12)/(10 - 4)	0.0733333
ND<0.912 OK (6/13/2007 a)	ND<1.12 U (4/10/2006 a)	(0.912 - 1.12)/(11 - 4)	-0.0297143
ND<1.47 OK (7/20/2006 ~)	ND<1.33 OK (4/19/2006 a)	(1.47 - 1.33)/(6 - 5)	0.14
ND<0.831 OK (10/5/2006 a)	ND<1.33 OK (4/19/2006 a)	(0.831 - 1.33)/(7 - 5)	-0.2495
ND<1.42 OK (11/12/2006 a)	ND<1.33 OK (4/19/2006 a)	(1.42 - 1.33)/(8 - 5)	0.03
1.65 OK (1/14/2007 a)	ND<1.33 OK (4/19/2006 a)	(1.65 - 1.33)/(9 - 5)	0.08
ND<1.56 OK (3/13/2007 a)	ND<1.33 OK (4/19/2006 a)	(1.56 - 1.33)/(10 - 5)	0.046
ND<0.912 OK (6/13/2007 a)	ND<1.33 OK (4/19/2006 a)	(0.912 - 1.33)/(11 - 5)	-0.0696667
ND<0.831 OK (10/5/2006 a)	ND<1.47 OK (7/20/2006 ~)	(0.831 - 1.47)/(7 - 6)	-0.639
ND<1.42 OK (11/12/2006 a)	ND<1.47 OK (7/20/2006 ~)	(1.42 - 1.47)/(8 - 6)	-0.025
1.65 OK (1/14/2007 a)	ND<1.47 OK (7/20/2006 ~)	(1.65 - 1.47)/(9 - 6)	0.06
ND<1.56 OK (3/13/2007 a)	ND<1.47 OK (7/20/2006 ~)	(1.56 - 1.47)/(10 - 6)	0.0225
ND<0.912 OK (6/13/2007 a)	ND<1.47 OK (7/20/2006 ~)	(0.912 - 1.47)/(11 - 6)	-0.1116
ND<1.42 OK (11/12/2006 a)	ND<0.831 OK (10/5/2006 a)	(1.42 - 0.831)/(8 - 7)	0.589
1.65 OK (1/14/2007 a)	ND<0.831 OK (10/5/2006 a)	(1.65 - 0.831)/(9 - 7)	0.4095
ND<1.56 OK (3/13/2007 a)	ND<0.831 OK (10/5/2006 a)	(1.56 - 0.831)/(10 - 7)	0.243
ND<0.912 OK (6/13/2007 a)	ND<0.831 OK (10/5/2006 a)	(0.912 - 0.831)/(11 - 7)	0.02025
1.65 OK (1/14/2007 a)	ND<1.42 OK (11/12/2006 a)	(1.65 - 1.42)/(9 - 8)	0.23
ND<1.56 OK (3/13/2007 a)	ND<1.42 OK (11/12/2006 a)	(1.56 - 1.42)/(10 - 8)	0.07
ND<0.912 OK (6/13/2007 a)	ND<1.42 OK (11/12/2006 a)	(0.912 - 1.42)/(11 - 8)	-0.169333
ND<1.56 OK (3/13/2007 a)	1.65 OK (1/14/2007 a)	(1.56 - 1.65)/(10 - 9)	-0.09
ND<0.912 OK (6/13/2007 a)	1.65 OK (1/14/2007 a)	(0.912 - 1.65)/(11 - 9)	-0.369
ND<0.912 OK (6/13/2007 a)	ND<1.56 OK (3/13/2007 a)	(0.912 - 1.56)/(11 - 10)	-0.648

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.648
2	-0.639

3	-0.369
4	-0.2495
5	-0.169333
6	-0.1116
7	-0.0963333
8	-0.09
9	-0.08225
10	-0.0696667
11	-0.0438
12	-0.04
13	-0.031
14	-0.0297143
15	-0.025
16	-0.0153333
17	0.02025
18	0.0225
19	0.03
20	0.035
21	0.046
22	0.052
23	0.0526
24	0.0571429
25	0.06
26	0.0616667
27	0.06375
28	0.07
29	0.0733333
30	0.0741667
31	0.075
32	0.08
33	0.0816667
34	0.085
35	0.0857143
36	0.0933333
37	0.103333
38	0.105
39	0.106
40	0.11
41	0.130444
42	0.14
43	0.147714

44	0.158
45	0.175
46	0.21
47	0.2168
48	0.23
49	0.236
50	0.243
51	0.244667
52	0.387
53	0.4095
54	0.589
55	0.664

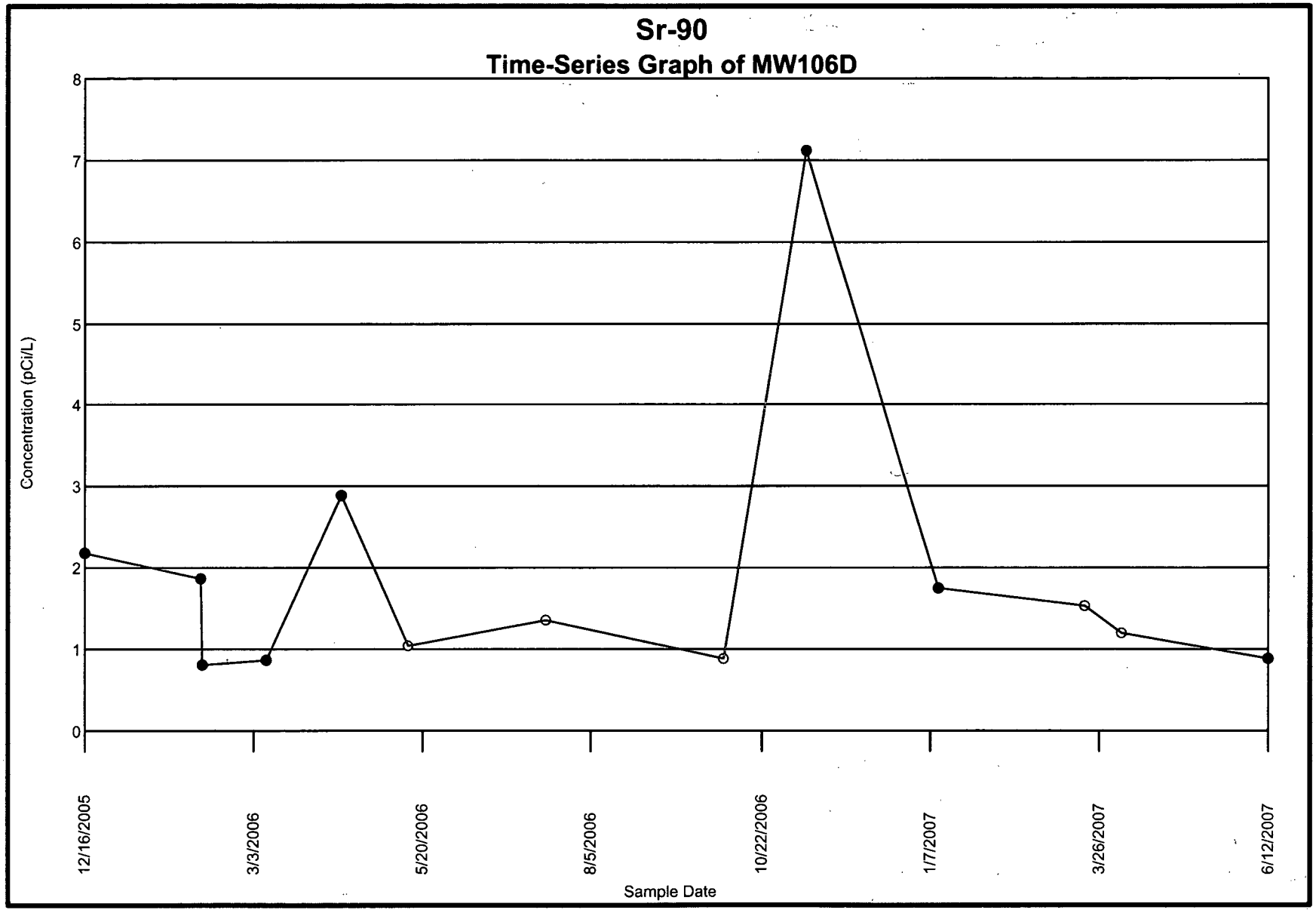
Sen's Estimator (Median Q) is 0.07

Time Period	Observations
12/16/2005	1
2/8/2006	1
3/1/2006	1
4/10/2006	1
4/19/2006	1
7/20/2006	1
10/5/2006	1
11/12/2006	1
1/14/2007	1
3/13/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357

M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 0.02025 = Q(17)
Upper limit is 0.106 = Q(39)
0.02025 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW106D
Concentration (pCi/L)
0
1
2
3
4
5
6
7
8
12/16/2005
3/3/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW106D
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1.87 OK (2/7/2006 a)	2.18 OK (12/16/2005 a)	(1.87 - 2.18)/(2 - 1)	-0.31
0.801 U (2/8/2006 a)	2.18 OK (12/16/2005 a)	(0.801 - 2.18)/(3 - 1)	-0.6895
0.86 U (3/9/2006 a)	2.18 OK (12/16/2005 a)	(0.86 - 2.18)/(4 - 1)	-0.44
2.88 OK (4/13/2006 a)	2.18 OK (12/16/2005 a)	(2.88 - 2.18)/(5 - 1)	0.175
ND<1.05 OK (5/13/2006 a)	2.18 OK (12/16/2005 a)	(1.05 - 2.18)/(6 - 1)	-0.226
ND<1.36 OK (7/16/2006 a)	2.18 OK (12/16/2005 a)	(1.36 - 2.18)/(7 - 1)	-0.136667
ND<0.884 OK (10/5/2006 a)	2.18 OK (12/16/2005 a)	(0.884 - 2.18)/(8 - 1)	-0.185143
7.11 OK (11/12/2006 a)	2.18 OK (12/16/2005 a)	(7.11 - 2.18)/(9 - 1)	0.61625
1.74 OK (1/12/2007 a)	2.18 OK (12/16/2005 a)	(1.74 - 2.18)/(10 - 1)	-0.0488889
ND<1.53 OK (3/20/2007 a)	2.18 OK (12/16/2005 a)	(1.53 - 2.18)/(11 - 1)	-0.065
ND<1.19 OK (4/6/2007 a)	2.18 OK (12/16/2005 a)	(1.19 - 2.18)/(12 - 1)	-0.09
0.8835 OK (6/12/2007 ~)	2.18 OK (12/16/2005 a)	(0.8835 - 2.18)/(13 - 1)	-0.108042
0.801 U (2/8/2006 a)	1.87 OK (2/7/2006 a)	(0.801 - 1.87)/(3 - 2)	-1.069
0.86 U (3/9/2006 a)	1.87 OK (2/7/2006 a)	(0.86 - 1.87)/(4 - 2)	-0.505
2.88 OK (4/13/2006 a)	1.87 OK (2/7/2006 a)	(2.88 - 1.87)/(5 - 2)	0.336667
ND<1.05 OK (5/13/2006 a)	1.87 OK (2/7/2006 a)	(1.05 - 1.87)/(6 - 2)	-0.205
ND<1.36 OK (7/16/2006 a)	1.87 OK (2/7/2006 a)	(1.36 - 1.87)/(7 - 2)	-0.102
ND<0.884 OK (10/5/2006 a)	1.87 OK (2/7/2006 a)	(0.884 - 1.87)/(8 - 2)	-0.164333
7.11 OK (11/12/2006 a)	1.87 OK (2/7/2006 a)	(7.11 - 1.87)/(9 - 2)	0.748571
1.74 OK (1/12/2007 a)	1.87 OK (2/7/2006 a)	(1.74 - 1.87)/(10 - 2)	-0.01625
ND<1.53 OK (3/20/2007 a)	1.87 OK (2/7/2006 a)	(1.53 - 1.87)/(11 - 2)	-0.0377778
ND<1.19 OK (4/6/2007 a)	1.87 OK (2/7/2006 a)	(1.19 - 1.87)/(12 - 2)	-0.068
0.8835 OK (6/12/2007 ~)	1.87 OK (2/7/2006 a)	(0.8835 - 1.87)/(13 - 2)	-0.0896818
0.86 U (3/9/2006 a)	0.801 U (2/8/2006 a)	(0.86 - 0.801)/(4 - 3)	0.059
2.88 OK (4/13/2006 a)	0.801 U (2/8/2006 a)	(2.88 - 0.801)/(5 - 3)	1.0395
ND<1.05 OK (5/13/2006 a)	0.801 U (2/8/2006 a)	(1.05 - 0.801)/(6 - 3)	0.083
ND<1.36 OK (7/16/2006 a)	0.801 U (2/8/2006 a)	(1.36 - 0.801)/(7 - 3)	0.13975
ND<0.884 OK (10/5/2006 a)	0.801 U (2/8/2006 a)	(0.884 - 0.801)/(8 - 3)	0.0166
7.11 OK (11/12/2006 a)	0.801 U (2/8/2006 a)	(7.11 - 0.801)/(9 - 3)	1.0515
1.74 OK (1/12/2007 a)	0.801 U (2/8/2006 a)	(1.74 - 0.801)/(10 - 3)	0.134143
ND<1.53 OK (3/20/2007 a)	0.801 U (2/8/2006 a)	(1.53 - 0.801)/(11 - 3)	0.091125
ND<1.19 OK (4/6/2007 a)	0.801 U (2/8/2006 a)	(1.19 - 0.801)/(12 - 3)	0.0432222
0.8835 OK (6/12/2007 ~)	0.801 U (2/8/2006 a)	(0.8835 - 0.801)/(13 - 3)	0.00825
2.88 OK (4/13/2006 a)	0.86 U (3/9/2006 a)	(2.88 - 0.86)/(5 - 4)	2.02
ND<1.05 OK (5/13/2006 a)	0.86 U (3/9/2006 a)	(1.05 - 0.86)/(6 - 4)	0.095
ND<1.36 OK (7/16/2006 a)	0.86 U (3/9/2006 a)	(1.36 - 0.86)/(7 - 4)	0.166667
ND<0.884 OK (10/5/2006 a)	0.86 U (3/9/2006 a)	(0.884 - 0.86)/(8 - 4)	0.006
7.11 OK (11/12/2006 a)	0.86 U (3/9/2006 a)	(7.11 - 0.86)/(9 - 4)	1.25
1.74 OK (1/12/2007 a)	0.86 U (3/9/2006 a)	(1.74 - 0.86)/(10 - 4)	0.146667
ND<1.53 OK (3/20/2007 a)	0.86 U (3/9/2006 a)	(1.53 - 0.86)/(11 - 4)	0.0957143
ND<1.19 OK (4/6/2007 a)	0.86 U (3/9/2006 a)	(1.19 - 0.86)/(12 - 4)	0.04125
0.8835 OK (6/12/2007 ~)	0.86 U (3/9/2006 a)	(0.8835 - 0.86)/(13 - 4)	0.00261111
ND<1.05 OK (5/13/2006 a)	2.88 OK (4/13/2006 a)	(1.05 - 2.88)/(6 - 5)	-1.83

ND<1.36 OK (7/16/2006 a)	2.88 OK (4/13/2006 a)	(1.36 - 2.88)/(7 - 5)	-0.76
ND<0.884 OK (10/5/2006 a)	2.88 OK (4/13/2006 a)	(0.884 - 2.88)/(8 - 5)	-0.665333
7.11 OK (11/12/2006 a)	2.88 OK (4/13/2006 a)	(7.11 - 2.88)/(9 - 5)	1.0575
1.74 OK (1/12/2007 a)	2.88 OK (4/13/2006 a)	(1.74 - 2.88)/(10 - 5)	-0.228
ND<1.53 OK (3/20/2007 a)	2.88 OK (4/13/2006 a)	(1.53 - 2.88)/(11 - 5)	-0.225
ND<1.19 OK (4/6/2007 a)	2.88 OK (4/13/2006 a)	(1.19 - 2.88)/(12 - 5)	-0.241429
0.8835 OK (6/12/2007 ~)	2.88 OK (4/13/2006 a)	(0.8835 - 2.88)/(13 - 5)	-0.249562
ND<1.36 OK (7/16/2006 a)	ND<1.05 OK (5/13/2006 a)	(1.36 - 1.05)/(7 - 6)	0.31
ND<0.884 OK (10/5/2006 a)	ND<1.05 OK (5/13/2006 a)	(0.884 - 1.05)/(8 - 6)	-0.083
7.11 OK (11/12/2006 a)	ND<1.05 OK (5/13/2006 a)	(7.11 - 1.05)/(9 - 6)	2.02
1.74 OK (1/12/2007 a)	ND<1.05 OK (5/13/2006 a)	(1.74 - 1.05)/(10 - 6)	0.1725
ND<1.53 OK (3/20/2007 a)	ND<1.05 OK (5/13/2006 a)	(1.53 - 1.05)/(11 - 6)	0.096
ND<1.19 OK (4/6/2007 a)	ND<1.05 OK (5/13/2006 a)	(1.19 - 1.05)/(12 - 6)	0.0233333
0.8835 OK (6/12/2007 ~)	ND<1.05 OK (5/13/2006 a)	(0.8835 - 1.05)/(13 - 6)	-0.0237857
ND<0.884 OK (10/5/2006 a)	ND<1.36 OK (7/16/2006 a)	(0.884 - 1.36)/(8 - 7)	-0.476
7.11 OK (11/12/2006 a)	ND<1.36 OK (7/16/2006 a)	(7.11 - 1.36)/(9 - 7)	2.875
1.74 OK (1/12/2007 a)	ND<1.36 OK (7/16/2006 a)	(1.74 - 1.36)/(10 - 7)	0.126667
ND<1.53 OK (3/20/2007 a)	ND<1.36 OK (7/16/2006 a)	(1.53 - 1.36)/(11 - 7)	0.0425
ND<1.19 OK (4/6/2007 a)	ND<1.36 OK (7/16/2006 a)	(1.19 - 1.36)/(12 - 7)	-0.034
0.8835 OK (6/12/2007 ~)	ND<1.36 OK (7/16/2006 a)	(0.8835 - 1.36)/(13 - 7)	-0.0794167
7.11 OK (11/12/2006 a)	ND<0.884 OK (10/5/2006 a)	(7.11 - 0.884)/(9 - 8)	6.226
1.74 OK (1/12/2007 a)	ND<0.884 OK (10/5/2006 a)	(1.74 - 0.884)/(10 - 8)	0.428
ND<1.53 OK (3/20/2007 a)	ND<0.884 OK (10/5/2006 a)	(1.53 - 0.884)/(11 - 8)	0.215333
ND<1.19 OK (4/6/2007 a)	ND<0.884 OK (10/5/2006 a)	(1.19 - 0.884)/(12 - 8)	0.0765
0.8835 OK (6/12/2007 ~)	ND<0.884 OK (10/5/2006 a)	(0.8835 - 0.884)/(13 - 8)	-0.0001
1.74 OK (1/12/2007 a)	7.11 OK (11/12/2006 a)	(1.74 - 7.11)/(10 - 9)	-5.37
ND<1.53 OK (3/20/2007 a)	7.11 OK (11/12/2006 a)	(1.53 - 7.11)/(11 - 9)	-2.79
ND<1.19 OK (4/6/2007 a)	7.11 OK (11/12/2006 a)	(1.19 - 7.11)/(12 - 9)	-1.97333
0.8835 OK (6/12/2007 ~)	7.11 OK (11/12/2006 a)	(0.8835 - 7.11)/(13 - 9)	-1.55663
ND<1.53 OK (3/20/2007 a)	1.74 OK (1/12/2007 a)	(1.53 - 1.74)/(11 - 10)	-0.21
ND<1.19 OK (4/6/2007 a)	1.74 OK (1/12/2007 a)	(1.19 - 1.74)/(12 - 10)	-0.275
0.8835 OK (6/12/2007 ~)	1.74 OK (1/12/2007 a)	(0.8835 - 1.74)/(13 - 10)	-0.2855
ND<1.19 OK (4/6/2007 a)	ND<1.53 OK (3/20/2007 a)	(1.19 - 1.53)/(12 - 11)	-0.34
0.8835 OK (6/12/2007 ~)	ND<1.53 OK (3/20/2007 a)	(0.8835 - 1.53)/(13 - 11)	-0.32325
0.8835 OK (6/12/2007 ~)	ND<1.19 OK (4/6/2007 a)	(0.8835 - 1.19)/(13 - 12)	-0.3065

Number of Q values = 78

Ordered Q Values

n	Q
1	-5.37
2	-2.79
3	-1.97333
4	-1.83
5	-1.55663
6	-1.069
7	-0.76
8	-0.6895
9	-0.665333

10	-0.505
11	-0.476
12	-0.44
13	-0.34
14	-0.32325
15	-0.31
16	-0.3065
17	-0.2855
18	-0.275
19	-0.249562
20	-0.241429
21	-0.228
22	-0.226
23	-0.225
24	-0.21
25	-0.205
26	-0.185143
27	-0.164333
28	-0.136667
29	-0.108042
30	-0.102
31	-0.09
32	-0.0896818
33	-0.083
34	-0.0794167
35	-0.068
36	-0.065
37	-0.0488889
38	-0.0377778
39	-0.034
40	-0.0237857
41	-0.01625
42	-0.0001
43	0.00261111
44	0.006
45	0.00825
46	0.0166
47	0.0233333
48	0.04125
49	0.0425
50	0.0432222
51	0.059
52	0.0765
53	0.083
54	0.091125
55	0.095
56	0.0957143
57	0.096
58	0.126667
59	0.134143
60	0.13975
61	0.146667
62	0.166667
63	0.1725
64	0.175
65	0.215333
66	0.31

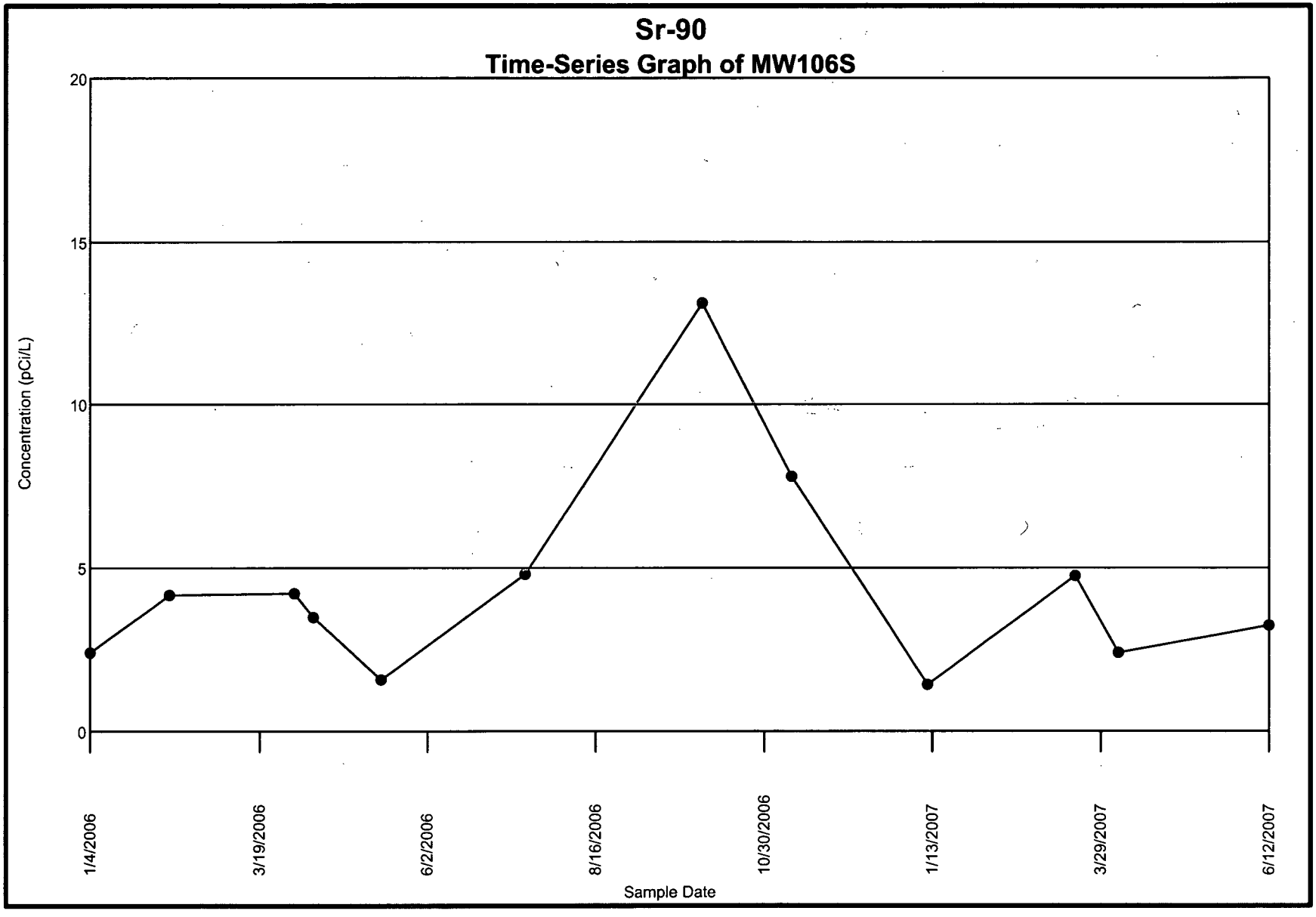
67	0.336667
68	0.428
69	0.61625
70	0.748571
71	1.0395
72	1.0515
73	1.0575
74	1.25
75	2.02
76	2.02
77	2.875
78	6.226

Sen's Estimator (Median Q) is -0.0288929

Time Period	Observations
12/16/2005	1
2/7/2006	1
2/8/2006	1
3/9/2006	1
4/13/2006	1
5/13/2006	1
7/16/2006	1
10/5/2006	1
11/12/2006	1
1/12/2007	1
3/20/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.185143 = Q(26)
Upper limit is 0.083 = Q(53)
-0.185143 < 0 < 0.083 indicating no trend in data.


Sr-90
Time-Series Graph of MW106S
Concentration (pCi/L)
20
15
10
5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW106S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
4.17 OK (2/8/2006 a)	2.4 OK (1/4/2006 a)	(4.17 - 2.4)/(2 - 1)	1.77
4.25 OK (4/4/2006 a)	2.4 OK (1/4/2006 a)	(4.25 - 2.4)/(3 - 1)	0.925
3.47 OK (4/13/2006 a)	2.4 OK (1/4/2006 a)	(3.47 - 2.4)/(4 - 1)	0.356667
1.59 OK (5/13/2006 ~)	2.4 OK (1/4/2006 a)	(1.59 - 2.4)/(5 - 1)	-0.2025
4.805 OK (7/16/2006 ~)	2.4 OK (1/4/2006 a)	(4.805 - 2.4)/(6 - 1)	0.481
13.1 OK (10/3/2006 a)	2.4 OK (1/4/2006 a)	(13.1 - 2.4)/(7 - 1)	1.78333
7.8 OK (11/12/2006 a)	2.4 OK (1/4/2006 a)	(7.8 - 2.4)/(8 - 1)	0.771429
1.44 OK (1/11/2007 a)	2.4 OK (1/4/2006 a)	(1.44 - 2.4)/(9 - 1)	-0.12
4.77 OK (3/18/2007 a)	2.4 OK (1/4/2006 a)	(4.77 - 2.4)/(10 - 1)	0.263333
2.43 OK (4/6/2007 ~)	2.4 OK (1/4/2006 a)	(2.43 - 2.4)/(11 - 1)	0.003
3.23 OK (6/12/2007 a)	2.4 OK (1/4/2006 a)	(3.23 - 2.4)/(12 - 1)	0.0754545
4.25 OK (4/4/2006 a)	4.17 OK (2/8/2006 a)	(4.25 - 4.17)/(3 - 2)	0.08
3.47 OK (4/13/2006 a)	4.17 OK (2/8/2006 a)	(3.47 - 4.17)/(4 - 2)	-0.35
1.59 OK (5/13/2006 ~)	4.17 OK (2/8/2006 a)	(1.59 - 4.17)/(5 - 2)	-0.86
4.805 OK (7/16/2006 ~)	4.17 OK (2/8/2006 a)	(4.805 - 4.17)/(6 - 2)	0.15875
13.1 OK (10/3/2006 a)	4.17 OK (2/8/2006 a)	(13.1 - 4.17)/(7 - 2)	1.786
7.8 OK (11/12/2006 a)	4.17 OK (2/8/2006 a)	(7.8 - 4.17)/(8 - 2)	0.605
1.44 OK (1/11/2007 a)	4.17 OK (2/8/2006 a)	(1.44 - 4.17)/(9 - 2)	-0.39
4.77 OK (3/18/2007 a)	4.17 OK (2/8/2006 a)	(4.77 - 4.17)/(10 - 2)	0.075
2.43 OK (4/6/2007 ~)	4.17 OK (2/8/2006 a)	(2.43 - 4.17)/(11 - 2)	-0.193333
3.23 OK (6/12/2007 a)	4.17 OK (2/8/2006 a)	(3.23 - 4.17)/(12 - 2)	-0.094
3.47 OK (4/13/2006 a)	4.25 OK (4/4/2006 a)	(3.47 - 4.25)/(4 - 3)	-0.78
1.59 OK (5/13/2006 ~)	4.25 OK (4/4/2006 a)	(1.59 - 4.25)/(5 - 3)	-1.33
4.805 OK (7/16/2006 ~)	4.25 OK (4/4/2006 a)	(4.805 - 4.25)/(6 - 3)	0.185
13.1 OK (10/3/2006 a)	4.25 OK (4/4/2006 a)	(13.1 - 4.25)/(7 - 3)	2.2125
7.8 OK (11/12/2006 a)	4.25 OK (4/4/2006 a)	(7.8 - 4.25)/(8 - 3)	0.71
1.44 OK (1/11/2007 a)	4.25 OK (4/4/2006 a)	(1.44 - 4.25)/(9 - 3)	-0.468333
4.77 OK (3/18/2007 a)	4.25 OK (4/4/2006 a)	(4.77 - 4.25)/(10 - 3)	0.0742857
2.43 OK (4/6/2007 ~)	4.25 OK (4/4/2006 a)	(2.43 - 4.25)/(11 - 3)	-0.2275
3.23 OK (6/12/2007 a)	4.25 OK (4/4/2006 a)	(3.23 - 4.25)/(12 - 3)	-0.113333
1.59 OK (5/13/2006 ~)	3.47 OK (4/13/2006 a)	(1.59 - 3.47)/(5 - 4)	-1.88
4.805 OK (7/16/2006 ~)	3.47 OK (4/13/2006 a)	(4.805 - 3.47)/(6 - 4)	0.6675
13.1 OK (10/3/2006 a)	3.47 OK (4/13/2006 a)	(13.1 - 3.47)/(7 - 4)	3.21
7.8 OK (11/12/2006 a)	3.47 OK (4/13/2006 a)	(7.8 - 3.47)/(8 - 4)	1.0825
1.44 OK (1/11/2007 a)	3.47 OK (4/13/2006 a)	(1.44 - 3.47)/(9 - 4)	-0.406
4.77 OK (3/18/2007 a)	3.47 OK (4/13/2006 a)	(4.77 - 3.47)/(10 - 4)	0.216667
2.43 OK (4/6/2007 ~)	3.47 OK (4/13/2006 a)	(2.43 - 3.47)/(11 - 4)	-0.148571
3.23 OK (6/12/2007 a)	3.47 OK (4/13/2006 a)	(3.23 - 3.47)/(12 - 4)	-0.03
4.805 OK (7/16/2006 ~)	1.59 OK (5/13/2006 ~)	(4.805 - 1.59)/(6 - 5)	3.215
13.1 OK (10/3/2006 a)	1.59 OK (5/13/2006 ~)	(13.1 - 1.59)/(7 - 5)	5.755
7.8 OK (11/12/2006 a)	1.59 OK (5/13/2006 ~)	(7.8 - 1.59)/(8 - 5)	2.07
1.44 OK (1/11/2007 a)	1.59 OK (5/13/2006 ~)	(1.44 - 1.59)/(9 - 5)	-0.0375
4.77 OK (3/18/2007 a)	1.59 OK (5/13/2006 ~)	(4.77 - 1.59)/(10 - 5)	0.636

2.43 OK (4/6/2007 ~)	1.59 OK (5/13/2006 ~)	(2.43 - 1.59)/(11 - 5)	0.14
3.23 OK (6/12/2007 a)	1.59 OK (5/13/2006 ~)	(3.23 - 1.59)/(12 - 5)	0.234286
13.1 OK (10/3/2006 a)	4.805 OK (7/16/2006 ~)	(13.1 - 4.805)/(7 - 6)	8.295
7.8 OK (11/12/2006 a)	4.805 OK (7/16/2006 ~)	(7.8 - 4.805)/(8 - 6)	1.4975
1.44 OK (1/11/2007 a)	4.805 OK (7/16/2006 ~)	(1.44 - 4.805)/(9 - 6)	-1.12167
4.77 OK (3/18/2007 a)	4.805 OK (7/16/2006 ~)	(4.77 - 4.805)/(10 - 6)	-0.00875
2.43 OK (4/6/2007 ~)	4.805 OK (7/16/2006 ~)	(2.43 - 4.805)/(11 - 6)	-0.475
3.23 OK (6/12/2007 a)	4.805 OK (7/16/2006 ~)	(3.23 - 4.805)/(12 - 6)	-0.2625
7.8 OK (11/12/2006 a)	13.1 OK (10/3/2006 a)	(7.8 - 13.1)/(8 - 7)	-5.3
1.44 OK (1/11/2007 a)	13.1 OK (10/3/2006 a)	(1.44 - 13.1)/(9 - 7)	-5.83
4.77 OK (3/18/2007 a)	13.1 OK (10/3/2006 a)	(4.77 - 13.1)/(10 - 7)	-2.77667
2.43 OK (4/6/2007 ~)	13.1 OK (10/3/2006 a)	(2.43 - 13.1)/(11 - 7)	-2.6675
3.23 OK (6/12/2007 a)	13.1 OK (10/3/2006 a)	(3.23 - 13.1)/(12 - 7)	-1.974
1.44 OK (1/11/2007 a)	7.8 OK (11/12/2006 a)	(1.44 - 7.8)/(9 - 8)	-6.36
4.77 OK (3/18/2007 a)	7.8 OK (11/12/2006 a)	(4.77 - 7.8)/(10 - 8)	-1.515
2.43 OK (4/6/2007 ~)	7.8 OK (11/12/2006 a)	(2.43 - 7.8)/(11 - 8)	-1.79
3.23 OK (6/12/2007 a)	7.8 OK (11/12/2006 a)	(3.23 - 7.8)/(12 - 8)	-1.1425
4.77 OK (3/18/2007 a)	1.44 OK (1/11/2007 a)	(4.77 - 1.44)/(10 - 9)	3.33
2.43 OK (4/6/2007 ~)	1.44 OK (1/11/2007 a)	(2.43 - 1.44)/(11 - 9)	0.495
3.23 OK (6/12/2007 a)	1.44 OK (1/11/2007 a)	(3.23 - 1.44)/(12 - 9)	0.596667
2.43 OK (4/6/2007 ~)	4.77 OK (3/18/2007 a)	(2.43 - 4.77)/(11 - 10)	-2.34
3.23 OK (6/12/2007 a)	4.77 OK (3/18/2007 a)	(3.23 - 4.77)/(12 - 10)	-0.77
3.23 OK (6/12/2007 a)	2.43 OK (4/6/2007 ~)	(3.23 - 2.43)/(12 - 11)	0.8

Number of Q values = 66

Ordered Q Values

n	Q
1	-6.36
2	-5.83
3	-5.3
4	-2.77667
5	-2.6675
6	-2.34
7	-1.974
8	-1.88
9	-1.79
10	-1.515
11	-1.33
12	-1.1425
13	-1.12167
14	-0.86
15	-0.78
16	-0.77
17	-0.475
18	-0.468333
19	-0.406
20	-0.39
21	-0.35
22	-0.2625

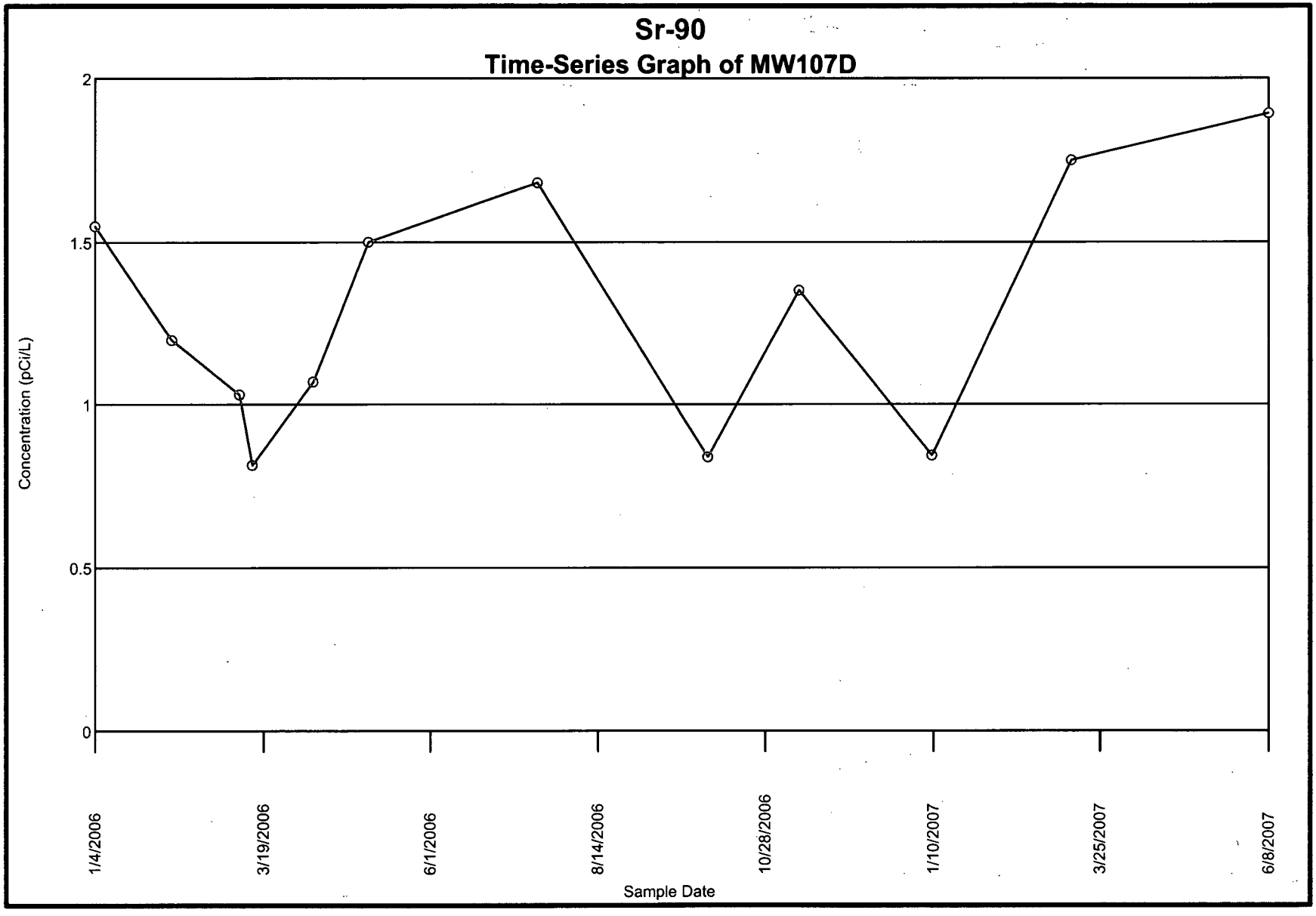
23	-0.2275
24	-0.2025
25	-0.193333
26	-0.148571
27	-0.12
28	-0.113333
29	-0.094
30	-0.0375
31	-0.03
32	-0.00875
33	0.003
34	0.0742857
35	0.075
36	0.0754545
37	0.08
38	0.14
39	0.15875
40	0.185
41	0.216667
42	0.234286
43	0.263333
44	0.356667
45	0.481
46	0.495
47	0.596667
48	0.605
49	0.636
50	0.6675
51	0.71
52	0.771429
53	0.8
54	0.925
55	1.0825
56	1.4975
57	1.77
58	1.78333
59	1.786
60	2.07
61	2.2125
62	3.21
63	3.215
64	3.33
65	5.755
66	8.295

Sen's Estimator (Median Q) is 0.0386429

Time Period	Observations
1/4/2006	1
2/8/2006	1
4/4/2006	1
4/13/2006	1
5/13/2006	1
7/16/2006	1
10/3/2006	1
11/12/2006	1
1/11/2007	1
3/18/2007	1

4/6/2007 1
6/12/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.35 = Q(21)
Upper limit is 0.495 = Q(46)
-0.35 < 0 < 0.495 indicating no trend in data.


Sr-90
Time-Series Graph of MW107D
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW107D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.2 U (2/7/2006 a)	ND<1.55 U (1/4/2006 a)	(1.2 - 1.55)/(2 - 1)	-0.35
ND<1.03 U (3/9/2006 a)	ND<1.55 U (1/4/2006 a)	(1.03 - 1.55)/(3 - 1)	-0.26
ND<0.815 U (3/14/2006 a)	ND<1.55 U (1/4/2006 a)	(0.815 - 1.55)/(4 - 1)	-0.245
ND<1.07 U (4/10/2006 a)	ND<1.55 U (1/4/2006 a)	(1.07 - 1.55)/(5 - 1)	-0.12
ND<1.5 OK (5/5/2006 a)	ND<1.55 U (1/4/2006 a)	(1.5 - 1.55)/(6 - 1)	-0.01
ND<1.68 OK (7/19/2006 a)	ND<1.55 U (1/4/2006 a)	(1.68 - 1.55)/(7 - 1)	0.0216667
ND<0.841 OK (10/3/2006 a)	ND<1.55 U (1/4/2006 a)	(0.841 - 1.55)/(8 - 1)	-0.101286
ND<1.35 OK (11/12/2006 a)	ND<1.55 U (1/4/2006 a)	(1.35 - 1.55)/(9 - 1)	-0.025
ND<0.846 OK (1/10/2007 a)	ND<1.55 U (1/4/2006 a)	(0.846 - 1.55)/(10 - 1)	-0.0782222
ND<1.75 OK (3/13/2007 a)	ND<1.55 U (1/4/2006 a)	(1.75 - 1.55)/(11 - 1)	0.02
ND<1.89 OK (6/8/2007 a)	ND<1.55 U (1/4/2006 a)	(1.89 - 1.55)/(12 - 1)	0.0309091
ND<1.03 U (3/9/2006 a)	ND<1.2 U (2/7/2006 a)	(1.03 - 1.2)/(3 - 2)	-0.17
ND<0.815 U (3/14/2006 a)	ND<1.2 U (2/7/2006 a)	(0.815 - 1.2)/(4 - 2)	-0.1925
ND<1.07 U (4/10/2006 a)	ND<1.2 U (2/7/2006 a)	(1.07 - 1.2)/(5 - 2)	-0.0433333
ND<1.5 OK (5/5/2006 a)	ND<1.2 U (2/7/2006 a)	(1.5 - 1.2)/(6 - 2)	0.075
ND<1.68 OK (7/19/2006 a)	ND<1.2 U (2/7/2006 a)	(1.68 - 1.2)/(7 - 2)	0.096
ND<0.841 OK (10/3/2006 a)	ND<1.2 U (2/7/2006 a)	(0.841 - 1.2)/(8 - 2)	-0.0598333
ND<1.35 OK (11/12/2006 a)	ND<1.2 U (2/7/2006 a)	(1.35 - 1.2)/(9 - 2)	0.0214286
ND<0.846 OK (1/10/2007 a)	ND<1.2 U (2/7/2006 a)	(0.846 - 1.2)/(10 - 2)	-0.04425
ND<1.75 OK (3/13/2007 a)	ND<1.2 U (2/7/2006 a)	(1.75 - 1.2)/(11 - 2)	0.0611111
ND<1.89 OK (6/8/2007 a)	ND<1.2 U (2/7/2006 a)	(1.89 - 1.2)/(12 - 2)	0.069
ND<0.815 U (3/14/2006 a)	ND<1.03 U (3/9/2006 a)	(0.815 - 1.03)/(4 - 3)	-0.215
ND<1.07 U (4/10/2006 a)	ND<1.03 U (3/9/2006 a)	(1.07 - 1.03)/(5 - 3)	0.02
ND<1.5 OK (5/5/2006 a)	ND<1.03 U (3/9/2006 a)	(1.5 - 1.03)/(6 - 3)	0.156667
ND<1.68 OK (7/19/2006 a)	ND<1.03 U (3/9/2006 a)	(1.68 - 1.03)/(7 - 3)	0.1625
ND<0.841 OK (10/3/2006 a)	ND<1.03 U (3/9/2006 a)	(0.841 - 1.03)/(8 - 3)	-0.0378
ND<1.35 OK (11/12/2006 a)	ND<1.03 U (3/9/2006 a)	(1.35 - 1.03)/(9 - 3)	0.0533333
ND<0.846 OK (1/10/2007 a)	ND<1.03 U (3/9/2006 a)	(0.846 - 1.03)/(10 - 3)	-0.0262857
ND<1.75 OK (3/13/2007 a)	ND<1.03 U (3/9/2006 a)	(1.75 - 1.03)/(11 - 3)	0.09

ND<1.89 OK (6/8/2007 a)	ND<1.03 U (3/9/2006 a)	(1.89 - 1.03)/(12 - 3)	0.0955556
ND<1.07 U (4/10/2006 a)	ND<0.815 U (3/14/2006 a)	(1.07 - 0.815)/(5 - 4)	0.255
ND<1.5 OK (5/5/2006 a)	ND<0.815 U (3/14/2006 a)	(1.5 - 0.815)/(6 - 4)	0.3425
ND<1.68 OK (7/19/2006 a)	ND<0.815 U (3/14/2006 a)	(1.68 - 0.815)/(7 - 4)	0.288333
ND<0.841 OK (10/3/2006 a)	ND<0.815 U (3/14/2006 a)	(0.841 - 0.815)/(8 - 4)	0.0065
ND<1.35 OK (11/12/2006 a)	ND<0.815 U (3/14/2006 a)	(1.35 - 0.815)/(9 - 4)	0.107
ND<0.846 OK (1/10/2007 a)	ND<0.815 U (3/14/2006 a)	(0.846 - 0.815)/(10 - 4)	0.00516667
ND<1.75 OK (3/13/2007 a)	ND<0.815 U (3/14/2006 a)	(1.75 - 0.815)/(11 - 4)	0.133571
ND<1.89 OK (6/8/2007 a)	ND<0.815 U (3/14/2006 a)	(1.89 - 0.815)/(12 - 4)	0.134375
ND<1.5 OK (5/5/2006 a)	ND<1.07 U (4/10/2006 a)	(1.5 - 1.07)/(6 - 5)	0.43
ND<1.68 OK (7/19/2006 a)	ND<1.07 U (4/10/2006 a)	(1.68 - 1.07)/(7 - 5)	0.305
ND<0.841 OK (10/3/2006 a)	ND<1.07 U (4/10/2006 a)	(0.841 - 1.07)/(8 - 5)	-0.0763333
ND<1.35 OK (11/12/2006 a)	ND<1.07 U (4/10/2006 a)	(1.35 - 1.07)/(9 - 5)	0.07
ND<0.846 OK (1/10/2007 a)	ND<1.07 U (4/10/2006 a)	(0.846 - 1.07)/(10 - 5)	-0.0448
ND<1.75 OK (3/13/2007 a)	ND<1.07 U (4/10/2006 a)	(1.75 - 1.07)/(11 - 5)	0.113333
ND<1.89 OK (6/8/2007 a)	ND<1.07 U (4/10/2006 a)	(1.89 - 1.07)/(12 - 5)	0.117143
ND<1.68 OK (7/19/2006 a)	ND<1.5 OK (5/5/2006 a)	(1.68 - 1.5)/(7 - 6)	0.18
ND<0.841 OK (10/3/2006 a)	ND<1.5 OK (5/5/2006 a)	(0.841 - 1.5)/(8 - 6)	-0.3295
ND<1.35 OK (11/12/2006 a)	ND<1.5 OK (5/5/2006 a)	(1.35 - 1.5)/(9 - 6)	-0.05
ND<0.846 OK (1/10/2007 a)	ND<1.5 OK (5/5/2006 a)	(0.846 - 1.5)/(10 - 6)	-0.1635
ND<1.75 OK (3/13/2007 a)	ND<1.5 OK (5/5/2006 a)	(1.75 - 1.5)/(11 - 6)	0.05
ND<1.89 OK (6/8/2007 a)	ND<1.5 OK (5/5/2006 a)	(1.89 - 1.5)/(12 - 6)	0.065
ND<0.841 OK (10/3/2006 a)	ND<1.68 OK (7/19/2006 a)	(0.841 - 1.68)/(8 - 7)	-0.839
ND<1.35 OK (11/12/2006 a)	ND<1.68 OK (7/19/2006 a)	(1.35 - 1.68)/(9 - 7)	-0.165
ND<0.846 OK (1/10/2007 a)	ND<1.68 OK (7/19/2006 a)	(0.846 - 1.68)/(10 - 7)	-0.278
ND<1.75 OK (3/13/2007 a)	ND<1.68 OK (7/19/2006 a)	(1.75 - 1.68)/(11 - 7)	0.0175
ND<1.89 OK (6/8/2007 a)	ND<1.68 OK (7/19/2006 a)	(1.89 - 1.68)/(12 - 7)	0.042
ND<1.35 OK (11/12/2006 a)	ND<0.841 OK (10/3/2006 a)	(1.35 - 0.841)/(9 - 8)	0.509
ND<0.846 OK (1/10/2007 a)	ND<0.841 OK (10/3/2006 a)	(0.846 - 0.841)/(10 - 8)	0.0025
ND<1.75 OK (3/13/2007 a)	ND<0.841 OK (10/3/2006 a)	(1.75 - 0.841)/(11 - 8)	0.303
ND<1.89 OK (6/8/2007 a)	ND<0.841 OK (10/3/2006 a)	(1.89 - 0.841)/(12 - 8)	0.26225
ND<0.846 OK (1/10/2007 a)	ND<1.35 OK (11/12/2006 a)	(0.846 - 1.35)/(10 - 9)	-0.504
ND<1.75 OK (3/13/2007 a)	ND<1.35 OK (11/12/2006 a)	(1.75 - 1.35)/(11 - 9)	0.2
ND<1.89 OK (6/8/2007 a)	ND<1.35 OK (11/12/2006 a)	(1.89 - 1.35)/(12 - 9)	0.18

ND<1.75 OK (3/13/2007 a)	ND<0.846 OK (1/10/2007 a)	(1.75 - 0.846)/(11 - 10)	0.904
ND<1.89 OK (6/8/2007 a)	ND<0.846 OK (1/10/2007 a)	(1.89 - 0.846)/(12 - 10)	0.522
ND<1.89 OK (6/8/2007 a)	ND<1.75 OK (3/13/2007 a)	(1.89 - 1.75)/(12 - 11)	0.14

Number of Q values = 66

Ordered Q Values

n	Q
1	-0.839
2	-0.504
3	-0.35
4	-0.3295
5	-0.278
6	-0.26
7	-0.245
8	-0.215
9	-0.1925
10	-0.17
11	-0.165
12	-0.1635
13	-0.12
14	-0.101286
15	-0.0782222
16	-0.0763333
17	-0.0598333
18	-0.05
19	-0.0448
20	-0.04425
21	-0.0433333
22	-0.0378
23	-0.0262857
24	-0.025
25	-0.01
26	0.0025
27	0.00516667
28	0.0065
29	0.0175
30	0.02
31	0.02

32	0.0214286
33	0.0216667
34	0.0309091
35	0.042
36	0.05
37	0.0533333
38	0.0611111
39	0.065
40	0.069
41	0.07
42	0.075
43	0.09
44	0.0955556
45	0.096
46	0.107
47	0.113333
48	0.117143
49	0.133571
50	0.134375
51	0.14
52	0.156667
53	0.1625
54	0.18
55	0.18
56	0.2
57	0.255
58	0.26225
59	0.288333
60	0.303
61	0.305
62	0.3425
63	0.43
64	0.509
65	0.522
66	0.904

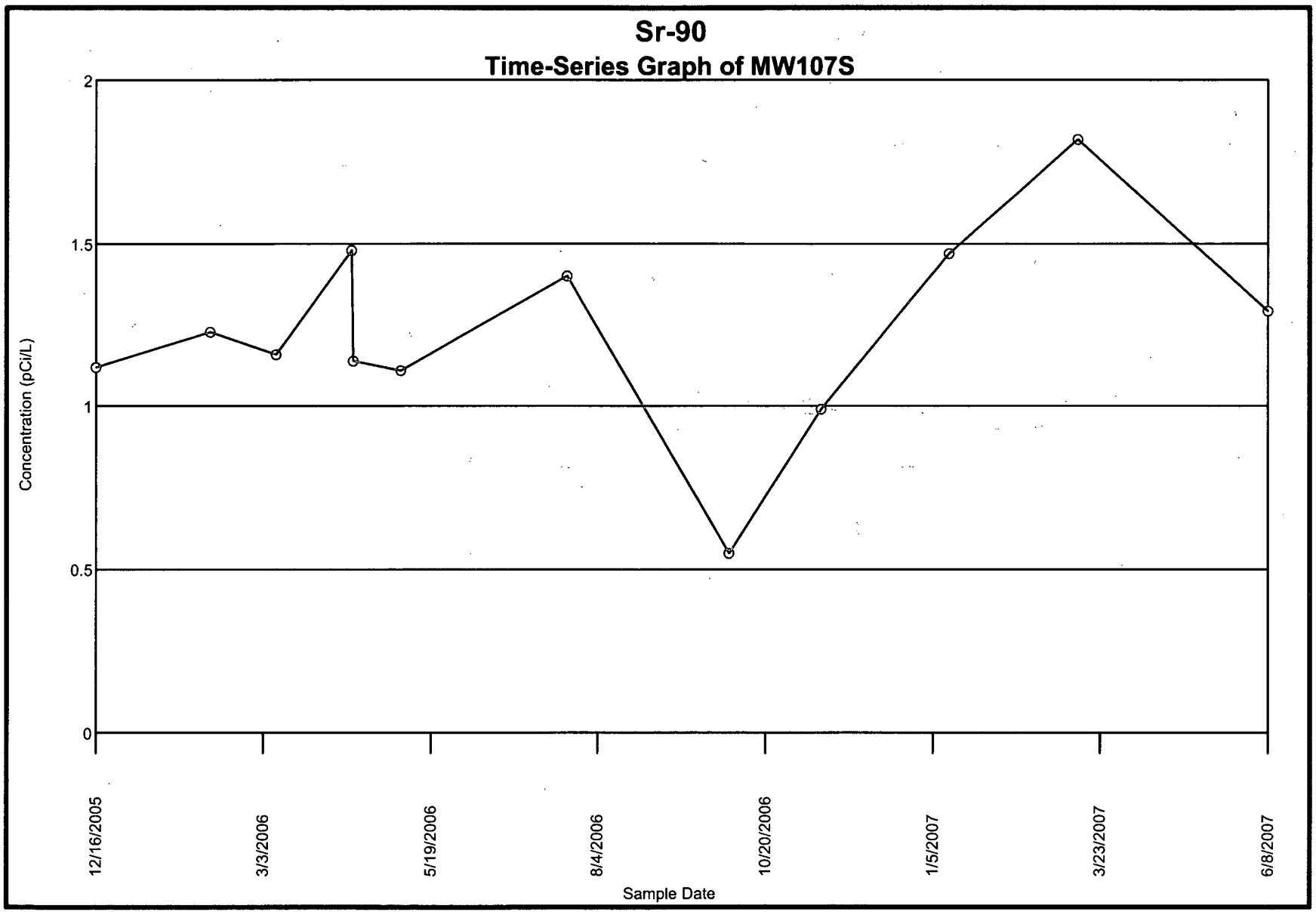
Sen's Estimator (Median Q) is 0.0262879

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/9/2006	1

3/14/2006	1
4/10/2006	1
5/5/2006	1
7/19/2006	1
10/3/2006	1
11/12/2006	1
1/10/2007	1
3/13/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.0433333 = Q(21)
Upper limit is 0.107 = Q(46)
-0.0433333 < 0 < 0.107 indicating no trend in data.


Sr-90
Time-Series Graph of MW107S
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/19/2006
8/4/2006
10/20/2006
1/5/2007
3/23/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW107S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.23 U (2/7/2006 a)	ND<1.12 U (12/16/2005 a)	(1.23 - 1.12)/(2 - 1)	0.11
ND<1.16 U (3/9/2006 a)	ND<1.12 U (12/16/2005 a)	(1.16 - 1.12)/(3 - 1)	0.02
ND<1.48 U (4/12/2006 a)	ND<1.12 U (12/16/2005 a)	(1.48 - 1.12)/(4 - 1)	0.12
ND<1.14 U (4/13/2006 a)	ND<1.12 U (12/16/2005 a)	(1.14 - 1.12)/(5 - 1)	0.005
ND<1.11 OK (5/5/2006 a)	ND<1.12 U (12/16/2005 a)	(1.11 - 1.12)/(6 - 1)	-0.002
ND<1.4 OK (7/21/2006 a)	ND<1.12 U (12/16/2005 a)	(1.4 - 1.12)/(7 - 1)	0.0466667
ND<0.548 OK (10/3/2006 a)	ND<1.12 U (12/16/2005 a)	(0.548 - 1.12)/(8 - 1)	-0.0817143
ND<0.994 OK (11/15/2006 a)	ND<1.12 U (12/16/2005 a)	(0.994 - 1.12)/(9 - 1)	-0.01575
ND<1.47 OK (1/12/2007 a)	ND<1.12 U (12/16/2005 a)	(1.47 - 1.12)/(10 - 1)	0.0388889
ND<1.82 OK (3/13/2007 a)	ND<1.12 U (12/16/2005 a)	(1.82 - 1.12)/(11 - 1)	0.07
ND<1.29 OK (6/8/2007 a)	ND<1.12 U (12/16/2005 a)	(1.29 - 1.12)/(12 - 1)	0.0154545
ND<1.16 U (3/9/2006 a)	ND<1.23 U (2/7/2006 a)	(1.16 - 1.23)/(3 - 2)	-0.07
ND<1.48 U (4/12/2006 a)	ND<1.23 U (2/7/2006 a)	(1.48 - 1.23)/(4 - 2)	0.125
ND<1.14 U (4/13/2006 a)	ND<1.23 U (2/7/2006 a)	(1.14 - 1.23)/(5 - 2)	-0.03
ND<1.11 OK (5/5/2006 a)	ND<1.23 U (2/7/2006 a)	(1.11 - 1.23)/(6 - 2)	-0.03
ND<1.4 OK (7/21/2006 a)	ND<1.23 U (2/7/2006 a)	(1.4 - 1.23)/(7 - 2)	0.034
ND<0.548 OK (10/3/2006 a)	ND<1.23 U (2/7/2006 a)	(0.548 - 1.23)/(8 - 2)	-0.113667
ND<0.994 OK (11/15/2006 a)	ND<1.23 U (2/7/2006 a)	(0.994 - 1.23)/(9 - 2)	-0.0337143
ND<1.47 OK (1/12/2007 a)	ND<1.23 U (2/7/2006 a)	(1.47 - 1.23)/(10 - 2)	0.03
ND<1.82 OK (3/13/2007 a)	ND<1.23 U (2/7/2006 a)	(1.82 - 1.23)/(11 - 2)	0.0655556
ND<1.29 OK (6/8/2007 a)	ND<1.23 U (2/7/2006 a)	(1.29 - 1.23)/(12 - 2)	0.006
ND<1.48 U (4/12/2006 a)	ND<1.16 U (3/9/2006 a)	(1.48 - 1.16)/(4 - 3)	0.32
ND<1.14 U (4/13/2006 a)	ND<1.16 U (3/9/2006 a)	(1.14 - 1.16)/(5 - 3)	-0.01
ND<1.11 OK (5/5/2006 a)	ND<1.16 U (3/9/2006 a)	(1.11 - 1.16)/(6 - 3)	-0.0166667
ND<1.4 OK (7/21/2006 a)	ND<1.16 U (3/9/2006 a)	(1.4 - 1.16)/(7 - 3)	0.06
ND<0.548 OK (10/3/2006 a)	ND<1.16 U (3/9/2006 a)	(0.548 - 1.16)/(8 - 3)	-0.1224
ND<0.994 OK (11/15/2006 a)	ND<1.16 U (3/9/2006 a)	(0.994 - 1.16)/(9 - 3)	-0.0276667
ND<1.47 OK (1/12/2007 a)	ND<1.16 U (3/9/2006 a)	(1.47 - 1.16)/(10 - 3)	0.0442857
ND<1.82 OK (3/13/2007 a)	ND<1.16 U (3/9/2006 a)	(1.82 - 1.16)/(11 - 3)	0.0825
ND<1.29 OK (6/8/2007 a)	ND<1.16 U (3/9/2006 a)	(1.29 - 1.16)/(12 - 3)	0.0144444
ND<1.14 U (4/13/2006 a)	ND<1.48 U (4/12/2006 a)	(1.14 - 1.48)/(5 - 4)	-0.34
ND<1.11 OK (5/5/2006 a)	ND<1.48 U (4/12/2006 a)	(1.11 - 1.48)/(6 - 4)	-0.185
ND<1.4 OK (7/21/2006 a)	ND<1.48 U (4/12/2006 a)	(1.4 - 1.48)/(7 - 4)	-0.0266667
ND<0.548 OK (10/3/2006 a)	ND<1.48 U (4/12/2006 a)	(0.548 - 1.48)/(8 - 4)	-0.233
ND<0.994 OK (11/15/2006 a)	ND<1.48 U (4/12/2006 a)	(0.994 - 1.48)/(9 - 4)	-0.0972
ND<1.47 OK (1/12/2007 a)	ND<1.48 U (4/12/2006 a)	(1.47 - 1.48)/(10 - 4)	-0.00166667
ND<1.82 OK (3/13/2007 a)	ND<1.48 U (4/12/2006 a)	(1.82 - 1.48)/(11 - 4)	0.0485714
ND<1.29 OK (6/8/2007 a)	ND<1.48 U (4/12/2006 a)	(1.29 - 1.48)/(12 - 4)	-0.02375
ND<1.11 OK (5/5/2006 a)	ND<1.14 U (4/13/2006 a)	(1.11 - 1.14)/(6 - 5)	-0.03
ND<1.4 OK (7/21/2006 a)	ND<1.14 U (4/13/2006 a)	(1.4 - 1.14)/(7 - 5)	0.13
ND<0.548 OK (10/3/2006 a)	ND<1.14 U (4/13/2006 a)	(0.548 - 1.14)/(8 - 5)	-0.197333
ND<0.994 OK (11/15/2006 a)	ND<1.14 U (4/13/2006 a)	(0.994 - 1.14)/(9 - 5)	-0.0365
ND<1.47 OK (1/12/2007 a)	ND<1.14 U (4/13/2006 a)	(1.47 - 1.14)/(10 - 5)	0.066

ND<1.82 OK (3/13/2007 a)	ND<1.14 U (4/13/2006 a)	(1.82 - 1.14)/(11 - 5)	0.113333
ND<1.29 OK (6/8/2007 a)	ND<1.14 U (4/13/2006 a)	(1.29 - 1.14)/(12 - 5)	0.0214286
ND<1.4 OK (7/21/2006 a)	ND<1.11 OK (5/5/2006 a)	(1.4 - 1.11)/(7 - 6)	0.29
ND<0.548 OK (10/3/2006 a)	ND<1.11 OK (5/5/2006 a)	(0.548 - 1.11)/(8 - 6)	-0.281
ND<0.994 OK (11/15/2006 a)	ND<1.11 OK (5/5/2006 a)	(0.994 - 1.11)/(9 - 6)	-0.0386667
ND<1.47 OK (1/12/2007 a)	ND<1.11 OK (5/5/2006 a)	(1.47 - 1.11)/(10 - 6)	0.09
ND<1.82 OK (3/13/2007 a)	ND<1.11 OK (5/5/2006 a)	(1.82 - 1.11)/(11 - 6)	0.142
ND<1.29 OK (6/8/2007 a)	ND<1.11 OK (5/5/2006 a)	(1.29 - 1.11)/(12 - 6)	0.03
ND<0.548 OK (10/3/2006 a)	ND<1.4 OK (7/21/2006 a)	(0.548 - 1.4)/(8 - 7)	-0.852
ND<0.994 OK (11/15/2006 a)	ND<1.4 OK (7/21/2006 a)	(0.994 - 1.4)/(9 - 7)	-0.203
ND<1.47 OK (1/12/2007 a)	ND<1.4 OK (7/21/2006 a)	(1.47 - 1.4)/(10 - 7)	0.0233333
ND<1.82 OK (3/13/2007 a)	ND<1.4 OK (7/21/2006 a)	(1.82 - 1.4)/(11 - 7)	0.105
ND<1.29 OK (6/8/2007 a)	ND<1.4 OK (7/21/2006 a)	(1.29 - 1.4)/(12 - 7)	-0.022
ND<0.994 OK (11/15/2006 a)	ND<0.548 OK (10/3/2006 a)	(0.994 - 0.548)/(9 - 8)	0.446
ND<1.47 OK (1/12/2007 a)	ND<0.548 OK (10/3/2006 a)	(1.47 - 0.548)/(10 - 8)	0.461
ND<1.82 OK (3/13/2007 a)	ND<0.548 OK (10/3/2006 a)	(1.82 - 0.548)/(11 - 8)	0.424
ND<1.29 OK (6/8/2007 a)	ND<0.548 OK (10/3/2006 a)	(1.29 - 0.548)/(12 - 8)	0.1855
ND<1.47 OK (1/12/2007 a)	ND<0.994 OK (11/15/2006 a)	(1.47 - 0.994)/(10 - 9)	0.476
ND<1.82 OK (3/13/2007 a)	ND<0.994 OK (11/15/2006 a)	(1.82 - 0.994)/(11 - 9)	0.413
ND<1.29 OK (6/8/2007 a)	ND<0.994 OK (11/15/2006 a)	(1.29 - 0.994)/(12 - 9)	0.0986667
ND<1.82 OK (3/13/2007 a)	ND<1.47 OK (1/12/2007 a)	(1.82 - 1.47)/(11 - 10)	0.35
ND<1.29 OK (6/8/2007 a)	ND<1.47 OK (1/12/2007 a)	(1.29 - 1.47)/(12 - 10)	-0.09
ND<1.29 OK (6/8/2007 a)	ND<1.82 OK (3/13/2007 a)	(1.29 - 1.82)/(12 - 11)	-0.53

Number of Q values = 66

Ordered Q Values

n	Q
1	-0.852
2	-0.53
3	-0.34
4	-0.281
5	-0.233
6	-0.203
7	-0.197333
8	-0.185
9	-0.1224
10	-0.113667
11	-0.0972
12	-0.09
13	-0.0817143
14	-0.07
15	-0.0386667
16	-0.0365
17	-0.0337143
18	-0.03
19	-0.03
20	-0.03
21	-0.0276667
22	-0.0266667

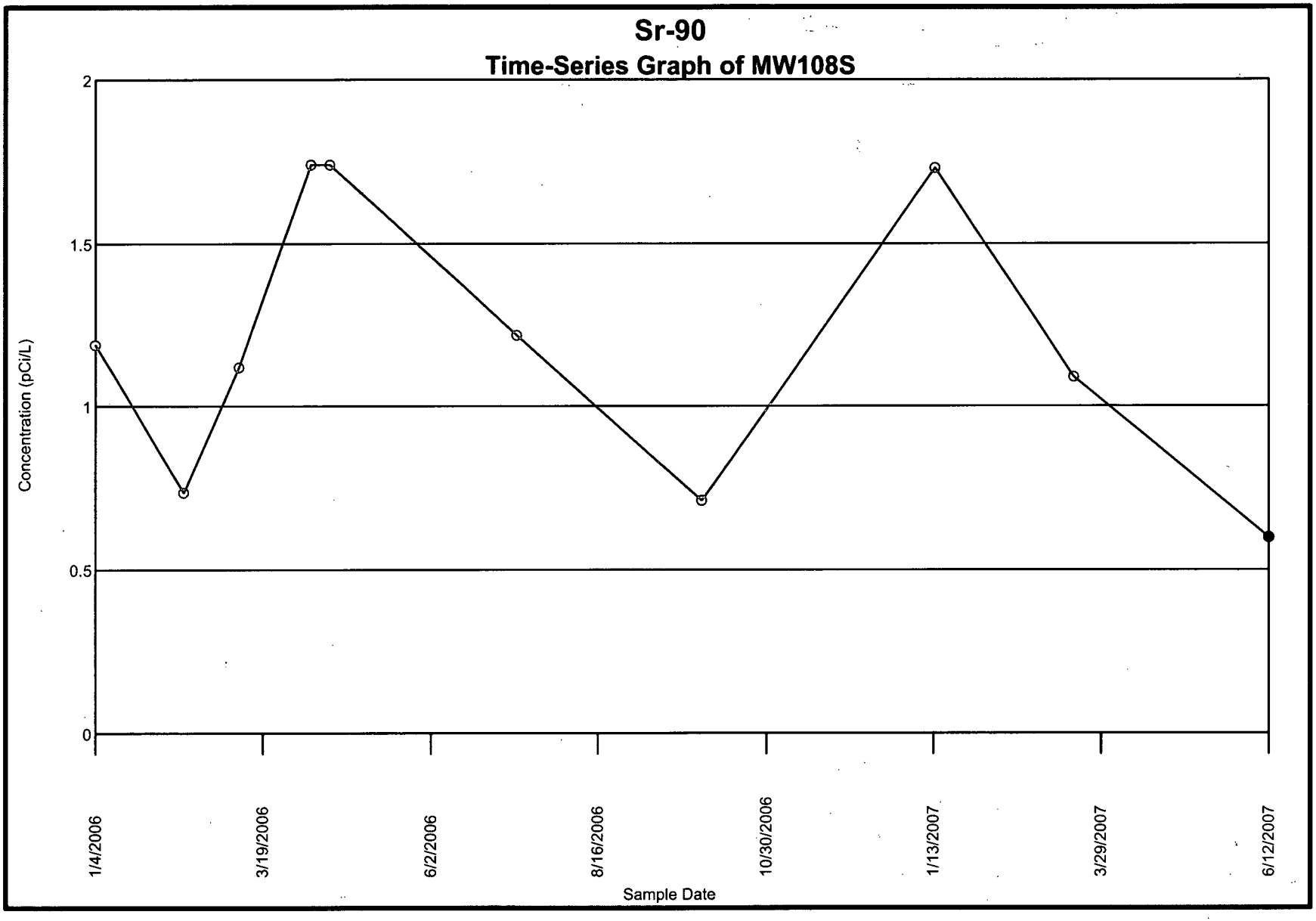
23	-0.02375
24	-0.022
25	-0.0166667
26	-0.01575
27	-0.01
28	-0.002
29	-0.00166667
30	0.005
31	0.006
32	0.0144444
33	0.0154545
34	0.02
35	0.0214286
36	0.0233333
37	0.03
38	0.03
39	0.034
40	0.0388889
41	0.0442857
42	0.0466667
43	0.0485714
44	0.06
45	0.0655556
46	0.066
47	0.07
48	0.0825
49	0.09
50	0.0986667
51	0.105
52	0.11
53	0.113333
54	0.12
55	0.125
56	0.13
57	0.142
58	0.1855
59	0.29
60	0.32
61	0.35
62	0.413
63	0.424
64	0.446
65	0.461
66	0.476

Sen's Estimator (Median Q) is 0.0177273

Time Period	Observations
12/16/2005	1
2/7/2006	1
3/9/2006	1
4/12/2006	1
4/13/2006	1
5/5/2006	1
7/21/2006	1
10/3/2006	1
11/15/2006	1
1/12/2007	1

3/13/2007 1
6/8/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.0276667 = Q(21)
Upper limit is 0.066 = Q(46)
-0.0276667 < 0 < 0.066 indicating no trend in data.


Sr-90
Time-Series Graph of MW108S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW108S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.736 U (2/12/2006 a)	ND<1.19 U (1/4/2006 a)	(0.736 - 1.19)/(2 - 1)	-0.454
ND<1.12 U (3/9/2006 a)	ND<1.19 U (1/4/2006 a)	(1.12 - 1.19)/(3 - 1)	-0.035
ND<1.74 U (4/10/2006 a)	ND<1.19 U (1/4/2006 a)	(1.74 - 1.19)/(4 - 1)	0.183333
ND<1.74 OK (4/19/2006 a)	ND<1.19 U (1/4/2006 a)	(1.74 - 1.19)/(5 - 1)	0.1375
ND<1.22 OK (7/11/2006 a)	ND<1.19 U (1/4/2006 a)	(1.22 - 1.19)/(6 - 1)	0.006
ND<0.711 OK (10/2/2006 a)	ND<1.19 U (1/4/2006 a)	(0.711 - 1.19)/(7 - 1)	-0.0798333
ND<1.73 OK (1/14/2007 a)	ND<1.19 U (1/4/2006 a)	(1.73 - 1.19)/(8 - 1)	0.0771429
ND<1.09 OK (3/17/2007 a)	ND<1.19 U (1/4/2006 a)	(1.09 - 1.19)/(9 - 1)	-0.0125
ND<1.44 OK (6/12/2007 a)	ND<1.19 U (1/4/2006 a)	(1.44 - 1.19)/(10 - 1)	0.0277778
ND<1.12 U (3/9/2006 a)	ND<0.736 U (2/12/2006 a)	(1.12 - 0.736)/(3 - 2)	0.384
ND<1.74 U (4/10/2006 a)	ND<0.736 U (2/12/2006 a)	(1.74 - 0.736)/(4 - 2)	0.502
ND<1.74 OK (4/19/2006 a)	ND<0.736 U (2/12/2006 a)	(1.74 - 0.736)/(5 - 2)	0.334667
ND<1.22 OK (7/11/2006 a)	ND<0.736 U (2/12/2006 a)	(1.22 - 0.736)/(6 - 2)	0.121
ND<0.711 OK (10/2/2006 a)	ND<0.736 U (2/12/2006 a)	(0.711 - 0.736)/(7 - 2)	-0.005
ND<1.73 OK (1/14/2007 a)	ND<0.736 U (2/12/2006 a)	(1.73 - 0.736)/(8 - 2)	0.165667
ND<1.09 OK (3/17/2007 a)	ND<0.736 U (2/12/2006 a)	(1.09 - 0.736)/(9 - 2)	0.0505714
ND<1.44 OK (6/12/2007 a)	ND<0.736 U (2/12/2006 a)	(1.44 - 0.736)/(10 - 2)	0.088
ND<1.74 U (4/10/2006 a)	ND<1.12 U (3/9/2006 a)	(1.74 - 1.12)/(4 - 3)	0.62
ND<1.74 OK (4/19/2006 a)	ND<1.12 U (3/9/2006 a)	(1.74 - 1.12)/(5 - 3)	0.31
ND<1.22 OK (7/11/2006 a)	ND<1.12 U (3/9/2006 a)	(1.22 - 1.12)/(6 - 3)	0.0333333
ND<0.711 OK (10/2/2006 a)	ND<1.12 U (3/9/2006 a)	(0.711 - 1.12)/(7 - 3)	-0.10225
ND<1.73 OK (1/14/2007 a)	ND<1.12 U (3/9/2006 a)	(1.73 - 1.12)/(8 - 3)	0.122
ND<1.09 OK (3/17/2007 a)	ND<1.12 U (3/9/2006 a)	(1.09 - 1.12)/(9 - 3)	-0.005
ND<1.44 OK (6/12/2007 a)	ND<1.12 U (3/9/2006 a)	(1.44 - 1.12)/(10 - 3)	0.0457143
ND<1.74 OK (4/19/2006 a)	ND<1.74 U (4/10/2006 a)	(1.74 - 1.74)/(5 - 4)	0
ND<1.22 OK (7/11/2006 a)	ND<1.74 U (4/10/2006 a)	(1.22 - 1.74)/(6 - 4)	-0.26
ND<0.711 OK (10/2/2006 a)	ND<1.74 U (4/10/2006 a)	(0.711 - 1.74)/(7 - 4)	-0.343
ND<1.73 OK (1/14/2007 a)	ND<1.74 U (4/10/2006 a)	(1.73 - 1.74)/(8 - 4)	-0.0025
ND<1.09 OK (3/17/2007 a)	ND<1.74 U (4/10/2006 a)	(1.09 - 1.74)/(9 - 4)	-0.13
ND<1.44 OK (6/12/2007 a)	ND<1.74 U (4/10/2006 a)	(1.44 - 1.74)/(10 - 4)	-0.05
ND<1.22 OK (7/11/2006 a)	ND<1.74 OK (4/19/2006 a)	(1.22 - 1.74)/(6 - 5)	-0.52
ND<0.711 OK (10/2/2006 a)	ND<1.74 OK (4/19/2006 a)	(0.711 - 1.74)/(7 - 5)	-0.5145
ND<1.73 OK (1/14/2007 a)	ND<1.74 OK (4/19/2006 a)	(1.73 - 1.74)/(8 - 5)	-0.00333333
ND<1.09 OK (3/17/2007 a)	ND<1.74 OK (4/19/2006 a)	(1.09 - 1.74)/(9 - 5)	-0.1625
ND<1.44 OK (6/12/2007 a)	ND<1.74 OK (4/19/2006 a)	(1.44 - 1.74)/(10 - 5)	-0.06
ND<0.711 OK (10/2/2006 a)	ND<1.22 OK (7/11/2006 a)	(0.711 - 1.22)/(7 - 6)	-0.509
ND<1.73 OK (1/14/2007 a)	ND<1.22 OK (7/11/2006 a)	(1.73 - 1.22)/(8 - 6)	0.255
ND<1.09 OK (3/17/2007 a)	ND<1.22 OK (7/11/2006 a)	(1.09 - 1.22)/(9 - 6)	-0.0433333
ND<1.44 OK (6/12/2007 a)	ND<1.22 OK (7/11/2006 a)	(1.44 - 1.22)/(10 - 6)	0.055
ND<1.73 OK (1/14/2007 a)	ND<0.711 OK (10/2/2006 a)	(1.73 - 0.711)/(8 - 7)	1.019
ND<1.09 OK (3/17/2007 a)	ND<0.711 OK (10/2/2006 a)	(1.09 - 0.711)/(9 - 7)	0.1895

ND<1.44 OK (6/12/2007 a)	ND<0.711 OK (10/2/2006 a)	(1.44 - 0.711)/(10 - 7)	0.243
ND<1.09 OK (3/17/2007 a)	ND<1.73 OK (1/14/2007 a)	(1.09 - 1.73)/(9 - 8)	-0.64
ND<1.44 OK (6/12/2007 a)	ND<1.73 OK (1/14/2007 a)	(1.44 - 1.73)/(10 - 8)	-0.145
ND<1.44 OK (6/12/2007 a)	ND<1.09 OK (3/17/2007 a)	(1.44 - 1.09)/(10 - 9)	0.35

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.64
2	-0.52
3	-0.5145
4	-0.509
5	-0.454
6	-0.343
7	-0.26
8	-0.1625
9	-0.145
10	-0.13
11	-0.10225
12	-0.0798333
13	-0.06
14	-0.05
15	-0.0433333
16	-0.035
17	-0.0125
18	-0.005
19	-0.005
20	-0.00333333
21	-0.0025
22	0
23	0.006
24	0.0277778
25	0.0333333
26	0.0457143
27	0.0505714
28	0.055
29	0.0771429
30	0.088
31	0.121
32	0.122
33	0.1375
34	0.165667
35	0.183333
36	0.1895
37	0.243
38	0.255
39	0.31
40	0.334667
41	0.35
42	0.384
43	0.502
44	0.62
45	1.019

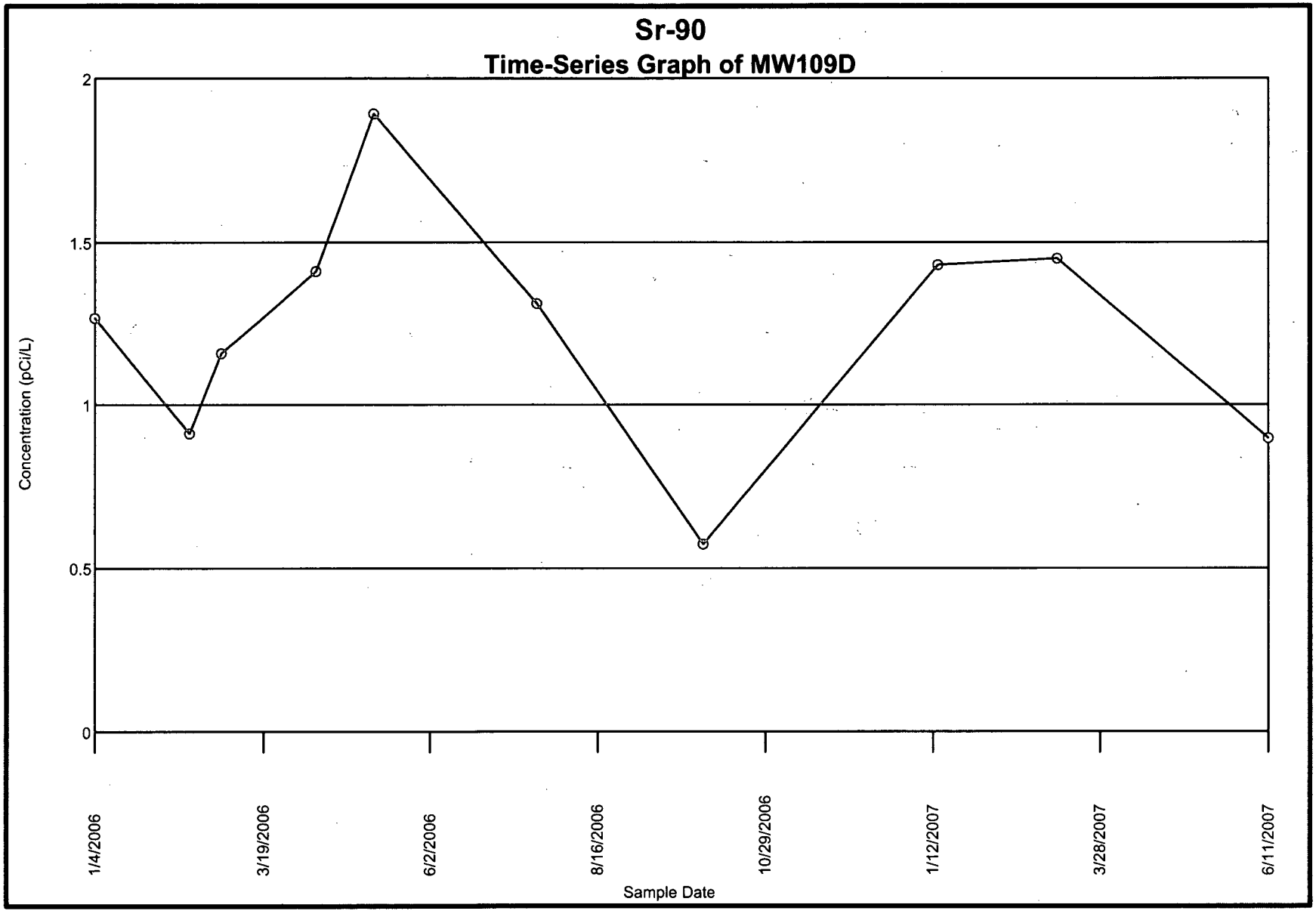
Sen's Estimator (Median Q) is 0.006

Tied Group	Value	Members
1	1.74	2

Time Period	Observations
1/4/2006	1
2/12/2006	1
3/9/2006	1
4/10/2006	1
4/19/2006	1
7/11/2006	1
10/2/2006	1
1/14/2007	1
3/17/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.06 = Q(13)
Upper limit is 0.1375 = Q(33)
-0.06 < 0 < 0.1375 indicating no trend in data.


Sr-90
Time-Series Graph of MW109D
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/29/2006
1/12/2007
3/28/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW109D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.915 U (2/15/2006 a)	ND<1.27 U (1/4/2006 a)	(0.915 - 1.27)/(2 - 1)	-0.355
ND<1.16 U (3/1/2006 a)	ND<1.27 U (1/4/2006 a)	(1.16 - 1.27)/(3 - 1)	-0.055
ND<1.41 U (4/12/2006 a)	ND<1.27 U (1/4/2006 a)	(1.41 - 1.27)/(4 - 1)	0.0466667
ND<1.89 OK (5/8/2006 a)	ND<1.27 U (1/4/2006 a)	(1.89 - 1.27)/(5 - 1)	0.155
ND<1.31 OK (7/20/2006 a)	ND<1.27 U (1/4/2006 a)	(1.31 - 1.27)/(6 - 1)	0.008
ND<0.575 OK (10/2/2006 a)	ND<1.27 U (1/4/2006 a)	(0.575 - 1.27)/(7 - 1)	-0.115833
ND<1.43 OK (1/15/2007 a)	ND<1.27 U (1/4/2006 a)	(1.43 - 1.27)/(8 - 1)	0.0228571
ND<1.45 OK (3/9/2007 a)	ND<1.27 U (1/4/2006 a)	(1.45 - 1.27)/(9 - 1)	0.0225
ND<0.897 OK (6/11/2007 a)	ND<1.27 U (1/4/2006 a)	(0.897 - 1.27)/(10 - 1)	-0.0414444
ND<1.16 U (3/1/2006 a)	ND<0.915 U (2/15/2006 a)	(1.16 - 0.915)/(3 - 2)	0.245
ND<1.41 U (4/12/2006 a)	ND<0.915 U (2/15/2006 a)	(1.41 - 0.915)/(4 - 2)	0.2475
ND<1.89 OK (5/8/2006 a)	ND<0.915 U (2/15/2006 a)	(1.89 - 0.915)/(5 - 2)	0.325
ND<1.31 OK (7/20/2006 a)	ND<0.915 U (2/15/2006 a)	(1.31 - 0.915)/(6 - 2)	0.09875
ND<0.575 OK (10/2/2006 a)	ND<0.915 U (2/15/2006 a)	(0.575 - 0.915)/(7 - 2)	-0.068
ND<1.43 OK (1/15/2007 a)	ND<0.915 U (2/15/2006 a)	(1.43 - 0.915)/(8 - 2)	0.0858333
ND<1.45 OK (3/9/2007 a)	ND<0.915 U (2/15/2006 a)	(1.45 - 0.915)/(9 - 2)	0.0764286
ND<0.897 OK (6/11/2007 a)	ND<0.915 U (2/15/2006 a)	(0.897 - 0.915)/(10 - 2)	-0.00225
ND<1.41 U (4/12/2006 a)	ND<1.16 U (3/1/2006 a)	(1.41 - 1.16)/(4 - 3)	0.25
ND<1.89 OK (5/8/2006 a)	ND<1.16 U (3/1/2006 a)	(1.89 - 1.16)/(5 - 3)	0.365
ND<1.31 OK (7/20/2006 a)	ND<1.16 U (3/1/2006 a)	(1.31 - 1.16)/(6 - 3)	0.05
ND<0.575 OK (10/2/2006 a)	ND<1.16 U (3/1/2006 a)	(0.575 - 1.16)/(7 - 3)	-0.14625
ND<1.43 OK (1/15/2007 a)	ND<1.16 U (3/1/2006 a)	(1.43 - 1.16)/(8 - 3)	0.054
ND<1.45 OK (3/9/2007 a)	ND<1.16 U (3/1/2006 a)	(1.45 - 1.16)/(9 - 3)	0.0483333
ND<0.897 OK (6/11/2007 a)	ND<1.16 U (3/1/2006 a)	(0.897 - 1.16)/(10 - 3)	-0.0375714
ND<1.89 OK (5/8/2006 a)	ND<1.41 U (4/12/2006 a)	(1.89 - 1.41)/(5 - 4)	0.48
ND<1.31 OK (7/20/2006 a)	ND<1.41 U (4/12/2006 a)	(1.31 - 1.41)/(6 - 4)	-0.05
ND<0.575 OK (10/2/2006 a)	ND<1.41 U (4/12/2006 a)	(0.575 - 1.41)/(7 - 4)	-0.278333
ND<1.43 OK (1/15/2007 a)	ND<1.41 U (4/12/2006 a)	(1.43 - 1.41)/(8 - 4)	0.005

ND<1.45 OK (3/9/2007 a)	ND<1.41 U (4/12/2006 a)	(1.45 - 1.41)/(9 - 4)	0.008
ND<0.897 OK (6/11/2007 a)	ND<1.41 U (4/12/2006 a)	(0.897 - 1.41)/(10 - 4)	-0.0855
ND<1.31 OK (7/20/2006 a)	ND<1.89 OK (5/8/2006 a)	(1.31 - 1.89)/(6 - 5)	-0.58
ND<0.575 OK (10/2/2006 a)	ND<1.89 OK (5/8/2006 a)	(0.575 - 1.89)/(7 - 5)	-0.6575
ND<1.43 OK (1/15/2007 a)	ND<1.89 OK (5/8/2006 a)	(1.43 - 1.89)/(8 - 5)	-0.153333
ND<1.45 OK (3/9/2007 a)	ND<1.89 OK (5/8/2006 a)	(1.45 - 1.89)/(9 - 5)	-0.11
ND<0.897 OK (6/11/2007 a)	ND<1.89 OK (5/8/2006 a)	(0.897 - 1.89)/(10 - 5)	-0.1986
ND<0.575 OK (10/2/2006 a)	ND<1.31 OK (7/20/2006 a)	(0.575 - 1.31)/(7 - 6)	-0.735
ND<1.43 OK (1/15/2007 a)	ND<1.31 OK (7/20/2006 a)	(1.43 - 1.31)/(8 - 6)	0.06
ND<1.45 OK (3/9/2007 a)	ND<1.31 OK (7/20/2006 a)	(1.45 - 1.31)/(9 - 6)	0.0466667
ND<0.897 OK (6/11/2007 a)	ND<1.31 OK (7/20/2006 a)	(0.897 - 1.31)/(10 - 6)	-0.10325
ND<1.43 OK (1/15/2007 a)	ND<0.575 OK (10/2/2006 a)	(1.43 - 0.575)/(8 - 7)	0.855
ND<1.45 OK (3/9/2007 a)	ND<0.575 OK (10/2/2006 a)	(1.45 - 0.575)/(9 - 7)	0.4375
ND<0.897 OK (6/11/2007 a)	ND<0.575 OK (10/2/2006 a)	(0.897 - 0.575)/(10 - 7)	0.107333
ND<1.45 OK (3/9/2007 a)	ND<1.43 OK (1/15/2007 a)	(1.45 - 1.43)/(9 - 8)	0.02
ND<0.897 OK (6/11/2007 a)	ND<1.43 OK (1/15/2007 a)	(0.897 - 1.43)/(10 - 8)	-0.2665
ND<0.897 OK (6/11/2007 a)	ND<1.45 OK (3/9/2007 a)	(0.897 - 1.45)/(10 - 9)	-0.553

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.735
2	-0.6575
3	-0.58
4	-0.553
5	-0.355
6	-0.278333
7	-0.2665
8	-0.1986
9	-0.153333
10	-0.14625
11	-0.115833
12	-0.11
13	-0.10325

14	-0.0855
15	-0.068
16	-0.055
17	-0.05
18	-0.0414444
19	-0.0375714
20	-0.00225
21	0.005
22	0.008
23	0.008
24	0.02
25	0.0225
26	0.0228571
27	0.0466667
28	0.0466667
29	0.0483333
30	0.05
31	0.054
32	0.06
33	0.0764286
34	0.0858333
35	0.09875
36	0.107333
37	0.155
38	0.245
39	0.2475
40	0.25
41	0.325
42	0.365
43	0.4375
44	0.48
45	0.855

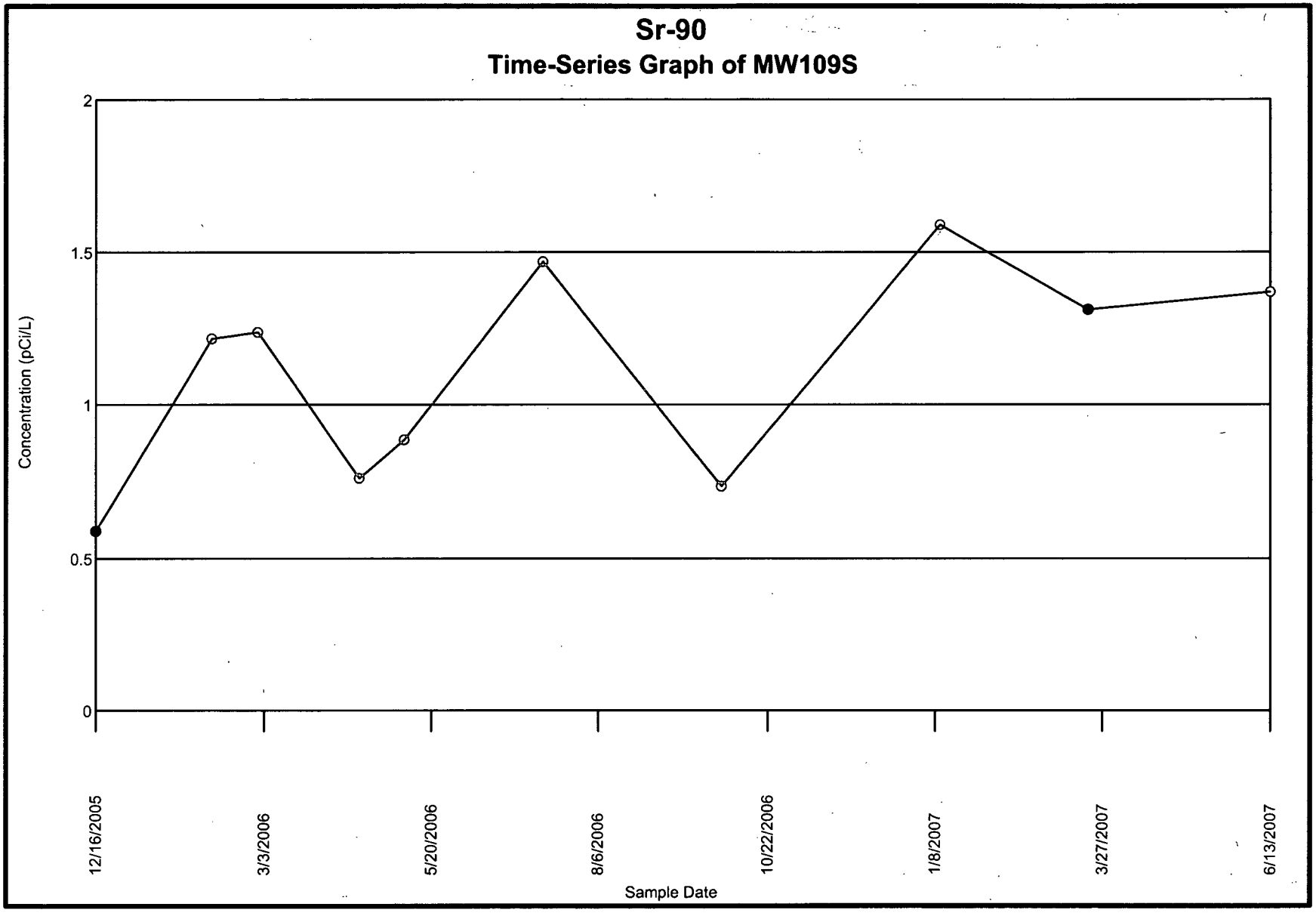
Sen's Estimator (Median Q) is 0.008

Time Period	Observations
1/4/2006	1
2/15/2006	1
3/1/2006	1
4/12/2006	1
5/8/2006	1
7/20/2006	1

10/2/2006	1
1/15/2007	1
3/9/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.10325 = Q(13)
Upper limit is 0.0764286 = Q(33)
-0.10325 < 0 < 0.0764286 indicating no trend in data.


Sr-90
Time-Series Graph of MW109S
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/20/2006
8/6/2006
10/22/2006
1/8/2007
3/27/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW109S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.22 U (2/7/2006 a)	0.589 U (12/16/2005 a)	(1.22 - 0.589)/(2 - 1)	0.631
ND<1.24 U (3/1/2006 a)	0.589 U (12/16/2005 a)	(1.24 - 0.589)/(3 - 1)	0.3255
ND<0.762 U (4/17/2006 a)	0.589 U (12/16/2005 a)	(0.762 - 0.589)/(4 - 1)	0.0576667
ND<0.887 OK (5/8/2006 a)	0.589 U (12/16/2005 a)	(0.887 - 0.589)/(5 - 1)	0.0745
ND<1.47 OK (7/11/2006 a)	0.589 U (12/16/2005 a)	(1.47 - 0.589)/(6 - 1)	0.1762
ND<0.736 OK (10/2/2006 a)	0.589 U (12/16/2005 a)	(0.736 - 0.589)/(7 - 1)	0.0245
ND<1.59 OK (1/11/2007 a)	0.589 U (12/16/2005 a)	(1.59 - 0.589)/(8 - 1)	0.143
1.31 OK (3/21/2007 a)	0.589 U (12/16/2005 a)	(1.31 - 0.589)/(9 - 1)	0.090125
ND<1.37 OK (6/13/2007 a)	0.589 U (12/16/2005 a)	(1.37 - 0.589)/(10 - 1)	0.0867778
ND<1.24 U (3/1/2006 a)	ND<1.22 U (2/7/2006 a)	(1.24 - 1.22)/(3 - 2)	0.02
ND<0.762 U (4/17/2006 a)	ND<1.22 U (2/7/2006 a)	(0.762 - 1.22)/(4 - 2)	-0.229
ND<0.887 OK (5/8/2006 a)	ND<1.22 U (2/7/2006 a)	(0.887 - 1.22)/(5 - 2)	-0.111
ND<1.47 OK (7/11/2006 a)	ND<1.22 U (2/7/2006 a)	(1.47 - 1.22)/(6 - 2)	0.0625
ND<0.736 OK (10/2/2006 a)	ND<1.22 U (2/7/2006 a)	(0.736 - 1.22)/(7 - 2)	-0.0968
ND<1.59 OK (1/11/2007 a)	ND<1.22 U (2/7/2006 a)	(1.59 - 1.22)/(8 - 2)	0.0616667
1.31 OK (3/21/2007 a)	ND<1.22 U (2/7/2006 a)	(1.31 - 1.22)/(9 - 2)	0.0128571
ND<1.37 OK (6/13/2007 a)	ND<1.22 U (2/7/2006 a)	(1.37 - 1.22)/(10 - 2)	0.01875
ND<0.762 U (4/17/2006 a)	ND<1.24 U (3/1/2006 a)	(0.762 - 1.24)/(4 - 3)	-0.478
ND<0.887 OK (5/8/2006 a)	ND<1.24 U (3/1/2006 a)	(0.887 - 1.24)/(5 - 3)	-0.1765
ND<1.47 OK (7/11/2006 a)	ND<1.24 U (3/1/2006 a)	(1.47 - 1.24)/(6 - 3)	0.0766667
ND<0.736 OK (10/2/2006 a)	ND<1.24 U (3/1/2006 a)	(0.736 - 1.24)/(7 - 3)	-0.126
ND<1.59 OK (1/11/2007 a)	ND<1.24 U (3/1/2006 a)	(1.59 - 1.24)/(8 - 3)	0.07
1.31 OK (3/21/2007 a)	ND<1.24 U (3/1/2006 a)	(1.31 - 1.24)/(9 - 3)	0.0116667
ND<1.37 OK (6/13/2007 a)	ND<1.24 U (3/1/2006 a)	(1.37 - 1.24)/(10 - 3)	0.0185714
ND<0.887 OK (5/8/2006 a)	ND<0.762 U (4/17/2006 a)	(0.887 - 0.762)/(5 - 4)	0.125
ND<1.47 OK (7/11/2006 a)	ND<0.762 U (4/17/2006 a)	(1.47 - 0.762)/(6 - 4)	0.354
ND<0.736 OK (10/2/2006 a)	ND<0.762 U (4/17/2006 a)	(0.736 - 0.762)/(7 - 4)	-0.00866667
ND<1.59 OK (1/11/2007 a)	ND<0.762 U (4/17/2006 a)	(1.59 - 0.762)/(8 - 4)	0.207

1.31 OK (3/21/2007 a)	ND<0.762 U (4/17/2006 a)	(1.31 - 0.762)/(9 - 4)	0.1096
ND<1.37 OK (6/13/2007 a)	ND<0.762 U (4/17/2006 a)	(1.37 - 0.762)/(10 - 4)	0.101333
ND<1.47 OK (7/11/2006 a)	ND<0.887 OK (5/8/2006 a)	(1.47 - 0.887)/(6 - 5)	0.583
ND<0.736 OK (10/2/2006 a)	ND<0.887 OK (5/8/2006 a)	(0.736 - 0.887)/(7 - 5)	-0.0755
ND<1.59 OK (1/11/2007 a)	ND<0.887 OK (5/8/2006 a)	(1.59 - 0.887)/(8 - 5)	0.234333
1.31 OK (3/21/2007 a)	ND<0.887 OK (5/8/2006 a)	(1.31 - 0.887)/(9 - 5)	0.10575
ND<1.37 OK (6/13/2007 a)	ND<0.887 OK (5/8/2006 a)	(1.37 - 0.887)/(10 - 5)	0.0966
ND<0.736 OK (10/2/2006 a)	ND<1.47 OK (7/11/2006 a)	(0.736 - 1.47)/(7 - 6)	-0.734
ND<1.59 OK (1/11/2007 a)	ND<1.47 OK (7/11/2006 a)	(1.59 - 1.47)/(8 - 6)	0.06
1.31 OK (3/21/2007 a)	ND<1.47 OK (7/11/2006 a)	(1.31 - 1.47)/(9 - 6)	-0.0533333
ND<1.37 OK (6/13/2007 a)	ND<1.47 OK (7/11/2006 a)	(1.37 - 1.47)/(10 - 6)	-0.025
ND<1.59 OK (1/11/2007 a)	ND<0.736 OK (10/2/2006 a)	(1.59 - 0.736)/(8 - 7)	0.854
1.31 OK (3/21/2007 a)	ND<0.736 OK (10/2/2006 a)	(1.31 - 0.736)/(9 - 7)	0.287
ND<1.37 OK (6/13/2007 a)	ND<0.736 OK (10/2/2006 a)	(1.37 - 0.736)/(10 - 7)	0.211333
1.31 OK (3/21/2007 a)	ND<1.59 OK (1/11/2007 a)	(1.31 - 1.59)/(9 - 8)	-0.28
ND<1.37 OK (6/13/2007 a)	ND<1.59 OK (1/11/2007 a)	(1.37 - 1.59)/(10 - 8)	-0.11
ND<1.37 OK (6/13/2007 a)	1.31 OK (3/21/2007 a)	(1.37 - 1.31)/(10 - 9)	0.06

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.734
2	-0.478
3	-0.28
4	-0.229
5	-0.1765
6	-0.126
7	-0.111
8	-0.11
9	-0.0968
10	-0.0755
11	-0.0533333
12	-0.025
13	-0.00866667

14	0.0116667
15	0.0128571
16	0.0185714
17	0.01875
18	0.02
19	0.0245
20	0.0576667
21	0.06
22	0.06
23	0.0616667
24	0.0625
25	0.07
26	0.0745
27	0.0766667
28	0.0867778
29	0.090125
30	0.0966
31	0.101333
32	0.10575
33	0.1096
34	0.125
35	0.143
36	0.1762
37	0.207
38	0.211333
39	0.234333
40	0.287
41	0.3255
42	0.354
43	0.583
44	0.631
45	0.854

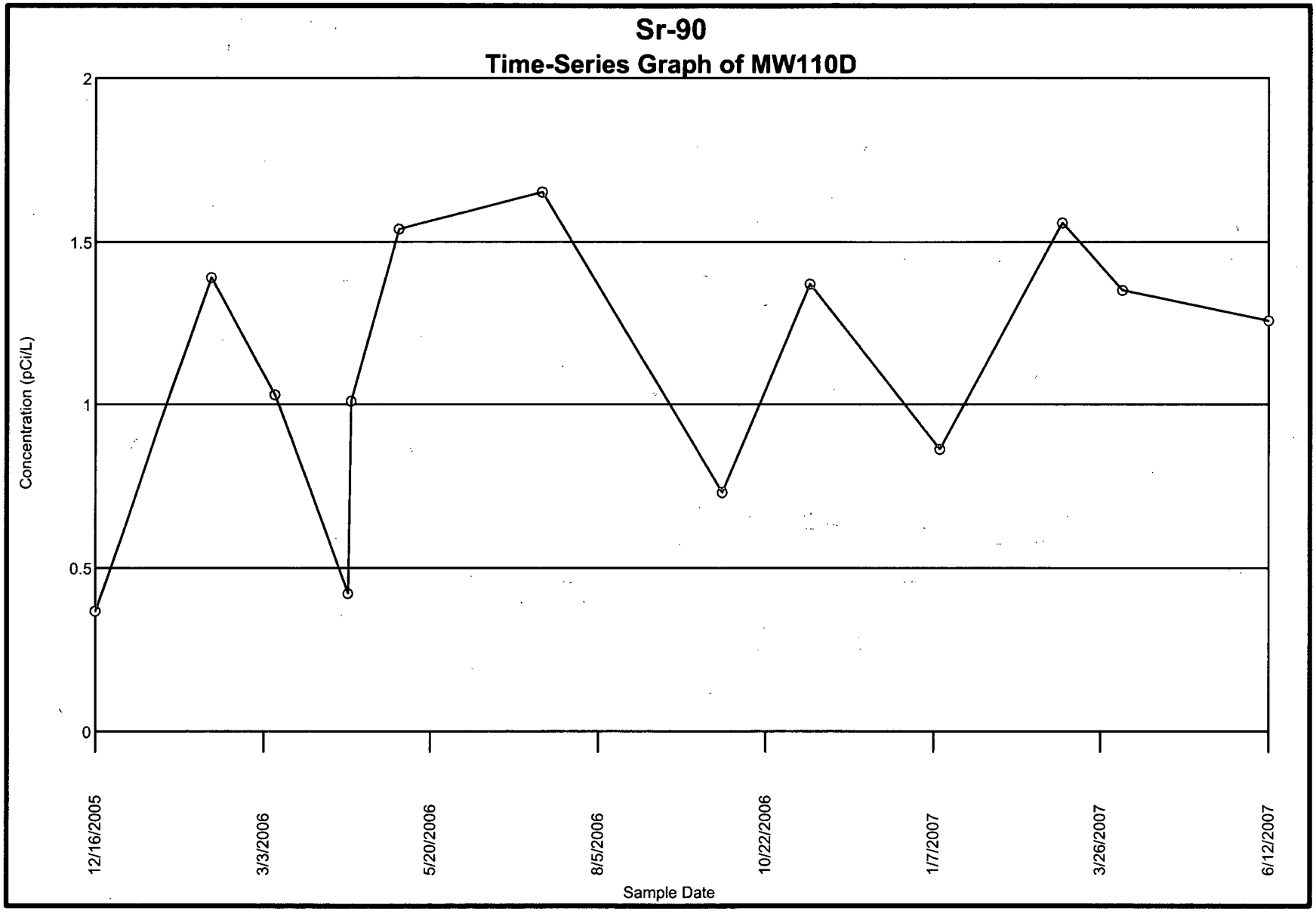
Sen's Estimator (Median Q) is 0.0616667

Time Period	Observations
12/16/2005	1
2/7/2006	1
3/1/2006	1
4/17/2006	1
5/8/2006	1
7/11/2006	1

10/2/2006	1
1/11/2007	1
3/21/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.00866667 = Q(13)
Upper limit is 0.1096 = Q(33)
-0.00866667 < 0 < 0.1096 indicating no trend in data.


Sr-90
Time-Series Graph of MW110D
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW110D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.39 U (2/7/2006 a)	ND<0.371 U (12/16/2005 a)	(1.39 - 0.371)/(2 - 1)	1.019
ND<1.03 U (3/9/2006 a)	ND<0.371 U (12/16/2005 a)	(1.03 - 0.371)/(3 - 1)	0.3295
ND<0.424 U (4/12/2006 a)	ND<0.371 U (12/16/2005 a)	(0.424 - 0.371)/(4 - 1)	0.0176667
ND<1.01 U (4/13/2006 a)	ND<0.371 U (12/16/2005 a)	(1.01 - 0.371)/(5 - 1)	0.15975
ND<1.54 OK (5/5/2006 a)	ND<0.371 U (12/16/2005 a)	(1.54 - 0.371)/(6 - 1)	0.2338
ND<1.65 OK (7/11/2006 ~)	ND<0.371 U (12/16/2005 a)	(1.65 - 0.371)/(7 - 1)	0.213167
ND<0.731 OK (10/2/2006 a)	ND<0.371 U (12/16/2005 a)	(0.731 - 0.371)/(8 - 1)	0.0514286
ND<1.37 OK (11/12/2006 a)	ND<0.371 U (12/16/2005 a)	(1.37 - 0.371)/(9 - 1)	0.124875
ND<0.865 OK (1/11/2007 a)	ND<0.371 U (12/16/2005 a)	(0.865 - 0.371)/(10 - 1)	0.0548889
ND<1.56 OK (3/9/2007 a)	ND<0.371 U (12/16/2005 a)	(1.56 - 0.371)/(11 - 1)	0.1189
ND<1.35 OK (4/6/2007 a)	ND<0.371 U (12/16/2005 a)	(1.35 - 0.371)/(12 - 1)	0.089
ND<1.26 OK (6/12/2007 a)	ND<0.371 U (12/16/2005 a)	(1.26 - 0.371)/(13 - 1)	0.0740833
ND<1.03 U (3/9/2006 a)	ND<1.39 U (2/7/2006 a)	(1.03 - 1.39)/(3 - 2)	-0.36
ND<0.424 U (4/12/2006 a)	ND<1.39 U (2/7/2006 a)	(0.424 - 1.39)/(4 - 2)	-0.483
ND<1.01 U (4/13/2006 a)	ND<1.39 U (2/7/2006 a)	(1.01 - 1.39)/(5 - 2)	-0.126667
ND<1.54 OK (5/5/2006 a)	ND<1.39 U (2/7/2006 a)	(1.54 - 1.39)/(6 - 2)	0.0375
ND<1.65 OK (7/11/2006 ~)	ND<1.39 U (2/7/2006 a)	(1.65 - 1.39)/(7 - 2)	0.052
ND<0.731 OK (10/2/2006 a)	ND<1.39 U (2/7/2006 a)	(0.731 - 1.39)/(8 - 2)	-0.109833
ND<1.37 OK (11/12/2006 a)	ND<1.39 U (2/7/2006 a)	(1.37 - 1.39)/(9 - 2)	-0.00285714
ND<0.865 OK (1/11/2007 a)	ND<1.39 U (2/7/2006 a)	(0.865 - 1.39)/(10 - 2)	-0.065625
ND<1.56 OK (3/9/2007 a)	ND<1.39 U (2/7/2006 a)	(1.56 - 1.39)/(11 - 2)	0.0188889
ND<1.35 OK (4/6/2007 a)	ND<1.39 U (2/7/2006 a)	(1.35 - 1.39)/(12 - 2)	-0.004
ND<1.26 OK (6/12/2007 a)	ND<1.39 U (2/7/2006 a)	(1.26 - 1.39)/(13 - 2)	-0.0118182
ND<0.424 U (4/12/2006 a)	ND<1.03 U (3/9/2006 a)	(0.424 - 1.03)/(4 - 3)	-0.606
ND<1.01 U (4/13/2006 a)	ND<1.03 U (3/9/2006 a)	(1.01 - 1.03)/(5 - 3)	-0.01
ND<1.54 OK (5/5/2006 a)	ND<1.03 U (3/9/2006 a)	(1.54 - 1.03)/(6 - 3)	0.17
ND<1.65 OK (7/11/2006 ~)	ND<1.03 U (3/9/2006 a)	(1.65 - 1.03)/(7 - 3)	0.155
ND<0.731 OK (10/2/2006 a)	ND<1.03 U (3/9/2006 a)	(0.731 - 1.03)/(8 - 3)	-0.0598
ND<1.37 OK (11/12/2006 a)	ND<1.03 U (3/9/2006 a)	(1.37 - 1.03)/(9 - 3)	0.0566667

ND<0.865 OK (1/11/2007 a)	ND<1.03 U (3/9/2006 a)	(0.865 - 1.03)/(10 - 3)	-0.0235714
ND<1.56 OK (3/9/2007 a)	ND<1.03 U (3/9/2006 a)	(1.56 - 1.03)/(11 - 3)	0.06625
ND<1.35 OK (4/6/2007 a)	ND<1.03 U (3/9/2006 a)	(1.35 - 1.03)/(12 - 3)	0.0355556
ND<1.26 OK (6/12/2007 a)	ND<1.03 U (3/9/2006 a)	(1.26 - 1.03)/(13 - 3)	0.023
ND<1.01 U (4/13/2006 a)	ND<0.424 U (4/12/2006 a)	(1.01 - 0.424)/(5 - 4)	0.586
ND<1.54 OK (5/5/2006 a)	ND<0.424 U (4/12/2006 a)	(1.54 - 0.424)/(6 - 4)	0.558
ND<1.65 OK (7/11/2006 ~)	ND<0.424 U (4/12/2006 a)	(1.65 - 0.424)/(7 - 4)	0.408667
ND<0.731 OK (10/2/2006 a)	ND<0.424 U (4/12/2006 a)	(0.731 - 0.424)/(8 - 4)	0.07675
ND<1.37 OK (11/12/2006 a)	ND<0.424 U (4/12/2006 a)	(1.37 - 0.424)/(9 - 4)	0.1892
ND<0.865 OK (1/11/2007 a)	ND<0.424 U (4/12/2006 a)	(0.865 - 0.424)/(10 - 4)	0.0735
ND<1.56 OK (3/9/2007 a)	ND<0.424 U (4/12/2006 a)	(1.56 - 0.424)/(11 - 4)	0.162286
ND<1.35 OK (4/6/2007 a)	ND<0.424 U (4/12/2006 a)	(1.35 - 0.424)/(12 - 4)	0.11575
ND<1.26 OK (6/12/2007 a)	ND<0.424 U (4/12/2006 a)	(1.26 - 0.424)/(13 - 4)	0.0928889
ND<1.54 OK (5/5/2006 a)	ND<1.01 U (4/13/2006 a)	(1.54 - 1.01)/(6 - 5)	0.53
ND<1.65 OK (7/11/2006 ~)	ND<1.01 U (4/13/2006 a)	(1.65 - 1.01)/(7 - 5)	0.32
ND<0.731 OK (10/2/2006 a)	ND<1.01 U (4/13/2006 a)	(0.731 - 1.01)/(8 - 5)	-0.093
ND<1.37 OK (11/12/2006 a)	ND<1.01 U (4/13/2006 a)	(1.37 - 1.01)/(9 - 5)	0.09
ND<0.865 OK (1/11/2007 a)	ND<1.01 U (4/13/2006 a)	(0.865 - 1.01)/(10 - 5)	-0.029
ND<1.56 OK (3/9/2007 a)	ND<1.01 U (4/13/2006 a)	(1.56 - 1.01)/(11 - 5)	0.0916667
ND<1.35 OK (4/6/2007 a)	ND<1.01 U (4/13/2006 a)	(1.35 - 1.01)/(12 - 5)	0.0485714
ND<1.26 OK (6/12/2007 a)	ND<1.01 U (4/13/2006 a)	(1.26 - 1.01)/(13 - 5)	0.03125
ND<1.65 OK (7/11/2006 ~)	ND<1.54 OK (5/5/2006 a)	(1.65 - 1.54)/(7 - 6)	0.11
ND<0.731 OK (10/2/2006 a)	ND<1.54 OK (5/5/2006 a)	(0.731 - 1.54)/(8 - 6)	-0.4045
ND<1.37 OK (11/12/2006 a)	ND<1.54 OK (5/5/2006 a)	(1.37 - 1.54)/(9 - 6)	-0.0566667
ND<0.865 OK (1/11/2007 a)	ND<1.54 OK (5/5/2006 a)	(0.865 - 1.54)/(10 - 6)	-0.16875
ND<1.56 OK (3/9/2007 a)	ND<1.54 OK (5/5/2006 a)	(1.56 - 1.54)/(11 - 6)	0.004
ND<1.35 OK (4/6/2007 a)	ND<1.54 OK (5/5/2006 a)	(1.35 - 1.54)/(12 - 6)	-0.0316667
ND<1.26 OK (6/12/2007 a)	ND<1.54 OK (5/5/2006 a)	(1.26 - 1.54)/(13 - 6)	-0.04
ND<0.731 OK (10/2/2006 a)	ND<1.65 OK (7/11/2006 ~)	(0.731 - 1.65)/(8 - 7)	-0.919
ND<1.37 OK (11/12/2006 a)	ND<1.65 OK (7/11/2006 ~)	(1.37 - 1.65)/(9 - 7)	-0.14
ND<0.865 OK (1/11/2007 a)	ND<1.65 OK (7/11/2006 ~)	(0.865 - 1.65)/(10 - 7)	-0.261667
ND<1.56 OK (3/9/2007 a)	ND<1.65 OK (7/11/2006 ~)	(1.56 - 1.65)/(11 - 7)	-0.0225
ND<1.35 OK (4/6/2007 a)	ND<1.65 OK (7/11/2006 ~)	(1.35 - 1.65)/(12 - 7)	-0.06
ND<1.26 OK (6/12/2007 a)	ND<1.65 OK (7/11/2006 ~)	(1.26 - 1.65)/(13 - 7)	-0.065
ND<1.37 OK (11/12/2006 a)	ND<0.731 OK (10/2/2006 a)	(1.37 - 0.731)/(9 - 8)	0.639
ND<0.865 OK (1/11/2007 a)	ND<0.731 OK (10/2/2006 a)	(0.865 - 0.731)/(10 - 8)	0.067

ND<1.56 OK (3/9/2007 a)	ND<0.731 OK (10/2/2006 a)	(1.56 - 0.731)/(11 - 8)	0.276333
ND<1.35 OK (4/6/2007 a)	ND<0.731 OK (10/2/2006 a)	(1.35 - 0.731)/(12 - 8)	0.15475
ND<1.26 OK (6/12/2007 a)	ND<0.731 OK (10/2/2006 a)	(1.26 - 0.731)/(13 - 8)	0.1058
ND<0.865 OK (1/11/2007 a)	ND<1.37 OK (11/12/2006 a)	(0.865 - 1.37)/(10 - 9)	-0.505
ND<1.56 OK (3/9/2007 a)	ND<1.37 OK (11/12/2006 a)	(1.56 - 1.37)/(11 - 9)	0.095
ND<1.35 OK (4/6/2007 a)	ND<1.37 OK (11/12/2006 a)	(1.35 - 1.37)/(12 - 9)	-0.00666667
ND<1.26 OK (6/12/2007 a)	ND<1.37 OK (11/12/2006 a)	(1.26 - 1.37)/(13 - 9)	-0.0275
ND<1.56 OK (3/9/2007 a)	ND<0.865 OK (1/11/2007 a)	(1.56 - 0.865)/(11 - 10)	0.695
ND<1.35 OK (4/6/2007 a)	ND<0.865 OK (1/11/2007 a)	(1.35 - 0.865)/(12 - 10)	0.2425
ND<1.26 OK (6/12/2007 a)	ND<0.865 OK (1/11/2007 a)	(1.26 - 0.865)/(13 - 10)	0.131667
ND<1.35 OK (4/6/2007 a)	ND<1.56 OK (3/9/2007 a)	(1.35 - 1.56)/(12 - 11)	-0.21
ND<1.26 OK (6/12/2007 a)	ND<1.56 OK (3/9/2007 a)	(1.26 - 1.56)/(13 - 11)	-0.15
ND<1.26 OK (6/12/2007 a)	ND<1.35 OK (4/6/2007 a)	(1.26 - 1.35)/(13 - 12)	-0.09

Number of Q values = 78

Ordered Q Values

n	Q
1	-0.919
2	-0.606
3	-0.505
4	-0.483
5	-0.4045
6	-0.36
7	-0.261667
8	-0.21
9	-0.16875
10	-0.15
11	-0.14
12	-0.126667
13	-0.109833
14	-0.093
15	-0.09
16	-0.065625
17	-0.065
18	-0.06

19	-0.0598
20	-0.0566667
21	-0.04
22	-0.0316667
23	-0.029
24	-0.0275
25	-0.0235714
26	-0.0225
27	-0.0118182
28	-0.01
29	-0.00666667
30	-0.004
31	-0.00285714
32	0.004
33	0.0176667
34	0.0188889
35	0.023
36	0.03125
37	0.0355556
38	0.0375
39	0.0485714
40	0.0514286
41	0.052
42	0.0548889
43	0.0566667
44	0.06625
45	0.067
46	0.0735
47	0.0740833
48	0.07675
49	0.089
50	0.09
51	0.0916667
52	0.0928889
53	0.095
54	0.1058
55	0.11
56	0.11575
57	0.1189
58	0.124875
59	0.131667

60	0.15475
61	0.155
62	0.15975
63	0.162286
64	0.17
65	0.1892
66	0.213167
67	0.2338
68	0.2425
69	0.276333
70	0.32
71	0.3295
72	0.408667
73	0.53
74	0.558
75	0.586
76	0.639
77	0.695
78	1.019

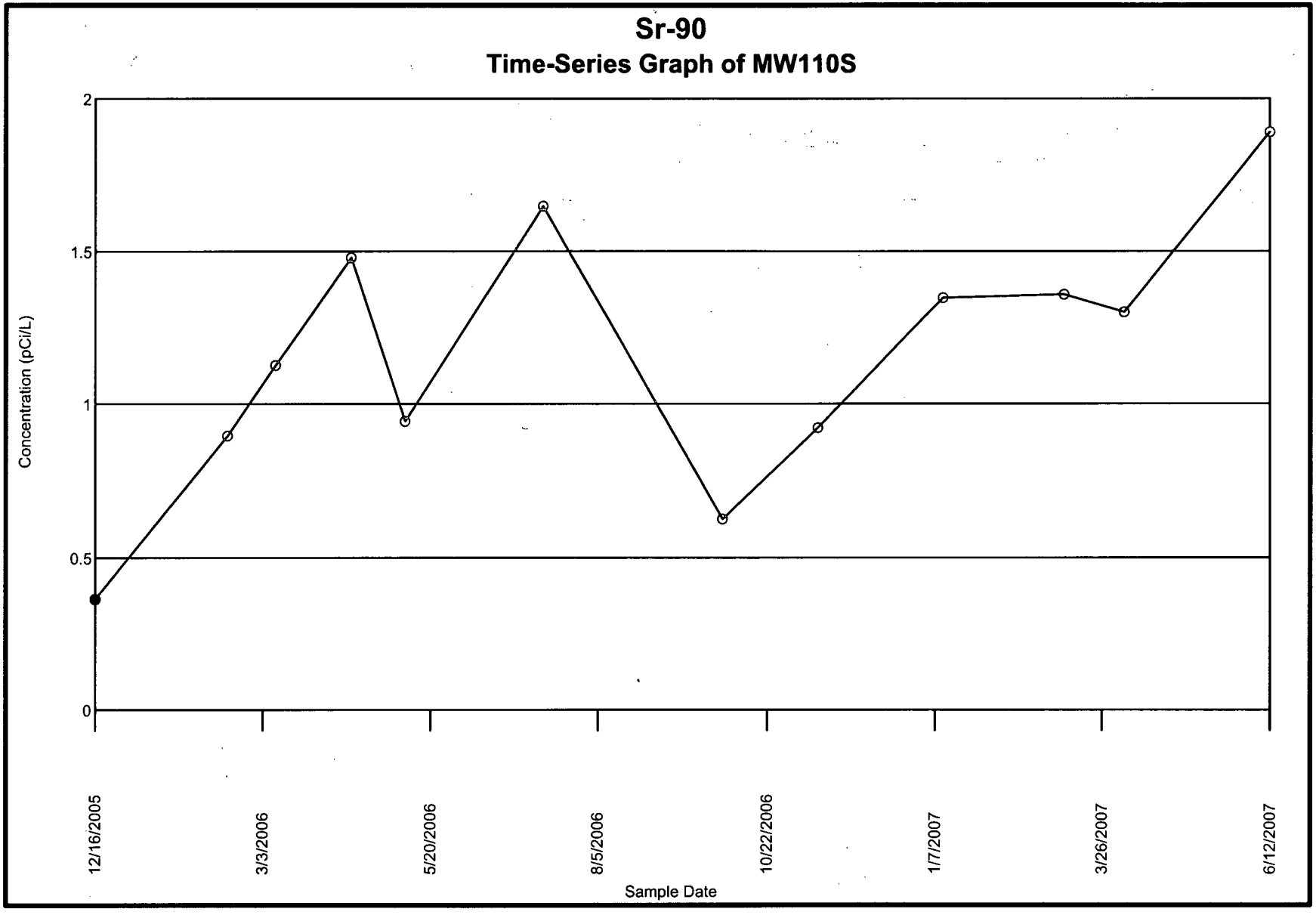
Sen's Estimator (Median Q) is 0.05

Time Period	Observations
12/16/2005	1
2/7/2006	1
3/9/2006	1
4/12/2006	1
4/13/2006	1
5/5/2006	1
7/11/2006	1
10/2/2006	1
11/12/2006	1
1/11/2007	1
3/9/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0

E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.0225 = Q(26)
Upper limit is 0.095 = Q(53)
-0.0225 < 0 < 0.095 indicating no trend in data.


Sr-90
Time-Series Graph of MW110S
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW110S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.899 U (2/15/2006 a)	0.361 OK (12/16/2005 a)	(0.899 - 0.361)/(2 - 1)	0.538
ND<1.13 U (3/9/2006 a)	0.361 OK (12/16/2005 a)	(1.13 - 0.361)/(3 - 1)	0.3845
ND<1.48 U (4/13/2006 a)	0.361 OK (12/16/2005 a)	(1.48 - 0.361)/(4 - 1)	0.373
ND<0.944 OK (5/8/2006 a)	0.361 OK (12/16/2005 a)	(0.944 - 0.361)/(5 - 1)	0.14575
ND<1.65 OK (7/11/2006 a)	0.361 OK (12/16/2005 a)	(1.65 - 0.361)/(6 - 1)	0.2578
ND<0.625 OK (10/2/2006 a)	0.361 OK (12/16/2005 a)	(0.625 - 0.361)/(7 - 1)	0.044
ND<0.922 OK (11/15/2006 a)	0.361 OK (12/16/2005 a)	(0.922 - 0.361)/(8 - 1)	0.0801429
ND<1.35 OK (1/12/2007 a)	0.361 OK (12/16/2005 a)	(1.35 - 0.361)/(9 - 1)	0.123625
ND<1.36 OK (3/9/2007 a)	0.361 OK (12/16/2005 a)	(1.36 - 0.361)/(10 - 1)	0.111
ND<1.3 OK (4/6/2007 a)	0.361 OK (12/16/2005 a)	(1.3 - 0.361)/(11 - 1)	0.0939
ND<1.89 OK (6/12/2007 a)	0.361 OK (12/16/2005 a)	(1.89 - 0.361)/(12 - 1)	0.139
ND<1.13 U (3/9/2006 a)	ND<0.899 U (2/15/2006 a)	(1.13 - 0.899)/(3 - 2)	0.231
ND<1.48 U (4/13/2006 a)	ND<0.899 U (2/15/2006 a)	(1.48 - 0.899)/(4 - 2)	0.2905
ND<0.944 OK (5/8/2006 a)	ND<0.899 U (2/15/2006 a)	(0.944 - 0.899)/(5 - 2)	0.015
ND<1.65 OK (7/11/2006 a)	ND<0.899 U (2/15/2006 a)	(1.65 - 0.899)/(6 - 2)	0.18775
ND<0.625 OK (10/2/2006 a)	ND<0.899 U (2/15/2006 a)	(0.625 - 0.899)/(7 - 2)	-0.0548
ND<0.922 OK (11/15/2006 a)	ND<0.899 U (2/15/2006 a)	(0.922 - 0.899)/(8 - 2)	0.00383333
ND<1.35 OK (1/12/2007 a)	ND<0.899 U (2/15/2006 a)	(1.35 - 0.899)/(9 - 2)	0.0644286
ND<1.36 OK (3/9/2007 a)	ND<0.899 U (2/15/2006 a)	(1.36 - 0.899)/(10 - 2)	0.057625
ND<1.3 OK (4/6/2007 a)	ND<0.899 U (2/15/2006 a)	(1.3 - 0.899)/(11 - 2)	0.0445556
ND<1.89 OK (6/12/2007 a)	ND<0.899 U (2/15/2006 a)	(1.89 - 0.899)/(12 - 2)	0.0991
ND<1.48 U (4/13/2006 a)	ND<1.13 U (3/9/2006 a)	(1.48 - 1.13)/(4 - 3)	0.35
ND<0.944 OK (5/8/2006 a)	ND<1.13 U (3/9/2006 a)	(0.944 - 1.13)/(5 - 3)	-0.093
ND<1.65 OK (7/11/2006 a)	ND<1.13 U (3/9/2006 a)	(1.65 - 1.13)/(6 - 3)	0.173333
ND<0.625 OK (10/2/2006 a)	ND<1.13 U (3/9/2006 a)	(0.625 - 1.13)/(7 - 3)	-0.12625
ND<0.922 OK (11/15/2006 a)	ND<1.13 U (3/9/2006 a)	(0.922 - 1.13)/(8 - 3)	-0.0416
ND<1.35 OK (1/12/2007 a)	ND<1.13 U (3/9/2006 a)	(1.35 - 1.13)/(9 - 3)	0.0366667
ND<1.36 OK (3/9/2007 a)	ND<1.13 U (3/9/2006 a)	(1.36 - 1.13)/(10 - 3)	0.0328571
ND<1.3 OK (4/6/2007 a)	ND<1.13 U (3/9/2006 a)	(1.3 - 1.13)/(11 - 3)	0.02125

ND<1.89 OK (6/12/2007 a)	ND<1.13 U (3/9/2006 a)	(1.89 - 1.13)/(12 - 3)	0.0844444
ND<0.944 OK (5/8/2006 a)	ND<1.48 U (4/13/2006 a)	(0.944 - 1.48)/(5 - 4)	-0.536
ND<1.65 OK (7/11/2006 a)	ND<1.48 U (4/13/2006 a)	(1.65 - 1.48)/(6 - 4)	0.085
ND<0.625 OK (10/2/2006 a)	ND<1.48 U (4/13/2006 a)	(0.625 - 1.48)/(7 - 4)	-0.285
ND<0.922 OK (11/15/2006 a)	ND<1.48 U (4/13/2006 a)	(0.922 - 1.48)/(8 - 4)	-0.1395
ND<1.35 OK (1/12/2007 a)	ND<1.48 U (4/13/2006 a)	(1.35 - 1.48)/(9 - 4)	-0.026
ND<1.36 OK (3/9/2007 a)	ND<1.48 U (4/13/2006 a)	(1.36 - 1.48)/(10 - 4)	-0.02
ND<1.3 OK (4/6/2007 a)	ND<1.48 U (4/13/2006 a)	(1.3 - 1.48)/(11 - 4)	-0.0257143
ND<1.89 OK (6/12/2007 a)	ND<1.48 U (4/13/2006 a)	(1.89 - 1.48)/(12 - 4)	0.05125
ND<1.65 OK (7/11/2006 a)	ND<0.944 OK (5/8/2006 a)	(1.65 - 0.944)/(6 - 5)	0.706
ND<0.625 OK (10/2/2006 a)	ND<0.944 OK (5/8/2006 a)	(0.625 - 0.944)/(7 - 5)	-0.1595
ND<0.922 OK (11/15/2006 a)	ND<0.944 OK (5/8/2006 a)	(0.922 - 0.944)/(8 - 5)	-0.00733333
ND<1.35 OK (1/12/2007 a)	ND<0.944 OK (5/8/2006 a)	(1.35 - 0.944)/(9 - 5)	0.1015
ND<1.36 OK (3/9/2007 a)	ND<0.944 OK (5/8/2006 a)	(1.36 - 0.944)/(10 - 5)	0.0832
ND<1.3 OK (4/6/2007 a)	ND<0.944 OK (5/8/2006 a)	(1.3 - 0.944)/(11 - 5)	0.0593333
ND<1.89 OK (6/12/2007 a)	ND<0.944 OK (5/8/2006 a)	(1.89 - 0.944)/(12 - 5)	0.135143
ND<0.625 OK (10/2/2006 a)	ND<1.65 OK (7/11/2006 a)	(0.625 - 1.65)/(7 - 6)	-1.025
ND<0.922 OK (11/15/2006 a)	ND<1.65 OK (7/11/2006 a)	(0.922 - 1.65)/(8 - 6)	-0.364
ND<1.35 OK (1/12/2007 a)	ND<1.65 OK (7/11/2006 a)	(1.35 - 1.65)/(9 - 6)	-0.1
ND<1.36 OK (3/9/2007 a)	ND<1.65 OK (7/11/2006 a)	(1.36 - 1.65)/(10 - 6)	-0.0725
ND<1.3 OK (4/6/2007 a)	ND<1.65 OK (7/11/2006 a)	(1.3 - 1.65)/(11 - 6)	-0.07
ND<1.89 OK (6/12/2007 a)	ND<1.65 OK (7/11/2006 a)	(1.89 - 1.65)/(12 - 6)	0.04
ND<0.922 OK (11/15/2006 a)	ND<0.625 OK (10/2/2006 a)	(0.922 - 0.625)/(8 - 7)	0.297
ND<1.35 OK (1/12/2007 a)	ND<0.625 OK (10/2/2006 a)	(1.35 - 0.625)/(9 - 7)	0.3625
ND<1.36 OK (3/9/2007 a)	ND<0.625 OK (10/2/2006 a)	(1.36 - 0.625)/(10 - 7)	0.245
ND<1.3 OK (4/6/2007 a)	ND<0.625 OK (10/2/2006 a)	(1.3 - 0.625)/(11 - 7)	0.16875
ND<1.89 OK (6/12/2007 a)	ND<0.625 OK (10/2/2006 a)	(1.89 - 0.625)/(12 - 7)	0.253
ND<1.35 OK (1/12/2007 a)	ND<0.922 OK (11/15/2006 a)	(1.35 - 0.922)/(9 - 8)	0.428
ND<1.36 OK (3/9/2007 a)	ND<0.922 OK (11/15/2006 a)	(1.36 - 0.922)/(10 - 8)	0.219
ND<1.3 OK (4/6/2007 a)	ND<0.922 OK (11/15/2006 a)	(1.3 - 0.922)/(11 - 8)	0.126
ND<1.89 OK (6/12/2007 a)	ND<0.922 OK (11/15/2006 a)	(1.89 - 0.922)/(12 - 8)	0.242
ND<1.36 OK (3/9/2007 a)	ND<1.35 OK (1/12/2007 a)	(1.36 - 1.35)/(10 - 9)	0.01
ND<1.3 OK (4/6/2007 a)	ND<1.35 OK (1/12/2007 a)	(1.3 - 1.35)/(11 - 9)	-0.025
ND<1.89 OK (6/12/2007 a)	ND<1.35 OK (1/12/2007 a)	(1.89 - 1.35)/(12 - 9)	0.18

ND<1.3 OK (4/6/2007 a)	ND<1.36 OK (3/9/2007 a)	(1.3 - 1.36)/(11 - 10)	-0.06
ND<1.89 OK (6/12/2007 a)	ND<1.36 OK (3/9/2007 a)	(1.89 - 1.36)/(12 - 10)	0.265
ND<1.89 OK (6/12/2007 a)	ND<1.3 OK (4/6/2007 a)	(1.89 - 1.3)/(12 - 11)	0.59

Number of Q values = 66

Ordered Q Values

n	Q
1	-1.025
2	-0.536
3	-0.364
4	-0.285
5	-0.1595
6	-0.1395
7	-0.12625
8	-0.1
9	-0.093
10	-0.0725
11	-0.07
12	-0.06
13	-0.0548
14	-0.0416
15	-0.026
16	-0.0257143
17	-0.025
18	-0.02
19	-0.00733333
20	0.00383333
21	0.01
22	0.015
23	0.02125
24	0.0328571
25	0.0366667
26	0.04
27	0.044
28	0.0445556
29	0.05125
30	0.057625
31	0.0593333

32	0.0644286
33	0.0801429
34	0.0832
35	0.0844444
36	0.085
37	0.0939
38	0.0991
39	0.1015
40	0.111
41	0.123625
42	0.126
43	0.135143
44	0.139
45	0.14575
46	0.16875
47	0.173333
48	0.18
49	0.18775
50	0.219
51	0.231
52	0.242
53	0.245
54	0.253
55	0.2578
56	0.265
57	0.2905
58	0.297
59	0.35
60	0.3625
61	0.373
62	0.3845
63	0.428
64	0.538
65	0.59
66	0.706

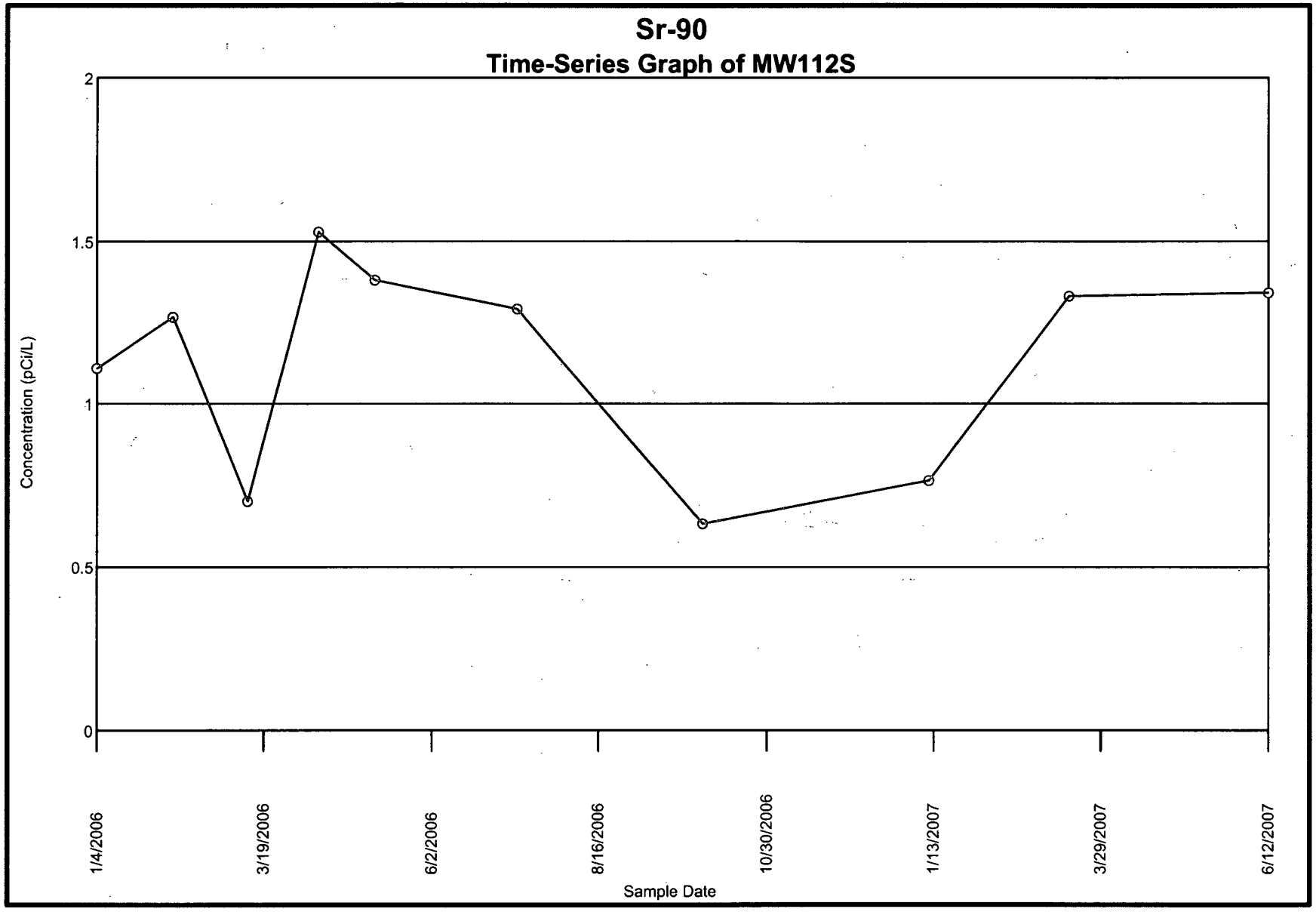
Sen's Estimator (Median Q) is 0.0816714

Time Period	Observations
12/16/2005	1
2/15/2006	1
3/9/2006	1

4/13/2006	1
5/8/2006	1
7/11/2006	1
10/2/2006	1
11/15/2006	1
1/12/2007	1
3/9/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is 0.01 = Q(21)
Upper limit is 0.16875 = Q(46)
0.01 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW112S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW112S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.27 U (2/7/2006 a)	ND<1.11 U (1/4/2006 a)	(1.27 - 1.11)/(2 - 1)	0.16
ND<0.703 U (3/13/2006 a)	ND<1.11 U (1/4/2006 a)	(0.703 - 1.11)/(3 - 1)	-0.2035
ND<1.53 U (4/13/2006 a)	ND<1.11 U (1/4/2006 a)	(1.53 - 1.11)/(4 - 1)	0.14
ND<1.38 OK (5/8/2006 a)	ND<1.11 U (1/4/2006 a)	(1.38 - 1.11)/(5 - 1)	0.0675
ND<1.29 OK (7/11/2006 a)	ND<1.11 U (1/4/2006 a)	(1.29 - 1.11)/(6 - 1)	0.036
ND<0.632 OK (10/2/2006 a)	ND<1.11 U (1/4/2006 a)	(0.632 - 1.11)/(7 - 1)	-0.0796667
ND<0.768 OK (1/11/2007 a)	ND<1.11 U (1/4/2006 a)	(0.768 - 1.11)/(8 - 1)	-0.0488571
ND<1.33 OK (3/15/2007 a)	ND<1.11 U (1/4/2006 a)	(1.33 - 1.11)/(9 - 1)	0.0275
ND<1.34 OK (6/12/2007 a)	ND<1.11 U (1/4/2006 a)	(1.34 - 1.11)/(10 - 1)	0.0255556
ND<0.703 U (3/13/2006 a)	ND<1.27 U (2/7/2006 a)	(0.703 - 1.27)/(3 - 2)	-0.567
ND<1.53 U (4/13/2006 a)	ND<1.27 U (2/7/2006 a)	(1.53 - 1.27)/(4 - 2)	0.13
ND<1.38 OK (5/8/2006 a)	ND<1.27 U (2/7/2006 a)	(1.38 - 1.27)/(5 - 2)	0.0366667
ND<1.29 OK (7/11/2006 a)	ND<1.27 U (2/7/2006 a)	(1.29 - 1.27)/(6 - 2)	0.005
ND<0.632 OK (10/2/2006 a)	ND<1.27 U (2/7/2006 a)	(0.632 - 1.27)/(7 - 2)	-0.1276
ND<0.768 OK (1/11/2007 a)	ND<1.27 U (2/7/2006 a)	(0.768 - 1.27)/(8 - 2)	-0.0836667
ND<1.33 OK (3/15/2007 a)	ND<1.27 U (2/7/2006 a)	(1.33 - 1.27)/(9 - 2)	0.00857143
ND<1.34 OK (6/12/2007 a)	ND<1.27 U (2/7/2006 a)	(1.34 - 1.27)/(10 - 2)	0.00875
ND<1.53 U (4/13/2006 a)	ND<0.703 U (3/13/2006 a)	(1.53 - 0.703)/(4 - 3)	0.827
ND<1.38 OK (5/8/2006 a)	ND<0.703 U (3/13/2006 a)	(1.38 - 0.703)/(5 - 3)	0.3385
ND<1.29 OK (7/11/2006 a)	ND<0.703 U (3/13/2006 a)	(1.29 - 0.703)/(6 - 3)	0.195667
ND<0.632 OK (10/2/2006 a)	ND<0.703 U (3/13/2006 a)	(0.632 - 0.703)/(7 - 3)	-0.01775
ND<0.768 OK (1/11/2007 a)	ND<0.703 U (3/13/2006 a)	(0.768 - 0.703)/(8 - 3)	0.013
ND<1.33 OK (3/15/2007 a)	ND<0.703 U (3/13/2006 a)	(1.33 - 0.703)/(9 - 3)	0.1045
ND<1.34 OK (6/12/2007 a)	ND<0.703 U (3/13/2006 a)	(1.34 - 0.703)/(10 - 3)	0.091
ND<1.38 OK (5/8/2006 a)	ND<1.53 U (4/13/2006 a)	(1.38 - 1.53)/(5 - 4)	-0.15
ND<1.29 OK (7/11/2006 a)	ND<1.53 U (4/13/2006 a)	(1.29 - 1.53)/(6 - 4)	-0.12
ND<0.632 OK (10/2/2006 a)	ND<1.53 U (4/13/2006 a)	(0.632 - 1.53)/(7 - 4)	-0.299333
ND<0.768 OK (1/11/2007 a)	ND<1.53 U (4/13/2006 a)	(0.768 - 1.53)/(8 - 4)	-0.1905
ND<1.33 OK (3/15/2007 a)	ND<1.53 U (4/13/2006 a)	(1.33 - 1.53)/(9 - 4)	-0.04
ND<1.34 OK (6/12/2007 a)	ND<1.53 U (4/13/2006 a)	(1.34 - 1.53)/(10 - 4)	-0.0316667
ND<1.29 OK (7/11/2006 a)	ND<1.38 OK (5/8/2006 a)	(1.29 - 1.38)/(6 - 5)	-0.09
ND<0.632 OK (10/2/2006 a)	ND<1.38 OK (5/8/2006 a)	(0.632 - 1.38)/(7 - 5)	-0.374
ND<0.768 OK (1/11/2007 a)	ND<1.38 OK (5/8/2006 a)	(0.768 - 1.38)/(8 - 5)	-0.204
ND<1.33 OK (3/15/2007 a)	ND<1.38 OK (5/8/2006 a)	(1.33 - 1.38)/(9 - 5)	-0.0125
ND<1.34 OK (6/12/2007 a)	ND<1.38 OK (5/8/2006 a)	(1.34 - 1.38)/(10 - 5)	-0.008
ND<0.632 OK (10/2/2006 a)	ND<1.29 OK (7/11/2006 a)	(0.632 - 1.29)/(7 - 6)	-0.658
ND<0.768 OK (1/11/2007 a)	ND<1.29 OK (7/11/2006 a)	(0.768 - 1.29)/(8 - 6)	-0.261
ND<1.33 OK (3/15/2007 a)	ND<1.29 OK (7/11/2006 a)	(1.33 - 1.29)/(9 - 6)	0.0133333
ND<1.34 OK (6/12/2007 a)	ND<1.29 OK (7/11/2006 a)	(1.34 - 1.29)/(10 - 6)	0.0125
ND<0.768 OK (1/11/2007 a)	ND<0.632 OK (10/2/2006 a)	(0.768 - 0.632)/(8 - 7)	0.136
ND<1.33 OK (3/15/2007 a)	ND<0.632 OK (10/2/2006 a)	(1.33 - 0.632)/(9 - 7)	0.349

ND<1.34 OK (6/12/2007 a)	ND<0.632 OK (10/2/2006 a)	(1.34 - 0.632)/(10 - 7)	0.236
ND<1.33 OK (3/15/2007 a)	ND<0.768 OK (1/11/2007 a)	(1.33 - 0.768)/(9 - 8)	0.562
ND<1.34 OK (6/12/2007 a)	ND<0.768 OK (1/11/2007 a)	(1.34 - 0.768)/(10 - 8)	0.286
ND<1.34 OK (6/12/2007 a)	ND<1.33 OK (3/15/2007 a)	(1.34 - 1.33)/(10 - 9)	0.01

Number of Q values = 45

Ordered Q Values

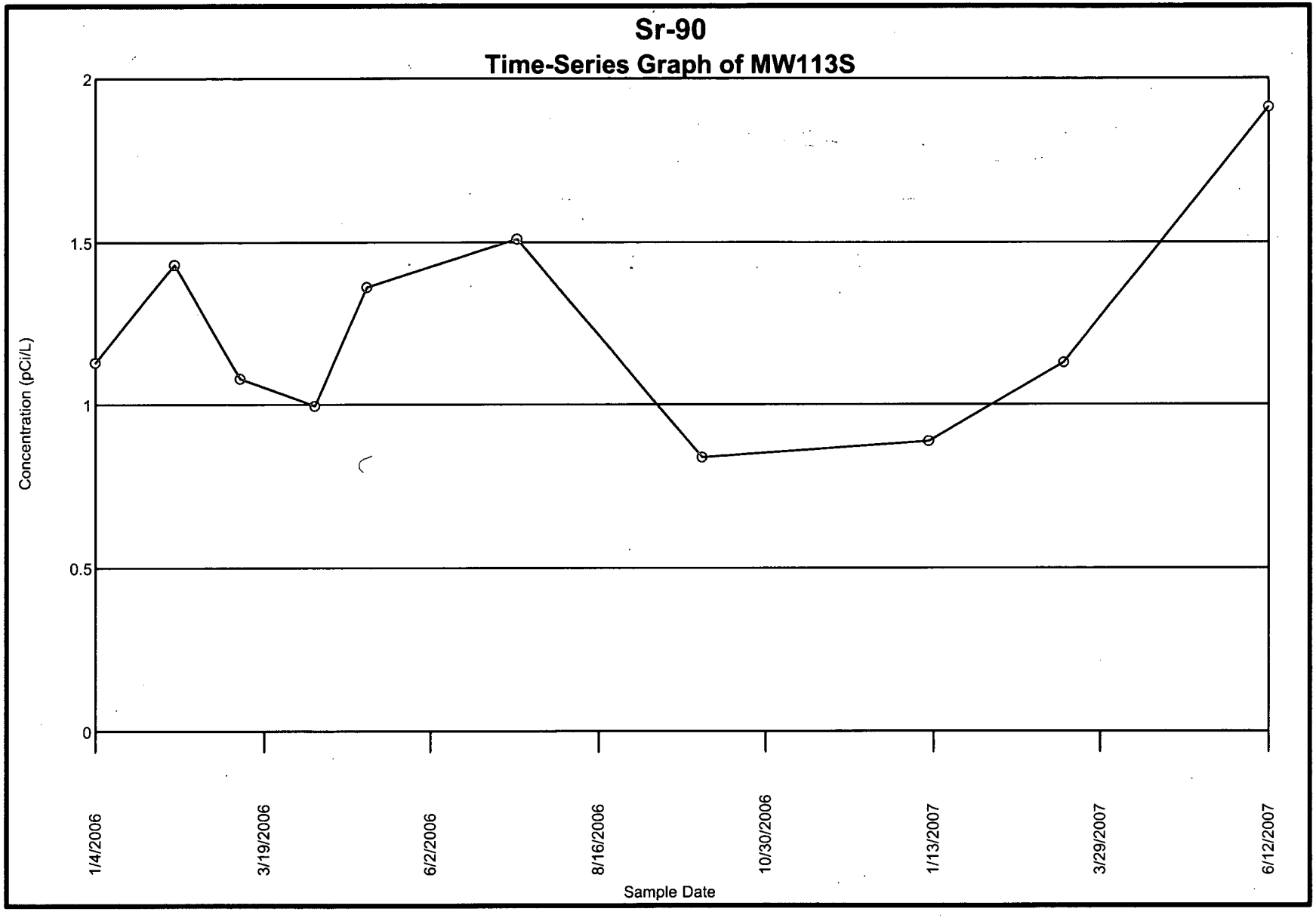
n	Q
1	-0.658
2	-0.567
3	-0.374
4	-0.299333
5	-0.261
6	-0.204
7	-0.2035
8	-0.1905
9	-0.15
10	-0.1276
11	-0.12
12	-0.09
13	-0.0836667
14	-0.0796667
15	-0.0488571
16	-0.04
17	-0.0316667
18	-0.01775
19	-0.0125
20	-0.008
21	0.005
22	0.00857143
23	0.00875
24	0.01
25	0.0125
26	0.013
27	0.0133333
28	0.0255556
29	0.0275
30	0.036
31	0.0366667
32	0.0675
33	0.091
34	0.1045
35	0.13
36	0.136
37	0.14
38	0.16
39	0.195667
40	0.236
41	0.286
42	0.3385
43	0.349
44	0.562
45	0.827

Sen's Estimator (Median Q) is 0.00875

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/13/2006	1
4/13/2006	1
5/8/2006	1
7/11/2006	1
10/2/2006	1
1/11/2007	1
3/15/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.0836667 = Q(13)
Upper limit is 0.091 = Q(33)
-0.0836667 < 0 < 0.091 indicating no trend in data.


Sr-90
Time-Series Graph of MW113S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW113S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.43 U (2/8/2006 a)	ND<1.13 U (1/4/2006 a)	(1.43 - 1.13)/(2 - 1)	0.3
ND<1.08 U (3/9/2006 a)	ND<1.13 U (1/4/2006 a)	(1.08 - 1.13)/(3 - 1)	-0.025
ND<1 U (4/12/2006 a)	ND<1.13 U (1/4/2006 a)	(1 - 1.13)/(4 - 1)	-0.0433333
ND<1.36 OK (5/5/2006 a)	ND<1.13 U (1/4/2006 a)	(1.36 - 1.13)/(5 - 1)	0.0575
ND<1.51 OK (7/11/2006 a)	ND<1.13 U (1/4/2006 a)	(1.51 - 1.13)/(6 - 1)	0.076
ND<0.839 OK (10/2/2006 a)	ND<1.13 U (1/4/2006 a)	(0.839 - 1.13)/(7 - 1)	-0.0485
ND<0.891 OK (1/11/2007 a)	ND<1.13 U (1/4/2006 a)	(0.891 - 1.13)/(8 - 1)	-0.0341429
ND<1.13 OK (3/13/2007 a)	ND<1.13 U (1/4/2006 a)	(1.13 - 1.13)/(9 - 1)	0
ND<1.91 OK (6/12/2007 a)	ND<1.13 U (1/4/2006 a)	(1.91 - 1.13)/(10 - 1)	0.0866667
ND<1.08 U (3/9/2006 a)	ND<1.43 U (2/8/2006 a)	(1.08 - 1.43)/(3 - 2)	-0.35
ND<1 U (4/12/2006 a)	ND<1.43 U (2/8/2006 a)	(1 - 1.43)/(4 - 2)	-0.215
ND<1.36 OK (5/5/2006 a)	ND<1.43 U (2/8/2006 a)	(1.36 - 1.43)/(5 - 2)	-0.0233333
ND<1.51 OK (7/11/2006 a)	ND<1.43 U (2/8/2006 a)	(1.51 - 1.43)/(6 - 2)	0.02
ND<0.839 OK (10/2/2006 a)	ND<1.43 U (2/8/2006 a)	(0.839 - 1.43)/(7 - 2)	-0.1182
ND<0.891 OK (1/11/2007 a)	ND<1.43 U (2/8/2006 a)	(0.891 - 1.43)/(8 - 2)	-0.0898333
ND<1.13 OK (3/13/2007 a)	ND<1.43 U (2/8/2006 a)	(1.13 - 1.43)/(9 - 2)	-0.0428571
ND<1.91 OK (6/12/2007 a)	ND<1.43 U (2/8/2006 a)	(1.91 - 1.43)/(10 - 2)	0.06
ND<1 U (4/12/2006 a)	ND<1.08 U (3/9/2006 a)	(1 - 1.08)/(4 - 3)	-0.08
ND<1.36 OK (5/5/2006 a)	ND<1.08 U (3/9/2006 a)	(1.36 - 1.08)/(5 - 3)	0.14
ND<1.51 OK (7/11/2006 a)	ND<1.08 U (3/9/2006 a)	(1.51 - 1.08)/(6 - 3)	0.143333
ND<0.839 OK (10/2/2006 a)	ND<1.08 U (3/9/2006 a)	(0.839 - 1.08)/(7 - 3)	-0.06025
ND<0.891 OK (1/11/2007 a)	ND<1.08 U (3/9/2006 a)	(0.891 - 1.08)/(8 - 3)	-0.0378
ND<1.13 OK (3/13/2007 a)	ND<1.08 U (3/9/2006 a)	(1.13 - 1.08)/(9 - 3)	0.00833333
ND<1.91 OK (6/12/2007 a)	ND<1.08 U (3/9/2006 a)	(1.91 - 1.08)/(10 - 3)	0.118571
ND<1.36 OK (5/5/2006 a)	ND<1 U (4/12/2006 a)	(1.36 - 1)/(5 - 4)	0.36
ND<1.51 OK (7/11/2006 a)	ND<1 U (4/12/2006 a)	(1.51 - 1)/(6 - 4)	0.255
ND<0.839 OK (10/2/2006 a)	ND<1 U (4/12/2006 a)	(0.839 - 1)/(7 - 4)	-0.0536667
ND<0.891 OK (1/11/2007 a)	ND<1 U (4/12/2006 a)	(0.891 - 1)/(8 - 4)	-0.02725
ND<1.13 OK (3/13/2007 a)	ND<1 U (4/12/2006 a)	(1.13 - 1)/(9 - 4)	0.026
ND<1.91 OK (6/12/2007 a)	ND<1 U (4/12/2006 a)	(1.91 - 1)/(10 - 4)	0.151667
ND<1.51 OK (7/11/2006 a)	ND<1.36 OK (5/5/2006 a)	(1.51 - 1.36)/(6 - 5)	0.15
ND<0.839 OK (10/2/2006 a)	ND<1.36 OK (5/5/2006 a)	(0.839 - 1.36)/(7 - 5)	-0.2605
ND<0.891 OK (1/11/2007 a)	ND<1.36 OK (5/5/2006 a)	(0.891 - 1.36)/(8 - 5)	-0.156333
ND<1.13 OK (3/13/2007 a)	ND<1.36 OK (5/5/2006 a)	(1.13 - 1.36)/(9 - 5)	-0.0575
ND<1.91 OK (6/12/2007 a)	ND<1.36 OK (5/5/2006 a)	(1.91 - 1.36)/(10 - 5)	0.11
ND<0.839 OK (10/2/2006 a)	ND<1.51 OK (7/11/2006 a)	(0.839 - 1.51)/(7 - 6)	-0.671
ND<0.891 OK (1/11/2007 a)	ND<1.51 OK (7/11/2006 a)	(0.891 - 1.51)/(8 - 6)	-0.3095
ND<1.13 OK (3/13/2007 a)	ND<1.51 OK (7/11/2006 a)	(1.13 - 1.51)/(9 - 6)	-0.126667
ND<1.91 OK (6/12/2007 a)	ND<1.51 OK (7/11/2006 a)	(1.91 - 1.51)/(10 - 6)	0.1
ND<0.891 OK (1/11/2007 a)	ND<0.839 OK (10/2/2006 a)	(0.891 - 0.839)/(8 - 7)	0.052
ND<1.13 OK (3/13/2007 a)	ND<0.839 OK (10/2/2006 a)	(1.13 - 0.839)/(9 - 7)	0.1455

ND<1.91 OK (6/12/2007 a)	ND<0.839 OK (10/2/2006 a)	(1.91 - 0.839)/(10 - 7)	0.357
ND<1.13 OK (3/13/2007 a)	ND<0.891 OK (1/11/2007 a)	(1.13 - 0.891)/(9 - 8)	0.239
ND<1.91 OK (6/12/2007 a)	ND<0.891 OK (1/11/2007 a)	(1.91 - 0.891)/(10 - 8)	0.5095
ND<1.91 OK (6/12/2007 a)	ND<1.13 OK (3/13/2007 a)	(1.91 - 1.13)/(10 - 9)	0.78

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.671
2	-0.35
3	-0.3095
4	-0.2605
5	-0.215
6	-0.156333
7	-0.126667
8	-0.1182
9	-0.0898333
10	-0.08
11	-0.06025
12	-0.0575
13	-0.0536667
14	-0.0485
15	-0.0433333
16	-0.0428571
17	-0.0378
18	-0.0341429
19	-0.02725
20	-0.025
21	-0.0233333
22	0
23	0.00833333
24	0.02
25	0.026
26	0.052
27	0.0575
28	0.06
29	0.076
30	0.0866667
31	0.1
32	0.11
33	0.118571
34	0.14
35	0.143333
36	0.1455
37	0.15
38	0.151667
39	0.239
40	0.255
41	0.3
42	0.357
43	0.36
44	0.5095
45	0.78

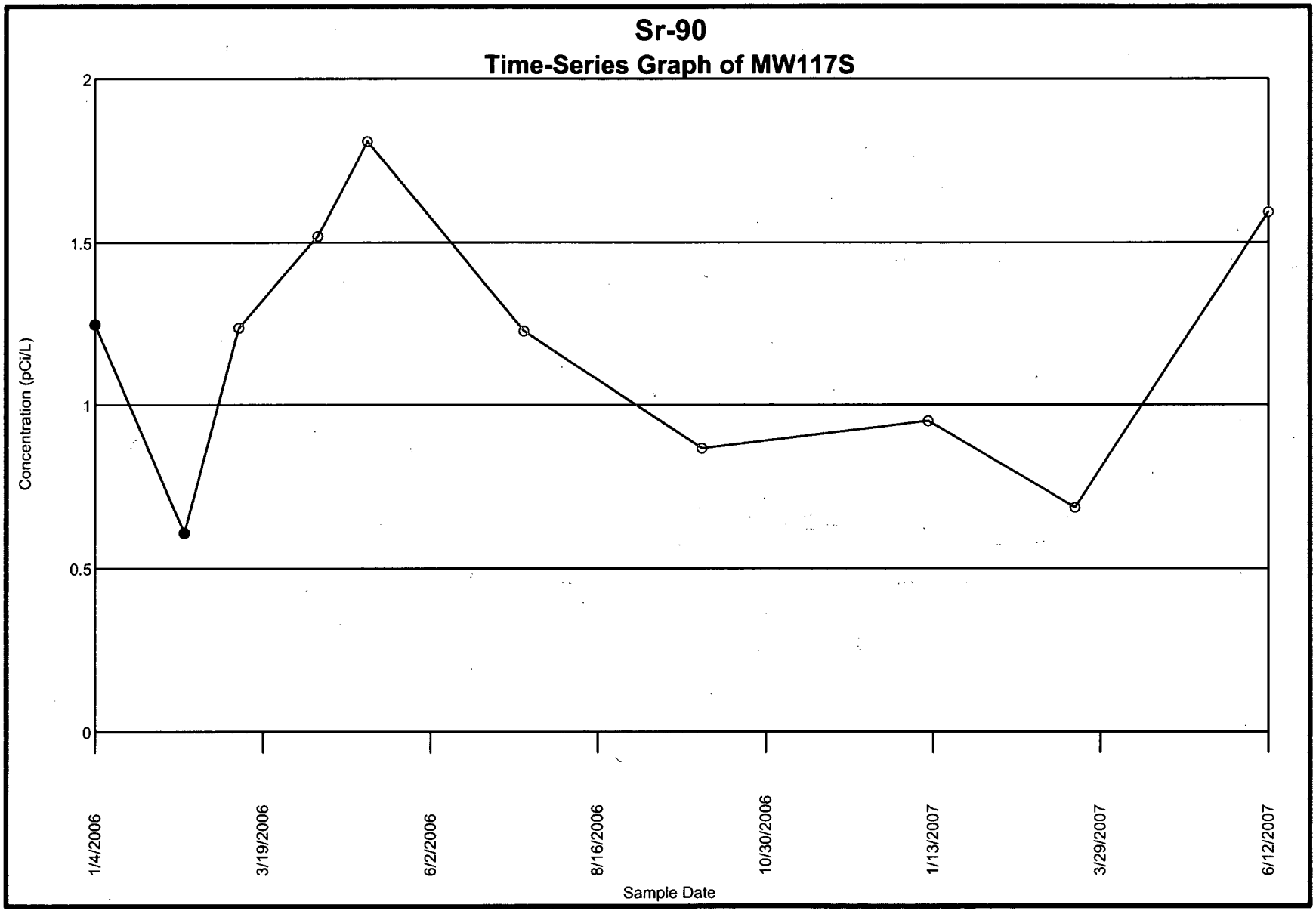
Sen's Estimator (Median Q) is 0.00833333

Tied Group	Value	Members
1	1.13	2

Time Period	Observations
1/4/2006	1
2/8/2006	1
3/9/2006	1
4/12/2006	1
5/5/2006	1
7/11/2006	1
10/2/2006	1
1/11/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.0536667 = Q(13)
Upper limit is 0.118571 = Q(33)
-0.0536667 < 0 < 0.118571 indicating no trend in data.


Sr-90
Time-Series Graph of MW117S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW117S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
0.611 U (2/13/2006 a)	1.25 OK (1/4/2006 a)	(0.611 - 1.25)/(2 - 1)	-0.639
ND<1.24 U (3/9/2006 a)	1.25 OK (1/4/2006 a)	(1.24 - 1.25)/(3 - 1)	-0.005
ND<1.52 U (4/13/2006 a)	1.25 OK (1/4/2006 a)	(1.52 - 1.25)/(4 - 1)	0.09
ND<1.81 OK (5/5/2006 ~)	1.25 OK (1/4/2006 a)	(1.81 - 1.25)/(5 - 1)	0.14
ND<1.23 OK (7/15/2006 a)	1.25 OK (1/4/2006 a)	(1.23 - 1.25)/(6 - 1)	-0.004
ND<0.868 OK (10/2/2006 a)	1.25 OK (1/4/2006 a)	(0.868 - 1.25)/(7 - 1)	-0.0636667
ND<0.955 OK (1/11/2007 ~)	1.25 OK (1/4/2006 a)	(0.955 - 1.25)/(8 - 1)	-0.0421429
ND<0.689 OK (3/18/2007 a)	1.25 OK (1/4/2006 a)	(0.689 - 1.25)/(9 - 1)	-0.070125
ND<1.59 OK (6/12/2007 a)	1.25 OK (1/4/2006 a)	(1.59 - 1.25)/(10 - 1)	0.0377778
ND<1.24 U (3/9/2006 a)	0.611 U (2/13/2006 a)	(1.24 - 0.611)/(3 - 2)	0.629
ND<1.52 U (4/13/2006 a)	0.611 U (2/13/2006 a)	(1.52 - 0.611)/(4 - 2)	0.4545
ND<1.81 OK (5/5/2006 ~)	0.611 U (2/13/2006 a)	(1.81 - 0.611)/(5 - 2)	0.399667
ND<1.23 OK (7/15/2006 a)	0.611 U (2/13/2006 a)	(1.23 - 0.611)/(6 - 2)	0.15475
ND<0.868 OK (10/2/2006 a)	0.611 U (2/13/2006 a)	(0.868 - 0.611)/(7 - 2)	0.0514
ND<0.955 OK (1/11/2007 ~)	0.611 U (2/13/2006 a)	(0.955 - 0.611)/(8 - 2)	0.0573333
ND<0.689 OK (3/18/2007 a)	0.611 U (2/13/2006 a)	(0.689 - 0.611)/(9 - 2)	0.0111429
ND<1.59 OK (6/12/2007 a)	0.611 U (2/13/2006 a)	(1.59 - 0.611)/(10 - 2)	0.122375
ND<1.52 U (4/13/2006 a)	ND<1.24 U (3/9/2006 a)	(1.52 - 1.24)/(4 - 3)	0.28
ND<1.81 OK (5/5/2006 ~)	ND<1.24 U (3/9/2006 a)	(1.81 - 1.24)/(5 - 3)	0.285
ND<1.23 OK (7/15/2006 a)	ND<1.24 U (3/9/2006 a)	(1.23 - 1.24)/(6 - 3)	-0.00333333
ND<0.868 OK (10/2/2006 a)	ND<1.24 U (3/9/2006 a)	(0.868 - 1.24)/(7 - 3)	-0.093
ND<0.955 OK (1/11/2007 ~)	ND<1.24 U (3/9/2006 a)	(0.955 - 1.24)/(8 - 3)	-0.057
ND<0.689 OK (3/18/2007 a)	ND<1.24 U (3/9/2006 a)	(0.689 - 1.24)/(9 - 3)	-0.0918333
ND<1.59 OK (6/12/2007 a)	ND<1.24 U (3/9/2006 a)	(1.59 - 1.24)/(10 - 3)	0.05
ND<1.81 OK (5/5/2006 ~)	ND<1.52 U (4/13/2006 a)	(1.81 - 1.52)/(5 - 4)	0.29
ND<1.23 OK (7/15/2006 a)	ND<1.52 U (4/13/2006 a)	(1.23 - 1.52)/(6 - 4)	-0.145
ND<0.868 OK (10/2/2006 a)	ND<1.52 U (4/13/2006 a)	(0.868 - 1.52)/(7 - 4)	-0.217333
ND<0.955 OK (1/11/2007 ~)	ND<1.52 U (4/13/2006 a)	(0.955 - 1.52)/(8 - 4)	-0.14125

ND<0.689 OK (3/18/2007 a)	ND<1.52 U (4/13/2006 a)	(0.689 - 1.52)/(9 - 4)	-0.1662
ND<1.59 OK (6/12/2007 a)	ND<1.52 U (4/13/2006 a)	(1.59 - 1.52)/(10 - 4)	0.0116667
ND<1.23 OK (7/15/2006 a)	ND<1.81 OK (5/5/2006 ~)	(1.23 - 1.81)/(6 - 5)	-0.58
ND<0.868 OK (10/2/2006 a)	ND<1.81 OK (5/5/2006 ~)	(0.868 - 1.81)/(7 - 5)	-0.471
ND<0.955 OK (1/11/2007 ~)	ND<1.81 OK (5/5/2006 ~)	(0.955 - 1.81)/(8 - 5)	-0.285
ND<0.689 OK (3/18/2007 a)	ND<1.81 OK (5/5/2006 ~)	(0.689 - 1.81)/(9 - 5)	-0.28025
ND<1.59 OK (6/12/2007 a)	ND<1.81 OK (5/5/2006 ~)	(1.59 - 1.81)/(10 - 5)	-0.044
ND<0.868 OK (10/2/2006 a)	ND<1.23 OK (7/15/2006 a)	(0.868 - 1.23)/(7 - 6)	-0.362
ND<0.955 OK (1/11/2007 ~)	ND<1.23 OK (7/15/2006 a)	(0.955 - 1.23)/(8 - 6)	-0.1375
ND<0.689 OK (3/18/2007 a)	ND<1.23 OK (7/15/2006 a)	(0.689 - 1.23)/(9 - 6)	-0.180333
ND<1.59 OK (6/12/2007 a)	ND<1.23 OK (7/15/2006 a)	(1.59 - 1.23)/(10 - 6)	0.09
ND<0.955 OK (1/11/2007 ~)	ND<0.868 OK (10/2/2006 a)	(0.955 - 0.868)/(8 - 7)	0.087
ND<0.689 OK (3/18/2007 a)	ND<0.868 OK (10/2/2006 a)	(0.689 - 0.868)/(9 - 7)	-0.0895
ND<1.59 OK (6/12/2007 a)	ND<0.868 OK (10/2/2006 a)	(1.59 - 0.868)/(10 - 7)	0.240667
ND<0.689 OK (3/18/2007 a)	ND<0.955 OK (1/11/2007 ~)	(0.689 - 0.955)/(9 - 8)	-0.266
ND<1.59 OK (6/12/2007 a)	ND<0.955 OK (1/11/2007 ~)	(1.59 - 0.955)/(10 - 8)	0.3175
ND<1.59 OK (6/12/2007 a)	ND<0.689 OK (3/18/2007 a)	(1.59 - 0.689)/(10 - 9)	0.901

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.639
2	-0.58
3	-0.471
4	-0.362
5	-0.285
6	-0.28025
7	-0.266
8	-0.217333
9	-0.180333
10	-0.1662
11	-0.145
12	-0.14125
13	-0.1375

14	-0.093
15	-0.0918333
16	-0.0895
17	-0.070125
18	-0.0636667
19	-0.057
20	-0.044
21	-0.0421429
22	-0.005
23	-0.004
24	-0.00333333
25	0.0111429
26	0.0116667
27	0.0377778
28	0.05
29	0.0514
30	0.0573333
31	0.087
32	0.09
33	0.09
34	0.122375
35	0.14
36	0.15475
37	0.240667
38	0.28
39	0.285
40	0.29
41	0.3175
42	0.399667
43	0.4545
44	0.629
45	0.901

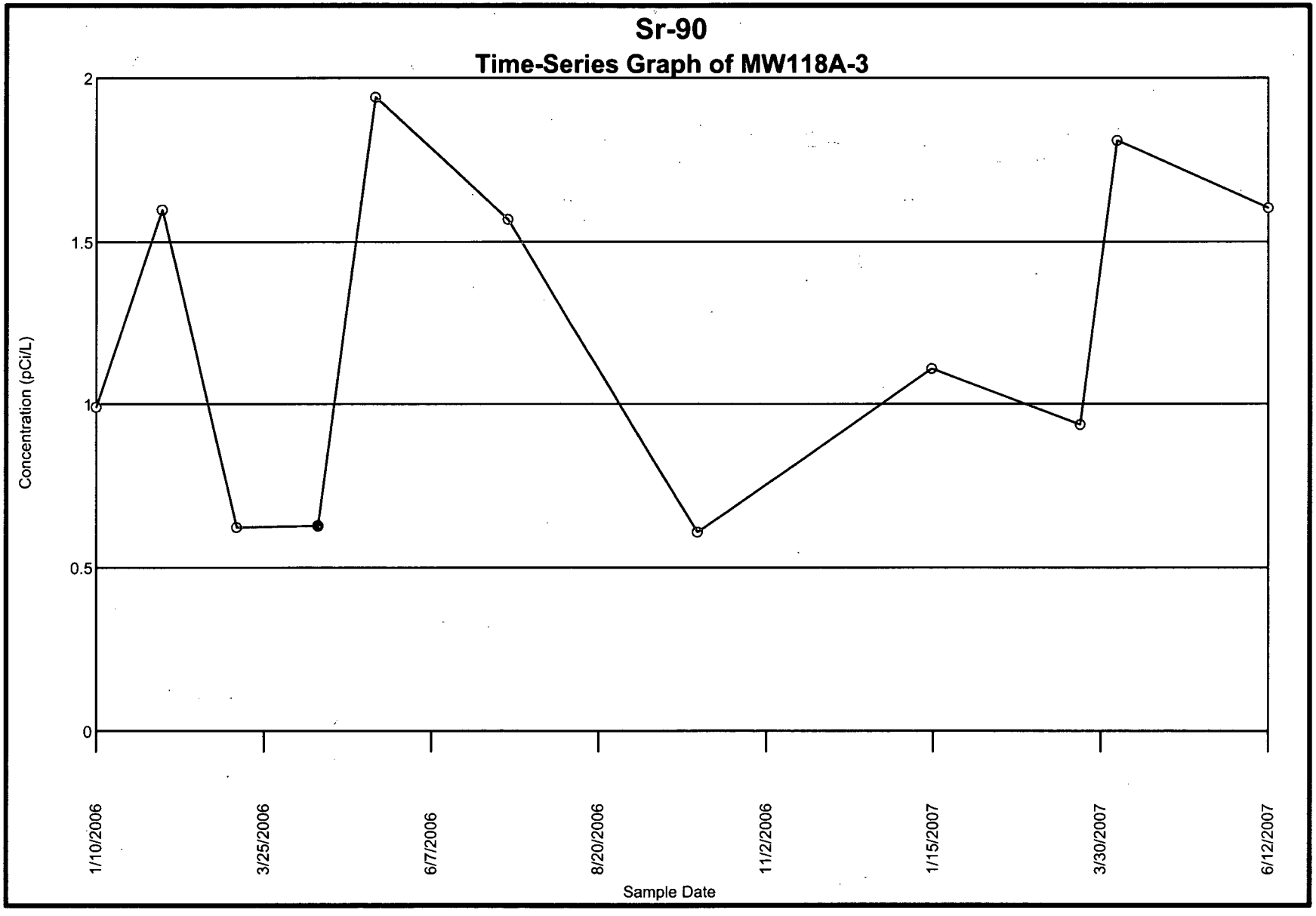
Sen's Estimator (Median Q) is -0.004

Time Period	Observations
1/4/2006	1
2/13/2006	1
3/9/2006	1
4/13/2006	1
5/5/2006	1
7/15/2006	1

10/2/2006	1
1/11/2007	1
3/18/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.1375 = Q(13)
Upper limit is 0.09 = Q(33)
-0.1375 < 0 < 0.09 indicating no trend in data.


Sr-90
Time-Series Graph of MW118A-3
Concentration (pCi/L)
2
1.5
1
0.5
0
1/10/2006
3/25/2006
6/7/2006
8/20/2006
11/2/2006
1/15/2007
3/30/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW118A-3

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.595 U (2/8/2006 ~)	ND<0.995 U (1/10/2006 a)	(1.595 - 0.995)/(2 - 1)	0.6
ND<0.626 U (3/13/2006 a)	ND<0.995 U (1/10/2006 a)	(0.626 - 0.995)/(3 - 1)	-0.1845
0.628 U (4/18/2006 a)	ND<0.995 U (1/10/2006 a)	(0.628 - 0.995)/(4 - 1)	-0.122333
ND<1.94 OK (5/13/2006 a)	ND<0.995 U (1/10/2006 a)	(1.94 - 0.995)/(5 - 1)	0.23625
ND<1.57 OK (7/11/2006 a)	ND<0.995 U (1/10/2006 a)	(1.57 - 0.995)/(6 - 1)	0.115
ND<0.609 OK (10/3/2006 ~)	ND<0.995 U (1/10/2006 a)	(0.609 - 0.995)/(7 - 1)	-0.0643333
ND<1.11 OK (1/14/2007 a)	ND<0.995 U (1/10/2006 a)	(1.11 - 0.995)/(8 - 1)	0.0164286
ND<0.939 OK (3/21/2007 a)	ND<0.995 U (1/10/2006 a)	(0.939 - 0.995)/(9 - 1)	-0.007
ND<1.81 OK (4/6/2007 a)	ND<0.995 U (1/10/2006 a)	(1.81 - 0.995)/(10 - 1)	0.0905556
ND<1.6 OK (6/12/2007 ~)	ND<0.995 U (1/10/2006 a)	(1.6 - 0.995)/(11 - 1)	0.0605
ND<0.626 U (3/13/2006 a)	ND<1.595 U (2/8/2006 ~)	(0.626 - 1.595)/(3 - 2)	-0.969
0.628 U (4/18/2006 a)	ND<1.595 U (2/8/2006 ~)	(0.628 - 1.595)/(4 - 2)	-0.4835
ND<1.94 OK (5/13/2006 a)	ND<1.595 U (2/8/2006 ~)	(1.94 - 1.595)/(5 - 2)	0.115
ND<1.57 OK (7/11/2006 a)	ND<1.595 U (2/8/2006 ~)	(1.57 - 1.595)/(6 - 2)	-0.00625
ND<0.609 OK (10/3/2006 ~)	ND<1.595 U (2/8/2006 ~)	(0.609 - 1.595)/(7 - 2)	-0.1972
ND<1.11 OK (1/14/2007 a)	ND<1.595 U (2/8/2006 ~)	(1.11 - 1.595)/(8 - 2)	-0.0808333
ND<0.939 OK (3/21/2007 a)	ND<1.595 U (2/8/2006 ~)	(0.939 - 1.595)/(9 - 2)	-0.0937143
ND<1.81 OK (4/6/2007 a)	ND<1.595 U (2/8/2006 ~)	(1.81 - 1.595)/(10 - 2)	0.026875
ND<1.6 OK (6/12/2007 ~)	ND<1.595 U (2/8/2006 ~)	(1.6 - 1.595)/(11 - 2)	0.000555556
0.628 U (4/18/2006 a)	ND<0.626 U (3/13/2006 a)	(0.628 - 0.626)/(4 - 3)	0.002
ND<1.94 OK (5/13/2006 a)	ND<0.626 U (3/13/2006 a)	(1.94 - 0.626)/(5 - 3)	0.657
ND<1.57 OK (7/11/2006 a)	ND<0.626 U (3/13/2006 a)	(1.57 - 0.626)/(6 - 3)	0.314667
ND<0.609 OK (10/3/2006 ~)	ND<0.626 U (3/13/2006 a)	(0.609 - 0.626)/(7 - 3)	-0.00425
ND<1.11 OK (1/14/2007 a)	ND<0.626 U (3/13/2006 a)	(1.11 - 0.626)/(8 - 3)	0.0968
ND<0.939 OK (3/21/2007 a)	ND<0.626 U (3/13/2006 a)	(0.939 - 0.626)/(9 - 3)	0.0521667
ND<1.81 OK (4/6/2007 a)	ND<0.626 U (3/13/2006 a)	(1.81 - 0.626)/(10 - 3)	0.169143
ND<1.6 OK (6/12/2007 ~)	ND<0.626 U (3/13/2006 a)	(1.6 - 0.626)/(11 - 3)	0.12175
ND<1.94 OK (5/13/2006 a)	0.628 U (4/18/2006 a)	(1.94 - 0.628)/(5 - 4)	1.312
ND<1.57 OK (7/11/2006 a)	0.628 U (4/18/2006 a)	(1.57 - 0.628)/(6 - 4)	0.471
ND<0.609 OK (10/3/2006 ~)	0.628 U (4/18/2006 a)	(0.609 - 0.628)/(7 - 4)	-0.00633333
ND<1.11 OK (1/14/2007 a)	0.628 U (4/18/2006 a)	(1.11 - 0.628)/(8 - 4)	0.1205
ND<0.939 OK (3/21/2007 a)	0.628 U (4/18/2006 a)	(0.939 - 0.628)/(9 - 4)	0.0622
ND<1.81 OK (4/6/2007 a)	0.628 U (4/18/2006 a)	(1.81 - 0.628)/(10 - 4)	0.197
ND<1.6 OK (6/12/2007 ~)	0.628 U (4/18/2006 a)	(1.6 - 0.628)/(11 - 4)	0.138857
ND<1.57 OK (7/11/2006 a)	ND<1.94 OK (5/13/2006 a)	(1.57 - 1.94)/(6 - 5)	-0.37
ND<0.609 OK (10/3/2006 ~)	ND<1.94 OK (5/13/2006 a)	(0.609 - 1.94)/(7 - 5)	-0.6655
ND<1.11 OK (1/14/2007 a)	ND<1.94 OK (5/13/2006 a)	(1.11 - 1.94)/(8 - 5)	-0.276667
ND<0.939 OK (3/21/2007 a)	ND<1.94 OK (5/13/2006 a)	(0.939 - 1.94)/(9 - 5)	-0.25025
ND<1.81 OK (4/6/2007 a)	ND<1.94 OK (5/13/2006 a)	(1.81 - 1.94)/(10 - 5)	-0.026
ND<1.6 OK (6/12/2007 ~)	ND<1.94 OK (5/13/2006 a)	(1.6 - 1.94)/(11 - 5)	-0.0566667
ND<0.609 OK (10/3/2006 ~)	ND<1.57 OK (7/11/2006 a)	(0.609 - 1.57)/(7 - 6)	-0.961
ND<1.11 OK (1/14/2007 a)	ND<1.57 OK (7/11/2006 a)	(1.11 - 1.57)/(8 - 6)	-0.23

ND<0.939 OK (3/21/2007 a)	ND<1.57 OK (7/11/2006 a)	(0.939 - 1.57)/(9 - 6)	-0.210333
ND<1.81 OK (4/6/2007 a)	ND<1.57 OK (7/11/2006 a)	(1.81 - 1.57)/(10 - 6)	0.06
ND<1.6 OK (6/12/2007 ~)	ND<1.57 OK (7/11/2006 a)	(1.6 - 1.57)/(11 - 6)	0.006
ND<1.11 OK (1/14/2007 a)	ND<0.609 OK (10/3/2006 ~)	(1.11 - 0.609)/(8 - 7)	0.501
ND<0.939 OK (3/21/2007 a)	ND<0.609 OK (10/3/2006 ~)	(0.939 - 0.609)/(9 - 7)	0.165
ND<1.81 OK (4/6/2007 a)	ND<0.609 OK (10/3/2006 ~)	(1.81 - 0.609)/(10 - 7)	0.400333
ND<1.6 OK (6/12/2007 ~)	ND<0.609 OK (10/3/2006 ~)	(1.6 - 0.609)/(11 - 7)	0.24775
ND<0.939 OK (3/21/2007 a)	ND<1.11 OK (1/14/2007 a)	(0.939 - 1.11)/(9 - 8)	-0.171
ND<1.81 OK (4/6/2007 a)	ND<1.11 OK (1/14/2007 a)	(1.81 - 1.11)/(10 - 8)	0.35
ND<1.6 OK (6/12/2007 ~)	ND<1.11 OK (1/14/2007 a)	(1.6 - 1.11)/(11 - 8)	0.163333
ND<1.81 OK (4/6/2007 a)	ND<0.939 OK (3/21/2007 a)	(1.81 - 0.939)/(10 - 9)	0.871
ND<1.6 OK (6/12/2007 ~)	ND<0.939 OK (3/21/2007 a)	(1.6 - 0.939)/(11 - 9)	0.3305
ND<1.6 OK (6/12/2007 ~)	ND<1.81 OK (4/6/2007 a)	(1.6 - 1.81)/(11 - 10)	-0.21

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.969
2	-0.961
3	-0.6655
4	-0.4835
5	-0.37
6	-0.276667
7	-0.25025
8	-0.23
9	-0.210333
10	-0.21
11	-0.1972
12	-0.1845
13	-0.171
14	-0.122333
15	-0.0937143
16	-0.0808333
17	-0.0643333
18	-0.0566667
19	-0.026
20	-0.007
21	-0.00633333
22	-0.00625
23	-0.00425
24	0.000555556
25	0.002
26	0.006
27	0.0164286
28	0.026875
29	0.0521667
30	0.06
31	0.0605
32	0.0622
33	0.0905556
34	0.0968

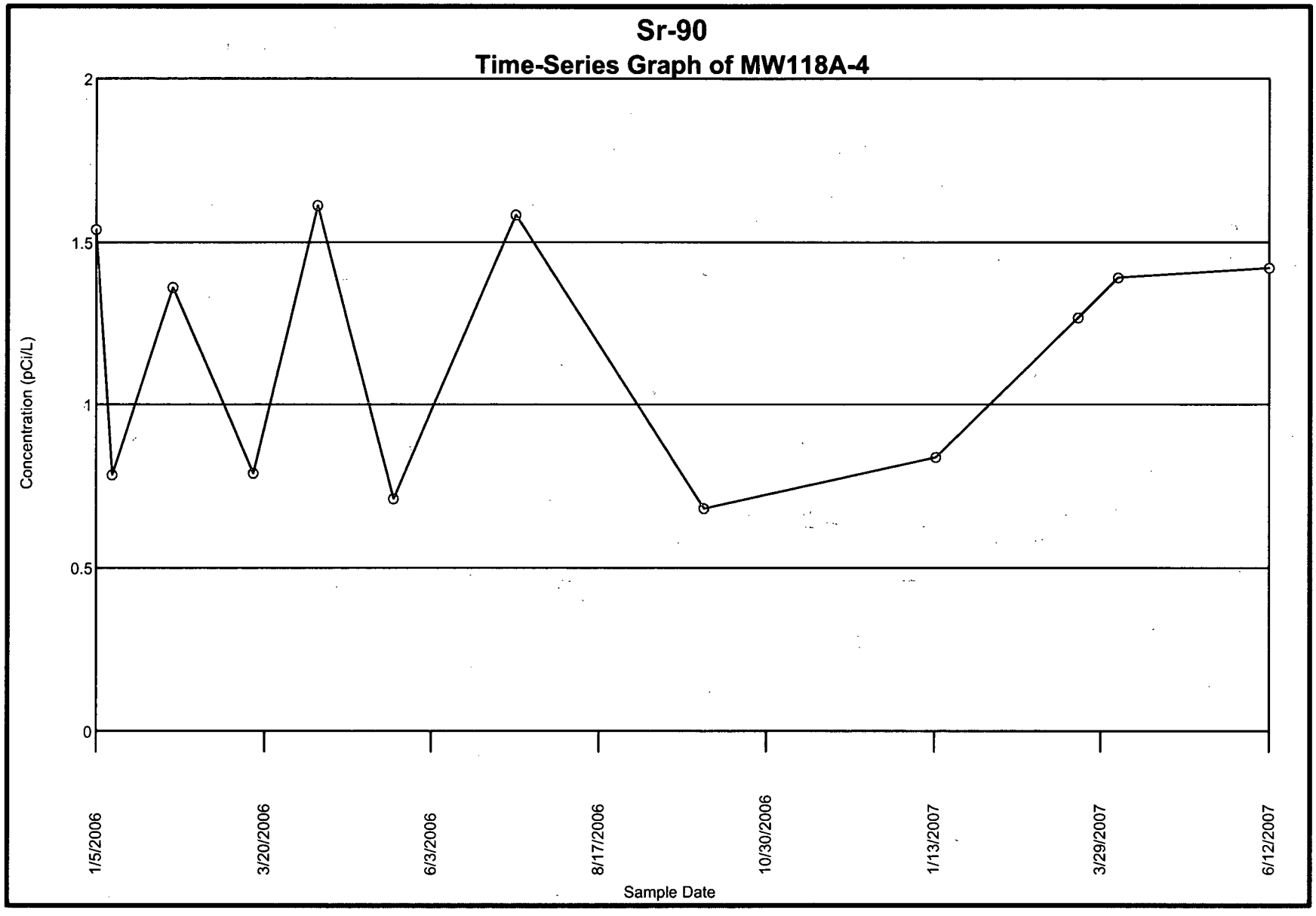
35	0.115
36	0.115
37	0.1205
38	0.12175
39	0.138857
40	0.163333
41	0.165
42	0.169143
43	0.197
44	0.23625
45	0.24775
46	0.314667
47	0.3305
48	0.35
49	0.400333
50	0.471
51	0.501
52	0.6
53	0.657
54	0.871
55	1.312

Sen's Estimator (Median Q) is 0.026875

Time Period	Observations
1/10/2006	1
2/8/2006	1
3/13/2006	1
4/18/2006	1
5/13/2006	1
7/11/2006	1
10/3/2006	1
1/14/2007	1
3/21/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.0643333 = Q(17)
Upper limit is 0.138857 = Q(39)
-0.0643333 < 0 < 0.138857 indicating no trend in data.


Sr-90
Time-Series Graph of MW118A-4
Concentration (pCi/L)
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW118A-4

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.787 U (1/12/2006 a)	ND<1.54 U (1/5/2006 ~)	(0.787 - 1.54)/(2 - 1)	-0.753
ND<1.36 U (2/8/2006 a)	ND<1.54 U (1/5/2006 ~)	(1.36 - 1.54)/(3 - 1)	-0.09
ND<0.791 U (3/16/2006 a)	ND<1.54 U (1/5/2006 ~)	(0.791 - 1.54)/(4 - 1)	-0.249667
ND<1.61 U (4/13/2006 a)	ND<1.54 U (1/5/2006 ~)	(1.61 - 1.54)/(5 - 1)	0.0175
ND<0.714 OK (5/17/2006 a)	ND<1.54 U (1/5/2006 ~)	(0.714 - 1.54)/(6 - 1)	-0.1652
ND<1.58 OK (7/11/2006 a)	ND<1.54 U (1/5/2006 ~)	(1.58 - 1.54)/(7 - 1)	0.00666667
ND<0.682 OK (10/3/2006 a)	ND<1.54 U (1/5/2006 ~)	(0.682 - 1.54)/(8 - 1)	-0.122571
ND<0.8405 OK (1/14/2007 ~)	ND<1.54 U (1/5/2006 ~)	(0.8405 - 1.54)/(9 - 1)	-0.0874375
ND<1.27 OK (3/19/2007 a)	ND<1.54 U (1/5/2006 ~)	(1.27 - 1.54)/(10 - 1)	-0.03
ND<1.39 OK (4/6/2007 a)	ND<1.54 U (1/5/2006 ~)	(1.39 - 1.54)/(11 - 1)	-0.015
ND<1.42 OK (6/12/2007 a)	ND<1.54 U (1/5/2006 ~)	(1.42 - 1.54)/(12 - 1)	-0.0109091
ND<1.36 U (2/8/2006 a)	ND<0.787 U (1/12/2006 a)	(1.36 - 0.787)/(3 - 2)	0.573
ND<0.791 U (3/16/2006 a)	ND<0.787 U (1/12/2006 a)	(0.791 - 0.787)/(4 - 2)	0.002
ND<1.61 U (4/13/2006 a)	ND<0.787 U (1/12/2006 a)	(1.61 - 0.787)/(5 - 2)	0.274333
ND<0.714 OK (5/17/2006 a)	ND<0.787 U (1/12/2006 a)	(0.714 - 0.787)/(6 - 2)	-0.01825
ND<1.58 OK (7/11/2006 a)	ND<0.787 U (1/12/2006 a)	(1.58 - 0.787)/(7 - 2)	0.1586
ND<0.682 OK (10/3/2006 a)	ND<0.787 U (1/12/2006 a)	(0.682 - 0.787)/(8 - 2)	-0.0175
ND<0.8405 OK (1/14/2007 ~)	ND<0.787 U (1/12/2006 a)	(0.8405 - 0.787)/(9 - 2)	0.00764286
ND<1.27 OK (3/19/2007 a)	ND<0.787 U (1/12/2006 a)	(1.27 - 0.787)/(10 - 2)	0.060375
ND<1.39 OK (4/6/2007 a)	ND<0.787 U (1/12/2006 a)	(1.39 - 0.787)/(11 - 2)	0.067
ND<1.42 OK (6/12/2007 a)	ND<0.787 U (1/12/2006 a)	(1.42 - 0.787)/(12 - 2)	0.0633
ND<0.791 U (3/16/2006 a)	ND<1.36 U (2/8/2006 a)	(0.791 - 1.36)/(4 - 3)	-0.569
ND<1.61 U (4/13/2006 a)	ND<1.36 U (2/8/2006 a)	(1.61 - 1.36)/(5 - 3)	0.125
ND<0.714 OK (5/17/2006 a)	ND<1.36 U (2/8/2006 a)	(0.714 - 1.36)/(6 - 3)	-0.215333
ND<1.58 OK (7/11/2006 a)	ND<1.36 U (2/8/2006 a)	(1.58 - 1.36)/(7 - 3)	0.055
ND<0.682 OK (10/3/2006 a)	ND<1.36 U (2/8/2006 a)	(0.682 - 1.36)/(8 - 3)	-0.1356
ND<0.8405 OK (1/14/2007 ~)	ND<1.36 U (2/8/2006 a)	(0.8405 - 1.36)/(9 - 3)	-0.0865833
ND<1.27 OK (3/19/2007 a)	ND<1.36 U (2/8/2006 a)	(1.27 - 1.36)/(10 - 3)	-0.0128571
ND<1.39 OK (4/6/2007 a)	ND<1.36 U (2/8/2006 a)	(1.39 - 1.36)/(11 - 3)	0.00375
ND<1.42 OK (6/12/2007 a)	ND<1.36 U (2/8/2006 a)	(1.42 - 1.36)/(12 - 3)	0.00666667
ND<1.61 U (4/13/2006 a)	ND<0.791 U (3/16/2006 a)	(1.61 - 0.791)/(5 - 4)	0.819
ND<0.714 OK (5/17/2006 a)	ND<0.791 U (3/16/2006 a)	(0.714 - 0.791)/(6 - 4)	-0.0385
ND<1.58 OK (7/11/2006 a)	ND<0.791 U (3/16/2006 a)	(1.58 - 0.791)/(7 - 4)	0.263
ND<0.682 OK (10/3/2006 a)	ND<0.791 U (3/16/2006 a)	(0.682 - 0.791)/(8 - 4)	-0.02725
ND<0.8405 OK (1/14/2007 ~)	ND<0.791 U (3/16/2006 a)	(0.8405 - 0.791)/(9 - 4)	0.0099
ND<1.27 OK (3/19/2007 a)	ND<0.791 U (3/16/2006 a)	(1.27 - 0.791)/(10 - 4)	0.0798333
ND<1.39 OK (4/6/2007 a)	ND<0.791 U (3/16/2006 a)	(1.39 - 0.791)/(11 - 4)	0.0855714
ND<1.42 OK (6/12/2007 a)	ND<0.791 U (3/16/2006 a)	(1.42 - 0.791)/(12 - 4)	0.078625
ND<0.714 OK (5/17/2006 a)	ND<1.61 U (4/13/2006 a)	(0.714 - 1.61)/(6 - 5)	-0.896
ND<1.58 OK (7/11/2006 a)	ND<1.61 U (4/13/2006 a)	(1.58 - 1.61)/(7 - 5)	-0.015
ND<0.682 OK (10/3/2006 a)	ND<1.61 U (4/13/2006 a)	(0.682 - 1.61)/(8 - 5)	-0.309333
ND<0.8405 OK (1/14/2007 ~)	ND<1.61 U (4/13/2006 a)	(0.8405 - 1.61)/(9 - 5)	-0.192375
ND<1.27 OK (3/19/2007 a)	ND<1.61 U (4/13/2006 a)	(1.27 - 1.61)/(10 - 5)	-0.068

ND<1.39 OK (4/6/2007 a)	ND<1.61 U (4/13/2006 a)	(1.39 - 1.61)/(11 - 5)	-0.0366667
ND<1.42 OK (6/12/2007 a)	ND<1.61 U (4/13/2006 a)	(1.42 - 1.61)/(12 - 5)	-0.0271429
ND<1.58 OK (7/11/2006 a)	ND<0.714 OK (5/17/2006 a)	(1.58 - 0.714)/(7 - 6)	0.866
ND<0.682 OK (10/3/2006 a)	ND<0.714 OK (5/17/2006 a)	(0.682 - 0.714)/(8 - 6)	-0.016
ND<0.8405 OK (1/14/2007 ~)	ND<0.714 OK (5/17/2006 a)	(0.8405 - 0.714)/(9 - 6)	0.0421667
ND<1.27 OK (3/19/2007 a)	ND<0.714 OK (5/17/2006 a)	(1.27 - 0.714)/(10 - 6)	0.139
ND<1.39 OK (4/6/2007 a)	ND<0.714 OK (5/17/2006 a)	(1.39 - 0.714)/(11 - 6)	0.1352
ND<1.42 OK (6/12/2007 a)	ND<0.714 OK (5/17/2006 a)	(1.42 - 0.714)/(12 - 6)	0.117667
ND<0.682 OK (10/3/2006 a)	ND<1.58 OK (7/11/2006 a)	(0.682 - 1.58)/(8 - 7)	-0.898
ND<0.8405 OK (1/14/2007 ~)	ND<1.58 OK (7/11/2006 a)	(0.8405 - 1.58)/(9 - 7)	-0.36975
ND<1.27 OK (3/19/2007 a)	ND<1.58 OK (7/11/2006 a)	(1.27 - 1.58)/(10 - 7)	-0.103333
ND<1.39 OK (4/6/2007 a)	ND<1.58 OK (7/11/2006 a)	(1.39 - 1.58)/(11 - 7)	-0.0475
ND<1.42 OK (6/12/2007 a)	ND<1.58 OK (7/11/2006 a)	(1.42 - 1.58)/(12 - 7)	-0.032
ND<0.8405 OK (1/14/2007 ~)	ND<0.682 OK (10/3/2006 a)	(0.8405 - 0.682)/(9 - 8)	0.1585
ND<1.27 OK (3/19/2007 a)	ND<0.682 OK (10/3/2006 a)	(1.27 - 0.682)/(10 - 8)	0.294
ND<1.39 OK (4/6/2007 a)	ND<0.682 OK (10/3/2006 a)	(1.39 - 0.682)/(11 - 8)	0.236
ND<1.42 OK (6/12/2007 a)	ND<0.682 OK (10/3/2006 a)	(1.42 - 0.682)/(12 - 8)	0.1845
ND<1.27 OK (3/19/2007 a)	ND<0.8405 OK (1/14/2007 ~)	(1.27 - 0.8405)/(10 - 9)	0.4295
ND<1.39 OK (4/6/2007 a)	ND<0.8405 OK (1/14/2007 ~)	(1.39 - 0.8405)/(11 - 9)	0.27475
ND<1.42 OK (6/12/2007 a)	ND<0.8405 OK (1/14/2007 ~)	(1.42 - 0.8405)/(12 - 9)	0.193167
ND<1.39 OK (4/6/2007 a)	ND<1.27 OK (3/19/2007 a)	(1.39 - 1.27)/(11 - 10)	0.12
ND<1.42 OK (6/12/2007 a)	ND<1.27 OK (3/19/2007 a)	(1.42 - 1.27)/(12 - 10)	0.075
ND<1.42 OK (6/12/2007 a)	ND<1.39 OK (4/6/2007 a)	(1.42 - 1.39)/(12 - 11)	0.03

Number of Q values = 66

Ordered Q Values

n	Q
1	-0.898
2	-0.896
3	-0.753
4	-0.569
5	-0.36975
6	-0.309333
7	-0.249667
8	-0.215333
9	-0.192375
10	-0.1652
11	-0.1356
12	-0.122571
13	-0.103333
14	-0.09
15	-0.0874375
16	-0.0865833
17	-0.068
18	-0.0475
19	-0.0385
20	-0.0366667
21	-0.032
22	-0.03

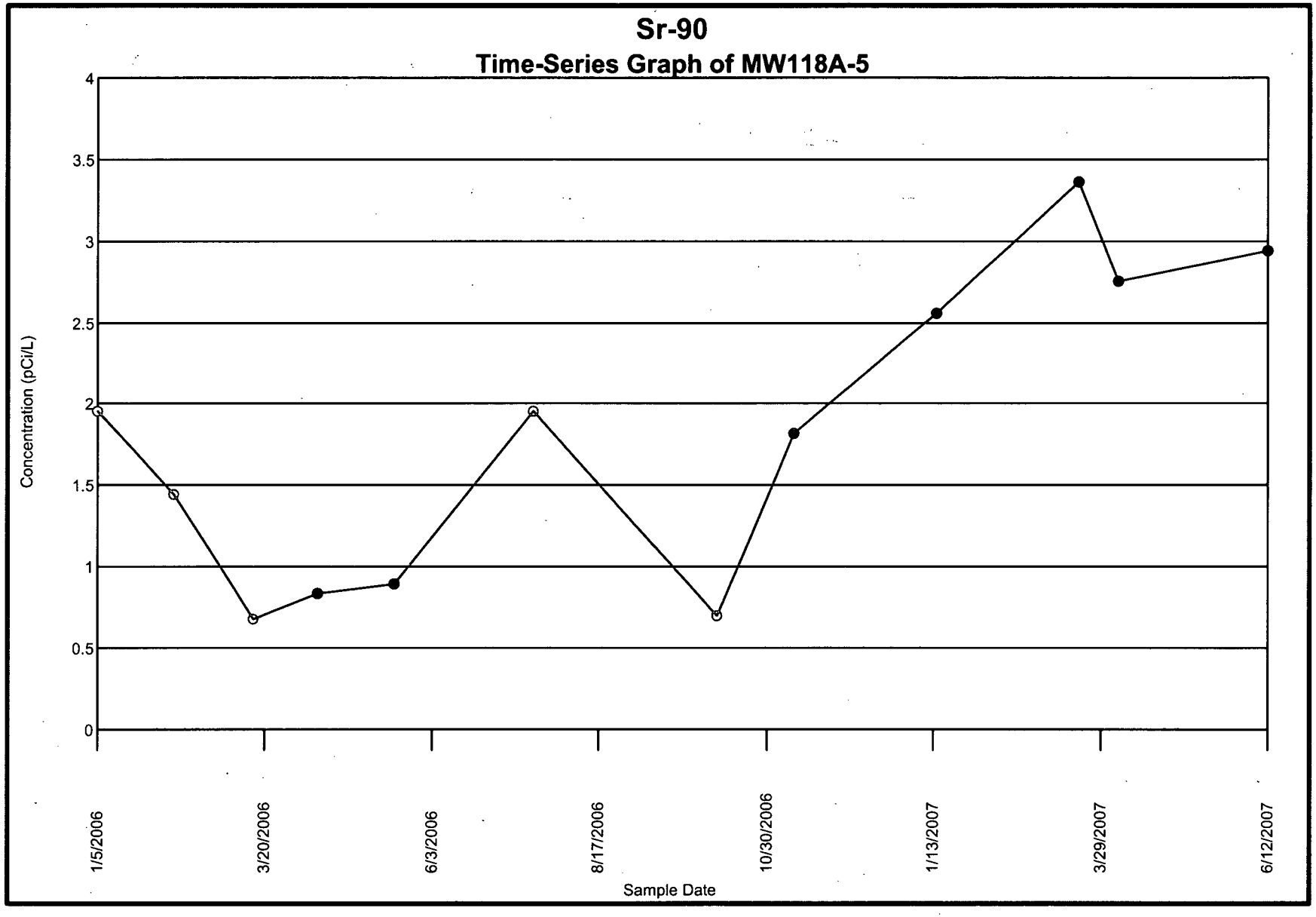
23	-0.02725
24	-0.0271429
25	-0.01825
26	-0.0175
27	-0.016
28	-0.015
29	-0.015
30	-0.0128571
31	-0.0109091
32	0.002
33	0.00375
34	0.00666667
35	0.00666667
36	0.00764286
37	0.0099
38	0.0175
39	0.03
40	0.0421667
41	0.055
42	0.060375
43	0.0633
44	0.067
45	0.075
46	0.078625
47	0.0798333
48	0.0855714
49	0.117667
50	0.12
51	0.125
52	0.1352
53	0.139
54	0.1585
55	0.1586
56	0.1845
57	0.193167
58	0.236
59	0.263
60	0.274333
61	0.27475
62	0.294
63	0.4295
64	0.573
65	0.819
66	0.866

Sen's Estimator (Median Q) is 0.00520833

Time Period	Observations
1/5/2006	1
1/12/2006	1
2/8/2006	1
3/16/2006	1
4/13/2006	1
5/17/2006	1
7/11/2006	1
10/3/2006	1
1/14/2007	1
3/19/2007	1

4/6/2007 1
6/12/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.032 = Q(21)
Upper limit is 0.078625 = Q(46)
-0.032 < 0 < 0.078625 indicating no trend in data.


Sr-90
Time-Series Graph of MW118A-5
Concentration (pCi/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW118A-5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.44 U (2/8/2006 a)	ND<1.96 U (1/5/2006 a)	(1.44 - 1.96)/(2 - 1)	-0.52
ND<0.679 U (3/16/2006 a)	ND<1.96 U (1/5/2006 a)	(0.679 - 1.96)/(3 - 1)	-0.6405
0.832 U (4/13/2006 a)	ND<1.96 U (1/5/2006 a)	(0.832 - 1.96)/(4 - 1)	-0.376
0.894 OK (5/17/2006 a)	ND<1.96 U (1/5/2006 a)	(0.894 - 1.96)/(5 - 1)	-0.2665
ND<1.96 OK (7/19/2006 a)	ND<1.96 U (1/5/2006 a)	(1.96 - 1.96)/(6 - 1)	0
ND<0.702 OK (10/9/2006 a)	ND<1.96 U (1/5/2006 a)	(0.702 - 1.96)/(7 - 1)	-0.209667
1.82 OK (11/12/2006 a)	ND<1.96 U (1/5/2006 a)	(1.82 - 1.96)/(8 - 1)	-0.02
2.56 OK (1/15/2007 a)	ND<1.96 U (1/5/2006 a)	(2.56 - 1.96)/(9 - 1)	0.075
3.36 OK (3/19/2007 a)	ND<1.96 U (1/5/2006 a)	(3.36 - 1.96)/(10 - 1)	0.155556
2.75 OK (4/6/2007 a)	ND<1.96 U (1/5/2006 a)	(2.75 - 1.96)/(11 - 1)	0.079
2.94 OK (6/12/2007 a)	ND<1.96 U (1/5/2006 a)	(2.94 - 1.96)/(12 - 1)	0.0890909
ND<0.679 U (3/16/2006 a)	ND<1.44 U (2/8/2006 a)	(0.679 - 1.44)/(3 - 2)	-0.761
0.832 U (4/13/2006 a)	ND<1.44 U (2/8/2006 a)	(0.832 - 1.44)/(4 - 2)	-0.304
0.894 OK (5/17/2006 a)	ND<1.44 U (2/8/2006 a)	(0.894 - 1.44)/(5 - 2)	-0.182
ND<1.96 OK (7/19/2006 a)	ND<1.44 U (2/8/2006 a)	(1.96 - 1.44)/(6 - 2)	0.13
ND<0.702 OK (10/9/2006 a)	ND<1.44 U (2/8/2006 a)	(0.702 - 1.44)/(7 - 2)	-0.1476
1.82 OK (11/12/2006 a)	ND<1.44 U (2/8/2006 a)	(1.82 - 1.44)/(8 - 2)	0.0633333
2.56 OK (1/15/2007 a)	ND<1.44 U (2/8/2006 a)	(2.56 - 1.44)/(9 - 2)	0.16
3.36 OK (3/19/2007 a)	ND<1.44 U (2/8/2006 a)	(3.36 - 1.44)/(10 - 2)	0.24
2.75 OK (4/6/2007 a)	ND<1.44 U (2/8/2006 a)	(2.75 - 1.44)/(11 - 2)	0.145556
2.94 OK (6/12/2007 a)	ND<1.44 U (2/8/2006 a)	(2.94 - 1.44)/(12 - 2)	0.15
0.832 U (4/13/2006 a)	ND<0.679 U (3/16/2006 a)	(0.832 - 0.679)/(4 - 3)	0.153
0.894 OK (5/17/2006 a)	ND<0.679 U (3/16/2006 a)	(0.894 - 0.679)/(5 - 3)	0.1075
ND<1.96 OK (7/19/2006 a)	ND<0.679 U (3/16/2006 a)	(1.96 - 0.679)/(6 - 3)	0.427
ND<0.702 OK (10/9/2006 a)	ND<0.679 U (3/16/2006 a)	(0.702 - 0.679)/(7 - 3)	0.00575
1.82 OK (11/12/2006 a)	ND<0.679 U (3/16/2006 a)	(1.82 - 0.679)/(8 - 3)	0.2282
2.56 OK (1/15/2007 a)	ND<0.679 U (3/16/2006 a)	(2.56 - 0.679)/(9 - 3)	0.3135
3.36 OK (3/19/2007 a)	ND<0.679 U (3/16/2006 a)	(3.36 - 0.679)/(10 - 3)	0.383
2.75 OK (4/6/2007 a)	ND<0.679 U (3/16/2006 a)	(2.75 - 0.679)/(11 - 3)	0.258875
2.94 OK (6/12/2007 a)	ND<0.679 U (3/16/2006 a)	(2.94 - 0.679)/(12 - 3)	0.251222
0.894 OK (5/17/2006 a)	0.832 U (4/13/2006 a)	(0.894 - 0.832)/(5 - 4)	0.062
ND<1.96 OK (7/19/2006 a)	0.832 U (4/13/2006 a)	(1.96 - 0.832)/(6 - 4)	0.564
ND<0.702 OK (10/9/2006 a)	0.832 U (4/13/2006 a)	(0.702 - 0.832)/(7 - 4)	-0.0433333
1.82 OK (11/12/2006 a)	0.832 U (4/13/2006 a)	(1.82 - 0.832)/(8 - 4)	0.247
2.56 OK (1/15/2007 a)	0.832 U (4/13/2006 a)	(2.56 - 0.832)/(9 - 4)	0.3456
3.36 OK (3/19/2007 a)	0.832 U (4/13/2006 a)	(3.36 - 0.832)/(10 - 4)	0.421333
2.75 OK (4/6/2007 a)	0.832 U (4/13/2006 a)	(2.75 - 0.832)/(11 - 4)	0.274
2.94 OK (6/12/2007 a)	0.832 U (4/13/2006 a)	(2.94 - 0.832)/(12 - 4)	0.2635
ND<1.96 OK (7/19/2006 a)	0.894 OK (5/17/2006 a)	(1.96 - 0.894)/(6 - 5)	1.066
ND<0.702 OK (10/9/2006 a)	0.894 OK (5/17/2006 a)	(0.702 - 0.894)/(7 - 5)	-0.096
1.82 OK (11/12/2006 a)	0.894 OK (5/17/2006 a)	(1.82 - 0.894)/(8 - 5)	0.308667
2.56 OK (1/15/2007 a)	0.894 OK (5/17/2006 a)	(2.56 - 0.894)/(9 - 5)	0.4165
3.36 OK (3/19/2007 a)	0.894 OK (5/17/2006 a)	(3.36 - 0.894)/(10 - 5)	0.4932

2.75 OK (4/6/2007 a)	0.894 OK (5/17/2006 a)	(2.75 - 0.894)/(11 - 5)	0.309333
2.94 OK (6/12/2007 a)	0.894 OK (5/17/2006 a)	(2.94 - 0.894)/(12 - 5)	0.292286
ND<0.702 OK (10/9/2006 a)	ND<1.96 OK (7/19/2006 a)	(0.702 - 1.96)/(7 - 6)	-1.258
1.82 OK (11/12/2006 a)	ND<1.96 OK (7/19/2006 a)	(1.82 - 1.96)/(8 - 6)	-0.07
2.56 OK (1/15/2007 a)	ND<1.96 OK (7/19/2006 a)	(2.56 - 1.96)/(9 - 6)	0.2
3.36 OK (3/19/2007 a)	ND<1.96 OK (7/19/2006 a)	(3.36 - 1.96)/(10 - 6)	0.35
2.75 OK (4/6/2007 a)	ND<1.96 OK (7/19/2006 a)	(2.75 - 1.96)/(11 - 6)	0.158
2.94 OK (6/12/2007 a)	ND<1.96 OK (7/19/2006 a)	(2.94 - 1.96)/(12 - 6)	0.163333
1.82 OK (11/12/2006 a)	ND<0.702 OK (10/9/2006 a)	(1.82 - 0.702)/(8 - 7)	1.118
2.56 OK (1/15/2007 a)	ND<0.702 OK (10/9/2006 a)	(2.56 - 0.702)/(9 - 7)	0.929
3.36 OK (3/19/2007 a)	ND<0.702 OK (10/9/2006 a)	(3.36 - 0.702)/(10 - 7)	0.886
2.75 OK (4/6/2007 a)	ND<0.702 OK (10/9/2006 a)	(2.75 - 0.702)/(11 - 7)	0.512
2.94 OK (6/12/2007 a)	ND<0.702 OK (10/9/2006 a)	(2.94 - 0.702)/(12 - 7)	0.4476
2.56 OK (1/15/2007 a)	1.82 OK (11/12/2006 a)	(2.56 - 1.82)/(9 - 8)	0.74
3.36 OK (3/19/2007 a)	1.82 OK (11/12/2006 a)	(3.36 - 1.82)/(10 - 8)	0.77
2.75 OK (4/6/2007 a)	1.82 OK (11/12/2006 a)	(2.75 - 1.82)/(11 - 8)	0.31
2.94 OK (6/12/2007 a)	1.82 OK (11/12/2006 a)	(2.94 - 1.82)/(12 - 8)	0.28
3.36 OK (3/19/2007 a)	2.56 OK (1/15/2007 a)	(3.36 - 2.56)/(10 - 9)	0.8
2.75 OK (4/6/2007 a)	2.56 OK (1/15/2007 a)	(2.75 - 2.56)/(11 - 9)	0.095
2.94 OK (6/12/2007 a)	2.56 OK (1/15/2007 a)	(2.94 - 2.56)/(12 - 9)	0.126667
2.75 OK (4/6/2007 a)	3.36 OK (3/19/2007 a)	(2.75 - 3.36)/(11 - 10)	-0.61
2.94 OK (6/12/2007 a)	3.36 OK (3/19/2007 a)	(2.94 - 3.36)/(12 - 10)	-0.21
2.94 OK (6/12/2007 a)	2.75 OK (4/6/2007 a)	(2.94 - 2.75)/(12 - 11)	0.19

Number of Q values = 66

Ordered Q Values

n	Q
1	-1.258
2	-0.761
3	-0.6405
4	-0.61
5	-0.52
6	-0.376
7	-0.304
8	-0.2665
9	-0.21
10	-0.209667
11	-0.182
12	-0.1476
13	-0.096
14	-0.07
15	-0.0433333
16	-0.02
17	0
18	0.00575
19	0.062
20	0.0633333
21	0.075
22	0.079

23	0.0890909
24	0.095
25	0.1075
26	0.126667
27	0.13
28	0.145556
29	0.15
30	0.153
31	0.155556
32	0.158
33	0.16
34	0.163333
35	0.19
36	0.2
37	0.2282
38	0.24
39	0.247
40	0.251222
41	0.258875
42	0.2635
43	0.274
44	0.28
45	0.292286
46	0.308667
47	0.309333
48	0.31
49	0.3135
50	0.3456
51	0.35
52	0.383
53	0.4165
54	0.421333
55	0.427
56	0.4476
57	0.4932
58	0.512
59	0.564
60	0.74
61	0.77
62	0.8
63	0.886
64	0.929
65	1.066
66	1.118

Sen's Estimator (Median Q) is 0.161667

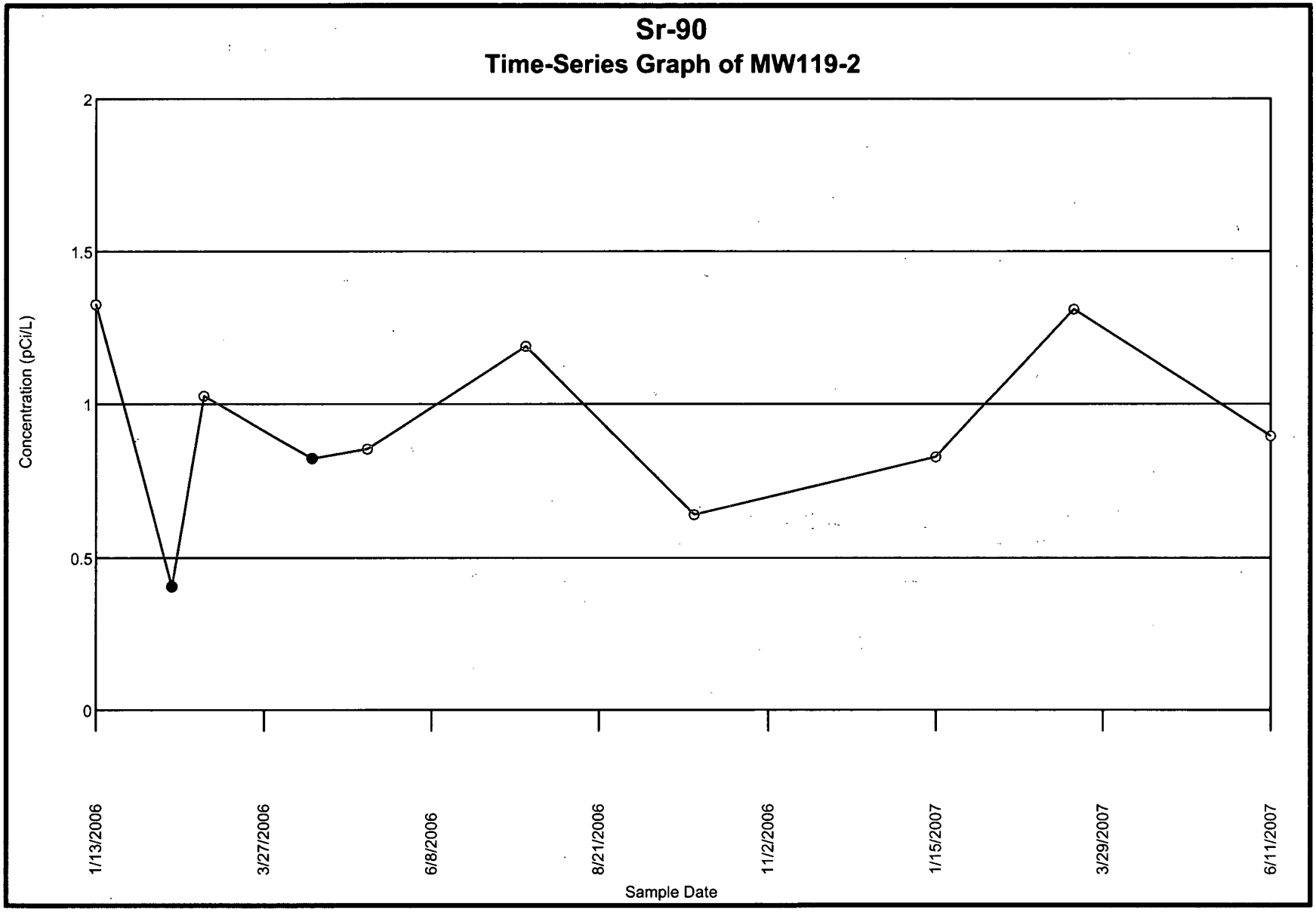
Tied Group	Value	Members
1	1.96	2

Time Period	Observations
1/5/2006	1
2/8/2006	1
3/16/2006	1
4/13/2006	1
5/17/2006	1
7/19/2006	1
10/9/2006	1

11/12/2006	1
1/15/2007	1
3/19/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 211.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.9306
M1 = (66 - 23.9306)/2.0 = 21.0347
M2 = (66 + 23.9306)/2.0 + 1 = 45.9653
Lower limit is 0.075 = Q(21)
Upper limit is 0.308667 = Q(46)
0.075 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW119-2
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/8/2006
8/21/2006
11/2/2006
1/15/2007
3/29/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW119-2

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
0.403 U (2/15/2006 a)	ND<1.33 U (1/13/2006 a)	(0.403 - 1.33)/(2 - 1)	-0.927
ND<1.03 U (3/1/2006 a)	ND<1.33 U (1/13/2006 a)	(1.03 - 1.33)/(3 - 1)	-0.15
0.826 OK (4/17/2006 a)	ND<1.33 U (1/13/2006 a)	(0.826 - 1.33)/(4 - 1)	-0.168
ND<0.856 OK (5/12/2006 ~)	ND<1.33 U (1/13/2006 a)	(0.856 - 1.33)/(5 - 1)	-0.1185
ND<1.19 OK (7/20/2006 a)	ND<1.33 U (1/13/2006 a)	(1.19 - 1.33)/(6 - 1)	-0.028
ND<0.64 OK (10/2/2006 a)	ND<1.33 U (1/13/2006 a)	(0.64 - 1.33)/(7 - 1)	-0.115
ND<0.827 OK (1/15/2007 a)	ND<1.33 U (1/13/2006 a)	(0.827 - 1.33)/(8 - 1)	-0.0718571
ND<1.31 OK (3/17/2007 a)	ND<1.33 U (1/13/2006 a)	(1.31 - 1.33)/(9 - 1)	-0.0025
ND<0.899 OK (6/11/2007 a)	ND<1.33 U (1/13/2006 a)	(0.899 - 1.33)/(10 - 1)	-0.0478889
ND<1.03 U (3/1/2006 a)	0.403 U (2/15/2006 a)	(1.03 - 0.403)/(3 - 2)	0.627
0.826 OK (4/17/2006 a)	0.403 U (2/15/2006 a)	(0.826 - 0.403)/(4 - 2)	0.2115
ND<0.856 OK (5/12/2006 ~)	0.403 U (2/15/2006 a)	(0.856 - 0.403)/(5 - 2)	0.151
ND<1.19 OK (7/20/2006 a)	0.403 U (2/15/2006 a)	(1.19 - 0.403)/(6 - 2)	0.19675
ND<0.64 OK (10/2/2006 a)	0.403 U (2/15/2006 a)	(0.64 - 0.403)/(7 - 2)	0.0474
ND<0.827 OK (1/15/2007 a)	0.403 U (2/15/2006 a)	(0.827 - 0.403)/(8 - 2)	0.0706667
ND<1.31 OK (3/17/2007 a)	0.403 U (2/15/2006 a)	(1.31 - 0.403)/(9 - 2)	0.129571
ND<0.899 OK (6/11/2007 a)	0.403 U (2/15/2006 a)	(0.899 - 0.403)/(10 - 2)	0.062
0.826 OK (4/17/2006 a)	ND<1.03 U (3/1/2006 a)	(0.826 - 1.03)/(4 - 3)	-0.204
ND<0.856 OK (5/12/2006 ~)	ND<1.03 U (3/1/2006 a)	(0.856 - 1.03)/(5 - 3)	-0.087
ND<1.19 OK (7/20/2006 a)	ND<1.03 U (3/1/2006 a)	(1.19 - 1.03)/(6 - 3)	0.0533333
ND<0.64 OK (10/2/2006 a)	ND<1.03 U (3/1/2006 a)	(0.64 - 1.03)/(7 - 3)	-0.0975
ND<0.827 OK (1/15/2007 a)	ND<1.03 U (3/1/2006 a)	(0.827 - 1.03)/(8 - 3)	-0.0406
ND<1.31 OK (3/17/2007 a)	ND<1.03 U (3/1/2006 a)	(1.31 - 1.03)/(9 - 3)	0.0466667
ND<0.899 OK (6/11/2007 a)	ND<1.03 U (3/1/2006 a)	(0.899 - 1.03)/(10 - 3)	-0.0187143
ND<0.856 OK (5/12/2006 ~)	0.826 OK (4/17/2006 a)	(0.856 - 0.826)/(5 - 4)	0.03
ND<1.19 OK (7/20/2006 a)	0.826 OK (4/17/2006 a)	(1.19 - 0.826)/(6 - 4)	0.182
ND<0.64 OK (10/2/2006 a)	0.826 OK (4/17/2006 a)	(0.64 - 0.826)/(7 - 4)	-0.062
ND<0.827 OK (1/15/2007 a)	0.826 OK (4/17/2006 a)	(0.827 - 0.826)/(8 - 4)	0.00025

ND<1.31 OK (3/17/2007 a)	0.826 OK (4/17/2006 a)	(1.31 - 0.826)/(9 - 4)	0.0968
ND<0.899 OK (6/11/2007 a)	0.826 OK (4/17/2006 a)	(0.899 - 0.826)/(10 - 4)	0.0121667
ND<1.19 OK (7/20/2006 a)	ND<0.856 OK (5/12/2006 ~)	(1.19 - 0.856)/(6 - 5)	0.334
ND<0.64 OK (10/2/2006 a)	ND<0.856 OK (5/12/2006 ~)	(0.64 - 0.856)/(7 - 5)	-0.108
ND<0.827 OK (1/15/2007 a)	ND<0.856 OK (5/12/2006 ~)	(0.827 - 0.856)/(8 - 5)	-0.00966667
ND<1.31 OK (3/17/2007 a)	ND<0.856 OK (5/12/2006 ~)	(1.31 - 0.856)/(9 - 5)	0.1135
ND<0.899 OK (6/11/2007 a)	ND<0.856 OK (5/12/2006 ~)	(0.899 - 0.856)/(10 - 5)	0.0086
ND<0.64 OK (10/2/2006 a)	ND<1.19 OK (7/20/2006 a)	(0.64 - 1.19)/(7 - 6)	-0.55
ND<0.827 OK (1/15/2007 a)	ND<1.19 OK (7/20/2006 a)	(0.827 - 1.19)/(8 - 6)	-0.1815
ND<1.31 OK (3/17/2007 a)	ND<1.19 OK (7/20/2006 a)	(1.31 - 1.19)/(9 - 6)	0.04
ND<0.899 OK (6/11/2007 a)	ND<1.19 OK (7/20/2006 a)	(0.899 - 1.19)/(10 - 6)	-0.07275
ND<0.827 OK (1/15/2007 a)	ND<0.64 OK (10/2/2006 a)	(0.827 - 0.64)/(8 - 7)	0.187
ND<1.31 OK (3/17/2007 a)	ND<0.64 OK (10/2/2006 a)	(1.31 - 0.64)/(9 - 7)	0.335
ND<0.899 OK (6/11/2007 a)	ND<0.64 OK (10/2/2006 a)	(0.899 - 0.64)/(10 - 7)	0.0863333
ND<1.31 OK (3/17/2007 a)	ND<0.827 OK (1/15/2007 a)	(1.31 - 0.827)/(9 - 8)	0.483
ND<0.899 OK (6/11/2007 a)	ND<0.827 OK (1/15/2007 a)	(0.899 - 0.827)/(10 - 8)	0.036
ND<0.899 OK (6/11/2007 a)	ND<1.31 OK (3/17/2007 a)	(0.899 - 1.31)/(10 - 9)	-0.411

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.927
2	-0.55
3	-0.411
4	-0.204
5	-0.1815
6	-0.168
7	-0.15
8	-0.1185
9	-0.115
10	-0.108
11	-0.0975
12	-0.087
13	-0.07275

14	-0.0718571
15	-0.062
16	-0.0478889
17	-0.0406
18	-0.028
19	-0.0187143
20	-0.00966667
21	-0.0025
22	0.00025
23	0.0086
24	0.0121667
25	0.03
26	0.036
27	0.04
28	0.0466667
29	0.0474
30	0.0533333
31	0.062
32	0.0706667
33	0.0863333
34	0.0968
35	0.1135
36	0.129571
37	0.151
38	0.182
39	0.187
40	0.19675
41	0.2115
42	0.334
43	0.335
44	0.483
45	0.627

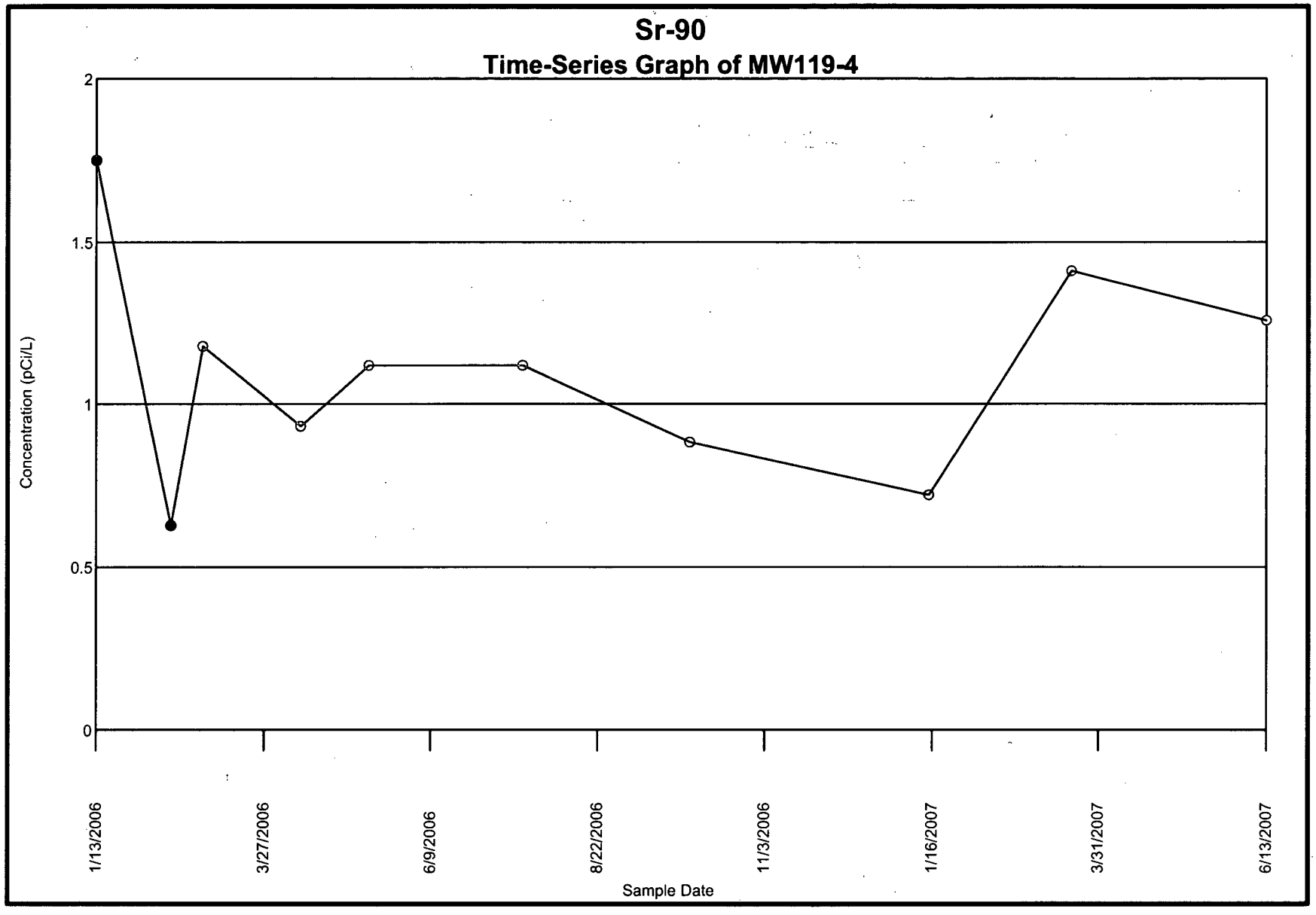
Sen's Estimator (Median Q) is 0.0086

Time Period	Observations
1/13/2006	1
2/15/2006	1
3/1/2006	1
4/17/2006	1
5/12/2006	1
7/20/2006	1

10/2/2006	1
1/15/2007	1
3/17/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.07275 = Q(13)
Upper limit is 0.0863333 = Q(33)
-0.07275 < 0 < 0.0863333 indicating no trend in data.


Sr-90
Time-Series Graph of MW119-4
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/9/2006
8/22/2006
11/3/2006
1/16/2007
3/31/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW119-4

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
0.63 U (2/15/2006 a)	1.75 OK (1/13/2006 a)	(0.63 - 1.75)/(2 - 1)	-1.12
ND<1.18 U (3/1/2006 a)	1.75 OK (1/13/2006 a)	(1.18 - 1.75)/(3 - 1)	-0.285
ND<0.933 U (4/13/2006 a)	1.75 OK (1/13/2006 a)	(0.933 - 1.75)/(4 - 1)	-0.272333
ND<1.12 OK (5/13/2006 a)	1.75 OK (1/13/2006 a)	(1.12 - 1.75)/(5 - 1)	-0.1575
ND<1.12 OK (7/20/2006 a)	1.75 OK (1/13/2006 a)	(1.12 - 1.75)/(6 - 1)	-0.126
ND<0.886 OK (10/2/2006 a)	1.75 OK (1/13/2006 a)	(0.886 - 1.75)/(7 - 1)	-0.144
ND<0.721 OK (1/15/2007 a)	1.75 OK (1/13/2006 a)	(0.721 - 1.75)/(8 - 1)	-0.147
ND<1.41 OK (3/19/2007 a)	1.75 OK (1/13/2006 a)	(1.41 - 1.75)/(9 - 1)	-0.0425
ND<1.26 OK (6/13/2007 a)	1.75 OK (1/13/2006 a)	(1.26 - 1.75)/(10 - 1)	-0.0544444
ND<1.18 U (3/1/2006 a)	0.63 U (2/15/2006 a)	(1.18 - 0.63)/(3 - 2)	0.55
ND<0.933 U (4/13/2006 a)	0.63 U (2/15/2006 a)	(0.933 - 0.63)/(4 - 2)	0.1515
ND<1.12 OK (5/13/2006 a)	0.63 U (2/15/2006 a)	(1.12 - 0.63)/(5 - 2)	0.163333
ND<1.12 OK (7/20/2006 a)	0.63 U (2/15/2006 a)	(1.12 - 0.63)/(6 - 2)	0.1225
ND<0.886 OK (10/2/2006 a)	0.63 U (2/15/2006 a)	(0.886 - 0.63)/(7 - 2)	0.0512
ND<0.721 OK (1/15/2007 a)	0.63 U (2/15/2006 a)	(0.721 - 0.63)/(8 - 2)	0.0151667
ND<1.41 OK (3/19/2007 a)	0.63 U (2/15/2006 a)	(1.41 - 0.63)/(9 - 2)	0.111429
ND<1.26 OK (6/13/2007 a)	0.63 U (2/15/2006 a)	(1.26 - 0.63)/(10 - 2)	0.07875
ND<0.933 U (4/13/2006 a)	ND<1.18 U (3/1/2006 a)	(0.933 - 1.18)/(4 - 3)	-0.247
ND<1.12 OK (5/13/2006 a)	ND<1.18 U (3/1/2006 a)	(1.12 - 1.18)/(5 - 3)	-0.03
ND<1.12 OK (7/20/2006 a)	ND<1.18 U (3/1/2006 a)	(1.12 - 1.18)/(6 - 3)	-0.02
ND<0.886 OK (10/2/2006 a)	ND<1.18 U (3/1/2006 a)	(0.886 - 1.18)/(7 - 3)	-0.0735
ND<0.721 OK (1/15/2007 a)	ND<1.18 U (3/1/2006 a)	(0.721 - 1.18)/(8 - 3)	-0.0918
ND<1.41 OK (3/19/2007 a)	ND<1.18 U (3/1/2006 a)	(1.41 - 1.18)/(9 - 3)	0.0383333
ND<1.26 OK (6/13/2007 a)	ND<1.18 U (3/1/2006 a)	(1.26 - 1.18)/(10 - 3)	0.0114286
ND<1.12 OK (5/13/2006 a)	ND<0.933 U (4/13/2006 a)	(1.12 - 0.933)/(5 - 4)	0.187
ND<1.12 OK (7/20/2006 a)	ND<0.933 U (4/13/2006 a)	(1.12 - 0.933)/(6 - 4)	0.0935
ND<0.886 OK (10/2/2006 a)	ND<0.933 U (4/13/2006 a)	(0.886 - 0.933)/(7 - 4)	-0.0156667
ND<0.721 OK (1/15/2007 a)	ND<0.933 U (4/13/2006 a)	(0.721 - 0.933)/(8 - 4)	-0.053
ND<1.41 OK (3/19/2007 a)	ND<0.933 U (4/13/2006 a)	(1.41 - 0.933)/(9 - 4)	0.0954
ND<1.26 OK (6/13/2007 a)	ND<0.933 U (4/13/2006 a)	(1.26 - 0.933)/(10 - 4)	0.0545
ND<1.12 OK (7/20/2006 a)	ND<1.12 OK (5/13/2006 a)	(1.12 - 1.12)/(6 - 5)	0
ND<0.886 OK (10/2/2006 a)	ND<1.12 OK (5/13/2006 a)	(0.886 - 1.12)/(7 - 5)	-0.117
ND<0.721 OK (1/15/2007 a)	ND<1.12 OK (5/13/2006 a)	(0.721 - 1.12)/(8 - 5)	-0.133
ND<1.41 OK (3/19/2007 a)	ND<1.12 OK (5/13/2006 a)	(1.41 - 1.12)/(9 - 5)	0.0725
ND<1.26 OK (6/13/2007 a)	ND<1.12 OK (5/13/2006 a)	(1.26 - 1.12)/(10 - 5)	0.028
ND<0.886 OK (10/2/2006 a)	ND<1.12 OK (7/20/2006 a)	(0.886 - 1.12)/(7 - 6)	-0.234
ND<0.721 OK (1/15/2007 a)	ND<1.12 OK (7/20/2006 a)	(0.721 - 1.12)/(8 - 6)	-0.1995
ND<1.41 OK (3/19/2007 a)	ND<1.12 OK (7/20/2006 a)	(1.41 - 1.12)/(9 - 6)	0.0966667
ND<1.26 OK (6/13/2007 a)	ND<1.12 OK (7/20/2006 a)	(1.26 - 1.12)/(10 - 6)	0.035
ND<0.721 OK (1/15/2007 a)	ND<0.886 OK (10/2/2006 a)	(0.721 - 0.886)/(8 - 7)	-0.165
ND<1.41 OK (3/19/2007 a)	ND<0.886 OK (10/2/2006 a)	(1.41 - 0.886)/(9 - 7)	0.262

ND<1.26 OK (6/13/2007 a)	ND<0.886 OK (10/2/2006 a)	(1.26 - 0.886)/(10 - 7)	0.124667
ND<1.41 OK (3/19/2007 a)	ND<0.721 OK (1/15/2007 a)	(1.41 - 0.721)/(9 - 8)	0.689
ND<1.26 OK (6/13/2007 a)	ND<0.721 OK (1/15/2007 a)	(1.26 - 0.721)/(10 - 8)	0.2695
ND<1.26 OK (6/13/2007 a)	ND<1.41 OK (3/19/2007 a)	(1.26 - 1.41)/(10 - 9)	-0.15

Number of Q values = 45

Ordered Q Values

n	Q
1	-1.12
2	-0.285
3	-0.272333
4	-0.247
5	-0.234
6	-0.1995
7	-0.165
8	-0.1575
9	-0.15
10	-0.147
11	-0.144
12	-0.133
13	-0.126
14	-0.117
15	-0.0918
16	-0.0735
17	-0.0544444
18	-0.053
19	-0.0425
20	-0.03
21	-0.02
22	-0.0156667
23	0
24	0.0114286
25	0.0151667
26	0.028
27	0.035
28	0.0383333
29	0.0512
30	0.0545
31	0.0725
32	0.07875
33	0.0935
34	0.0954
35	0.0966667
36	0.111429
37	0.1225
38	0.124667
39	0.1515
40	0.163333
41	0.187
42	0.262
43	0.2695
44	0.55
45	0.689

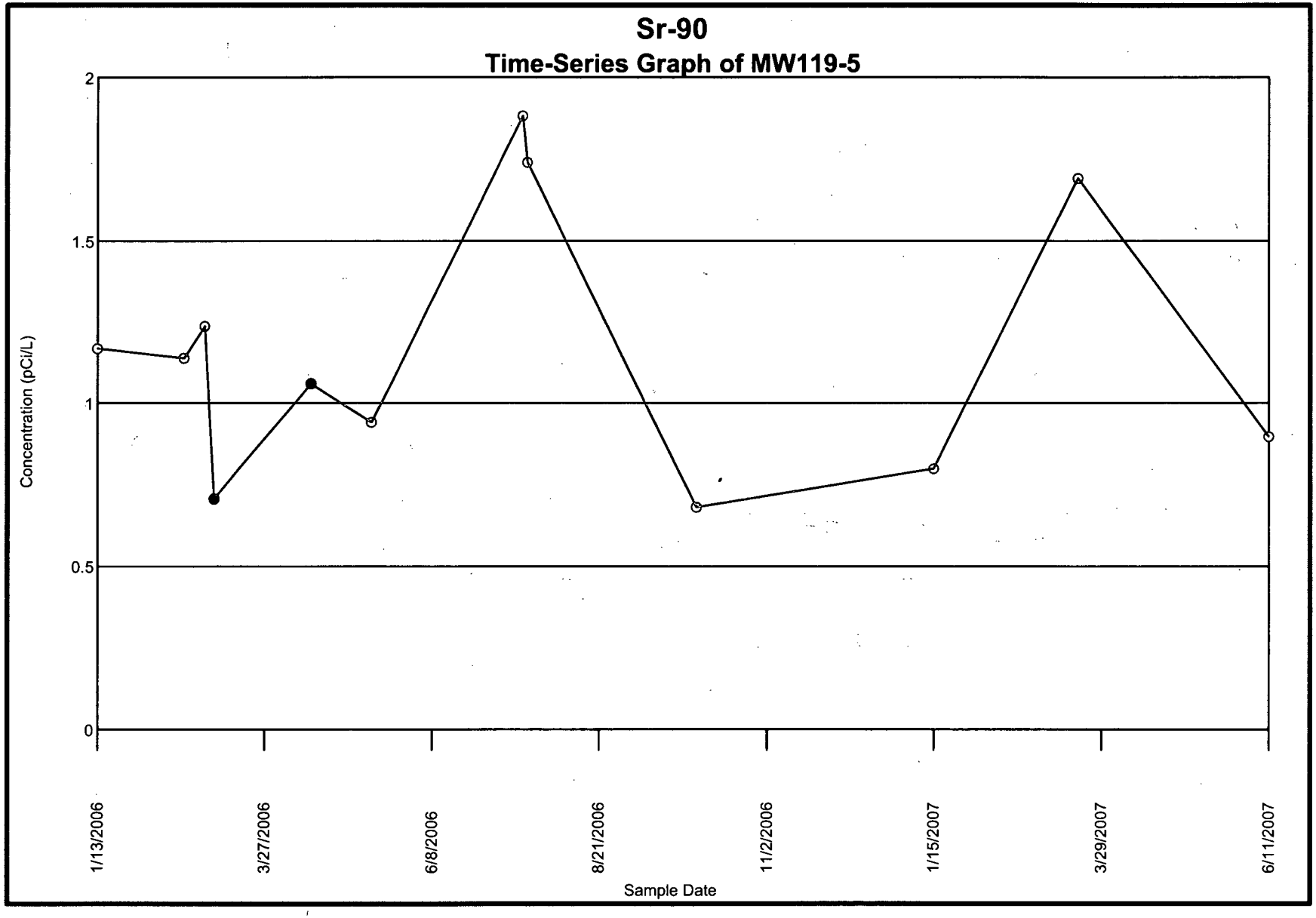
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	1.12	2

Time Period	Observations
1/13/2006	1
2/15/2006	1
3/1/2006	1
4/13/2006	1
5/13/2006	1
7/20/2006	1
10/2/2006	1
1/15/2007	1
3/19/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.126 = Q(13)
Upper limit is 0.0935 = Q(33)
-0.126 < 0 < 0.0935 indicating no trend in data.


Sr-90
Time-Series Graph of MW119-5
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/8/2006
8/21/2006
11/2/2006
1/15/2007
3/29/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW119-5
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.14 U (2/20/2006 a)	ND<1.17 U (1/13/2006 a)	(1.14 - 1.17)/(2 - 1)	-0.03
ND<1.24 U (3/1/2006 a)	ND<1.17 U (1/13/2006 a)	(1.24 - 1.17)/(3 - 1)	0.035
0.708 U (3/5/2006 a)	ND<1.17 U (1/13/2006 a)	(0.708 - 1.17)/(4 - 1)	-0.154
1.06 OK (4/17/2006 a)	ND<1.17 U (1/13/2006 a)	(1.06 - 1.17)/(5 - 1)	-0.0275
ND<0.945 OK (5/13/2006 a)	ND<1.17 U (1/13/2006 a)	(0.945 - 1.17)/(6 - 1)	-0.045
ND<1.88 OK (7/19/2006 a)	ND<1.17 U (1/13/2006 a)	(1.88 - 1.17)/(7 - 1)	0.118333
ND<1.74 OK (7/21/2006 a)	ND<1.17 U (1/13/2006 a)	(1.74 - 1.17)/(8 - 1)	0.0814286
ND<0.683 OK (10/3/2006 a)	ND<1.17 U (1/13/2006 a)	(0.683 - 1.17)/(9 - 1)	-0.060875
ND<0.799 OK (1/15/2007 a)	ND<1.17 U (1/13/2006 a)	(0.799 - 1.17)/(10 - 1)	-0.0412222
ND<1.69 OK (3/19/2007 a)	ND<1.17 U (1/13/2006 a)	(1.69 - 1.17)/(11 - 1)	0.052
ND<0.899 OK (6/11/2007 a)	ND<1.17 U (1/13/2006 a)	(0.899 - 1.17)/(12 - 1)	-0.0246364
ND<1.24 U (3/1/2006 a)	ND<1.14 U (2/20/2006 a)	(1.24 - 1.14)/(3 - 2)	0.1
0.708 U (3/5/2006 a)	ND<1.14 U (2/20/2006 a)	(0.708 - 1.14)/(4 - 2)	-0.216
1.06 OK (4/17/2006 a)	ND<1.14 U (2/20/2006 a)	(1.06 - 1.14)/(5 - 2)	-0.0266667
ND<0.945 OK (5/13/2006 a)	ND<1.14 U (2/20/2006 a)	(0.945 - 1.14)/(6 - 2)	-0.04875
ND<1.88 OK (7/19/2006 a)	ND<1.14 U (2/20/2006 a)	(1.88 - 1.14)/(7 - 2)	0.148
ND<1.74 OK (7/21/2006 a)	ND<1.14 U (2/20/2006 a)	(1.74 - 1.14)/(8 - 2)	0.1
ND<0.683 OK (10/3/2006 a)	ND<1.14 U (2/20/2006 a)	(0.683 - 1.14)/(9 - 2)	-0.0652857
ND<0.799 OK (1/15/2007 a)	ND<1.14 U (2/20/2006 a)	(0.799 - 1.14)/(10 - 2)	-0.042625
ND<1.69 OK (3/19/2007 a)	ND<1.14 U (2/20/2006 a)	(1.69 - 1.14)/(11 - 2)	0.0611111
ND<0.899 OK (6/11/2007 a)	ND<1.14 U (2/20/2006 a)	(0.899 - 1.14)/(12 - 2)	-0.0241
0.708 U (3/5/2006 a)	ND<1.24 U (3/1/2006 a)	(0.708 - 1.24)/(4 - 3)	-0.532
1.06 OK (4/17/2006 a)	ND<1.24 U (3/1/2006 a)	(1.06 - 1.24)/(5 - 3)	-0.09
ND<0.945 OK (5/13/2006 a)	ND<1.24 U (3/1/2006 a)	(0.945 - 1.24)/(6 - 3)	-0.0983333
ND<1.88 OK (7/19/2006 a)	ND<1.24 U (3/1/2006 a)	(1.88 - 1.24)/(7 - 3)	0.16
ND<1.74 OK (7/21/2006 a)	ND<1.24 U (3/1/2006 a)	(1.74 - 1.24)/(8 - 3)	0.1
ND<0.683 OK (10/3/2006 a)	ND<1.24 U (3/1/2006 a)	(0.683 - 1.24)/(9 - 3)	-0.0928333
ND<0.799 OK (1/15/2007 a)	ND<1.24 U (3/1/2006 a)	(0.799 - 1.24)/(10 - 3)	-0.063
ND<1.69 OK (3/19/2007 a)	ND<1.24 U (3/1/2006 a)	(1.69 - 1.24)/(11 - 3)	0.05625

ND<0.899 OK (6/11/2007 a)	ND<1.24 U (3/1/2006 a)	(0.899 - 1.24)/(12 - 3)	-0.0378889
1.06 OK (4/17/2006 a)	0.708 U (3/5/2006 a)	(1.06 - 0.708)/(5 - 4)	0.352
ND<0.945 OK (5/13/2006 a)	0.708 U (3/5/2006 a)	(0.945 - 0.708)/(6 - 4)	0.1185
ND<1.88 OK (7/19/2006 a)	0.708 U (3/5/2006 a)	(1.88 - 0.708)/(7 - 4)	0.390667
ND<1.74 OK (7/21/2006 a)	0.708 U (3/5/2006 a)	(1.74 - 0.708)/(8 - 4)	0.258
ND<0.683 OK (10/3/2006 a)	0.708 U (3/5/2006 a)	(0.683 - 0.708)/(9 - 4)	-0.005
ND<0.799 OK (1/15/2007 a)	0.708 U (3/5/2006 a)	(0.799 - 0.708)/(10 - 4)	0.0151667
ND<1.69 OK (3/19/2007 a)	0.708 U (3/5/2006 a)	(1.69 - 0.708)/(11 - 4)	0.140286
ND<0.899 OK (6/11/2007 a)	0.708 U (3/5/2006 a)	(0.899 - 0.708)/(12 - 4)	0.023875
ND<0.945 OK (5/13/2006 a)	1.06 OK (4/17/2006 a)	(0.945 - 1.06)/(6 - 5)	-0.115
ND<1.88 OK (7/19/2006 a)	1.06 OK (4/17/2006 a)	(1.88 - 1.06)/(7 - 5)	0.41
ND<1.74 OK (7/21/2006 a)	1.06 OK (4/17/2006 a)	(1.74 - 1.06)/(8 - 5)	0.226667
ND<0.683 OK (10/3/2006 a)	1.06 OK (4/17/2006 a)	(0.683 - 1.06)/(9 - 5)	-0.09425
ND<0.799 OK (1/15/2007 a)	1.06 OK (4/17/2006 a)	(0.799 - 1.06)/(10 - 5)	-0.0522
ND<1.69 OK (3/19/2007 a)	1.06 OK (4/17/2006 a)	(1.69 - 1.06)/(11 - 5)	0.105
ND<0.899 OK (6/11/2007 a)	1.06 OK (4/17/2006 a)	(0.899 - 1.06)/(12 - 5)	-0.023
ND<1.88 OK (7/19/2006 a)	ND<0.945 OK (5/13/2006 a)	(1.88 - 0.945)/(7 - 6)	0.935
ND<1.74 OK (7/21/2006 a)	ND<0.945 OK (5/13/2006 a)	(1.74 - 0.945)/(8 - 6)	0.3975
ND<0.683 OK (10/3/2006 a)	ND<0.945 OK (5/13/2006 a)	(0.683 - 0.945)/(9 - 6)	-0.0873333
ND<0.799 OK (1/15/2007 a)	ND<0.945 OK (5/13/2006 a)	(0.799 - 0.945)/(10 - 6)	-0.0365
ND<1.69 OK (3/19/2007 a)	ND<0.945 OK (5/13/2006 a)	(1.69 - 0.945)/(11 - 6)	0.149
ND<0.899 OK (6/11/2007 a)	ND<0.945 OK (5/13/2006 a)	(0.899 - 0.945)/(12 - 6)	-0.00766667
ND<1.74 OK (7/21/2006 a)	ND<1.88 OK (7/19/2006 a)	(1.74 - 1.88)/(8 - 7)	-0.14
ND<0.683 OK (10/3/2006 a)	ND<1.88 OK (7/19/2006 a)	(0.683 - 1.88)/(9 - 7)	-0.5985
ND<0.799 OK (1/15/2007 a)	ND<1.88 OK (7/19/2006 a)	(0.799 - 1.88)/(10 - 7)	-0.360333
ND<1.69 OK (3/19/2007 a)	ND<1.88 OK (7/19/2006 a)	(1.69 - 1.88)/(11 - 7)	-0.0475
ND<0.899 OK (6/11/2007 a)	ND<1.88 OK (7/19/2006 a)	(0.899 - 1.88)/(12 - 7)	-0.1962
ND<0.683 OK (10/3/2006 a)	ND<1.74 OK (7/21/2006 a)	(0.683 - 1.74)/(9 - 8)	-1.057
ND<0.799 OK (1/15/2007 a)	ND<1.74 OK (7/21/2006 a)	(0.799 - 1.74)/(10 - 8)	-0.4705
ND<1.69 OK (3/19/2007 a)	ND<1.74 OK (7/21/2006 a)	(1.69 - 1.74)/(11 - 8)	-0.0166667
ND<0.899 OK (6/11/2007 a)	ND<1.74 OK (7/21/2006 a)	(0.899 - 1.74)/(12 - 8)	-0.21025
ND<0.799 OK (1/15/2007 a)	ND<0.683 OK (10/3/2006 a)	(0.799 - 0.683)/(10 - 9)	0.116
ND<1.69 OK (3/19/2007 a)	ND<0.683 OK (10/3/2006 a)	(1.69 - 0.683)/(11 - 9)	0.5035
ND<0.899 OK (6/11/2007 a)	ND<0.683 OK (10/3/2006 a)	(0.899 - 0.683)/(12 - 9)	0.072

ND<1.69 OK (3/19/2007 a)	ND<0.799 OK (1/15/2007 a)	(1.69 - 0.799)/(11 - 10)	0.891
ND<0.899 OK (6/11/2007 a)	ND<0.799 OK (1/15/2007 a)	(0.899 - 0.799)/(12 - 10)	0.05
ND<0.899 OK (6/11/2007 a)	ND<1.69 OK (3/19/2007 a)	(0.899 - 1.69)/(12 - 11)	-0.791

Number of Q values = 66

Ordered Q Values

n	Q
1	-1.057
2	-0.791
3	-0.5985
4	-0.532
5	-0.4705
6	-0.360333
7	-0.216
8	-0.21025
9	-0.1962
10	-0.154
11	-0.14
12	-0.115
13	-0.0983333
14	-0.09425
15	-0.0928333
16	-0.09
17	-0.0873333
18	-0.0652857
19	-0.063
20	-0.060875
21	-0.0522
22	-0.04875
23	-0.0475
24	-0.045
25	-0.042625
26	-0.0412222
27	-0.0378889
28	-0.0365
29	-0.03
30	-0.0275
31	-0.0266667

32	-0.0246364
33	-0.0241
34	-0.023
35	-0.0166667
36	-0.00766667
37	-0.005
38	0.0151667
39	0.023875
40	0.035
41	0.05
42	0.052
43	0.05625
44	0.0611111
45	0.072
46	0.0814286
47	0.1
48	0.1
49	0.1
50	0.105
51	0.116
52	0.118333
53	0.1185
54	0.140286
55	0.148
56	0.149
57	0.16
58	0.226667
59	0.258
60	0.352
61	0.390667
62	0.3975
63	0.41
64	0.5035
65	0.891
66	0.935

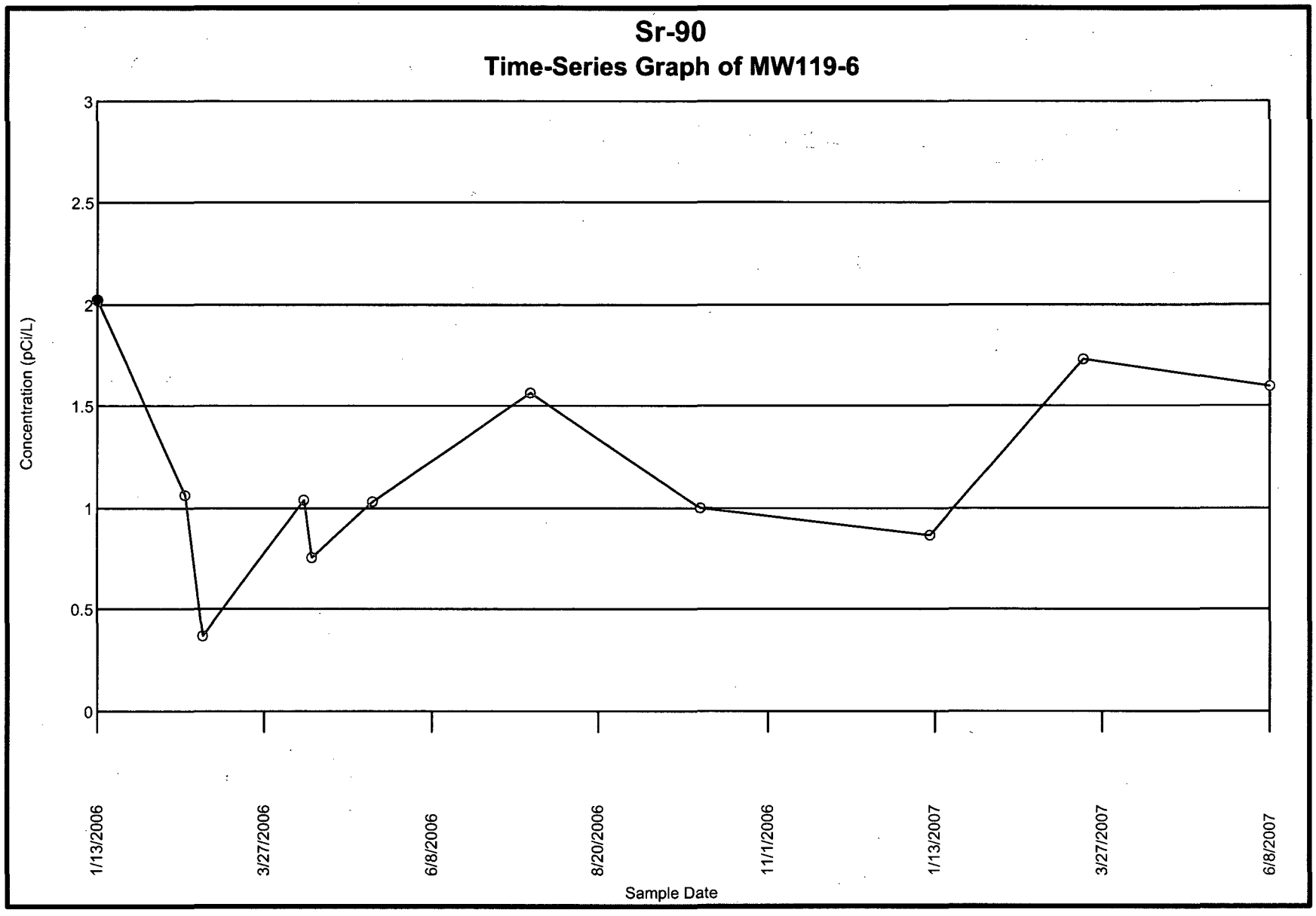
Sen's Estimator (Median Q) is -0.02355

Time Period	Observations
1/13/2006	1
2/20/2006	1
3/1/2006	1

3/5/2006	1
4/17/2006	1
5/13/2006	1
7/19/2006	1
7/21/2006	1
10/3/2006	1
1/15/2007	1
3/19/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.0522 = Q(21)
Upper limit is 0.0814286 = Q(46)
-0.0522 < 0 < 0.0814286 indicating no trend in data.


Sr-90
Time-Series Graph of MW119-6
Concentration (pCi/L)
3
2.5
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW119-6

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.06 U (2/20/2006 a)	2.02 OK (1/13/2006 a)	(1.06 - 2.02)/(2 - 1)	-0.96
ND<0.373 U (2/28/2006 a)	2.02 OK (1/13/2006 a)	(0.373 - 2.02)/(3 - 1)	-0.8235
ND<1.04 U (4/13/2006 a)	2.02 OK (1/13/2006 a)	(1.04 - 2.02)/(4 - 1)	-0.326667
ND<0.755 U (4/17/2006 a)	2.02 OK (1/13/2006 a)	(0.755 - 2.02)/(5 - 1)	-0.31625
ND<1.03 OK (5/13/2006 a)	2.02 OK (1/13/2006 a)	(1.03 - 2.02)/(6 - 1)	-0.198
ND<1.57 OK (7/21/2006 a)	2.02 OK (1/13/2006 a)	(1.57 - 2.02)/(7 - 1)	-0.075
ND<0.999 OK (10/3/2006 a)	2.02 OK (1/13/2006 a)	(0.999 - 2.02)/(8 - 1)	-0.145857
ND<0.867 OK (1/11/2007 a)	2.02 OK (1/13/2006 a)	(0.867 - 2.02)/(9 - 1)	-0.144125
ND<1.73 OK (3/19/2007 a)	2.02 OK (1/13/2006 a)	(1.73 - 2.02)/(10 - 1)	-0.0322222
ND<1.6 OK (6/8/2007 a)	2.02 OK (1/13/2006 a)	(1.6 - 2.02)/(11 - 1)	-0.042
ND<0.373 U (2/28/2006 a)	ND<1.06 U (2/20/2006 a)	(0.373 - 1.06)/(3 - 2)	-0.687
ND<1.04 U (4/13/2006 a)	ND<1.06 U (2/20/2006 a)	(1.04 - 1.06)/(4 - 2)	-0.01
ND<0.755 U (4/17/2006 a)	ND<1.06 U (2/20/2006 a)	(0.755 - 1.06)/(5 - 2)	-0.101667
ND<1.03 OK (5/13/2006 a)	ND<1.06 U (2/20/2006 a)	(1.03 - 1.06)/(6 - 2)	-0.0075
ND<1.57 OK (7/21/2006 a)	ND<1.06 U (2/20/2006 a)	(1.57 - 1.06)/(7 - 2)	0.102
ND<0.999 OK (10/3/2006 a)	ND<1.06 U (2/20/2006 a)	(0.999 - 1.06)/(8 - 2)	-0.0101667
ND<0.867 OK (1/11/2007 a)	ND<1.06 U (2/20/2006 a)	(0.867 - 1.06)/(9 - 2)	-0.0275714
ND<1.73 OK (3/19/2007 a)	ND<1.06 U (2/20/2006 a)	(1.73 - 1.06)/(10 - 2)	0.08375
ND<1.6 OK (6/8/2007 a)	ND<1.06 U (2/20/2006 a)	(1.6 - 1.06)/(11 - 2)	0.06
ND<1.04 U (4/13/2006 a)	ND<0.373 U (2/28/2006 a)	(1.04 - 0.373)/(4 - 3)	0.667
ND<0.755 U (4/17/2006 a)	ND<0.373 U (2/28/2006 a)	(0.755 - 0.373)/(5 - 3)	0.191
ND<1.03 OK (5/13/2006 a)	ND<0.373 U (2/28/2006 a)	(1.03 - 0.373)/(6 - 3)	0.219
ND<1.57 OK (7/21/2006 a)	ND<0.373 U (2/28/2006 a)	(1.57 - 0.373)/(7 - 3)	0.29925
ND<0.999 OK (10/3/2006 a)	ND<0.373 U (2/28/2006 a)	(0.999 - 0.373)/(8 - 3)	0.1252
ND<0.867 OK (1/11/2007 a)	ND<0.373 U (2/28/2006 a)	(0.867 - 0.373)/(9 - 3)	0.0823333
ND<1.73 OK (3/19/2007 a)	ND<0.373 U (2/28/2006 a)	(1.73 - 0.373)/(10 - 3)	0.193857
ND<1.6 OK (6/8/2007 a)	ND<0.373 U (2/28/2006 a)	(1.6 - 0.373)/(11 - 3)	0.153375
ND<0.755 U (4/17/2006 a)	ND<1.04 U (4/13/2006 a)	(0.755 - 1.04)/(5 - 4)	-0.285

ND<1.03 OK (5/13/2006 a)	ND<1.04 U (4/13/2006 a)	(1.03 - 1.04)/(6 - 4)	-0.005
ND<1.57 OK (7/21/2006 a)	ND<1.04 U (4/13/2006 a)	(1.57 - 1.04)/(7 - 4)	0.176667
ND<0.999 OK (10/3/2006 a)	ND<1.04 U (4/13/2006 a)	(0.999 - 1.04)/(8 - 4)	-0.01025
ND<0.867 OK (1/11/2007 a)	ND<1.04 U (4/13/2006 a)	(0.867 - 1.04)/(9 - 4)	-0.0346
ND<1.73 OK (3/19/2007 a)	ND<1.04 U (4/13/2006 a)	(1.73 - 1.04)/(10 - 4)	0.115
ND<1.6 OK (6/8/2007 a)	ND<1.04 U (4/13/2006 a)	(1.6 - 1.04)/(11 - 4)	0.08
ND<1.03 OK (5/13/2006 a)	ND<0.755 U (4/17/2006 a)	(1.03 - 0.755)/(6 - 5)	0.275
ND<1.57 OK (7/21/2006 a)	ND<0.755 U (4/17/2006 a)	(1.57 - 0.755)/(7 - 5)	0.4075
ND<0.999 OK (10/3/2006 a)	ND<0.755 U (4/17/2006 a)	(0.999 - 0.755)/(8 - 5)	0.0813333
ND<0.867 OK (1/11/2007 a)	ND<0.755 U (4/17/2006 a)	(0.867 - 0.755)/(9 - 5)	0.028
ND<1.73 OK (3/19/2007 a)	ND<0.755 U (4/17/2006 a)	(1.73 - 0.755)/(10 - 5)	0.195
ND<1.6 OK (6/8/2007 a)	ND<0.755 U (4/17/2006 a)	(1.6 - 0.755)/(11 - 5)	0.140833
ND<1.57 OK (7/21/2006 a)	ND<1.03 OK (5/13/2006 a)	(1.57 - 1.03)/(7 - 6)	0.54
ND<0.999 OK (10/3/2006 a)	ND<1.03 OK (5/13/2006 a)	(0.999 - 1.03)/(8 - 6)	-0.0155
ND<0.867 OK (1/11/2007 a)	ND<1.03 OK (5/13/2006 a)	(0.867 - 1.03)/(9 - 6)	-0.0543333
ND<1.73 OK (3/19/2007 a)	ND<1.03 OK (5/13/2006 a)	(1.73 - 1.03)/(10 - 6)	0.175
ND<1.6 OK (6/8/2007 a)	ND<1.03 OK (5/13/2006 a)	(1.6 - 1.03)/(11 - 6)	0.114
ND<0.999 OK (10/3/2006 a)	ND<1.57 OK (7/21/2006 a)	(0.999 - 1.57)/(8 - 7)	-0.571
ND<0.867 OK (1/11/2007 a)	ND<1.57 OK (7/21/2006 a)	(0.867 - 1.57)/(9 - 7)	-0.3515
ND<1.73 OK (3/19/2007 a)	ND<1.57 OK (7/21/2006 a)	(1.73 - 1.57)/(10 - 7)	0.0533333
ND<1.6 OK (6/8/2007 a)	ND<1.57 OK (7/21/2006 a)	(1.6 - 1.57)/(11 - 7)	0.0075
ND<0.867 OK (1/11/2007 a)	ND<0.999 OK (10/3/2006 a)	(0.867 - 0.999)/(9 - 8)	-0.132
ND<1.73 OK (3/19/2007 a)	ND<0.999 OK (10/3/2006 a)	(1.73 - 0.999)/(10 - 8)	0.3655
ND<1.6 OK (6/8/2007 a)	ND<0.999 OK (10/3/2006 a)	(1.6 - 0.999)/(11 - 8)	0.200333
ND<1.73 OK (3/19/2007 a)	ND<0.867 OK (1/11/2007 a)	(1.73 - 0.867)/(10 - 9)	0.863
ND<1.6 OK (6/8/2007 a)	ND<0.867 OK (1/11/2007 a)	(1.6 - 0.867)/(11 - 9)	0.3665
ND<1.6 OK (6/8/2007 a)	ND<1.73 OK (3/19/2007 a)	(1.6 - 1.73)/(11 - 10)	-0.13

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.96
2	-0.8235

3	-0.687
4	-0.571
5	-0.3515
6	-0.326667
7	-0.31625
8	-0.285
9	-0.198
10	-0.145857
11	-0.144125
12	-0.132
13	-0.13
14	-0.101667
15	-0.075
16	-0.0543333
17	-0.042
18	-0.0346
19	-0.0322222
20	-0.0275714
21	-0.0155
22	-0.01025
23	-0.0101667
24	-0.01
25	-0.0075
26	-0.005
27	0.0075
28	0.028
29	0.0533333
30	0.06
31	0.08
32	0.0813333
33	0.0823333
34	0.08375
35	0.102
36	0.114
37	0.115
38	0.1252
39	0.140833
40	0.153375
41	0.175
42	0.176667
43	0.191

44	0.193857
45	0.195
46	0.200333
47	0.219
48	0.275
49	0.29925
50	0.3655
51	0.3665
52	0.4075
53	0.54
54	0.667
55	0.863

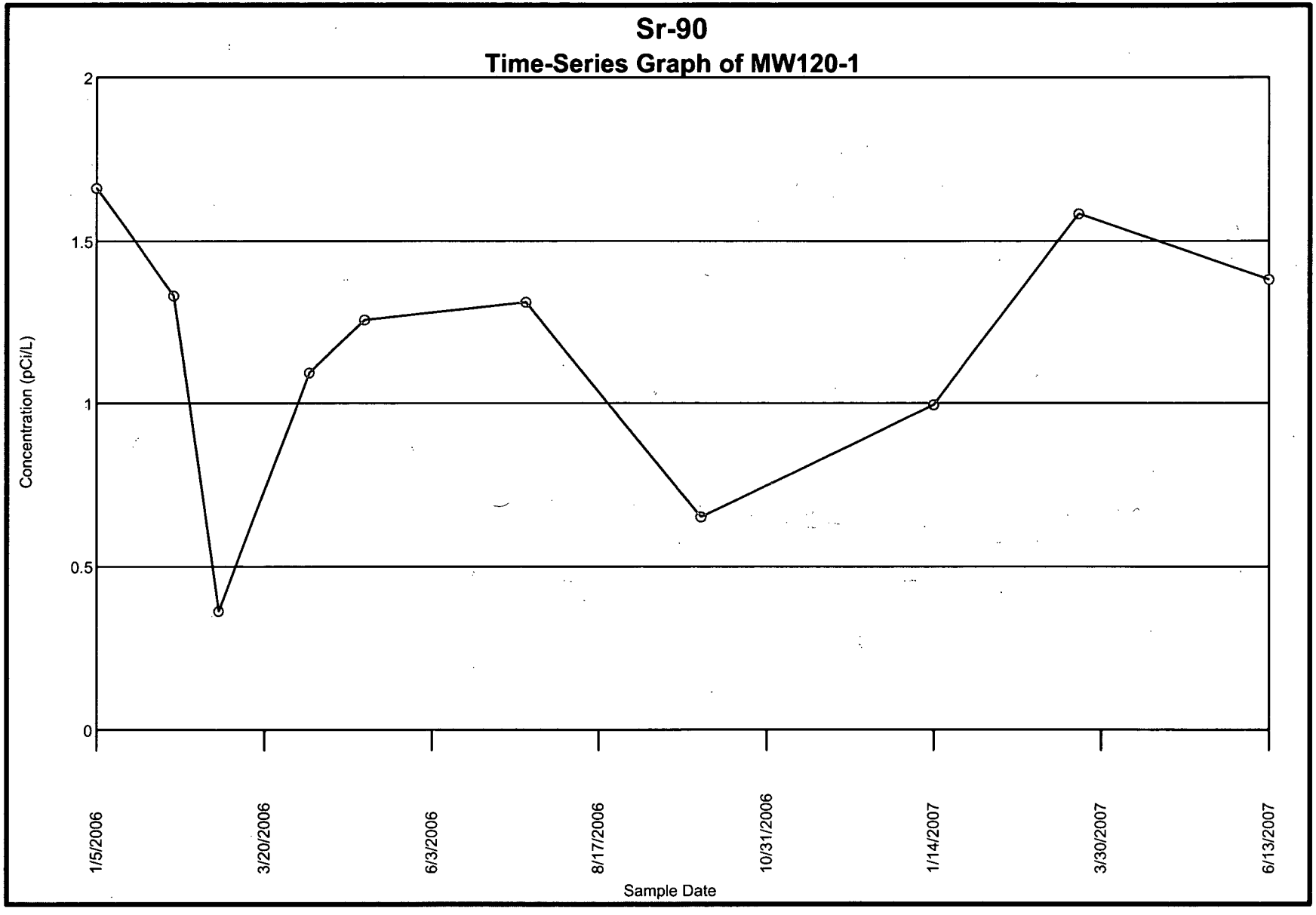
Sen's Estimator (Median Q) is 0.028

Time Period	Observations
1/13/2006	1
2/20/2006	1
2/28/2006	1
4/13/2006	1
4/17/2006	1
5/13/2006	1
7/21/2006	1
10/3/2006	1
1/11/2007	1
3/19/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357

M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.042 = Q(17)
Upper limit is 0.140833 = Q(39)
-0.042 < 0 < 0.140833 indicating no trend in data.


Sr-90
Time-Series Graph of MW120-1
Concentration (pCi/L)
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/17/2006
10/31/2006
1/14/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW120-1
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.33 U (2/8/2006 a)	ND<1.66 U (1/5/2006 a)	(1.33 - 1.66)/(2 - 1)	-0.33
ND<0.365 U (2/28/2006 a)	ND<1.66 U (1/5/2006 a)	(0.365 - 1.66)/(3 - 1)	-0.6475
ND<1.095 U (4/10/2006 ~)	ND<1.66 U (1/5/2006 a)	(1.095 - 1.66)/(4 - 1)	-0.188333
ND<1.26 OK (5/5/2006 a)	ND<1.66 U (1/5/2006 a)	(1.26 - 1.66)/(5 - 1)	-0.1
ND<1.31 OK (7/16/2006 a)	ND<1.66 U (1/5/2006 a)	(1.31 - 1.66)/(6 - 1)	-0.07
ND<0.652 OK (10/2/2006 a)	ND<1.66 U (1/5/2006 a)	(0.652 - 1.66)/(7 - 1)	-0.168
ND<0.998 OK (1/14/2007 a)	ND<1.66 U (1/5/2006 a)	(0.998 - 1.66)/(8 - 1)	-0.0945714
ND<1.58 OK (3/20/2007 a)	ND<1.66 U (1/5/2006 a)	(1.58 - 1.66)/(9 - 1)	-0.01
ND<1.38 OK (6/13/2007 a)	ND<1.66 U (1/5/2006 a)	(1.38 - 1.66)/(10 - 1)	-0.0311111
ND<0.365 U (2/28/2006 a)	ND<1.33 U (2/8/2006 a)	(0.365 - 1.33)/(3 - 2)	-0.965
ND<1.095 U (4/10/2006 ~)	ND<1.33 U (2/8/2006 a)	(1.095 - 1.33)/(4 - 2)	-0.1175
ND<1.26 OK (5/5/2006 a)	ND<1.33 U (2/8/2006 a)	(1.26 - 1.33)/(5 - 2)	-0.0233333
ND<1.31 OK (7/16/2006 a)	ND<1.33 U (2/8/2006 a)	(1.31 - 1.33)/(6 - 2)	-0.005
ND<0.652 OK (10/2/2006 a)	ND<1.33 U (2/8/2006 a)	(0.652 - 1.33)/(7 - 2)	-0.1356
ND<0.998 OK (1/14/2007 a)	ND<1.33 U (2/8/2006 a)	(0.998 - 1.33)/(8 - 2)	-0.0553333
ND<1.58 OK (3/20/2007 a)	ND<1.33 U (2/8/2006 a)	(1.58 - 1.33)/(9 - 2)	0.0357143
ND<1.38 OK (6/13/2007 a)	ND<1.33 U (2/8/2006 a)	(1.38 - 1.33)/(10 - 2)	0.00625
ND<1.095 U (4/10/2006 ~)	ND<0.365 U (2/28/2006 a)	(1.095 - 0.365)/(4 - 3)	0.73
ND<1.26 OK (5/5/2006 a)	ND<0.365 U (2/28/2006 a)	(1.26 - 0.365)/(5 - 3)	0.4475
ND<1.31 OK (7/16/2006 a)	ND<0.365 U (2/28/2006 a)	(1.31 - 0.365)/(6 - 3)	0.315
ND<0.652 OK (10/2/2006 a)	ND<0.365 U (2/28/2006 a)	(0.652 - 0.365)/(7 - 3)	0.07175
ND<0.998 OK (1/14/2007 a)	ND<0.365 U (2/28/2006 a)	(0.998 - 0.365)/(8 - 3)	0.1266
ND<1.58 OK (3/20/2007 a)	ND<0.365 U (2/28/2006 a)	(1.58 - 0.365)/(9 - 3)	0.2025
ND<1.38 OK (6/13/2007 a)	ND<0.365 U (2/28/2006 a)	(1.38 - 0.365)/(10 - 3)	0.145
ND<1.26 OK (5/5/2006 a)	ND<1.095 U (4/10/2006 ~)	(1.26 - 1.095)/(5 - 4)	0.165
ND<1.31 OK (7/16/2006 a)	ND<1.095 U (4/10/2006 ~)	(1.31 - 1.095)/(6 - 4)	0.1075
ND<0.652 OK (10/2/2006 a)	ND<1.095 U (4/10/2006 ~)	(0.652 - 1.095)/(7 - 4)	-0.147667
ND<0.998 OK (1/14/2007 a)	ND<1.095 U (4/10/2006 ~)	(0.998 - 1.095)/(8 - 4)	-0.02425
ND<1.58 OK (3/20/2007 a)	ND<1.095 U (4/10/2006 ~)	(1.58 - 1.095)/(9 - 4)	0.097
ND<1.38 OK (6/13/2007 a)	ND<1.095 U (4/10/2006 ~)	(1.38 - 1.095)/(10 - 4)	0.0475
ND<1.31 OK (7/16/2006 a)	ND<1.26 OK (5/5/2006 a)	(1.31 - 1.26)/(6 - 5)	0.05
ND<0.652 OK (10/2/2006 a)	ND<1.26 OK (5/5/2006 a)	(0.652 - 1.26)/(7 - 5)	-0.304
ND<0.998 OK (1/14/2007 a)	ND<1.26 OK (5/5/2006 a)	(0.998 - 1.26)/(8 - 5)	-0.0873333
ND<1.58 OK (3/20/2007 a)	ND<1.26 OK (5/5/2006 a)	(1.58 - 1.26)/(9 - 5)	0.08
ND<1.38 OK (6/13/2007 a)	ND<1.26 OK (5/5/2006 a)	(1.38 - 1.26)/(10 - 5)	0.024
ND<0.652 OK (10/2/2006 a)	ND<1.31 OK (7/16/2006 a)	(0.652 - 1.31)/(7 - 6)	-0.658
ND<0.998 OK (1/14/2007 a)	ND<1.31 OK (7/16/2006 a)	(0.998 - 1.31)/(8 - 6)	-0.156
ND<1.58 OK (3/20/2007 a)	ND<1.31 OK (7/16/2006 a)	(1.58 - 1.31)/(9 - 6)	0.09
ND<1.38 OK (6/13/2007 a)	ND<1.31 OK (7/16/2006 a)	(1.38 - 1.31)/(10 - 6)	0.0175
ND<0.998 OK (1/14/2007 a)	ND<0.652 OK (10/2/2006 a)	(0.998 - 0.652)/(8 - 7)	0.346
ND<1.58 OK (3/20/2007 a)	ND<0.652 OK (10/2/2006 a)	(1.58 - 0.652)/(9 - 7)	0.464

ND<1.38 OK (6/13/2007 a)	ND<0.652 OK (10/2/2006 a)	(1.38 - 0.652)/(10 - 7)	0.242667
ND<1.58 OK (3/20/2007 a)	ND<0.998 OK (1/14/2007 a)	(1.58 - 0.998)/(9 - 8)	0.582
ND<1.38 OK (6/13/2007 a)	ND<0.998 OK (1/14/2007 a)	(1.38 - 0.998)/(10 - 8)	0.191
ND<1.38 OK (6/13/2007 a)	ND<1.58 OK (3/20/2007 a)	(1.38 - 1.58)/(10 - 9)	-0.2

Number of Q values = 45

Ordered Q Values

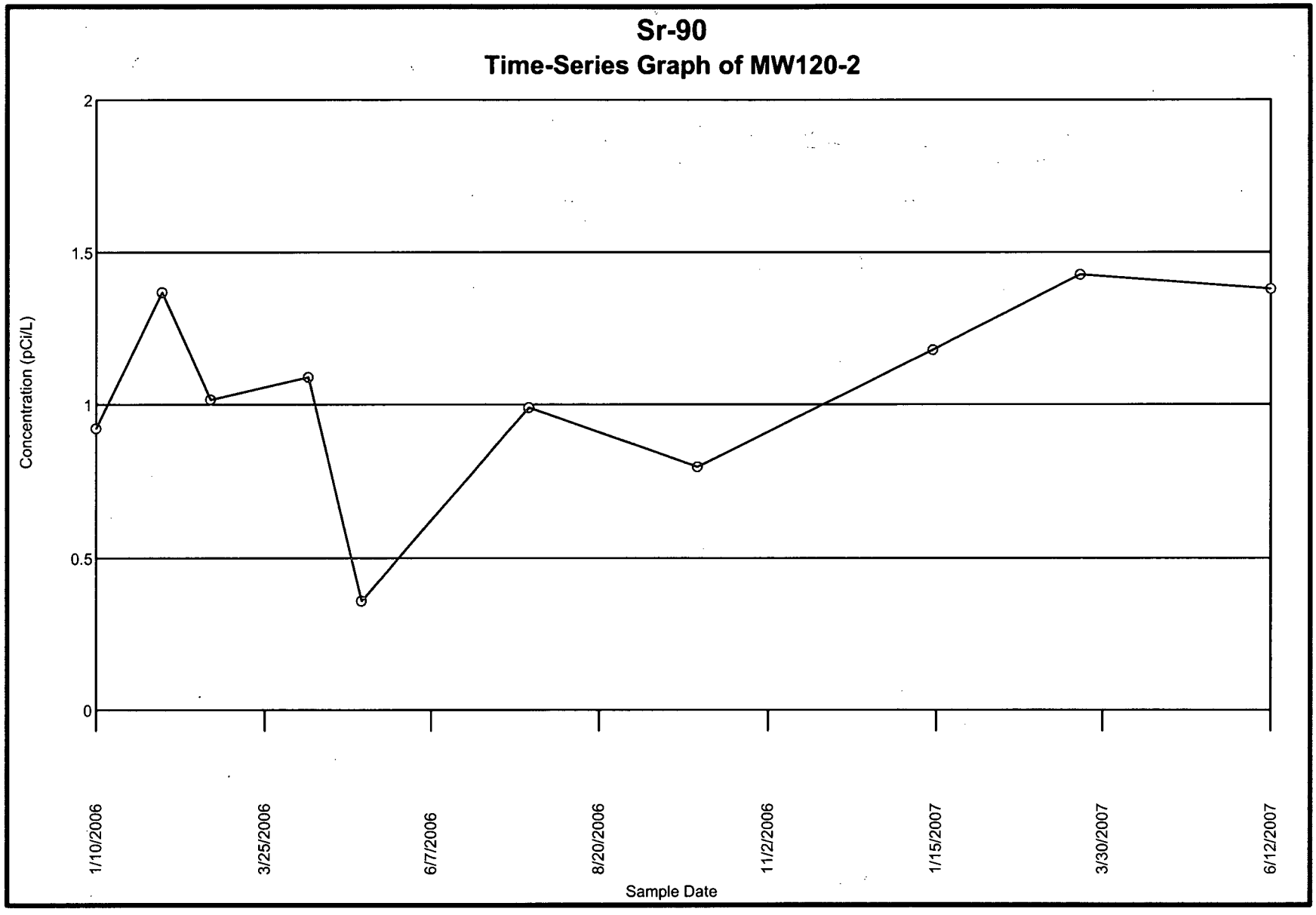
n	Q
1	-0.965
2	-0.658
3	-0.6475
4	-0.33
5	-0.304
6	-0.2
7	-0.188333
8	-0.168
9	-0.156
10	-0.147667
11	-0.1356
12	-0.1175
13	-0.1
14	-0.0945714
15	-0.0873333
16	-0.07
17	-0.0553333
18	-0.0311111
19	-0.02425
20	-0.0233333
21	-0.01
22	-0.005
23	0.00625
24	0.0175
25	0.024
26	0.0357143
27	0.0475
28	0.05
29	0.07175
30	0.08
31	0.09
32	0.097
33	0.1075
34	0.1266
35	0.145
36	0.165
37	0.191
38	0.2025
39	0.242667
40	0.315
41	0.346
42	0.4475
43	0.464
44	0.582
45	0.73

Sen's Estimator (Median Q) is 0.00625

Time Period	Observations
1/5/2006	1
2/8/2006	1
2/28/2006	1
4/10/2006	1
5/5/2006	1
7/16/2006	1
10/2/2006	1
1/14/2007	1
3/20/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.1 = Q(13)
Upper limit is 0.1075 = Q(33)
-0.1 < 0 < 0.1075 indicating no trend in data.


Sr-90
Time-Series Graph of MW120-2
Concentration (pCi/L)
2
1.5
1
0.5
0
1/10/2006
3/25/2006
6/7/2006
8/20/2006
11/2/2006
1/15/2007
3/30/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW120-2

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.37 U (2/8/2006 a)	ND<0.922 U (1/10/2006 a)	(1.37 - 0.922)/(2 - 1)	0.448
ND<1.02 U (3/1/2006 a)	ND<0.922 U (1/10/2006 a)	(1.02 - 0.922)/(3 - 1)	0.049
ND<1.09 U (4/13/2006 a)	ND<0.922 U (1/10/2006 a)	(1.09 - 0.922)/(4 - 1)	0.056
ND<0.356 OK (5/7/2006 a)	ND<0.922 U (1/10/2006 a)	(0.356 - 0.922)/(5 - 1)	-0.1415
ND<0.99 OK (7/20/2006 a)	ND<0.922 U (1/10/2006 a)	(0.99 - 0.922)/(6 - 1)	0.0136
ND<0.796 OK (10/2/2006 a)	ND<0.922 U (1/10/2006 a)	(0.796 - 0.922)/(7 - 1)	-0.021
ND<1.18 OK (1/14/2007 a)	ND<0.922 U (1/10/2006 a)	(1.18 - 0.922)/(8 - 1)	0.0368571
ND<1.43 OK (3/20/2007 a)	ND<0.922 U (1/10/2006 a)	(1.43 - 0.922)/(9 - 1)	0.0635
ND<1.38 OK (6/12/2007 a)	ND<0.922 U (1/10/2006 a)	(1.38 - 0.922)/(10 - 1)	0.0508889
ND<1.02 U (3/1/2006 a)	ND<1.37 U (2/8/2006 a)	(1.02 - 1.37)/(3 - 2)	-0.35
ND<1.09 U (4/13/2006 a)	ND<1.37 U (2/8/2006 a)	(1.09 - 1.37)/(4 - 2)	-0.14
ND<0.356 OK (5/7/2006 a)	ND<1.37 U (2/8/2006 a)	(0.356 - 1.37)/(5 - 2)	-0.338
ND<0.99 OK (7/20/2006 a)	ND<1.37 U (2/8/2006 a)	(0.99 - 1.37)/(6 - 2)	-0.095
ND<0.796 OK (10/2/2006 a)	ND<1.37 U (2/8/2006 a)	(0.796 - 1.37)/(7 - 2)	-0.1148
ND<1.18 OK (1/14/2007 a)	ND<1.37 U (2/8/2006 a)	(1.18 - 1.37)/(8 - 2)	-0.0316667
ND<1.43 OK (3/20/2007 a)	ND<1.37 U (2/8/2006 a)	(1.43 - 1.37)/(9 - 2)	0.00857143
ND<1.38 OK (6/12/2007 a)	ND<1.37 U (2/8/2006 a)	(1.38 - 1.37)/(10 - 2)	0.00125
ND<1.09 U (4/13/2006 a)	ND<1.02 U (3/1/2006 a)	(1.09 - 1.02)/(4 - 3)	0.07
ND<0.356 OK (5/7/2006 a)	ND<1.02 U (3/1/2006 a)	(0.356 - 1.02)/(5 - 3)	-0.332
ND<0.99 OK (7/20/2006 a)	ND<1.02 U (3/1/2006 a)	(0.99 - 1.02)/(6 - 3)	-0.01
ND<0.796 OK (10/2/2006 a)	ND<1.02 U (3/1/2006 a)	(0.796 - 1.02)/(7 - 3)	-0.056
ND<1.18 OK (1/14/2007 a)	ND<1.02 U (3/1/2006 a)	(1.18 - 1.02)/(8 - 3)	0.032
ND<1.43 OK (3/20/2007 a)	ND<1.02 U (3/1/2006 a)	(1.43 - 1.02)/(9 - 3)	0.0683333
ND<1.38 OK (6/12/2007 a)	ND<1.02 U (3/1/2006 a)	(1.38 - 1.02)/(10 - 3)	0.0514286
ND<0.356 OK (5/7/2006 a)	ND<1.09 U (4/13/2006 a)	(0.356 - 1.09)/(5 - 4)	-0.734
ND<0.99 OK (7/20/2006 a)	ND<1.09 U (4/13/2006 a)	(0.99 - 1.09)/(6 - 4)	-0.05
ND<0.796 OK (10/2/2006 a)	ND<1.09 U (4/13/2006 a)	(0.796 - 1.09)/(7 - 4)	-0.098
ND<1.18 OK (1/14/2007 a)	ND<1.09 U (4/13/2006 a)	(1.18 - 1.09)/(8 - 4)	0.0225

ND<1.43 OK (3/20/2007 a)	ND<1.09 U (4/13/2006 a)	(1.43 - 1.09)/(9 - 4)	0.068
ND<1.38 OK (6/12/2007 a)	ND<1.09 U (4/13/2006 a)	(1.38 - 1.09)/(10 - 4)	0.0483333
ND<0.99 OK (7/20/2006 a)	ND<0.356 OK (5/7/2006 a)	(0.99 - 0.356)/(6 - 5)	0.634
ND<0.796 OK (10/2/2006 a)	ND<0.356 OK (5/7/2006 a)	(0.796 - 0.356)/(7 - 5)	0.22
ND<1.18 OK (1/14/2007 a)	ND<0.356 OK (5/7/2006 a)	(1.18 - 0.356)/(8 - 5)	0.274667
ND<1.43 OK (3/20/2007 a)	ND<0.356 OK (5/7/2006 a)	(1.43 - 0.356)/(9 - 5)	0.2685
ND<1.38 OK (6/12/2007 a)	ND<0.356 OK (5/7/2006 a)	(1.38 - 0.356)/(10 - 5)	0.2048
ND<0.796 OK (10/2/2006 a)	ND<0.99 OK (7/20/2006 a)	(0.796 - 0.99)/(7 - 6)	-0.194
ND<1.18 OK (1/14/2007 a)	ND<0.99 OK (7/20/2006 a)	(1.18 - 0.99)/(8 - 6)	0.095
ND<1.43 OK (3/20/2007 a)	ND<0.99 OK (7/20/2006 a)	(1.43 - 0.99)/(9 - 6)	0.146667
ND<1.38 OK (6/12/2007 a)	ND<0.99 OK (7/20/2006 a)	(1.38 - 0.99)/(10 - 6)	0.0975
ND<1.18 OK (1/14/2007 a)	ND<0.796 OK (10/2/2006 a)	(1.18 - 0.796)/(8 - 7)	0.384
ND<1.43 OK (3/20/2007 a)	ND<0.796 OK (10/2/2006 a)	(1.43 - 0.796)/(9 - 7)	0.317
ND<1.38 OK (6/12/2007 a)	ND<0.796 OK (10/2/2006 a)	(1.38 - 0.796)/(10 - 7)	0.194667
ND<1.43 OK (3/20/2007 a)	ND<1.18 OK (1/14/2007 a)	(1.43 - 1.18)/(9 - 8)	0.25
ND<1.38 OK (6/12/2007 a)	ND<1.18 OK (1/14/2007 a)	(1.38 - 1.18)/(10 - 8)	0.1
ND<1.38 OK (6/12/2007 a)	ND<1.43 OK (3/20/2007 a)	(1.38 - 1.43)/(10 - 9)	-0.05

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.734
2	-0.35
3	-0.338
4	-0.332
5	-0.194
6	-0.1415
7	-0.14
8	-0.1148
9	-0.098
10	-0.095
11	-0.056
12	-0.05
13	-0.05

14	-0.0316667
15	-0.021
16	-0.01
17	0.00125
18	0.00857143
19	0.0136
20	0.0225
21	0.032
22	0.0368571
23	0.0483333
24	0.049
25	0.0508889
26	0.0514286
27	0.056
28	0.0635
29	0.068
30	0.0683333
31	0.07
32	0.095
33	0.0975
34	0.1
35	0.146667
36	0.194667
37	0.2048
38	0.22
39	0.25
40	0.2685
41	0.274667
42	0.317
43	0.384
44	0.448
45	0.634

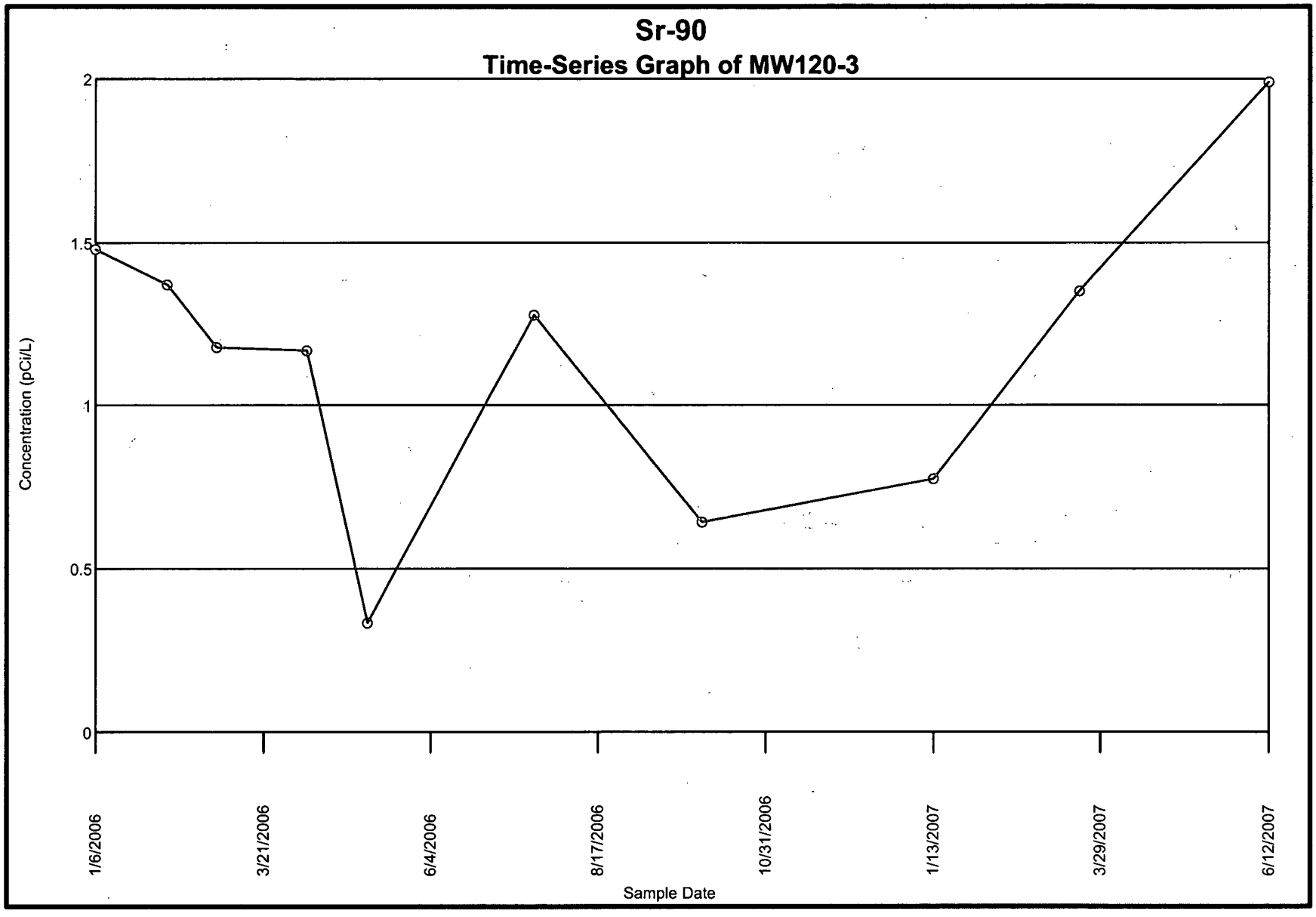
Sen's Estimator (Median Q) is 0.0483333

Time Period	Observations
1/10/2006	1
2/8/2006	1
3/1/2006	1
4/13/2006	1
5/7/2006	1
7/20/2006	1

10/2/2006	1
1/14/2007	1
3/20/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.05 = Q(13)
Upper limit is 0.0975 = Q(33)
-0.05 < 0 < 0.0975 indicating no trend in data.


Sr-90
Time-Series Graph of MW120-3
Concentration (pCi/L)
2
1.5
1
0.5
0
1/6/2006
3/21/2006
6/4/2006
8/17/2006
10/31/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW120-3

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.37 U (2/7/2006 a)	ND<1.48 U (1/6/2006 a)	(1.37 - 1.48)/(2 - 1)	-0.11
ND<1.18 U (3/1/2006 a)	ND<1.48 U (1/6/2006 a)	(1.18 - 1.48)/(3 - 1)	-0.15
ND<1.17 U (4/10/2006 a)	ND<1.48 U (1/6/2006 a)	(1.17 - 1.48)/(4 - 1)	-0.103333
ND<0.335 OK (5/7/2006 a)	ND<1.48 U (1/6/2006 a)	(0.335 - 1.48)/(5 - 1)	-0.28625
ND<1.28 OK (7/20/2006 a)	ND<1.48 U (1/6/2006 a)	(1.28 - 1.48)/(6 - 1)	-0.04
ND<0.643 OK (10/3/2006 a)	ND<1.48 U (1/6/2006 a)	(0.643 - 1.48)/(7 - 1)	-0.1395
ND<0.777 OK (1/14/2007 a)	ND<1.48 U (1/6/2006 a)	(0.777 - 1.48)/(8 - 1)	-0.100429
ND<1.35 OK (3/20/2007 ~)	ND<1.48 U (1/6/2006 a)	(1.35 - 1.48)/(9 - 1)	-0.01625
ND<1.99 OK (6/12/2007 a)	ND<1.48 U (1/6/2006 a)	(1.99 - 1.48)/(10 - 1)	0.0566667
ND<1.18 U (3/1/2006 a)	ND<1.37 U (2/7/2006 a)	(1.18 - 1.37)/(3 - 2)	-0.19
ND<1.17 U (4/10/2006 a)	ND<1.37 U (2/7/2006 a)	(1.17 - 1.37)/(4 - 2)	-0.1
ND<0.335 OK (5/7/2006 a)	ND<1.37 U (2/7/2006 a)	(0.335 - 1.37)/(5 - 2)	-0.345
ND<1.28 OK (7/20/2006 a)	ND<1.37 U (2/7/2006 a)	(1.28 - 1.37)/(6 - 2)	-0.0225
ND<0.643 OK (10/3/2006 a)	ND<1.37 U (2/7/2006 a)	(0.643 - 1.37)/(7 - 2)	-0.1454
ND<0.777 OK (1/14/2007 a)	ND<1.37 U (2/7/2006 a)	(0.777 - 1.37)/(8 - 2)	-0.0988333
ND<1.35 OK (3/20/2007 ~)	ND<1.37 U (2/7/2006 a)	(1.35 - 1.37)/(9 - 2)	-0.00285714
ND<1.99 OK (6/12/2007 a)	ND<1.37 U (2/7/2006 a)	(1.99 - 1.37)/(10 - 2)	0.0775
ND<1.17 U (4/10/2006 a)	ND<1.18 U (3/1/2006 a)	(1.17 - 1.18)/(4 - 3)	-0.01
ND<0.335 OK (5/7/2006 a)	ND<1.18 U (3/1/2006 a)	(0.335 - 1.18)/(5 - 3)	-0.4225
ND<1.28 OK (7/20/2006 a)	ND<1.18 U (3/1/2006 a)	(1.28 - 1.18)/(6 - 3)	0.0333333
ND<0.643 OK (10/3/2006 a)	ND<1.18 U (3/1/2006 a)	(0.643 - 1.18)/(7 - 3)	-0.13425
ND<0.777 OK (1/14/2007 a)	ND<1.18 U (3/1/2006 a)	(0.777 - 1.18)/(8 - 3)	-0.0806
ND<1.35 OK (3/20/2007 ~)	ND<1.18 U (3/1/2006 a)	(1.35 - 1.18)/(9 - 3)	0.0283333
ND<1.99 OK (6/12/2007 a)	ND<1.18 U (3/1/2006 a)	(1.99 - 1.18)/(10 - 3)	0.115714
ND<0.335 OK (5/7/2006 a)	ND<1.17 U (4/10/2006 a)	(0.335 - 1.17)/(5 - 4)	-0.835
ND<1.28 OK (7/20/2006 a)	ND<1.17 U (4/10/2006 a)	(1.28 - 1.17)/(6 - 4)	0.055
ND<0.643 OK (10/3/2006 a)	ND<1.17 U (4/10/2006 a)	(0.643 - 1.17)/(7 - 4)	-0.175667
ND<0.777 OK (1/14/2007 a)	ND<1.17 U (4/10/2006 a)	(0.777 - 1.17)/(8 - 4)	-0.09825
ND<1.35 OK (3/20/2007 ~)	ND<1.17 U (4/10/2006 a)	(1.35 - 1.17)/(9 - 4)	0.036
ND<1.99 OK (6/12/2007 a)	ND<1.17 U (4/10/2006 a)	(1.99 - 1.17)/(10 - 4)	0.136667
ND<1.28 OK (7/20/2006 a)	ND<0.335 OK (5/7/2006 a)	(1.28 - 0.335)/(6 - 5)	0.945
ND<0.643 OK (10/3/2006 a)	ND<0.335 OK (5/7/2006 a)	(0.643 - 0.335)/(7 - 5)	0.154
ND<0.777 OK (1/14/2007 a)	ND<0.335 OK (5/7/2006 a)	(0.777 - 0.335)/(8 - 5)	0.147333
ND<1.35 OK (3/20/2007 ~)	ND<0.335 OK (5/7/2006 a)	(1.35 - 0.335)/(9 - 5)	0.25375
ND<1.99 OK (6/12/2007 a)	ND<0.335 OK (5/7/2006 a)	(1.99 - 0.335)/(10 - 5)	0.331
ND<0.643 OK (10/3/2006 a)	ND<1.28 OK (7/20/2006 a)	(0.643 - 1.28)/(7 - 6)	-0.637
ND<0.777 OK (1/14/2007 a)	ND<1.28 OK (7/20/2006 a)	(0.777 - 1.28)/(8 - 6)	-0.2515
ND<1.35 OK (3/20/2007 ~)	ND<1.28 OK (7/20/2006 a)	(1.35 - 1.28)/(9 - 6)	0.0233333
ND<1.99 OK (6/12/2007 a)	ND<1.28 OK (7/20/2006 a)	(1.99 - 1.28)/(10 - 6)	0.1775
ND<0.777 OK (1/14/2007 a)	ND<0.643 OK (10/3/2006 a)	(0.777 - 0.643)/(8 - 7)	0.134
ND<1.35 OK (3/20/2007 ~)	ND<0.643 OK (10/3/2006 a)	(1.35 - 0.643)/(9 - 7)	0.3535

ND<1.99 OK (6/12/2007 a)	ND<0.643 OK (10/3/2006 a)	(1.99 - 0.643)/(10 - 7)	0.449
ND<1.35 OK (3/20/2007 ~)	ND<0.777 OK (1/14/2007 a)	(1.35 - 0.777)/(9 - 8)	0.573
ND<1.99 OK (6/12/2007 a)	ND<0.777 OK (1/14/2007 a)	(1.99 - 0.777)/(10 - 8)	0.6065
ND<1.99 OK (6/12/2007 a)	ND<1.35 OK (3/20/2007 ~)	(1.99 - 1.35)/(10 - 9)	0.64

Number of Q values = 45

Ordered Q Values

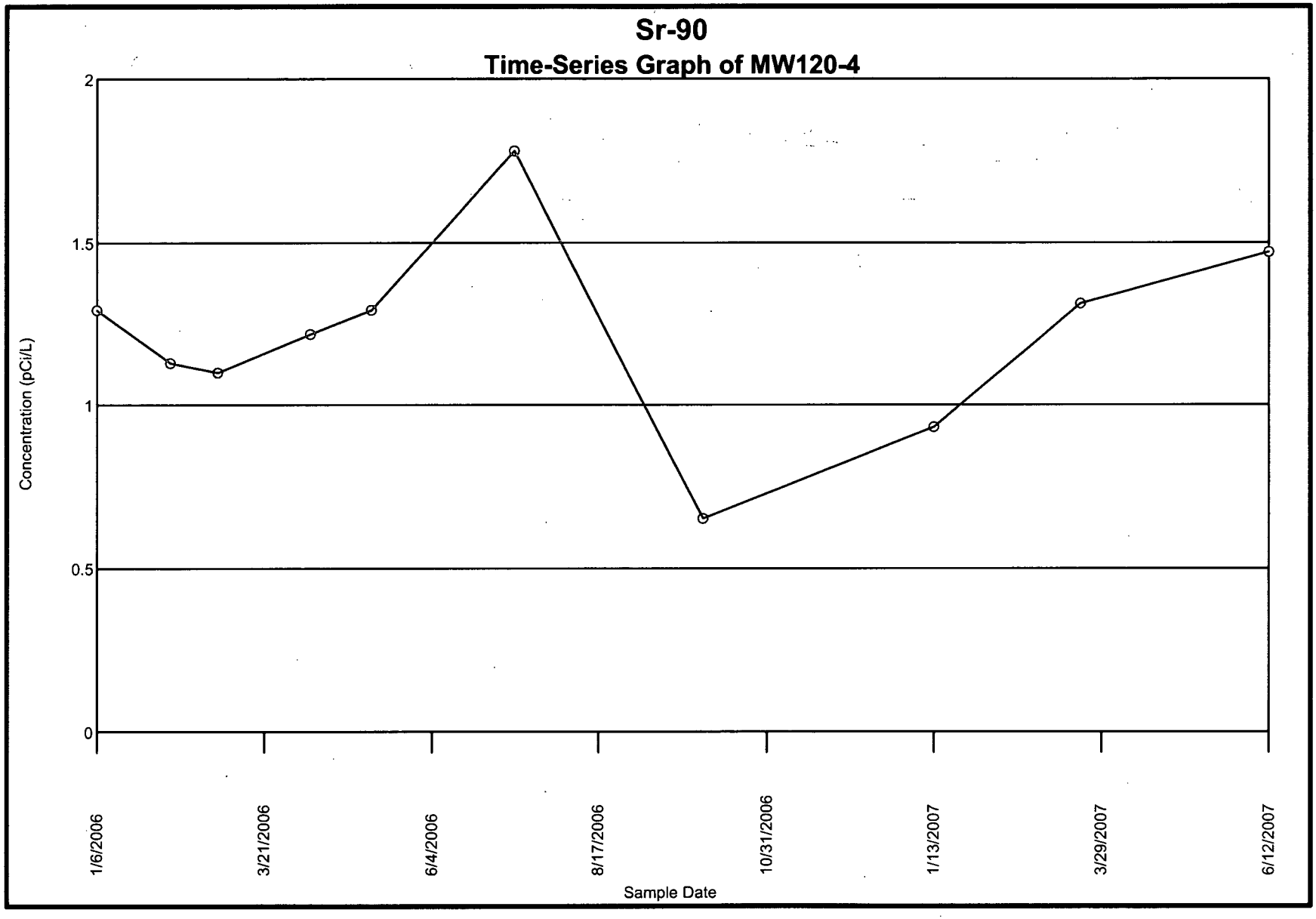
n	Q
1	-0.835
2	-0.637
3	-0.4225
4	-0.345
5	-0.28625
6	-0.2515
7	-0.19
8	-0.175667
9	-0.15
10	-0.1454
11	-0.1395
12	-0.13425
13	-0.11
14	-0.103333
15	-0.100429
16	-0.1
17	-0.0988333
18	-0.09825
19	-0.0806
20	-0.04
21	-0.0225
22	-0.01625
23	-0.01
24	-0.00285714
25	0.0233333
26	0.0283333
27	0.0333333
28	0.036
29	0.055
30	0.0566667
31	0.0775
32	0.115714
33	0.134
34	0.136667
35	0.147333
36	0.154
37	0.1775
38	0.25375
39	0.331
40	0.3535
41	0.449
42	0.573
43	0.6065
44	0.64
45	0.945

Sen's Estimator (Median Q) is -0.01

Time Period	Observations
1/6/2006	1
2/7/2006	1
3/1/2006	1
4/10/2006	1
5/7/2006	1
7/20/2006	1
10/3/2006	1
1/14/2007	1
3/20/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.11 = Q(13)
Upper limit is 0.134 = Q(33)
-0.11 < 0 < 0.134 indicating no trend in data.


Sr-90
Time-Series Graph of MW120-4
Concentration (pCi/L)
2
1.5
1
0.5
0
1/6/2006
3/21/2006
6/4/2006
8/17/2006
10/31/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW120-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.13 U (2/8/2006 a)	ND<1.29 U (1/6/2006 a)	(1.13 - 1.29)/(2 - 1)	-0.16
ND<1.1 U (3/1/2006 a)	ND<1.29 U (1/6/2006 a)	(1.1 - 1.29)/(3 - 1)	-0.095
ND<1.22 U (4/11/2006 a)	ND<1.29 U (1/6/2006 a)	(1.22 - 1.29)/(4 - 1)	-0.0233333
ND<1.29 OK (5/8/2006 a)	ND<1.29 U (1/6/2006 a)	(1.29 - 1.29)/(5 - 1)	0
ND<1.78 OK (7/11/2006 a)	ND<1.29 U (1/6/2006 a)	(1.78 - 1.29)/(6 - 1)	0.098
ND<0.654 OK (10/3/2006 a)	ND<1.29 U (1/6/2006 a)	(0.654 - 1.29)/(7 - 1)	-0.106
ND<0.936 OK (1/14/2007 a)	ND<1.29 U (1/6/2006 a)	(0.936 - 1.29)/(8 - 1)	-0.0505714
ND<1.31 OK (3/20/2007 a)	ND<1.29 U (1/6/2006 a)	(1.31 - 1.29)/(9 - 1)	0.0025
ND<1.47 OK (6/12/2007 a)	ND<1.29 U (1/6/2006 a)	(1.47 - 1.29)/(10 - 1)	0.02
ND<1.1 U (3/1/2006 a)	ND<1.13 U (2/8/2006 a)	(1.1 - 1.13)/(3 - 2)	-0.03
ND<1.22 U (4/11/2006 a)	ND<1.13 U (2/8/2006 a)	(1.22 - 1.13)/(4 - 2)	0.045
ND<1.29 OK (5/8/2006 a)	ND<1.13 U (2/8/2006 a)	(1.29 - 1.13)/(5 - 2)	0.0533333
ND<1.78 OK (7/11/2006 a)	ND<1.13 U (2/8/2006 a)	(1.78 - 1.13)/(6 - 2)	0.1625
ND<0.654 OK (10/3/2006 a)	ND<1.13 U (2/8/2006 a)	(0.654 - 1.13)/(7 - 2)	-0.0952
ND<0.936 OK (1/14/2007 a)	ND<1.13 U (2/8/2006 a)	(0.936 - 1.13)/(8 - 2)	-0.0323333
ND<1.31 OK (3/20/2007 a)	ND<1.13 U (2/8/2006 a)	(1.31 - 1.13)/(9 - 2)	0.0257143
ND<1.47 OK (6/12/2007 a)	ND<1.13 U (2/8/2006 a)	(1.47 - 1.13)/(10 - 2)	0.0425
ND<1.22 U (4/11/2006 a)	ND<1.1 U (3/1/2006 a)	(1.22 - 1.1)/(4 - 3)	0.12
ND<1.29 OK (5/8/2006 a)	ND<1.1 U (3/1/2006 a)	(1.29 - 1.1)/(5 - 3)	0.095
ND<1.78 OK (7/11/2006 a)	ND<1.1 U (3/1/2006 a)	(1.78 - 1.1)/(6 - 3)	0.226667
ND<0.654 OK (10/3/2006 a)	ND<1.1 U (3/1/2006 a)	(0.654 - 1.1)/(7 - 3)	-0.1115
ND<0.936 OK (1/14/2007 a)	ND<1.1 U (3/1/2006 a)	(0.936 - 1.1)/(8 - 3)	-0.0328
ND<1.31 OK (3/20/2007 a)	ND<1.1 U (3/1/2006 a)	(1.31 - 1.1)/(9 - 3)	0.035
ND<1.47 OK (6/12/2007 a)	ND<1.1 U (3/1/2006 a)	(1.47 - 1.1)/(10 - 3)	0.0528571
ND<1.29 OK (5/8/2006 a)	ND<1.22 U (4/11/2006 a)	(1.29 - 1.22)/(5 - 4)	0.07
ND<1.78 OK (7/11/2006 a)	ND<1.22 U (4/11/2006 a)	(1.78 - 1.22)/(6 - 4)	0.28
ND<0.654 OK (10/3/2006 a)	ND<1.22 U (4/11/2006 a)	(0.654 - 1.22)/(7 - 4)	-0.188667
ND<0.936 OK (1/14/2007 a)	ND<1.22 U (4/11/2006 a)	(0.936 - 1.22)/(8 - 4)	-0.071

ND<1.31 OK (3/20/2007 a)	ND<1.22 U (4/11/2006 a)	(1.31 - 1.22)/(9 - 4)	0.018
ND<1.47 OK (6/12/2007 a)	ND<1.22 U (4/11/2006 a)	(1.47 - 1.22)/(10 - 4)	0.0416667
ND<1.78 OK (7/11/2006 a)	ND<1.29 OK (5/8/2006 a)	(1.78 - 1.29)/(6 - 5)	0.49
ND<0.654 OK (10/3/2006 a)	ND<1.29 OK (5/8/2006 a)	(0.654 - 1.29)/(7 - 5)	-0.318
ND<0.936 OK (1/14/2007 a)	ND<1.29 OK (5/8/2006 a)	(0.936 - 1.29)/(8 - 5)	-0.118
ND<1.31 OK (3/20/2007 a)	ND<1.29 OK (5/8/2006 a)	(1.31 - 1.29)/(9 - 5)	0.005
ND<1.47 OK (6/12/2007 a)	ND<1.29 OK (5/8/2006 a)	(1.47 - 1.29)/(10 - 5)	0.036
ND<0.654 OK (10/3/2006 a)	ND<1.78 OK (7/11/2006 a)	(0.654 - 1.78)/(7 - 6)	-1.126
ND<0.936 OK (1/14/2007 a)	ND<1.78 OK (7/11/2006 a)	(0.936 - 1.78)/(8 - 6)	-0.422
ND<1.31 OK (3/20/2007 a)	ND<1.78 OK (7/11/2006 a)	(1.31 - 1.78)/(9 - 6)	-0.156667
ND<1.47 OK (6/12/2007 a)	ND<1.78 OK (7/11/2006 a)	(1.47 - 1.78)/(10 - 6)	-0.0775
ND<0.936 OK (1/14/2007 a)	ND<0.654 OK (10/3/2006 a)	(0.936 - 0.654)/(8 - 7)	0.282
ND<1.31 OK (3/20/2007 a)	ND<0.654 OK (10/3/2006 a)	(1.31 - 0.654)/(9 - 7)	0.328
ND<1.47 OK (6/12/2007 a)	ND<0.654 OK (10/3/2006 a)	(1.47 - 0.654)/(10 - 7)	0.272
ND<1.31 OK (3/20/2007 a)	ND<0.936 OK (1/14/2007 a)	(1.31 - 0.936)/(9 - 8)	0.374
ND<1.47 OK (6/12/2007 a)	ND<0.936 OK (1/14/2007 a)	(1.47 - 0.936)/(10 - 8)	0.267
ND<1.47 OK (6/12/2007 a)	ND<1.31 OK (3/20/2007 a)	(1.47 - 1.31)/(10 - 9)	0.16

Number of Q values = 45

Ordered Q Values

n	Q
1	-1.126
2	-0.422
3	-0.318
4	-0.188667
5	-0.16
6	-0.156667
7	-0.118
8	-0.1115
9	-0.106
10	-0.0952
11	-0.095
12	-0.0775
13	-0.071

14	-0.0505714
15	-0.0328
16	-0.0323333
17	-0.03
18	-0.0233333
19	0
20	0.0025
21	0.005
22	0.018
23	0.02
24	0.0257143
25	0.035
26	0.036
27	0.0416667
28	0.0425
29	0.045
30	0.0528571
31	0.0533333
32	0.07
33	0.095
34	0.098
35	0.12
36	0.16
37	0.1625
38	0.226667
39	0.267
40	0.272
41	0.28
42	0.282
43	0.328
44	0.374
45	0.49

Sen's Estimator (Median Q) is 0.02

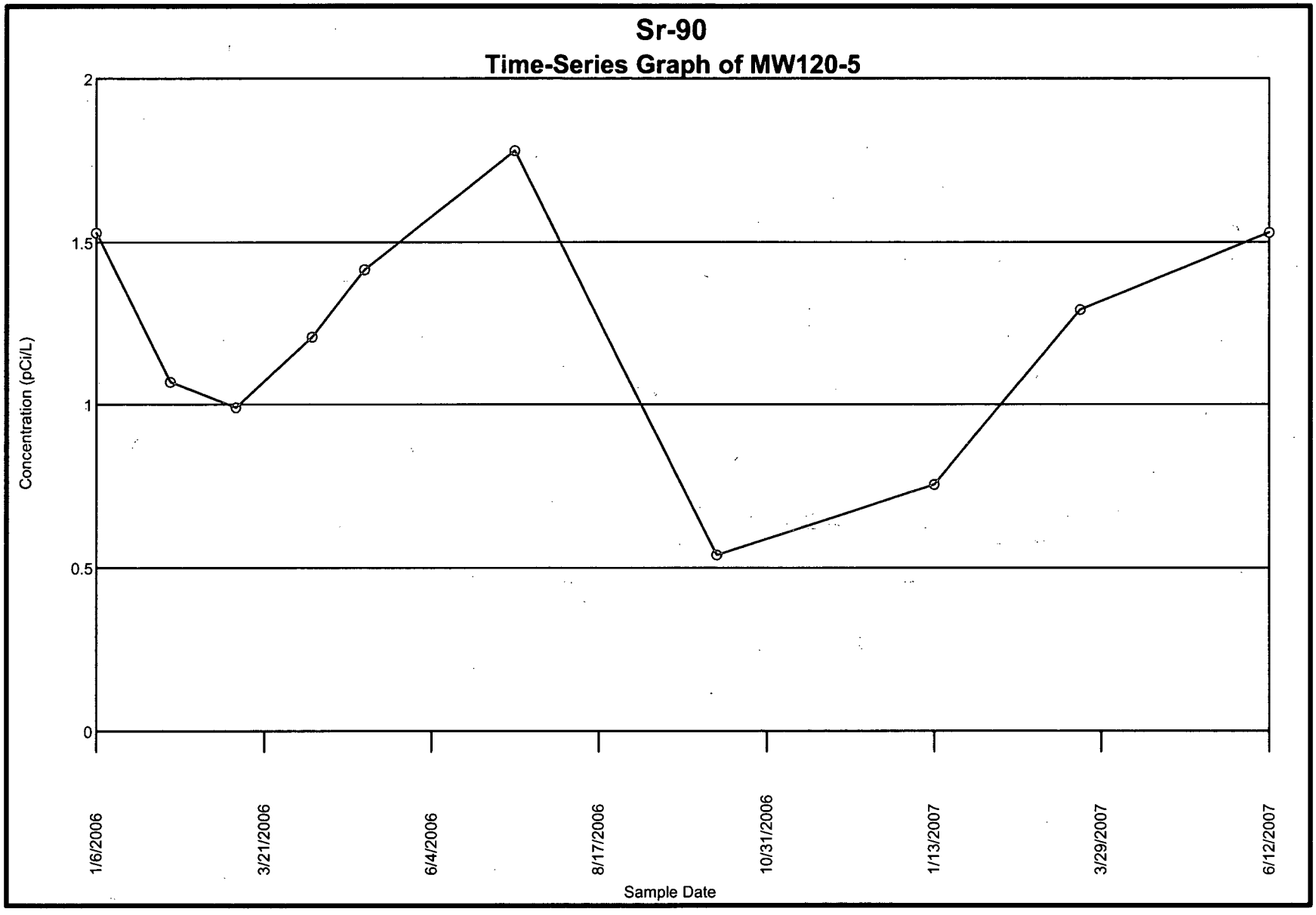
Tied Group	Value	Members
1	1.29	2

Time Period	Observations
1/6/2006	1
2/8/2006	1
3/1/2006	1

4/11/2006	1
5/8/2006	1
7/11/2006	1
10/3/2006	1
1/14/2007	1
3/20/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.071 = Q(13)
Upper limit is 0.095 = Q(33)
-0.071 < 0 < 0.095 indicating no trend in data.


Sr-90
Time-Series Graph of MW120-5
Concentration (pCi/L)
2
1.5
1
0.5
0
1/6/2006
3/21/2006
6/4/2006
8/17/2006
10/31/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW120-5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.07 U (2/8/2006 a)	ND<1.53 U (1/6/2006 a)	(1.07 - 1.53)/(2 - 1)	-0.46
ND<0.993 U (3/9/2006 a)	ND<1.53 U (1/6/2006 a)	(0.993 - 1.53)/(3 - 1)	-0.2685
ND<1.21 U (4/12/2006 a)	ND<1.53 U (1/6/2006 a)	(1.21 - 1.53)/(4 - 1)	-0.106667
ND<1.415 OK (5/5/2006 ~)	ND<1.53 U (1/6/2006 a)	(1.415 - 1.53)/(5 - 1)	-0.02875
ND<1.78 OK (7/11/2006 a)	ND<1.53 U (1/6/2006 a)	(1.78 - 1.53)/(6 - 1)	0.05
ND<0.542 OK (10/9/2006 a)	ND<1.53 U (1/6/2006 a)	(0.542 - 1.53)/(7 - 1)	-0.164667
ND<0.756 OK (1/14/2007 a)	ND<1.53 U (1/6/2006 a)	(0.756 - 1.53)/(8 - 1)	-0.110571
ND<1.29 OK (3/20/2007 a)	ND<1.53 U (1/6/2006 a)	(1.29 - 1.53)/(9 - 1)	-0.03
ND<1.53 OK (6/12/2007 a)	ND<1.53 U (1/6/2006 a)	(1.53 - 1.53)/(10 - 1)	0
ND<0.993 U (3/9/2006 a)	ND<1.07 U (2/8/2006 a)	(0.993 - 1.07)/(3 - 2)	-0.077
ND<1.21 U (4/12/2006 a)	ND<1.07 U (2/8/2006 a)	(1.21 - 1.07)/(4 - 2)	0.07
ND<1.415 OK (5/5/2006 ~)	ND<1.07 U (2/8/2006 a)	(1.415 - 1.07)/(5 - 2)	0.115
ND<1.78 OK (7/11/2006 a)	ND<1.07 U (2/8/2006 a)	(1.78 - 1.07)/(6 - 2)	0.1775
ND<0.542 OK (10/9/2006 a)	ND<1.07 U (2/8/2006 a)	(0.542 - 1.07)/(7 - 2)	-0.1056
ND<0.756 OK (1/14/2007 a)	ND<1.07 U (2/8/2006 a)	(0.756 - 1.07)/(8 - 2)	-0.0523333
ND<1.29 OK (3/20/2007 a)	ND<1.07 U (2/8/2006 a)	(1.29 - 1.07)/(9 - 2)	0.0314286
ND<1.53 OK (6/12/2007 a)	ND<1.07 U (2/8/2006 a)	(1.53 - 1.07)/(10 - 2)	0.0575
ND<1.21 U (4/12/2006 a)	ND<0.993 U (3/9/2006 a)	(1.21 - 0.993)/(4 - 3)	0.217
ND<1.415 OK (5/5/2006 ~)	ND<0.993 U (3/9/2006 a)	(1.415 - 0.993)/(5 - 3)	0.211
ND<1.78 OK (7/11/2006 a)	ND<0.993 U (3/9/2006 a)	(1.78 - 0.993)/(6 - 3)	0.262333
ND<0.542 OK (10/9/2006 a)	ND<0.993 U (3/9/2006 a)	(0.542 - 0.993)/(7 - 3)	-0.11275
ND<0.756 OK (1/14/2007 a)	ND<0.993 U (3/9/2006 a)	(0.756 - 0.993)/(8 - 3)	-0.0474
ND<1.29 OK (3/20/2007 a)	ND<0.993 U (3/9/2006 a)	(1.29 - 0.993)/(9 - 3)	0.0495
ND<1.53 OK (6/12/2007 a)	ND<0.993 U (3/9/2006 a)	(1.53 - 0.993)/(10 - 3)	0.0767143
ND<1.415 OK (5/5/2006 ~)	ND<1.21 U (4/12/2006 a)	(1.415 - 1.21)/(5 - 4)	0.205
ND<1.78 OK (7/11/2006 a)	ND<1.21 U (4/12/2006 a)	(1.78 - 1.21)/(6 - 4)	0.285
ND<0.542 OK (10/9/2006 a)	ND<1.21 U (4/12/2006 a)	(0.542 - 1.21)/(7 - 4)	-0.222667
ND<0.756 OK (1/14/2007 a)	ND<1.21 U (4/12/2006 a)	(0.756 - 1.21)/(8 - 4)	-0.1135
ND<1.29 OK (3/20/2007 a)	ND<1.21 U (4/12/2006 a)	(1.29 - 1.21)/(9 - 4)	0.016
ND<1.53 OK (6/12/2007 a)	ND<1.21 U (4/12/2006 a)	(1.53 - 1.21)/(10 - 4)	0.0533333
ND<1.78 OK (7/11/2006 a)	ND<1.415 OK (5/5/2006 ~)	(1.78 - 1.415)/(6 - 5)	0.365
ND<0.542 OK (10/9/2006 a)	ND<1.415 OK (5/5/2006 ~)	(0.542 - 1.415)/(7 - 5)	-0.4365
ND<0.756 OK (1/14/2007 a)	ND<1.415 OK (5/5/2006 ~)	(0.756 - 1.415)/(8 - 5)	-0.219667
ND<1.29 OK (3/20/2007 a)	ND<1.415 OK (5/5/2006 ~)	(1.29 - 1.415)/(9 - 5)	-0.03125
ND<1.53 OK (6/12/2007 a)	ND<1.415 OK (5/5/2006 ~)	(1.53 - 1.415)/(10 - 5)	0.023
ND<0.542 OK (10/9/2006 a)	ND<1.78 OK (7/11/2006 a)	(0.542 - 1.78)/(7 - 6)	-1.238
ND<0.756 OK (1/14/2007 a)	ND<1.78 OK (7/11/2006 a)	(0.756 - 1.78)/(8 - 6)	-0.512
ND<1.29 OK (3/20/2007 a)	ND<1.78 OK (7/11/2006 a)	(1.29 - 1.78)/(9 - 6)	-0.163333
ND<1.53 OK (6/12/2007 a)	ND<1.78 OK (7/11/2006 a)	(1.53 - 1.78)/(10 - 6)	-0.0625
ND<0.756 OK (1/14/2007 a)	ND<0.542 OK (10/9/2006 a)	(0.756 - 0.542)/(8 - 7)	0.214
ND<1.29 OK (3/20/2007 a)	ND<0.542 OK (10/9/2006 a)	(1.29 - 0.542)/(9 - 7)	0.374

ND<1.53 OK (6/12/2007 a)	ND<0.542 OK (10/9/2006 a)	(1.53 - 0.542)/(10 - 7)	0.329333
ND<1.29 OK (3/20/2007 a)	ND<0.756 OK (1/14/2007 a)	(1.29 - 0.756)/(9 - 8)	0.534
ND<1.53 OK (6/12/2007 a)	ND<0.756 OK (1/14/2007 a)	(1.53 - 0.756)/(10 - 8)	0.387
ND<1.53 OK (6/12/2007 a)	ND<1.29 OK (3/20/2007 a)	(1.53 - 1.29)/(10 - 9)	0.24

Number of Q values = 45

Ordered Q Values

n	Q
1	-1.238
2	-0.512
3	-0.46
4	-0.4365
5	-0.2685
6	-0.222667
7	-0.219667
8	-0.164667
9	-0.163333
10	-0.1135
11	-0.11275
12	-0.110571
13	-0.106667
14	-0.1056
15	-0.077
16	-0.0625
17	-0.0523333
18	-0.0474
19	-0.03125
20	-0.03
21	-0.02875
22	0
23	0.016
24	0.023
25	0.0314286
26	0.0495
27	0.05
28	0.0533333
29	0.0575
30	0.07
31	0.0767143
32	0.115
33	0.1775
34	0.205
35	0.211
36	0.214
37	0.217
38	0.24
39	0.262333
40	0.285
41	0.329333
42	0.365
43	0.374
44	0.387
45	0.534

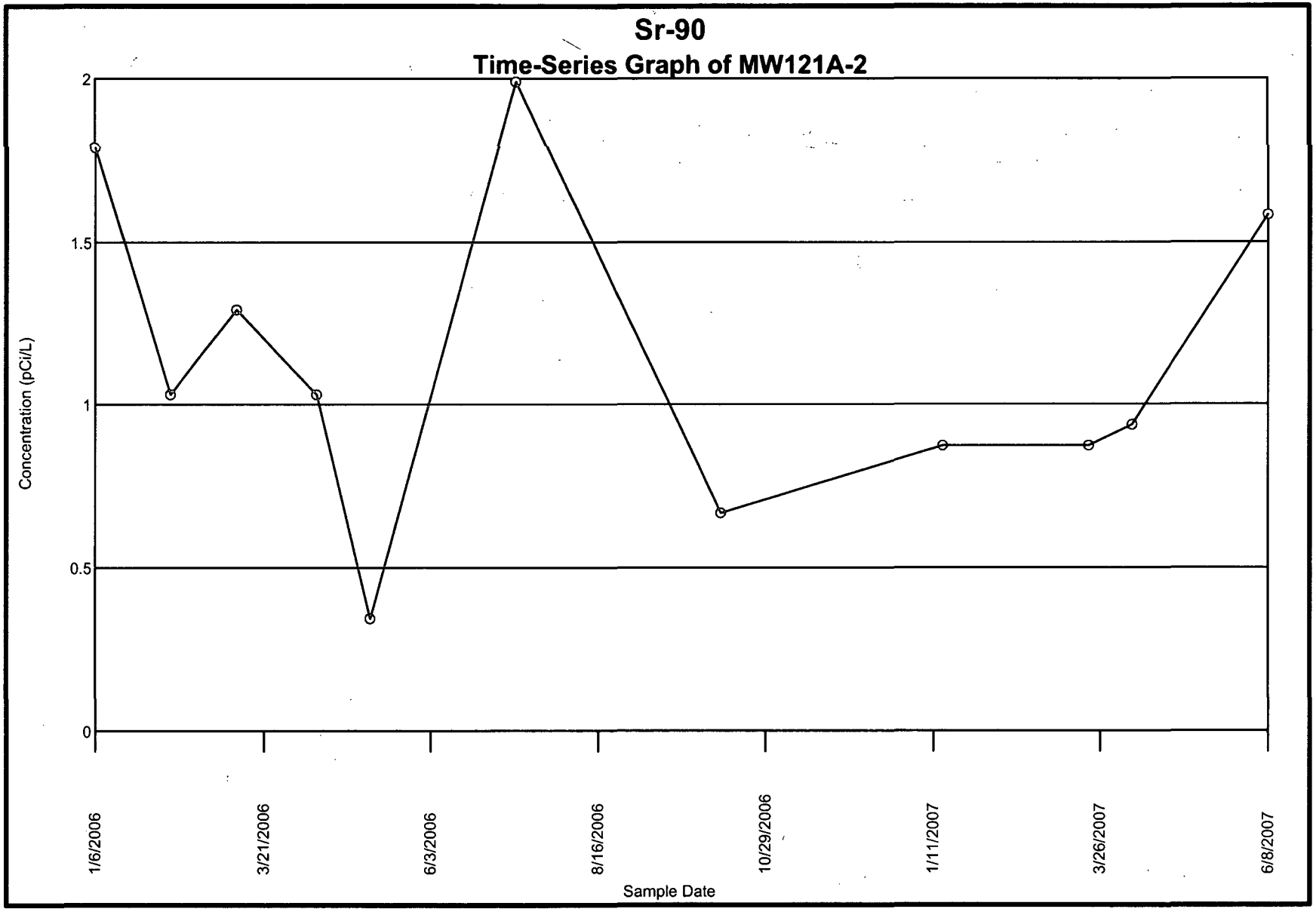
Sen's Estimator (Median Q) is 0.016

Tied Group	Value	Members
1	1.53	2

Time Period	Observations
1/6/2006	1
2/8/2006	1
3/9/2006	1
4/12/2006	1
5/5/2006	1
7/11/2006	1
10/9/2006	1
1/14/2007	1
3/20/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.106667 = Q(13)
Upper limit is 0.1775 = Q(33)
-0.106667 < 0 < 0.1775 indicating no trend in data.


Sr-90
Time-Series Graph of MW121A-2
Concentration (pCi/L)
2
1.5
1
0.5
0
1/6/2006
3/21/2006
6/3/2006
8/16/2006
10/29/2006
1/11/2007
3/26/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW121A-2

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.03 U (2/8/2006 a)	ND<1.79 U (1/6/2006 a)	(1.03 - 1.79)/(2 - 1)	-0.76
ND<1.29 U (3/9/2006 a)	ND<1.79 U (1/6/2006 a)	(1.29 - 1.79)/(3 - 1)	-0.25
ND<1.03 U (4/13/2006 a)	ND<1.79 U (1/6/2006 a)	(1.03 - 1.79)/(4 - 1)	-0.253333
ND<0.344 OK (5/7/2006 a)	ND<1.79 U (1/6/2006 a)	(0.344 - 1.79)/(5 - 1)	-0.3615
ND<1.99 OK (7/11/2006 a)	ND<1.79 U (1/6/2006 a)	(1.99 - 1.79)/(6 - 1)	0.04
ND<0.668 OK (10/9/2006 a)	ND<1.79 U (1/6/2006 a)	(0.668 - 1.79)/(7 - 1)	-0.187
ND<0.876 OK (1/15/2007 a)	ND<1.79 U (1/6/2006 a)	(0.876 - 1.79)/(8 - 1)	-0.130571
ND<0.874 OK (3/21/2007 a)	ND<1.79 U (1/6/2006 a)	(0.874 - 1.79)/(9 - 1)	-0.1145
ND<0.941 OK (4/9/2007 a)	ND<1.79 U (1/6/2006 a)	(0.941 - 1.79)/(10 - 1)	-0.0943333
ND<1.58 OK (6/8/2007 a)	ND<1.79 U (1/6/2006 a)	(1.58 - 1.79)/(11 - 1)	-0.021
ND<1.29 U (3/9/2006 a)	ND<1.03 U (2/8/2006 a)	(1.29 - 1.03)/(3 - 2)	0.26
ND<1.03 U (4/13/2006 a)	ND<1.03 U (2/8/2006 a)	(1.03 - 1.03)/(4 - 2)	0
ND<0.344 OK (5/7/2006 a)	ND<1.03 U (2/8/2006 a)	(0.344 - 1.03)/(5 - 2)	-0.228667
ND<1.99 OK (7/11/2006 a)	ND<1.03 U (2/8/2006 a)	(1.99 - 1.03)/(6 - 2)	0.24
ND<0.668 OK (10/9/2006 a)	ND<1.03 U (2/8/2006 a)	(0.668 - 1.03)/(7 - 2)	-0.0724
ND<0.876 OK (1/15/2007 a)	ND<1.03 U (2/8/2006 a)	(0.876 - 1.03)/(8 - 2)	-0.0256667
ND<0.874 OK (3/21/2007 a)	ND<1.03 U (2/8/2006 a)	(0.874 - 1.03)/(9 - 2)	-0.0222857
ND<0.941 OK (4/9/2007 a)	ND<1.03 U (2/8/2006 a)	(0.941 - 1.03)/(10 - 2)	-0.011125
ND<1.58 OK (6/8/2007 a)	ND<1.03 U (2/8/2006 a)	(1.58 - 1.03)/(11 - 2)	0.0611111
ND<1.03 U (4/13/2006 a)	ND<1.29 U (3/9/2006 a)	(1.03 - 1.29)/(4 - 3)	-0.26
ND<0.344 OK (5/7/2006 a)	ND<1.29 U (3/9/2006 a)	(0.344 - 1.29)/(5 - 3)	-0.473
ND<1.99 OK (7/11/2006 a)	ND<1.29 U (3/9/2006 a)	(1.99 - 1.29)/(6 - 3)	0.233333
ND<0.668 OK (10/9/2006 a)	ND<1.29 U (3/9/2006 a)	(0.668 - 1.29)/(7 - 3)	-0.1555
ND<0.876 OK (1/15/2007 a)	ND<1.29 U (3/9/2006 a)	(0.876 - 1.29)/(8 - 3)	-0.0828
ND<0.874 OK (3/21/2007 a)	ND<1.29 U (3/9/2006 a)	(0.874 - 1.29)/(9 - 3)	-0.0693333
ND<0.941 OK (4/9/2007 a)	ND<1.29 U (3/9/2006 a)	(0.941 - 1.29)/(10 - 3)	-0.0498571
ND<1.58 OK (6/8/2007 a)	ND<1.29 U (3/9/2006 a)	(1.58 - 1.29)/(11 - 3)	0.03625
ND<0.344 OK (5/7/2006 a)	ND<1.03 U (4/13/2006 a)	(0.344 - 1.03)/(5 - 4)	-0.686
ND<1.99 OK (7/11/2006 a)	ND<1.03 U (4/13/2006 a)	(1.99 - 1.03)/(6 - 4)	0.48
ND<0.668 OK (10/9/2006 a)	ND<1.03 U (4/13/2006 a)	(0.668 - 1.03)/(7 - 4)	-0.120667
ND<0.876 OK (1/15/2007 a)	ND<1.03 U (4/13/2006 a)	(0.876 - 1.03)/(8 - 4)	-0.0385
ND<0.874 OK (3/21/2007 a)	ND<1.03 U (4/13/2006 a)	(0.874 - 1.03)/(9 - 4)	-0.0312
ND<0.941 OK (4/9/2007 a)	ND<1.03 U (4/13/2006 a)	(0.941 - 1.03)/(10 - 4)	-0.0148333
ND<1.58 OK (6/8/2007 a)	ND<1.03 U (4/13/2006 a)	(1.58 - 1.03)/(11 - 4)	0.0785714
ND<1.99 OK (7/11/2006 a)	ND<0.344 OK (5/7/2006 a)	(1.99 - 0.344)/(6 - 5)	1.646
ND<0.668 OK (10/9/2006 a)	ND<0.344 OK (5/7/2006 a)	(0.668 - 0.344)/(7 - 5)	0.162
ND<0.876 OK (1/15/2007 a)	ND<0.344 OK (5/7/2006 a)	(0.876 - 0.344)/(8 - 5)	0.177333
ND<0.874 OK (3/21/2007 a)	ND<0.344 OK (5/7/2006 a)	(0.874 - 0.344)/(9 - 5)	0.1325
ND<0.941 OK (4/9/2007 a)	ND<0.344 OK (5/7/2006 a)	(0.941 - 0.344)/(10 - 5)	0.1194
ND<1.58 OK (6/8/2007 a)	ND<0.344 OK (5/7/2006 a)	(1.58 - 0.344)/(11 - 5)	0.206
ND<0.668 OK (10/9/2006 a)	ND<1.99 OK (7/11/2006 a)	(0.668 - 1.99)/(7 - 6)	-1.322
ND<0.876 OK (1/15/2007 a)	ND<1.99 OK (7/11/2006 a)	(0.876 - 1.99)/(8 - 6)	-0.557

ND<0.874 OK (3/21/2007 a)	ND<1.99 OK (7/11/2006 a)	(0.874 - 1.99)/(9 - 6)	-0.372
ND<0.941 OK (4/9/2007 a)	ND<1.99 OK (7/11/2006 a)	(0.941 - 1.99)/(10 - 6)	-0.26225
ND<1.58 OK (6/8/2007 a)	ND<1.99 OK (7/11/2006 a)	(1.58 - 1.99)/(11 - 6)	-0.082
ND<0.876 OK (1/15/2007 a)	ND<0.668 OK (10/9/2006 a)	(0.876 - 0.668)/(8 - 7)	0.208
ND<0.874 OK (3/21/2007 a)	ND<0.668 OK (10/9/2006 a)	(0.874 - 0.668)/(9 - 7)	0.103
ND<0.941 OK (4/9/2007 a)	ND<0.668 OK (10/9/2006 a)	(0.941 - 0.668)/(10 - 7)	0.091
ND<1.58 OK (6/8/2007 a)	ND<0.668 OK (10/9/2006 a)	(1.58 - 0.668)/(11 - 7)	0.228
ND<0.874 OK (3/21/2007 a)	ND<0.876 OK (1/15/2007 a)	(0.874 - 0.876)/(9 - 8)	-0.002
ND<0.941 OK (4/9/2007 a)	ND<0.876 OK (1/15/2007 a)	(0.941 - 0.876)/(10 - 8)	0.0325
ND<1.58 OK (6/8/2007 a)	ND<0.876 OK (1/15/2007 a)	(1.58 - 0.876)/(11 - 8)	0.234667
ND<0.941 OK (4/9/2007 a)	ND<0.874 OK (3/21/2007 a)	(0.941 - 0.874)/(10 - 9)	0.067
ND<1.58 OK (6/8/2007 a)	ND<0.874 OK (3/21/2007 a)	(1.58 - 0.874)/(11 - 9)	0.353
ND<1.58 OK (6/8/2007 a)	ND<0.941 OK (4/9/2007 a)	(1.58 - 0.941)/(11 - 10)	0.639

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.322
2	-0.76
3	-0.686
4	-0.557
5	-0.473
6	-0.372
7	-0.3615
8	-0.26225
9	-0.26
10	-0.253333
11	-0.25
12	-0.228667
13	-0.187
14	-0.1555
15	-0.130571
16	-0.120667
17	-0.1145
18	-0.0943333
19	-0.0828
20	-0.082
21	-0.0724
22	-0.0693333
23	-0.0498571
24	-0.0385
25	-0.0312
26	-0.0256667
27	-0.0222857
28	-0.021
29	-0.0148333
30	-0.011125
31	-0.002
32	0
33	0.0325
34	0.03625

35	0.04
36	0.0611111
37	0.067
38	0.0785714
39	0.091
40	0.103
41	0.1194
42	0.1325
43	0.162
44	0.177333
45	0.206
46	0.208
47	0.228
48	0.233333
49	0.234667
50	0.24
51	0.26
52	0.353
53	0.48
54	0.639
55	1.646

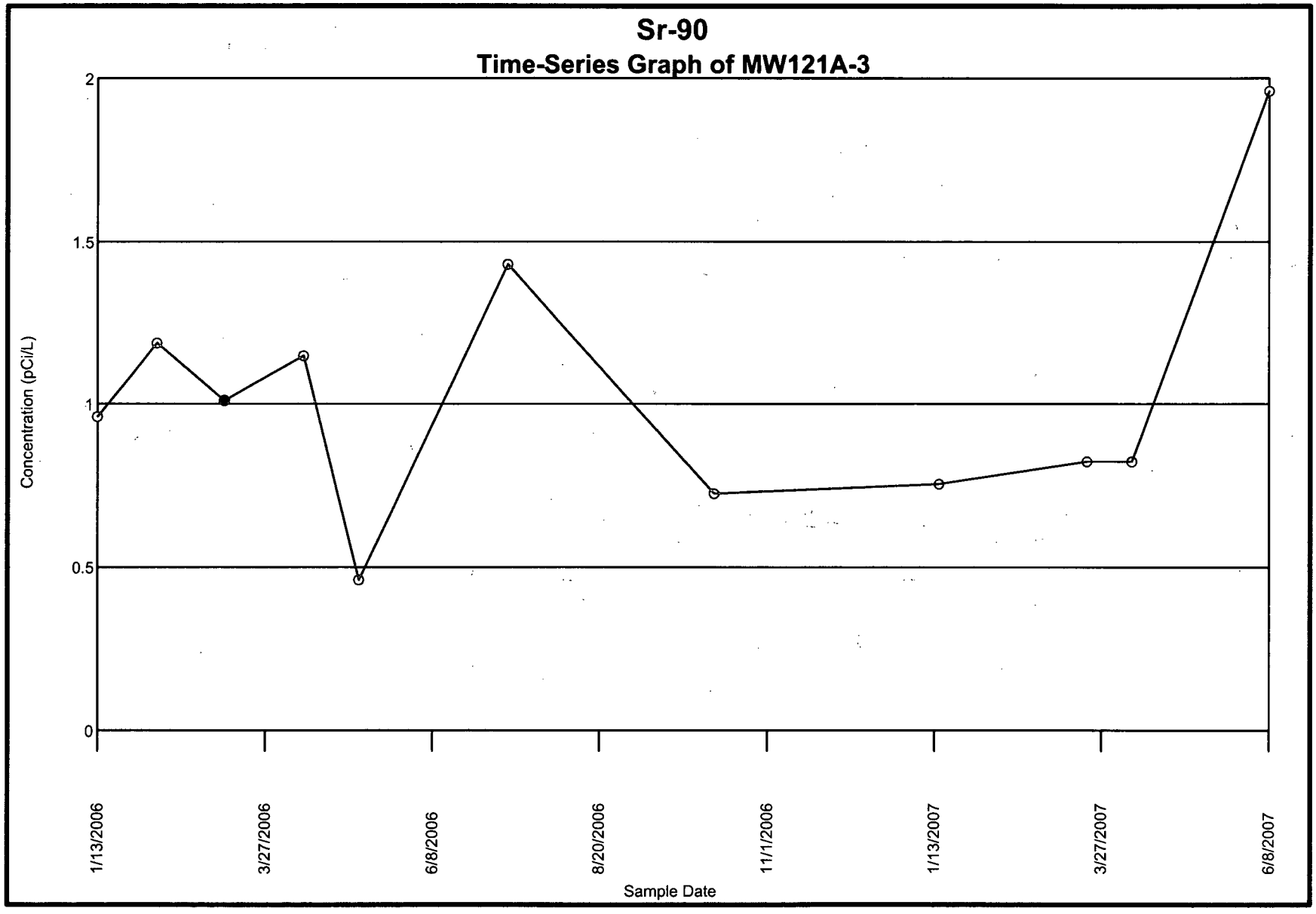
Sen's Estimator (Median Q) is -0.021

Tied Group	Value	Members
1	1.03	2

Time Period	Observations
1/6/2006	1
2/8/2006	1
3/9/2006	1
4/13/2006	1
5/7/2006	1
7/11/2006	1
10/9/2006	1
1/15/2007	1
3/21/2007	1
4/9/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -0.1145 = Q(17)
Upper limit is 0.091 = Q(39)
-0.1145 < 0 < 0.091 indicating no trend in data.


Sr-90
Time-Series Graph of MW121A-3
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW121A-3

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.19 U (2/8/2006 a)	ND<0.963 U (1/13/2006 a)	(1.19 - 0.963)/(2 - 1)	0.227
1.0125 U (3/9/2006 ~)	ND<0.963 U (1/13/2006 a)	(1.0125 - 0.963)/(3 - 1)	0.02475
ND<1.15 U (4/13/2006 a)	ND<0.963 U (1/13/2006 a)	(1.15 - 0.963)/(4 - 1)	0.0623333
ND<0.46 OK (5/7/2006 a)	ND<0.963 U (1/13/2006 a)	(0.46 - 0.963)/(5 - 1)	-0.12575
ND<1.43 OK (7/11/2006 a)	ND<0.963 U (1/13/2006 a)	(1.43 - 0.963)/(6 - 1)	0.0934
ND<0.728 OK (10/9/2006 a)	ND<0.963 U (1/13/2006 a)	(0.728 - 0.963)/(7 - 1)	-0.0391667
ND<0.755 OK (1/15/2007 a)	ND<0.963 U (1/13/2006 a)	(0.755 - 0.963)/(8 - 1)	-0.0297143
ND<0.825 OK (3/21/2007 a)	ND<0.963 U (1/13/2006 a)	(0.825 - 0.963)/(9 - 1)	-0.01725
ND<0.825 OK (4/9/2007 a)	ND<0.963 U (1/13/2006 a)	(0.825 - 0.963)/(10 - 1)	-0.0153333
ND<1.96 OK (6/8/2007 a)	ND<0.963 U (1/13/2006 a)	(1.96 - 0.963)/(11 - 1)	0.0997
1.0125 U (3/9/2006 ~)	ND<1.19 U (2/8/2006 a)	(1.0125 - 1.19)/(3 - 2)	-0.1775
ND<1.15 U (4/13/2006 a)	ND<1.19 U (2/8/2006 a)	(1.15 - 1.19)/(4 - 2)	-0.02
ND<0.46 OK (5/7/2006 a)	ND<1.19 U (2/8/2006 a)	(0.46 - 1.19)/(5 - 2)	-0.243333
ND<1.43 OK (7/11/2006 a)	ND<1.19 U (2/8/2006 a)	(1.43 - 1.19)/(6 - 2)	0.06
ND<0.728 OK (10/9/2006 a)	ND<1.19 U (2/8/2006 a)	(0.728 - 1.19)/(7 - 2)	-0.0924
ND<0.755 OK (1/15/2007 a)	ND<1.19 U (2/8/2006 a)	(0.755 - 1.19)/(8 - 2)	-0.0725
ND<0.825 OK (3/21/2007 a)	ND<1.19 U (2/8/2006 a)	(0.825 - 1.19)/(9 - 2)	-0.0521429
ND<0.825 OK (4/9/2007 a)	ND<1.19 U (2/8/2006 a)	(0.825 - 1.19)/(10 - 2)	-0.045625
ND<1.96 OK (6/8/2007 a)	ND<1.19 U (2/8/2006 a)	(1.96 - 1.19)/(11 - 2)	0.0855556
ND<1.15 U (4/13/2006 a)	1.0125 U (3/9/2006 ~)	(1.15 - 1.0125)/(4 - 3)	0.1375
ND<0.46 OK (5/7/2006 a)	1.0125 U (3/9/2006 ~)	(0.46 - 1.0125)/(5 - 3)	-0.27625
ND<1.43 OK (7/11/2006 a)	1.0125 U (3/9/2006 ~)	(1.43 - 1.0125)/(6 - 3)	0.139167
ND<0.728 OK (10/9/2006 a)	1.0125 U (3/9/2006 ~)	(0.728 - 1.0125)/(7 - 3)	-0.071125
ND<0.755 OK (1/15/2007 a)	1.0125 U (3/9/2006 ~)	(0.755 - 1.0125)/(8 - 3)	-0.0515
ND<0.825 OK (3/21/2007 a)	1.0125 U (3/9/2006 ~)	(0.825 - 1.0125)/(9 - 3)	-0.03125
ND<0.825 OK (4/9/2007 a)	1.0125 U (3/9/2006 ~)	(0.825 - 1.0125)/(10 - 3)	-0.0267857
ND<1.96 OK (6/8/2007 a)	1.0125 U (3/9/2006 ~)	(1.96 - 1.0125)/(11 - 3)	0.118437
ND<0.46 OK (5/7/2006 a)	ND<1.15 U (4/13/2006 a)	(0.46 - 1.15)/(5 - 4)	-0.69
ND<1.43 OK (7/11/2006 a)	ND<1.15 U (4/13/2006 a)	(1.43 - 1.15)/(6 - 4)	0.14
ND<0.728 OK (10/9/2006 a)	ND<1.15 U (4/13/2006 a)	(0.728 - 1.15)/(7 - 4)	-0.140667
ND<0.755 OK (1/15/2007 a)	ND<1.15 U (4/13/2006 a)	(0.755 - 1.15)/(8 - 4)	-0.09875
ND<0.825 OK (3/21/2007 a)	ND<1.15 U (4/13/2006 a)	(0.825 - 1.15)/(9 - 4)	-0.065
ND<0.825 OK (4/9/2007 a)	ND<1.15 U (4/13/2006 a)	(0.825 - 1.15)/(10 - 4)	-0.0541667
ND<1.96 OK (6/8/2007 a)	ND<1.15 U (4/13/2006 a)	(1.96 - 1.15)/(11 - 4)	0.115714
ND<1.43 OK (7/11/2006 a)	ND<0.46 OK (5/7/2006 a)	(1.43 - 0.46)/(6 - 5)	0.97
ND<0.728 OK (10/9/2006 a)	ND<0.46 OK (5/7/2006 a)	(0.728 - 0.46)/(7 - 5)	0.134
ND<0.755 OK (1/15/2007 a)	ND<0.46 OK (5/7/2006 a)	(0.755 - 0.46)/(8 - 5)	0.0983333
ND<0.825 OK (3/21/2007 a)	ND<0.46 OK (5/7/2006 a)	(0.825 - 0.46)/(9 - 5)	0.09125
ND<0.825 OK (4/9/2007 a)	ND<0.46 OK (5/7/2006 a)	(0.825 - 0.46)/(10 - 5)	0.073
ND<1.96 OK (6/8/2007 a)	ND<0.46 OK (5/7/2006 a)	(1.96 - 0.46)/(11 - 5)	0.25
ND<0.728 OK (10/9/2006 a)	ND<1.43 OK (7/11/2006 a)	(0.728 - 1.43)/(7 - 6)	-0.702
ND<0.755 OK (1/15/2007 a)	ND<1.43 OK (7/11/2006 a)	(0.755 - 1.43)/(8 - 6)	-0.3375

ND<0.825 OK (3/21/2007 a)	ND<1.43 OK (7/11/2006 a)	(0.825 - 1.43)/(9 - 6)	-0.201667
ND<0.825 OK (4/9/2007 a)	ND<1.43 OK (7/11/2006 a)	(0.825 - 1.43)/(10 - 6)	-0.15125
ND<1.96 OK (6/8/2007 a)	ND<1.43 OK (7/11/2006 a)	(1.96 - 1.43)/(11 - 6)	0.106
ND<0.755 OK (1/15/2007 a)	ND<0.728 OK (10/9/2006 a)	(0.755 - 0.728)/(8 - 7)	0.027
ND<0.825 OK (3/21/2007 a)	ND<0.728 OK (10/9/2006 a)	(0.825 - 0.728)/(9 - 7)	0.0485
ND<0.825 OK (4/9/2007 a)	ND<0.728 OK (10/9/2006 a)	(0.825 - 0.728)/(10 - 7)	0.0323333
ND<1.96 OK (6/8/2007 a)	ND<0.728 OK (10/9/2006 a)	(1.96 - 0.728)/(11 - 7)	0.308
ND<0.825 OK (3/21/2007 a)	ND<0.755 OK (1/15/2007 a)	(0.825 - 0.755)/(9 - 8)	0.07
ND<0.825 OK (4/9/2007 a)	ND<0.755 OK (1/15/2007 a)	(0.825 - 0.755)/(10 - 8)	0.035
ND<1.96 OK (6/8/2007 a)	ND<0.755 OK (1/15/2007 a)	(1.96 - 0.755)/(11 - 8)	0.401667
ND<0.825 OK (4/9/2007 a)	ND<0.825 OK (3/21/2007 a)	(0.825 - 0.825)/(10 - 9)	0
ND<1.96 OK (6/8/2007 a)	ND<0.825 OK (3/21/2007 a)	(1.96 - 0.825)/(11 - 9)	0.5675
ND<1.96 OK (6/8/2007 a)	ND<0.825 OK (4/9/2007 a)	(1.96 - 0.825)/(11 - 10)	1.135

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.702
2	-0.69
3	-0.3375
4	-0.27625
5	-0.243333
6	-0.201667
7	-0.1775
8	-0.15125
9	-0.140667
10	-0.12575
11	-0.09875
12	-0.0924
13	-0.0725
14	-0.071125
15	-0.065
16	-0.0541667
17	-0.0521429
18	-0.0515
19	-0.045625
20	-0.0391667
21	-0.03125
22	-0.0297143
23	-0.0267857
24	-0.02
25	-0.01725
26	-0.0153333
27	0
28	0.02475
29	0.027
30	0.0323333
31	0.035
32	0.0485
33	0.06
34	0.0623333

35	0.07
36	0.073
37	0.0855556
38	0.09125
39	0.0934
40	0.0983333
41	0.0997
42	0.106
43	0.115714
44	0.118437
45	0.134
46	0.1375
47	0.139167
48	0.14
49	0.227
50	0.25
51	0.308
52	0.401667
53	0.5675
54	0.97
55	1.135

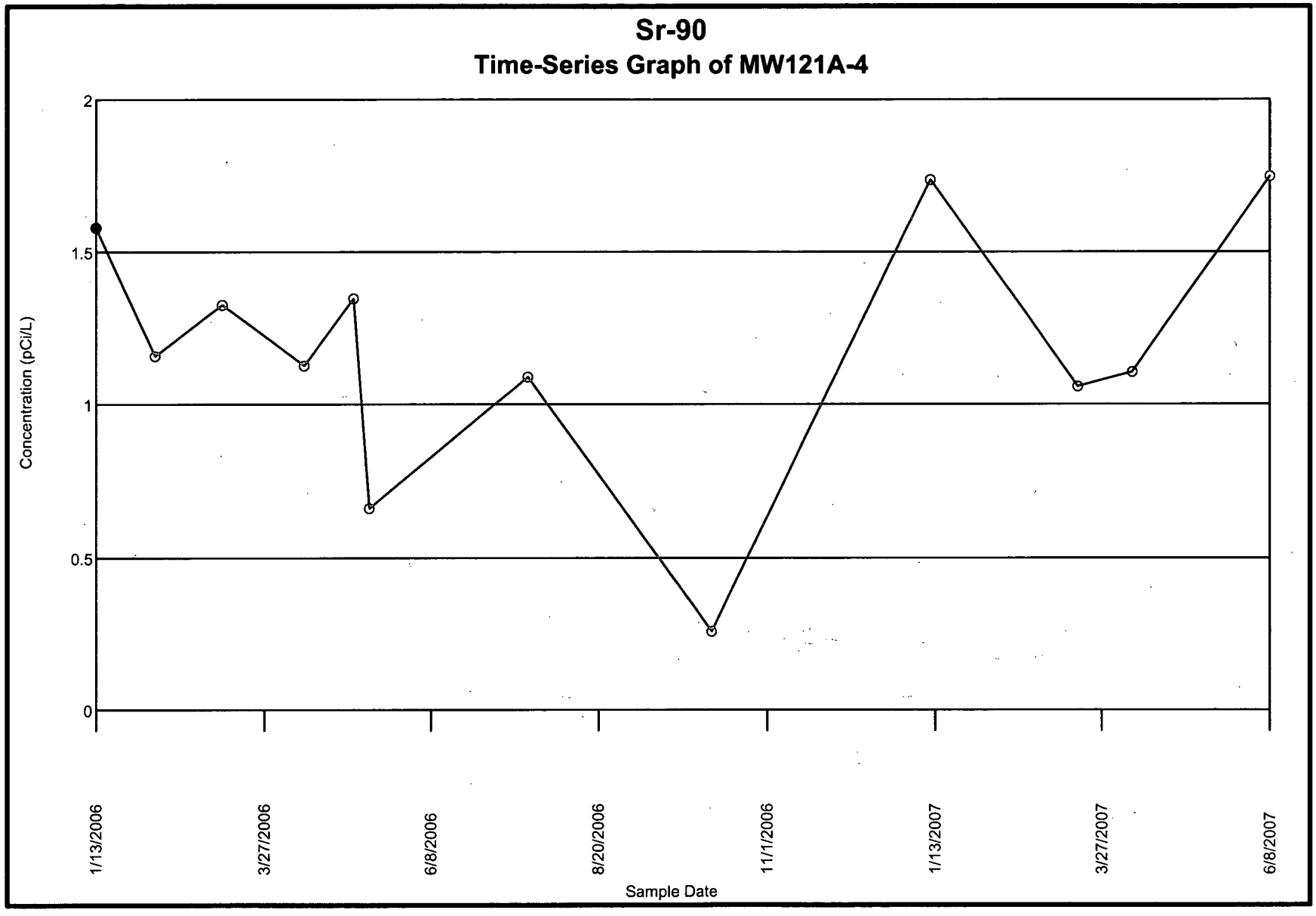
Sen's Estimator (Median Q) is 0.02475

Tied Group	Value	Members
1	0.825	2

Time Period	Observations
1/13/2006	1
2/8/2006	1
3/9/2006	1
4/13/2006	1
5/7/2006	1
7/11/2006	1
10/9/2006	1
1/15/2007	1
3/21/2007	1
4/9/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -0.0521429 = Q(17)
Upper limit is 0.0934 = Q(39)
-0.0521429 < 0 < 0.0934 indicating no trend in data.


Sr-90
Time-Series Graph of MW121A-4
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/8/2006
8/20/2006
11/1/2006
1/13/2007
3/27/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW121A-4
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.16 U (2/8/2006 a)	1.58 OK (1/13/2006 a)	(1.16 - 1.58)/(2 - 1)	-0.42
ND<1.33 U (3/9/2006 a)	1.58 OK (1/13/2006 a)	(1.33 - 1.58)/(3 - 1)	-0.125
ND<1.13 U (4/13/2006 a)	1.58 OK (1/13/2006 a)	(1.13 - 1.58)/(4 - 1)	-0.15
ND<1.35 OK (5/5/2006 a)	1.58 OK (1/13/2006 a)	(1.35 - 1.58)/(5 - 1)	-0.0575
ND<0.664 OK (5/12/2006 a)	1.58 OK (1/13/2006 a)	(0.664 - 1.58)/(6 - 1)	-0.1832
ND<1.09 OK (7/20/2006 a)	1.58 OK (1/13/2006 a)	(1.09 - 1.58)/(7 - 1)	-0.0816667
ND<0.256 OK (10/8/2006 a)	1.58 OK (1/13/2006 a)	(0.256 - 1.58)/(8 - 1)	-0.189143
ND<1.74 OK (1/11/2007 a)	1.58 OK (1/13/2006 a)	(1.74 - 1.58)/(9 - 1)	0.02
ND<1.06 OK (3/17/2007 a)	1.58 OK (1/13/2006 a)	(1.06 - 1.58)/(10 - 1)	-0.0577778
ND<1.11 OK (4/9/2007 a)	1.58 OK (1/13/2006 a)	(1.11 - 1.58)/(11 - 1)	-0.047
ND<1.75 OK (6/8/2007 a)	1.58 OK (1/13/2006 a)	(1.75 - 1.58)/(12 - 1)	0.0154545
ND<1.33 U (3/9/2006 a)	ND<1.16 U (2/8/2006 a)	(1.33 - 1.16)/(3 - 2)	0.17
ND<1.13 U (4/13/2006 a)	ND<1.16 U (2/8/2006 a)	(1.13 - 1.16)/(4 - 2)	-0.015
ND<1.35 OK (5/5/2006 a)	ND<1.16 U (2/8/2006 a)	(1.35 - 1.16)/(5 - 2)	0.0633333
ND<0.664 OK (5/12/2006 a)	ND<1.16 U (2/8/2006 a)	(0.664 - 1.16)/(6 - 2)	-0.124
ND<1.09 OK (7/20/2006 a)	ND<1.16 U (2/8/2006 a)	(1.09 - 1.16)/(7 - 2)	-0.014
ND<0.256 OK (10/8/2006 a)	ND<1.16 U (2/8/2006 a)	(0.256 - 1.16)/(8 - 2)	-0.150667
ND<1.74 OK (1/11/2007 a)	ND<1.16 U (2/8/2006 a)	(1.74 - 1.16)/(9 - 2)	0.0828571
ND<1.06 OK (3/17/2007 a)	ND<1.16 U (2/8/2006 a)	(1.06 - 1.16)/(10 - 2)	-0.0125
ND<1.11 OK (4/9/2007 a)	ND<1.16 U (2/8/2006 a)	(1.11 - 1.16)/(11 - 2)	-0.00555556
ND<1.75 OK (6/8/2007 a)	ND<1.16 U (2/8/2006 a)	(1.75 - 1.16)/(12 - 2)	0.059
ND<1.13 U (4/13/2006 a)	ND<1.33 U (3/9/2006 a)	(1.13 - 1.33)/(4 - 3)	-0.2
ND<1.35 OK (5/5/2006 a)	ND<1.33 U (3/9/2006 a)	(1.35 - 1.33)/(5 - 3)	0.01
ND<0.664 OK (5/12/2006 a)	ND<1.33 U (3/9/2006 a)	(0.664 - 1.33)/(6 - 3)	-0.222
ND<1.09 OK (7/20/2006 a)	ND<1.33 U (3/9/2006 a)	(1.09 - 1.33)/(7 - 3)	-0.06
ND<0.256 OK (10/8/2006 a)	ND<1.33 U (3/9/2006 a)	(0.256 - 1.33)/(8 - 3)	-0.2148
ND<1.74 OK (1/11/2007 a)	ND<1.33 U (3/9/2006 a)	(1.74 - 1.33)/(9 - 3)	0.0683333
ND<1.06 OK (3/17/2007 a)	ND<1.33 U (3/9/2006 a)	(1.06 - 1.33)/(10 - 3)	-0.0385714
ND<1.11 OK (4/9/2007 a)	ND<1.33 U (3/9/2006 a)	(1.11 - 1.33)/(11 - 3)	-0.0275

ND<1.75 OK (6/8/2007 a)	ND<1.33 U (3/9/2006 a)	(1.75 - 1.33)/(12 - 3)	0.0466667
ND<1.35 OK (5/5/2006 a)	ND<1.13 U (4/13/2006 a)	(1.35 - 1.13)/(5 - 4)	0.22
ND<0.664 OK (5/12/2006 a)	ND<1.13 U (4/13/2006 a)	(0.664 - 1.13)/(6 - 4)	-0.233
ND<1.09 OK (7/20/2006 a)	ND<1.13 U (4/13/2006 a)	(1.09 - 1.13)/(7 - 4)	-0.0133333
ND<0.256 OK (10/8/2006 a)	ND<1.13 U (4/13/2006 a)	(0.256 - 1.13)/(8 - 4)	-0.2185
ND<1.74 OK (1/11/2007 a)	ND<1.13 U (4/13/2006 a)	(1.74 - 1.13)/(9 - 4)	0.122
ND<1.06 OK (3/17/2007 a)	ND<1.13 U (4/13/2006 a)	(1.06 - 1.13)/(10 - 4)	-0.0116667
ND<1.11 OK (4/9/2007 a)	ND<1.13 U (4/13/2006 a)	(1.11 - 1.13)/(11 - 4)	-0.00285714
ND<1.75 OK (6/8/2007 a)	ND<1.13 U (4/13/2006 a)	(1.75 - 1.13)/(12 - 4)	0.0775
ND<0.664 OK (5/12/2006 a)	ND<1.35 OK (5/5/2006 a)	(0.664 - 1.35)/(6 - 5)	-0.686
ND<1.09 OK (7/20/2006 a)	ND<1.35 OK (5/5/2006 a)	(1.09 - 1.35)/(7 - 5)	-0.13
ND<0.256 OK (10/8/2006 a)	ND<1.35 OK (5/5/2006 a)	(0.256 - 1.35)/(8 - 5)	-0.364667
ND<1.74 OK (1/11/2007 a)	ND<1.35 OK (5/5/2006 a)	(1.74 - 1.35)/(9 - 5)	0.0975
ND<1.06 OK (3/17/2007 a)	ND<1.35 OK (5/5/2006 a)	(1.06 - 1.35)/(10 - 5)	-0.058
ND<1.11 OK (4/9/2007 a)	ND<1.35 OK (5/5/2006 a)	(1.11 - 1.35)/(11 - 5)	-0.04
ND<1.75 OK (6/8/2007 a)	ND<1.35 OK (5/5/2006 a)	(1.75 - 1.35)/(12 - 5)	0.0571429
ND<1.09 OK (7/20/2006 a)	ND<0.664 OK (5/12/2006 a)	(1.09 - 0.664)/(7 - 6)	0.426
ND<0.256 OK (10/8/2006 a)	ND<0.664 OK (5/12/2006 a)	(0.256 - 0.664)/(8 - 6)	-0.204
ND<1.74 OK (1/11/2007 a)	ND<0.664 OK (5/12/2006 a)	(1.74 - 0.664)/(9 - 6)	0.358667
ND<1.06 OK (3/17/2007 a)	ND<0.664 OK (5/12/2006 a)	(1.06 - 0.664)/(10 - 6)	0.099
ND<1.11 OK (4/9/2007 a)	ND<0.664 OK (5/12/2006 a)	(1.11 - 0.664)/(11 - 6)	0.0892
ND<1.75 OK (6/8/2007 a)	ND<0.664 OK (5/12/2006 a)	(1.75 - 0.664)/(12 - 6)	0.181
ND<0.256 OK (10/8/2006 a)	ND<1.09 OK (7/20/2006 a)	(0.256 - 1.09)/(8 - 7)	-0.834
ND<1.74 OK (1/11/2007 a)	ND<1.09 OK (7/20/2006 a)	(1.74 - 1.09)/(9 - 7)	0.325
ND<1.06 OK (3/17/2007 a)	ND<1.09 OK (7/20/2006 a)	(1.06 - 1.09)/(10 - 7)	-0.01
ND<1.11 OK (4/9/2007 a)	ND<1.09 OK (7/20/2006 a)	(1.11 - 1.09)/(11 - 7)	0.005
ND<1.75 OK (6/8/2007 a)	ND<1.09 OK (7/20/2006 a)	(1.75 - 1.09)/(12 - 7)	0.132
ND<1.74 OK (1/11/2007 a)	ND<0.256 OK (10/8/2006 a)	(1.74 - 0.256)/(9 - 8)	1.484
ND<1.06 OK (3/17/2007 a)	ND<0.256 OK (10/8/2006 a)	(1.06 - 0.256)/(10 - 8)	0.402
ND<1.11 OK (4/9/2007 a)	ND<0.256 OK (10/8/2006 a)	(1.11 - 0.256)/(11 - 8)	0.284667
ND<1.75 OK (6/8/2007 a)	ND<0.256 OK (10/8/2006 a)	(1.75 - 0.256)/(12 - 8)	0.3735
ND<1.06 OK (3/17/2007 a)	ND<1.74 OK (1/11/2007 a)	(1.06 - 1.74)/(10 - 9)	-0.68
ND<1.11 OK (4/9/2007 a)	ND<1.74 OK (1/11/2007 a)	(1.11 - 1.74)/(11 - 9)	-0.315
ND<1.75 OK (6/8/2007 a)	ND<1.74 OK (1/11/2007 a)	(1.75 - 1.74)/(12 - 9)	0.00333333

ND<1.11 OK (4/9/2007 a)	ND<1.06 OK (3/17/2007 a)	(1.11 - 1.06)/(11 - 10)	0.05
ND<1.75 OK (6/8/2007 a)	ND<1.06 OK (3/17/2007 a)	(1.75 - 1.06)/(12 - 10)	0.345
ND<1.75 OK (6/8/2007 a)	ND<1.11 OK (4/9/2007 a)	(1.75 - 1.11)/(12 - 11)	0.64

Number of Q values = 66

Ordered Q Values

n	Q
1	-0.834
2	-0.686
3	-0.68
4	-0.42
5	-0.364667
6	-0.315
7	-0.233
8	-0.222
9	-0.2185
10	-0.2148
11	-0.204
12	-0.2
13	-0.189143
14	-0.1832
15	-0.150667
16	-0.15
17	-0.13
18	-0.125
19	-0.124
20	-0.0816667
21	-0.06
22	-0.058
23	-0.0577778
24	-0.0575
25	-0.047
26	-0.04
27	-0.0385714
28	-0.0275
29	-0.015
30	-0.014
31	-0.0133333

32	-0.0125
33	-0.0116667
34	-0.01
35	-0.00555556
36	-0.00285714
37	0.00333333
38	0.005
39	0.01
40	0.0154545
41	0.02
42	0.0466667
43	0.05
44	0.0571429
45	0.059
46	0.0633333
47	0.0683333
48	0.0775
49	0.0828571
50	0.0892
51	0.0975
52	0.099
53	0.122
54	0.132
55	0.17
56	0.181
57	0.22
58	0.284667
59	0.325
60	0.345
61	0.358667
62	0.3735
63	0.402
64	0.426
65	0.64
66	1.484

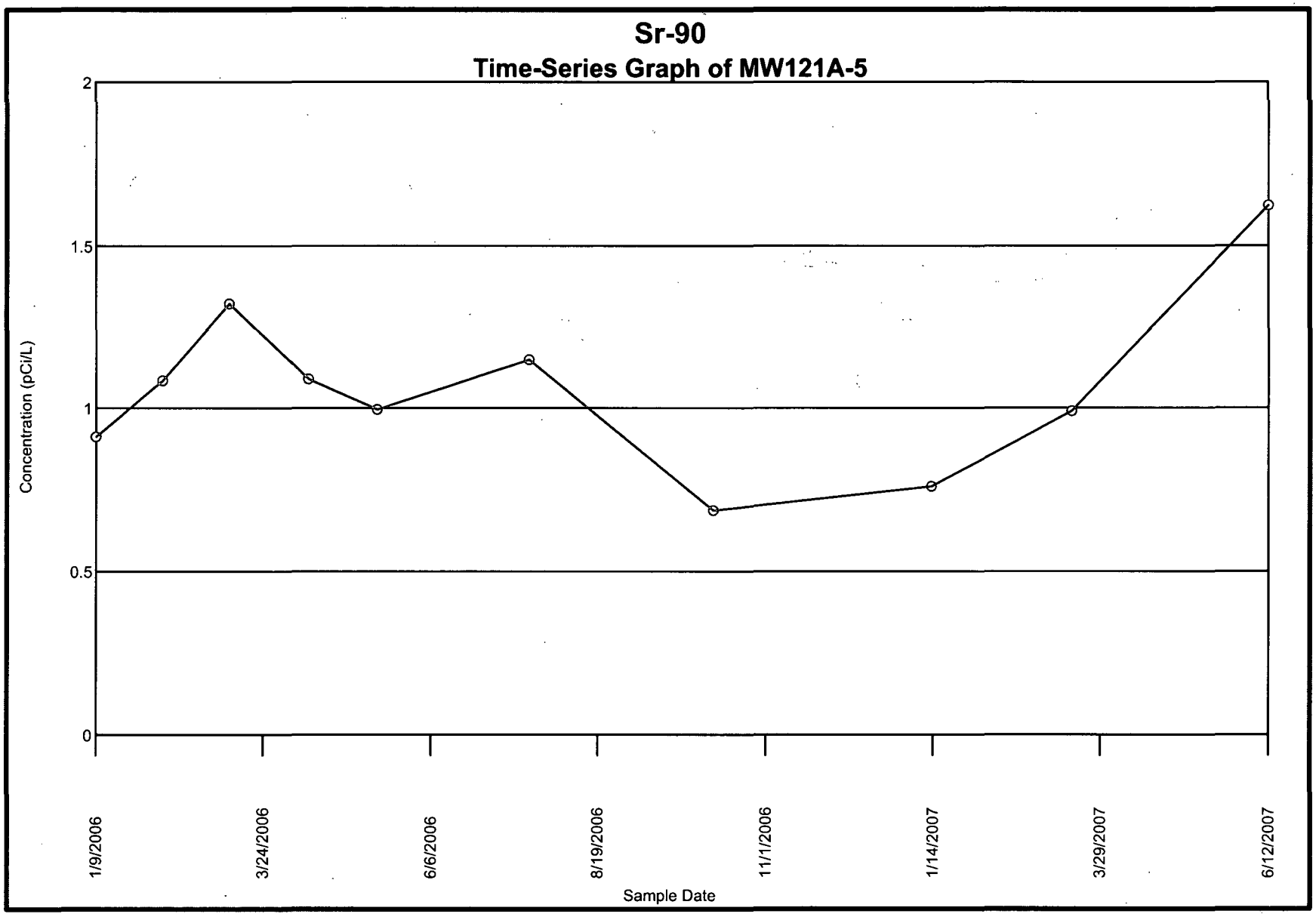
Sen's Estimator (Median Q) is -0.0108333

Time Period	Observations
1/13/2006	1
2/8/2006	1
3/9/2006	1

4/13/2006	1
5/5/2006	1
5/12/2006	1
7/20/2006	1
10/8/2006	1
1/11/2007	1
3/17/2007	1
4/9/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is -0.06 = Q(21)
Upper limit is 0.0633333 = Q(46)
-0.06 < 0 < 0.0633333 indicating no trend in data.


Sr-90
Time-Series Graph of MW121A-5
Concentration (pCi/L)
2
1.5
1
0.5
0
1/9/2006
3/24/2006
6/6/2006
8/19/2006
11/1/2006
1/14/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW121A-5

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.085 U (2/8/2006 ~)	ND<0.913 U (1/9/2006 a)	(1.085 - 0.913)/(2 - 1)	0.172
ND<1.32 U (3/9/2006 a)	ND<0.913 U (1/9/2006 a)	(1.32 - 0.913)/(3 - 1)	0.2035
ND<1.09 U (4/13/2006 a)	ND<0.913 U (1/9/2006 a)	(1.09 - 0.913)/(4 - 1)	0.059
ND<1 OK (5/13/2006 a)	ND<0.913 U (1/9/2006 a)	(1 - 0.913)/(5 - 1)	0.02175
ND<1.15 OK (7/20/2006 a)	ND<0.913 U (1/9/2006 a)	(1.15 - 0.913)/(6 - 1)	0.0474
ND<0.69 OK (10/9/2006 a)	ND<0.913 U (1/9/2006 a)	(0.69 - 0.913)/(7 - 1)	-0.0371667
ND<0.764 OK (1/14/2007 a)	ND<0.913 U (1/9/2006 a)	(0.764 - 0.913)/(8 - 1)	-0.0212857
ND<0.994 OK (3/17/2007 a)	ND<0.913 U (1/9/2006 a)	(0.994 - 0.913)/(9 - 1)	0.010125
ND<1.62 OK (6/12/2007 a)	ND<0.913 U (1/9/2006 a)	(1.62 - 0.913)/(10 - 1)	0.0785556
ND<1.32 U (3/9/2006 a)	ND<1.085 U (2/8/2006 ~)	(1.32 - 1.085)/(3 - 2)	0.235
ND<1.09 U (4/13/2006 a)	ND<1.085 U (2/8/2006 ~)	(1.09 - 1.085)/(4 - 2)	0.0025
ND<1 OK (5/13/2006 a)	ND<1.085 U (2/8/2006 ~)	(1 - 1.085)/(5 - 2)	-0.0283333
ND<1.15 OK (7/20/2006 a)	ND<1.085 U (2/8/2006 ~)	(1.15 - 1.085)/(6 - 2)	0.01625
ND<0.69 OK (10/9/2006 a)	ND<1.085 U (2/8/2006 ~)	(0.69 - 1.085)/(7 - 2)	-0.079
ND<0.764 OK (1/14/2007 a)	ND<1.085 U (2/8/2006 ~)	(0.764 - 1.085)/(8 - 2)	-0.0535
ND<0.994 OK (3/17/2007 a)	ND<1.085 U (2/8/2006 ~)	(0.994 - 1.085)/(9 - 2)	-0.013
ND<1.62 OK (6/12/2007 a)	ND<1.085 U (2/8/2006 ~)	(1.62 - 1.085)/(10 - 2)	0.066875
ND<1.09 U (4/13/2006 a)	ND<1.32 U (3/9/2006 a)	(1.09 - 1.32)/(4 - 3)	-0.23
ND<1 OK (5/13/2006 a)	ND<1.32 U (3/9/2006 a)	(1 - 1.32)/(5 - 3)	-0.16
ND<1.15 OK (7/20/2006 a)	ND<1.32 U (3/9/2006 a)	(1.15 - 1.32)/(6 - 3)	-0.0566667
ND<0.69 OK (10/9/2006 a)	ND<1.32 U (3/9/2006 a)	(0.69 - 1.32)/(7 - 3)	-0.1575
ND<0.764 OK (1/14/2007 a)	ND<1.32 U (3/9/2006 a)	(0.764 - 1.32)/(8 - 3)	-0.1112
ND<0.994 OK (3/17/2007 a)	ND<1.32 U (3/9/2006 a)	(0.994 - 1.32)/(9 - 3)	-0.0543333
ND<1.62 OK (6/12/2007 a)	ND<1.32 U (3/9/2006 a)	(1.62 - 1.32)/(10 - 3)	0.0428571
ND<1 OK (5/13/2006 a)	ND<1.09 U (4/13/2006 a)	(1 - 1.09)/(5 - 4)	-0.09
ND<1.15 OK (7/20/2006 a)	ND<1.09 U (4/13/2006 a)	(1.15 - 1.09)/(6 - 4)	0.03
ND<0.69 OK (10/9/2006 a)	ND<1.09 U (4/13/2006 a)	(0.69 - 1.09)/(7 - 4)	-0.133333
ND<0.764 OK (1/14/2007 a)	ND<1.09 U (4/13/2006 a)	(0.764 - 1.09)/(8 - 4)	-0.0815

ND<0.994 OK (3/17/2007 a)	ND<1.09 U (4/13/2006 a)	(0.994 - 1.09)/(9 - 4)	-0.0192
ND<1.62 OK (6/12/2007 a)	ND<1.09 U (4/13/2006 a)	(1.62 - 1.09)/(10 - 4)	0.0883333
ND<1.15 OK (7/20/2006 a)	ND<1 OK (5/13/2006 a)	(1.15 - 1)/(6 - 5)	0.15
ND<0.69 OK (10/9/2006 a)	ND<1 OK (5/13/2006 a)	(0.69 - 1)/(7 - 5)	-0.155
ND<0.764 OK (1/14/2007 a)	ND<1 OK (5/13/2006 a)	(0.764 - 1)/(8 - 5)	-0.0786667
ND<0.994 OK (3/17/2007 a)	ND<1 OK (5/13/2006 a)	(0.994 - 1)/(9 - 5)	-0.0015
ND<1.62 OK (6/12/2007 a)	ND<1 OK (5/13/2006 a)	(1.62 - 1)/(10 - 5)	0.124
ND<0.69 OK (10/9/2006 a)	ND<1.15 OK (7/20/2006 a)	(0.69 - 1.15)/(7 - 6)	-0.46
ND<0.764 OK (1/14/2007 a)	ND<1.15 OK (7/20/2006 a)	(0.764 - 1.15)/(8 - 6)	-0.193
ND<0.994 OK (3/17/2007 a)	ND<1.15 OK (7/20/2006 a)	(0.994 - 1.15)/(9 - 6)	-0.052
ND<1.62 OK (6/12/2007 a)	ND<1.15 OK (7/20/2006 a)	(1.62 - 1.15)/(10 - 6)	0.1175
ND<0.764 OK (1/14/2007 a)	ND<0.69 OK (10/9/2006 a)	(0.764 - 0.69)/(8 - 7)	0.074
ND<0.994 OK (3/17/2007 a)	ND<0.69 OK (10/9/2006 a)	(0.994 - 0.69)/(9 - 7)	0.152
ND<1.62 OK (6/12/2007 a)	ND<0.69 OK (10/9/2006 a)	(1.62 - 0.69)/(10 - 7)	0.31
ND<0.994 OK (3/17/2007 a)	ND<0.764 OK (1/14/2007 a)	(0.994 - 0.764)/(9 - 8)	0.23
ND<1.62 OK (6/12/2007 a)	ND<0.764 OK (1/14/2007 a)	(1.62 - 0.764)/(10 - 8)	0.428
ND<1.62 OK (6/12/2007 a)	ND<0.994 OK (3/17/2007 a)	(1.62 - 0.994)/(10 - 9)	0.626

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.46
2	-0.23
3	-0.193
4	-0.16
5	-0.1575
6	-0.155
7	-0.133333
8	-0.1112
9	-0.09
10	-0.0815
11	-0.079
12	-0.0786667
13	-0.0566667

14	-0.0543333
15	-0.0535
16	-0.052
17	-0.0371667
18	-0.0283333
19	-0.0212857
20	-0.0192
21	-0.013
22	-0.0015
23	0.0025
24	0.010125
25	0.01625
26	0.02175
27	0.03
28	0.0428571
29	0.0474
30	0.059
31	0.066875
32	0.074
33	0.0785556
34	0.0883333
35	0.1175
36	0.124
37	0.15
38	0.152
39	0.172
40	0.2035
41	0.23
42	0.235
43	0.31
44	0.428
45	0.626

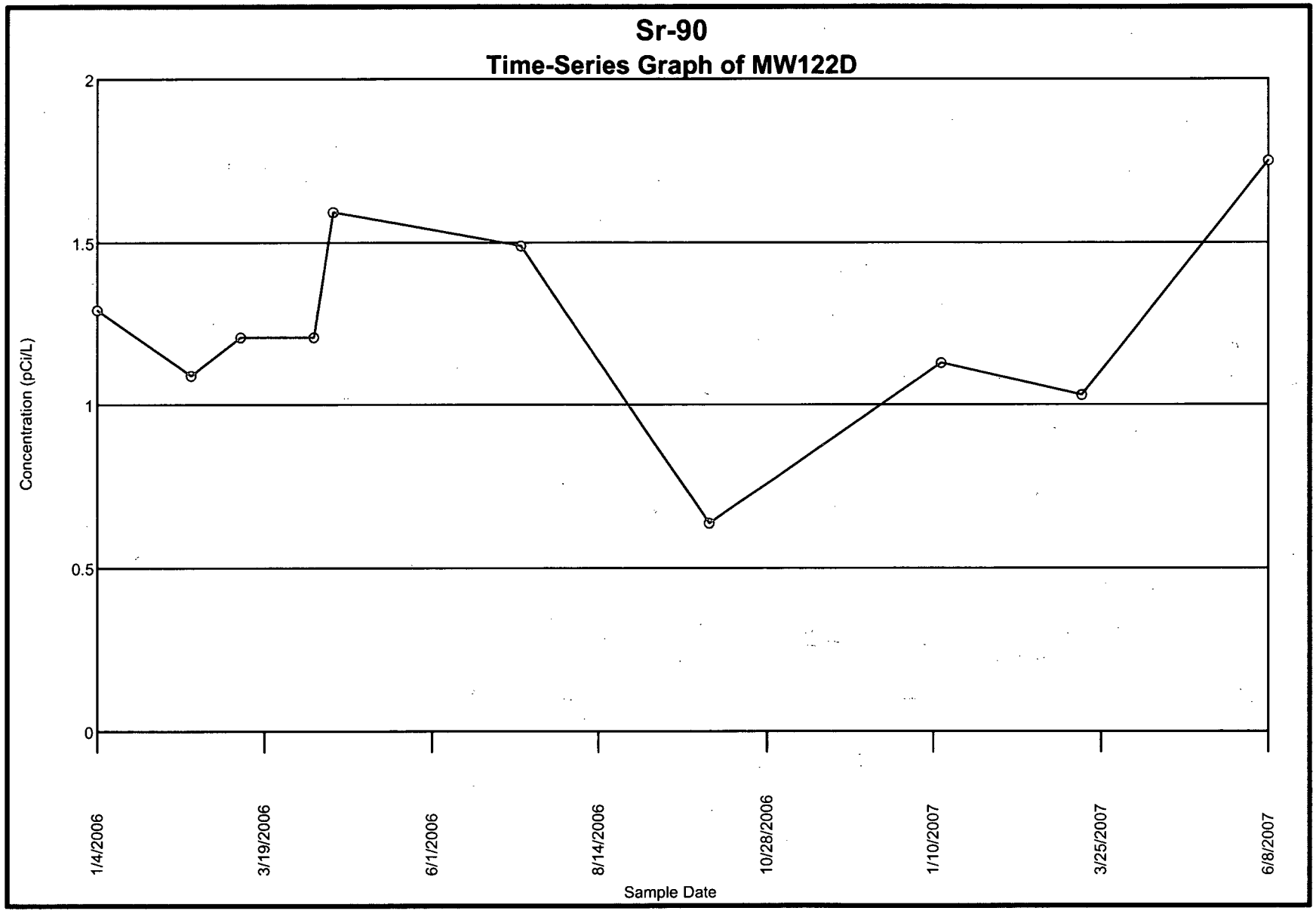
Sen's Estimator (Median Q) is 0.0025

Time Period	Observations
1/9/2006	1
2/8/2006	1
3/9/2006	1
4/13/2006	1
5/13/2006	1
7/20/2006	1

10/9/2006	1
1/14/2007	1
3/17/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.0566667 = Q(13)
Upper limit is 0.0785556 = Q(33)
-0.0566667 < 0 < 0.0785556 indicating no trend in data.


Sr-90
Time-Series Graph of MW122D
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW122D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.09 U (2/15/2006 ~)	ND<1.29 U (1/4/2006 a)	(1.09 - 1.29)/(2 - 1)	-0.2
ND<1.21 U (3/9/2006 a)	ND<1.29 U (1/4/2006 a)	(1.21 - 1.29)/(3 - 1)	-0.04
ND<1.21 U (4/10/2006 a)	ND<1.29 U (1/4/2006 a)	(1.21 - 1.29)/(4 - 1)	-0.0266667
ND<1.59 OK (4/19/2006 a)	ND<1.29 U (1/4/2006 a)	(1.59 - 1.29)/(5 - 1)	0.075
ND<1.49 OK (7/11/2006 ~)	ND<1.29 U (1/4/2006 a)	(1.49 - 1.29)/(6 - 1)	0.04
ND<0.638 OK (10/3/2006 a)	ND<1.29 U (1/4/2006 a)	(0.638 - 1.29)/(7 - 1)	-0.108667
ND<1.13 OK (1/14/2007 a)	ND<1.29 U (1/4/2006 a)	(1.13 - 1.29)/(8 - 1)	-0.0228571
ND<1.03 OK (3/17/2007 a)	ND<1.29 U (1/4/2006 a)	(1.03 - 1.29)/(9 - 1)	-0.0325
ND<1.75 OK (6/8/2007 a)	ND<1.29 U (1/4/2006 a)	(1.75 - 1.29)/(10 - 1)	0.0511111
ND<1.21 U (3/9/2006 a)	ND<1.09 U (2/15/2006 ~)	(1.21 - 1.09)/(3 - 2)	0.12
ND<1.21 U (4/10/2006 a)	ND<1.09 U (2/15/2006 ~)	(1.21 - 1.09)/(4 - 2)	0.06
ND<1.59 OK (4/19/2006 a)	ND<1.09 U (2/15/2006 ~)	(1.59 - 1.09)/(5 - 2)	0.166667
ND<1.49 OK (7/11/2006 ~)	ND<1.09 U (2/15/2006 ~)	(1.49 - 1.09)/(6 - 2)	0.1
ND<0.638 OK (10/3/2006 a)	ND<1.09 U (2/15/2006 ~)	(0.638 - 1.09)/(7 - 2)	-0.0904
ND<1.13 OK (1/14/2007 a)	ND<1.09 U (2/15/2006 ~)	(1.13 - 1.09)/(8 - 2)	0.00666667
ND<1.03 OK (3/17/2007 a)	ND<1.09 U (2/15/2006 ~)	(1.03 - 1.09)/(9 - 2)	-0.00857143
ND<1.75 OK (6/8/2007 a)	ND<1.09 U (2/15/2006 ~)	(1.75 - 1.09)/(10 - 2)	0.0825
ND<1.21 U (4/10/2006 a)	ND<1.21 U (3/9/2006 a)	(1.21 - 1.21)/(4 - 3)	0
ND<1.59 OK (4/19/2006 a)	ND<1.21 U (3/9/2006 a)	(1.59 - 1.21)/(5 - 3)	0.19
ND<1.49 OK (7/11/2006 ~)	ND<1.21 U (3/9/2006 a)	(1.49 - 1.21)/(6 - 3)	0.0933333
ND<0.638 OK (10/3/2006 a)	ND<1.21 U (3/9/2006 a)	(0.638 - 1.21)/(7 - 3)	-0.143
ND<1.13 OK (1/14/2007 a)	ND<1.21 U (3/9/2006 a)	(1.13 - 1.21)/(8 - 3)	-0.016
ND<1.03 OK (3/17/2007 a)	ND<1.21 U (3/9/2006 a)	(1.03 - 1.21)/(9 - 3)	-0.03
ND<1.75 OK (6/8/2007 a)	ND<1.21 U (3/9/2006 a)	(1.75 - 1.21)/(10 - 3)	0.0771429
ND<1.59 OK (4/19/2006 a)	ND<1.21 U (4/10/2006 a)	(1.59 - 1.21)/(5 - 4)	0.38
ND<1.49 OK (7/11/2006 ~)	ND<1.21 U (4/10/2006 a)	(1.49 - 1.21)/(6 - 4)	0.14
ND<0.638 OK (10/3/2006 a)	ND<1.21 U (4/10/2006 a)	(0.638 - 1.21)/(7 - 4)	-0.190667
ND<1.13 OK (1/14/2007 a)	ND<1.21 U (4/10/2006 a)	(1.13 - 1.21)/(8 - 4)	-0.02
ND<1.03 OK (3/17/2007 a)	ND<1.21 U (4/10/2006 a)	(1.03 - 1.21)/(9 - 4)	-0.036
ND<1.75 OK (6/8/2007 a)	ND<1.21 U (4/10/2006 a)	(1.75 - 1.21)/(10 - 4)	0.09
ND<1.49 OK (7/11/2006 ~)	ND<1.59 OK (4/19/2006 a)	(1.49 - 1.59)/(6 - 5)	-0.1
ND<0.638 OK (10/3/2006 a)	ND<1.59 OK (4/19/2006 a)	(0.638 - 1.59)/(7 - 5)	-0.476
ND<1.13 OK (1/14/2007 a)	ND<1.59 OK (4/19/2006 a)	(1.13 - 1.59)/(8 - 5)	-0.153333
ND<1.03 OK (3/17/2007 a)	ND<1.59 OK (4/19/2006 a)	(1.03 - 1.59)/(9 - 5)	-0.14
ND<1.75 OK (6/8/2007 a)	ND<1.59 OK (4/19/2006 a)	(1.75 - 1.59)/(10 - 5)	0.032
ND<0.638 OK (10/3/2006 a)	ND<1.49 OK (7/11/2006 ~)	(0.638 - 1.49)/(7 - 6)	-0.852
ND<1.13 OK (1/14/2007 a)	ND<1.49 OK (7/11/2006 ~)	(1.13 - 1.49)/(8 - 6)	-0.18
ND<1.03 OK (3/17/2007 a)	ND<1.49 OK (7/11/2006 ~)	(1.03 - 1.49)/(9 - 6)	-0.153333
ND<1.75 OK (6/8/2007 a)	ND<1.49 OK (7/11/2006 ~)	(1.75 - 1.49)/(10 - 6)	0.065
ND<1.13 OK (1/14/2007 a)	ND<0.638 OK (10/3/2006 a)	(1.13 - 0.638)/(8 - 7)	0.492
ND<1.03 OK (3/17/2007 a)	ND<0.638 OK (10/3/2006 a)	(1.03 - 0.638)/(9 - 7)	0.196

ND<1.75 OK (6/8/2007 a)	ND<0.638 OK (10/3/2006 a)	(1.75 - 0.638)/(10 - 7)	0.370667
ND<1.03 OK (3/17/2007 a)	ND<1.13 OK (1/14/2007 a)	(1.03 - 1.13)/(9 - 8)	-0.1
ND<1.75 OK (6/8/2007 a)	ND<1.13 OK (1/14/2007 a)	(1.75 - 1.13)/(10 - 8)	0.31
ND<1.75 OK (6/8/2007 a)	ND<1.03 OK (3/17/2007 a)	(1.75 - 1.03)/(10 - 9)	0.72

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.852
2	-0.476
3	-0.2
4	-0.190667
5	-0.18
6	-0.153333
7	-0.153333
8	-0.143
9	-0.14
10	-0.108667
11	-0.1
12	-0.1
13	-0.0904
14	-0.04
15	-0.036
16	-0.0325
17	-0.03
18	-0.0266667
19	-0.0228571
20	-0.02
21	-0.016
22	-0.00857143
23	0
24	0.00666667
25	0.032
26	0.04
27	0.0511111
28	0.06
29	0.065
30	0.075
31	0.0771429
32	0.0825
33	0.09
34	0.0933333
35	0.1
36	0.12
37	0.14
38	0.166667
39	0.19
40	0.196
41	0.31
42	0.370667
43	0.38
44	0.492
45	0.72

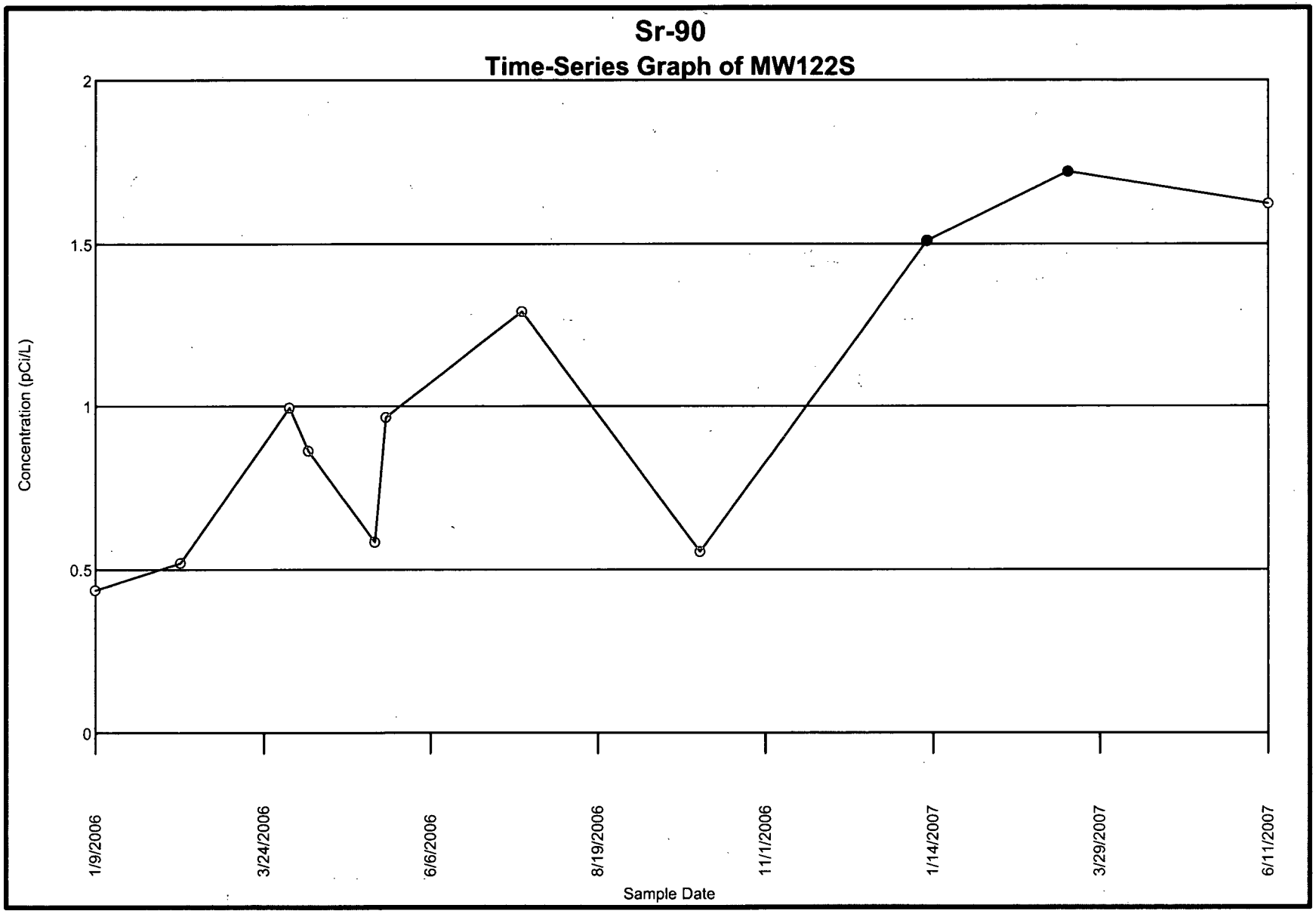
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	1.21	2

Time Period	Observations
1/4/2006	1
2/15/2006	1
3/9/2006	1
4/10/2006	1
4/19/2006	1
7/11/2006	1
10/3/2006	1
1/14/2007	1
3/17/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.0904 = Q(13)
Upper limit is 0.09 = Q(33)
-0.0904 < 0 < 0.09 indicating no trend in data.


Sr-90
Time-Series Graph of MW122S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/9/2006
3/24/2006
6/6/2006
8/19/2006
11/1/2006
1/14/2007
3/29/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW122S
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.522 U (2/15/2006 a)	ND<0.436 U (1/9/2006 a)	(0.522 - 0.436)/(2 - 1)	0.086
ND<1 U (4/4/2006 a)	ND<0.436 U (1/9/2006 a)	(1 - 0.436)/(3 - 1)	0.282
ND<0.864 U (4/13/2006 a)	ND<0.436 U (1/9/2006 a)	(0.864 - 0.436)/(4 - 1)	0.142667
ND<0.584 OK (5/12/2006 a)	ND<0.436 U (1/9/2006 a)	(0.584 - 0.436)/(5 - 1)	0.037
ND<0.966 OK (5/17/2006 a)	ND<0.436 U (1/9/2006 a)	(0.966 - 0.436)/(6 - 1)	0.106
ND<1.29 OK (7/16/2006 a)	ND<0.436 U (1/9/2006 a)	(1.29 - 0.436)/(7 - 1)	0.142333
ND<0.554 OK (10/3/2006 a)	ND<0.436 U (1/9/2006 a)	(0.554 - 0.436)/(8 - 1)	0.0168571
1.51 OK (1/11/2007 a)	ND<0.436 U (1/9/2006 a)	(1.51 - 0.436)/(9 - 1)	0.13425
1.72 OK (3/15/2007 a)	ND<0.436 U (1/9/2006 a)	(1.72 - 0.436)/(10 - 1)	0.142667
ND<1.62 OK (6/11/2007 a)	ND<0.436 U (1/9/2006 a)	(1.62 - 0.436)/(11 - 1)	0.1184
ND<1 U (4/4/2006 a)	ND<0.522 U (2/15/2006 a)	(1 - 0.522)/(3 - 2)	0.478
ND<0.864 U (4/13/2006 a)	ND<0.522 U (2/15/2006 a)	(0.864 - 0.522)/(4 - 2)	0.171
ND<0.584 OK (5/12/2006 a)	ND<0.522 U (2/15/2006 a)	(0.584 - 0.522)/(5 - 2)	0.0206667
ND<0.966 OK (5/17/2006 a)	ND<0.522 U (2/15/2006 a)	(0.966 - 0.522)/(6 - 2)	0.111
ND<1.29 OK (7/16/2006 a)	ND<0.522 U (2/15/2006 a)	(1.29 - 0.522)/(7 - 2)	0.1536
ND<0.554 OK (10/3/2006 a)	ND<0.522 U (2/15/2006 a)	(0.554 - 0.522)/(8 - 2)	0.00533333
1.51 OK (1/11/2007 a)	ND<0.522 U (2/15/2006 a)	(1.51 - 0.522)/(9 - 2)	0.141143
1.72 OK (3/15/2007 a)	ND<0.522 U (2/15/2006 a)	(1.72 - 0.522)/(10 - 2)	0.14975
ND<1.62 OK (6/11/2007 a)	ND<0.522 U (2/15/2006 a)	(1.62 - 0.522)/(11 - 2)	0.122
ND<0.864 U (4/13/2006 a)	ND<1 U (4/4/2006 a)	(0.864 - 1)/(4 - 3)	-0.136
ND<0.584 OK (5/12/2006 a)	ND<1 U (4/4/2006 a)	(0.584 - 1)/(5 - 3)	-0.208
ND<0.966 OK (5/17/2006 a)	ND<1 U (4/4/2006 a)	(0.966 - 1)/(6 - 3)	-0.0113333
ND<1.29 OK (7/16/2006 a)	ND<1 U (4/4/2006 a)	(1.29 - 1)/(7 - 3)	0.0725
ND<0.554 OK (10/3/2006 a)	ND<1 U (4/4/2006 a)	(0.554 - 1)/(8 - 3)	-0.0892
1.51 OK (1/11/2007 a)	ND<1 U (4/4/2006 a)	(1.51 - 1)/(9 - 3)	0.085
1.72 OK (3/15/2007 a)	ND<1 U (4/4/2006 a)	(1.72 - 1)/(10 - 3)	0.102857
ND<1.62 OK (6/11/2007 a)	ND<1 U (4/4/2006 a)	(1.62 - 1)/(11 - 3)	0.0775
ND<0.584 OK (5/12/2006 a)	ND<0.864 U (4/13/2006 a)	(0.584 - 0.864)/(5 - 4)	-0.28
ND<0.966 OK (5/17/2006 a)	ND<0.864 U (4/13/2006 a)	(0.966 - 0.864)/(6 - 4)	0.051
ND<1.29 OK (7/16/2006 a)	ND<0.864 U (4/13/2006 a)	(1.29 - 0.864)/(7 - 4)	0.142
ND<0.554 OK (10/3/2006 a)	ND<0.864 U (4/13/2006 a)	(0.554 - 0.864)/(8 - 4)	-0.0775
1.51 OK (1/11/2007 a)	ND<0.864 U (4/13/2006 a)	(1.51 - 0.864)/(9 - 4)	0.1292
1.72 OK (3/15/2007 a)	ND<0.864 U (4/13/2006 a)	(1.72 - 0.864)/(10 - 4)	0.142667
ND<1.62 OK (6/11/2007 a)	ND<0.864 U (4/13/2006 a)	(1.62 - 0.864)/(11 - 4)	0.108
ND<0.966 OK (5/17/2006 a)	ND<0.584 OK (5/12/2006 a)	(0.966 - 0.584)/(6 - 5)	0.382
ND<1.29 OK (7/16/2006 a)	ND<0.584 OK (5/12/2006 a)	(1.29 - 0.584)/(7 - 5)	0.353
ND<0.554 OK (10/3/2006 a)	ND<0.584 OK (5/12/2006 a)	(0.554 - 0.584)/(8 - 5)	-0.01
1.51 OK (1/11/2007 a)	ND<0.584 OK (5/12/2006 a)	(1.51 - 0.584)/(9 - 5)	0.2315
1.72 OK (3/15/2007 a)	ND<0.584 OK (5/12/2006 a)	(1.72 - 0.584)/(10 - 5)	0.2272
ND<1.62 OK (6/11/2007 a)	ND<0.584 OK (5/12/2006 a)	(1.62 - 0.584)/(11 - 5)	0.172667
ND<1.29 OK (7/16/2006 a)	ND<0.966 OK (5/17/2006 a)	(1.29 - 0.966)/(7 - 6)	0.324
ND<0.554 OK (10/3/2006 a)	ND<0.966 OK (5/17/2006 a)	(0.554 - 0.966)/(8 - 6)	-0.206

1.51 OK (1/11/2007 a)	ND<0.966 OK (5/17/2006 a)	(1.51 - 0.966)/(9 - 6)	0.181333
1.72 OK (3/15/2007 a)	ND<0.966 OK (5/17/2006 a)	(1.72 - 0.966)/(10 - 6)	0.1885
ND<1.62 OK (6/11/2007 a)	ND<0.966 OK (5/17/2006 a)	(1.62 - 0.966)/(11 - 6)	0.1308
ND<0.554 OK (10/3/2006 a)	ND<1.29 OK (7/16/2006 a)	(0.554 - 1.29)/(8 - 7)	-0.736
1.51 OK (1/11/2007 a)	ND<1.29 OK (7/16/2006 a)	(1.51 - 1.29)/(9 - 7)	0.11
1.72 OK (3/15/2007 a)	ND<1.29 OK (7/16/2006 a)	(1.72 - 1.29)/(10 - 7)	0.143333
ND<1.62 OK (6/11/2007 a)	ND<1.29 OK (7/16/2006 a)	(1.62 - 1.29)/(11 - 7)	0.0825
1.51 OK (1/11/2007 a)	ND<0.554 OK (10/3/2006 a)	(1.51 - 0.554)/(9 - 8)	0.956
1.72 OK (3/15/2007 a)	ND<0.554 OK (10/3/2006 a)	(1.72 - 0.554)/(10 - 8)	0.583
ND<1.62 OK (6/11/2007 a)	ND<0.554 OK (10/3/2006 a)	(1.62 - 0.554)/(11 - 8)	0.355333
1.72 OK (3/15/2007 a)	1.51 OK (1/11/2007 a)	(1.72 - 1.51)/(10 - 9)	0.21
ND<1.62 OK (6/11/2007 a)	1.51 OK (1/11/2007 a)	(1.62 - 1.51)/(11 - 9)	0.055
ND<1.62 OK (6/11/2007 a)	1.72 OK (3/15/2007 a)	(1.62 - 1.72)/(11 - 10)	-0.1

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.736
2	-0.28
3	-0.208
4	-0.206
5	-0.136
6	-0.1
7	-0.0892
8	-0.0775
9	-0.0113333
10	-0.01
11	0.00533333
12	0.0168571
13	0.0206667
14	0.037
15	0.051
16	0.055
17	0.0725
18	0.0775
19	0.0825
20	0.085
21	0.086
22	0.102857
23	0.106
24	0.108
25	0.11
26	0.111
27	0.1184
28	0.122
29	0.1292
30	0.1308
31	0.13425
32	0.141143
33	0.142
34	0.142333

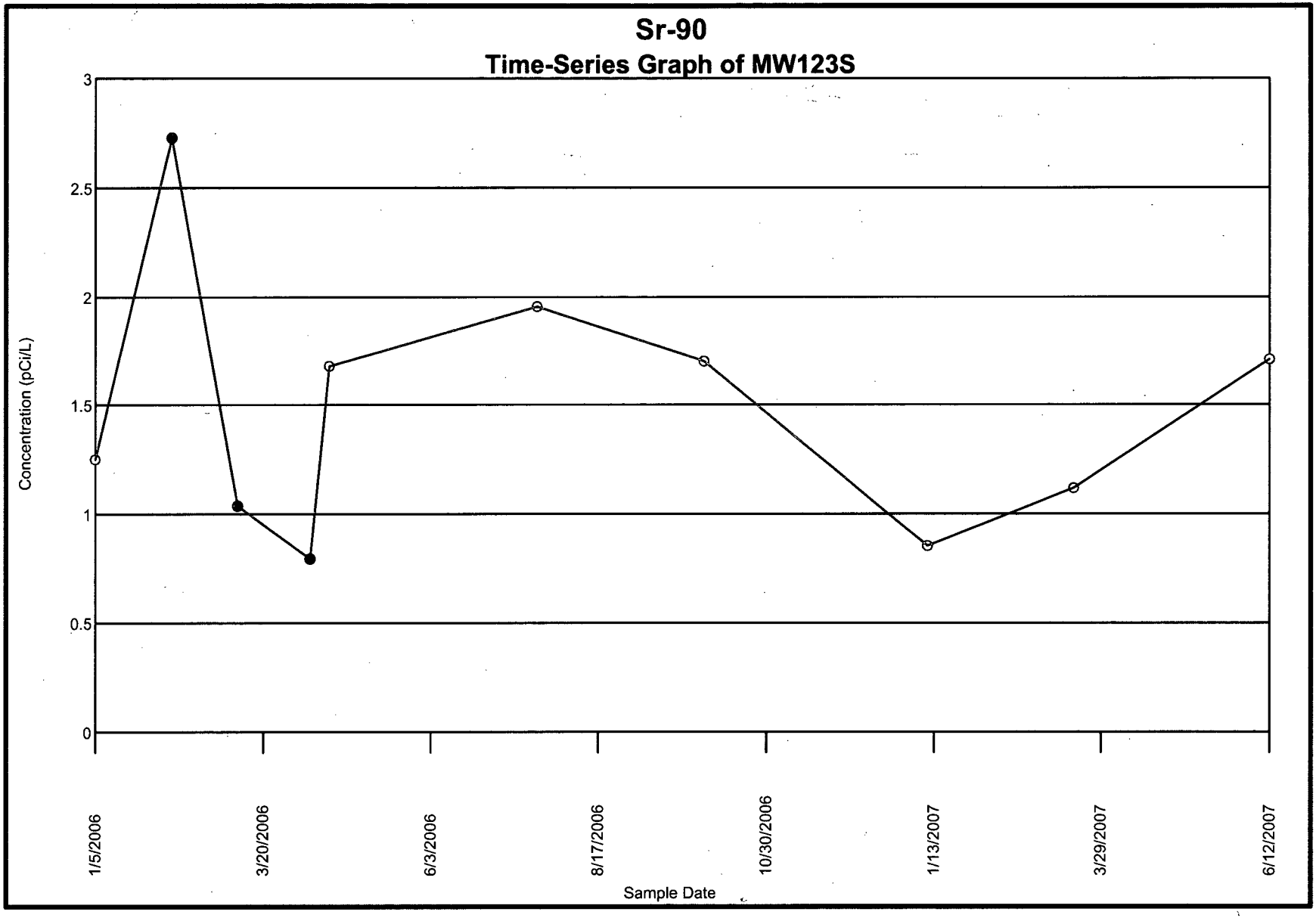
35	0.142667
36	0.142667
37	0.142667
38	0.143333
39	0.14975
40	0.1536
41	0.171
42	0.172667
43	0.181333
44	0.1885
45	0.21
46	0.2272
47	0.2315
48	0.282
49	0.324
50	0.353
51	0.355333
52	0.382
53	0.478
54	0.583
55	0.956

Sen's Estimator (Median Q) is 0.122

Time Period	Observations
1/9/2006	1
2/15/2006	1
4/4/2006	1
4/13/2006	1
5/12/2006	1
5/17/2006	1
7/16/2006	1
10/3/2006	1
1/11/2007	1
3/15/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 0.0725 = Q(17)
Upper limit is 0.14975 = Q(39)
0.0725 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW123S
Concentration (pCi/L)
3
2.5
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW123S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
2.73 OK (2/8/2006 a)	ND<1.25 U (1/5/2006 a)	(2.73 - 1.25)/(2 - 1)	1.48
1.04 U (3/9/2006 a)	ND<1.25 U (1/5/2006 a)	(1.04 - 1.25)/(3 - 1)	-0.105
0.799 U (4/10/2006 a)	ND<1.25 U (1/5/2006 a)	(0.799 - 1.25)/(4 - 1)	-0.150333
ND<1.68 OK (4/19/2006 a)	ND<1.25 U (1/5/2006 a)	(1.68 - 1.25)/(5 - 1)	0.1075
ND<1.95 OK (7/21/2006 a)	ND<1.25 U (1/5/2006 a)	(1.95 - 1.25)/(6 - 1)	0.14
ND<1.7 OK (10/3/2006 a)	ND<1.25 U (1/5/2006 a)	(1.7 - 1.25)/(7 - 1)	0.075
ND<0.854 OK (1/11/2007 a)	ND<1.25 U (1/5/2006 a)	(0.854 - 1.25)/(8 - 1)	-0.0565714
ND<1.12 OK (3/17/2007 ~)	ND<1.25 U (1/5/2006 a)	(1.12 - 1.25)/(9 - 1)	-0.01625
ND<1.71 OK (6/12/2007 a)	ND<1.25 U (1/5/2006 a)	(1.71 - 1.25)/(10 - 1)	0.0511111
1.04 U (3/9/2006 a)	2.73 OK (2/8/2006 a)	(1.04 - 2.73)/(3 - 2)	-1.69
0.799 U (4/10/2006 a)	2.73 OK (2/8/2006 a)	(0.799 - 2.73)/(4 - 2)	-0.9655
ND<1.68 OK (4/19/2006 a)	2.73 OK (2/8/2006 a)	(1.68 - 2.73)/(5 - 2)	-0.35
ND<1.95 OK (7/21/2006 a)	2.73 OK (2/8/2006 a)	(1.95 - 2.73)/(6 - 2)	-0.195
ND<1.7 OK (10/3/2006 a)	2.73 OK (2/8/2006 a)	(1.7 - 2.73)/(7 - 2)	-0.206
ND<0.854 OK (1/11/2007 a)	2.73 OK (2/8/2006 a)	(0.854 - 2.73)/(8 - 2)	-0.312667
ND<1.12 OK (3/17/2007 ~)	2.73 OK (2/8/2006 a)	(1.12 - 2.73)/(9 - 2)	-0.23
ND<1.71 OK (6/12/2007 a)	2.73 OK (2/8/2006 a)	(1.71 - 2.73)/(10 - 2)	-0.1275
0.799 U (4/10/2006 a)	1.04 U (3/9/2006 a)	(0.799 - 1.04)/(4 - 3)	-0.241
ND<1.68 OK (4/19/2006 a)	1.04 U (3/9/2006 a)	(1.68 - 1.04)/(5 - 3)	0.32
ND<1.95 OK (7/21/2006 a)	1.04 U (3/9/2006 a)	(1.95 - 1.04)/(6 - 3)	0.303333
ND<1.7 OK (10/3/2006 a)	1.04 U (3/9/2006 a)	(1.7 - 1.04)/(7 - 3)	0.165
ND<0.854 OK (1/11/2007 a)	1.04 U (3/9/2006 a)	(0.854 - 1.04)/(8 - 3)	-0.0372
ND<1.12 OK (3/17/2007 ~)	1.04 U (3/9/2006 a)	(1.12 - 1.04)/(9 - 3)	0.0133333
ND<1.71 OK (6/12/2007 a)	1.04 U (3/9/2006 a)	(1.71 - 1.04)/(10 - 3)	0.0957143
ND<1.68 OK (4/19/2006 a)	0.799 U (4/10/2006 a)	(1.68 - 0.799)/(5 - 4)	0.881
ND<1.95 OK (7/21/2006 a)	0.799 U (4/10/2006 a)	(1.95 - 0.799)/(6 - 4)	0.5755
ND<1.7 OK (10/3/2006 a)	0.799 U (4/10/2006 a)	(1.7 - 0.799)/(7 - 4)	0.300333
ND<0.854 OK (1/11/2007 a)	0.799 U (4/10/2006 a)	(0.854 - 0.799)/(8 - 4)	0.01375
ND<1.12 OK (3/17/2007 ~)	0.799 U (4/10/2006 a)	(1.12 - 0.799)/(9 - 4)	0.0642
ND<1.71 OK (6/12/2007 a)	0.799 U (4/10/2006 a)	(1.71 - 0.799)/(10 - 4)	0.151833
ND<1.95 OK (7/21/2006 a)	ND<1.68 OK (4/19/2006 a)	(1.95 - 1.68)/(6 - 5)	0.27
ND<1.7 OK (10/3/2006 a)	ND<1.68 OK (4/19/2006 a)	(1.7 - 1.68)/(7 - 5)	0.01
ND<0.854 OK (1/11/2007 a)	ND<1.68 OK (4/19/2006 a)	(0.854 - 1.68)/(8 - 5)	-0.275333
ND<1.12 OK (3/17/2007 ~)	ND<1.68 OK (4/19/2006 a)	(1.12 - 1.68)/(9 - 5)	-0.14
ND<1.71 OK (6/12/2007 a)	ND<1.68 OK (4/19/2006 a)	(1.71 - 1.68)/(10 - 5)	0.006
ND<1.7 OK (10/3/2006 a)	ND<1.95 OK (7/21/2006 a)	(1.7 - 1.95)/(7 - 6)	-0.25
ND<0.854 OK (1/11/2007 a)	ND<1.95 OK (7/21/2006 a)	(0.854 - 1.95)/(8 - 6)	-0.548
ND<1.12 OK (3/17/2007 ~)	ND<1.95 OK (7/21/2006 a)	(1.12 - 1.95)/(9 - 6)	-0.276667
ND<1.71 OK (6/12/2007 a)	ND<1.95 OK (7/21/2006 a)	(1.71 - 1.95)/(10 - 6)	-0.06
ND<0.854 OK (1/11/2007 a)	ND<1.7 OK (10/3/2006 a)	(0.854 - 1.7)/(8 - 7)	-0.846
ND<1.12 OK (3/17/2007 ~)	ND<1.7 OK (10/3/2006 a)	(1.12 - 1.7)/(9 - 7)	-0.29

ND<1.71 OK (6/12/2007 a)	ND<1.7 OK (10/3/2006 a)	(1.71 - 1.7)/(10 - 7)	0.00333333
ND<1.12 OK (3/17/2007 ~)	ND<0.854 OK (1/11/2007 a)	(1.12 - 0.854)/(9 - 8)	0.266
ND<1.71 OK (6/12/2007 a)	ND<0.854 OK (1/11/2007 a)	(1.71 - 0.854)/(10 - 8)	0.428
ND<1.71 OK (6/12/2007 a)	ND<1.12 OK (3/17/2007 ~)	(1.71 - 1.12)/(10 - 9)	0.59

Number of Q values = 45

Ordered Q Values

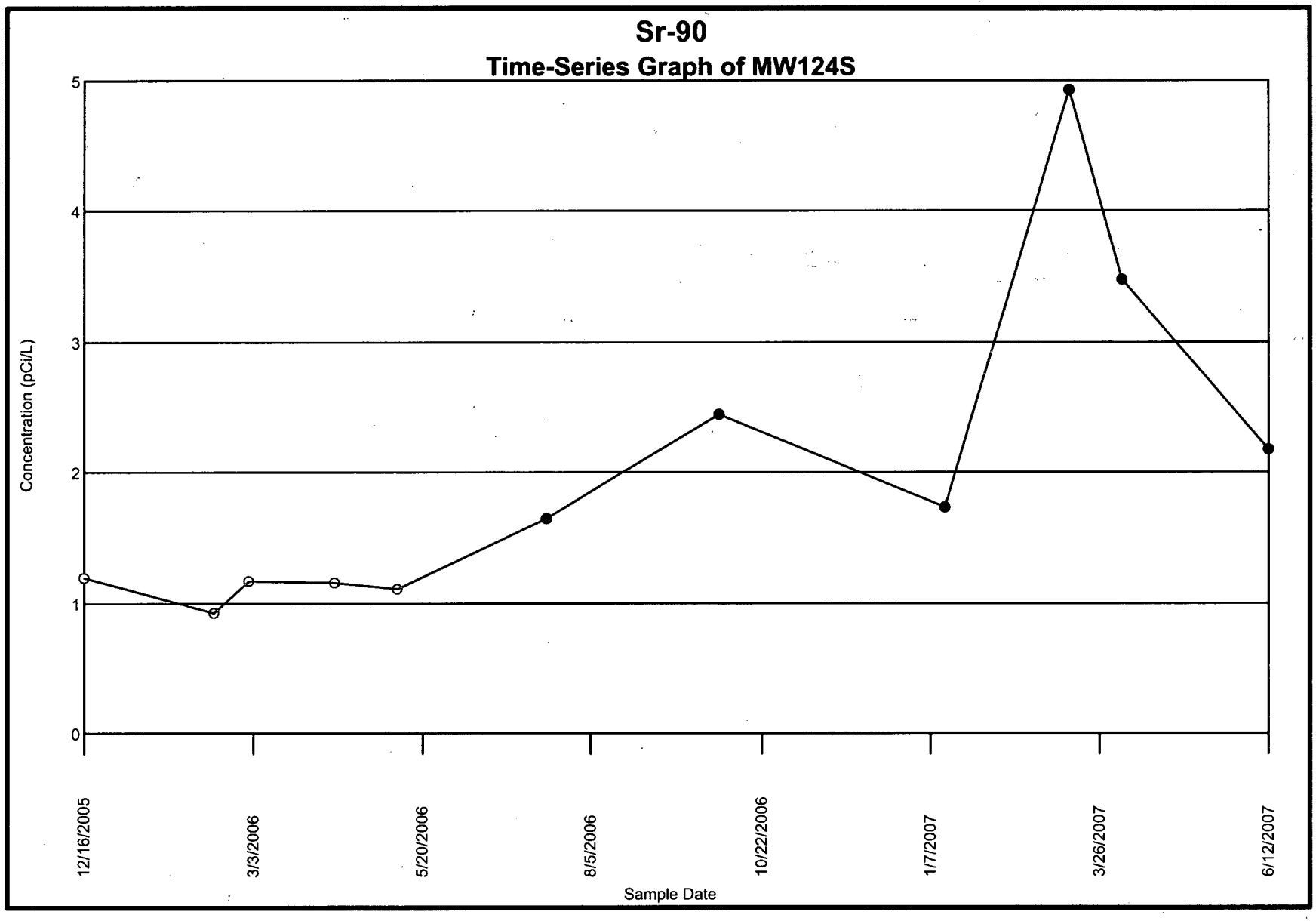
n	Q
1	-1.69
2	-0.9655
3	-0.846
4	-0.548
5	-0.35
6	-0.312667
7	-0.29
8	-0.276667
9	-0.275333
10	-0.25
11	-0.241
12	-0.23
13	-0.206
14	-0.195
15	-0.150333
16	-0.14
17	-0.1275
18	-0.105
19	-0.06
20	-0.0565714
21	-0.0372
22	-0.01625
23	0.00333333
24	0.006
25	0.01
26	0.0133333
27	0.01375
28	0.0511111
29	0.0642
30	0.075
31	0.0957143
32	0.1075
33	0.14
34	0.151833
35	0.165
36	0.266
37	0.27
38	0.300333
39	0.303333
40	0.32
41	0.428
42	0.5755
43	0.59
44	0.881
45	1.48

Sen's Estimator (Median Q) is 0.00333333

Time Period	Observations
1/5/2006	1
2/8/2006	1
3/9/2006	1
4/10/2006	1
4/19/2006	1
7/21/2006	1
10/3/2006	1
1/11/2007	1
3/17/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.206 = Q(13)
Upper limit is 0.14 = Q(33)
-0.206 < 0 < 0.14 indicating no trend in data.


Sr-90
Time-Series Graph of MW124S
Concentration (pCi/L)
0
1
2
3
4
5
12/16/2005
3/3/2006
5/20/2006
8/5/2006
10/22/2006
1/7/2007
3/26/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW124S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.924 U (2/13/2006 a)	ND<1.19 U (12/16/2005 a)	(0.924 - 1.19)/(2 - 1)	-0.266
ND<1.17 U (3/1/2006 a)	ND<1.19 U (12/16/2005 a)	(1.17 - 1.19)/(3 - 1)	-0.01
ND<1.16 U (4/10/2006 a)	ND<1.19 U (12/16/2005 a)	(1.16 - 1.19)/(4 - 1)	-0.01
ND<1.11 OK (5/8/2006 a)	ND<1.19 U (12/16/2005 a)	(1.11 - 1.19)/(5 - 1)	-0.02
1.65 OK (7/16/2006 a)	ND<1.19 U (12/16/2005 a)	(1.65 - 1.19)/(6 - 1)	0.092
2.45 OK (10/3/2006 a)	ND<1.19 U (12/16/2005 a)	(2.45 - 1.19)/(7 - 1)	0.21
1.73 OK (1/15/2007 a)	ND<1.19 U (12/16/2005 a)	(1.73 - 1.19)/(8 - 1)	0.0771429
4.93 OK (3/13/2007 a)	ND<1.19 U (12/16/2005 a)	(4.93 - 1.19)/(9 - 1)	0.4675
3.48 OK (4/6/2007 a)	ND<1.19 U (12/16/2005 a)	(3.48 - 1.19)/(10 - 1)	0.254444
2.18 OK (6/12/2007 a)	ND<1.19 U (12/16/2005 a)	(2.18 - 1.19)/(11 - 1)	0.099
ND<1.17 U (3/1/2006 a)	ND<0.924 U (2/13/2006 a)	(1.17 - 0.924)/(3 - 2)	0.246
ND<1.16 U (4/10/2006 a)	ND<0.924 U (2/13/2006 a)	(1.16 - 0.924)/(4 - 2)	0.118
ND<1.11 OK (5/8/2006 a)	ND<0.924 U (2/13/2006 a)	(1.11 - 0.924)/(5 - 2)	0.062
1.65 OK (7/16/2006 a)	ND<0.924 U (2/13/2006 a)	(1.65 - 0.924)/(6 - 2)	0.1815
2.45 OK (10/3/2006 a)	ND<0.924 U (2/13/2006 a)	(2.45 - 0.924)/(7 - 2)	0.3052
1.73 OK (1/15/2007 a)	ND<0.924 U (2/13/2006 a)	(1.73 - 0.924)/(8 - 2)	0.134333
4.93 OK (3/13/2007 a)	ND<0.924 U (2/13/2006 a)	(4.93 - 0.924)/(9 - 2)	0.572286
3.48 OK (4/6/2007 a)	ND<0.924 U (2/13/2006 a)	(3.48 - 0.924)/(10 - 2)	0.3195
2.18 OK (6/12/2007 a)	ND<0.924 U (2/13/2006 a)	(2.18 - 0.924)/(11 - 2)	0.139556
ND<1.16 U (4/10/2006 a)	ND<1.17 U (3/1/2006 a)	(1.16 - 1.17)/(4 - 3)	-0.01
ND<1.11 OK (5/8/2006 a)	ND<1.17 U (3/1/2006 a)	(1.11 - 1.17)/(5 - 3)	-0.03
1.65 OK (7/16/2006 a)	ND<1.17 U (3/1/2006 a)	(1.65 - 1.17)/(6 - 3)	0.16
2.45 OK (10/3/2006 a)	ND<1.17 U (3/1/2006 a)	(2.45 - 1.17)/(7 - 3)	0.32
1.73 OK (1/15/2007 a)	ND<1.17 U (3/1/2006 a)	(1.73 - 1.17)/(8 - 3)	0.112
4.93 OK (3/13/2007 a)	ND<1.17 U (3/1/2006 a)	(4.93 - 1.17)/(9 - 3)	0.626667
3.48 OK (4/6/2007 a)	ND<1.17 U (3/1/2006 a)	(3.48 - 1.17)/(10 - 3)	0.33
2.18 OK (6/12/2007 a)	ND<1.17 U (3/1/2006 a)	(2.18 - 1.17)/(11 - 3)	0.12625
ND<1.11 OK (5/8/2006 a)	ND<1.16 U (4/10/2006 a)	(1.11 - 1.16)/(5 - 4)	-0.05
1.65 OK (7/16/2006 a)	ND<1.16 U (4/10/2006 a)	(1.65 - 1.16)/(6 - 4)	0.245
2.45 OK (10/3/2006 a)	ND<1.16 U (4/10/2006 a)	(2.45 - 1.16)/(7 - 4)	0.43
1.73 OK (1/15/2007 a)	ND<1.16 U (4/10/2006 a)	(1.73 - 1.16)/(8 - 4)	0.1425
4.93 OK (3/13/2007 a)	ND<1.16 U (4/10/2006 a)	(4.93 - 1.16)/(9 - 4)	0.754
3.48 OK (4/6/2007 a)	ND<1.16 U (4/10/2006 a)	(3.48 - 1.16)/(10 - 4)	0.386667
2.18 OK (6/12/2007 a)	ND<1.16 U (4/10/2006 a)	(2.18 - 1.16)/(11 - 4)	0.145714
1.65 OK (7/16/2006 a)	ND<1.11 OK (5/8/2006 a)	(1.65 - 1.11)/(6 - 5)	0.54
2.45 OK (10/3/2006 a)	ND<1.11 OK (5/8/2006 a)	(2.45 - 1.11)/(7 - 5)	0.67
1.73 OK (1/15/2007 a)	ND<1.11 OK (5/8/2006 a)	(1.73 - 1.11)/(8 - 5)	0.206667
4.93 OK (3/13/2007 a)	ND<1.11 OK (5/8/2006 a)	(4.93 - 1.11)/(9 - 5)	0.955
3.48 OK (4/6/2007 a)	ND<1.11 OK (5/8/2006 a)	(3.48 - 1.11)/(10 - 5)	0.474
2.18 OK (6/12/2007 a)	ND<1.11 OK (5/8/2006 a)	(2.18 - 1.11)/(11 - 5)	0.178333
2.45 OK (10/3/2006 a)	1.65 OK (7/16/2006 a)	(2.45 - 1.65)/(7 - 6)	0.8
1.73 OK (1/15/2007 a)	1.65 OK (7/16/2006 a)	(1.73 - 1.65)/(8 - 6)	0.04

4.93 OK (3/13/2007 a)	1.65 OK (7/16/2006 a)	(4.93 - 1.65)/(9 - 6)	1.09333
3.48 OK (4/6/2007 a)	1.65 OK (7/16/2006 a)	(3.48 - 1.65)/(10 - 6)	0.4575
2.18 OK (6/12/2007 a)	1.65 OK (7/16/2006 a)	(2.18 - 1.65)/(11 - 6)	0.106
1.73 OK (1/15/2007 a)	2.45 OK (10/3/2006 a)	(1.73 - 2.45)/(8 - 7)	-0.72
4.93 OK (3/13/2007 a)	2.45 OK (10/3/2006 a)	(4.93 - 2.45)/(9 - 7)	1.24
3.48 OK (4/6/2007 a)	2.45 OK (10/3/2006 a)	(3.48 - 2.45)/(10 - 7)	0.343333
2.18 OK (6/12/2007 a)	2.45 OK (10/3/2006 a)	(2.18 - 2.45)/(11 - 7)	-0.0675
4.93 OK (3/13/2007 a)	1.73 OK (1/15/2007 a)	(4.93 - 1.73)/(9 - 8)	3.2
3.48 OK (4/6/2007 a)	1.73 OK (1/15/2007 a)	(3.48 - 1.73)/(10 - 8)	0.875
2.18 OK (6/12/2007 a)	1.73 OK (1/15/2007 a)	(2.18 - 1.73)/(11 - 8)	0.15
3.48 OK (4/6/2007 a)	4.93 OK (3/13/2007 a)	(3.48 - 4.93)/(10 - 9)	-1.45
2.18 OK (6/12/2007 a)	4.93 OK (3/13/2007 a)	(2.18 - 4.93)/(11 - 9)	-1.375
2.18 OK (6/12/2007 a)	3.48 OK (4/6/2007 a)	(2.18 - 3.48)/(11 - 10)	-1.3

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.45
2	-1.375
3	-1.3
4	-0.72
5	-0.266
6	-0.0675
7	-0.05
8	-0.03
9	-0.02
10	-0.01
11	-0.01
12	-0.01
13	0.04
14	0.062
15	0.0771429
16	0.092
17	0.099
18	0.106
19	0.112
20	0.118
21	0.12625
22	0.134333
23	0.139556
24	0.1425
25	0.145714
26	0.15
27	0.16
28	0.178333
29	0.1815
30	0.206667
31	0.21
32	0.245
33	0.246
34	0.254444

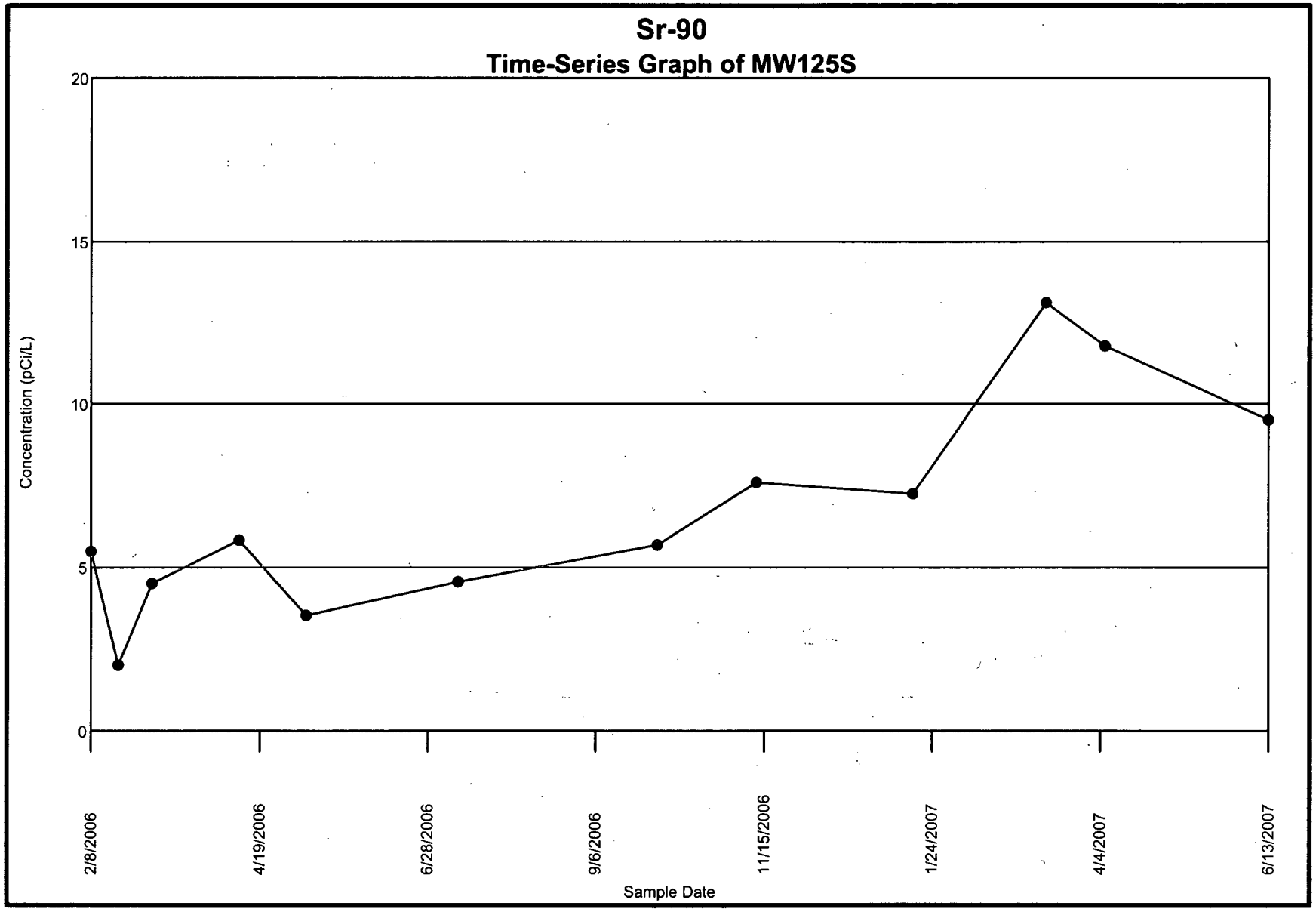
35	0.3052
36	0.3195
37	0.32
38	0.33
39	0.343333
40	0.386667
41	0.43
42	0.4575
43	0.4675
44	0.474
45	0.54
46	0.572286
47	0.626667
48	0.67
49	0.754
50	0.8
51	0.875
52	0.955
53	1.09333
54	1.24
55	3.2

Sen's Estimator (Median Q) is 0.178333

Time Period	Observations
12/16/2005	1
2/13/2006	1
3/1/2006	1
4/10/2006	1
5/8/2006	1
7/16/2006	1
10/3/2006	1
1/15/2007	1
3/13/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 0.099 = Q(17)
Upper limit is 0.343333 = Q(39)
0.099 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW125S
Concentration (pCi/L)
20
15
10
5
0
2/8/2006
4/19/2006
6/28/2006
9/6/2006
11/15/2006
1/24/2007
4/4/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW125S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
2.02 OK (2/19/2006 ~)	5.5 OK (2/8/2006 a)	(2.02 - 5.5)/(2 - 1)	-3.48
4.52 OK (3/5/2006 a)	5.5 OK (2/8/2006 a)	(4.52 - 5.5)/(3 - 1)	-0.49
5.85 OK (4/10/2006 a)	5.5 OK (2/8/2006 a)	(5.85 - 5.5)/(4 - 1)	0.116667
3.55 OK (5/8/2006 ~)	5.5 OK (2/8/2006 a)	(3.55 - 5.5)/(5 - 1)	-0.4875
4.59 OK (7/11/2006 ~)	5.5 OK (2/8/2006 a)	(4.59 - 5.5)/(6 - 1)	-0.182
5.71 OK (10/2/2006 a)	5.5 OK (2/8/2006 a)	(5.71 - 5.5)/(7 - 1)	0.035
7.6 OK (11/12/2006 a)	5.5 OK (2/8/2006 a)	(7.6 - 5.5)/(8 - 1)	0.3
7.28 OK (1/16/2007 a)	5.5 OK (2/8/2006 a)	(7.28 - 5.5)/(9 - 1)	0.2225
13.1 OK (3/13/2007 a)	5.5 OK (2/8/2006 a)	(13.1 - 5.5)/(10 - 1)	0.844444
11.8 OK (4/6/2007 a)	5.5 OK (2/8/2006 a)	(11.8 - 5.5)/(11 - 1)	0.63
9.52 OK (6/13/2007 a)	5.5 OK (2/8/2006 a)	(9.52 - 5.5)/(12 - 1)	0.365455
4.52 OK (3/5/2006 a)	2.02 OK (2/19/2006 ~)	(4.52 - 2.02)/(3 - 2)	2.5
5.85 OK (4/10/2006 a)	2.02 OK (2/19/2006 ~)	(5.85 - 2.02)/(4 - 2)	1.915
3.55 OK (5/8/2006 ~)	2.02 OK (2/19/2006 ~)	(3.55 - 2.02)/(5 - 2)	0.51
4.59 OK (7/11/2006 ~)	2.02 OK (2/19/2006 ~)	(4.59 - 2.02)/(6 - 2)	0.6425
5.71 OK (10/2/2006 a)	2.02 OK (2/19/2006 ~)	(5.71 - 2.02)/(7 - 2)	0.738
7.6 OK (11/12/2006 a)	2.02 OK (2/19/2006 ~)	(7.6 - 2.02)/(8 - 2)	0.93
7.28 OK (1/16/2007 a)	2.02 OK (2/19/2006 ~)	(7.28 - 2.02)/(9 - 2)	0.751429
13.1 OK (3/13/2007 a)	2.02 OK (2/19/2006 ~)	(13.1 - 2.02)/(10 - 2)	1.385
11.8 OK (4/6/2007 a)	2.02 OK (2/19/2006 ~)	(11.8 - 2.02)/(11 - 2)	1.08667
9.52 OK (6/13/2007 a)	2.02 OK (2/19/2006 ~)	(9.52 - 2.02)/(12 - 2)	0.75
5.85 OK (4/10/2006 a)	4.52 OK (3/5/2006 a)	(5.85 - 4.52)/(4 - 3)	1.33
3.55 OK (5/8/2006 ~)	4.52 OK (3/5/2006 a)	(3.55 - 4.52)/(5 - 3)	-0.485
4.59 OK (7/11/2006 ~)	4.52 OK (3/5/2006 a)	(4.59 - 4.52)/(6 - 3)	0.0233333
5.71 OK (10/2/2006 a)	4.52 OK (3/5/2006 a)	(5.71 - 4.52)/(7 - 3)	0.2975
7.6 OK (11/12/2006 a)	4.52 OK (3/5/2006 a)	(7.6 - 4.52)/(8 - 3)	0.616
7.28 OK (1/16/2007 a)	4.52 OK (3/5/2006 a)	(7.28 - 4.52)/(9 - 3)	0.46
13.1 OK (3/13/2007 a)	4.52 OK (3/5/2006 a)	(13.1 - 4.52)/(10 - 3)	1.22571
11.8 OK (4/6/2007 a)	4.52 OK (3/5/2006 a)	(11.8 - 4.52)/(11 - 3)	0.91
9.52 OK (6/13/2007 a)	4.52 OK (3/5/2006 a)	(9.52 - 4.52)/(12 - 3)	0.555556
3.55 OK (5/8/2006 ~)	5.85 OK (4/10/2006 a)	(3.55 - 5.85)/(5 - 4)	-2.3
4.59 OK (7/11/2006 ~)	5.85 OK (4/10/2006 a)	(4.59 - 5.85)/(6 - 4)	-0.63
5.71 OK (10/2/2006 a)	5.85 OK (4/10/2006 a)	(5.71 - 5.85)/(7 - 4)	-0.0466667
7.6 OK (11/12/2006 a)	5.85 OK (4/10/2006 a)	(7.6 - 5.85)/(8 - 4)	0.4375
7.28 OK (1/16/2007 a)	5.85 OK (4/10/2006 a)	(7.28 - 5.85)/(9 - 4)	0.286
13.1 OK (3/13/2007 a)	5.85 OK (4/10/2006 a)	(13.1 - 5.85)/(10 - 4)	1.20833
11.8 OK (4/6/2007 a)	5.85 OK (4/10/2006 a)	(11.8 - 5.85)/(11 - 4)	0.85
9.52 OK (6/13/2007 a)	5.85 OK (4/10/2006 a)	(9.52 - 5.85)/(12 - 4)	0.45875
4.59 OK (7/11/2006 ~)	3.55 OK (5/8/2006 ~)	(4.59 - 3.55)/(6 - 5)	1.04
5.71 OK (10/2/2006 a)	3.55 OK (5/8/2006 ~)	(5.71 - 3.55)/(7 - 5)	1.08
7.6 OK (11/12/2006 a)	3.55 OK (5/8/2006 ~)	(7.6 - 3.55)/(8 - 5)	1.35
7.28 OK (1/16/2007 a)	3.55 OK (5/8/2006 ~)	(7.28 - 3.55)/(9 - 5)	0.9325
13.1 OK (3/13/2007 a)	3.55 OK (5/8/2006 ~)	(13.1 - 3.55)/(10 - 5)	1.91

11.8 OK (4/6/2007 a)	3.55 OK (5/8/2006 ~)	(11.8 - 3.55)/(11 - 5)	1.375
9.52 OK (6/13/2007 a)	3.55 OK (5/8/2006 ~)	(9.52 - 3.55)/(12 - 5)	0.852857
5.71 OK (10/2/2006 a)	4.59 OK (7/11/2006 ~)	(5.71 - 4.59)/(7 - 6)	1.12
7.6 OK (11/12/2006 a)	4.59 OK (7/11/2006 ~)	(7.6 - 4.59)/(8 - 6)	1.505
7.28 OK (1/16/2007 a)	4.59 OK (7/11/2006 ~)	(7.28 - 4.59)/(9 - 6)	0.896667
13.1 OK (3/13/2007 a)	4.59 OK (7/11/2006 ~)	(13.1 - 4.59)/(10 - 6)	2.1275
11.8 OK (4/6/2007 a)	4.59 OK (7/11/2006 ~)	(11.8 - 4.59)/(11 - 6)	1.442
9.52 OK (6/13/2007 a)	4.59 OK (7/11/2006 ~)	(9.52 - 4.59)/(12 - 6)	0.821667
7.6 OK (11/12/2006 a)	5.71 OK (10/2/2006 a)	(7.6 - 5.71)/(8 - 7)	1.89
7.28 OK (1/16/2007 a)	5.71 OK (10/2/2006 a)	(7.28 - 5.71)/(9 - 7)	0.785
13.1 OK (3/13/2007 a)	5.71 OK (10/2/2006 a)	(13.1 - 5.71)/(10 - 7)	2.46333
11.8 OK (4/6/2007 a)	5.71 OK (10/2/2006 a)	(11.8 - 5.71)/(11 - 7)	1.5225
9.52 OK (6/13/2007 a)	5.71 OK (10/2/2006 a)	(9.52 - 5.71)/(12 - 7)	0.762
7.28 OK (1/16/2007 a)	7.6 OK (11/12/2006 a)	(7.28 - 7.6)/(9 - 8)	-0.32
13.1 OK (3/13/2007 a)	7.6 OK (11/12/2006 a)	(13.1 - 7.6)/(10 - 8)	2.75
11.8 OK (4/6/2007 a)	7.6 OK (11/12/2006 a)	(11.8 - 7.6)/(11 - 8)	1.4
9.52 OK (6/13/2007 a)	7.6 OK (11/12/2006 a)	(9.52 - 7.6)/(12 - 8)	0.48
13.1 OK (3/13/2007 a)	7.28 OK (1/16/2007 a)	(13.1 - 7.28)/(10 - 9)	5.82
11.8 OK (4/6/2007 a)	7.28 OK (1/16/2007 a)	(11.8 - 7.28)/(11 - 9)	2.26
9.52 OK (6/13/2007 a)	7.28 OK (1/16/2007 a)	(9.52 - 7.28)/(12 - 9)	0.746667
11.8 OK (4/6/2007 a)	13.1 OK (3/13/2007 a)	(11.8 - 13.1)/(11 - 10)	-1.3
9.52 OK (6/13/2007 a)	13.1 OK (3/13/2007 a)	(9.52 - 13.1)/(12 - 10)	-1.79
9.52 OK (6/13/2007 a)	11.8 OK (4/6/2007 a)	(9.52 - 11.8)/(12 - 11)	-2.28

Number of Q values = 66

Ordered Q Values

n	Q
1	-3.48
2	-2.3
3	-2.28
4	-1.79
5	-1.3
6	-0.63
7	-0.49
8	-0.4875
9	-0.485
10	-0.32
11	-0.182
12	-0.0466667
13	0.0233333
14	0.035
15	0.116667
16	0.2225
17	0.286
18	0.2975
19	0.3
20	0.365455
21	0.4375
22	0.45875

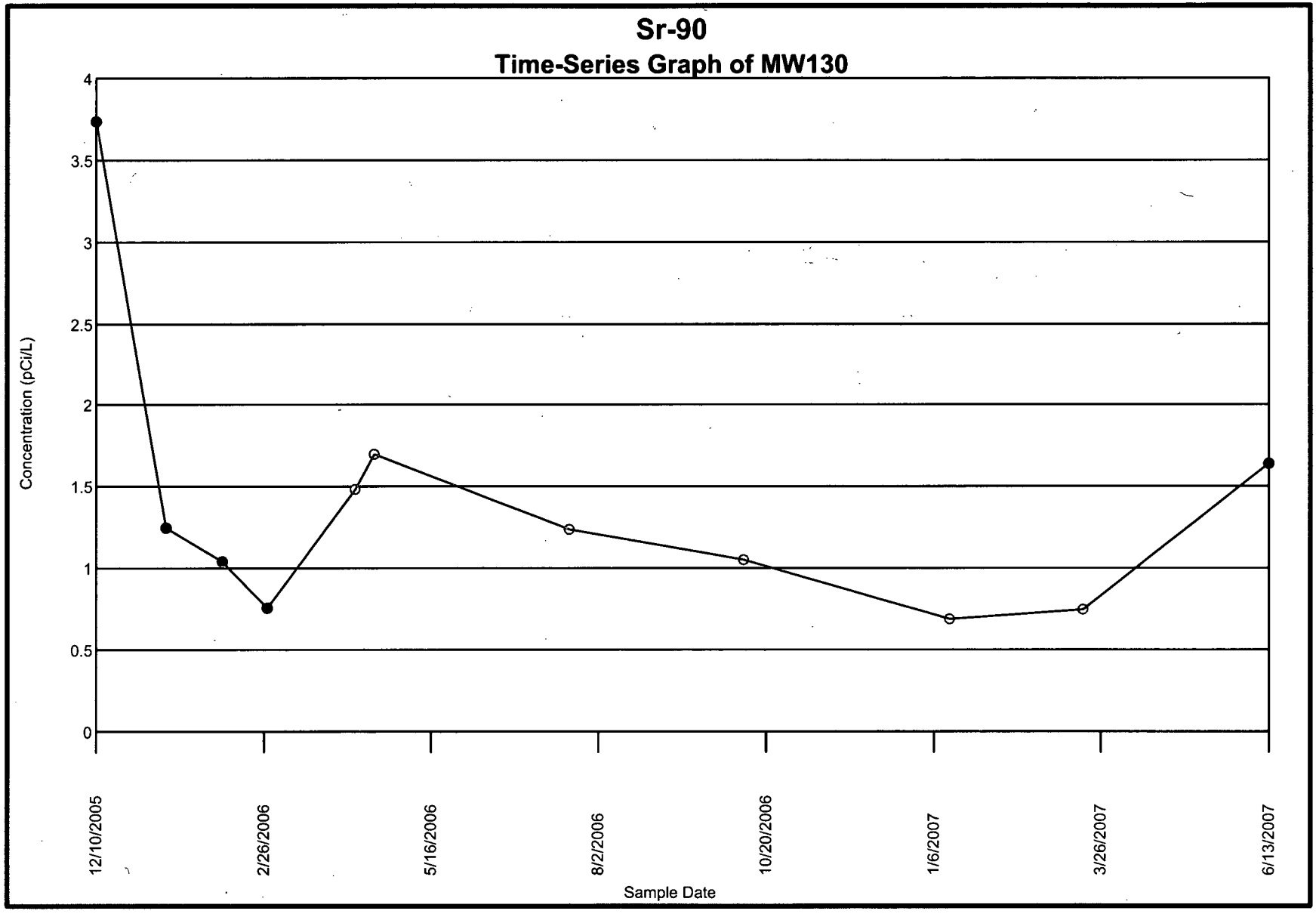
23	0.46
24	0.48
25	0.51
26	0.555556
27	0.616
28	0.63
29	0.6425
30	0.738
31	0.746667
32	0.75
33	0.751429
34	0.762
35	0.785
36	0.821667
37	0.844444
38	0.85
39	0.852857
40	0.896667
41	0.91
42	0.93
43	0.9325
44	1.04
45	1.08
46	1.08667
47	1.12
48	1.20833
49	1.22571
50	1.33
51	1.35
52	1.375
53	1.385
54	1.4
55	1.442
56	1.505
57	1.5225
58	1.89
59	1.91
60	1.915
61	2.1275
62	2.26
63	2.46333
64	2.5
65	2.75
66	5.82

Sen's Estimator (Median Q) is 0.756714

Time Period	Observations
2/8/2006	1
2/19/2006	1
3/5/2006	1
4/10/2006	1
5/8/2006	1
7/11/2006	1
10/2/2006	1
11/12/2006	1
1/16/2007	1
3/13/2007	1

4/6/2007 1
6/13/2007 1
There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 3828
b = 11880
c = 264
Group Variance = 212.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.987
M1 = (66 - 23.987)/2.0 = 21.0065
M2 = (66 + 23.987)/2.0 + 1 = 45.9935
Lower limit is 0.4375 = Q(21)
Upper limit is 1.08667 = Q(46)
0.4375 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW130
Concentration (pCi/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
12/10/2005
2/26/2006
5/16/2006
8/2/2006
10/20/2006
1/6/2007
3/26/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW130

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1.25 OK (1/12/2006 a)	3.737 OK (12/10/2005 ~)	(1.25 - 3.737)/(2 - 1)	-2.487
1.0435 U (2/7/2006 ~)	3.737 OK (12/10/2005 ~)	(1.0435 - 3.737)/(3 - 1)	-1.34675
0.758 OK (2/28/2006 a)	3.737 OK (12/10/2005 ~)	(0.758 - 3.737)/(4 - 1)	-0.993
ND<1.48 U (4/10/2006 a)	3.737 OK (12/10/2005 ~)	(1.48 - 3.737)/(5 - 1)	-0.56425
ND<1.7 OK (4/19/2006 a)	3.737 OK (12/10/2005 ~)	(1.7 - 3.737)/(6 - 1)	-0.4074
ND<1.24 OK (7/20/2006 ~)	3.737 OK (12/10/2005 ~)	(1.24 - 3.737)/(7 - 1)	-0.416167
ND<1.05 OK (10/10/2006 a)	3.737 OK (12/10/2005 ~)	(1.05 - 3.737)/(8 - 1)	-0.383857
ND<0.692 OK (1/14/2007 a)	3.737 OK (12/10/2005 ~)	(0.692 - 3.737)/(9 - 1)	-0.380625
ND<0.75 OK (3/18/2007 a)	3.737 OK (12/10/2005 ~)	(0.75 - 3.737)/(10 - 1)	-0.331889
1.64 OK (6/13/2007 a)	3.737 OK (12/10/2005 ~)	(1.64 - 3.737)/(11 - 1)	-0.2097
1.0435 U (2/7/2006 ~)	1.25 OK (1/12/2006 a)	(1.0435 - 1.25)/(3 - 2)	-0.2065
0.758 OK (2/28/2006 a)	1.25 OK (1/12/2006 a)	(0.758 - 1.25)/(4 - 2)	-0.246
ND<1.48 U (4/10/2006 a)	1.25 OK (1/12/2006 a)	(1.48 - 1.25)/(5 - 2)	0.0766667
ND<1.7 OK (4/19/2006 a)	1.25 OK (1/12/2006 a)	(1.7 - 1.25)/(6 - 2)	0.1125
ND<1.24 OK (7/20/2006 ~)	1.25 OK (1/12/2006 a)	(1.24 - 1.25)/(7 - 2)	-0.002
ND<1.05 OK (10/10/2006 a)	1.25 OK (1/12/2006 a)	(1.05 - 1.25)/(8 - 2)	-0.0333333
ND<0.692 OK (1/14/2007 a)	1.25 OK (1/12/2006 a)	(0.692 - 1.25)/(9 - 2)	-0.0797143
ND<0.75 OK (3/18/2007 a)	1.25 OK (1/12/2006 a)	(0.75 - 1.25)/(10 - 2)	-0.0625
1.64 OK (6/13/2007 a)	1.25 OK (1/12/2006 a)	(1.64 - 1.25)/(11 - 2)	0.0433333
0.758 OK (2/28/2006 a)	1.0435 U (2/7/2006 ~)	(0.758 - 1.0435)/(4 - 3)	-0.2855
ND<1.48 U (4/10/2006 a)	1.0435 U (2/7/2006 ~)	(1.48 - 1.0435)/(5 - 3)	0.21825
ND<1.7 OK (4/19/2006 a)	1.0435 U (2/7/2006 ~)	(1.7 - 1.0435)/(6 - 3)	0.218833
ND<1.24 OK (7/20/2006 ~)	1.0435 U (2/7/2006 ~)	(1.24 - 1.0435)/(7 - 3)	0.049125
ND<1.05 OK (10/10/2006 a)	1.0435 U (2/7/2006 ~)	(1.05 - 1.0435)/(8 - 3)	0.0013
ND<0.692 OK (1/14/2007 a)	1.0435 U (2/7/2006 ~)	(0.692 - 1.0435)/(9 - 3)	-0.0585833
ND<0.75 OK (3/18/2007 a)	1.0435 U (2/7/2006 ~)	(0.75 - 1.0435)/(10 - 3)	-0.0419286
1.64 OK (6/13/2007 a)	1.0435 U (2/7/2006 ~)	(1.64 - 1.0435)/(11 - 3)	0.0745625
ND<1.48 U (4/10/2006 a)	0.758 OK (2/28/2006 a)	(1.48 - 0.758)/(5 - 4)	0.722
ND<1.7 OK (4/19/2006 a)	0.758 OK (2/28/2006 a)	(1.7 - 0.758)/(6 - 4)	0.471
ND<1.24 OK (7/20/2006 ~)	0.758 OK (2/28/2006 a)	(1.24 - 0.758)/(7 - 4)	0.160667
ND<1.05 OK (10/10/2006 a)	0.758 OK (2/28/2006 a)	(1.05 - 0.758)/(8 - 4)	0.073
ND<0.692 OK (1/14/2007 a)	0.758 OK (2/28/2006 a)	(0.692 - 0.758)/(9 - 4)	-0.0132
ND<0.75 OK (3/18/2007 a)	0.758 OK (2/28/2006 a)	(0.75 - 0.758)/(10 - 4)	-0.00133333
1.64 OK (6/13/2007 a)	0.758 OK (2/28/2006 a)	(1.64 - 0.758)/(11 - 4)	0.126
ND<1.7 OK (4/19/2006 a)	ND<1.48 U (4/10/2006 a)	(1.7 - 1.48)/(6 - 5)	0.22
ND<1.24 OK (7/20/2006 ~)	ND<1.48 U (4/10/2006 a)	(1.24 - 1.48)/(7 - 5)	-0.12
ND<1.05 OK (10/10/2006 a)	ND<1.48 U (4/10/2006 a)	(1.05 - 1.48)/(8 - 5)	-0.143333
ND<0.692 OK (1/14/2007 a)	ND<1.48 U (4/10/2006 a)	(0.692 - 1.48)/(9 - 5)	-0.197
ND<0.75 OK (3/18/2007 a)	ND<1.48 U (4/10/2006 a)	(0.75 - 1.48)/(10 - 5)	-0.146
1.64 OK (6/13/2007 a)	ND<1.48 U (4/10/2006 a)	(1.64 - 1.48)/(11 - 5)	0.0266667
ND<1.24 OK (7/20/2006 ~)	ND<1.7 OK (4/19/2006 a)	(1.24 - 1.7)/(7 - 6)	-0.46
ND<1.05 OK (10/10/2006 a)	ND<1.7 OK (4/19/2006 a)	(1.05 - 1.7)/(8 - 6)	-0.325

ND<0.692 OK (1/14/2007 a)	ND<1.7 OK (4/19/2006 a)	(0.692 - 1.7)/(9 - 6)	-0.336
ND<0.75 OK (3/18/2007 a)	ND<1.7 OK (4/19/2006 a)	(0.75 - 1.7)/(10 - 6)	-0.2375
1.64 OK (6/13/2007 a)	ND<1.7 OK (4/19/2006 a)	(1.64 - 1.7)/(11 - 6)	-0.012
ND<1.05 OK (10/10/2006 a)	ND<1.24 OK (7/20/2006 ~)	(1.05 - 1.24)/(8 - 7)	-0.19
ND<0.692 OK (1/14/2007 a)	ND<1.24 OK (7/20/2006 ~)	(0.692 - 1.24)/(9 - 7)	-0.274
ND<0.75 OK (3/18/2007 a)	ND<1.24 OK (7/20/2006 ~)	(0.75 - 1.24)/(10 - 7)	-0.163333
1.64 OK (6/13/2007 a)	ND<1.24 OK (7/20/2006 ~)	(1.64 - 1.24)/(11 - 7)	0.1
ND<0.692 OK (1/14/2007 a)	ND<1.05 OK (10/10/2006 a)	(0.692 - 1.05)/(9 - 8)	-0.358
ND<0.75 OK (3/18/2007 a)	ND<1.05 OK (10/10/2006 a)	(0.75 - 1.05)/(10 - 8)	-0.15
1.64 OK (6/13/2007 a)	ND<1.05 OK (10/10/2006 a)	(1.64 - 1.05)/(11 - 8)	0.196667
ND<0.75 OK (3/18/2007 a)	ND<0.692 OK (1/14/2007 a)	(0.75 - 0.692)/(10 - 9)	0.058
1.64 OK (6/13/2007 a)	ND<0.692 OK (1/14/2007 a)	(1.64 - 0.692)/(11 - 9)	0.474
1.64 OK (6/13/2007 a)	ND<0.75 OK (3/18/2007 a)	(1.64 - 0.75)/(11 - 10)	0.89

Number of Q values = 55

Ordered Q Values

n	Q
1	-2.487
2	-1.34675
3	-0.993
4	-0.56425
5	-0.46
6	-0.416167
7	-0.4074
8	-0.383857
9	-0.380625
10	-0.358
11	-0.336
12	-0.331889
13	-0.325
14	-0.2855
15	-0.274
16	-0.246
17	-0.2375
18	-0.2097
19	-0.2065
20	-0.197
21	-0.19
22	-0.163333
23	-0.15
24	-0.146
25	-0.143333
26	-0.12
27	-0.0797143
28	-0.0625
29	-0.0585833
30	-0.0419286
31	-0.0333333
32	-0.0132
33	-0.012
34	-0.002

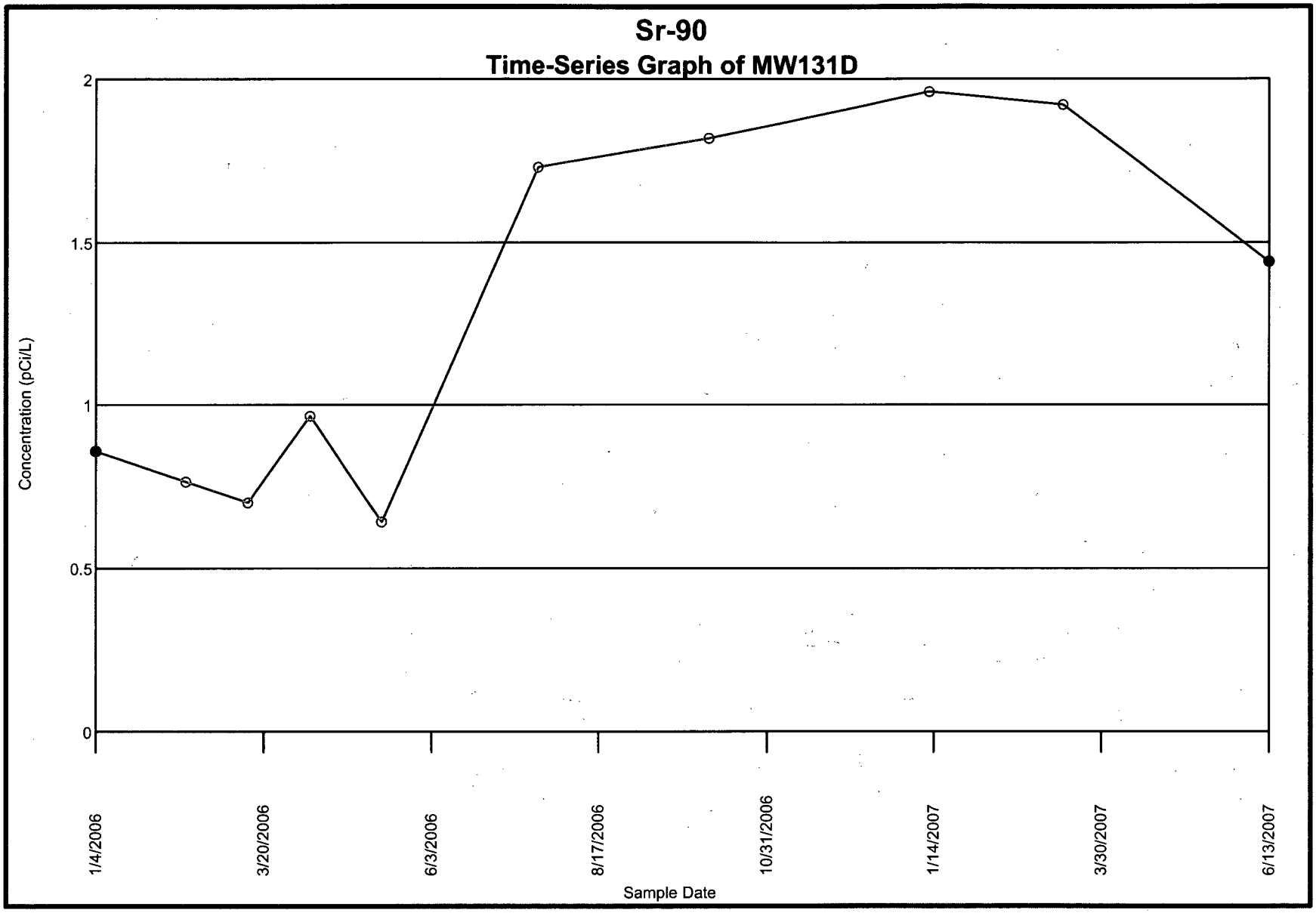
35	-0.00133333
36	0.0013
37	0.0266667
38	0.0433333
39	0.049125
40	0.058
41	0.073
42	0.0745625
43	0.0766667
44	0.1
45	0.1125
46	0.126
47	0.160667
48	0.196667
49	0.21825
50	0.218833
51	0.22
52	0.471
53	0.474
54	0.722
55	0.89

Sen's Estimator (Median Q) is -0.0625

Time Period	Observations
12/10/2005	1
1/12/2006	1
2/7/2006	1
2/28/2006	1
4/10/2006	1
4/19/2006	1
7/20/2006	1
10/10/2006	1
1/14/2007	1
3/18/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.2375 = Q(17)
Upper limit is 0.049125 = Q(39)
-0.2375 < 0 < 0.049125 indicating no trend in data.


Sr-90
Time-Series Graph of MW131D
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/20/2006
6/3/2006
8/17/2006
10/31/2006
1/14/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW131D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.767 U (2/13/2006 a)	0.861 U (1/4/2006 a)	(0.767 - 0.861)/(2 - 1)	-0.094
ND<0.701 U (3/13/2006 a)	0.861 U (1/4/2006 a)	(0.701 - 0.861)/(3 - 1)	-0.08
ND<0.967 U (4/10/2006 a)	0.861 U (1/4/2006 a)	(0.967 - 0.861)/(4 - 1)	0.0353333
ND<0.646 OK (5/12/2006 a)	0.861 U (1/4/2006 a)	(0.646 - 0.861)/(5 - 1)	-0.05375
ND<1.73 OK (7/21/2006 a)	0.861 U (1/4/2006 a)	(1.73 - 0.861)/(6 - 1)	0.1738
ND<1.82 OK (10/5/2006 a)	0.861 U (1/4/2006 a)	(1.82 - 0.861)/(7 - 1)	0.159833
ND<1.96 OK (1/12/2007 a)	0.861 U (1/4/2006 a)	(1.96 - 0.861)/(8 - 1)	0.157
ND<1.92 OK (3/13/2007 a)	0.861 U (1/4/2006 a)	(1.92 - 0.861)/(9 - 1)	0.132375
1.44 OK (6/13/2007 a)	0.861 U (1/4/2006 a)	(1.44 - 0.861)/(10 - 1)	0.0643333
ND<0.701 U (3/13/2006 a)	ND<0.767 U (2/13/2006 a)	(0.701 - 0.767)/(3 - 2)	-0.066
ND<0.967 U (4/10/2006 a)	ND<0.767 U (2/13/2006 a)	(0.967 - 0.767)/(4 - 2)	0.1
ND<0.646 OK (5/12/2006 a)	ND<0.767 U (2/13/2006 a)	(0.646 - 0.767)/(5 - 2)	-0.0403333
ND<1.73 OK (7/21/2006 a)	ND<0.767 U (2/13/2006 a)	(1.73 - 0.767)/(6 - 2)	0.24075
ND<1.82 OK (10/5/2006 a)	ND<0.767 U (2/13/2006 a)	(1.82 - 0.767)/(7 - 2)	0.2106
ND<1.96 OK (1/12/2007 a)	ND<0.767 U (2/13/2006 a)	(1.96 - 0.767)/(8 - 2)	0.198833
ND<1.92 OK (3/13/2007 a)	ND<0.767 U (2/13/2006 a)	(1.92 - 0.767)/(9 - 2)	0.164714
1.44 OK (6/13/2007 a)	ND<0.767 U (2/13/2006 a)	(1.44 - 0.767)/(10 - 2)	0.084125
ND<0.967 U (4/10/2006 a)	ND<0.701 U (3/13/2006 a)	(0.967 - 0.701)/(4 - 3)	0.266
ND<0.646 OK (5/12/2006 a)	ND<0.701 U (3/13/2006 a)	(0.646 - 0.701)/(5 - 3)	-0.0275
ND<1.73 OK (7/21/2006 a)	ND<0.701 U (3/13/2006 a)	(1.73 - 0.701)/(6 - 3)	0.343
ND<1.82 OK (10/5/2006 a)	ND<0.701 U (3/13/2006 a)	(1.82 - 0.701)/(7 - 3)	0.27975
ND<1.96 OK (1/12/2007 a)	ND<0.701 U (3/13/2006 a)	(1.96 - 0.701)/(8 - 3)	0.2518
ND<1.92 OK (3/13/2007 a)	ND<0.701 U (3/13/2006 a)	(1.92 - 0.701)/(9 - 3)	0.203167
1.44 OK (6/13/2007 a)	ND<0.701 U (3/13/2006 a)	(1.44 - 0.701)/(10 - 3)	0.105571
ND<0.646 OK (5/12/2006 a)	ND<0.967 U (4/10/2006 a)	(0.646 - 0.967)/(5 - 4)	-0.321
ND<1.73 OK (7/21/2006 a)	ND<0.967 U (4/10/2006 a)	(1.73 - 0.967)/(6 - 4)	0.3815
ND<1.82 OK (10/5/2006 a)	ND<0.967 U (4/10/2006 a)	(1.82 - 0.967)/(7 - 4)	0.284333
ND<1.96 OK (1/12/2007 a)	ND<0.967 U (4/10/2006 a)	(1.96 - 0.967)/(8 - 4)	0.24825
ND<1.92 OK (3/13/2007 a)	ND<0.967 U (4/10/2006 a)	(1.92 - 0.967)/(9 - 4)	0.1906
1.44 OK (6/13/2007 a)	ND<0.967 U (4/10/2006 a)	(1.44 - 0.967)/(10 - 4)	0.0788333
ND<1.73 OK (7/21/2006 a)	ND<0.646 OK (5/12/2006 a)	(1.73 - 0.646)/(6 - 5)	1.084
ND<1.82 OK (10/5/2006 a)	ND<0.646 OK (5/12/2006 a)	(1.82 - 0.646)/(7 - 5)	0.587
ND<1.96 OK (1/12/2007 a)	ND<0.646 OK (5/12/2006 a)	(1.96 - 0.646)/(8 - 5)	0.438
ND<1.92 OK (3/13/2007 a)	ND<0.646 OK (5/12/2006 a)	(1.92 - 0.646)/(9 - 5)	0.3185
1.44 OK (6/13/2007 a)	ND<0.646 OK (5/12/2006 a)	(1.44 - 0.646)/(10 - 5)	0.1588
ND<1.82 OK (10/5/2006 a)	ND<1.73 OK (7/21/2006 a)	(1.82 - 1.73)/(7 - 6)	0.09
ND<1.96 OK (1/12/2007 a)	ND<1.73 OK (7/21/2006 a)	(1.96 - 1.73)/(8 - 6)	0.115
ND<1.92 OK (3/13/2007 a)	ND<1.73 OK (7/21/2006 a)	(1.92 - 1.73)/(9 - 6)	0.0633333
1.44 OK (6/13/2007 a)	ND<1.73 OK (7/21/2006 a)	(1.44 - 1.73)/(10 - 6)	-0.0725
ND<1.96 OK (1/12/2007 a)	ND<1.82 OK (10/5/2006 a)	(1.96 - 1.82)/(8 - 7)	0.14
ND<1.92 OK (3/13/2007 a)	ND<1.82 OK (10/5/2006 a)	(1.92 - 1.82)/(9 - 7)	0.05

1.44 OK (6/13/2007 a)	ND<1.82 OK (10/5/2006 a)	(1.44 - 1.82)/(10 - 7)	-0.126667
ND<1.92 OK (3/13/2007 a)	ND<1.96 OK (1/12/2007 a)	(1.92 - 1.96)/(9 - 8)	-0.04
1.44 OK (6/13/2007 a)	ND<1.96 OK (1/12/2007 a)	(1.44 - 1.96)/(10 - 8)	-0.26
1.44 OK (6/13/2007 a)	ND<1.92 OK (3/13/2007 a)	(1.44 - 1.92)/(10 - 9)	-0.48

Number of Q values = 45

Ordered Q Values

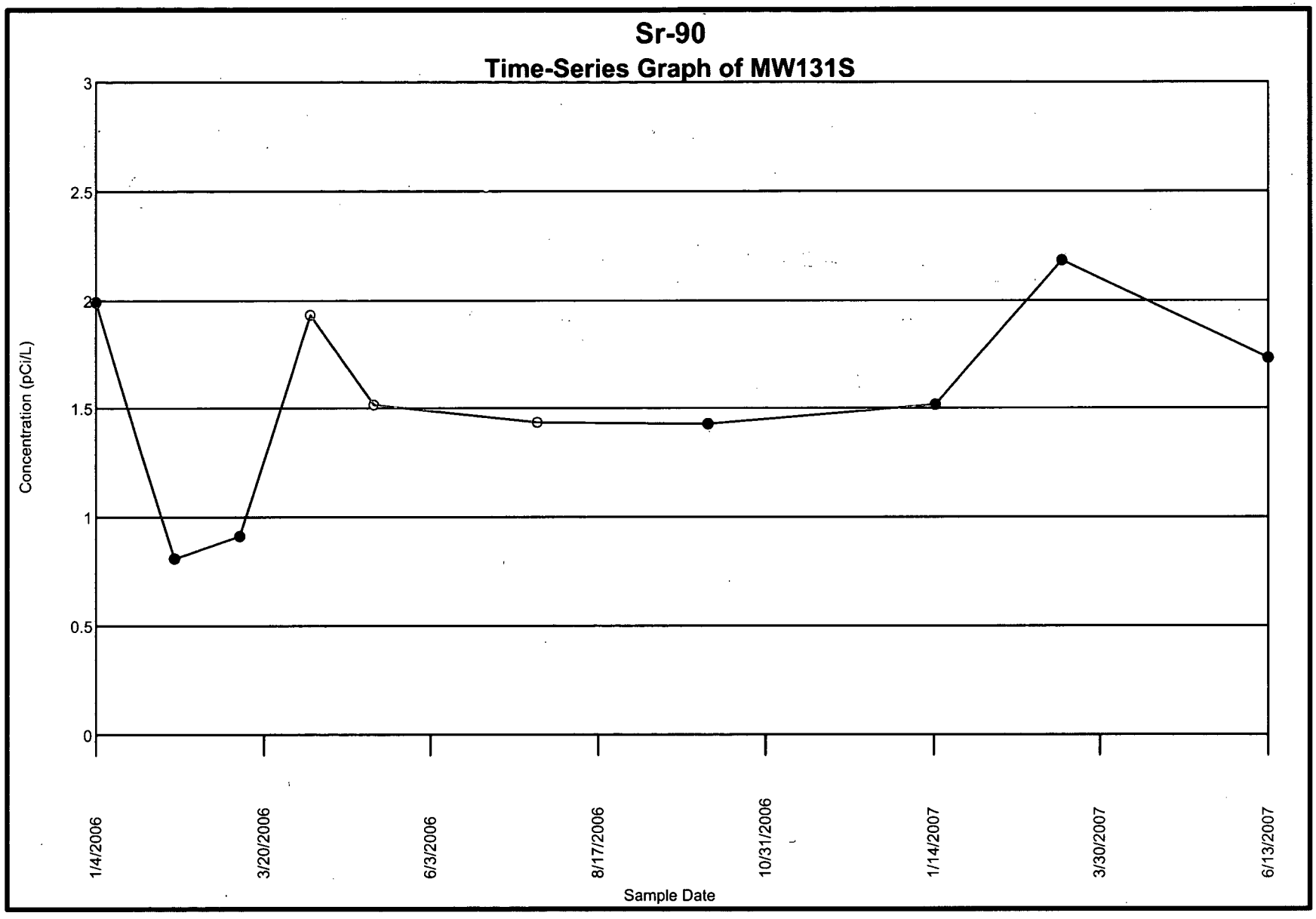
n	Q
1	-0.48
2	-0.321
3	-0.26
4	-0.126667
5	-0.094
6	-0.08
7	-0.0725
8	-0.066
9	-0.05375
10	-0.0403333
11	-0.04
12	-0.0275
13	0.0353333
14	0.05
15	0.0633333
16	0.0643333
17	0.0788333
18	0.084125
19	0.09
20	0.1
21	0.105571
22	0.115
23	0.132375
24	0.14
25	0.157
26	0.1588
27	0.159833
28	0.164714
29	0.1738
30	0.1906
31	0.198833
32	0.203167
33	0.2106
34	0.24075
35	0.24825
36	0.2518
37	0.266
38	0.27975
39	0.284333
40	0.3185
41	0.343
42	0.3815
43	0.438
44	0.587
45	1.084

Sen's Estimator (Median Q) is 0.132375

Time Period	Observations
1/4/2006	1
2/13/2006	1
3/13/2006	1
4/10/2006	1
5/12/2006	1
7/21/2006	1
10/5/2006	1
1/12/2007	1
3/13/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is 0.0353333 = Q(13)
Upper limit is 0.2106 = Q(33)
0.0353333 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW131S
Concentration (pCi/L)
3
2.5
2
1.5
1
0.5
0
1/4/2006
3/20/2006
6/3/2006
8/17/2006
10/31/2006
1/14/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW131S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
0.812 U (2/8/2006 a)	1.99 OK (1/4/2006 a)	(0.812 - 1.99)/(2 - 1)	-1.178
0.913 U (3/9/2006 a)	1.99 OK (1/4/2006 a)	(0.913 - 1.99)/(3 - 1)	-0.5385
ND<1.93 U (4/10/2006 a)	1.99 OK (1/4/2006 a)	(1.93 - 1.99)/(4 - 1)	-0.02
ND<1.52 OK (5/8/2006 a)	1.99 OK (1/4/2006 a)	(1.52 - 1.99)/(5 - 1)	-0.1175
ND<1.44 OK (7/21/2006 a)	1.99 OK (1/4/2006 a)	(1.44 - 1.99)/(6 - 1)	-0.11
1.43 OK (10/5/2006 a)	1.99 OK (1/4/2006 a)	(1.43 - 1.99)/(7 - 1)	-0.0933333
1.52 OK (1/15/2007 a)	1.99 OK (1/4/2006 a)	(1.52 - 1.99)/(8 - 1)	-0.0671429
2.18 OK (3/13/2007 a)	1.99 OK (1/4/2006 a)	(2.18 - 1.99)/(9 - 1)	0.02375
1.73 OK (6/13/2007 a)	1.99 OK (1/4/2006 a)	(1.73 - 1.99)/(10 - 1)	-0.0288889
0.913 U (3/9/2006 a)	0.812 U (2/8/2006 a)	(0.913 - 0.812)/(3 - 2)	0.101
ND<1.93 U (4/10/2006 a)	0.812 U (2/8/2006 a)	(1.93 - 0.812)/(4 - 2)	0.559
ND<1.52 OK (5/8/2006 a)	0.812 U (2/8/2006 a)	(1.52 - 0.812)/(5 - 2)	0.236
ND<1.44 OK (7/21/2006 a)	0.812 U (2/8/2006 a)	(1.44 - 0.812)/(6 - 2)	0.157
1.43 OK (10/5/2006 a)	0.812 U (2/8/2006 a)	(1.43 - 0.812)/(7 - 2)	0.1236
1.52 OK (1/15/2007 a)	0.812 U (2/8/2006 a)	(1.52 - 0.812)/(8 - 2)	0.118
2.18 OK (3/13/2007 a)	0.812 U (2/8/2006 a)	(2.18 - 0.812)/(9 - 2)	0.195429
1.73 OK (6/13/2007 a)	0.812 U (2/8/2006 a)	(1.73 - 0.812)/(10 - 2)	0.11475
ND<1.93 U (4/10/2006 a)	0.913 U (3/9/2006 a)	(1.93 - 0.913)/(4 - 3)	1.017
ND<1.52 OK (5/8/2006 a)	0.913 U (3/9/2006 a)	(1.52 - 0.913)/(5 - 3)	0.3035
ND<1.44 OK (7/21/2006 a)	0.913 U (3/9/2006 a)	(1.44 - 0.913)/(6 - 3)	0.175667
1.43 OK (10/5/2006 a)	0.913 U (3/9/2006 a)	(1.43 - 0.913)/(7 - 3)	0.12925
1.52 OK (1/15/2007 a)	0.913 U (3/9/2006 a)	(1.52 - 0.913)/(8 - 3)	0.1214
2.18 OK (3/13/2007 a)	0.913 U (3/9/2006 a)	(2.18 - 0.913)/(9 - 3)	0.211167
1.73 OK (6/13/2007 a)	0.913 U (3/9/2006 a)	(1.73 - 0.913)/(10 - 3)	0.116714
ND<1.52 OK (5/8/2006 a)	ND<1.93 U (4/10/2006 a)	(1.52 - 1.93)/(5 - 4)	-0.41
ND<1.44 OK (7/21/2006 a)	ND<1.93 U (4/10/2006 a)	(1.44 - 1.93)/(6 - 4)	-0.245
1.43 OK (10/5/2006 a)	ND<1.93 U (4/10/2006 a)	(1.43 - 1.93)/(7 - 4)	-0.166667
1.52 OK (1/15/2007 a)	ND<1.93 U (4/10/2006 a)	(1.52 - 1.93)/(8 - 4)	-0.1025
2.18 OK (3/13/2007 a)	ND<1.93 U (4/10/2006 a)	(2.18 - 1.93)/(9 - 4)	0.05
1.73 OK (6/13/2007 a)	ND<1.93 U (4/10/2006 a)	(1.73 - 1.93)/(10 - 4)	-0.0333333
ND<1.44 OK (7/21/2006 a)	ND<1.52 OK (5/8/2006 a)	(1.44 - 1.52)/(6 - 5)	-0.08
1.43 OK (10/5/2006 a)	ND<1.52 OK (5/8/2006 a)	(1.43 - 1.52)/(7 - 5)	-0.045
1.52 OK (1/15/2007 a)	ND<1.52 OK (5/8/2006 a)	(1.52 - 1.52)/(8 - 5)	0
2.18 OK (3/13/2007 a)	ND<1.52 OK (5/8/2006 a)	(2.18 - 1.52)/(9 - 5)	0.165
1.73 OK (6/13/2007 a)	ND<1.52 OK (5/8/2006 a)	(1.73 - 1.52)/(10 - 5)	0.042
1.43 OK (10/5/2006 a)	ND<1.44 OK (7/21/2006 a)	(1.43 - 1.44)/(7 - 6)	-0.01
1.52 OK (1/15/2007 a)	ND<1.44 OK (7/21/2006 a)	(1.52 - 1.44)/(8 - 6)	0.04
2.18 OK (3/13/2007 a)	ND<1.44 OK (7/21/2006 a)	(2.18 - 1.44)/(9 - 6)	0.246667
1.73 OK (6/13/2007 a)	ND<1.44 OK (7/21/2006 a)	(1.73 - 1.44)/(10 - 6)	0.0725
1.52 OK (1/15/2007 a)	1.43 OK (10/5/2006 a)	(1.52 - 1.43)/(8 - 7)	0.09
2.18 OK (3/13/2007 a)	1.43 OK (10/5/2006 a)	(2.18 - 1.43)/(9 - 7)	0.375

1.73 OK (6/13/2007 a)	1.43 OK (10/5/2006 a)	(1.73 - 1.43)/(10 - 7)	0.1
2.18 OK (3/13/2007 a)	1.52 OK (1/15/2007 a)	(2.18 - 1.52)/(9 - 8)	0.66
1.73 OK (6/13/2007 a)	1.52 OK (1/15/2007 a)	(1.73 - 1.52)/(10 - 8)	0.105
1.73 OK (6/13/2007 a)	2.18 OK (3/13/2007 a)	(1.73 - 2.18)/(10 - 9)	-0.45

Number of Q values = 45

Ordered Q Values

n	Q
1	-1.178
2	-0.5385
3	-0.45
4	-0.41
5	-0.245
6	-0.166667
7	-0.1175
8	-0.11
9	-0.1025
10	-0.0933333
11	-0.08
12	-0.0671429
13	-0.045
14	-0.0333333
15	-0.0288889
16	-0.02
17	-0.01
18	0
19	0.02375
20	0.04
21	0.042
22	0.05
23	0.0725
24	0.09
25	0.1
26	0.101
27	0.105
28	0.11475
29	0.116714
30	0.118
31	0.1214
32	0.1236
33	0.12925
34	0.157
35	0.165
36	0.175667
37	0.195429
38	0.211167
39	0.236
40	0.246667
41	0.3035
42	0.375
43	0.559
44	0.66
45	1.017

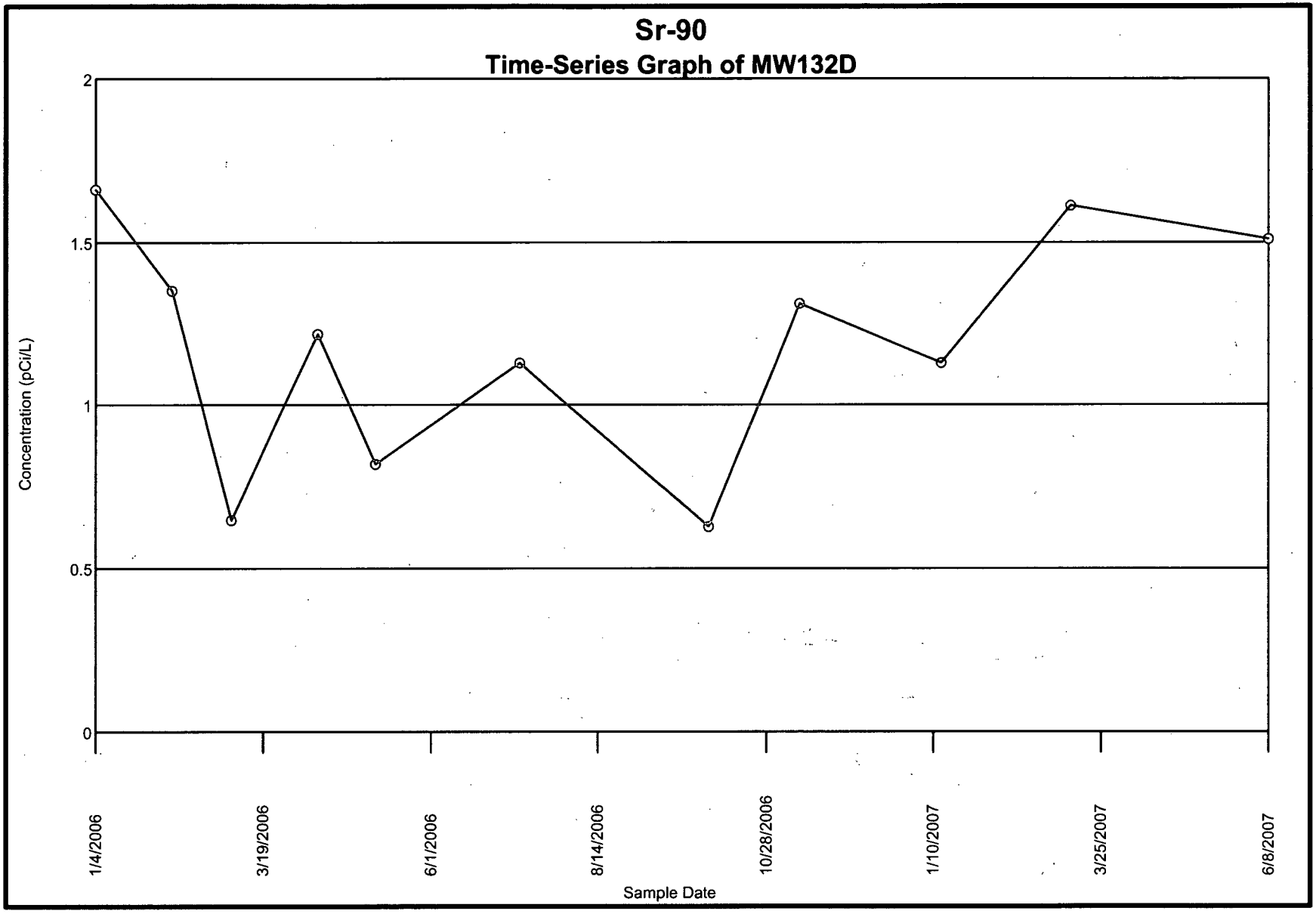
Sen's Estimator (Median Q) is 0.0725

Tied Group	Value	Members
1	1.52	2

Time Period	Observations
1/4/2006	1
2/8/2006	1
3/9/2006	1
4/10/2006	1
5/8/2006	1
7/21/2006	1
10/5/2006	1
1/15/2007	1
3/13/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 124
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.3163
M1 = (45 - 18.3163)/2.0 = 13.3418
M2 = (45 + 18.3163)/2.0 + 1 = 32.6582
Lower limit is -0.045 = Q(13)
Upper limit is 0.12925 = Q(33)
-0.045 < 0 < 0.12925 indicating no trend in data.


Sr-90
Time-Series Graph of MW132D
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/1/2006
8/14/2006
10/28/2006
1/10/2007
3/25/2007
6/8/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW132D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.35 U (2/7/2006 a)	ND<1.66 U (1/4/2006 a)	(1.35 - 1.66)/(2 - 1)	-0.31
ND<0.651 U (3/5/2006 a)	ND<1.66 U (1/4/2006 a)	(0.651 - 1.66)/(3 - 1)	-0.5045
ND<1.22 U (4/12/2006 a)	ND<1.66 U (1/4/2006 a)	(1.22 - 1.66)/(4 - 1)	-0.146667
ND<0.822 OK (5/8/2006 a)	ND<1.66 U (1/4/2006 a)	(0.822 - 1.66)/(5 - 1)	-0.2095
ND<1.13 OK (7/11/2006 a)	ND<1.66 U (1/4/2006 a)	(1.13 - 1.66)/(6 - 1)	-0.106
ND<0.627 OK (10/3/2006 a)	ND<1.66 U (1/4/2006 a)	(0.627 - 1.66)/(7 - 1)	-0.172167
ND<1.31 OK (11/12/2006 a)	ND<1.66 U (1/4/2006 a)	(1.31 - 1.66)/(8 - 1)	-0.05
ND<1.13 OK (1/14/2007 a)	ND<1.66 U (1/4/2006 a)	(1.13 - 1.66)/(9 - 1)	-0.06625
ND<1.61 OK (3/12/2007 a)	ND<1.66 U (1/4/2006 a)	(1.61 - 1.66)/(10 - 1)	-0.00555556
ND<1.51 OK (6/8/2007 a)	ND<1.66 U (1/4/2006 a)	(1.51 - 1.66)/(11 - 1)	-0.015
ND<0.651 U (3/5/2006 a)	ND<1.35 U (2/7/2006 a)	(0.651 - 1.35)/(3 - 2)	-0.699
ND<1.22 U (4/12/2006 a)	ND<1.35 U (2/7/2006 a)	(1.22 - 1.35)/(4 - 2)	-0.065
ND<0.822 OK (5/8/2006 a)	ND<1.35 U (2/7/2006 a)	(0.822 - 1.35)/(5 - 2)	-0.176
ND<1.13 OK (7/11/2006 a)	ND<1.35 U (2/7/2006 a)	(1.13 - 1.35)/(6 - 2)	-0.055
ND<0.627 OK (10/3/2006 a)	ND<1.35 U (2/7/2006 a)	(0.627 - 1.35)/(7 - 2)	-0.1446
ND<1.31 OK (11/12/2006 a)	ND<1.35 U (2/7/2006 a)	(1.31 - 1.35)/(8 - 2)	-0.00666667
ND<1.13 OK (1/14/2007 a)	ND<1.35 U (2/7/2006 a)	(1.13 - 1.35)/(9 - 2)	-0.0314286
ND<1.61 OK (3/12/2007 a)	ND<1.35 U (2/7/2006 a)	(1.61 - 1.35)/(10 - 2)	0.0325
ND<1.51 OK (6/8/2007 a)	ND<1.35 U (2/7/2006 a)	(1.51 - 1.35)/(11 - 2)	0.0177778
ND<1.22 U (4/12/2006 a)	ND<0.651 U (3/5/2006 a)	(1.22 - 0.651)/(4 - 3)	0.569
ND<0.822 OK (5/8/2006 a)	ND<0.651 U (3/5/2006 a)	(0.822 - 0.651)/(5 - 3)	0.0855
ND<1.13 OK (7/11/2006 a)	ND<0.651 U (3/5/2006 a)	(1.13 - 0.651)/(6 - 3)	0.159667
ND<0.627 OK (10/3/2006 a)	ND<0.651 U (3/5/2006 a)	(0.627 - 0.651)/(7 - 3)	-0.006
ND<1.31 OK (11/12/2006 a)	ND<0.651 U (3/5/2006 a)	(1.31 - 0.651)/(8 - 3)	0.1318
ND<1.13 OK (1/14/2007 a)	ND<0.651 U (3/5/2006 a)	(1.13 - 0.651)/(9 - 3)	0.0798333
ND<1.61 OK (3/12/2007 a)	ND<0.651 U (3/5/2006 a)	(1.61 - 0.651)/(10 - 3)	0.137
ND<1.51 OK (6/8/2007 a)	ND<0.651 U (3/5/2006 a)	(1.51 - 0.651)/(11 - 3)	0.107375
ND<0.822 OK (5/8/2006 a)	ND<1.22 U (4/12/2006 a)	(0.822 - 1.22)/(5 - 4)	-0.398
ND<1.13 OK (7/11/2006 a)	ND<1.22 U (4/12/2006 a)	(1.13 - 1.22)/(6 - 4)	-0.045
ND<0.627 OK (10/3/2006 a)	ND<1.22 U (4/12/2006 a)	(0.627 - 1.22)/(7 - 4)	-0.197667
ND<1.31 OK (11/12/2006 a)	ND<1.22 U (4/12/2006 a)	(1.31 - 1.22)/(8 - 4)	0.0225
ND<1.13 OK (1/14/2007 a)	ND<1.22 U (4/12/2006 a)	(1.13 - 1.22)/(9 - 4)	-0.018
ND<1.61 OK (3/12/2007 a)	ND<1.22 U (4/12/2006 a)	(1.61 - 1.22)/(10 - 4)	0.065
ND<1.51 OK (6/8/2007 a)	ND<1.22 U (4/12/2006 a)	(1.51 - 1.22)/(11 - 4)	0.0414286
ND<1.13 OK (7/11/2006 a)	ND<0.822 OK (5/8/2006 a)	(1.13 - 0.822)/(6 - 5)	0.308
ND<0.627 OK (10/3/2006 a)	ND<0.822 OK (5/8/2006 a)	(0.627 - 0.822)/(7 - 5)	-0.0975
ND<1.31 OK (11/12/2006 a)	ND<0.822 OK (5/8/2006 a)	(1.31 - 0.822)/(8 - 5)	0.162667
ND<1.13 OK (1/14/2007 a)	ND<0.822 OK (5/8/2006 a)	(1.13 - 0.822)/(9 - 5)	0.077
ND<1.61 OK (3/12/2007 a)	ND<0.822 OK (5/8/2006 a)	(1.61 - 0.822)/(10 - 5)	0.1576
ND<1.51 OK (6/8/2007 a)	ND<0.822 OK (5/8/2006 a)	(1.51 - 0.822)/(11 - 5)	0.114667
ND<0.627 OK (10/3/2006 a)	ND<1.13 OK (7/11/2006 a)	(0.627 - 1.13)/(7 - 6)	-0.503
ND<1.31 OK (11/12/2006 a)	ND<1.13 OK (7/11/2006 a)	(1.31 - 1.13)/(8 - 6)	0.09

ND<1.13 OK (1/14/2007 a)	ND<1.13 OK (7/11/2006 a)	(1.13 - 1.13)/(9 - 6)	0
ND<1.61 OK (3/12/2007 a)	ND<1.13 OK (7/11/2006 a)	(1.61 - 1.13)/(10 - 6)	0.12
ND<1.51 OK (6/8/2007 a)	ND<1.13 OK (7/11/2006 a)	(1.51 - 1.13)/(11 - 6)	0.076
ND<1.31 OK (11/12/2006 a)	ND<0.627 OK (10/3/2006 a)	(1.31 - 0.627)/(8 - 7)	0.683
ND<1.13 OK (1/14/2007 a)	ND<0.627 OK (10/3/2006 a)	(1.13 - 0.627)/(9 - 7)	0.2515
ND<1.61 OK (3/12/2007 a)	ND<0.627 OK (10/3/2006 a)	(1.61 - 0.627)/(10 - 7)	0.327667
ND<1.51 OK (6/8/2007 a)	ND<0.627 OK (10/3/2006 a)	(1.51 - 0.627)/(11 - 7)	0.22075
ND<1.13 OK (1/14/2007 a)	ND<1.31 OK (11/12/2006 a)	(1.13 - 1.31)/(9 - 8)	-0.18
ND<1.61 OK (3/12/2007 a)	ND<1.31 OK (11/12/2006 a)	(1.61 - 1.31)/(10 - 8)	0.15
ND<1.51 OK (6/8/2007 a)	ND<1.31 OK (11/12/2006 a)	(1.51 - 1.31)/(11 - 8)	0.0666667
ND<1.61 OK (3/12/2007 a)	ND<1.13 OK (1/14/2007 a)	(1.61 - 1.13)/(10 - 9)	0.48
ND<1.51 OK (6/8/2007 a)	ND<1.13 OK (1/14/2007 a)	(1.51 - 1.13)/(11 - 9)	0.19
ND<1.51 OK (6/8/2007 a)	ND<1.61 OK (3/12/2007 a)	(1.51 - 1.61)/(11 - 10)	-0.1

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.699
2	-0.5045
3	-0.503
4	-0.398
5	-0.31
6	-0.2095
7	-0.197667
8	-0.18
9	-0.176
10	-0.172167
11	-0.146667
12	-0.1446
13	-0.106
14	-0.1
15	-0.0975
16	-0.06625
17	-0.065
18	-0.055
19	-0.05
20	-0.045
21	-0.0314286
22	-0.018
23	-0.015
24	-0.00666667
25	-0.006
26	-0.00555556
27	0
28	0.0177778
29	0.0225
30	0.0325
31	0.0414286
32	0.065
33	0.0666667
34	0.076

35	0.077
36	0.0798333
37	0.0855
38	0.09
39	0.107375
40	0.114667
41	0.12
42	0.1318
43	0.137
44	0.15
45	0.1576
46	0.159667
47	0.162667
48	0.19
49	0.22075
50	0.2515
51	0.308
52	0.327667
53	0.48
54	0.569
55	0.683

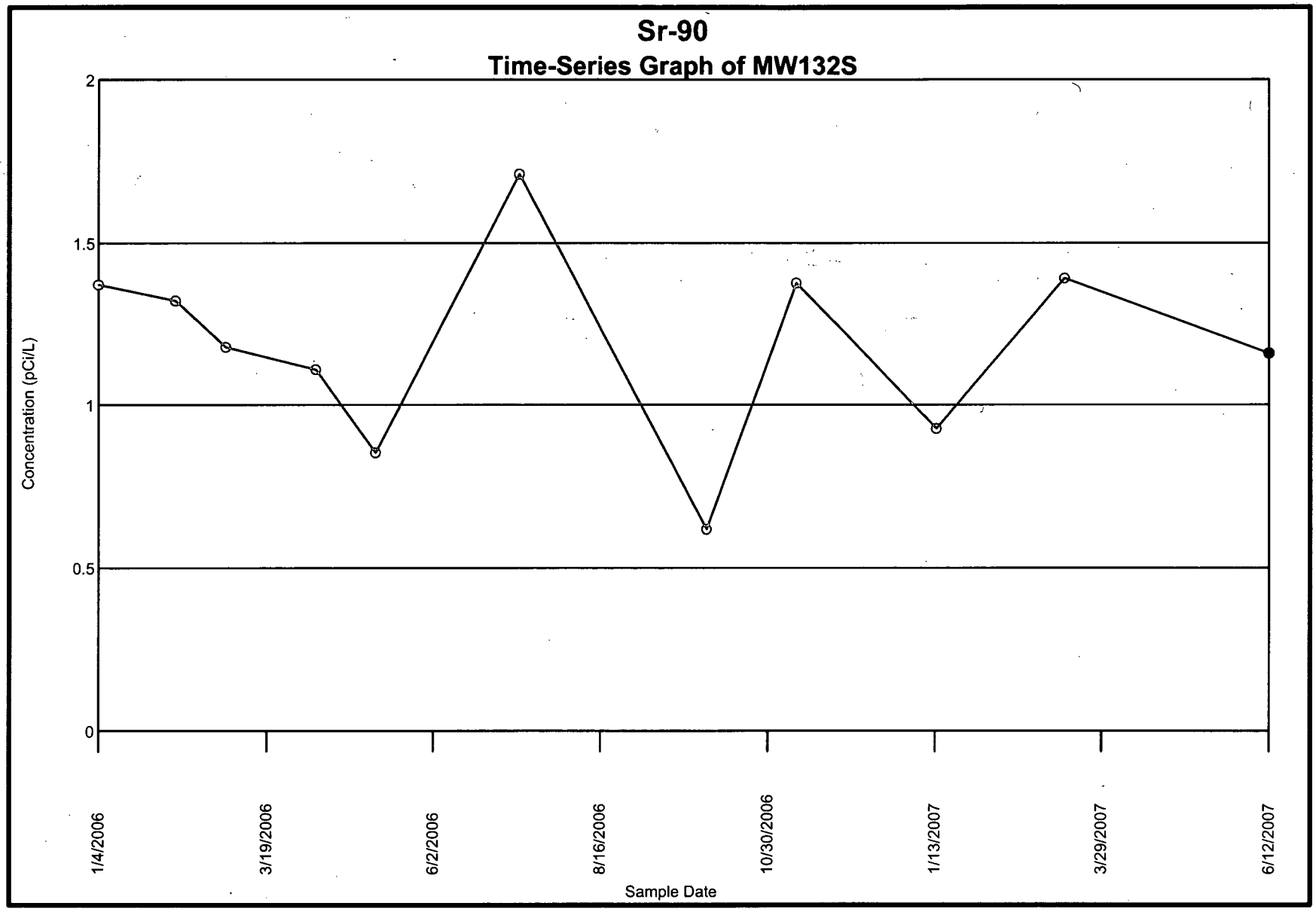
Sen's Estimator (Median Q) is 0.0177778

Tied Group	Value	Members
1	1.13	2

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/5/2006	1
4/12/2006	1
5/8/2006	1
7/11/2006	1
10/3/2006	1
11/12/2006	1
1/14/2007	1
3/12/2007	1
6/8/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -0.065 = Q(17)
Upper limit is 0.107375 = Q(39)
-0.065 < 0 < 0.107375 indicating no trend in data.


Sr-90
Time-Series Graph of MW132S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/4/2006
3/19/2006
6/2/2006
8/16/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW132S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.32 U (2/7/2006 a)	ND<1.37 U (1/4/2006 a)	(1.32 - 1.37)/(2 - 1)	-0.05
ND<1.18 U (3/1/2006 a)	ND<1.37 U (1/4/2006 a)	(1.18 - 1.37)/(3 - 1)	-0.095
ND<1.11 U (4/11/2006 a)	ND<1.37 U (1/4/2006 a)	(1.11 - 1.37)/(4 - 1)	-0.0866667
ND<0.856 OK (5/8/2006 a)	ND<1.37 U (1/4/2006 a)	(0.856 - 1.37)/(5 - 1)	-0.1285
ND<1.71 OK (7/11/2006 a)	ND<1.37 U (1/4/2006 a)	(1.71 - 1.37)/(6 - 1)	0.068
ND<0.62 OK (10/3/2006 a)	ND<1.37 U (1/4/2006 a)	(0.62 - 1.37)/(7 - 1)	-0.125
ND<1.375 OK (11/12/2006 ~)	ND<1.37 U (1/4/2006 a)	(1.375 - 1.37)/(8 - 1)	0.000714286
ND<0.93 OK (1/14/2007 a)	ND<1.37 U (1/4/2006 a)	(0.93 - 1.37)/(9 - 1)	-0.055
ND<1.39 OK (3/13/2007 a)	ND<1.37 U (1/4/2006 a)	(1.39 - 1.37)/(10 - 1)	0.00222222
1.1615 OK (6/12/2007 ~)	ND<1.37 U (1/4/2006 a)	(1.1615 - 1.37)/(11 - 1)	-0.02085
ND<1.18 U (3/1/2006 a)	ND<1.32 U (2/7/2006 a)	(1.18 - 1.32)/(3 - 2)	-0.14
ND<1.11 U (4/11/2006 a)	ND<1.32 U (2/7/2006 a)	(1.11 - 1.32)/(4 - 2)	-0.105
ND<0.856 OK (5/8/2006 a)	ND<1.32 U (2/7/2006 a)	(0.856 - 1.32)/(5 - 2)	-0.154667
ND<1.71 OK (7/11/2006 a)	ND<1.32 U (2/7/2006 a)	(1.71 - 1.32)/(6 - 2)	0.0975
ND<0.62 OK (10/3/2006 a)	ND<1.32 U (2/7/2006 a)	(0.62 - 1.32)/(7 - 2)	-0.14
ND<1.375 OK (11/12/2006 ~)	ND<1.32 U (2/7/2006 a)	(1.375 - 1.32)/(8 - 2)	0.00916667
ND<0.93 OK (1/14/2007 a)	ND<1.32 U (2/7/2006 a)	(0.93 - 1.32)/(9 - 2)	-0.0557143
ND<1.39 OK (3/13/2007 a)	ND<1.32 U (2/7/2006 a)	(1.39 - 1.32)/(10 - 2)	0.00875
1.1615 OK (6/12/2007 ~)	ND<1.32 U (2/7/2006 a)	(1.1615 - 1.32)/(11 - 2)	-0.0176111
ND<1.11 U (4/11/2006 a)	ND<1.18 U (3/1/2006 a)	(1.11 - 1.18)/(4 - 3)	-0.07
ND<0.856 OK (5/8/2006 a)	ND<1.18 U (3/1/2006 a)	(0.856 - 1.18)/(5 - 3)	-0.162
ND<1.71 OK (7/11/2006 a)	ND<1.18 U (3/1/2006 a)	(1.71 - 1.18)/(6 - 3)	0.176667
ND<0.62 OK (10/3/2006 a)	ND<1.18 U (3/1/2006 a)	(0.62 - 1.18)/(7 - 3)	-0.14
ND<1.375 OK (11/12/2006 ~)	ND<1.18 U (3/1/2006 a)	(1.375 - 1.18)/(8 - 3)	0.039
ND<0.93 OK (1/14/2007 a)	ND<1.18 U (3/1/2006 a)	(0.93 - 1.18)/(9 - 3)	-0.0416667
ND<1.39 OK (3/13/2007 a)	ND<1.18 U (3/1/2006 a)	(1.39 - 1.18)/(10 - 3)	0.03
1.1615 OK (6/12/2007 ~)	ND<1.18 U (3/1/2006 a)	(1.1615 - 1.18)/(11 - 3)	-0.0023125
ND<0.856 OK (5/8/2006 a)	ND<1.11 U (4/11/2006 a)	(0.856 - 1.11)/(5 - 4)	-0.254
ND<1.71 OK (7/11/2006 a)	ND<1.11 U (4/11/2006 a)	(1.71 - 1.11)/(6 - 4)	0.3
ND<0.62 OK (10/3/2006 a)	ND<1.11 U (4/11/2006 a)	(0.62 - 1.11)/(7 - 4)	-0.163333
ND<1.375 OK (11/12/2006 ~)	ND<1.11 U (4/11/2006 a)	(1.375 - 1.11)/(8 - 4)	0.06625
ND<0.93 OK (1/14/2007 a)	ND<1.11 U (4/11/2006 a)	(0.93 - 1.11)/(9 - 4)	-0.036
ND<1.39 OK (3/13/2007 a)	ND<1.11 U (4/11/2006 a)	(1.39 - 1.11)/(10 - 4)	0.0466667
1.1615 OK (6/12/2007 ~)	ND<1.11 U (4/11/2006 a)	(1.1615 - 1.11)/(11 - 4)	0.00735714
ND<1.71 OK (7/11/2006 a)	ND<0.856 OK (5/8/2006 a)	(1.71 - 0.856)/(6 - 5)	0.854
ND<0.62 OK (10/3/2006 a)	ND<0.856 OK (5/8/2006 a)	(0.62 - 0.856)/(7 - 5)	-0.118
ND<1.375 OK (11/12/2006 ~)	ND<0.856 OK (5/8/2006 a)	(1.375 - 0.856)/(8 - 5)	0.173
ND<0.93 OK (1/14/2007 a)	ND<0.856 OK (5/8/2006 a)	(0.93 - 0.856)/(9 - 5)	0.0185
ND<1.39 OK (3/13/2007 a)	ND<0.856 OK (5/8/2006 a)	(1.39 - 0.856)/(10 - 5)	0.1068
1.1615 OK (6/12/2007 ~)	ND<0.856 OK (5/8/2006 a)	(1.1615 - 0.856)/(11 - 5)	0.0509167
ND<0.62 OK (10/3/2006 a)	ND<1.71 OK (7/11/2006 a)	(0.62 - 1.71)/(7 - 6)	-1.09
ND<1.375 OK (11/12/2006 ~)	ND<1.71 OK (7/11/2006 a)	(1.375 - 1.71)/(8 - 6)	-0.1675

ND<0.93 OK (1/14/2007 a)	ND<1.71 OK (7/11/2006 a)	(0.93 - 1.71)/(9 - 6)	-0.26
ND<1.39 OK (3/13/2007 a)	ND<1.71 OK (7/11/2006 a)	(1.39 - 1.71)/(10 - 6)	-0.08
1.1615 OK (6/12/2007 ~)	ND<1.71 OK (7/11/2006 a)	(1.1615 - 1.71)/(11 - 6)	-0.1097
ND<1.375 OK (11/12/2006 ~)	ND<0.62 OK (10/3/2006 a)	(1.375 - 0.62)/(8 - 7)	0.755
ND<0.93 OK (1/14/2007 a)	ND<0.62 OK (10/3/2006 a)	(0.93 - 0.62)/(9 - 7)	0.155
ND<1.39 OK (3/13/2007 a)	ND<0.62 OK (10/3/2006 a)	(1.39 - 0.62)/(10 - 7)	0.256667
1.1615 OK (6/12/2007 ~)	ND<0.62 OK (10/3/2006 a)	(1.1615 - 0.62)/(11 - 7)	0.135375
ND<0.93 OK (1/14/2007 a)	ND<1.375 OK (11/12/2006 ~)	(0.93 - 1.375)/(9 - 8)	-0.445
ND<1.39 OK (3/13/2007 a)	ND<1.375 OK (11/12/2006 ~)	(1.39 - 1.375)/(10 - 8)	0.0075
1.1615 OK (6/12/2007 ~)	ND<1.375 OK (11/12/2006 ~)	(1.1615 - 1.375)/(11 - 8)	-0.0711667
ND<1.39 OK (3/13/2007 a)	ND<0.93 OK (1/14/2007 a)	(1.39 - 0.93)/(10 - 9)	0.46
1.1615 OK (6/12/2007 ~)	ND<0.93 OK (1/14/2007 a)	(1.1615 - 0.93)/(11 - 9)	0.11575
1.1615 OK (6/12/2007 ~)	ND<1.39 OK (3/13/2007 a)	(1.1615 - 1.39)/(11 - 10)	-0.2285

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.09
2	-0.445
3	-0.26
4	-0.254
5	-0.2285
6	-0.1675
7	-0.163333
8	-0.162
9	-0.154667
10	-0.14
11	-0.14
12	-0.14
13	-0.1285
14	-0.125
15	-0.118
16	-0.1097
17	-0.105
18	-0.095
19	-0.0866667
20	-0.08
21	-0.0711667
22	-0.07
23	-0.0557143
24	-0.055
25	-0.05
26	-0.0416667
27	-0.036
28	-0.02085
29	-0.0176111
30	-0.0023125
31	0.000714286
32	0.00222222
33	0.00735714
34	0.0075

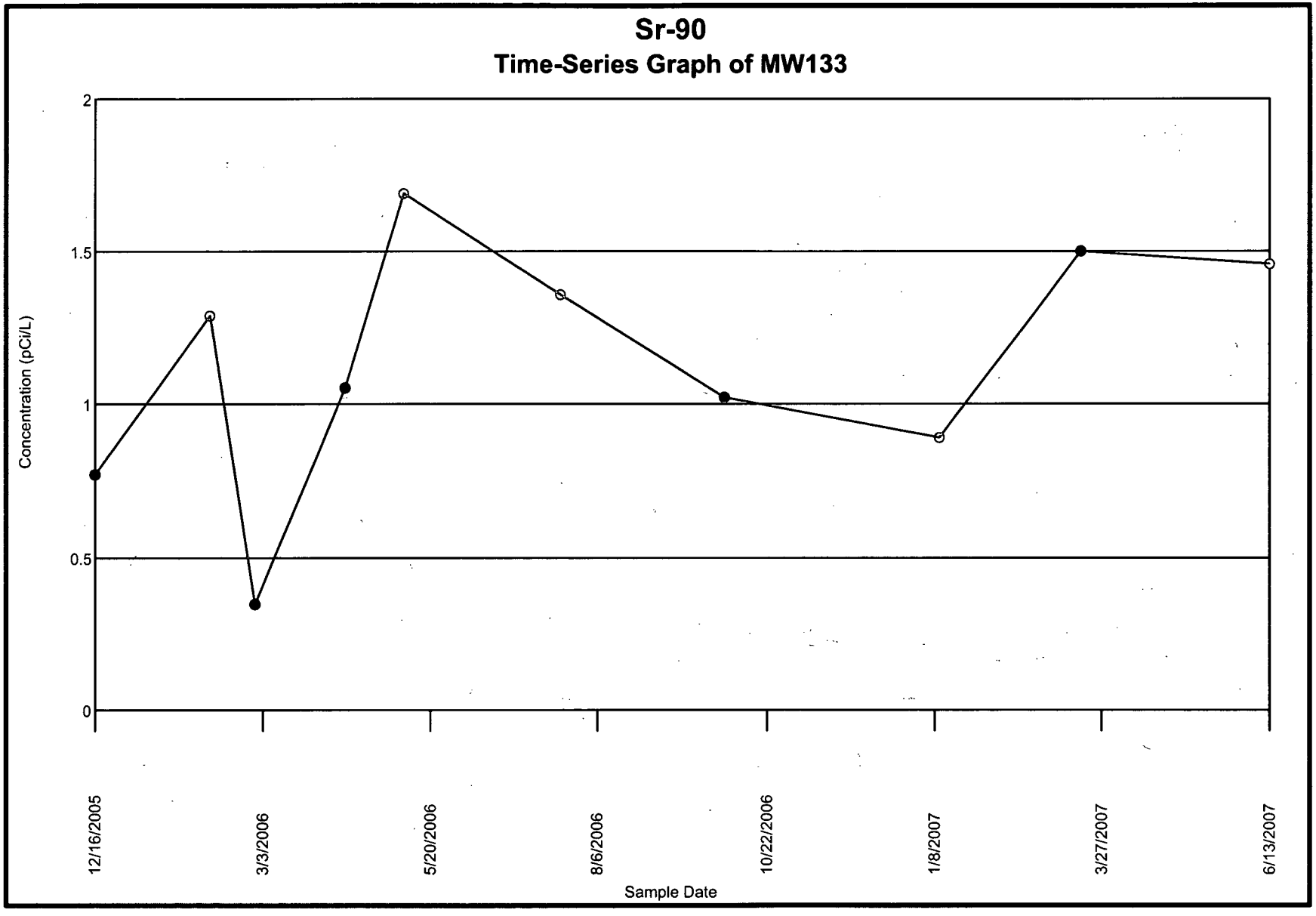
35	0.00875
36	0.00916667
37	0.0185
38	0.03
39	0.039
40	0.0466667
41	0.0509167
42	0.06625
43	0.068
44	0.0975
45	0.1068
46	0.11575
47	0.135375
48	0.155
49	0.173
50	0.176667
51	0.256667
52	0.3
53	0.46
54	0.755
55	0.854

Sen's Estimator (Median Q) is -0.02085

Time Period	Observations
1/4/2006	1
2/7/2006	1
3/1/2006	1
4/11/2006	1
5/8/2006	1
7/11/2006	1
10/3/2006	1
11/12/2006	1
1/14/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.105 = Q(17)
Upper limit is 0.039 = Q(39)
-0.105 < 0 < 0.039 indicating no trend in data.


Sr-90
Time-Series Graph of MW133
Concentration (pCi/L)
2
1.5
1
0.5
0
12/16/2005
3/3/2006
5/20/2006
8/6/2006
10/22/2006
1/8/2007
3/27/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW133
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.29 U (2/7/2006 ~)	0.774 U (12/16/2005 ~)	(1.29 - 0.774)/(2 - 1)	0.516
0.348 U (2/28/2006 a)	0.774 U (12/16/2005 ~)	(0.348 - 0.774)/(3 - 1)	-0.213
1.055 U (4/10/2006 ~)	0.774 U (12/16/2005 ~)	(1.055 - 0.774)/(4 - 1)	0.0936667
ND<1.69 OK (5/8/2006 a)	0.774 U (12/16/2005 ~)	(1.69 - 0.774)/(5 - 1)	0.229
ND<1.36 OK (7/20/2006 a)	0.774 U (12/16/2005 ~)	(1.36 - 0.774)/(6 - 1)	0.1172
1.0215 OK (10/3/2006 ~)	0.774 U (12/16/2005 ~)	(1.0215 - 0.774)/(7 - 1)	0.04125
ND<0.892 OK (1/11/2007 a)	0.774 U (12/16/2005 ~)	(0.892 - 0.774)/(8 - 1)	0.0168571
1.5 OK (3/18/2007 a)	0.774 U (12/16/2005 ~)	(1.5 - 0.774)/(9 - 1)	0.09075
ND<1.46 OK (6/13/2007 a)	0.774 U (12/16/2005 ~)	(1.46 - 0.774)/(10 - 1)	0.0762222
0.348 U (2/28/2006 a)	ND<1.29 U (2/7/2006 ~)	(0.348 - 1.29)/(3 - 2)	-0.942
1.055 U (4/10/2006 ~)	ND<1.29 U (2/7/2006 ~)	(1.055 - 1.29)/(4 - 2)	-0.1175
ND<1.69 OK (5/8/2006 a)	ND<1.29 U (2/7/2006 ~)	(1.69 - 1.29)/(5 - 2)	0.133333
ND<1.36 OK (7/20/2006 a)	ND<1.29 U (2/7/2006 ~)	(1.36 - 1.29)/(6 - 2)	0.0175
1.0215 OK (10/3/2006 ~)	ND<1.29 U (2/7/2006 ~)	(1.0215 - 1.29)/(7 - 2)	-0.0537
ND<0.892 OK (1/11/2007 a)	ND<1.29 U (2/7/2006 ~)	(0.892 - 1.29)/(8 - 2)	-0.0663333
1.5 OK (3/18/2007 a)	ND<1.29 U (2/7/2006 ~)	(1.5 - 1.29)/(9 - 2)	0.03
ND<1.46 OK (6/13/2007 a)	ND<1.29 U (2/7/2006 ~)	(1.46 - 1.29)/(10 - 2)	0.02125
1.055 U (4/10/2006 ~)	0.348 U (2/28/2006 a)	(1.055 - 0.348)/(4 - 3)	0.707
ND<1.69 OK (5/8/2006 a)	0.348 U (2/28/2006 a)	(1.69 - 0.348)/(5 - 3)	0.671
ND<1.36 OK (7/20/2006 a)	0.348 U (2/28/2006 a)	(1.36 - 0.348)/(6 - 3)	0.337333
1.0215 OK (10/3/2006 ~)	0.348 U (2/28/2006 a)	(1.0215 - 0.348)/(7 - 3)	0.168375
ND<0.892 OK (1/11/2007 a)	0.348 U (2/28/2006 a)	(0.892 - 0.348)/(8 - 3)	0.1088
1.5 OK (3/18/2007 a)	0.348 U (2/28/2006 a)	(1.5 - 0.348)/(9 - 3)	0.192
ND<1.46 OK (6/13/2007 a)	0.348 U (2/28/2006 a)	(1.46 - 0.348)/(10 - 3)	0.158857
ND<1.69 OK (5/8/2006 a)	1.055 U (4/10/2006 ~)	(1.69 - 1.055)/(5 - 4)	0.635
ND<1.36 OK (7/20/2006 a)	1.055 U (4/10/2006 ~)	(1.36 - 1.055)/(6 - 4)	0.1525
1.0215 OK (10/3/2006 ~)	1.055 U (4/10/2006 ~)	(1.0215 - 1.055)/(7 - 4)	-0.0111667
ND<0.892 OK (1/11/2007 a)	1.055 U (4/10/2006 ~)	(0.892 - 1.055)/(8 - 4)	-0.04075

1.5 OK (3/18/2007 a)	1.055 U (4/10/2006 ~)	(1.5 - 1.055)/(9 - 4)	0.089
ND<1.46 OK (6/13/2007 a)	1.055 U (4/10/2006 ~)	(1.46 - 1.055)/(10 - 4)	0.0675
ND<1.36 OK (7/20/2006 a)	ND<1.69 OK (5/8/2006 a)	(1.36 - 1.69)/(6 - 5)	-0.33
1.0215 OK (10/3/2006 ~)	ND<1.69 OK (5/8/2006 a)	(1.0215 - 1.69)/(7 - 5)	-0.33425
ND<0.892 OK (1/11/2007 a)	ND<1.69 OK (5/8/2006 a)	(0.892 - 1.69)/(8 - 5)	-0.266
1.5 OK (3/18/2007 a)	ND<1.69 OK (5/8/2006 a)	(1.5 - 1.69)/(9 - 5)	-0.0475
ND<1.46 OK (6/13/2007 a)	ND<1.69 OK (5/8/2006 a)	(1.46 - 1.69)/(10 - 5)	-0.046
1.0215 OK (10/3/2006 ~)	ND<1.36 OK (7/20/2006 a)	(1.0215 - 1.36)/(7 - 6)	-0.3385
ND<0.892 OK (1/11/2007 a)	ND<1.36 OK (7/20/2006 a)	(0.892 - 1.36)/(8 - 6)	-0.234
1.5 OK (3/18/2007 a)	ND<1.36 OK (7/20/2006 a)	(1.5 - 1.36)/(9 - 6)	0.0466667
ND<1.46 OK (6/13/2007 a)	ND<1.36 OK (7/20/2006 a)	(1.46 - 1.36)/(10 - 6)	0.025
ND<0.892 OK (1/11/2007 a)	1.0215 OK (10/3/2006 ~)	(0.892 - 1.0215)/(8 - 7)	-0.1295
1.5 OK (3/18/2007 a)	1.0215 OK (10/3/2006 ~)	(1.5 - 1.0215)/(9 - 7)	0.23925
ND<1.46 OK (6/13/2007 a)	1.0215 OK (10/3/2006 ~)	(1.46 - 1.0215)/(10 - 7)	0.146167
1.5 OK (3/18/2007 a)	ND<0.892 OK (1/11/2007 a)	(1.5 - 0.892)/(9 - 8)	0.608
ND<1.46 OK (6/13/2007 a)	ND<0.892 OK (1/11/2007 a)	(1.46 - 0.892)/(10 - 8)	0.284
ND<1.46 OK (6/13/2007 a)	1.5 OK (3/18/2007 a)	(1.46 - 1.5)/(10 - 9)	-0.04

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.942
2	-0.3385
3	-0.33425
4	-0.33
5	-0.266
6	-0.234
7	-0.213
8	-0.1295
9	-0.1175
10	-0.0663333
11	-0.0537
12	-0.0475
13	-0.046

14	-0.04075
15	-0.04
16	-0.0111667
17	0.0168571
18	0.0175
19	0.02125
20	0.025
21	0.03
22	0.04125
23	0.0466667
24	0.0675
25	0.0762222
26	0.089
27	0.09075
28	0.0936667
29	0.1088
30	0.1172
31	0.133333
32	0.146167
33	0.1525
34	0.158857
35	0.168375
36	0.192
37	0.229
38	0.23925
39	0.284
40	0.337333
41	0.516
42	0.608
43	0.635
44	0.671
45	0.707

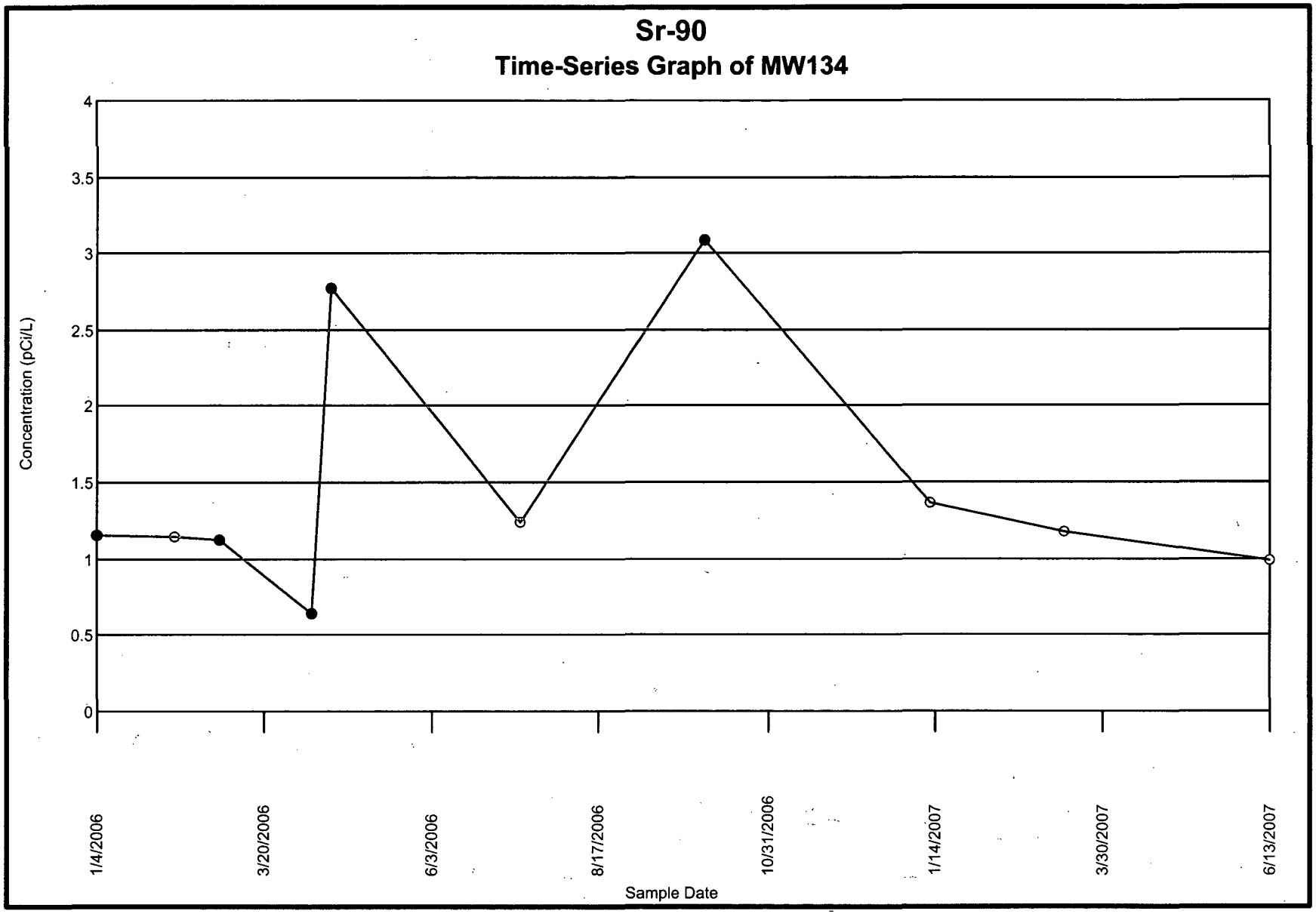
Sen's Estimator (Median Q) is 0.0466667

Time Period	Observations
12/16/2005	1
2/7/2006	1
2/28/2006	1
4/10/2006	1
5/8/2006	1
7/20/2006	1

10/3/2006	1
1/11/2007	1
3/18/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.046 = Q(13)
Upper limit is 0.1525 = Q(33)
-0.046 < 0 < 0.1525 indicating no trend in data.


Sr-90
Time-Series Graph of MW134
Concentration (pCi/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
1/4/2006
3/20/2006
6/3/2006
8/17/2006
10/31/2006
1/14/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW134

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.14 U (2/8/2006 a)	1.15 U (1/4/2006 a)	(1.14 - 1.15)/(2 - 1)	-0.01
1.12 OK (2/28/2006 a)	1.15 U (1/4/2006 a)	(1.12 - 1.15)/(3 - 1)	-0.015
0.645 U (4/10/2006 a)	1.15 U (1/4/2006 a)	(0.645 - 1.15)/(4 - 1)	-0.168333
2.77 OK (4/19/2006 a)	1.15 U (1/4/2006 a)	(2.77 - 1.15)/(5 - 1)	0.405
ND<1.24 OK (7/13/2006 a)	1.15 U (1/4/2006 a)	(1.24 - 1.15)/(6 - 1)	0.018
3.09 OK (10/3/2006 a)	1.15 U (1/4/2006 a)	(3.09 - 1.15)/(7 - 1)	0.323333
ND<1.37 OK (1/12/2007 a)	1.15 U (1/4/2006 a)	(1.37 - 1.15)/(8 - 1)	0.0314286
ND<1.18 OK (3/13/2007 a)	1.15 U (1/4/2006 a)	(1.18 - 1.15)/(9 - 1)	0.00375
ND<0.985 OK (6/13/2007 a)	1.15 U (1/4/2006 a)	(0.985 - 1.15)/(10 - 1)	-0.0183333
1.12 OK (2/28/2006 a)	ND<1.14 U (2/8/2006 a)	(1.12 - 1.14)/(3 - 2)	-0.02
0.645 U (4/10/2006 a)	ND<1.14 U (2/8/2006 a)	(0.645 - 1.14)/(4 - 2)	-0.2475
2.77 OK (4/19/2006 a)	ND<1.14 U (2/8/2006 a)	(2.77 - 1.14)/(5 - 2)	0.543333
ND<1.24 OK (7/13/2006 a)	ND<1.14 U (2/8/2006 a)	(1.24 - 1.14)/(6 - 2)	0.025
3.09 OK (10/3/2006 a)	ND<1.14 U (2/8/2006 a)	(3.09 - 1.14)/(7 - 2)	0.39
ND<1.37 OK (1/12/2007 a)	ND<1.14 U (2/8/2006 a)	(1.37 - 1.14)/(8 - 2)	0.0383333
ND<1.18 OK (3/13/2007 a)	ND<1.14 U (2/8/2006 a)	(1.18 - 1.14)/(9 - 2)	0.00571429
ND<0.985 OK (6/13/2007 a)	ND<1.14 U (2/8/2006 a)	(0.985 - 1.14)/(10 - 2)	-0.019375
0.645 U (4/10/2006 a)	1.12 OK (2/28/2006 a)	(0.645 - 1.12)/(4 - 3)	-0.475
2.77 OK (4/19/2006 a)	1.12 OK (2/28/2006 a)	(2.77 - 1.12)/(5 - 3)	0.825
ND<1.24 OK (7/13/2006 a)	1.12 OK (2/28/2006 a)	(1.24 - 1.12)/(6 - 3)	0.04
3.09 OK (10/3/2006 a)	1.12 OK (2/28/2006 a)	(3.09 - 1.12)/(7 - 3)	0.4925
ND<1.37 OK (1/12/2007 a)	1.12 OK (2/28/2006 a)	(1.37 - 1.12)/(8 - 3)	0.05
ND<1.18 OK (3/13/2007 a)	1.12 OK (2/28/2006 a)	(1.18 - 1.12)/(9 - 3)	0.01
ND<0.985 OK (6/13/2007 a)	1.12 OK (2/28/2006 a)	(0.985 - 1.12)/(10 - 3)	-0.0192857
2.77 OK (4/19/2006 a)	0.645 U (4/10/2006 a)	(2.77 - 0.645)/(5 - 4)	2.125
ND<1.24 OK (7/13/2006 a)	0.645 U (4/10/2006 a)	(1.24 - 0.645)/(6 - 4)	0.2975
3.09 OK (10/3/2006 a)	0.645 U (4/10/2006 a)	(3.09 - 0.645)/(7 - 4)	0.815
ND<1.37 OK (1/12/2007 a)	0.645 U (4/10/2006 a)	(1.37 - 0.645)/(8 - 4)	0.18125

ND<1.18 OK (3/13/2007 a)	0.645 U (4/10/2006 a)	(1.18 - 0.645)/(9 - 4)	0.107
ND<0.985 OK (6/13/2007 a)	0.645 U (4/10/2006 a)	(0.985 - 0.645)/(10 - 4)	0.0566667
ND<1.24 OK (7/13/2006 a)	2.77 OK (4/19/2006 a)	(1.24 - 2.77)/(6 - 5)	-1.53
3.09 OK (10/3/2006 a)	2.77 OK (4/19/2006 a)	(3.09 - 2.77)/(7 - 5)	0.16
ND<1.37 OK (1/12/2007 a)	2.77 OK (4/19/2006 a)	(1.37 - 2.77)/(8 - 5)	-0.466667
ND<1.18 OK (3/13/2007 a)	2.77 OK (4/19/2006 a)	(1.18 - 2.77)/(9 - 5)	-0.3975
ND<0.985 OK (6/13/2007 a)	2.77 OK (4/19/2006 a)	(0.985 - 2.77)/(10 - 5)	-0.357
3.09 OK (10/3/2006 a)	ND<1.24 OK (7/13/2006 a)	(3.09 - 1.24)/(7 - 6)	1.85
ND<1.37 OK (1/12/2007 a)	ND<1.24 OK (7/13/2006 a)	(1.37 - 1.24)/(8 - 6)	0.065
ND<1.18 OK (3/13/2007 a)	ND<1.24 OK (7/13/2006 a)	(1.18 - 1.24)/(9 - 6)	-0.02
ND<0.985 OK (6/13/2007 a)	ND<1.24 OK (7/13/2006 a)	(0.985 - 1.24)/(10 - 6)	-0.06375
ND<1.37 OK (1/12/2007 a)	3.09 OK (10/3/2006 a)	(1.37 - 3.09)/(8 - 7)	-1.72
ND<1.18 OK (3/13/2007 a)	3.09 OK (10/3/2006 a)	(1.18 - 3.09)/(9 - 7)	-0.955
ND<0.985 OK (6/13/2007 a)	3.09 OK (10/3/2006 a)	(0.985 - 3.09)/(10 - 7)	-0.701667
ND<1.18 OK (3/13/2007 a)	ND<1.37 OK (1/12/2007 a)	(1.18 - 1.37)/(9 - 8)	-0.19
ND<0.985 OK (6/13/2007 a)	ND<1.37 OK (1/12/2007 a)	(0.985 - 1.37)/(10 - 8)	-0.1925
ND<0.985 OK (6/13/2007 a)	ND<1.18 OK (3/13/2007 a)	(0.985 - 1.18)/(10 - 9)	-0.195

Number of Q values = 45

Ordered Q Values

n	Q
1	-1.72
2	-1.53
3	-0.955
4	-0.701667
5	-0.475
6	-0.466667
7	-0.3975
8	-0.357
9	-0.2475
10	-0.195
11	-0.1925
12	-0.19
13	-0.168333

14	-0.06375
15	-0.02
16	-0.02
17	-0.019375
18	-0.0192857
19	-0.0183333
20	-0.015
21	-0.01
22	0.00375
23	0.00571429
24	0.01
25	0.018
26	0.025
27	0.0314286
28	0.0383333
29	0.04
30	0.05
31	0.0566667
32	0.065
33	0.107
34	0.16
35	0.18125
36	0.2975
37	0.323333
38	0.39
39	0.405
40	0.4925
41	0.543333
42	0.815
43	0.825
44	1.85
45	2.125

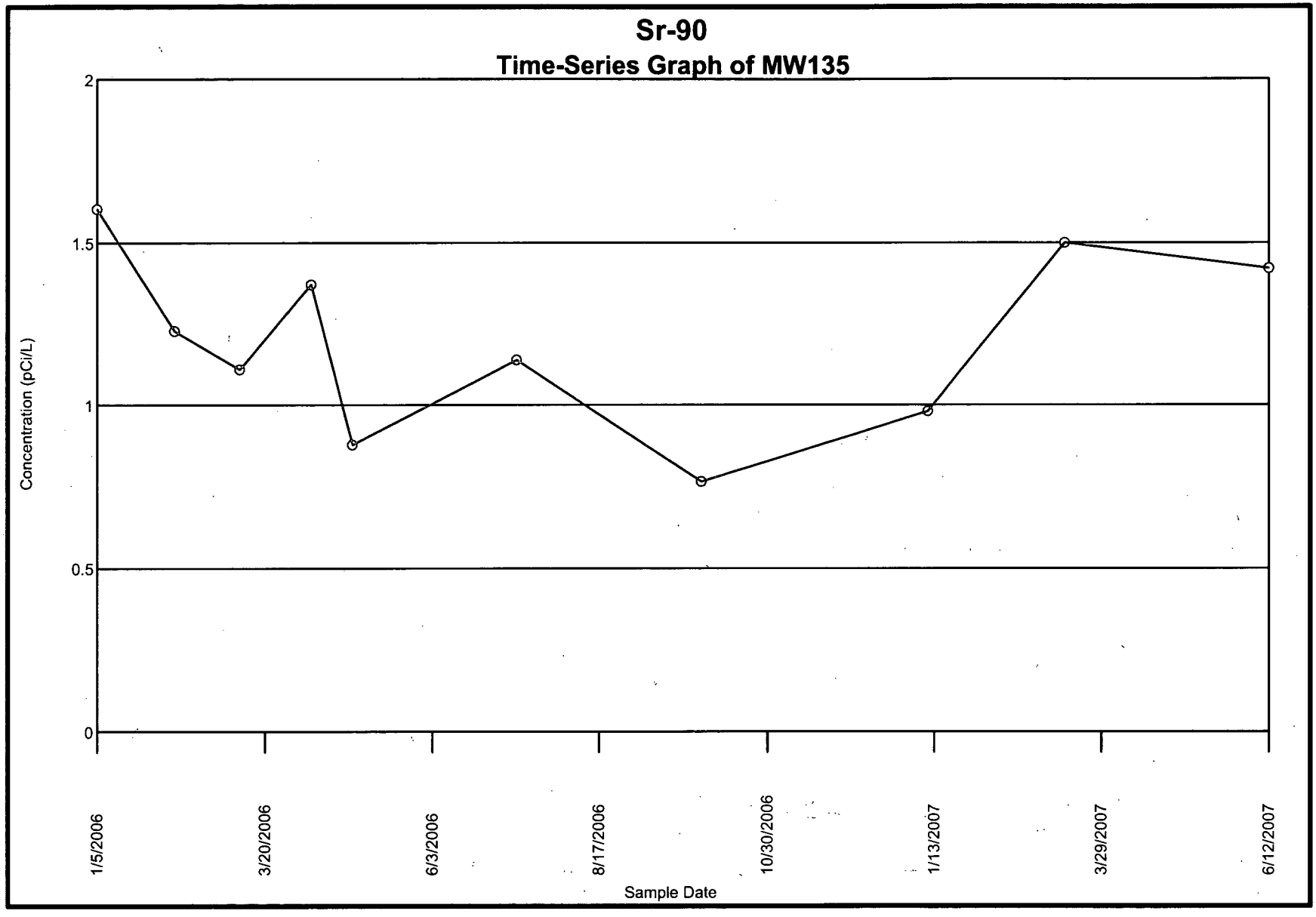
Sen's Estimator (Median Q) is 0.00571429

Time Period	Observations
1/4/2006	1
2/8/2006	1
2/28/2006	1
4/10/2006	1
4/19/2006	1
7/13/2006	1

10/3/2006	1
1/12/2007	1
3/13/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.168333 = Q(13)
Upper limit is 0.107 = Q(33)
-0.168333 < 0 < 0.107 indicating no trend in data.


Sr-90
Time-Series Graph of MW135
Concentration (pCi/L)
2
1.5
1
0.5
0
1/5/2006
3/20/2006
6/3/2006
8/17/2006
10/30/2006
1/13/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW135

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.23 U (2/8/2006 a)	ND<1.6 U (1/5/2006 a)	(1.23 - 1.6)/(2 - 1)	-0.37
ND<1.11 U (3/9/2006 a)	ND<1.6 U (1/5/2006 a)	(1.11 - 1.6)/(3 - 1)	-0.245
ND<1.37 U (4/10/2006 a)	ND<1.6 U (1/5/2006 a)	(1.37 - 1.6)/(4 - 1)	-0.0766667
ND<0.88 OK (4/29/2006 a)	ND<1.6 U (1/5/2006 a)	(0.88 - 1.6)/(5 - 1)	-0.18
ND<1.14 OK (7/11/2006 a)	ND<1.6 U (1/5/2006 a)	(1.14 - 1.6)/(6 - 1)	-0.092
ND<0.766 OK (10/2/2006 a)	ND<1.6 U (1/5/2006 a)	(0.766 - 1.6)/(7 - 1)	-0.139
ND<0.982 OK (1/11/2007 ~)	ND<1.6 U (1/5/2006 a)	(0.982 - 1.6)/(8 - 1)	-0.0882857
ND<1.5 OK (3/13/2007 a)	ND<1.6 U (1/5/2006 a)	(1.5 - 1.6)/(9 - 1)	-0.0125
ND<1.42 OK (6/12/2007 a)	ND<1.6 U (1/5/2006 a)	(1.42 - 1.6)/(10 - 1)	-0.02
ND<1.11 U (3/9/2006 a)	ND<1.23 U (2/8/2006 a)	(1.11 - 1.23)/(3 - 2)	-0.12
ND<1.37 U (4/10/2006 a)	ND<1.23 U (2/8/2006 a)	(1.37 - 1.23)/(4 - 2)	0.07
ND<0.88 OK (4/29/2006 a)	ND<1.23 U (2/8/2006 a)	(0.88 - 1.23)/(5 - 2)	-0.116667
ND<1.14 OK (7/11/2006 a)	ND<1.23 U (2/8/2006 a)	(1.14 - 1.23)/(6 - 2)	-0.0225
ND<0.766 OK (10/2/2006 a)	ND<1.23 U (2/8/2006 a)	(0.766 - 1.23)/(7 - 2)	-0.0928
ND<0.982 OK (1/11/2007 ~)	ND<1.23 U (2/8/2006 a)	(0.982 - 1.23)/(8 - 2)	-0.0413333
ND<1.5 OK (3/13/2007 a)	ND<1.23 U (2/8/2006 a)	(1.5 - 1.23)/(9 - 2)	0.0385714
ND<1.42 OK (6/12/2007 a)	ND<1.23 U (2/8/2006 a)	(1.42 - 1.23)/(10 - 2)	0.02375
ND<1.37 U (4/10/2006 a)	ND<1.11 U (3/9/2006 a)	(1.37 - 1.11)/(4 - 3)	0.26
ND<0.88 OK (4/29/2006 a)	ND<1.11 U (3/9/2006 a)	(0.88 - 1.11)/(5 - 3)	-0.115
ND<1.14 OK (7/11/2006 a)	ND<1.11 U (3/9/2006 a)	(1.14 - 1.11)/(6 - 3)	0.01
ND<0.766 OK (10/2/2006 a)	ND<1.11 U (3/9/2006 a)	(0.766 - 1.11)/(7 - 3)	-0.086
ND<0.982 OK (1/11/2007 ~)	ND<1.11 U (3/9/2006 a)	(0.982 - 1.11)/(8 - 3)	-0.0256
ND<1.5 OK (3/13/2007 a)	ND<1.11 U (3/9/2006 a)	(1.5 - 1.11)/(9 - 3)	0.065
ND<1.42 OK (6/12/2007 a)	ND<1.11 U (3/9/2006 a)	(1.42 - 1.11)/(10 - 3)	0.0442857
ND<0.88 OK (4/29/2006 a)	ND<1.37 U (4/10/2006 a)	(0.88 - 1.37)/(5 - 4)	-0.49
ND<1.14 OK (7/11/2006 a)	ND<1.37 U (4/10/2006 a)	(1.14 - 1.37)/(6 - 4)	-0.115
ND<0.766 OK (10/2/2006 a)	ND<1.37 U (4/10/2006 a)	(0.766 - 1.37)/(7 - 4)	-0.201333
ND<0.982 OK (1/11/2007 ~)	ND<1.37 U (4/10/2006 a)	(0.982 - 1.37)/(8 - 4)	-0.097

ND<1.5 OK (3/13/2007 a)	ND<1.37 U (4/10/2006 a)	(1.5 - 1.37)/(9 - 4)	0.026
ND<1.42 OK (6/12/2007 a)	ND<1.37 U (4/10/2006 a)	(1.42 - 1.37)/(10 - 4)	0.00833333
ND<1.14 OK (7/11/2006 a)	ND<0.88 OK (4/29/2006 a)	(1.14 - 0.88)/(6 - 5)	0.26
ND<0.766 OK (10/2/2006 a)	ND<0.88 OK (4/29/2006 a)	(0.766 - 0.88)/(7 - 5)	-0.057
ND<0.982 OK (1/11/2007 ~)	ND<0.88 OK (4/29/2006 a)	(0.982 - 0.88)/(8 - 5)	0.034
ND<1.5 OK (3/13/2007 a)	ND<0.88 OK (4/29/2006 a)	(1.5 - 0.88)/(9 - 5)	0.155
ND<1.42 OK (6/12/2007 a)	ND<0.88 OK (4/29/2006 a)	(1.42 - 0.88)/(10 - 5)	0.108
ND<0.766 OK (10/2/2006 a)	ND<1.14 OK (7/11/2006 a)	(0.766 - 1.14)/(7 - 6)	-0.374
ND<0.982 OK (1/11/2007 ~)	ND<1.14 OK (7/11/2006 a)	(0.982 - 1.14)/(8 - 6)	-0.079
ND<1.5 OK (3/13/2007 a)	ND<1.14 OK (7/11/2006 a)	(1.5 - 1.14)/(9 - 6)	0.12
ND<1.42 OK (6/12/2007 a)	ND<1.14 OK (7/11/2006 a)	(1.42 - 1.14)/(10 - 6)	0.07
ND<0.982 OK (1/11/2007 ~)	ND<0.766 OK (10/2/2006 a)	(0.982 - 0.766)/(8 - 7)	0.216
ND<1.5 OK (3/13/2007 a)	ND<0.766 OK (10/2/2006 a)	(1.5 - 0.766)/(9 - 7)	0.367
ND<1.42 OK (6/12/2007 a)	ND<0.766 OK (10/2/2006 a)	(1.42 - 0.766)/(10 - 7)	0.218
ND<1.5 OK (3/13/2007 a)	ND<0.982 OK (1/11/2007 ~)	(1.5 - 0.982)/(9 - 8)	0.518
ND<1.42 OK (6/12/2007 a)	ND<0.982 OK (1/11/2007 ~)	(1.42 - 0.982)/(10 - 8)	0.219
ND<1.42 OK (6/12/2007 a)	ND<1.5 OK (3/13/2007 a)	(1.42 - 1.5)/(10 - 9)	-0.08

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.49
2	-0.374
3	-0.37
4	-0.245
5	-0.201333
6	-0.18
7	-0.139
8	-0.12
9	-0.116667
10	-0.115
11	-0.115
12	-0.097
13	-0.0928

14	-0.092
15	-0.0882857
16	-0.086
17	-0.08
18	-0.079
19	-0.0766667
20	-0.057
21	-0.0413333
22	-0.0256
23	-0.0225
24	-0.02
25	-0.0125
26	0.00833333
27	0.01
28	0.02375
29	0.026
30	0.034
31	0.0385714
32	0.0442857
33	0.065
34	0.07
35	0.07
36	0.108
37	0.12
38	0.155
39	0.216
40	0.218
41	0.219
42	0.26
43	0.26
44	0.367
45	0.518

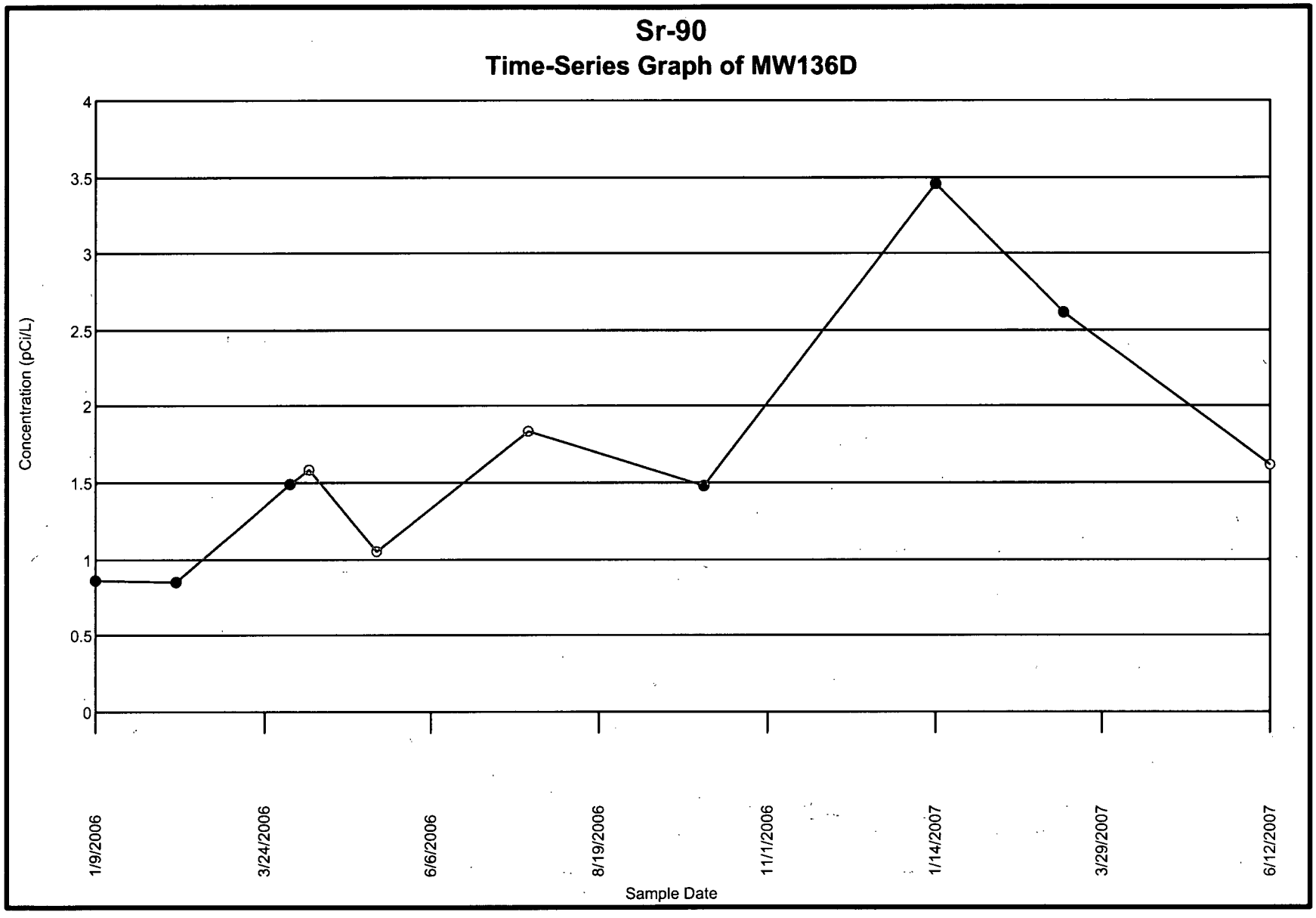
Sen's Estimator (Median Q) is -0.0225

Time Period	Observations
1/5/2006	1
2/8/2006	1
3/9/2006	1
4/10/2006	1
4/29/2006	1
7/11/2006	1

10/2/2006	1
1/11/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is -0.0928 = Q(13)
Upper limit is 0.065 = Q(33)
-0.0928 < 0 < 0.065 indicating no trend in data.


Sr-90
Time-Series Graph of MW136D
Concentration (pCi/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
1/9/2006
3/24/2006
6/6/2006
8/19/2006
11/1/2006
1/14/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW136D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
0.852 U (2/13/2006 a)	0.864 OK (1/9/2006 a)	(0.852 - 0.864)/(2 - 1)	-0.012
1.49 OK (4/4/2006 a)	0.864 OK (1/9/2006 a)	(1.49 - 0.864)/(3 - 1)	0.313
ND<1.58333 U (4/13/2006 ~)	0.864 OK (1/9/2006 a)	(1.58333 - 0.864)/(4 - 1)	0.239778
ND<1.05 OK (5/13/2006 a)	0.864 OK (1/9/2006 a)	(1.05 - 0.864)/(5 - 1)	0.0465
ND<1.84 OK (7/19/2006 a)	0.864 OK (1/9/2006 a)	(1.84 - 0.864)/(6 - 1)	0.1952
1.48 OK (10/5/2006 a)	0.864 OK (1/9/2006 a)	(1.48 - 0.864)/(7 - 1)	0.102667
3.45 OK (1/15/2007 a)	0.864 OK (1/9/2006 a)	(3.45 - 0.864)/(8 - 1)	0.369429
2.61 OK (3/13/2007 ~)	0.864 OK (1/9/2006 a)	(2.61 - 0.864)/(9 - 1)	0.21825
ND<1.62 OK (6/12/2007 a)	0.864 OK (1/9/2006 a)	(1.62 - 0.864)/(10 - 1)	0.084
1.49 OK (4/4/2006 a)	0.852 U (2/13/2006 a)	(1.49 - 0.852)/(3 - 2)	0.638
ND<1.58333 U (4/13/2006 ~)	0.852 U (2/13/2006 a)	(1.58333 - 0.852)/(4 - 2)	0.365667
ND<1.05 OK (5/13/2006 a)	0.852 U (2/13/2006 a)	(1.05 - 0.852)/(5 - 2)	0.066
ND<1.84 OK (7/19/2006 a)	0.852 U (2/13/2006 a)	(1.84 - 0.852)/(6 - 2)	0.247
1.48 OK (10/5/2006 a)	0.852 U (2/13/2006 a)	(1.48 - 0.852)/(7 - 2)	0.1256
3.45 OK (1/15/2007 a)	0.852 U (2/13/2006 a)	(3.45 - 0.852)/(8 - 2)	0.433
2.61 OK (3/13/2007 ~)	0.852 U (2/13/2006 a)	(2.61 - 0.852)/(9 - 2)	0.251143
ND<1.62 OK (6/12/2007 a)	0.852 U (2/13/2006 a)	(1.62 - 0.852)/(10 - 2)	0.096
ND<1.58333 U (4/13/2006 ~)	1.49 OK (4/4/2006 a)	(1.58333 - 1.49)/(4 - 3)	0.0933333
ND<1.05 OK (5/13/2006 a)	1.49 OK (4/4/2006 a)	(1.05 - 1.49)/(5 - 3)	-0.22
ND<1.84 OK (7/19/2006 a)	1.49 OK (4/4/2006 a)	(1.84 - 1.49)/(6 - 3)	0.116667
1.48 OK (10/5/2006 a)	1.49 OK (4/4/2006 a)	(1.48 - 1.49)/(7 - 3)	-0.0025
3.45 OK (1/15/2007 a)	1.49 OK (4/4/2006 a)	(3.45 - 1.49)/(8 - 3)	0.392
2.61 OK (3/13/2007 ~)	1.49 OK (4/4/2006 a)	(2.61 - 1.49)/(9 - 3)	0.186667
ND<1.62 OK (6/12/2007 a)	1.49 OK (4/4/2006 a)	(1.62 - 1.49)/(10 - 3)	0.0185714
ND<1.05 OK (5/13/2006 a)	ND<1.58333 U (4/13/2006 ~)	(1.05 - 1.58333)/(5 - 4)	-0.533333
ND<1.84 OK (7/19/2006 a)	ND<1.58333 U (4/13/2006 ~)	(1.84 - 1.58333)/(6 - 4)	0.128333
1.48 OK (10/5/2006 a)	ND<1.58333 U (4/13/2006 ~)	(1.48 - 1.58333)/(7 - 4)	-0.0344444
3.45 OK (1/15/2007 a)	ND<1.58333 U (4/13/2006 ~)	(3.45 - 1.58333)/(8 - 4)	0.466667

2.61 OK (3/13/2007 ~)	ND<1.58333 U (4/13/2006 ~)	(2.61 - 1.58333)/(9 - 4)	0.205333
ND<1.62 OK (6/12/2007 a)	ND<1.58333 U (4/13/2006 ~)	(1.62 - 1.58333)/(10 - 4)	0.00611111
ND<1.84 OK (7/19/2006 a)	ND<1.05 OK (5/13/2006 a)	(1.84 - 1.05)/(6 - 5)	0.79
1.48 OK (10/5/2006 a)	ND<1.05 OK (5/13/2006 a)	(1.48 - 1.05)/(7 - 5)	0.215
3.45 OK (1/15/2007 a)	ND<1.05 OK (5/13/2006 a)	(3.45 - 1.05)/(8 - 5)	0.8
2.61 OK (3/13/2007 ~)	ND<1.05 OK (5/13/2006 a)	(2.61 - 1.05)/(9 - 5)	0.39
ND<1.62 OK (6/12/2007 a)	ND<1.05 OK (5/13/2006 a)	(1.62 - 1.05)/(10 - 5)	0.114
1.48 OK (10/5/2006 a)	ND<1.84 OK (7/19/2006 a)	(1.48 - 1.84)/(7 - 6)	-0.36
3.45 OK (1/15/2007 a)	ND<1.84 OK (7/19/2006 a)	(3.45 - 1.84)/(8 - 6)	0.805
2.61 OK (3/13/2007 ~)	ND<1.84 OK (7/19/2006 a)	(2.61 - 1.84)/(9 - 6)	0.256667
ND<1.62 OK (6/12/2007 a)	ND<1.84 OK (7/19/2006 a)	(1.62 - 1.84)/(10 - 6)	-0.055
3.45 OK (1/15/2007 a)	1.48 OK (10/5/2006 a)	(3.45 - 1.48)/(8 - 7)	1.97
2.61 OK (3/13/2007 ~)	1.48 OK (10/5/2006 a)	(2.61 - 1.48)/(9 - 7)	0.565
ND<1.62 OK (6/12/2007 a)	1.48 OK (10/5/2006 a)	(1.62 - 1.48)/(10 - 7)	0.0466667
2.61 OK (3/13/2007 ~)	3.45 OK (1/15/2007 a)	(2.61 - 3.45)/(9 - 8)	-0.84
ND<1.62 OK (6/12/2007 a)	3.45 OK (1/15/2007 a)	(1.62 - 3.45)/(10 - 8)	-0.915
ND<1.62 OK (6/12/2007 a)	2.61 OK (3/13/2007 ~)	(1.62 - 2.61)/(10 - 9)	-0.99

Number of Q values = 45

Ordered Q Values

n	Q
1	-0.99
2	-0.915
3	-0.84
4	-0.533333
5	-0.36
6	-0.22
7	-0.055
8	-0.0344444
9	-0.012
10	-0.0025
11	0.00611111
12	0.0185714
13	0.0465

14	0.0466667
15	0.066
16	0.084
17	0.0933333
18	0.096
19	0.102667
20	0.114
21	0.116667
22	0.1256
23	0.128333
24	0.186667
25	0.1952
26	0.205333
27	0.215
28	0.21825
29	0.239778
30	0.247
31	0.251143
32	0.256667
33	0.313
34	0.365667
35	0.369429
36	0.39
37	0.392
38	0.433
39	0.466667
40	0.565
41	0.638
42	0.79
43	0.8
44	0.805
45	1.97

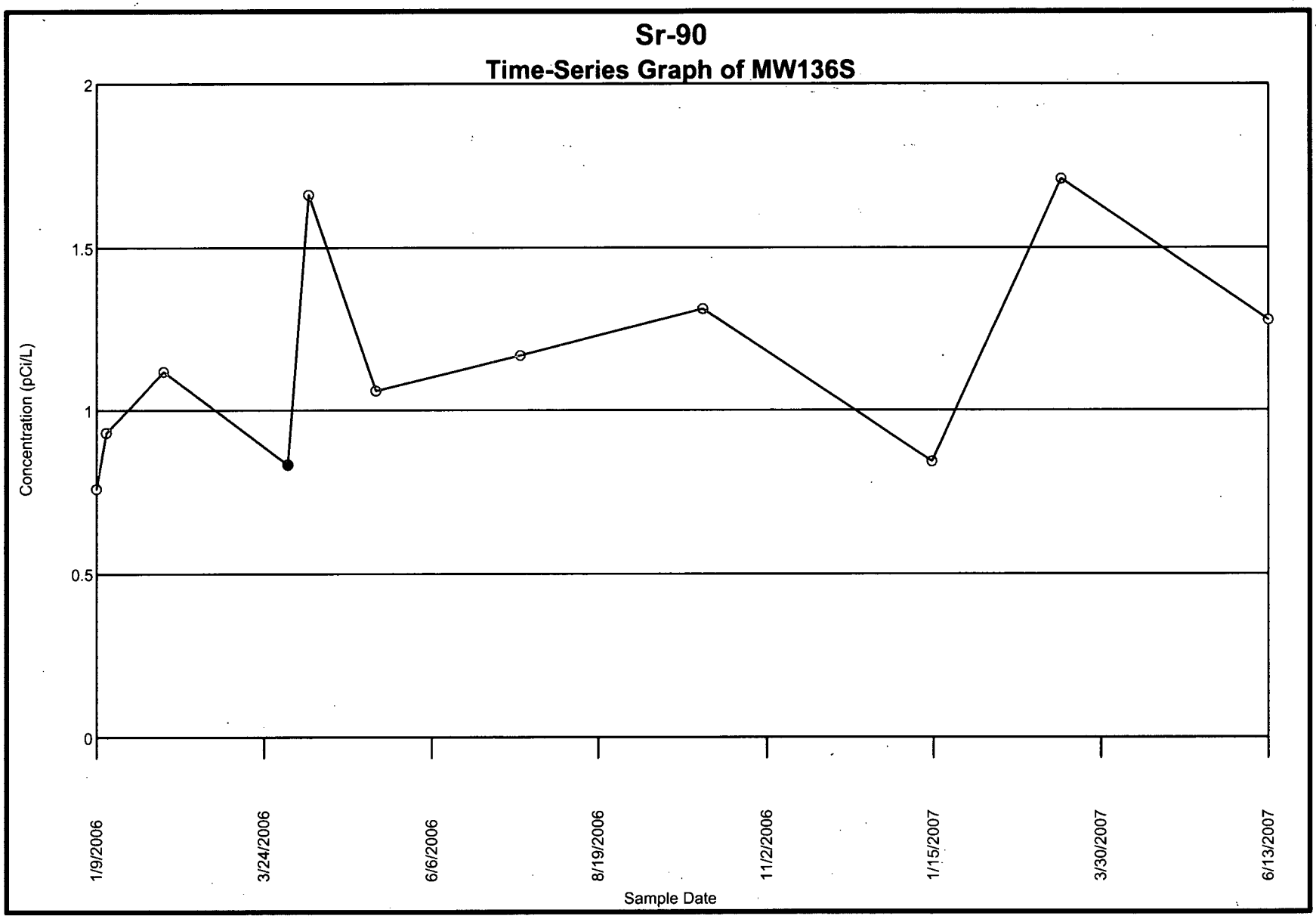
Sen's Estimator (Median Q) is 0.128333

Time Period	Observations
1/9/2006	1
2/13/2006	1
4/4/2006	1
4/13/2006	1
5/13/2006	1
7/19/2006	1

10/5/2006	1
1/15/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2250
b = 6480
c = 180
Group Variance = 125
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 18.39
M1 = (45 - 18.39)/2.0 = 13.305
M2 = (45 + 18.39)/2.0 + 1 = 32.695
Lower limit is 0.0465 = Q(13)
Upper limit is 0.313 = Q(33)
0.0465 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW136S
Concentration (pCi/L)
2
1.5
1
0.5
0
1/9/2006
3/24/2006
6/6/2006
8/19/2006
11/2/2006
1/15/2007
3/30/2007
6/13/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW136S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<0.935 U (1/13/2006 a)	ND<0.764 U (1/9/2006 a)	(0.935 - 0.764)/(2 - 1)	0.171
ND<1.12 U (2/8/2006 a)	ND<0.764 U (1/9/2006 a)	(1.12 - 0.764)/(3 - 1)	0.178
0.835 U (4/4/2006 a)	ND<0.764 U (1/9/2006 a)	(0.835 - 0.764)/(4 - 1)	0.0236667
ND<1.66 U (4/13/2006 a)	ND<0.764 U (1/9/2006 a)	(1.66 - 0.764)/(5 - 1)	0.224
ND<1.06 OK (5/13/2006 a)	ND<0.764 U (1/9/2006 a)	(1.06 - 0.764)/(6 - 1)	0.0592
ND<1.17 OK (7/16/2006 a)	ND<0.764 U (1/9/2006 a)	(1.17 - 0.764)/(7 - 1)	0.0676667
ND<1.31 OK (10/5/2006 a)	ND<0.764 U (1/9/2006 a)	(1.31 - 0.764)/(8 - 1)	0.078
ND<0.843 OK (1/15/2007 a)	ND<0.764 U (1/9/2006 a)	(0.843 - 0.764)/(9 - 1)	0.009875
ND<1.71 OK (3/13/2007 a)	ND<0.764 U (1/9/2006 a)	(1.71 - 0.764)/(10 - 1)	0.105111
ND<1.28 OK (6/13/2007 a)	ND<0.764 U (1/9/2006 a)	(1.28 - 0.764)/(11 - 1)	0.0516
ND<1.12 U (2/8/2006 a)	ND<0.935 U (1/13/2006 a)	(1.12 - 0.935)/(3 - 2)	0.185
0.835 U (4/4/2006 a)	ND<0.935 U (1/13/2006 a)	(0.835 - 0.935)/(4 - 2)	-0.05
ND<1.66 U (4/13/2006 a)	ND<0.935 U (1/13/2006 a)	(1.66 - 0.935)/(5 - 2)	0.241667
ND<1.06 OK (5/13/2006 a)	ND<0.935 U (1/13/2006 a)	(1.06 - 0.935)/(6 - 2)	0.03125
ND<1.17 OK (7/16/2006 a)	ND<0.935 U (1/13/2006 a)	(1.17 - 0.935)/(7 - 2)	0.047
ND<1.31 OK (10/5/2006 a)	ND<0.935 U (1/13/2006 a)	(1.31 - 0.935)/(8 - 2)	0.0625
ND<0.843 OK (1/15/2007 a)	ND<0.935 U (1/13/2006 a)	(0.843 - 0.935)/(9 - 2)	-0.0131429
ND<1.71 OK (3/13/2007 a)	ND<0.935 U (1/13/2006 a)	(1.71 - 0.935)/(10 - 2)	0.096875
ND<1.28 OK (6/13/2007 a)	ND<0.935 U (1/13/2006 a)	(1.28 - 0.935)/(11 - 2)	0.0383333
0.835 U (4/4/2006 a)	ND<1.12 U (2/8/2006 a)	(0.835 - 1.12)/(4 - 3)	-0.285
ND<1.66 U (4/13/2006 a)	ND<1.12 U (2/8/2006 a)	(1.66 - 1.12)/(5 - 3)	0.27
ND<1.06 OK (5/13/2006 a)	ND<1.12 U (2/8/2006 a)	(1.06 - 1.12)/(6 - 3)	-0.02
ND<1.17 OK (7/16/2006 a)	ND<1.12 U (2/8/2006 a)	(1.17 - 1.12)/(7 - 3)	0.0125
ND<1.31 OK (10/5/2006 a)	ND<1.12 U (2/8/2006 a)	(1.31 - 1.12)/(8 - 3)	0.038
ND<0.843 OK (1/15/2007 a)	ND<1.12 U (2/8/2006 a)	(0.843 - 1.12)/(9 - 3)	-0.0461667
ND<1.71 OK (3/13/2007 a)	ND<1.12 U (2/8/2006 a)	(1.71 - 1.12)/(10 - 3)	0.0842857
ND<1.28 OK (6/13/2007 a)	ND<1.12 U (2/8/2006 a)	(1.28 - 1.12)/(11 - 3)	0.02
ND<1.66 U (4/13/2006 a)	0.835 U (4/4/2006 a)	(1.66 - 0.835)/(5 - 4)	0.825

ND<1.06 OK (5/13/2006 a)	0.835 U (4/4/2006 a)	(1.06 - 0.835)/(6 - 4)	0.1125
ND<1.17 OK (7/16/2006 a)	0.835 U (4/4/2006 a)	(1.17 - 0.835)/(7 - 4)	0.111667
ND<1.31 OK (10/5/2006 a)	0.835 U (4/4/2006 a)	(1.31 - 0.835)/(8 - 4)	0.11875
ND<0.843 OK (1/15/2007 a)	0.835 U (4/4/2006 a)	(0.843 - 0.835)/(9 - 4)	0.0016
ND<1.71 OK (3/13/2007 a)	0.835 U (4/4/2006 a)	(1.71 - 0.835)/(10 - 4)	0.145833
ND<1.28 OK (6/13/2007 a)	0.835 U (4/4/2006 a)	(1.28 - 0.835)/(11 - 4)	0.0635714
ND<1.06 OK (5/13/2006 a)	ND<1.66 U (4/13/2006 a)	(1.06 - 1.66)/(6 - 5)	-0.6
ND<1.17 OK (7/16/2006 a)	ND<1.66 U (4/13/2006 a)	(1.17 - 1.66)/(7 - 5)	-0.245
ND<1.31 OK (10/5/2006 a)	ND<1.66 U (4/13/2006 a)	(1.31 - 1.66)/(8 - 5)	-0.116667
ND<0.843 OK (1/15/2007 a)	ND<1.66 U (4/13/2006 a)	(0.843 - 1.66)/(9 - 5)	-0.20425
ND<1.71 OK (3/13/2007 a)	ND<1.66 U (4/13/2006 a)	(1.71 - 1.66)/(10 - 5)	0.01
ND<1.28 OK (6/13/2007 a)	ND<1.66 U (4/13/2006 a)	(1.28 - 1.66)/(11 - 5)	-0.0633333
ND<1.17 OK (7/16/2006 a)	ND<1.06 OK (5/13/2006 a)	(1.17 - 1.06)/(7 - 6)	0.11
ND<1.31 OK (10/5/2006 a)	ND<1.06 OK (5/13/2006 a)	(1.31 - 1.06)/(8 - 6)	0.125
ND<0.843 OK (1/15/2007 a)	ND<1.06 OK (5/13/2006 a)	(0.843 - 1.06)/(9 - 6)	-0.0723333
ND<1.71 OK (3/13/2007 a)	ND<1.06 OK (5/13/2006 a)	(1.71 - 1.06)/(10 - 6)	0.1625
ND<1.28 OK (6/13/2007 a)	ND<1.06 OK (5/13/2006 a)	(1.28 - 1.06)/(11 - 6)	0.044
ND<1.31 OK (10/5/2006 a)	ND<1.17 OK (7/16/2006 a)	(1.31 - 1.17)/(8 - 7)	0.14
ND<0.843 OK (1/15/2007 a)	ND<1.17 OK (7/16/2006 a)	(0.843 - 1.17)/(9 - 7)	-0.1635
ND<1.71 OK (3/13/2007 a)	ND<1.17 OK (7/16/2006 a)	(1.71 - 1.17)/(10 - 7)	0.18
ND<1.28 OK (6/13/2007 a)	ND<1.17 OK (7/16/2006 a)	(1.28 - 1.17)/(11 - 7)	0.0275
ND<0.843 OK (1/15/2007 a)	ND<1.31 OK (10/5/2006 a)	(0.843 - 1.31)/(9 - 8)	-0.467
ND<1.71 OK (3/13/2007 a)	ND<1.31 OK (10/5/2006 a)	(1.71 - 1.31)/(10 - 8)	0.2
ND<1.28 OK (6/13/2007 a)	ND<1.31 OK (10/5/2006 a)	(1.28 - 1.31)/(11 - 8)	-0.01
ND<1.71 OK (3/13/2007 a)	ND<0.843 OK (1/15/2007 a)	(1.71 - 0.843)/(10 - 9)	0.867
ND<1.28 OK (6/13/2007 a)	ND<0.843 OK (1/15/2007 a)	(1.28 - 0.843)/(11 - 9)	0.2185
ND<1.28 OK (6/13/2007 a)	ND<1.71 OK (3/13/2007 a)	(1.28 - 1.71)/(11 - 10)	-0.43

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.6
2	-0.467

3	-0.43
4	-0.285
5	-0.245
6	-0.20425
7	-0.1635
8	-0.116667
9	-0.0723333
10	-0.0633333
11	-0.05
12	-0.0461667
13	-0.02
14	-0.0131429
15	-0.01
16	0.0016
17	0.009875
18	0.01
19	0.0125
20	0.02
21	0.0236667
22	0.0275
23	0.03125
24	0.038
25	0.0383333
26	0.044
27	0.047
28	0.0516
29	0.0592
30	0.0625
31	0.0635714
32	0.0676667
33	0.078
34	0.0842857
35	0.096875
36	0.105111
37	0.11
38	0.111667
39	0.1125
40	0.11875
41	0.125
42	0.14
43	0.145833

44	0.1625
45	0.171
46	0.178
47	0.18
48	0.185
49	0.2
50	0.2185
51	0.224
52	0.241667
53	0.27
54	0.825
55	0.867

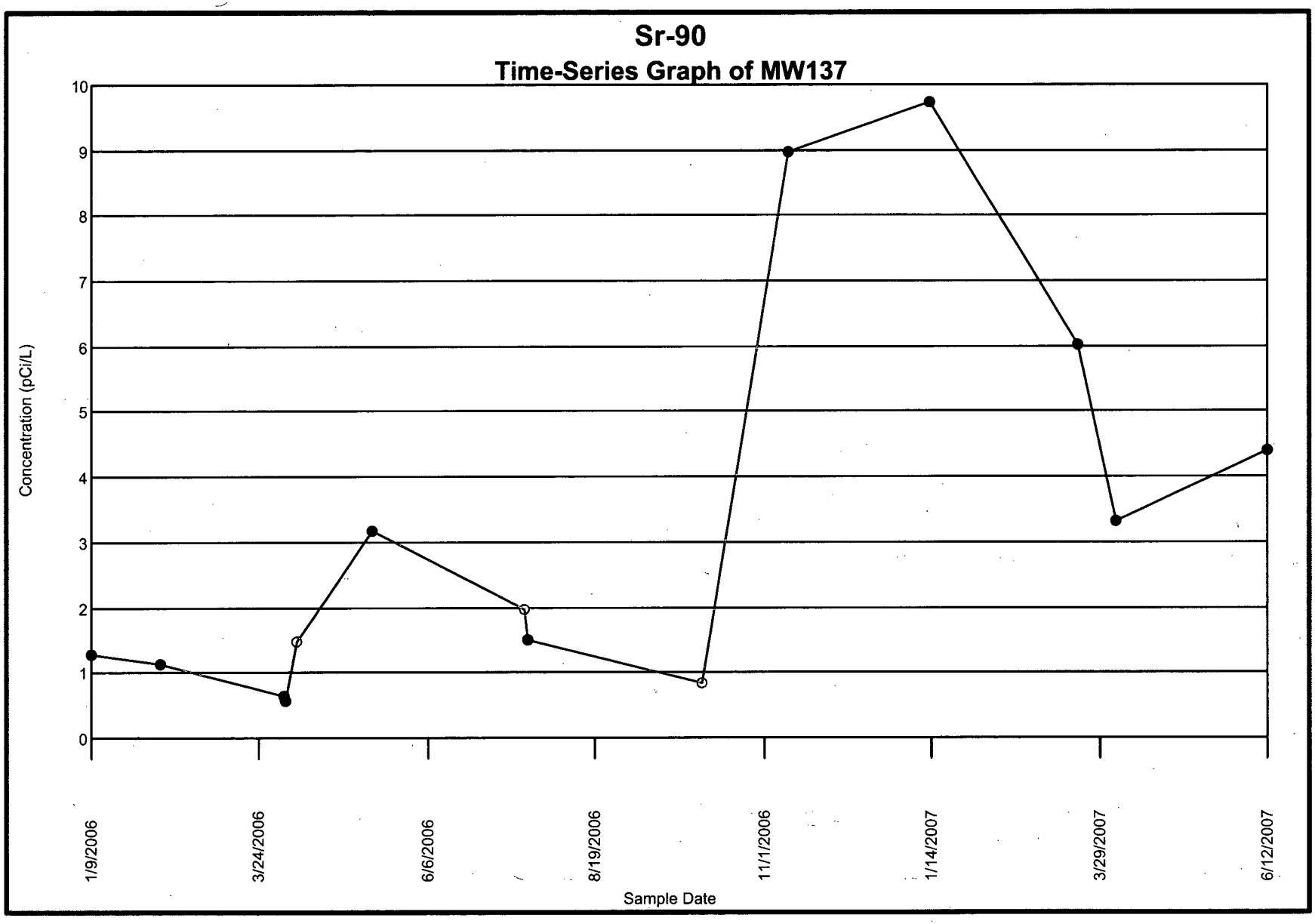
Sen's Estimator (Median Q) is 0.0516

Time Period	Observations
1/9/2006	1
1/13/2006	1
2/8/2006	1
4/4/2006	1
4/13/2006	1
5/13/2006	1
7/16/2006	1
10/5/2006	1
1/15/2007	1
3/13/2007	1
6/13/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357

M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is 0.009875 = Q(17)
Upper limit is 0.1125 = Q(39)
0.009875 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW137
Concentration (pCi/L)
0
1
2
3
4
5
6
7
8
9
10
1/9/2006
3/24/2006
6/6/2006
8/19/2006
11/1/2006
1/14/2007
3/29/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW137

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1.13 U (2/8/2006 a)	1.28 OK (1/9/2006 a)	(1.13 - 1.28)/(2 - 1)	-0.15
0.633 U (4/4/2006 a)	1.28 OK (1/9/2006 a)	(0.633 - 1.28)/(3 - 1)	-0.3235
0.562 U (4/5/2006 a)	1.28 OK (1/9/2006 a)	(0.562 - 1.28)/(4 - 1)	-0.239333
ND<1.48 U (4/10/2006 a)	1.28 OK (1/9/2006 a)	(1.48 - 1.28)/(5 - 1)	0.05
3.18 OK (5/13/2006 a)	1.28 OK (1/9/2006 a)	(3.18 - 1.28)/(6 - 1)	0.38
ND<1.96 OK (7/19/2006 a)	1.28 OK (1/9/2006 a)	(1.96 - 1.28)/(7 - 1)	0.113333
1.5 OK (7/21/2006 a)	1.28 OK (1/9/2006 a)	(1.5 - 1.28)/(8 - 1)	0.0314286
ND<0.847 OK (10/5/2006 a)	1.28 OK (1/9/2006 a)	(0.847 - 1.28)/(9 - 1)	-0.054125
8.96 OK (11/12/2006 a)	1.28 OK (1/9/2006 a)	(8.96 - 1.28)/(10 - 1)	0.853333
9.72 OK (1/14/2007 a)	1.28 OK (1/9/2006 a)	(9.72 - 1.28)/(11 - 1)	0.844
6.01 OK (3/20/2007 a)	1.28 OK (1/9/2006 a)	(6.01 - 1.28)/(12 - 1)	0.43
3.32 OK (4/6/2007 a)	1.28 OK (1/9/2006 a)	(3.32 - 1.28)/(13 - 1)	0.17
4.41 OK (6/12/2007 a)	1.28 OK (1/9/2006 a)	(4.41 - 1.28)/(14 - 1)	0.240769
0.633 U (4/4/2006 a)	1.13 U (2/8/2006 a)	(0.633 - 1.13)/(3 - 2)	-0.497
0.562 U (4/5/2006 a)	1.13 U (2/8/2006 a)	(0.562 - 1.13)/(4 - 2)	-0.284
ND<1.48 U (4/10/2006 a)	1.13 U (2/8/2006 a)	(1.48 - 1.13)/(5 - 2)	0.116667
3.18 OK (5/13/2006 a)	1.13 U (2/8/2006 a)	(3.18 - 1.13)/(6 - 2)	0.5125
ND<1.96 OK (7/19/2006 a)	1.13 U (2/8/2006 a)	(1.96 - 1.13)/(7 - 2)	0.166
1.5 OK (7/21/2006 a)	1.13 U (2/8/2006 a)	(1.5 - 1.13)/(8 - 2)	0.0616667
ND<0.847 OK (10/5/2006 a)	1.13 U (2/8/2006 a)	(0.847 - 1.13)/(9 - 2)	-0.0404286
8.96 OK (11/12/2006 a)	1.13 U (2/8/2006 a)	(8.96 - 1.13)/(10 - 2)	0.97875
9.72 OK (1/14/2007 a)	1.13 U (2/8/2006 a)	(9.72 - 1.13)/(11 - 2)	0.954444
6.01 OK (3/20/2007 a)	1.13 U (2/8/2006 a)	(6.01 - 1.13)/(12 - 2)	0.488
3.32 OK (4/6/2007 a)	1.13 U (2/8/2006 a)	(3.32 - 1.13)/(13 - 2)	0.199091
4.41 OK (6/12/2007 a)	1.13 U (2/8/2006 a)	(4.41 - 1.13)/(14 - 2)	0.273333
0.562 U (4/5/2006 a)	0.633 U (4/4/2006 a)	(0.562 - 0.633)/(4 - 3)	-0.071
ND<1.48 U (4/10/2006 a)	0.633 U (4/4/2006 a)	(1.48 - 0.633)/(5 - 3)	0.4235
3.18 OK (5/13/2006 a)	0.633 U (4/4/2006 a)	(3.18 - 0.633)/(6 - 3)	0.849
ND<1.96 OK (7/19/2006 a)	0.633 U (4/4/2006 a)	(1.96 - 0.633)/(7 - 3)	0.33175
1.5 OK (7/21/2006 a)	0.633 U (4/4/2006 a)	(1.5 - 0.633)/(8 - 3)	0.1734
ND<0.847 OK (10/5/2006 a)	0.633 U (4/4/2006 a)	(0.847 - 0.633)/(9 - 3)	0.0356667
8.96 OK (11/12/2006 a)	0.633 U (4/4/2006 a)	(8.96 - 0.633)/(10 - 3)	1.18957
9.72 OK (1/14/2007 a)	0.633 U (4/4/2006 a)	(9.72 - 0.633)/(11 - 3)	1.13588
6.01 OK (3/20/2007 a)	0.633 U (4/4/2006 a)	(6.01 - 0.633)/(12 - 3)	0.597444
3.32 OK (4/6/2007 a)	0.633 U (4/4/2006 a)	(3.32 - 0.633)/(13 - 3)	0.2687
4.41 OK (6/12/2007 a)	0.633 U (4/4/2006 a)	(4.41 - 0.633)/(14 - 3)	0.343364
ND<1.48 U (4/10/2006 a)	0.562 U (4/5/2006 a)	(1.48 - 0.562)/(5 - 4)	0.918
3.18 OK (5/13/2006 a)	0.562 U (4/5/2006 a)	(3.18 - 0.562)/(6 - 4)	1.309
ND<1.96 OK (7/19/2006 a)	0.562 U (4/5/2006 a)	(1.96 - 0.562)/(7 - 4)	0.466
1.5 OK (7/21/2006 a)	0.562 U (4/5/2006 a)	(1.5 - 0.562)/(8 - 4)	0.2345
ND<0.847 OK (10/5/2006 a)	0.562 U (4/5/2006 a)	(0.847 - 0.562)/(9 - 4)	0.057
8.96 OK (11/12/2006 a)	0.562 U (4/5/2006 a)	(8.96 - 0.562)/(10 - 4)	1.39967
9.72 OK (1/14/2007 a)	0.562 U (4/5/2006 a)	(9.72 - 0.562)/(11 - 4)	1.30829
6.01 OK (3/20/2007 a)	0.562 U (4/5/2006 a)	(6.01 - 0.562)/(12 - 4)	0.681

3.32 OK (4/6/2007 a)	0.562 U (4/5/2006 a)	(3.32 - 0.562)/(13 - 4)	0.306444
4.41 OK (6/12/2007 a)	0.562 U (4/5/2006 a)	(4.41 - 0.562)/(14 - 4)	0.3848
3.18 OK (5/13/2006 a)	ND<1.48 U (4/10/2006 a)	(3.18 - 1.48)/(6 - 5)	1.7
ND<1.96 OK (7/19/2006 a)	ND<1.48 U (4/10/2006 a)	(1.96 - 1.48)/(7 - 5)	0.24
1.5 OK (7/21/2006 a)	ND<1.48 U (4/10/2006 a)	(1.5 - 1.48)/(8 - 5)	0.00666667
ND<0.847 OK (10/5/2006 a)	ND<1.48 U (4/10/2006 a)	(0.847 - 1.48)/(9 - 5)	-0.15825
8.96 OK (11/12/2006 a)	ND<1.48 U (4/10/2006 a)	(8.96 - 1.48)/(10 - 5)	1.496
9.72 OK (1/14/2007 a)	ND<1.48 U (4/10/2006 a)	(9.72 - 1.48)/(11 - 5)	1.37333
6.01 OK (3/20/2007 a)	ND<1.48 U (4/10/2006 a)	(6.01 - 1.48)/(12 - 5)	0.647143
3.32 OK (4/6/2007 a)	ND<1.48 U (4/10/2006 a)	(3.32 - 1.48)/(13 - 5)	0.23
4.41 OK (6/12/2007 a)	ND<1.48 U (4/10/2006 a)	(4.41 - 1.48)/(14 - 5)	0.325556
ND<1.96 OK (7/19/2006 a)	3.18 OK (5/13/2006 a)	(1.96 - 3.18)/(7 - 6)	-1.22
1.5 OK (7/21/2006 a)	3.18 OK (5/13/2006 a)	(1.5 - 3.18)/(8 - 6)	-0.84
ND<0.847 OK (10/5/2006 a)	3.18 OK (5/13/2006 a)	(0.847 - 3.18)/(9 - 6)	-0.777667
8.96 OK (11/12/2006 a)	3.18 OK (5/13/2006 a)	(8.96 - 3.18)/(10 - 6)	1.445
9.72 OK (1/14/2007 a)	3.18 OK (5/13/2006 a)	(9.72 - 3.18)/(11 - 6)	1.308
6.01 OK (3/20/2007 a)	3.18 OK (5/13/2006 a)	(6.01 - 3.18)/(12 - 6)	0.471667
3.32 OK (4/6/2007 a)	3.18 OK (5/13/2006 a)	(3.32 - 3.18)/(13 - 6)	0.02
4.41 OK (6/12/2007 a)	3.18 OK (5/13/2006 a)	(4.41 - 3.18)/(14 - 6)	0.15375
1.5 OK (7/21/2006 a)	ND<1.96 OK (7/19/2006 a)	(1.5 - 1.96)/(8 - 7)	-0.46
ND<0.847 OK (10/5/2006 a)	ND<1.96 OK (7/19/2006 a)	(0.847 - 1.96)/(9 - 7)	-0.5565
8.96 OK (11/12/2006 a)	ND<1.96 OK (7/19/2006 a)	(8.96 - 1.96)/(10 - 7)	2.33333
9.72 OK (1/14/2007 a)	ND<1.96 OK (7/19/2006 a)	(9.72 - 1.96)/(11 - 7)	1.94
6.01 OK (3/20/2007 a)	ND<1.96 OK (7/19/2006 a)	(6.01 - 1.96)/(12 - 7)	0.81
3.32 OK (4/6/2007 a)	ND<1.96 OK (7/19/2006 a)	(3.32 - 1.96)/(13 - 7)	0.226667
4.41 OK (6/12/2007 a)	ND<1.96 OK (7/19/2006 a)	(4.41 - 1.96)/(14 - 7)	0.35
ND<0.847 OK (10/5/2006 a)	1.5 OK (7/21/2006 a)	(0.847 - 1.5)/(9 - 8)	-0.653
8.96 OK (11/12/2006 a)	1.5 OK (7/21/2006 a)	(8.96 - 1.5)/(10 - 8)	3.73
9.72 OK (1/14/2007 a)	1.5 OK (7/21/2006 a)	(9.72 - 1.5)/(11 - 8)	2.74
6.01 OK (3/20/2007 a)	1.5 OK (7/21/2006 a)	(6.01 - 1.5)/(12 - 8)	1.1275
3.32 OK (4/6/2007 a)	1.5 OK (7/21/2006 a)	(3.32 - 1.5)/(13 - 8)	0.364
4.41 OK (6/12/2007 a)	1.5 OK (7/21/2006 a)	(4.41 - 1.5)/(14 - 8)	0.485
8.96 OK (11/12/2006 a)	ND<0.847 OK (10/5/2006 a)	(8.96 - 0.847)/(10 - 9)	8.113
9.72 OK (1/14/2007 a)	ND<0.847 OK (10/5/2006 a)	(9.72 - 0.847)/(11 - 9)	4.4365
6.01 OK (3/20/2007 a)	ND<0.847 OK (10/5/2006 a)	(6.01 - 0.847)/(12 - 9)	1.721
3.32 OK (4/6/2007 a)	ND<0.847 OK (10/5/2006 a)	(3.32 - 0.847)/(13 - 9)	0.61825
4.41 OK (6/12/2007 a)	ND<0.847 OK (10/5/2006 a)	(4.41 - 0.847)/(14 - 9)	0.7126
9.72 OK (1/14/2007 a)	8.96 OK (11/12/2006 a)	(9.72 - 8.96)/(11 - 10)	0.76
6.01 OK (3/20/2007 a)	8.96 OK (11/12/2006 a)	(6.01 - 8.96)/(12 - 10)	-1.475
3.32 OK (4/6/2007 a)	8.96 OK (11/12/2006 a)	(3.32 - 8.96)/(13 - 10)	-1.88
4.41 OK (6/12/2007 a)	8.96 OK (11/12/2006 a)	(4.41 - 8.96)/(14 - 10)	-1.1375
6.01 OK (3/20/2007 a)	9.72 OK (1/14/2007 a)	(6.01 - 9.72)/(12 - 11)	-3.71
3.32 OK (4/6/2007 a)	9.72 OK (1/14/2007 a)	(3.32 - 9.72)/(13 - 11)	-3.2
4.41 OK (6/12/2007 a)	9.72 OK (1/14/2007 a)	(4.41 - 9.72)/(14 - 11)	-1.77
3.32 OK (4/6/2007 a)	6.01 OK (3/20/2007 a)	(3.32 - 6.01)/(13 - 12)	-2.69
4.41 OK (6/12/2007 a)	6.01 OK (3/20/2007 a)	(4.41 - 6.01)/(14 - 12)	-0.8
4.41 OK (6/12/2007 a)	3.32 OK (4/6/2007 a)	(4.41 - 3.32)/(14 - 13)	1.09

Number of Q values = 91

Ordered Q Values

n	Q
1	-3.71
2	-3.2
3	-2.69
4	-1.88
5	-1.77
6	-1.475
7	-1.22
8	-1.1375
9	-0.84
10	-0.8
11	-0.777667
12	-0.653
13	-0.5565
14	-0.497
15	-0.46
16	-0.3235
17	-0.284
18	-0.239333
19	-0.15825
20	-0.15
21	-0.071
22	-0.054125
23	-0.0404286
24	0.00666667
25	0.02
26	0.0314286
27	0.0356667
28	0.05
29	0.057
30	0.0616667
31	0.113333
32	0.116667
33	0.15375
34	0.166
35	0.17
36	0.1734
37	0.199091
38	0.226667
39	0.23
40	0.2345
41	0.24
42	0.240769
43	0.2687
44	0.273333
45	0.306444
46	0.325556
47	0.33175
48	0.343364
49	0.35
50	0.364
51	0.38
52	0.3848

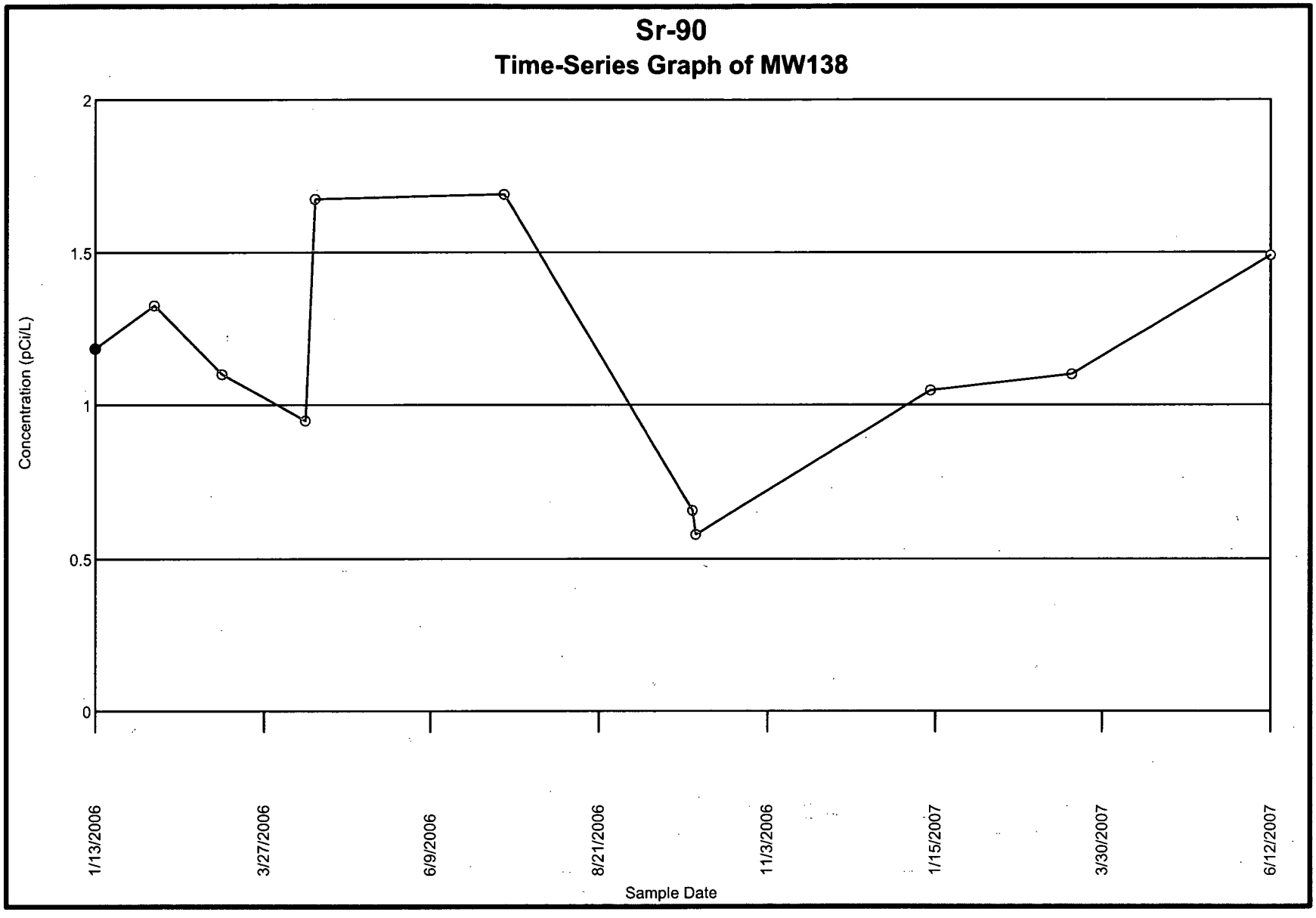
53	0.4235
54	0.43
55	0.466
56	0.471667
57	0.485
58	0.488
59	0.5125
60	0.597444
61	0.61825
62	0.647143
63	0.681
64	0.7126
65	0.76
66	0.81
67	0.844
68	0.849
69	0.853333
70	0.918
71	0.954444
72	0.97875
73	1.09
74	1.1275
75	1.13588
76	1.18957
77	1.308
78	1.30829
79	1.309
80	1.37333
81	1.39967
82	1.445
83	1.496
84	1.7
85	1.721
86	1.94
87	2.33333
88	2.74
89	3.73
90	4.4365
91	8.113

Sen's Estimator (Median Q) is 0.325556

Time Period	Observations
1/9/2006	1
2/8/2006	1
4/4/2006	1
4/5/2006	1
4/10/2006	1
5/13/2006	1
7/19/2006	1
7/21/2006	1
10/5/2006	1
11/12/2006	1
1/14/2007	1
3/20/2007	1
4/6/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is 0.0616667 = Q(30)
Upper limit is 0.647143 = Q(62)
0.0616667 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW138
Concentration (pCi/L)
2
1.5
1
0.5
0
1/13/2006
3/27/2006
6/9/2006
8/21/2006
11/3/2006
1/15/2007
3/30/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW138

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.33 U (2/8/2006 ~)	1.184 U (1/13/2006 ~)	(1.33 - 1.184)/(2 - 1)	0.146
ND<1.1 U (3/9/2006 a)	1.184 U (1/13/2006 ~)	(1.1 - 1.184)/(3 - 1)	-0.042
ND<0.952 U (4/15/2006 a)	1.184 U (1/13/2006 ~)	(0.952 - 1.184)/(4 - 1)	-0.0773333
ND<1.675 OK (4/19/2006 ~)	1.184 U (1/13/2006 ~)	(1.675 - 1.184)/(5 - 1)	0.12275
ND<1.69 OK (7/11/2006 a)	1.184 U (1/13/2006 ~)	(1.69 - 1.184)/(6 - 1)	0.1012
ND<0.657 OK (10/2/2006 a)	1.184 U (1/13/2006 ~)	(0.657 - 1.184)/(7 - 1)	-0.0878333
ND<0.579 OK (10/3/2006 a)	1.184 U (1/13/2006 ~)	(0.579 - 1.184)/(8 - 1)	-0.0864286
ND<1.05 OK (1/14/2007 a)	1.184 U (1/13/2006 ~)	(1.05 - 1.184)/(9 - 1)	-0.01675
ND<1.1 OK (3/17/2007 a)	1.184 U (1/13/2006 ~)	(1.1 - 1.184)/(10 - 1)	-0.00933333
ND<1.49 OK (6/12/2007 ~)	1.184 U (1/13/2006 ~)	(1.49 - 1.184)/(11 - 1)	0.0306
ND<1.1 U (3/9/2006 a)	ND<1.33 U (2/8/2006 ~)	(1.1 - 1.33)/(3 - 2)	-0.23
ND<0.952 U (4/15/2006 a)	ND<1.33 U (2/8/2006 ~)	(0.952 - 1.33)/(4 - 2)	-0.189
ND<1.675 OK (4/19/2006 ~)	ND<1.33 U (2/8/2006 ~)	(1.675 - 1.33)/(5 - 2)	0.115
ND<1.69 OK (7/11/2006 a)	ND<1.33 U (2/8/2006 ~)	(1.69 - 1.33)/(6 - 2)	0.09
ND<0.657 OK (10/2/2006 a)	ND<1.33 U (2/8/2006 ~)	(0.657 - 1.33)/(7 - 2)	-0.1346
ND<0.579 OK (10/3/2006 a)	ND<1.33 U (2/8/2006 ~)	(0.579 - 1.33)/(8 - 2)	-0.125167
ND<1.05 OK (1/14/2007 a)	ND<1.33 U (2/8/2006 ~)	(1.05 - 1.33)/(9 - 2)	-0.04
ND<1.1 OK (3/17/2007 a)	ND<1.33 U (2/8/2006 ~)	(1.1 - 1.33)/(10 - 2)	-0.02875
ND<1.49 OK (6/12/2007 ~)	ND<1.33 U (2/8/2006 ~)	(1.49 - 1.33)/(11 - 2)	0.0177778
ND<0.952 U (4/15/2006 a)	ND<1.1 U (3/9/2006 a)	(0.952 - 1.1)/(4 - 3)	-0.148
ND<1.675 OK (4/19/2006 ~)	ND<1.1 U (3/9/2006 a)	(1.675 - 1.1)/(5 - 3)	0.2875
ND<1.69 OK (7/11/2006 a)	ND<1.1 U (3/9/2006 a)	(1.69 - 1.1)/(6 - 3)	0.196667
ND<0.657 OK (10/2/2006 a)	ND<1.1 U (3/9/2006 a)	(0.657 - 1.1)/(7 - 3)	-0.11075
ND<0.579 OK (10/3/2006 a)	ND<1.1 U (3/9/2006 a)	(0.579 - 1.1)/(8 - 3)	-0.1042
ND<1.05 OK (1/14/2007 a)	ND<1.1 U (3/9/2006 a)	(1.05 - 1.1)/(9 - 3)	-0.00833333
ND<1.1 OK (3/17/2007 a)	ND<1.1 U (3/9/2006 a)	(1.1 - 1.1)/(10 - 3)	0
ND<1.49 OK (6/12/2007 ~)	ND<1.1 U (3/9/2006 a)	(1.49 - 1.1)/(11 - 3)	0.04875
ND<1.675 OK (4/19/2006 ~)	ND<0.952 U (4/15/2006 a)	(1.675 - 0.952)/(5 - 4)	0.723

ND<1.69 OK (7/11/2006 a)	ND<0.952 U (4/15/2006 a)	(1.69 - 0.952)/(6 - 4)	0.369
ND<0.657 OK (10/2/2006 a)	ND<0.952 U (4/15/2006 a)	(0.657 - 0.952)/(7 - 4)	-0.0983333
ND<0.579 OK (10/3/2006 a)	ND<0.952 U (4/15/2006 a)	(0.579 - 0.952)/(8 - 4)	-0.09325
ND<1.05 OK (1/14/2007 a)	ND<0.952 U (4/15/2006 a)	(1.05 - 0.952)/(9 - 4)	0.0196
ND<1.1 OK (3/17/2007 a)	ND<0.952 U (4/15/2006 a)	(1.1 - 0.952)/(10 - 4)	0.0246667
ND<1.49 OK (6/12/2007 ~)	ND<0.952 U (4/15/2006 a)	(1.49 - 0.952)/(11 - 4)	0.0768571
ND<1.69 OK (7/11/2006 a)	ND<1.675 OK (4/19/2006 ~)	(1.69 - 1.675)/(6 - 5)	0.015
ND<0.657 OK (10/2/2006 a)	ND<1.675 OK (4/19/2006 ~)	(0.657 - 1.675)/(7 - 5)	-0.509
ND<0.579 OK (10/3/2006 a)	ND<1.675 OK (4/19/2006 ~)	(0.579 - 1.675)/(8 - 5)	-0.365333
ND<1.05 OK (1/14/2007 a)	ND<1.675 OK (4/19/2006 ~)	(1.05 - 1.675)/(9 - 5)	-0.15625
ND<1.1 OK (3/17/2007 a)	ND<1.675 OK (4/19/2006 ~)	(1.1 - 1.675)/(10 - 5)	-0.115
ND<1.49 OK (6/12/2007 ~)	ND<1.675 OK (4/19/2006 ~)	(1.49 - 1.675)/(11 - 5)	-0.0308333
ND<0.657 OK (10/2/2006 a)	ND<1.69 OK (7/11/2006 a)	(0.657 - 1.69)/(7 - 6)	-1.033
ND<0.579 OK (10/3/2006 a)	ND<1.69 OK (7/11/2006 a)	(0.579 - 1.69)/(8 - 6)	-0.5555
ND<1.05 OK (1/14/2007 a)	ND<1.69 OK (7/11/2006 a)	(1.05 - 1.69)/(9 - 6)	-0.213333
ND<1.1 OK (3/17/2007 a)	ND<1.69 OK (7/11/2006 a)	(1.1 - 1.69)/(10 - 6)	-0.1475
ND<1.49 OK (6/12/2007 ~)	ND<1.69 OK (7/11/2006 a)	(1.49 - 1.69)/(11 - 6)	-0.04
ND<0.579 OK (10/3/2006 a)	ND<0.657 OK (10/2/2006 a)	(0.579 - 0.657)/(8 - 7)	-0.078
ND<1.05 OK (1/14/2007 a)	ND<0.657 OK (10/2/2006 a)	(1.05 - 0.657)/(9 - 7)	0.1965
ND<1.1 OK (3/17/2007 a)	ND<0.657 OK (10/2/2006 a)	(1.1 - 0.657)/(10 - 7)	0.147667
ND<1.49 OK (6/12/2007 ~)	ND<0.657 OK (10/2/2006 a)	(1.49 - 0.657)/(11 - 7)	0.20825
ND<1.05 OK (1/14/2007 a)	ND<0.579 OK (10/3/2006 a)	(1.05 - 0.579)/(9 - 8)	0.471
ND<1.1 OK (3/17/2007 a)	ND<0.579 OK (10/3/2006 a)	(1.1 - 0.579)/(10 - 8)	0.2605
ND<1.49 OK (6/12/2007 ~)	ND<0.579 OK (10/3/2006 a)	(1.49 - 0.579)/(11 - 8)	0.303667
ND<1.1 OK (3/17/2007 a)	ND<1.05 OK (1/14/2007 a)	(1.1 - 1.05)/(10 - 9)	0.05
ND<1.49 OK (6/12/2007 ~)	ND<1.05 OK (1/14/2007 a)	(1.49 - 1.05)/(11 - 9)	0.22
ND<1.49 OK (6/12/2007 ~)	ND<1.1 OK (3/17/2007 a)	(1.49 - 1.1)/(11 - 10)	0.39

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.033
2	-0.5555

3	-0.509
4	-0.365333
5	-0.23
6	-0.213333
7	-0.189
8	-0.15625
9	-0.148
10	-0.1475
11	-0.1346
12	-0.125167
13	-0.115
14	-0.11075
15	-0.1042
16	-0.0983333
17	-0.09325
18	-0.0878333
19	-0.0864286
20	-0.078
21	-0.0773333
22	-0.042
23	-0.04
24	-0.04
25	-0.0308333
26	-0.02875
27	-0.01675
28	-0.00933333
29	-0.00833333
30	0
31	0.015
32	0.0177778
33	0.0196
34	0.0246667
35	0.0306
36	0.04875
37	0.05
38	0.0768571
39	0.09
40	0.1012
41	0.115
42	0.12275
43	0.146

44	0.147667
45	0.1965
46	0.196667
47	0.20825
48	0.22
49	0.2605
50	0.2875
51	0.303667
52	0.369
53	0.39
54	0.471
55	0.723

Sen's Estimator (Median Q) is -0.00933333

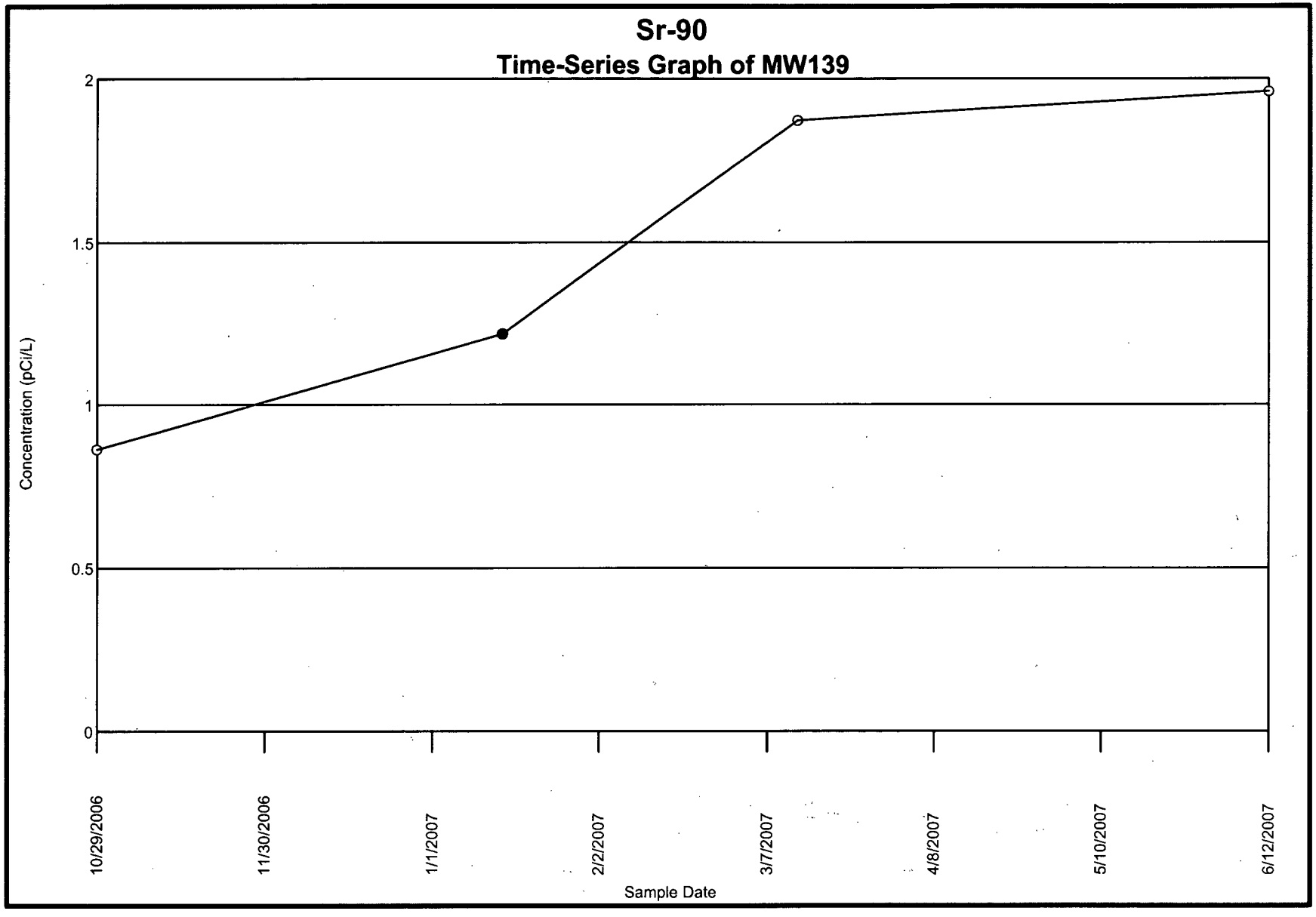
Tied Group	Value	Members
1	1.1	2

Time Period	Observations
1/13/2006	1
2/8/2006	1
3/9/2006	1
4/15/2006	1
4/19/2006	1
7/11/2006	1
10/2/2006	1
10/3/2006	1
1/14/2007	1
3/17/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 164

For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.0644
M1 = (55 - 21.0644)/2.0 = 16.9678
M2 = (55 + 21.0644)/2.0 + 1 = 39.0322
Lower limit is -0.09325 = Q(17)
Upper limit is 0.09 = Q(39)
-0.09325 < 0 < 0.09 indicating no trend in data.


Sr-90
Time-Series Graph of MW139
Concentration (pCi/L)
2
1.5
1
0.5
0
10/29/2006
11/30/2006
1/1/2007
2/2/2007
3/7/2007
4/8/2007
5/10/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW139

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1.22 OK (1/15/2007 a)	ND<0.867 OK (10/29/2006 ~)	(1.22 - 0.867)/(2 - 1)	0.353
ND<1.87 OK (3/13/2007 a)	ND<0.867 OK (10/29/2006 ~)	(1.87 - 0.867)/(3 - 1)	0.5015
ND<1.96 OK (6/12/2007 a)	ND<0.867 OK (10/29/2006 ~)	(1.96 - 0.867)/(4 - 1)	0.364333
ND<1.87 OK (3/13/2007 a)	1.22 OK (1/15/2007 a)	(1.87 - 1.22)/(3 - 2)	0.65
ND<1.96 OK (6/12/2007 a)	1.22 OK (1/15/2007 a)	(1.96 - 1.22)/(4 - 2)	0.37
ND<1.96 OK (6/12/2007 a)	ND<1.87 OK (3/13/2007 a)	(1.96 - 1.87)/(4 - 3)	0.09

Number of Q values = 6

Ordered Q Values

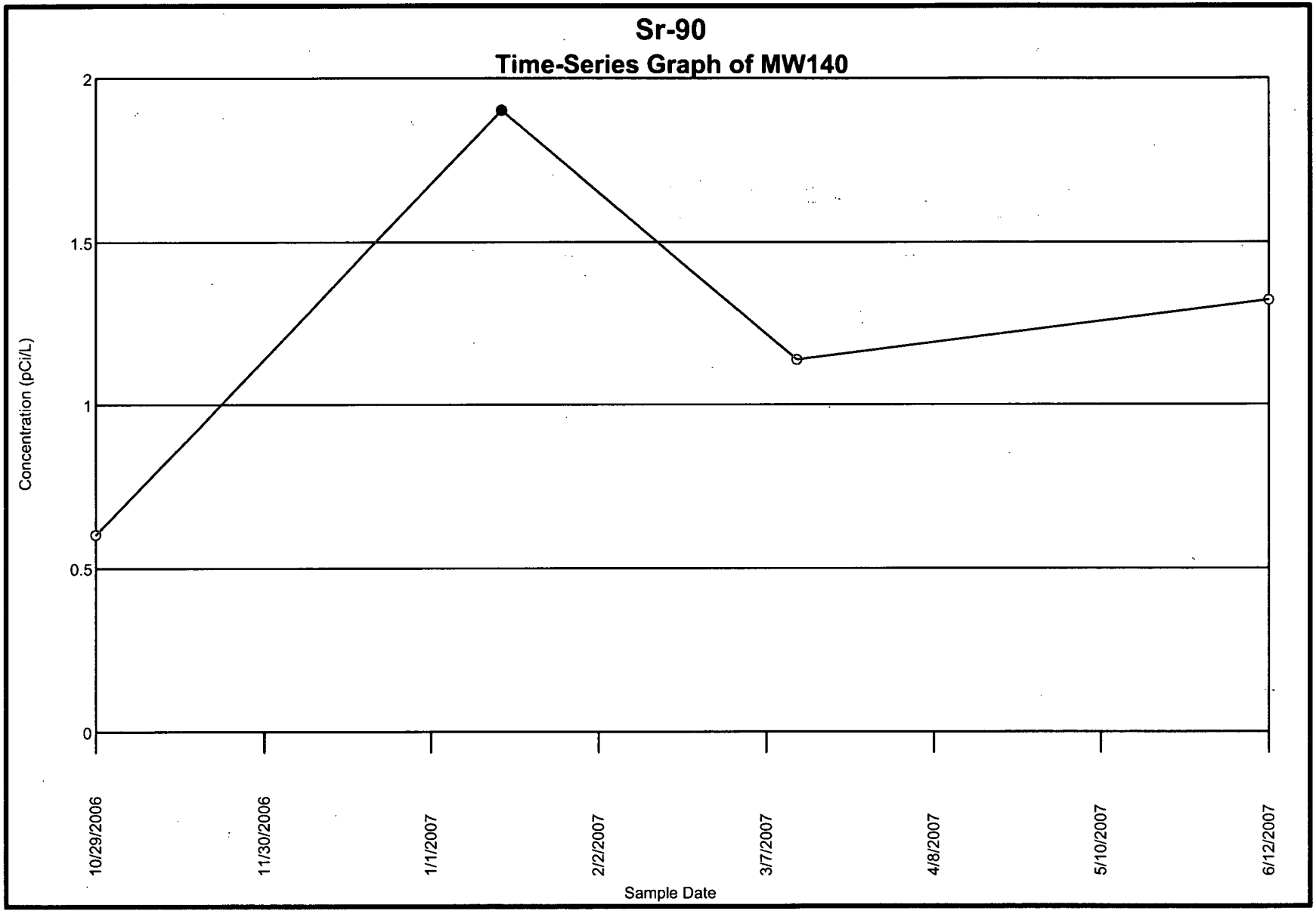
n	Q
1	0.09
2	0.353
3	0.364333
4	0.37
5	0.5015
6	0.65

Sen's Estimator (Median Q) is 0.367167

Time Period	Observations
10/29/2006	1
1/15/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 156
b = 216
c = 24
Group Variance = 8.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.84232
M1 = (6 - 4.84232)/2.0 = 0.578842
M2 = (6 + 4.84232)/2.0 + 1 = 6.42116
Lower limit is 0.09 = Q(1)
Upper limit is 0.65 = Q(6)
0.09 > 0 indicating an upward trend in data.


Sr-90
Time-Series Graph of MW140
Concentration (pCi/L)
2
1.5
1
0.5
0
10/29/2006
11/30/2006
1/1/2007
2/2/2007
3/7/2007
4/8/2007
5/10/2007
6/12/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW140

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
1.9 OK (1/15/2007 a)	ND<0.603 OK (10/29/2006 a)	(1.9 - 0.603)/(2 - 1)	1.297
ND<1.14 OK (3/13/2007 a)	ND<0.603 OK (10/29/2006 a)	(1.14 - 0.603)/(3 - 1)	0.2685
ND<1.32 OK (6/12/2007 a)	ND<0.603 OK (10/29/2006 a)	(1.32 - 0.603)/(4 - 1)	0.239
ND<1.14 OK (3/13/2007 a)	1.9 OK (1/15/2007 a)	(1.14 - 1.9)/(3 - 2)	-0.76
ND<1.32 OK (6/12/2007 a)	1.9 OK (1/15/2007 a)	(1.32 - 1.9)/(4 - 2)	-0.29
ND<1.32 OK (6/12/2007 a)	ND<1.14 OK (3/13/2007 a)	(1.32 - 1.14)/(4 - 3)	0.18

Number of Q values = 6

Ordered Q Values

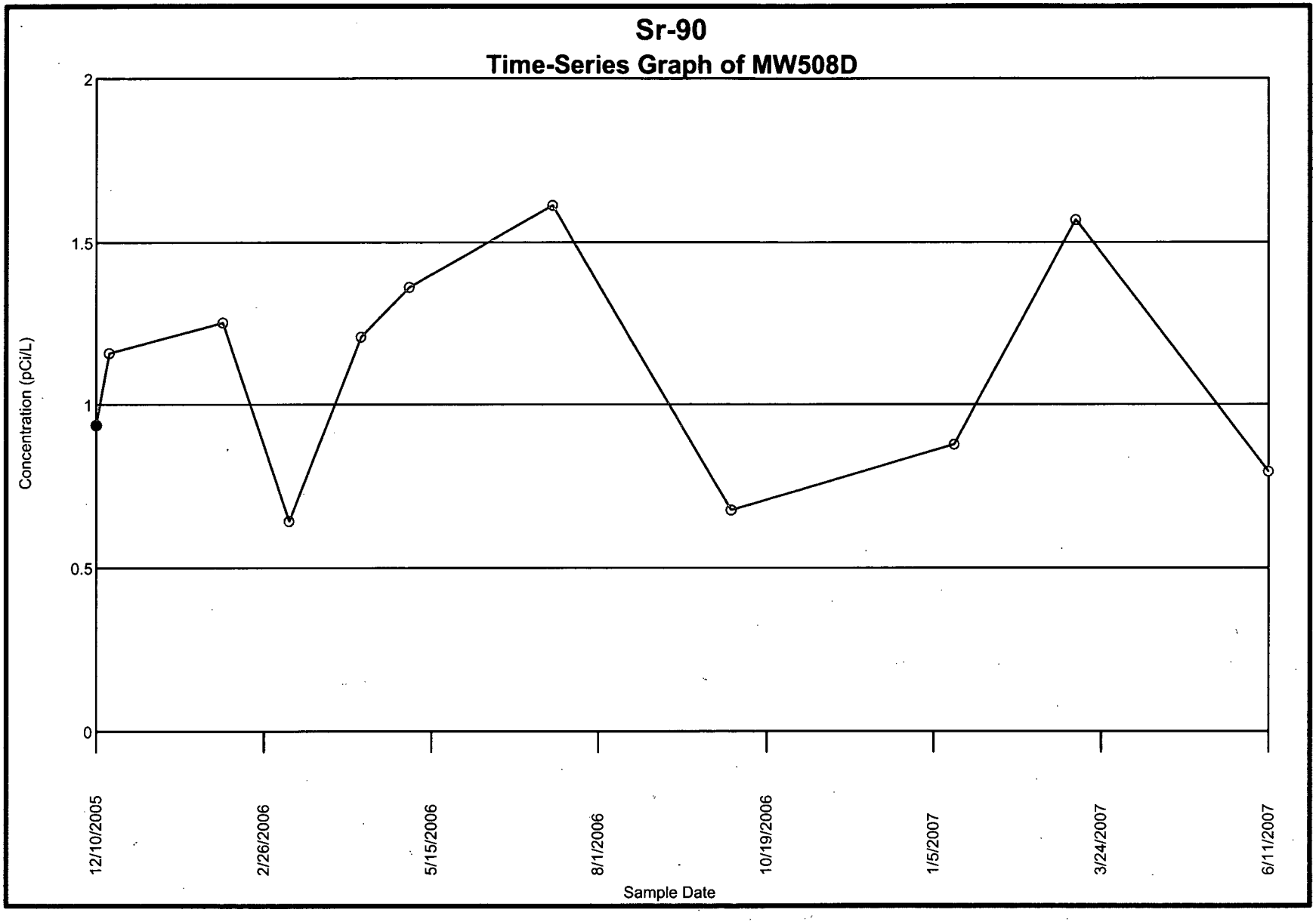
n	Q
1	-0.76
2	-0.29
3	0.18
4	0.239
5	0.2685
6	1.297

Sen's Estimator (Median Q) is 0.2095

Time Period	Observations
10/29/2006	1
1/15/2007	1
3/13/2007	1
6/12/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 156
b = 216
c = 24
Group Variance = 8.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.84232
M1 = (6 - 4.84232)/2.0 = 0.578842
M2 = (6 + 4.84232)/2.0 + 1 = 6.42116
Lower limit is -0.76 = Q(1)
Upper limit is 1.297 = Q(6)
-0.76 < 0 < 1.297 indicating no trend in data.


Sr-90
Time-Series Graph of MW508D
Concentration (pCi/L)
2
1.5
1
0.5
0
12/10/2005
2/26/2006
5/15/2006
8/1/2006
10/19/2006
1/5/2007
3/24/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW508D

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.16 U (12/16/2005 a)	0.941 U (12/10/2005 a)	(1.16 - 0.941)/(2 - 1)	0.219
ND<1.255 U (2/7/2006 ~)	0.941 U (12/10/2005 a)	(1.255 - 0.941)/(3 - 1)	0.157
ND<0.642 U (3/10/2006 a)	0.941 U (12/10/2005 a)	(0.642 - 0.941)/(4 - 1)	-0.0996667
ND<1.21 U (4/13/2006 a)	0.941 U (12/10/2005 a)	(1.21 - 0.941)/(5 - 1)	0.06725
ND<1.36 OK (5/5/2006 a)	0.941 U (12/10/2005 a)	(1.36 - 0.941)/(6 - 1)	0.0838
ND<1.61 OK (7/11/2006 a)	0.941 U (12/10/2005 a)	(1.61 - 0.941)/(7 - 1)	0.1115
ND<0.676 OK (10/3/2006 a)	0.941 U (12/10/2005 a)	(0.676 - 0.941)/(8 - 1)	-0.0378571
ND<0.88 OK (1/15/2007 a)	0.941 U (12/10/2005 a)	(0.88 - 0.941)/(9 - 1)	-0.007625
ND<1.57 OK (3/13/2007 a)	0.941 U (12/10/2005 a)	(1.57 - 0.941)/(10 - 1)	0.0698889
ND<0.795 OK (6/11/2007 a)	0.941 U (12/10/2005 a)	(0.795 - 0.941)/(11 - 1)	-0.0146
ND<1.255 U (2/7/2006 ~)	ND<1.16 U (12/16/2005 a)	(1.255 - 1.16)/(3 - 2)	0.095
ND<0.642 U (3/10/2006 a)	ND<1.16 U (12/16/2005 a)	(0.642 - 1.16)/(4 - 2)	-0.259
ND<1.21 U (4/13/2006 a)	ND<1.16 U (12/16/2005 a)	(1.21 - 1.16)/(5 - 2)	0.0166667
ND<1.36 OK (5/5/2006 a)	ND<1.16 U (12/16/2005 a)	(1.36 - 1.16)/(6 - 2)	0.05
ND<1.61 OK (7/11/2006 a)	ND<1.16 U (12/16/2005 a)	(1.61 - 1.16)/(7 - 2)	0.09
ND<0.676 OK (10/3/2006 a)	ND<1.16 U (12/16/2005 a)	(0.676 - 1.16)/(8 - 2)	-0.0806667
ND<0.88 OK (1/15/2007 a)	ND<1.16 U (12/16/2005 a)	(0.88 - 1.16)/(9 - 2)	-0.04
ND<1.57 OK (3/13/2007 a)	ND<1.16 U (12/16/2005 a)	(1.57 - 1.16)/(10 - 2)	0.05125
ND<0.795 OK (6/11/2007 a)	ND<1.16 U (12/16/2005 a)	(0.795 - 1.16)/(11 - 2)	-0.0405556
ND<0.642 U (3/10/2006 a)	ND<1.255 U (2/7/2006 ~)	(0.642 - 1.255)/(4 - 3)	-0.613
ND<1.21 U (4/13/2006 a)	ND<1.255 U (2/7/2006 ~)	(1.21 - 1.255)/(5 - 3)	-0.0225
ND<1.36 OK (5/5/2006 a)	ND<1.255 U (2/7/2006 ~)	(1.36 - 1.255)/(6 - 3)	0.035
ND<1.61 OK (7/11/2006 a)	ND<1.255 U (2/7/2006 ~)	(1.61 - 1.255)/(7 - 3)	0.08875
ND<0.676 OK (10/3/2006 a)	ND<1.255 U (2/7/2006 ~)	(0.676 - 1.255)/(8 - 3)	-0.1158
ND<0.88 OK (1/15/2007 a)	ND<1.255 U (2/7/2006 ~)	(0.88 - 1.255)/(9 - 3)	-0.0625
ND<1.57 OK (3/13/2007 a)	ND<1.255 U (2/7/2006 ~)	(1.57 - 1.255)/(10 - 3)	0.045
ND<0.795 OK (6/11/2007 a)	ND<1.255 U (2/7/2006 ~)	(0.795 - 1.255)/(11 - 3)	-0.0575
ND<1.21 U (4/13/2006 a)	ND<0.642 U (3/10/2006 a)	(1.21 - 0.642)/(5 - 4)	0.568
ND<1.36 OK (5/5/2006 a)	ND<0.642 U (3/10/2006 a)	(1.36 - 0.642)/(6 - 4)	0.359
ND<1.61 OK (7/11/2006 a)	ND<0.642 U (3/10/2006 a)	(1.61 - 0.642)/(7 - 4)	0.322667
ND<0.676 OK (10/3/2006 a)	ND<0.642 U (3/10/2006 a)	(0.676 - 0.642)/(8 - 4)	0.0085
ND<0.88 OK (1/15/2007 a)	ND<0.642 U (3/10/2006 a)	(0.88 - 0.642)/(9 - 4)	0.0476
ND<1.57 OK (3/13/2007 a)	ND<0.642 U (3/10/2006 a)	(1.57 - 0.642)/(10 - 4)	0.154667
ND<0.795 OK (6/11/2007 a)	ND<0.642 U (3/10/2006 a)	(0.795 - 0.642)/(11 - 4)	0.0218571
ND<1.36 OK (5/5/2006 a)	ND<1.21 U (4/13/2006 a)	(1.36 - 1.21)/(6 - 5)	0.15
ND<1.61 OK (7/11/2006 a)	ND<1.21 U (4/13/2006 a)	(1.61 - 1.21)/(7 - 5)	0.2
ND<0.676 OK (10/3/2006 a)	ND<1.21 U (4/13/2006 a)	(0.676 - 1.21)/(8 - 5)	-0.178
ND<0.88 OK (1/15/2007 a)	ND<1.21 U (4/13/2006 a)	(0.88 - 1.21)/(9 - 5)	-0.0825
ND<1.57 OK (3/13/2007 a)	ND<1.21 U (4/13/2006 a)	(1.57 - 1.21)/(10 - 5)	0.072
ND<0.795 OK (6/11/2007 a)	ND<1.21 U (4/13/2006 a)	(0.795 - 1.21)/(11 - 5)	-0.0691667
ND<1.61 OK (7/11/2006 a)	ND<1.36 OK (5/5/2006 a)	(1.61 - 1.36)/(7 - 6)	0.25
ND<0.676 OK (10/3/2006 a)	ND<1.36 OK (5/5/2006 a)	(0.676 - 1.36)/(8 - 6)	-0.342

ND<0.88 OK (1/15/2007 a)	ND<1.36 OK (5/5/2006 a)	(0.88 - 1.36)/(9 - 6)	-0.16
ND<1.57 OK (3/13/2007 a)	ND<1.36 OK (5/5/2006 a)	(1.57 - 1.36)/(10 - 6)	0.0525
ND<0.795 OK (6/11/2007 a)	ND<1.36 OK (5/5/2006 a)	(0.795 - 1.36)/(11 - 6)	-0.113
ND<0.676 OK (10/3/2006 a)	ND<1.61 OK (7/11/2006 a)	(0.676 - 1.61)/(8 - 7)	-0.934
ND<0.88 OK (1/15/2007 a)	ND<1.61 OK (7/11/2006 a)	(0.88 - 1.61)/(9 - 7)	-0.365
ND<1.57 OK (3/13/2007 a)	ND<1.61 OK (7/11/2006 a)	(1.57 - 1.61)/(10 - 7)	-0.0133333
ND<0.795 OK (6/11/2007 a)	ND<1.61 OK (7/11/2006 a)	(0.795 - 1.61)/(11 - 7)	-0.20375
ND<0.88 OK (1/15/2007 a)	ND<0.676 OK (10/3/2006 a)	(0.88 - 0.676)/(9 - 8)	0.204
ND<1.57 OK (3/13/2007 a)	ND<0.676 OK (10/3/2006 a)	(1.57 - 0.676)/(10 - 8)	0.447
ND<0.795 OK (6/11/2007 a)	ND<0.676 OK (10/3/2006 a)	(0.795 - 0.676)/(11 - 8)	0.0396667
ND<1.57 OK (3/13/2007 a)	ND<0.88 OK (1/15/2007 a)	(1.57 - 0.88)/(10 - 9)	0.69
ND<0.795 OK (6/11/2007 a)	ND<0.88 OK (1/15/2007 a)	(0.795 - 0.88)/(11 - 9)	-0.0425
ND<0.795 OK (6/11/2007 a)	ND<1.57 OK (3/13/2007 a)	(0.795 - 1.57)/(11 - 10)	-0.775

Number of Q values = 55

Ordered Q Values

n	Q
1	-0.934
2	-0.775
3	-0.613
4	-0.365
5	-0.342
6	-0.259
7	-0.20375
8	-0.178
9	-0.16
10	-0.1158
11	-0.113
12	-0.0996667
13	-0.0825
14	-0.0806667
15	-0.0691667
16	-0.0625
17	-0.0575
18	-0.0425
19	-0.0405556
20	-0.04
21	-0.0378571
22	-0.0225
23	-0.0146
24	-0.0133333
25	-0.007625
26	0.0085
27	0.0166667
28	0.0218571
29	0.035
30	0.0396667
31	0.045
32	0.0476
33	0.05
34	0.05125

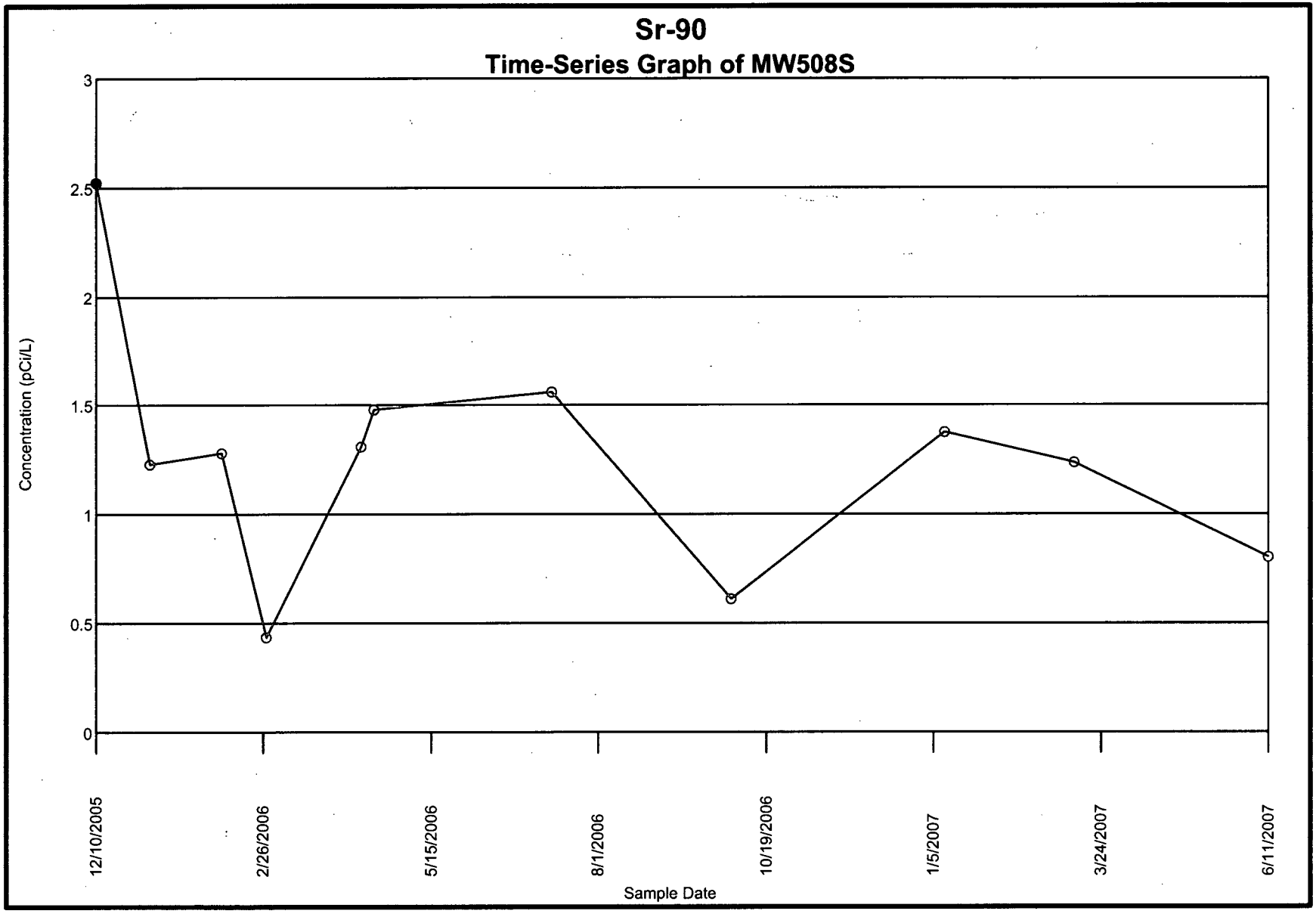
35	0.0525
36	0.06725
37	0.0698889
38	0.072
39	0.0838
40	0.08875
41	0.09
42	0.095
43	0.1115
44	0.15
45	0.154667
46	0.157
47	0.2
48	0.204
49	0.219
50	0.25
51	0.322667
52	0.359
53	0.447
54	0.568
55	0.69

Sen's Estimator (Median Q) is 0.0218571

Time Period	Observations
12/10/2005	1
12/16/2005	1
2/7/2006	1
3/10/2006	1
4/13/2006	1
5/5/2006	1
7/11/2006	1
10/3/2006	1
1/15/2007	1
3/13/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.0575 = Q(17)
Upper limit is 0.0838 = Q(39)
-0.0575 < 0 < 0.0838 indicating no trend in data.


Sr-90
Time-Series Graph of MW508S
Concentration (pCi/L)
3
2.5
2
1.5
1
0.5
0
12/10/2005
2/26/2006
5/15/2006
8/1/2006
10/19/2006
1/5/2007
3/24/2007
6/11/2007
Sample Date

Sen's Slope Analysis
Parameter: Sr-90
Location: MW508S

Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Xj	Xk	(Xj - Xk)/(j-k)	Q
ND<1.23 U (1/4/2006 a)	2.52 OK (12/10/2005 a)	(1.23 - 2.52)/(2 - 1)	-1.29
ND<1.28 U (2/7/2006 a)	2.52 OK (12/10/2005 a)	(1.28 - 2.52)/(3 - 1)	-0.62
ND<0.432 U (2/28/2006 a)	2.52 OK (12/10/2005 a)	(0.432 - 2.52)/(4 - 1)	-0.696
ND<1.31 U (4/13/2006 a)	2.52 OK (12/10/2005 a)	(1.31 - 2.52)/(5 - 1)	-0.3025
ND<1.48 OK (4/19/2006 a)	2.52 OK (12/10/2005 a)	(1.48 - 2.52)/(6 - 1)	-0.208
ND<1.56 OK (7/11/2006 a)	2.52 OK (12/10/2005 a)	(1.56 - 2.52)/(7 - 1)	-0.16
ND<0.615 OK (10/3/2006 a)	2.52 OK (12/10/2005 a)	(0.615 - 2.52)/(8 - 1)	-0.272143
ND<1.38 OK (1/11/2007 a)	2.52 OK (12/10/2005 a)	(1.38 - 2.52)/(9 - 1)	-0.1425
ND<1.24 OK (3/12/2007 a)	2.52 OK (12/10/2005 a)	(1.24 - 2.52)/(10 - 1)	-0.142222
ND<0.801 OK (6/11/2007 a)	2.52 OK (12/10/2005 a)	(0.801 - 2.52)/(11 - 1)	-0.1719
ND<1.28 U (2/7/2006 a)	ND<1.23 U (1/4/2006 a)	(1.28 - 1.23)/(3 - 2)	0.05
ND<0.432 U (2/28/2006 a)	ND<1.23 U (1/4/2006 a)	(0.432 - 1.23)/(4 - 2)	-0.399
ND<1.31 U (4/13/2006 a)	ND<1.23 U (1/4/2006 a)	(1.31 - 1.23)/(5 - 2)	0.0266667
ND<1.48 OK (4/19/2006 a)	ND<1.23 U (1/4/2006 a)	(1.48 - 1.23)/(6 - 2)	0.0625
ND<1.56 OK (7/11/2006 a)	ND<1.23 U (1/4/2006 a)	(1.56 - 1.23)/(7 - 2)	0.066
ND<0.615 OK (10/3/2006 a)	ND<1.23 U (1/4/2006 a)	(0.615 - 1.23)/(8 - 2)	-0.1025
ND<1.38 OK (1/11/2007 a)	ND<1.23 U (1/4/2006 a)	(1.38 - 1.23)/(9 - 2)	0.0214286
ND<1.24 OK (3/12/2007 a)	ND<1.23 U (1/4/2006 a)	(1.24 - 1.23)/(10 - 2)	0.00125
ND<0.801 OK (6/11/2007 a)	ND<1.23 U (1/4/2006 a)	(0.801 - 1.23)/(11 - 2)	-0.0476667
ND<0.432 U (2/28/2006 a)	ND<1.28 U (2/7/2006 a)	(0.432 - 1.28)/(4 - 3)	-0.848
ND<1.31 U (4/13/2006 a)	ND<1.28 U (2/7/2006 a)	(1.31 - 1.28)/(5 - 3)	0.015
ND<1.48 OK (4/19/2006 a)	ND<1.28 U (2/7/2006 a)	(1.48 - 1.28)/(6 - 3)	0.0666667
ND<1.56 OK (7/11/2006 a)	ND<1.28 U (2/7/2006 a)	(1.56 - 1.28)/(7 - 3)	0.07
ND<0.615 OK (10/3/2006 a)	ND<1.28 U (2/7/2006 a)	(0.615 - 1.28)/(8 - 3)	-0.133
ND<1.38 OK (1/11/2007 a)	ND<1.28 U (2/7/2006 a)	(1.38 - 1.28)/(9 - 3)	0.0166667
ND<1.24 OK (3/12/2007 a)	ND<1.28 U (2/7/2006 a)	(1.24 - 1.28)/(10 - 3)	-0.00571429
ND<0.801 OK (6/11/2007 a)	ND<1.28 U (2/7/2006 a)	(0.801 - 1.28)/(11 - 3)	-0.059875
ND<1.31 U (4/13/2006 a)	ND<0.432 U (2/28/2006 a)	(1.31 - 0.432)/(5 - 4)	0.878
ND<1.48 OK (4/19/2006 a)	ND<0.432 U (2/28/2006 a)	(1.48 - 0.432)/(6 - 4)	0.524
ND<1.56 OK (7/11/2006 a)	ND<0.432 U (2/28/2006 a)	(1.56 - 0.432)/(7 - 4)	0.376
ND<0.615 OK (10/3/2006 a)	ND<0.432 U (2/28/2006 a)	(0.615 - 0.432)/(8 - 4)	0.04575
ND<1.38 OK (1/11/2007 a)	ND<0.432 U (2/28/2006 a)	(1.38 - 0.432)/(9 - 4)	0.1896
ND<1.24 OK (3/12/2007 a)	ND<0.432 U (2/28/2006 a)	(1.24 - 0.432)/(10 - 4)	0.134667
ND<0.801 OK (6/11/2007 a)	ND<0.432 U (2/28/2006 a)	(0.801 - 0.432)/(11 - 4)	0.0527143
ND<1.48 OK (4/19/2006 a)	ND<1.31 U (4/13/2006 a)	(1.48 - 1.31)/(6 - 5)	0.17
ND<1.56 OK (7/11/2006 a)	ND<1.31 U (4/13/2006 a)	(1.56 - 1.31)/(7 - 5)	0.125
ND<0.615 OK (10/3/2006 a)	ND<1.31 U (4/13/2006 a)	(0.615 - 1.31)/(8 - 5)	-0.231667
ND<1.38 OK (1/11/2007 a)	ND<1.31 U (4/13/2006 a)	(1.38 - 1.31)/(9 - 5)	0.0175
ND<1.24 OK (3/12/2007 a)	ND<1.31 U (4/13/2006 a)	(1.24 - 1.31)/(10 - 5)	-0.014
ND<0.801 OK (6/11/2007 a)	ND<1.31 U (4/13/2006 a)	(0.801 - 1.31)/(11 - 5)	-0.0848333
ND<1.56 OK (7/11/2006 a)	ND<1.48 OK (4/19/2006 a)	(1.56 - 1.48)/(7 - 6)	0.08
ND<0.615 OK (10/3/2006 a)	ND<1.48 OK (4/19/2006 a)	(0.615 - 1.48)/(8 - 6)	-0.4325

ND<1.38 OK (1/11/2007 a)	ND<1.48 OK (4/19/2006 a)	(1.38 - 1.48)/(9 - 6)	-0.0333333
ND<1.24 OK (3/12/2007 a)	ND<1.48 OK (4/19/2006 a)	(1.24 - 1.48)/(10 - 6)	-0.06
ND<0.801 OK (6/11/2007 a)	ND<1.48 OK (4/19/2006 a)	(0.801 - 1.48)/(11 - 6)	-0.1358
ND<0.615 OK (10/3/2006 a)	ND<1.56 OK (7/11/2006 a)	(0.615 - 1.56)/(8 - 7)	-0.945
ND<1.38 OK (1/11/2007 a)	ND<1.56 OK (7/11/2006 a)	(1.38 - 1.56)/(9 - 7)	-0.09
ND<1.24 OK (3/12/2007 a)	ND<1.56 OK (7/11/2006 a)	(1.24 - 1.56)/(10 - 7)	-0.106667
ND<0.801 OK (6/11/2007 a)	ND<1.56 OK (7/11/2006 a)	(0.801 - 1.56)/(11 - 7)	-0.18975
ND<1.38 OK (1/11/2007 a)	ND<0.615 OK (10/3/2006 a)	(1.38 - 0.615)/(9 - 8)	0.765
ND<1.24 OK (3/12/2007 a)	ND<0.615 OK (10/3/2006 a)	(1.24 - 0.615)/(10 - 8)	0.3125
ND<0.801 OK (6/11/2007 a)	ND<0.615 OK (10/3/2006 a)	(0.801 - 0.615)/(11 - 8)	0.062
ND<1.24 OK (3/12/2007 a)	ND<1.38 OK (1/11/2007 a)	(1.24 - 1.38)/(10 - 9)	-0.14
ND<0.801 OK (6/11/2007 a)	ND<1.38 OK (1/11/2007 a)	(0.801 - 1.38)/(11 - 9)	-0.2895
ND<0.801 OK (6/11/2007 a)	ND<1.24 OK (3/12/2007 a)	(0.801 - 1.24)/(11 - 10)	-0.439

Number of Q values = 55

Ordered Q Values

n	Q
1	-1.29
2	-0.945
3	-0.848
4	-0.696
5	-0.62
6	-0.439
7	-0.4325
8	-0.399
9	-0.3025
10	-0.2895
11	-0.272143
12	-0.231667
13	-0.208
14	-0.18975
15	-0.1719
16	-0.16
17	-0.1425
18	-0.142222
19	-0.14
20	-0.1358
21	-0.133
22	-0.106667
23	-0.1025
24	-0.09
25	-0.0848333
26	-0.06
27	-0.059875
28	-0.0476667
29	-0.0333333
30	-0.014
31	-0.00571429
32	0.00125
33	0.015
34	0.0166667

35	0.0175
36	0.0214286
37	0.0266667
38	0.04575
39	0.05
40	0.0527143
41	0.062
42	0.0625
43	0.066
44	0.0666667
45	0.07
46	0.08
47	0.125
48	0.134667
49	0.17
50	0.1896
51	0.3125
52	0.376
53	0.524
54	0.765
55	0.878

Sen's Estimator (Median Q) is -0.0476667

Time Period	Observations
12/10/2005	1
1/4/2006	1
2/7/2006	1
2/28/2006	1
4/13/2006	1
4/19/2006	1
7/11/2006	1
10/3/2006	1
1/11/2007	1
3/12/2007	1
6/11/2007	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 2970
b = 8910
c = 220
Group Variance = 165
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.1285
M1 = (55 - 21.1285)/2.0 = 16.9357
M2 = (55 + 21.1285)/2.0 + 1 = 39.0643
Lower limit is -0.1425 = Q(17)
Upper limit is 0.05 = Q(39)
-0.1425 < 0 < 0.05 indicating no trend in data.