REPORT

2013 SUMMARY REPORT ON GROUNDWATER CONDITIONS AT THE MONSANTO SODA SPRINGS PLANT

Soda Springs, Idaho

Submitted To: Monsanto Soda Springs Plant
Highway 34
Soda Springs, Idaho 83276

Submitted By: Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA

Distribution:

3 Copies	Monsanto, Soda Springs, Idaho
1 Copy	EPA Region X, Richland, Washington
1 Copy	IDEQ-Pocatello, Idaho
1 Copy	IDEQ – Boise, Idaho
2 Copies	Golder Associates Inc., Redmond, Washington

March 18, 2014 **913-1101-002.002.2I**

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

Table of Contents

1.0 INTRODUCTION 1
1.1 Report Organization 2
2.0 SAMPLE COLLECTION AND ANALYTICAL ACTIVITIES 4
3.0 2013 SAMPLING RESULTS 5
3.1 Groundwater Elevations and Flow Directions 5
3.2 Analytical Results 5
3.3 Constituent Concentrations in Point of Compliance Locations 6
3.4 Constituent Concentration Trends in Other Wells and Springs 7
3.4.1 Wells in the Plant 7
3.4.2 Wells South of the Plant 7
3.4.3 Wells in Soda Springs 7
3.4.4 Springs and Surface Water 8
4.0 OVERALL ASSESSMENT SUMMARY 9
4.1 Remediation Goals 9
4.2 Assessment of 2013 Water Quality Data 9
4.2.1 Upper Basalt Zone-4 10
4.2.2 Upper Basalt Zone-1 10
4.2.3 Upper Basalt Zone-2 11
4.3 Soda Creek 13
5.0 CLOSING 14
6.0 BIBLIOGRAPHY 15

List of Tables

Table 1 Well Completion Summary
Table 2 History of Groundwater Investigations at Monsanto Plant
Table 3 Groundwater Remediation Goals for the Monsanto Plant (in text)
Table 4 Sample Collection Summary June 2013
Table 5 Analytical Methods for Monsanto Groundwater Sampling
Table 6 Groundwater Elevations June 2013
Table 7 Field Water Quality June 2013
Table 8a Analytical Results for Wells June 2013 Sample Round
Table 8b Analytical Results for Springs, Surface Water, and Non-Contact Cooling Water June 2013 Sample Round
Table 9 June 2013 Results Compared to Remediation Goals
Table 10 June 2013 Measured Spring Discharge and Streamflows
Table 11 Short-Term Constituent Concentration Trends at Point of Compliance Wells and Soda Creek
Table 12 Short-Term Constituent Concentration Trends at Other Wells and Springs
Table 13 June 2013 UBZ-4 Results Compared to 1993 to 2013 Results
Table 14 June 2013 UBZ-1 Results Compared to 1993 to 2013 Results
Table 15 June 2013 UBZ-2 Results Compared to 1993 to 2013 Results

List of Figures

Figure 1 Monsanto Plant Vicinity Map
Figure 2 Location of Springs and Wells in the Upper Basalt Zone
Figure 3 Location of Wells in the Lower Basalt Zone
Figure 4 Monsanto Facility Map
Figure 5 Location of Wells in Soda Springs and Soda Creek and Spring Sample Locations
Figure 6 Groundwater Elevation in the Upper Basalt Zone (June 2013)
Figure 7 Groundwater Elevation in the Lower Basalt Zone (June 2013)
Figure 8 Cadmium Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 9 Cadmium Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 10 Fluoride Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 11 Fluoride Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 12 Manganese Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 13 Manganese Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 14 Nitrate Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 15 Nitrate Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 16 Selenium Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 17 Selenium Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 18 Chloride Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 19 Chloride Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 20 Molybdenum Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 21 Molybdenum Concentrations in Groundwater and Surface Water June 2013 – South Sheet
Figure 22 Sulfate Concentrations in Groundwater and Surface Water June 2013 – North Sheet
Figure 23 Sulfate Concentrations in Groundwater and Surface Water June 2013 – South Sheet

List of Appendices

Appendix A	Time-History Graphs for Cadmium
Appendix B	Time-History Graphs for Fluoride
Appendix C	Time-History Graphs for Manganese
Appendix D	Time-History Graphs for Nitrate as N
Appendix E	Time-History Graphs for Selenium
Appendix F	Time-History Graphs for Chloride
Appendix G	Time-History Graphs for Molybdenum
Appendix H	Time-History Graphs for Sulfate
Appendix I	Groundwater Elevation Hydrographs
Appendix J	Data Validation Summary for 2013 Water Sampling, Monsanto Soda Springs Plant
Appendix K	Surface Water Sampling Locations

ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order on Consent
ARI	Analytical Resources Inc.
bgs	below ground surface
cfs	cubic feet per second
EPA	United States Environmental Protection Agency
Golder	Golder Associates Inc.
gpm	gallons per minute
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Department of Environmental Quality
LBZ	Lower Basalt Zone
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
N	Nitrogen
NO_3	Nitrate
NPDES	National Pollution Discharge Elimination System
NTU	Nephelometric Turbidity Units
ORP	oxidation reduction potential
Plant	Monsanto Soda Springs Plant
QA/QC	quality assurance/quality control
RG	Remediation Goal
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SVL	SVL Analytical Inc.
UBZ	Upper Basalt Zone
UFS	Underflow Solids

1.0 INTRODUCTION

This report presents the results of groundwater and surface water sampling completed at the Monsanto Soda Springs Plant (Plant) in June 2013. The Plant is located approximately one mile north of the City of Soda Springs, Caribou County, Idaho (Figure 1). The site covers an area of approximately 800 acres, with the Plant accounting for 540 acres. Wells and springs at and in the vicinity of the Plant are shown on Figures 2 and 3 for the Upper Basalt Zone (UBZ) and Lower Basalt Zone (LBZ), respectively. Operational facilities are shown on Figure 4. Well completion information is summarized in Table 1 for the monitoring wells and Plant production wells at and in the vicinity of the Plant.

This summary report is based on the groundwater and surface water quality data collected during sampling conducted from June 1 through June 9, 2013. The sampling program included the entire set of wells and springs monitored as part of the annual sampling with the exception of TW-63 and TW-64 which were not sampled because the water level dropped below the base of the permanent sampling pumps, and Calf Spring, which was dry. In addition, two monitoring wells and two irrigation or industrial wells in the City of Soda Springs, and a spring–fed pond near the southeast corner of Monsanto's property, were sampled in 2013 (Golder 2013a).

Table 2 presents a history of groundwater investigations at the Monsanto site. There are three constituent plumes on the site originating from Monsanto operations. Affected groundwater originates from three principal source areas within the Monsanto Plant (Figure 4):

- Old Underflow Solids (UFS) Ponds (UBZ-2 and UBZ-4)
- Northwest Pond (UBZ-4)
- Old Hydroclarifier (UBZ-4)

These former source areas were closed and capped in the 1980s (Golder 1995, 2013b).

The Record of Decision (ROD) established groundwater remediation goals for the constituents of concern: cadmium, fluoride, nitrate, selenium, and manganese. The remediation goals are the Maximum Contaminant Levels (MCLs) under the Safe Drinking Water Act for cadmium, fluoride, nitrate, and selenium, and a risk-based concentration for manganese, as shown in Table 3.

Table 3: Groundwater Remediation Goals for the Monsanto Plant

Parameter	Remediation Goal (mg/L)	Regulatory Source
Cadmium	0.005	Maximum Contaminant Level
Fluoride	4	Maximum Contaminant Level
Nitrate as NO_3/ Nitrate as N	44 /10	Maximum Contaminant Level

Parameter	Remediation Goal (mg/L)	Regulatory Source
Selenium	0.05	Maximum Contaminant Level
Manganese	0.18	Risk-Based Concentration

Notes: mg/L = milligrams per liter

The remediation goal for nitrate (44 mg/L) is the MCL for nitrate expressed as nitrate (NO_3). However, the analytical data presented in this report are in the form of nitrate as expressed as nitrogen (N). The equivalent remediation goal for nitrate as N is 10 mg/L.

There were no surface water remediation goals established under the ROD. For some parameters, surface water quality standards are different than the remediation goals (Idaho Administrative Procedures Act [IDAPA 2010] 58.01.02.210).

Based on the ROD and modifications to the ROD, the point of compliance locations are listed below and shown on Figure 2:

- Production Wells - Wells PW-01, PW-02, and PW-03
- Plant Fence Line – Monitoring Wells TW-20, TW-34, TW-35, and TW-39
- Southern Boundary – Monitoring Wells TW-53, TW-54, TW-55, and Harris Well
- Soda Creek (surface water) – Stations SC-1 (Soda Up) and SC-4 (Soda Down)

Mormon A Spring was identified as an alternate point of compliance for the Harris Well because the Harris Well may be completed within the transition zone between the UBZ and the LBZ. Thus, some of the constituents observed in sodic groundwater in LBZ-1 may occur in this well (Golder 2001).

Several sample locations have been established to monitor and evaluate discharges to surface water (Soda Creek), and effects of discharges on surface water quality. These sample locations are not point of compliance locations, but are used to evaluate water quality in Soda Creek. The sample locations for surface water quality are shown on Figure 5. Photographs of the sample locations are included in Appendix K.

All surface water and spring water quality samples collected in 2010 and prior years were unfiltered. Surface water and spring water quality samples collected starting in 2011 include a collection of filtered and unfiltered samples for metals analysis in accordance with the groundwater and surface water sampling work plan (Golder 2012a).

1.1 Report Organization

Sample collection activities carried out in June 2013 are summarized in Section 2.0. The results of the 2013 sampling are summarized in Section 3.0, including groundwater flow directions and significant

changes in concentrations or concentration trends. Section 4.0 presents a summary of the water quality data and chemical isopleth maps for 2013 concentrations of selected constituents.

Section 5.0 provides contact information in case there are any questions or need for additional information.

Section 6.0 provides a list of references used to compile this report.

Appendices A through I present time-history graphs for selected constituents and groundwater elevation hydrographs. Appendix J presents the data validation report for the analytical data from the 2013 sampling round. Photographs of surface water sampling locations are included in Appendix K.

2.0 SAMPLE COLLECTION AND ANALYTICAL ACTIVITIES

In June 2013, Golder Associates Inc. (Golder) collected site-wide groundwater level measurements and water quality samples per the annual sample collection requirements of the ROD. Sample collection occurred from June 1 to 9, 2013. Water quality samples were collected from 57 wells, 10 springs, and 14 surface water and non-contact cooling water locations during this period, as listed in Table 4. The 10 spring locations are to the south of the Plant. Calf Spring was not sampled in 2013 because the spring, which typically has very low flow (on the order of 1 to 2 gallons per minute [gpm]), was dry. The 14 surface water locations include the non-contact cooling water discharge pipe at Soda Creek; the inlet to the non-contact cooling water pond (Pond Inlet); and several stations along Soda Creek upstream and downstream of the Mormon Creek confluence (Figure 5). In 2013, samples could not be collected from monitoring wells TW-63 and TW-64 because the groundwater level in the wells dropped below the pump intake depths.

Groundwater elevations were measured at all accessible monitoring wells during this period.

Quality control samples were collected throughout the sampling event, and include the following:

- Duplicate Samples – Field duplicate samples were collected at seven locations, representing at least 5% of all monitoring samples collected.
- Equipment Blank Samples – Equipment blank samples were collected from distilled water poured over or pumped through decontaminated non-dedicated sampling equipment. An equipment blank sample was collected from the temporary Grundfos pump in 2013.
- A field blank was collected by pouring the distilled water used for decontamination directly into sample bottles.
- Split Samples – Split samples were collected at six monitoring well locations, representing at least 5% of all monitoring samples collected. These samples were shipped to an alternate laboratory for the same analyses as the other samples.

Groundwater, surface water, and spring samples were collected using the procedures described in in the Groundwater and Surface Water Sampling Work Plan (Golder 2012a, 2013a). All water samples were collected and analyzed for constituents listed in Table 5, per the requirements of the Sampling Plan and Quality Assurance Plan for the project (Golder 2012a).

The samples collected in June 2013 were shipped to the primary laboratory, SVL Analytical (SVL), in Kellogg, Idaho for the analyses listed in Table 5. In addition, split samples were shipped to Analytical Resources Inc. (ARI) in Seattle, Washington. Data validation was conducted on the data received from the laboratories to review and evaluate the procedures and methods used by the laboratories. Data validation evaluates the quality and quantity of the data received from the laboratories, and provides qualification of data that are outside of prescribed limitations (Appendix J).

3.0 2013 SAMPLING RESULTS

3.1 Groundwater Elevations and Flow Directions

The depth-to-groundwater measurements collected during the June 2013 sampling round were converted to groundwater elevations based on surveyed measurement point information. The groundwater elevations are presented in Table 6. Table 6 also summarizes flows measured at each spring. Figures 6 and 7 provide groundwater contour maps showing the interpreted directions of groundwater flow underlying the Plant for the UBZ and the LBZ, respectively, in June 2013. Groundwater elevation hydrographs are included in Appendix I.

The groundwater flow patterns in the UBZ and LBZ observed during June 2013 are generally to the south, similar to the groundwater flow patterns previously documented in annual and five-year review reports, with slight variations in groundwater elevations (and spring discharge) because of annual differences in precipitation and snowmelt patterns.

3.2 Analytical Results

This section describes the analytical results from the 2013 sampling, particularly significant changes in concentrations or concentration trends in comparison with previous years.

Field water quality parameters measured at the end of purging (for wells) or immediately prior to sampling (for surface water and spring samples) are summarized in Table 7. The results of the laboratory analyses at the 2013 sample locations are presented in Table 8a for groundwater and Table 8b for surface water, springs, and non-contact cooling water. Time-history charts for the sampled wells and springs are presented in Appendices A through H.

Concentrations for the constituents of concern and chloride, molybdenum, and sulfate at all groundwater, spring, and surface water sampling locations are shown on Figures 8 through 23:

- Cadmium is shown on Figures 8 (north sheet) and 9 (south sheet).
- Fluoride is shown on Figures 10 (north sheet) and 11 (south sheet).
- Manganese is shown on Figures 12 (north sheet) and 13 (south sheet).
- Nitrate is shown on Figures 14 (north sheet) and 15 (south sheet).
- Selenium is shown on Figures 16 (north sheet) and 17 (south sheet).
- Chloride is shown on Figures 18 (north sheet) and 19 (south sheet).
- Molybdenum is shown on Figures 20 (north sheet) and 21 (south sheet).
- Sulfate is shown on Figures 22 (north sheet) and 23 (south sheet).

Validation of the 2013 data is presented in Appendix J. Selected data were qualified as estimated ("J" or "UJ" qualifier. The data were generally qualified based on the results of laboratory quality control procedures or comparison of duplicate or split samples. Data for anions (fluoride, nitrate, chloride, and sulfate) collected from surface water monitoring stations were qualified as "J" (estimated) because the cooler temperatures were outside of 4 +/- 2 degrees Celsius (C) upon receipt at the laboratory. The cooler temperatures were about 7 to 8 degrees C upon receipt. The data qualifications do not affect the usability of the data.

3.3 Constituent Concentrations in Point of Compliance Locations

This section summarizes the results for the point of compliance locations. Table 9 summarizes the analytical results for the point of compliance locations and compares the 2013 results with the remediation goal for each constituent.

The remediation goal was met for cadmium at all point of compliance locations with the exception of:

- PW-01
- PW-02
- Mormon A Spring
- TW-39

The remediation goal for fluoride was met at all point of compliance locations with the exception of TW-39. The remediation goal for manganese was met at all point of compliance locations. The remediation goal for nitrate was met at all point of compliance locations with the exception of TW-54.

Selenium concentrations exceeded the remediation goal at the following locations:

- Harris Well
- Mormon A Spring
- TW-20
- TW-39
- TW-53
- TW-54

Selenium met the remediation goal at the Soda Creek compliance locations (SC-1 and SC-4), but exceeded the Idaho aquatic life chronic criteria for selenium at the Soda Down (SC-4) station.

Concentrations of the constituents of concern (and chloride, molybdenum, and sulfate) and constituent concentration trends are similar to those observed in 2012 (Golder 2013c).

3.4 Constituent Concentration Trends in Other Wells and Springs

Water quality monitoring at is conducted at several locations in the Plant site and at locations south of the Plant that are not point of compliance locations (Figures 2 and 5). This section also discusses concentrations in the four wells sampled in the City of Soda Springs for the first time in 2013 (Independent, Maughn, Tigert East, and Tigert South) and in Little Spring Pond, located about 380 feet southeast of the southeast corner of Monsanto property (Figure 5). Little Spring Pond is fed by discharge from several springs in the Kelly Park area.

The June 2013 groundwater concentrations for non-point of compliance wells, surface water, and springs are summarized in Table 8a (groundwater) and Table 8b (surface water and springs). Appendices A through H contain chemical hydrographs for the constituents of concern, and chloride, molybdenum, and sulfate for all sampling locations with the exception of the wells in Soda Springs sampled for the first time in 2013.

3.4.1 Wells in the Plant

The 2013 constituent concentration and concentration trends in the wells inside the Plant fenceline are generally similar to those observed in 2012. The 2013 sulfate concentration in TW-18 (Table 8a and Appendix H - Figure H-10) of 429 mg/L appears to be anomalous; the historic concentrations in TW-18 are all less than 100 mg/L.

3.4.2 Wells South of the Plant

The 2013 constituent concentration and concentration trends in the wells south of the Plant are generally similar to those observed in 2012. The 2013 sampling round confirmed constituent concentrations in the monitoring wells drilled in 2011 (TW-63 through TW-70, inclusive). Wells TW-63 and TW-64 could not be sampled because the groundwater level at each well was below the pump intake.

3.4.3 Wells in Soda Springs

Four wells were sampled in the City of Soda Springs in 2013. The sampled wells shown on Figure 5 and are:

- The Independent Drilling shop well
- The Maughn well
- Two wells at the Tigert Middle School – Tigert East and Tigert South

The Maughn and Independent Drilling wells are completed in basalt, likely the UBZ. The Independent Drilling well is 98 feet deep and completed with 6-inch diameter perforated casing between 60 and 80 feet below ground. The Maughn well is 60 feet deep and completed with 6-inch diameter perforated casing from 29 to 39 feet below ground, and completed as an open hole from 39 to 60 feet below ground. The

Tigert East and South wells are monitoring wells completed with 2-inch diameter PVC wells with screens between 10 and 20 feet (Tigert East) and 13 to 23 feet (Tigert West). The two Tigert Middle School wells are completed in both basalt and overlying unconsolidated sediments.

None of the wells are used for domestic drinking supply. The two wells at the Tigert Middle School are monitoring wells. The Independent Drilling shop well is used for clean-up and filling tanks for drilling water. The Maughn well is used for irrigation. The office at the Independent Drilling shop and the Maughn residence are both connected to the City of Soda Springs municipal supply. Neither well is connected to the water system in the office or residence.

Cadmium was not detected in any of the wells (concentration less than 0.0007 mg/L). Fluoride was detected at low concentrations (less than 1 mg/L). Manganese was not detected (less than 0.0014 mg/L) in the Independent Well and detected at less than 0.01 mg/L in the Maughn well. Manganese was detected at 0.872 and 1.79 mg/L in the two wells at the Tigert Middle School, however, the purged water was turbid which likely affected the manganese concentrations. Nitrate was detected in all wells except the Tigert South well at concentrations of 0.5 to 4.88 mg/L. Selenium was either not detected (less than 0.00026 mg/L) in the Tigert South well or detected at concentrations of 0.0004 to 0.0021 mg/L (Table 8a).

3.4.4 Springs and Surface Water

Spring and surface water sampling locations south of the Plant are shown on Figures 2 and 5. Constituent concentrations in springs and surface water are shown on Figures 8 through 23, inclusive. Calf Spring was dry and thus was not sampled in 2013. Calf Spring typically flows at a low rate of about 1 to 2 gpm. Flows from other springs and in Soda Creek in 2013 were lower than in 2012 (Table 10).

Selenium concentrations in surface water are below the Idaho aquatic standard of 0.005 mg/L with the exception of stations SC-3, SC-4, SC-6, and SC-7 which are all located between the power diversion weir and the power return. Downstream of the power return, selenium concentrations are less than 0.005 mg/L and below the aquatic life chronic standard (Figure 17).

Two samples were collected from Little Spring Pond (Figure 5). Concentrations of the constituents of concern were either not detected (cadmium less than 0.0007 mg/L and manganese less than 0.0014 mg/L) or detected at concentrations well below the remediation goals (fluoride [0.31 to 0.32 mg/L], nitrate [0.28 to 0.441 mg/L], and selenium [0.00096 to 0.001 mg/L]; Table 8b).

4.0 OVERALL ASSESSMENT SUMMARY

This section summarizes the remediation goals at the Monsanto Plant site and trends in constituent concentrations.

4.1 Remediation Goals

The following is a summary of the remediation goals for the point of compliance locations (wells and surface water) located at the southern boundary or south of the Monsanto Plant. Table 9 provides a summary of the results from all point of compliance locations in June 2013 compared to corresponding remediation goals.

- Cadmium is below the remediation goal of 0.005 mg/L in the point of compliance locations in 2013 except in PW-01, PW-02, and TW-39. Cadmium is also above the remediation goal at Mormon A Spring.
- Fluoride is below the remediation goal of 4 mg/L in all point of compliance locations in 2013 with the exception of TW-39.
- Manganese is at or below the remediation goal of 0.18 mg/L in all point of compliance locations in 2013.
- Nitrate as N is below the remediation goal of 10 mg/L in all point of compliance locations in 2013 with the exception of TW-54.
- Selenium is below the remediation goal of 0.05 mg/L in 2013 in point of compliance wells PW-01, PW-02, PW-03, PW-04, TW-34, TW-35, TW-55, and in Soda Creek upstream (station SC-1) and downstream (station SC-4) of the non-contact cooling water discharge. In 2013, selenium exceeds the remediation goal of 0.05 mg/L in point of compliance wells TW-20, TW-39, TW-53, TW-54, and in the Harris Well. The selenium concentration in Mormon A Spring is also above the remediation goal.

Short-term (2009 through 2013, inclusive) constituent concentration trends at point of compliance locations are summarized in Table 11. Constituent concentration trends in the point of compliance locations are similar to the concentrations trends reported in Golder (2013c).

4.2 Assessment of 2013 Water Quality Data

Short-term constituent concentration trends in non-point of compliance locations are summarized in Table 12. Constituent concentration trends in the non-point of compliance locations are similar to the concentrations trends reported in Golder (2013c). Figures 8 through 17, inclusive, show concentrations of the constituents of concern in the UBZ, springs, and surface water in June 2013. Figures 18 through 23, inclusive, show concentrations of chloride, molybdenum, and sulfate in the UBZ, springs, and surface water in 2013. The chemical concentrations shown on the isopleth maps include the concentrations in wells completed in the UBZ $\gamma 3$, $\gamma 4$, and $\gamma 5$ interflow zones for reference. In some cases, there are two wells completed in different interflow zones at the same location, and the concentrations are shown for both wells. The isopleth maps therefore show the overall distribution of the constituents in the UBZ regardless of interflow zone, but are generally contoured to reflect the highest concentrations, which for

most constituents and most locations are in the uppermost water bearing interflow zone. Thus, in some locations where nested wells are completed in several UBZ interflow zones, the contours honor the concentration in the uppermost water bearing zone (unless concentrations are affected by upwelling of sodic groundwater, such as areas of UBZ-1 where elevated manganese concentrations are observed).

4.2.1 Upper Basalt Zone-4

Concentrations in the UBZ-4 source areas (Old Hydroclarifier and Northwest Pond) are generally decreasing (Table 12). Thus, concentrations in downgradient wells are expected to continue to decrease with time, consistent with natural attenuation.

Table 13 summarizes the decrease from historic maximum concentrations to 2013 in the UBZ-4 source areas (Northwest Pond, UFS Piles, and Old Hydroclarifier) and downgradient wells (Plant Production wells). For most locations and constituents, the 2013 concentrations are lower than the historic high concentrations.

Chemical isopleth maps for the constituents of concern, and for chloride, molybdenum, and sulfate in June 2013 are shown on Figures 8 through 23, inclusive. The isopleth maps were developed based on the source locations, observed constituent concentrations, and interpreted groundwater flow directions in June 2013, including the cone of depression created by the pumping of the Plant Production Wells and the interpretation of the Monsanto Fault as a groundwater flow barrier in the Plant area (Golder 1995).

The chemical isopleth maps indicate the extent of groundwater with constituents of concern concentrations above the remediation goals in UBZ-4 is between the Northwest Pond and Old Hydroclarifier source areas and production well PW-03. Affected groundwater in UBZ-4 is contained by pumping of the Plant production wells and has not migrated outside of the Plant boundaries. The 2013 isopleths in UBZ-4 are similar to the 2002 and 2007 isopleths presented in the Second Five-Year Review Report (Golder 2008a) and indicate the plumes are stable or have decreased slightly and are being contained by pumping from PW-01, PW-02, and PW-03.

4.2.2 Upper Basalt Zone-1

The water quality data from UBZ-1 wells TW-10 and TW-69, and from Southwest Spring west of the Plant (UBZ-1) suggests that there is some groundwater flow across the Subsidiary Fault from the UBZ-2 source area (the Old Underflow Solids Pond) to UBZ-1. This is suggested by elevated concentrations of selected constituents of concern in TW-69 in 2013, such as cadmium (0.135 mg/L), fluoride (3.68 mg/L), and selenium (0.16 mg/L). In comparison, cadmium was not detected in TW-68 (less than 0.0007 mg/L), selenium was not detected (less than 0.00026 mg/L), and fluoride was detected at 0.18 mg/L; less than the concentration in UBZ-2 background well TW-57 (0.47 mg/L). Additional sampling is required to confirm concentration trends in TW-68 and TW-69.

Table 14 summarizes the decrease from historic maximum concentrations to 2013 in the UBZ-1 wells and springs. For most locations and constituents, the 2013 concentrations are lower than the historic high concentrations.

Chemical isopleth maps for the constituents of concern, and for chloride, molybdenum, and sulfate in June 2013 are shown on Figures 8 through 23, inclusive. Figures 8 and 9 show cadmium concentrations in the UBZ. Cadmium concentrations above the remediation goal extend from the Old Underflow Solids Pond southwest across the Subsidiary Fault to TW-69, but do not extend to Southwest Spring or TW-10. Figure 10 indicates fluoride above the remediation goal likely extends from the Old Underflow Solids Ponds southwest of the Subsidiary Fault, but does not extend to TW-69, Southwest Spring, or TW-10. However, fluoride concentrations in these wells are elevated (about 1 to 3 mg/L) compared to background wells, such as TW-57. Similarly, elevated fluoride concentrations occur in TW-63 and in TW-64 (Figure 11; about 1 mg/L).

Figures 14 and 15 show nitrate concentrations in June 2013. Nitrate is below the remediation goal in UBZ-1 with the exception of an area west of Government Dam Road between Homestead Spring and Mormon C Spring where nitrate exceeds the remediation goal. This includes shallow monitoring wells TW-63 and TW-64 (based on 2012 concentrations). Elevated nitrate concentrations in this area appear to be the result of agricultural activities in the fields west of Government Dam Road.

Figures 16 and 17 indicate that groundwater with selenium concentrations above the remediation goal in UBZ-1 extends to the south Plant Fence Line (Well TW-10). Groundwater with selenium concentrations above the remediation goal also extends southwest of the Subsidiary Fault to TW-69, but does not extend to Southwest Spring, where selenium concentrations are about 0.02 mg/L. South of Hooper Road in UBZ-1, groundwater with selenium above the remediation goal discharges to Mormon A, B, and C Springs, Calf Spring, and to Mormon Creek (Figures 16 and 17). Shallow groundwater in TW-63 and TW-64 is above the remediation goal for selenium (2012 data). Selenium is transported conservatively and not attenuated.

4.2.3 Upper Basalt Zone-2

The primary UBZ-2 source area (Old Underflow Solids Pond) was closed and capped in the 1980s, along with minor source areas, such as the old coke and quartzite ponds and the unlined non-contact cooling water ponds. The concentrations of the constituents of concern are generally decreasing or stable in the source areas and at the point of compliance locations, consistent with natural attenuation. Selenium and nitrate are not attenuated and are transported conservatively.

Concentrations in the UBZ-2 source area (Old Underflow Solids Ponds) are generally decreasing. Thus, concentrations in downgradient wells are expected to decrease in the future, consistent with natural

attenuation. There may be some short-term concentration increases in the source area as a result of increased infiltration of precipitation during periods of above-average precipitation.

Table 15 summarizes the decrease from historic maximum concentrations to 2013 in the UBZ-2 wells. For most locations and constituents, the 2013 concentrations are lower than the historic high concentrations.

Chemical isopleth maps for the constituents of concern, and for chloride, molybdenum, and sulfate in June 2013 are shown on Figures 8 through 23, inclusive. Figure 8 indicates that groundwater with cadmium concentrations above the remediation goal in UBZ-2 extends to the Plant Fence Line (TW-39), but does not extend to the Southern Boundary Wells, similar to the 2007 isopleth map presented in the Second Five Year Review Report (Golder 2008a), and a slight decrease in area from the 2002 isopleth map, when cadmium concentrations above the remediation goal extended to the Southern Boundary Wells (TW-54).

The extent of groundwater with selenium above the remediation goal in 2013 is similar to 2012 (Golder 2013c) but increased in comparison to 2007 (Golder 2007b, 2008b). The extent of groundwater with selenium concentrations above the remediation goal in 2013 (Figures 16 and 17) in UBZ-2 extends south of the South Plant Fence Line, beyond the Southern Boundary wells to monitoring wells TW-62 and TW-59, and south to the Monsanto property line on the east side of Government Dam Road to well TW-65, and west of Government Dam Road to wells TW-63 and TW-64 (Figure 17; based on concentrations in 2012 in TW-63 and TW-64). Groundwater from wells TW-59, TW-62, TW-63, TW-64, and TW-65 also contains elevated concentrations of nitrate as N, chloride, and sulfate (Figures 15, 19, and 23, respectively). The concentration of nitrate as N remains below the remediation goals with the exception of wells TW-63 and TW-64 (2012 data) that are likely affected by agricultural activity. Concentrations of cadmium, fluoride, and manganese also remain below the respective remediation goals in these wells.

The distribution of fluoride (Figures 10 and 11), nitrate (Figures 14 and 15), and manganese (Figures 12 and 13) is similar to that reported in Golder's 2012 report (Golder 2013c). The concentrations of these constituents are above the remediation goals in the area of the Old UFS ponds, but the extent of groundwater with concentrations of fluoride, manganese, and nitrate above the remediation goals does not extend south of the South Plant Fence Line, with the exception of TW-54 where nitrate concentrations are slightly above the remediation goal, and nitrate west of Government Dam Road in wells TW-63 and TW-64 that are likely affected by agricultural activity. Some UBZ-2 groundwater with slightly elevated (but below the remediation goal) concentrations of fluoride and nitrate discharges at Mormon A, B, and C Springs, Calf Spring, and to Mormon Creek.

4.3 Soda Creek

Concentrations of the constituents of concern at the point of compliance locations (SC-1 and SC-4) were below the remediation goals in 2013 (Table 9). The constituents of concern also were below the remediation goals at the other sample stations on Soda Creek. Selenium was detected above the chronic aquatic standard of 0.005 mg/L at stations SC-3 (Soda Mid), SC-4 (Soda Down), SC-6 (Soda at Property Line), and SC-7 (Soda Upstream Power Return). These stations are all located between the power diversion and power return (Figure 17). Below SC-7, selenium was detected at concentrations below the chronic aquatic life standard of 0.005 mg/L.

5.0 CLOSING

Please contact us if you have any questions or need additional information.

GOLDER ASSOCIATES INC.

Michael Klisch, LHG
Senior Project Hydrogeologist

David Banton, LHG, RG
Principal Hydrogeologist

MK/DB/ks

6.0 BIBLIOGRAPHY

Golder Associates Inc. (Golder). 1985. *Report to Monsanto Industrial Chemical Company on Hydrogeological Investigation, Soda Springs Plant Site, Soda Springs, Idaho, Volumes 1-3*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 1992. *Phase I Remedial Investigation/Feasibility Study, Preliminary Site Characterization Summary Report for the Soda Springs Elemental Phosphorus Plant*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington, April 23.

Golder. 1993. *Phase II Remedial Investigation Memorandum on Fate and Transport Modeling, Monsanto Elemental Phosphorus Plant, Soda Springs, Idaho*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington, October 5.

Golder. 1995. *Phase II Remedial Investigation Report for the Soda Springs Elemental Phosphorus Plant*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington, November 21.

Golder. 1998. May *1998 Groundwater Status – Solutia Soda Springs Site*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 1999. *Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho, Draft 1999 Summary Report*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2000. *Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho, Draft 2000 Summary Report*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2001. *Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho, Draft 2001 Summary Report*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2002. *Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho, Draft 2002 Summary Report*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2003a. *Five-Year Review Report for Groundwater Conditions at the Monsanto Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2003b. *Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho, Draft 2003 Summary Report,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2004. *Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho, Draft 2004 Summary Report*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2006a. *Monsanto Soda Springs Plant - Geophysical Survey South of Plant Site to Locate New Monitoring Wells*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2006b. *Work Plan for Drilling and Monitoring Well Installation Monsanto Soda Springs Plant*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2007a. *Well Completion Report, Monitoring Wells TW-59, TW-60, TW-61 and TW-62, Monsanto Soda Springs Plant*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2007b. *2007 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2008a. *Second Five-Year Review Report for Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2008b. *2008 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2009. *2009 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2010a*. Response to CH2M-Hill Comments on 2009 Summary Report on Groundwater Conditions at the Monsanto Soda Springs Plant,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2010b. *2010 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2011a. Monitoring *Well Drilling and Installation, Monsanto Soda Springs Idaho Plant*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

.Golder. 2011b. *2009 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2012a. *Groundwater and Surface Water Sampling Work Plan, Monsanto Soda Springs Idaho Plant*, prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington

Golder. 2012b. *2011 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Golder. 2013a. 2013 Groundwater and Surface Water Sampling – Monsanto Soda Springs Idaho Plant. May 7.

Golder 2013b. Source Area Characterization – UBZ-2, Phase I, Monsanto Soda Springs Idaho Plant. July 26.

Golder. 2013c. *2012 Summary Report, Groundwater Conditions at the Soda Springs Plant, Soda Springs, Idaho,* prepared for Monsanto Chemical Company by Golder Associates, Inc., Redmond, Washington.

Idaho Administrative Procedures Act (IDAPA). 2010. State of Idaho Water Quality Standards, 58.01.02.

United States Environmental Protection Agency (EPA). 1997. *Record of Decision, Monsanto Chemical Company Superfund Site, Caribou County, Idaho*, U.S. Environmental Protection Agency Region 10, Office of Environmental Cleanup, Seattle, Washington, April 30.

TABLES

Table 1: Well Completion Summary

Well	Formation	Measuring Point (MP) (per RI Report)	MP Elevation (feet amsl)	Top of Monitored Interval (feet bgs)	Bottom of Monitored Interval (feet bgs)	Hole Diameter (inches)	Casing Diameter (inches)	SP Northing	SP Easting	Comment
Harris Well	UBZ-2 γ4	Top of steel 1" pipe	5,877.56	58.0	62.0	6	6	368,317.90	654,651.32	MP = 4.05' above well-house floor
Independent Well	UBZ	Ground elevation	5,828.00	60.0	80.0	8	6			Elevation based on Google Earth
Lewis Well	UBZ-2 γ3 and γ4?	Top of Well Cap	5,864.35	85.0	105.0	6	6	366,022.93	655,889.54	MP is top of threaded access port
Maughn Well	UBZ	Ground elevation	5,776.00	29.0	39.0	6	6			Elevation based on Google Earth
SO2 Landfill North	UBZ-4 γ3	Top of coupling	TBD	68	88	8	4	376,555.90	656,197.96	NAD 27
SO2 Landfill South	UBZ-4 γ3	Top of coupling	TBD	60	80	8	4	375,615.53	655,478.55	NAD 27
Tigert East	UBZ	Top of PVC casing		10	20	6	2			No survey
Tigert South	UBZ	Top of PVC casing		13	23	6	2			No survey
TW-07	UBZ-1 γ3	Top of PVC well cap	5885.11	41.8	61.8	8	5	369,004.33	654,371.73	Top of PVC well cap
TW-08	UBZ-1 γ3	Top of PVC well cap	5,884.88	76.2	91.2	8	4	369,003.99	654,360.29	Top of PVC well cap
TW-10	UBZ-1 γ5	Top of seal	5,885.53	19.6	25.6	8	4	368,989.74	654,367.10	Top of seal = 0.05' above TOC
TW-11	LBZ-3 γ2	Top of coupling	5,938.03	129.1	138.5	8	4	368,986.08	656,682.08	Top of coupling = 0.25' above TOC
TW-12	UBZ-3 γ3	Top of seal	5,939.23	88.6	103.8	8	4	369,017.37	656,681.35	Top of seal = 0.07' above TOC
TW-15	UBZ-4 flow V?	Top of seal	5,988.27	50.4	62.4	8	4	374,947.60	658,454.43	Top of seal = 0.04' above TOC
TW-16	UBZ-4 γ3	Top of seal	5,998.39	69.1	78.6	8	4	374,541.55	654,567.41	Top of seal = 0.04' above TOC
TW-17	UBZ-4 γ3	Top of seal	5,998.33	98.5	117.5	8	4	374,539.37	654,587.61	Top of seal = 0.04' above TOC
TW-18	LBZ-4	Top of seal	5,996.89	221.8	240.8	8	4	374,520.88	654,587.13	Top of seal = 0.04' above TOC
TW-20	UBZ-2 γ4	Top of seal	5,893.37	38.2	46.4	8	4	368,975.43	655,503.64	Top of seal = 0.05' above TOC
TW-22	UBZ-2 γ4?	Top of seal	5,954.70	106.4	114.3	8	4	371,421.14	654,280.62	Top of seal = 0.05' above TOC
TW-24	UBZ-2 γ4	Top of PVC casing	5,954.43	75.3	94.3	8	4	371,435.86	654,273.24	
TW-26	UBZ-4 γ2	Top of seal	5,991.42	139.0	145.0	8	4	372,217.87	655,264.35	Top of seal = 0.04' above TOC
TW-29	UBZ-4 γ3	Top of coupling	5,989.59	42.7	49.7	10	4	375,471.82	654,187.34	Top of coupling = 0.27' above TOC
TW-30	UBZ-4 γ3	Top of coupling	5,992.73	64.7	71.7	8	4	373,594.42	655,794.00	Top of coupling = 0.25' above TOC
TW-33	UBZ-4 γ4	Top of coupling	5,975.68	69.1	77.1	8	4	372,526.92	657,699.47	Top of seal = 0.07' above TOC
TW-34	UBZ-2 γ3	Top of coupling	5,893.43	69.9	76.4	8	4	368,993.91	655,496.74	Top of coupling = 0.27' above TOC
TW-35	UBZ-2 γ3	Top of seal	5,897.16	73.5	86.0	8	4	369,036.29	655,076.56	Top of seal = 0.04' above TOC
TW-37	UBZ-2 γ4	Top of seal	5,959.17	96.3	102.9	8	4	372,837.18	654,245.63	Top of seal = 0.03' above TOC
TW-38	UBZ-3 γ3	Top of PVC casing	5,972.91	92.7	104.7	8	4	370,446.40	656,523.94	
TW-39	UBZ-2 γ4	Top of seal	5,897.07	50.6	58.1	8	4	369,036.99	655,061.98	Top of seal = 0.04' above TOC
TW-40	UBZ-4 γ3	Top of PVC casing	5,989.94	84.3	91.3	8	4	373,122.39	655,757.09	Pump out of well
TW-41	UBZ-4 γ3	Top of coupling	5,994.31	57.9	70.9	8	4	373,505.54	655,621.80	Top of coupling = 0.3' above TOC
TW-42	UBZ-4 γ3	Top of PVC casing	5,990.07	79.2	91.2	8	4	373,178.57	655,840.05	Pump out of well
TW-43	UBZ-4 γ3	Top of PVC casing	5,989.08	82.4	91.4	8	4	373,141.22	655,697.28	Pump out of well
TW-44A	LBZ-4	Top of seal	5,989.41	131.0	150.0	8	4	373,110.02	655,766.66	Top of seal = 0.04' above TOC
TW-45	LBZ-2 γ2	Top of coupling	5,959.17	216.8	230.8	8	4	372,827.62	654,238.16	Top of coupling = 0.26' above TOC
TW-48	UBZ-4 γ3	Top of coupling	5,989.40	67.3	73.3	8	4	375,520.55	655,978.20	Top of coupling = 0.25' above TOC
TW-49	UBZ-4 γ3	Top of seal	5,996.94	75.2	84.2	8	4	374,930.77	656,071.52	Top of seal = 0.04' above TOC
TW-50	UBZ-4 γ3	Top of seal	5,992.94	73.8	90.8	8	4	373,849.68	656,040.74	Top of seal = 0.04' above TOC
TW-53	UBZ-1 γ5	Top of coupling	5,880.65	19.5	34.0	8	4	368,055.24	654,739.84	Top of coupling = 0.26' above TOC
TW-54	UBZ-2 γ4	Top of coupling	5,889.21	39.3	54.3	8	4	368,052.39	655,240.53	Top of coupling = 0.25' above TOC
TW-55	UBZ-2 γ3	Top of coupling	5,886.58	53.5	69.0	8	4	368,050.24	655,739.76	Top of coupling = 0.25' above TOC

Table 1: Well Completion Summary

Well	Formation	Measuring Point (MP) (per RI Report)	MP Elevation (feet amsl)	Top of Monitored Interval (feet bgs)	Bottom of Monitored Interval (feet bgs)	Hole Diameter (inches)	Casing Diameter (inches)	SP Northing	SP Easting	Comment
TW-56	UBZ-3 γ3	Top of coupling	5,910.20	86.8	100.3	8	4	367,979.10	656,276.06	Top of coupling = 0.2' above TOC
TW-57	UBZ-2 γ5?	Top of coupling	5,952.74	23.2	37.3	8	4	374,365.91	654,000.20	Top of coupling = 0.2' above TOC
TW-58	UBZ-2 γ4	Top of Casing	5,892.74	36.3	51.7	12	8	368,980.16	655,458.20	
TW-59	UBZ-2 γ4	Top of coupling	5,858.64	29.0	42.5	8	4	365,662.80	654,853.50	Top of seal = 0.04' above TOC
TW-60	UBZ-1 γ4	Top of coupling	5,869.42	43.0	56.0	8	4	366,126.70	653,945.10	Top of seal = 0.04' above TOC
TW-61	UBZ-1 γ4	Top of coupling	5,878.75	61.5	77.0	8	4	367,105.20	653,964.70	Top of seal = 0.04' above TOC
TW-62	UBZ-2 γ4	Top of coupling	5,881.31	46.6	62.5	8	4	366,945.50	655,320.40	Top of seal = 0.04' above TOC
TW-63	UBZ-2 γ5	Top of seal	5,878.91	21.0	33.0	8	4	367,090.42	653,757.33	Top of seal = 0.04' above TOC
TW-64	UBZ-2 γ5	Top of seal	5,869.73	23.0	38.0	8	4	366,085.54	653,718.87	Top of seal = 0.04' above TOC
TW-65	UBZ-2 γ4	Top of seal	5,816.42	23.0	36.0	8	4	363,692.55	654,675.36	Top of seal = 0.04' above TOC
TW-66	UBZ-2 γ3	Top of seal	5,816.22	47.0	53.0	8	4	363,668.47	654,691.94	Top of seal = 0.04' above TOC
TW-67	UBZ-2 γ4/γ3	Top of seal	5,817.75	25.0	46.0	8	4	363,687.15	655,279.13	Top of seal = 0.04' above TOC
TW-68	UBZ-1 γ5	Top of seal	5,924.73	36.0	53.0	8	4	370,901.23	652,850.34	Top of seal = 0.04' above TOC
TW-69	UBZ-1 γ5	Top of seal	5,892.45	17.5	25.0	8	4	369,718.12	653,276.63	Top of seal = 0.04' above TOC
TW-70	UBZ-2 γ3	Top of seal	5,882.28	71.0	90.0	8	4	366,949.85	655,109.63	Top of seal = 0.04' above TOC

Notes:
TBD: To be determined

Table 2: History of Groundwater Investigations at Monsanto Plant

Date	Activity	Conducted By/For	Description
1978	Monsanto well installation	Monsanto	Installed 5 groundwater monitoring wells
1982	Monsanto well installation	Monsanto	Installed 2 additional wells, initiated spring sampling
1984	Groundwater Investigation	Golder/Monsanto	Installed 31 groundwater monitoring wells, characterized constituent plumes, identified sources of constituents
1988	CERCLA Site Inspection	Ecology & Environment/EPA	Groundwater sampling and analysis
1991 to 1998	Bi-annual groundwater monitoring	Golder/ Monsanto	Monsanto samples between 50 and 60 monitoring wells, offsite wells, and springs every 6 months
1992	Phase I Remedial Investigation	Golder/Monsanto	Remedial Investigation report for Monsanto Plant site
1993	Phase II Remedial Investigation Fate and Transport Model	Golder/Monsanto	Groundwater model to characterize fate and transport of constituents in groundwater
1995	Solute Transport Model	Golder/Monsanto	Solute transport model to predict the fate and transport of constituents in groundwater
1995	Phase II Remedial Investigation	Golder/Monsanto	Phase II Remedial Investigation
1998 to date	Annual groundwater sampling	Golder/Monsanto	Monsanto samples between 50 and 60 monitoring wells, offsite wells, springs, and surface water annually
2003	Solute Transport Model	Golder/Monsanto	Updated solute transport model to predict the fate and transport of constituents in groundwater, using additional data and a graphical, probabilistic modeling tool
2003	First Five Year Review	Golder/Monsanto	Review of monitoring data and groundwater model predictions to evaluate progress of selected remedial remedy, per the Record of Decision
2007	Groundwater Investigation - South of Plant	Golder/Monsanto	Installed 4 new groundwater monitoring wells (TW-59 though TW-62)
2008	Second Five Year Review	Golder/Monsanto	Review of monitoring data and groundwater model predictions to evaluate progress of selected remedial remedy, per the Record of Decision
2011	Groundwater Investigation - South and West of Plant	Golder/Monsanto	Installed 8 new groundwater monitoring wells (TW-63 though TW-70)
2012	UBZ-2 Source Area Investigations	Golder/Monsanto	Evalaution of hydrogeology and source areas in UBZ-2
Ongoing	Annual groundwater sampling	Golder/Monsanto	Monsanto samples between 70 and 90 monitoring wells, offsite wells, springs, and surface water sites annually

Table 4: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Water Disposal Method	Filter/ Unfilter	Filter Size (μ)	Notes
Surface Water/Non-Contact Cooling Water									
Non-Contact Cooling Water 1	13070	NA	June 7, 2013	12:00	Grab	NA	U/F	0.45	
Non-Contact Cooling Water 2	13071	NA	June 7, 2013	12:00	Grab	NA	U/F	0.45	
Non-Contact Cooling Water 3	13072	NA	June 7, 2013	12:00	Grab	NA	U/F	0.45	
PR-1 Power Return Canal	13073	NA	June 7, 2013	13:25	Grab	NA	U/F	0.45	
SC-01 Soda Up	13067	NA	June 7, 2013	10:40	Grab	NA	U/F	0.45	
SC-02 Soda Weir	13068	NA	June 7, 2013	11:30	Grab	NA	U/F	0.45	
SC-03 Soda Mid	13082	NA	June 8, 2013	09:30	Grab	NA	U/F	0.45	
SC-04 Soda Down	13084	NA	June 8, 2013	11:00	Grab	NA	U/F	0.45	
SC-05 Soda Below Weir	13069	NA	June 7, 2013	11:45	Grab	NA	U/F	0.45	
SC-06 Soda at Property Line	13092	NA	June 8, 2013	16:15	Grab	NA	U/F	0.45	
SC-07 Soda Upstream Power Return	13074	NA	June 7, 2013	14:10	Grab	NA	U/F	0.45	
SC-08 Soda at Octagon Park	13075	NA	June 7, 2013	14:50	Grab	NA	U/F	0.45	
SC-08 Soda at Octagon Park	13101	NA	June 9, 2013	14:15	Grab	NA	U/F	0.45	
SC-08 Soda at Octagon Park	12102	NA	June 9, 2013	14:15	Grab	NA	U/F	0.45	Split
SC-09 Soda above Diversion	13088	NA	June 8, 2013	14:10	Grab	NA	U/F	0.45	
SC-10 Soda at RR Bridge	13091	NA	June 8, 2013	16:00	Grab	NA	U/F	0.45	
SC-11 Soda at Highway 30	13089	NA	June 8, 2013	14:45	Grab	NA	U/F	0.45	
SC-11 Soda at Highway 30	13090	NA	June 8, 2013	14:45	Grab	NA	U/F	0.45	Duplicate
Non-Contact Cooling Water Pond Inlet	13063	NA	June 7, 2013	08:50	Grab	NA	U/F	0.45	
LITTLE SPRING POND DOWN	13093	NA	June 8, 2013	16:45	Grab	NA	U/F	0.45	
LITTLE SPRING POND UP	13094	NA	June 8, 2013	17:00	Grab	NA	U/F	0.45	
Groundwater - Springs									
Big Spring	13087	UBZ	June 8, 2013	13:35	Grab	NA	U/F	0.45	
Calf Spring	N/A	UBZ-1 γ5?	No Sample		Grab	NA	U/F	0.45	Spring was dry
City Park Spring	13086	UBZ	June 8, 2013	13:10	Grab	NA	U/F	0.45	
Homestead Spring	13085	UBZ-1 γ5?	June 8, 2013	12:00	Grab	NA	U/F	0.45	
Mormon A Spring	13076	UBZ-1 γ5?	June 7, 2013	17:00	Grab	NA	U/F	0.45	
Mormon A Spring	13077	UBZ-1 γ5?	June 7, 2013	17:00	Grab	NA	U/F	0.45	Split
Mormon B Spring	13078	UBZ-1 γ5?	June 7, 2013	17:30	Grab	NA	U/F	0.45	
Mormon C Spring	13079	UBZ-1 γ5?	June 7, 2013	17:45	Grab	NA	U/F	0.45	
MC-1 Mormon Creek	13083	UBZ-1 γ5?	June 8, 2013	10:00	Grab	NA	U/F	0.45	
SW Spring at Government Dam Road	13064	UBZ-1 γ5?	June 7, 2013	09:25	Grab	NA	U/F	0.45	
SW Spring at Government Dam Road	13065	UBZ-1 γ5?	June 7, 2013	09:25	Grab	NA	U/F	0.45	Duplicate
SW Spring above the confluence with Soda	13081	UBZ-1 γ5?	June 8, 2013	09:00	Grab	NA	U/F	0.45	
Marsh Spring	13066	UBZ-1 γ5?	June 7, 2013	10:05	Grab	NA	U/F	0.45	
Groundwater - Wells									
PW-01	13098	UBZ,LBZ-4	June 8, 2013	18:45	Operating Well	GROUND	U		
PW-02	13097	UBZ,LBZ-4	June 8, 2013	18:30	Operating Well	GROUND	U		
PW-03	13096	UBZ,LBZ-4	June 8, 2013	18:10	Operating Well	GROUND	U		
PW-04	13006	UBZ/LBZ-4	May 30, 2013	17:40	Operating Well	GROUND	U		
Harris Well	13031	UBZ-2 γ4	June 3, 2013	10:05	Non-Dedicated Pump	GROUND	U		
Independent Well	13060	UBZ	June 6, 2013	12:50	Dedicated Pump	GROUND	U		
Lewis Well	13095	UBZ-2 γ3 and γ4?	June 8, 2013	17:45	Operating Well	GROUND	U		
Maughn Well	13053	UBZ	June 5, 2013	16:30	Dedicated Pump	GROUND	U		

Table 4: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Water Disposal Method	Filter/ Unfilter	Filter Size (μ)	Notes
SO2 Landfill North	13013	UBZ-4 γ3	May 31, 2013	14:45	Dedicated Pump	GROUND	U		
SO2 Landfill South	13014	UBZ-4 γ3	May 31, 2013	15:15	Dedicated Pump	GROUND	U		
Tigert East	TE-1-2	UBZ	June 9, 2013	14:00	Non-Dedicated Pump	GROUND	U		
Tigert South	TS-1-2	UBZ	June 9, 2013	14:00	Non-Dedicated Pump	GROUND	U		
TW-07	13030	UBZ-1 γ4	June 2, 2013	17:45	Non-Dedicated Pump	GROUND	U		
TW-08	13029	UBZ-1 γ3	June 2, 2013	16:45	Non-Dedicated Pump	TANK	U		
TW-09	NS	LBZ-1							
TW-10	13004	UBZ-1 γ5	May 30, 2013	16:00	Dedicated Pump	TANK	U		
TW-11	13035	LBZ-3 γ2	June 3, 2013	12:35	Dedicated Pump	TANK	U		
TW-11	13036	LBZ-3 γ2	June 3, 2013	12:35	Dedicated Pump	TANK	U		Duplicate
TW-12	13037	UBZ-3 γ3	June 3, 2013	13:15	Dedicated Pump	TANK	U		
TW-12	13038	UBZ-3 γ3	June 3, 2013	13:15	Dedicated Pump	TANK	U		Split
TW-13	NS	UBZ-3 γ3							
TW-14	NS	SDZ							
TW-15	13016	UBZ-4 flow V?	May 31, 2013	16:25	Dedicated Pump	GROUND	U		
TW-16	13009	UBZ-4 γ3	May 31, 2013	10:00	Dedicated Pump	TANK	U		
TW-17	13010	UBZ-4 γ3	May 31, 2013	10:30	Dedicated Pump	TANK	U		
TW-18	13011	LBZ-4	May 31, 2013	13:05	Dedicated Pump	GROUND	U		
TW-19	NS	UBZ-3 flow V							
TW-20	13002	UBZ-2 γ4	May 30, 2013	14:55	Dedicated Pump	TANK	U		
TW-20	13003	UBZ-2 γ4	May 30, 2013	14:55	Dedicated Pump	TANK	U		Duplicate
TW-21	NS	LBZ-2 γ2							
TW-22	13005	UBZ-2 γ4?	May 30, 2013	16:40	Dedicated Pump	TANK	U		
TW-23	NS	LBZ-2 γ2							
TW-24	13028	UBZ-2 γ4	June 2, 2013	13:40	Non-Dedicated Pump	GROUND	U		
TW-26	13020	UBZ-4 γ2	May 31, 2013	18:50	Dedicated Pump	TANK	U		
TW-28	NS	UBZ-4 γ3							
TW-29	13012	UBZ-4 γ3	May 31, 2013	13:45	Dedicated Pump	GROUND	U		
TW-30	13024	UBZ-4 γ3	June 1, 2013	18:10	Dedicated Pump	TANK	U		
TW-31	NS	UBZ-4 γ5							
TW-32	NS	LBZ-4 γ2							
TW-33	13017	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	TANK	U		Split
TW-33	13018	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	TANK	U		
TW-33	13019	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	TANK	U		Duplicate
TW-34	13001	UBZ-2 γ3	May 30, 2013	14:30	Dedicated Pump	GROUND	U		
TW-35	13046	UBZ-2 γ3	June 4, 2013	17:50	Dedicated Pump	GROUND	U		
TW-35	13047	UBZ-2 γ3	June 4, 2013	17:50	Dedicated Pump	GROUND	U		Duplicate
TW-37	13041	UBZ-2 γ4	June 4, 2013	13:00	Dedicated Pump	TANK	U		
TW-38	13026	UBZ-3 γ3	June 2, 2013	10:05	Non-Dedicated Pump	TANK	U		
TW-39	13045	UBZ-2 γ4	June 4, 2013	16:55	Dedicated Pump	TANK	U		
TW-40	13022	UBZ-4 γ3	June 1, 2013	16:15	Hand Bailed	TANK	F	0.45	

Table 4: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Water Disposal Method	Filter/ Unfilter	Filter Size (μ)	Notes
TW-41	13025	UBZ-4 γ3	June 1, 2013	18:35	Dedicated Pump	TANK	U		
TW-42	NS	UBZ-4 γ3							
TW-43	13023	UBZ-4 γ3	June 1, 2013	17:00	Hand Bailed	TANK	F	0.45	
TW-44	13099	LBZ-4	June 9, 2013	10:00	Dedicated Pump	TANK	F	0.45	
TW-44	13100	LBZ-4	June 9, 2013	10:00	Dedicated Pump	TANK	F	0.45	Split
TW-45	13039	LBZ-2 γ2	June 4, 2013	09:30	Dedicated Pump	TANK	U		
TW-48	13015	UBZ-4 γ3	May 31, 2013	15:40	Dedicated Pump	GROUND	U		
TW-49	13008	UBZ-4 γ3	May 31, 2013	09:25	Dedicated Pump	GROUND	U		
TW-50	13021	UBZ-4 γ3	June 1, 2013	09:45	Dedicated Pump	TANK	U		
TW-53	13032	UBZ-1 γ5	June 3, 2013	11:15	Dedicated Pump	TANK	U		
TW-54	13033	UBZ-2 γ4	June 3, 2013	11:45	Dedicated Pump	TANK	U		
TW-54	13034	UBZ-2 γ4	June 3, 2013	11:45	Dedicated Pump	TANK	U		Split
TW-55	13043	UBZ-2 γ3	June 4, 2013	16:00	Dedicated Pump	TANK	U		
TW-55	13044	UBZ-2 γ3	June 4, 2013	16:00	Dedicated Pump	TANK	U		Split
TW-56	13042	UBZ-3 γ3	June 4, 2013	14:40	Dedicated Pump	TANK	U		
TW-57	13048	UBZ-2 γ5?	June 5, 2013	09:00	Dedicated Pump	GROUND	U		
TW-58	13027	UBZ-2 γ4	June 2, 2013	12:35	Non-Dedicated Pump	GROUND	U		
TW-59	13052	UBZ-2 γ4	June 5, 2013	13:40	Dedicated Pump	TANK	U		
TW-60	13051	UBZ-1 γ4	June 5, 2013	12:20	Dedicated Pump	GROUND	U		
TW-61	13050	UBZ-1 γ4	June 5, 2013	11:00	Dedicated Pump	GROUND	U		
TW-62	13054	UBZ-2 γ4	June 5, 2013	17:55	Dedicated Pump	TANK	U		
TW-62	13055	UBZ-2 γ4	June 5, 2013	17:55	Dedicated Pump	TANK	U		Duplicate
TW-63	NS	UBZ-2 γ5	No Sample		Dedicated Pump	NA	U		Well was dry
TW-64	NS	UBZ-2 γ5	No Sample		Dedicated Pump	NA	U		Well was dry
TW-65	13059	UBZ-2 γ4	June 6, 2013	11:40	Dedicated Pump	GROUND	U		
TW-66	13058	UBZ-2 γ3	June 6, 2013	10:00	Dedicated Pump	GROUND	U		
TW-67	13061	UBZ-2 γ4/γ3	June 6, 2013	15:00	Dedicated Pump	GROUND	U		
TW-67	13062	UBZ-2 γ4/γ3	June 6, 2013	15:00	Dedicated Pump	GROUND	U		Split
TW-68	13049	UBZ-1 γ5	June 5, 2013	09:50	Dedicated Pump	GROUND	U		
TW-69	13040	UBZ-1 γ5	June 4, 2013	12:00	Dedicated Pump	GROUND	U		
TW-70	13056	UBZ-2 γ3	June 5, 2013	18:20	Dedicated Pump	GROUND	U		
TW-70	13057	UBZ-2 γ3	June 5, 2013	18:20	Dedicated Pump	GROUND	U		Duplicate
QA/QC									
DI Blank	13007	NA	May 30, 2013	17:50	Grab	NA	U		Field Blank
Grundfos Blank	13103	NA	June 9, 2013	15:00	Grab	NA	U		Equipment Blank

Notes:
UBZ: Upper Basalt Zone
LBZ: Lower Basalt Zone
SDZ: Surficial Deposit Zone
U: Unfiltered
F: Filtered
NA: Not applicable
NS: No Sample - groundwater level only

Table 5: Analytical Methods for Monsanto Groundwater Sampling

Parameters	Analyzed in 2013	Analytical Method	Reporting Limit (mg/L)
Total Metals (surface water and groundwater) and Dissolved Metals (surface water only)			
Cadmium	Y	6010B	0.002
Calcium	Y	6010B	0.04
Magnesium	Y	6010B	0.06
Manganese	Y	6010B	0.004
Molybdenum	Y	6010B	0.01
Potassium	Y	6010B	0.50
Selenium	Y	6020	0.04 / 0.003
Sodium	Y	6010B	0.50
Vanadium	Y	6010B	0.01
Zinc	Y	6010B	0.01
Other Ions			
Alkalinity ($CaCO_3$)	Y	2320B	1.00
$CO_3/CaCO_3$	Y	2320B/2310B	1.00
$HCO_3/CaCO_3$	Y	2320B/2310B	1.00
Ammonia as N	Y	350.1	0.03
Chloride	Y	300.0	1.00
Fluoride	Y	300.0	0.10
Hardness as $CaCO_3$	Y	2340B	0.35
Nitrate and Nitrite As N	Y	353.2	0.02
Total Phosphorus	Y	4500-P-E	0.01
Sulfate	Y	300	0.30
TDS	Y	2540C	10.0
Field Parameters			
Specific Conductance	Y	NA	NA
Dissolved Oxygen	Y	NA	NA
Eh	Y	NA	NA
pH	Y	NA	NA
Turbidity	Y	NA	NA
Temperature	Y	NA	NA

Notes:
Y: Yes
N: No
NA: Not applicable

Table 6: Groundwater Elevations June 2013

Location	Date	Depth to Water (ft)	Formation Monitored	Approx. Well Volume (gal)	Approx. Purge Volume (gal)	Measurement Point (MP)	MP Elevation (ft)	Groundwater Elevation (ft)	Comments
Calf Spring	Not sampled	NA	UBZ-1 γ5?	NA	NA	Water Surface	5,858.47	5,858.47	Dry in June 2013
Doc Spring	Not sampled	NA	LBZ-1	NA	NA	Water Surface	5,847.58	5,847.58	Not measured
Harris Well	June 3, 2013	16.35	UBZ-2 γ4	73	219	Top of steel 1" pipe	5,877.56	5,861.21	
Homestead Spring	June 8, 2013	NA	UBZ-1 γ5?	NA	NA	Water Surface	5,815.86	5,815.86	Less than 1 gpm
Hooper Spring	Not sampled	NA	LBZ-1	NA	NA	Water Surface	5,853.78	5,853.78	Not measured
Independent Well	June 6, 2013	NM	UBZ	88	265	Ground Elevation	5,828.00	NM	Access port blocked
Lewis Well	June 8, 2013	NM	UBZ-2 γ3 and γ4?			Top of well cap	5,864.35	-	Not measured
Maughn Well	June 5, 2013	17.23	UBZ						
Mormon A Spring	June 7, 2013	NA	UBZ-1 γ5?	NA	NA	Water Surface	5,850.60	5,850.60	Flow 60-70 gpm
Mormon B Spring	June 7, 2013	NA	UBZ-1 γ5?	NA	NA	Water Surface	5,843.55	5,843.55	Flow 6 gpm
Mormon C Spring	June 7, 2013	NA	UBZ-1 γ5?	NA	NA	Water Surface	5,834.01	5,834.01	Flow 6 gpm
SO2 Landfill North	June 9, 2013	64.46	UBZ-4 γ3	25	76	Top of coupling	TBD	-	Not surveyed
SO2 Landfill South	June 9, 2013	53.09	UBZ-4 γ3	25	76	Top of coupling	TBD	-	Not surveyed
Tigert East	June 9, 2013	NM	UBZ			Top of PVC casing			Not surveyed
Tigert South	June 9, 2013	NM	UBZ			Top of PVC casing			Not surveyed
SW Spring at Government Dam Road	June 7, 2013	NA	UBZ-1 γ5?	NA	NA	Water Surface	5,859.25	5,859.25	Flow 550 gpm
SW Spring above the confluence with Soda Creek	June 8, 2013	NA	UBZ-1 γ5?	NA	NA		NA		Flow 200 gpm
TW-07	June 2, 2013	15.37	UBZ-1 γ4	33	129	Top of PVC well cap	5,885.11	5,869.74	
TW-08	June 2, 2013	14.99	UBZ-1 γ3	63	189	Top of PVC well cap	5,884.88	5,869.89	
TW-09	June 2, 2013	16.94	LBZ-1	No sample		Top of coupling	5,884.91	5,867.97	
TW-10	June 2, 2013	16.26	UBZ-1 γ5	11	33	Top of seal	5,885.53	5,869.27	
TW-11	June 3, 2013	69.95	LBZ-3 γ2	56	168	Top of coupling	5,938.03	5,868.08	
TW-12	June 3, 2013	71.76	UBZ-3 γ3	28	85	Top of seal	5,939.23	5,867.47	
TW-13	June 9, 2013	16.1	UBZ-3 γ3	No sample		Top of seal	5,988.35	5,972.25	
TW-14	June 9, 2013	14.43	SDZ	No sample		Top of PVC casing	5,988.59	5,974.16	
TW-15	June 9, 2013	17.22	UBZ-4 flow V?	35	105	Top of seal	5,988.27	5,971.05	
TW-16	June 9, 2013	63.10	UBZ-4 γ3	15	44	Top of seal	5,998.39	5,935.29	
TW-17	June 9, 2013	63.00	UBZ-4 γ3	46	137	Top of seal	5,998.33	5,935.33	
TW-18	June 9, 2013	60.25	LBZ-4	128	384	Top of seal	5,996.89	5,936.64	
TW-19	June 2, 2013	29.85	UBZ basalt flow V	No sample		Top of PVC casing	5,893.07	5,863.22	
TW-20	June 2, 2013	30.08	UBZ-2 γ4	15	44	Top of seal	5,893.37	5,863.29	
TW-21	June 2, 2013	24.58	LBZ-2 γ2	No sample		Top of coupling	5,893.68	5,869.10	
TW-22	June 2, 2013	72.13	UBZ-2 γ4?	36	109	Top of seal	5,954.70	5,882.57	
TW-23	June 2, 2013	70.92	LBZ-2 γ2	No sample		Top of seal	5,954.70	5,883.78	
TW-24	June 2, 2013	71.89	UBZ-2 γ4	26	78	Top of PVC casing	5,954.43	5,882.54	
TW-26	June 9, 2013	86.13	UBZ-4 γ2	44	133	Top of seal	5,991.42	5,905.29	

Table 6: Groundwater Elevations June 2013

Location	Date	Depth to Water (ft)	Formation Monitored	Approx. Well Volume (gal)	Approx. Purge Volume (gal)	Measurement Point (MP)	MP Elevation (ft)	Groundwater Elevation (ft)	Comments
TW-28	June 9, 2013	40.78	UBZ-4 γ3	No sample		Top of coupling	5,989.40	5,948.62	
TW-29	June 9, 2013	40.87	UBZ-4 γ3	13	38	Top of coupling	5,989.59	5,948.72	
TW-30	June 1, 2013	62.35	UBZ-4 γ3	10	30	Top of coupling	5,992.73	5,930.38	
TW-31	June 9, 2013	25	UBZ-4 γ5	No sample		Top of PVC casing	5,975.29	5,950.29	
TW-32	June 9, 2013	27.52	LBZ-4 γ2	No sample		Top of coupling	5,975.91	5,948.39	
TW-33	June 9, 2013	26.63	UBZ-4 γ4	37	110	Top of seal	5,975.86	5,949.23	
TW-34	June 2, 2013	30.13	UBZ-2 γ3	33	99	Top of coupling	5,893.43	5,863.30	
TW-35	June 4, 2013	32.73	UBZ-2 γ3	41	124	Top of seal	5,897.16	5,864.43	
TW-37	June 4, 2013	66.82	UBZ-2 γ4	26	79	Top of seal	5,959.17	5,892.35	
TW-38	June 2, 2013	90.95	UBZ-3 γ3	11	34	Top of PVC casing	5,972.91	5,881.96	
TW-39	June 4, 2013	33.85	UBZ-2 γ4	19	58	Top of seal	5,897.07	5,863.22	
TW-40	June 1, 2013	85.35	UBZ-4 γ3	5	14	Top of seal	5,989.94	5,904.59	
TW-41	June 1, 2013	59.82	UBZ-4 γ3	12	35	Top of coupling	5,994.31	5,934.49	
TW-42		NM	UBZ-4 γ3	No sample		Top of seal	5,990.07	NM	No access port
TW-43	June 1, 2013	84.42	UBZ-4 γ3	6	18	Top of PVC	5,989.08	5,904.66	
TW-44	June 1, 2013	98.56	LBZ-4	45	136	Top of seal = 0.04' above TOC	5,989.41	5,890.85	
TW-45	June 4, 2013	70.63	LBZ-2 γ2	112	337	Top of coupling = 0.26' above TOC	5,959.17	5,888.54	
TW-48	May 31, 2013	NM	UBZ-4 γ3	11	33	Top of coupling	5,989.40	NM	No access port
TW-49	May 31, 2013	NM	UBZ-4 γ3	12	37	Top of seal	5,996.94	NM	No access port
TW-50	June 9, 2013	57.88	UBZ-4 γ3	30	91	Top of seal	5,992.94	5,935.06	
TW-53	June 3, 2013	20.64	UBZ-1 γ5	16	47	Top of coupling	5,880.65	5,860.01	
TW-54	June 3, 2013	29.33	UBZ-2 γ4	24	72	Top of coupling	5,888.96	5,859.63	
TW-55	June 4, 2013	29.94	UBZ-2 γ3	34	102	Top of coupling	5,886.33	5,856.39	
TW-56	June 4, 2013	55.28	UBZ-3 γ3	35	104	Top of coupling	5,910.20	5,854.92	
TW-57	June 5, 2013	9.76	UBZ-2 γ5?	25	76	Top of coupling	5,952.74	5,942.98	
TW-58	June 2, 2013	29.85	UBZ-2 γ4	No sample		Top of Steel Casing	5,892.74	5,862.89	
TW-59	June 5, 2013	19.45	UBZ-2 γ4	25	75	Top of coupling	5,858.64	5,839.19	
TW-60	June 5, 2013	32.78	UBZ-1 γ4	25	75	Top of coupling	5,869.42	5,836.64	
TW-61	June 5, 2013	32.26	UBZ-1 γ4	35	105	Top of coupling	5,878.75	5,846.49	
TW-62	June 5, 2013	32.05	UBZ-2 γ4	31	93	Top of coupling	5,881.31	5,849.26	
TW-63	June 5, 2013	32.58	UBZ-2 γ5	5	15	Top of seal	5,878.91	5,846.33	
TW-64	June 5, 2013	39.01	UBZ-2 γ5	2	6	Top of seal	5,869.73	5,830.72	
TW-65	June 6, 2013	15.54	UBZ-2 γ4	23	69	Top of seal	5,816.42	5,800.88	
TW-66	June 6, 2013	16.95	UBZ-2 γ3	42	126	Top of seal	5,816.22	5,799.27	
TW-67	June 6, 2013	15.33	UBZ-2 γ4/γ3	49	147	Top of seal	5,817.75	5,802.42	
TW-68	June 5, 2013	38.27	UBZ-1 γ5	25	75	Top of seal	5,924.73	5,886.46	
TW-69	June 4, 2013	11.56	UBZ-1 γ5	13	42	Top of seal	5,892.45	5,880.89	
TW-70	June 5, 2013	32.87	UBZ-2 γ3	62	186	Top of seal	5,882.28	5,849.41	

Notes:
TBD: To be determined
NM: Not measured
NA: Not applicable

Table 7: Field Water Quality June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	pH (s.u.)	Specific Conductance (µS/cm)	Turbidity (NTU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Laboratory Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Oxidation-Reduction Potential (mV) [a]
Surface Water/Non-Contact Cooling Water													
Little Spring Pond Up	13094	NA	June 8, 2013	17:00	Grab	8.33	481	1.88	21.4	NM	8.2	198	360
Little Spring Pond Down	13093	NA	June 8, 2013	16:45	Grab	8.28	479	3.05	20.5	NM	8.4	178	369
Non-Contact Cooling Water 1	13070	NA	June 7, 2013	12:00	Grab	8.39	1,520	8.50	23.0	6.6	8.2	33	NM
Non-Contact Cooling Water 2	13071	NA	June 7, 2013	12:00	Grab	8.39	1,520	8.50	23.0	6.6	8.0	33	NM
Non-Contact Cooling Water 3	13072	NA	June 7, 2013	12:00	Grab	8.39	1,520	8.50	23.0	6.6	8.3	33	NM
PR-1 Power Return Canal	13073	NA	June 7, 2013	13:25	Grab	7.22	585	6.50	17.5	9.5	8.6	80	NM
SC-01 Soda Up	13067	NA	June 7, 2013	10:40	Grab	7.11	499	5.14	15.4	10.48	8.9	37	253
SC-02 Soda Weir	13068	NA	June 7, 2013	11:30	Grab	7.12	534	5.51	16.6	9.71	8.9	90	276
SC-03 Soda Mid	13082	NA	June 8, 2013	09:30	Grab	7.39	642	15.2	12.0	NM	8.0	300	398
SC-04 Soda Down	13084	NA	June 8, 2013	11:00	Grab	7.50	702	24.6	16.4	NM	8.5	304	423
SC-05 Soda Below Weir	13069	NA	June 7, 2013	11:45	Grab	7.62	576	3.59	19.1	7.29	3.5	56	220
SC-06 Soda at Property Line	13092	NA	June 8, 2013	16:15	Grab	8.09	835	13.6	23.5	NM	8.2	166	416
SC-07 Soda Upstream Power Return	13074	NA	June 7, 2013	14:10	Grab	8.17	783	6.04	21.5	NM	8.0	63	273
SC-08 Soda at Octagon Park	13075	NA	June 7, 2013	14:50	Grab	7.45	548	7.45	17.4	NM	8.4	64	303
SC-08 Soda at Octagon Park	13075	NA	June 7, 2013	14:50	Grab	7.45	548	7.45	17.4	NM	8.4	64	303
SC-08 Soda at Octagon Park	13075	NA	June 7, 2013	14:50	Grab	7.58	514	5.68	17.9	NM	NM	193	486
SC-09 Soda above Diversion	13088	NA	June 8, 2013	14:10	Grab	7.49	635	7.29	19.5	NM	8.5	194	340
SC-10 Soda at RR Bridge	13091	NA	June 8, 2013	16:00	Grab	7.35	726	6.74	21.4	NM	8.7	232	451
SC-11 Soda at Highway 30	13089	NA	June 8, 2013	14:45	Grab	7.44	721	7.12	21.5	NM	9.1	199	375
SC-11 Soda at Highway 30	13089	NA	June 8, 2013	14:45	Grab	7.44	721	7.12	21.5	NM	9.6	199	375
Non-Contact Cooling Water Pond Inlet	13063	NA	June 7, 2013	08:50	Grab	7.89	837	5.14	23.8	6.41	8.4	140	507
Groundwater - Springs													
Big Spring	13087	UBZ	June 8, 2013	13:35	Grab	7.29	458	1.05	10.8	NM	7.8	148	304
Calf Spring	NS	UBZ-1 γ5?			Grab								
City Park Spring	13086	UBZ	June 8, 2013	13:10	Grab	7.01	514	2.35	12.8	NM	7.8	206	327
Homestead Spring	13085	UBZ-1 γ5?	June 8, 2013	12:00	Grab	7.09	513	0.71	10.3	NM	8.4	248	463
Mormon A Spring	13076	UBZ-1 γ5?	June 7, 2013	17:00	Grab	6.87	651	0.94	14.9	NM	8.0	87	364
Mormon B Spring	13078	UBZ-1 γ5?	June 7, 2013	17:30	Grab	7.00	585	0.75	10.9	NM	8.0	88	345
Mormon C Spring	13079	UBZ-1 γ5?	June 7, 2013	17:45	Grab	6.93	543	0.58	9.4	NM	8.3	108	345
MC-1 Mormon Creek	13083	UBZ-1 γ5?	June 8, 2013	10:00	Grab	7.97	911	9.18	14.8	NM	8.5	310	467
SW Spring at Government Dam Road	13064	UBZ-1 γ5?	June 7, 2013	09:25	Grab	6.85	572	5.24	12.5	8.08	8.1	158	447
SW Spring above the confluence with Soda Creek	13081	UBZ-1 γ5?	June 8, 2013	09:00	Grab	7.68	658	23.5	11.1	NM	8.6	326	526
Marsh Spring	13066	UBZ-1 γ5?	June 7, 2013	10:05	Grab	6.57	652	13.3	16.1	3.35	5.1	-35	145
Groundwater - Wells													
PW-01	13098	UBZ,LBZ-4	June 8, 2013	18:45	Operating Well	7.08	537	1.02	9.9	NM	8.4	183	447
PW-02	13097	UBZ,LBZ-4	June 8, 2013	18:30	Operating Well	6.90	489	8.64	10.0	NM	7.8	172	504
PW-03	13096	UBZ,LBZ-4	June 8, 2013	18:10	Operating Well	7.54	466	1.08	10.0	NM	7.9	169	482
PW-04	13006	UBZ,LBZ-4	May 30, 2013	17:40	Operating Well	6.99	419	0.49	7.9	5.92	NM	103	NM
Harris Well	13031	UBZ-2 γ4	June 3, 2013	10:05	Non-Dedicated Pump	6.99	693	1.19	10.0	5.47	NM	90	NM
Independent Well	13060	UBZ	June 6, 2013	12:50	Dedicated Pump	7.58	343	1.12	9.8	5.33	7.9	235	454
Maughn Well	13053	UBZ	June 5, 2013	16:30	Dedicated Pump	7.61	451	3.33	11.9	6.24	8.3	182	552
Lewis Well	13095	UBZ-2 γ3 and γ4?	June 8, 2013	17:45	Operating Well	7.45	466	0.49	11.0	NM	8.6	179	425
SO2 Landfill North	13013	UBZ-4 γ3	May 31, 2013	14:45	Dedicated Pump	7.56	408	2.40	8.5	7.16	NM	-56	NM
SO2 Landfill South	13014	UBZ-4 γ3	May 31, 2013	15:15	Dedicated Pump	6.85	493	0.50	8.5	5.28	NM	-43	NM
Tigert East	TE-1-2	UBZ	June 9, 2013	14:00	Non-Dedicated Pump	NM	NM	NM	NM	NM	NM	NM	NM
Tigert South	TS-1-2	UBZ	June 9, 2013	14:00	Non-Dedicated Pump	NM	NM	NM	NM	NM	NM	NM	NM
TW-07	13030	UBZ-1 γ4	June 2, 2013	17:45	Grab	6.64	641	1.15	10.3	1.21	NM	0	NM
TW-08	13029	UBZ-1 γ3	June 2, 2013	16:45	Non-Dedicated Pump	6.32	728	0.69	11.4	0.71	NM	-48	NM

Table 7: Field Water Quality June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	pH (s.u.)	Specific Conductance (µS/cm)	Turbidity (NTU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Laboratory Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Oxidation-Reduction Potential (mV) [a]
TW-10	13004	UBZ-1 γ5	May 30, 2013	16:00	Dedicated Pump	6.90	922	0.57	9.2	7.01	NM	285	NM
TW-11	13035	LBZ-3 γ2	June 3, 2013	12:35	Dedicated Pump	7.27	522	0.76	10.8	1.81	6.0	9	NM
TW-12	13037	UBZ-3 γ3	June 3, 2013	13:15	Dedicated Pump	7.25	496	0.69	10.2	2.20	6.5	19	NM
TW-15	13016	UBZ-4 flow V?	May 31, 2013	16:25	Dedicated Pump	7.34	409	0.70	9.0	8.06	NM	40	NM
TW-16	13009	UBZ-4 γ3	May 31, 2013	10:00	Dedicated Pump	6.52	656	0.51	9.1	5.50	NM	-18	NM
TW-17	13010	UBZ-4 γ3	May 31, 2013	10:30	Dedicated Pump	7.01	812	2.40	9.1	2.50	NM	-108	NM
TW-18	13011	LBZ-4	May 31, 2013	13:05	Dedicated Pump	6.08	950	0.55	10.4	0.99	NM	-225	NM
TW-20	13002	UBZ-2 γ4	May 30, 2013	14:55	Dedicated Pump	7.18	849	1.46	15.0	6.55	NM	140	NM
TW-22	13005	UBZ-2 γ4?	May 30, 2013	16:40	Dedicated Pump	6.65	592	1.11	9.9	2.84	NM	11	NM
TW-24	13028	UBZ-2 γ4	June 2, 2013	13:40	Non-Dedicated Pump	6.61	670	0.59	11.2	0.51	NM	-32	NM
TW-26	13020	UBZ-4 γ2	May 31, 2013	18:50	Dedicated Pump	6.85	859	0.70	10.8	1.10	NM	-251	NM
TW-29	13012	UBZ-4 γ3	May 31, 2013	13:45	Dedicated Pump	6.53	695	0.49	9.0	4.82	NM	-21	NM
TW-30	13024	UBZ-4 γ3	June 1, 2013	18:10	Dedicated Pump	6.77	823	0.60	10.9	4.94	NM	-52	NM
TW-33	13017	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	7.29	453	1.00	11.7	7.36	NM	10	NM
TW-34	13001	UBZ-2 γ3	May 30, 2013	14:30	Dedicated Pump	6.99	837	0.90	18.5	5.28	NM	49	NM
TW-35	13046	UBZ-2 γ3	June 4, 2013	17:50	Dedicated Pump	6.30	814	0.69	17.8	1.34	4.4	225	NM
TW-37	13041	UBZ-2 γ4	June 4, 2013	13:00	Dedicated Pump	6.64	669	1.61	11.4	3.18	7.0	246	NM
TW-38	13026	UBZ-3 γ3	June 2, 2013	10:05	Non-Dedicated Pump	7.26	529	0.70	10.5	6.13	NM	54	NM
TW-39	13045	UBZ-2 γ4	June 4, 2013	16:55	Dedicated Pump	6.65	943	0.58	20.1	2.71	7.7	265	NM
TW-40	13022	UBZ-4 γ3	June 1, 2013	16:15	Hand Bailed	6.78	1,012	42.3	14.0	5.15	NM	-32	NM
TW-41	13025	UBZ-4 γ3	June 1, 2013	18:35	Dedicated Pump	6.74	850	0.80	15.0	3.57	NM	-44	NM
TW-43	13023	UBZ-4 γ3	June 1, 2013	17:00	Hand Bailed	6.77	1,052	66.0	14.0	5.42	NM	-4	NM
TW-44	13099	LBZ-4	June 9, 2013	10:00	Dedicated Pump	6.79	650	4.63	16.7	140.4	8.0	140.4	239
TW-45	13039	LBZ-2 γ2	June 4, 2013	09:30	Dedicated Pump	6.09	696	0.63	11.6	2.24	4.3	230	NM
TW-48	13015	UBZ-4 γ3	May 31, 2013	15:40	Dedicated Pump	7.11	462	1.30	9.3	6.34	NM	22	NM
TW-49	13008	UBZ-4 γ3	May 31, 2013	09:25	Dedicated Pump	6.72	550	0.48	8.0	5.26	NM	-5	NM
TW-50	13021	UBZ-4 γ3	June 1, 2013	09:45	Dedicated Pump	7.01	904	1.47	12.7	1.48	NM	-98	NM
TW-53	13032	UBZ-1 γ5	June 3, 2013	11:15	Dedicated Pump	6.99	671	0.54	10.0	6.33	NM	92	NM
TW-54	13033	UBZ-2 γ4	June 3, 2013	11:45	Dedicated Pump	7.00	732	1.27	11.2	4.88	7.7	80	NM
TW-55	13043	UBZ-2 γ3	June 4, 2013	16:00	Dedicated Pump	6.52	536	0.73	10.6	4.51	6.9	279	NM
TW-56	13042	UBZ-3 γ3	June 4, 2013	14:40	Dedicated Pump	7.52	482	2.84	11.5	5.46	7.3	251	NM
TW-57	13048	UBZ-2 γ5?	June 5, 2013	09:00	Dedicated Pump	6.70	428	0.93	6.4	4.51	6.4	232	NM
TW-58	13027	UBZ-2 γ4	June 2, 2013	12:35	Non-Dedicated Pump	7.14	879	0.72	17.0	4.54	NM	36	NM
TW-59	13052	UBZ-2 γ4	June 5, 2013	13:40	Dedicated Pump	6.86	424	1.12	9.1	7.06	8.0	203	NM
TW-60	13051	UBZ-1 γ4	June 5, 2013	12:20	Dedicated Pump	6.32	479	1.58	10.0	2.65	5.0	221	NM
TW-61	13050	UBZ-1 γ4	June 5, 2013	11:00	Dedicated Pump	6.15	490	1.17	9.3	1.00	2.9	215	NM
TW-62	13054	UBZ-2 γ4	June 5, 2013	17:55	Dedicated Pump	6.58	430	1.01	9.9	4.91	6.9	207	526
TW-63	Not sampled - Dry	UBZ-2 γ5			Dedicated Pump								
TW-64	Not sampled - Dry	UBZ-2 γ5			Dedicated Pump								
TW-65	13059	UBZ-2 γ4	June 6, 2013	11:40	Dedicated Pump	6.88	517	0.97	11.5	6.36	NM	245	480
TW-66	13058	UBZ-2 γ3	June 6, 2013	10:00	Dedicated Pump	7.31	552	0.74	10.2	5.33	NM	167	456
TW-67	13061	UBZ-2 γ4/γ3	June 6, 2013	15:00	Dedicated Pump	7.15	393	0.94	11.0	2.11	NM	142	423
TW-68	13049	UBZ-1 γ5	June 5, 2013	09:50	Dedicated Pump	6.39	490	0.99	9.2	4.66	NM	201	NM
TW-69	13040	UBZ-1 γ5	June 4, 2013	12:00	Dedicated Pump	6.61	564	1.16	9.3	3.78	NM	267	NM
TW-70	13056	UBZ-2 γ3	June 5, 2013	18:20	Dedicated Pump	6.53	439	0.73	10.8	3.26	NM	153	453

Notes:
UBZ: Upper Basalt Zone
LBZ: Lower Basalt Zone
U: Unfiltered
F: Filtered
NA: Not applicable
NM: Not measured for samples after June 7, 2013 at 12:00 pm due to the unexpected expiration of a critical component of the dissolved oxygen meter.
NS: Not sampled
a: A second meter was used to confirm the readings of the first meter.

Table 8a: Analytical Results for Wells June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Alkalinity (Total) (mg/L as CaCO3)	Q	Alkalinity (Carbonate) (mg/L as CaCO3)	Q	Alkalinity (Bicarbonate) mg/L as CaCO3	Q	Ammonia as N (mg/L)	Q	Total Recoverable Cadmium mg/L	Q	Total Recoverable Calcium mg/L	Q	Chloride mg/L	Q	Fluoride (mg/L)	Q	Hardness (mg/L as $CaCO_3$)	Q	Total Recoverable Magnesium (mg/L)	Q	Total Recoverable Manganese (mg/L)	Q
REMEDIATION GOAL													0.005						4						0.18	
Harris Well	UBZ-2 γ4	13031	U		462		<1.0	U	462		0.09		<0.0007	U	171		121		3.27		955		128		<0.0014	U
Independent Well	UBZ	13060	U		382	J	<1.0	UJ	382	J	0.14	J	<0.0007	U	100		13.7		0.38		431		43.9		<0.0014	U
Lewis Well	UBZ-2 γ3 and γ4?	13095	U		431		<1.0	U	431		0.03		<0.0007	U	119		42.1		0.43		581		68.9		<0.0014	U
Maughn Well	UBZ	13053	U		667		<1.0	U	667		<0.03	U	<0.0007	U	57.1		28.7		0.90		626		117		0.007	
PW-01	UBZ,LBZ-4	13098	U		480		<1.0	U	480		<0.03	U	0.0449		146		89.3		0.95		698		80.8		<0.0014	U
PW-02	UBZ,LBZ-4	13097	U		457		<1.0	U	457		<0.03	U	0.0149		135		63.4		0.62		619		68.1		<0.0014	U
PW-03	UBZ,LBZ-4	13096	U		439	J	<1.0	UJ	439	J	<0.03	UJ	0.0036		123		56.5	J	0.46		546		58.0		<0.0014	U
PW-04	UBZ,LBZ-4	13006	U		452		<1.0	U	452		<0.03	U	<0.0007	U	116		16.8		0.38		538		60.4		<0.0014	U
SO2 Landfill North	UBZ-4 γ3	13013	U		208		<1.0	U	208		<0.03	U	<0.0007	U	94.0		22.1		0.41		310		18.4		<0.0014	U
SO2 Landfill South	UBZ-4 γ3	13014	U		450		<1.0	U	450		<0.03	U	<0.0007	U	119		16.5		0.32		557		63.1		<0.0014	U
Tigert East	UBZ	TE-1-2	U		527	J	<1.0	UJ	527	J	0.08	J	<0.0007	U	111		79.3	J	0.54	J	619		83.3		0.872	
Tigert South	UBZ	TS-1-2	U		691	J	<1.0	UJ	691	J	0.15	J	<0.0007	U	125		1.36	J	0.54	J	721		100		1.790	
TW-07	UBZ-1 γ3	13030	U		966		<1.0	U	966		0.16		<0.0007	U	111		51.1		1.24		1120		206		0.487	
TW-08	UBZ-1 γ3	13029	U		1380		<1.0	U	1380		0.79		<0.0007	U	54.9		21.5		<0.5	U	1450		318		0.101	
TW-10	UBZ-1 γ5	13004	U		765		<1.0	U	765		<0.03	U	<0.0007	U	138		65.8		2.43		962		150		<0.0014	U
TW-11	LBZ-3 γ2	13035	U		402		<1.0	U	402		6.55	D	<0.0007	U	104		29.6		0.24		423		39.8		<0.0014	U
TW-11	LBZ-3 γ2	13036	U	Duplicate	406		<1.0	U	406		6.64		<0.0007	U	103		30.4		0.25		420		39.8		<0.0014	U
TW-12	UBZ-3 γ3	13037	U		383		<1.0	U	383		7.21		<0.0007	U	99.0		24.2		0.31		404		38.2		0.0224	
TW-12	UBZ-3 γ3	13038	U	Split	401		<1.0	U	401		7.56		<0.0020	U	104		24.8		0.30		420		39.8		0.0220	
TW-15	UBZ-4 flow V?	13016	U		380		<1.0	U	380		<0.03	U	<0.0007	U	105		11.1		0.32		433		41.4		<0.0014	U
TW-16	UBZ-4 γ3	13009	U		612		<1.0	U	612		<0.03	U	0.452		162		99.0		1.92		853		109		<0.0014	U
TW-17	UBZ-4 γ3	13010	U		1080		<1.0	U	1080		0.19		0.0062		70.1		166		2.78		1390		295		3.160	
TW-18	LBZ-4	13011	U		1040		<1.0	U	1040		0.40		<0.0007	U	143		62.0		<0.5	U	1410		255		0.660	
TW-20	UBZ-2 γ4	13002	F		393		<1.0	U	393		<0.03	U	0.0040		152		90.8		1.37		773		95.5		<0.0014	U
TW-20	UBZ-2 γ4	13003	U	Duplicate	395		<1.0	U	395		<0.03	U	0.0039		152		92.2		1.39		772		95.4		<0.0014	U
TW-22	UBZ-2 γ4?	13005	U		740		<1.0	U	740		1.40		0.0243		144		31.0		3.22		828		114		0.791	
TW-24	UBZ-2 γ4	13028	U		717		<1.0	U	717		1.02		0.270		145		36.6		4.95		804		107		0.266	
TW-26	UBZ-4 γ2	13020	U		509		<1.0	U	509		0.58		<0.0007	U	137		234		1.80		884		132		0.592	
TW-29	UBZ-4 γ3	13012	U		623		<1.0	U	623		<0.03	U	<0.0007	U	146		39.7		0.15		744		92.1		<0.0014	U
TW-30	UBZ-4 γ3	13024	U		395		<1.0	U	395		<0.03	U	<0.0007	U	237		297		2.90		1190		145		0.0075	
TW-33	UBZ-4 γ4	13017	U	Split	420		<1.0	U	420		0.08	J	<0.0020	U	118		13.8		0.20	J	470	U	42.6		0.0050	
TW-33	UBZ-4 γ4	13018	U		397		<1.0	U	397		<0.03	U	<0.0007	U	115		14.6		0.33	J	456		41.2		0.0020	J
TW-33	UBZ-4 γ4	13019	U	Duplicate	399		<1.0	U	399		<0.03	U	<0.0007	U	116		14.9		0.32		460		41.6		0.002	J
TW-34	UBZ-2 γ3	13001	U		626		<1.0	U	626		<0.03	U	<0.0007	U	153		43.4		0.64		872		119		0.149	
TW-35	UBZ-2 γ3	13046	U		1170		<1.0	U	1170		0.23	J	<0.0007	U	167	J	29.1		<0.5	UJ	1330	J	284	J	0.159	
TW-35	UBZ-2 γ3	13047	U	Duplicate	1190		<1.0	U	1190		0.23		<0.0007	U	61.6	J	29.6		<0.1	U	1260	J	269	J	0.162	
TW-37	UBZ-2 γ4	13041	F		362		<1.0	U	362		0.37		0.757		130		382		7.70		1150		111		0.618	
TW-38	UBZ-3 γ3	13026	U		394		<1.0	U	394		<0.03	U	<0.0007	U	116		38.2		0.40		489		48.2		<0.001	U
TW-39	UBZ-2 γ4	13045	U		497		<1.0	U	497		<0.03	U	0.026		191		131		4.12		1130		159		<0.0014	U
TW-40	UBZ-4 γ3	13022	F		388		<1.0	U	388		<0.03	U	3.07		316		458		4.74		1420		154		0.0517	
TW-41	UBZ-4 γ3	13025	U		342		<1.0	U	342		0.04		0.0048		197		209		3.59		905		100		<0.001	U
TW-43	UBZ-4 γ3	13023	F		396		<1.0	U	396		<0.03	U	2.20		319		501		4.30		1440		156		0.0071	
TW-44	LBZ-4	13099	U/F		854		<1.0	U	854		0.34	J	0.0028		56.6		29.4	J	0.73	J	953		197		0.230	
TW-44	LBZ-4	13100	U/F	Split	878		<1.0	U	878		<0.03	U	0.0030		56.2		30.0	J	0.40	J	930		191		0.216	
TW-45	LBZ-2 γ2	13039	U		979		<1.0	U	979		0.73		0.0031		142		24.9		0.92		1100		180		0.477	
TW-48	UBZ-4 γ3	13015	U		397		<1.0	U	397		<0.03	U	<0.0007	U	109		15.2		0.31		492		53.2		<0.0014	U
TW-49	UBZ-4 γ3	13008	U		486		<1.0	U	486		<0.03	U	<0.0007	U	126		24.3		0.43		598		68.4		<0.0014	U
TW-50	UBZ-4 γ3	13021	U		476		<1.0	U	476		<0.03	U	0.0046		161		239		1.16		1170		186		0.721	

Table 8a: Analytical Results for Wells June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Alkalinity (Total) (mg/L as CaCO3)	Q	Alkalinity (Carbonate) (mg/L as CaCO3)	Q	Alkalinity (Bicarbonate) mg/L as CaCO3	Q	Ammonia as N (mg/L)	Q	Total Recoverable Cadmium mg/L	Q	Total Recoverable Calcium mg/L	Q	Chloride mg/L	Q	Fluoride (mg/L)	Q	Hardness (mg/L as $CaCO_3$)	Q	Total Recoverable Magnesium (mg/L)	Q	Total Recoverable Manganese (mg/L)	Q
TW-53	UBZ-1 γ5	13032	U		469		<1.0	U	469		0.04		<0.0007	U	180		101		3.09		975		127		<0.0014	U
TW-54	UBZ-2 γ4	13033	U		436		<1.0	U	436		0.63	J	0.003		217		123		2.39	J	1100		136		0.0017	J
TW-54	UBZ-2 γ4	13034	U	Split	462		<1.0	U	462		<0.05	UJ	<0.0020	U	215		129		1.90	J	1100		138		0.013	J
TW-55	UBZ-2 γ3	13043	U		651		<1.0	U	651		<0.03	U	<0.0007	U	175		48.7		0.59	J	891		110		<0.0014	U
TW-55	UBZ-3 γ3	13044	U	Split	678		<1.0	U	678		0.12		<0.0020	U	172		52.6		0.30	J	880		109		0.0030	
TW-56	UBZ-3 γ3	13042	U		387		<1.0	U	387		<0.03	U	<0.0007	U	114		44.7		0.33		554		65.1		0.0132	
TW-57	UBZ-2 γ5?	13048	U		696		<1.0	U	696		<0.03	U	<0.0007	U	152		15.7		0.47		749		89.7		<0.0014	U
TW-58	UBZ-2 γ4	13027	U		397		<1.0	U	397		0.03		0.0076		175		95.6		2.00		892		110		<0.0014	U
TW-59	UBZ-2 γ4	13052	U		610		<1.0	U	610		<0.03	U	<0.0007	U	174		58.2		0.67		860		103		<0.0014	U
TW-60	UBZ-1 γ4	13051	U		1150		<1.0	U	1150		0.44		<0.0007	U	68.4		19.3		0.18		1160		241		5.560	
TW-61	UBZ-1 γ4	13050	U		1080		<1.0	U	1080		0.64		<0.0007	U	94.8		22.9		1.12		1110		212		0.542	
TW-62	UBZ-2 γ4	13054	U		640		<1.0	U	640		<0.03	U	<0.0007	U	188		73.1		0.61		963		120		<0.0014	U
TW-62	UBZ-2 γ4	13055	U	Duplicate	635		<1.0	U	635		<0.03	U	<0.0007	U	186		70.8		0.61		952		118		<0.0014	U
TW-65	UBZ-2 γ4	13059	U		694	J	<1.0	U	694	J	<0.03	UJ	<0.0007	U	187		51.6	J	0.11	J	908		107		<0.0014	U
TW-66	UBZ-2 γ3	13058	U		914	J	<1.0	UJ	914	J	<0.03	UJ	<0.0007	U	155		39.7	J	0.83	J	1040		160		0.0496	
TW-67	UBZ-2 γ4/γ3	13061	U		385		<1.0	U	385		3.89		<0.0007	U	104		28.4		0.41		441		43.6		0.0120	
TW-67	UBZ-2 γ4/γ3	13062	U	Split	402		<1.0	U	402		4.30		<0.0020	U	109		29.1		0.30		460		45.2		0.0140	
TW-68	UBZ-1 γ5	13049	U		845		<1.0	U	845		<0.03	U	<0.0007	U	123		12.7		0.18		836		129		<0.0014	U
TW-69	UBZ-1 γ5	13040	U		818		<1.0	U	818		<0.03	U	0.135		136		23.0		3.68		869		128		<0.0014	U
TW-70	UBZ-2 γ3	13056	U		861		<1.0	U	861		<0.03	U	<0.0007	U	212		56.0		0.12	J	1100		139		<0.0014	U
TW-70	UBZ-2 γ3	13057	U	Duplicate	851		<1.0	U	851		<0.03	U	<0.0007	U	211		57.5		0.12		1100		139		<0.0014	U

Notes:

"-" Not applicable
na: not analyzed
ns: no sample
J - The result is an estimated value.
J- - The result is an estimated value with low bias.
J+ - The result is an estimated value with high bias.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
D - A dilution was applied for the analysis
N - Unfiltered
Y - Filtered

Table 8a: Analytical Results for Wells June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Total Recoverable Molybdenum (mg/L)	Q	Nitrate and Nitrite as N (mg/L)	Q	Phosphorus (Total) (mg/L)	Q	Total Recoverable Potassium (mg/L)	Q	Total Recoverable Selenium (mg/L)	Q	Total Recoverable Sodium (mg/L)	Q	Sulfate (mg/L)	Q	Total Dissolved Solids (mg/L)	Q	Total Recoverable Vanadium (mg/L)	Q	Total Recoverable Zinc (mg/L)	Q
REMEDIATION GOAL							10						0.05											
Harris Well	UBZ-2 γ4	13031	U		0.0576		7.35		0.201		20.7		0.258		82.0		499		1480		0.0056		0.0064	J
Independent Well	UBZ	13060	U		0.0042	J	1.92	J	0.013	J	2.93		0.0018	J	11.0		40.3		440	J	0.0032	J	0.0483	
Lewis Well	UBZ-2 γ3 and γ4?	13095	U		0.0826		7.11		0.106		6.59		0.0140		36.8		145		719		0.0048	J	<0.0025	U
Maughn Well	UBZ	13053	U		0.0045	J	4.88		0.172		12.8		0.0021		76.4		70.9		797		<0.0015	U	0.0047	J
PW-01	UBZ,LBZ-4	13098	U		0.0366		4.63		1.210	D	13.1		0.0420		87.4		269		1020		0.0115		0.0660	
PW-02	UBZ,LBZ-4	13097	U		0.0415		4.47		0.589		8.79		0.0190		63.7		184		824		0.0201		0.0200	
PW-03	UBZ,LBZ-4	13096	U		0.0366		3.74	J	0.375	J	6.51		0.0120		50.9		129		753	J	0.0638		0.0114	
PW-04	UBZ,LBZ-4	13006	U		0.0028	U	3.67		0.098		4.80		0.0016	J	21.2		89.2		632		0.0029	J	<0.0025	U
SO2 Landfill North	UBZ-4 γ3	13013	U		<0.0018	U	17.1		0.087		2.30		0.0031		25.2		49.0		404		0.0077		<0.0025	U
SO2 Landfill South	UBZ-4 γ3	13014	U		0.0027	J	3.95		0.073		4.94		0.0015	J	22.7		92.6		620		0.0030	J	<0.0025	U
Tigert East	UBZ	TE-1-2	U		0.0036	J	0.54	J	0.163	J	4.63		0.0004	J	35.2		46.7		738	J	0.0026	J	0.0165	
Tigert South	UBZ	TS-1-2	U		<0.002	U	<0.05	UJ	0.138	J	4.01		<0.00026	U	48.1		4.41		853	J	0.0018	J	0.0033	J
TW-07	UBZ-1 γ3	13030	U		0.0058	J	0.079		0.192		16.4		0.0230		54.0		157		1240		0.0018	J	<0.0025	U
TW-08	UBZ-1 γ3	13029	U		0.0026	J	<0.05	U	0.906		22.2		0.00036	J	50.5		80.5		1420		<0.0015	U	<0.0025	U
TW-10	UBZ-1 γ5	13004	U		0.0418		6.97		0.550		12.5		0.3010		60.8		181		1100		0.0080		0.0080	J
TW-11	LBZ-3 γ2	13035	U		0.0032	J+	4.43		0.047		9.64		0.0027		57.5		57.5		578	J	0.0021	J	<0.0025	U
TW-11	LBZ-3 γ2	13036	U	Duplicate	0.0030	J+	4.42		0.053		9.52		0.0026		56.7		56.7		588	J	0.0019	J	<0.0025	U
TW-12	UBZ-3 γ3	13037	U		0.0025	J	6.65		0.559		8.28		0.0015	J	55.5		83.1		572	J	0.0026	J	<0.0025	U
TW-12	UBZ-3 γ3	13038	U	Split	0.378		6.44		0.529		6.10		0.0016		42.1		84.1		602	J	0.657		<0.01	U
TW-15	UBZ-4 flow V?	13016	U		<0.0018	U	1.36		0.032		2.33		0.0030		8.24		41.4		443		0.0020	J	<0.0025	U
TW-16	UBZ-4 γ3	13009	U		0.0079	U	4.33		2.16		9.58		0.1260		56.2		179		1040		0.0556		1.65	
TW-17	UBZ-4 γ3	13010	U		0.0276		0.261		1.60		22.0		0.0580		94.5		228		1560		0.0038	J	0.0530	
TW-18	LBZ-4	13011	U		0.0073	J	<0.05	U	0.789		21.4		0.0013	J	81.8		429		1600		<0.0015	U	0.0066	J
TW-20	UBZ-2 γ4	13002	F		0.0367		8.23		0.188		11.9		0.0650		55.0		322		1090		0.0058		0.0679	
TW-20	UBZ-2 γ4	13003	U	Duplicate	0.0353		8.80		0.192		12.0		0.0700		55.3		325		1050		0.0060		0.0699	
TW-22	UBZ-2 γ4?	13005	U		0.251		2.82		0.421		28.6		0.1550		48.2		131		986		0.0055		0.105	
TW-24	UBZ-2 γ4	13028	U		0.228		4.41		0.355		26.0		0.2660		50.6		137		1000		0.0798		2.00	
TW-26	UBZ-4 γ2	13020	U		0.108		4.23		0.518		26.5		0.3080		146		351		1340		0.0052		<0.0025	U
TW-29	UBZ-4 γ3	13012	U		0.0023	J	3.22		0.112		6.38		0.0030	J	27.9		84.2		807		0.0033	J	<0.0025	U
TW-30	UBZ-4 γ3	13024	U		0.0961		5.51		4.29		38.7		0.1640		220		864		2210		0.0048	J	0.0061	J
TW-33	UBZ-4 γ4	13017	U	Split	0.0370		2.62		0.160	J	2.50		<0.00026	U	14.8		40.7		497	J	0.411		<0.01	U
TW-33	UBZ-4 γ4	13018	U		0.0328		2.48		0.160	J	2.40		0.0023		14.3		42.1		477		0.403		0.0048	J
TW-33	UBZ-4 γ4	13019	U	Duplicate	0.0331		2.67		0.786	J	2.41		0.0022		14.5		41.4		476		0.410		0.0046	J
TW-34	UBZ-2 γ3	13001	U		0.0034	U	0.448		0.090		10.7		0.0200	J	26.0		236		1010		<0.0015	U	0.0048	J
TW-35	UBZ-2 γ3	13046	U		0.0029	J+	<0.05	U	0.588		21.2	J	<0.00026	U	46.3	J	125		1280		<0.0015	U	<0.0025	U
TW-35	UBZ-2 γ3	13047	U	Duplicate	0.0029	J	2.10	J	0.556		20.1	J	<0.00026	U	45.0	J	124		1280		<0.0015	U	<0.003	U
TW-37	UBZ-2 γ4	13041	F		0.232		7.53		0.768		30.3		0.289		60.9		328		1790		0.0426		3.90	
TW-38	UBZ-3 γ3	13026	U		0.0396		3.05		0.128		3.56		0.0049		23.2		68.4		591		0.133		<0.003	U
TW-39	UBZ-2 γ4	13045	U		0.100		7.23		0.360		34.5		0.3850		109		569		1610		0.0154		0.41	
TW-40	UBZ-4 γ3	13022	F		0.140		12.2		7.93		60.8		0.8500		269		958		2620		0.0493		6.02	
TW-41	UBZ-4 γ3	13025	U		0.118		6.46		4.80		35.0		0.2540		153		592		1620		0.0127		0.0107	
TW-43	UBZ-4 γ3	13023	F		0.101		10.5		13.1		52.0		0.8320	J	292		1010		2910		0.0595		3.120	
TW-44	LBZ-4	13099	U/F		0.0054	J	<0.05	U	2.21		12.6		0.0004	J	33.5		109		954	J	0.0026	J	0.068	
TW-44	LBZ-4	13100	U/F	Split	0.0090		0.010		1.98		12.1		0.0007		31.4		105		14400	J+	0.0040		0.070	
TW-45	LBZ-2 γ2	13039	U		0.0025	J+	<0.05	U	0.414		19.3		<0.00026	U	49.8		116		1170		<0.0015	U	0.0359	
TW-48	UBZ-4 γ3	13015	U		<0.0018	U	4.78		0.144		4.43		0.0017	J	19.0		75.8		556		0.0035	J	0.0061	J
TW-49	UBZ-4 γ3	13008	U		0.0122	J+	3.71		0.104		5.40		0.0027		33.7		125		723		0.0031	J	<0.0025	U
TW-50	UBZ-4 γ3	13021	U		0.0263		0.683		0.603		18.5		0.0210		128		590		1630		0.0053		0.0196	

Table 8a: Analytical Results for Wells June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Total Recoverable Molybdenum (mg/L)	Q	Nitrate and Nitrite as N (mg/L)	Q	Phosphorus (Total) (mg/L)	Q	Total Recoverable Potassium (mg/L)	Q	Total Recoverable Selenium (mg/L)	Q	Total Recoverable Sodium (mg/L)	Q	Sulfate (mg/L)	Q	Total Dissolved Solids (mg/L)	Q	Total Recoverable Vanadium (mg/L)	Q	Total Recoverable Zinc (mg/L)	Q
TW-53	UBZ-1 γ5	13032	U		0.0532		7.18		0.182		19.2		0.2340		80.7		433		1410		0.0053		0.0082	J
TW-54	UBZ-2 γ4	13033	U		0.0528		10.5		0.226		21.4		0.2700		99.5		600		1670	J	0.0049	J	0.0894	
TW-54	UBZ-2 γ4	13034	U	Split	0.0500		10.2		0.219		20.1		0.2520		98.2		611		1580	J	0.0060		0.0900	
TW-55	UBZ-2 γ3	13043	U		0.0035	J+	3.96		0.104	J	9.88		0.0200		37.7		159		990	J	0.002	J	<0.0025	U
TW-55	UBZ-3 γ3	13044	U	Split	0.0050		3.93		0.128	J	9.40		0.0231		36.5		157		3030	J+	<0.003	U	<0.01	U
TW-56	UBZ-3 γ3	13042	U		0.0897		5.87		0.072		7.78		0.0019	J	33.5		126		683		0.0019	J	0.0209	
TW-57	UBZ-2 γ5?	13048	U		0.0024	J	2.11		0.162		7.25		0.0026		27.6		78.8		842		0.0026	J	<0.0025	U
TW-58	UBZ-2 γ4	13027	U		0.0411		10.50		0.184		16.5		0.1340		73.2		439		1300		0.0063		0.0694	
TW-59	UBZ-2 γ4	13052	U		0.0028	J	6.83		0.086		9.25		0.0680		46.8		220		1110		0.0028	J	<0.0025	U
TW-60	UBZ-1 γ4	13051	U		0.0025	J	<0.05	U	0.256		14.7		<0.00026	U	34.5		75.3		1180		<0.0015	U	0.0216	
TW-61	UBZ-1 γ4	13050	U		<0.0018	U	0.090		0.720		16.4		<0.00026	U	38.6		93.0		1190		<0.0015	U	0.0164	
TW-62	UBZ-2 γ4	13054	U		0.0057	J	6.72		0.089		11.1		0.1050		58.9		298		1250		0.0034	J	<0.0025	U
TW-62	UBZ-2 γ4	13055	U	Duplicate	0.0057	J	6.77		0.098		10.9		0.1030		58.0		293		1240		0.0031	J	0.0028	J
TW-65	UBZ-2 γ4	13059	U		0.0026	J	7.29	J	0.267	J	8.84		0.0730		39.5		207		1140	J	0.0035	J	<0.0025	U
TW-66	UBZ-2 γ3	13058	U		0.0045	J	1.98	J	0.071	J	11.6		0.0270	J	31.3		151		1180	J	0.0024	J	<0.0025	U
TW-67	UBZ-2 γ4/γ3	13061	U		0.315		7.65		0.379		5.97		0.0034		43.4		90.5		581		0.2500		<0.0025	U
TW-67	UBZ-2 γ4/γ3	13062	U	Split	0.316		7.56		0.375		6.10		0.0036		43.1		90.0		619		0.2460		<0.01	U
TW-68	UBZ-1 γ5	13049	U		<0.0018	U	1.36		0.190		11.3		<0.00026	U	37.3		54.0		919		0.0066		<0.0025	U
TW-69	UBZ-1 γ5	13040	U		0.101		3.70		0.19		19.60		0.160		45.5		95.1		1010		0.0109		0.923	
TW-70	UBZ-2 γ3	13056	U		<0.0018	U	4.35		0.12		10.5		0.0760		44.8		250		1280		0.0028	J	<0.0025	U
TW-70	UBZ-2 γ3	13057	U	Duplicate	<0.0018	U	4.47		0.12		10.5		0.0750		44.6		251		1280		0.0030	J	<0.0025	U

Notes:
"-" Not applicable
na: not analyzed
ns: no sample
J - The result is an estimated value.
J- - The result is an estimated value with low bias.
J+ - The result is an estimated value with high bias.
UJ - The analyte was analyzed for but was not detected.
The reported quantitation limit is approximate and may be
inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
D - A dilution was applied for the analysis
N - Unfiltered
Y - Filtered

Table 8b: Analytical Results for Springs, Surface Water, and Non-Contact Cooling Water June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Alkalinity (Total) (mg/L as CaCO3)	Q	Alkalinity (Carbonate) (mg/L as CaCO3)	Q	Alkalinity (Bicarbonate) mg/L as CaCO3	Q	Ammonia as N (mg/L)	Q	Total Recoverable Cadmium (mg/L)	Q	Dissolved Cadmium (mg/L)	Q	Total Recoverable Calcium (mg/L)	Q	Dissolved Calcium (mg/L)	Q	Chloride (mg/L)	Q	Fluoride (mg/L)	Q	Total Hardness (mg/L as $CaCO_3$)	Q	Total Recoverable Magnesium (mg/L)	Q
REMEDIATION GOAL													0.005		0.005								4					
Groundwater - Springs																												
Calf Spring	UBZ-1 γ5?	Not Sampled																										
Big Spring	UBZ-1 γ5?	13087	U/F		403	J	1	UJ	403		2.96	J	<0.0007	U	<0.0007	U	97.7		98.4		31.9	J	0.33	J	425		43.9	
City Park Spring	UBZ-1 γ5?	13086	U/F		552	J	1	UJ	552		0.949	J	<0.0007	U	<0.0007	U	137		132		43.9	J	0.62	J	617		66.7	
Homestead Spring	UBZ-1 γ5?	13085	U/F		578	J	1	UJ	578		0.037	J	<0.0007	U	<0.0007	U	116		109		40.5	J	0.50	J	727		107	
MARSH SPRING	UBZ-1 γ5?	13066	U/F		949	J	1	UJ	949		0.229	J	0.00073	J	<0.0007	U	141		148		13.6	J	0.96	J	924		139	
MC-1 Mormon Creek	UBZ-1 γ5?	13083	U/F		583	J	1	UJ	583		0.039	J	0.0070		0.0022		132		131		161	J	2.47	J	837		123	
Mormon A Spring	UBZ-1 γ5?	13076	U/F		526	J	1	UJ	526		0.038	J	0.0162		0.0153		158		156		109	J	3.24	J	961		138	
Mormon A Spring	UBZ-1 γ5?	13077	U/F	Split	541				541		<0.05	UJ	0.0160		0.0160		166		165		110		2.70		1000		145	
Mormon B Spring	UBZ-1 γ5?	13078	U/F		630	J	1	UJ	630		<0.03	UJ	<0.0007	U	<0.0007	U	124		125		133	J	1.82	J	838		128	
Mormon C Spring	UBZ-1 γ5?	13079	U/F		475	J	1	UJ	475		<0.03	UJ	<0.0007	U	<0.0007	U	145		146		92.2	J	2.11	J	841		116	
SW Spring above the confluence with Soda Creek	UBZ-1 γ5?	13081	U/F		874	J	1	U	874		0.073	J	0.0067		<0.0007	U	124		115		16.0	J	0.80	J	877		138	
SW Spring at Government Dam Road	UBZ-1 γ5?	13064	U/F		867		1	U	867		0.074		0.0039		0.0015	J	121		121		15.2		0.98		874		139	
SW Spring at Government Dam Road	UBZ-1 γ5?	13065	U/F	Duplicate	898	J	1	UJ	898	J	0.057	J	0.0043		0.0017	J	118		117		15.4	J	1.06	J	859		137	
Surface Water/Non-Contact Cooling Water																												
LITTLE SPRING POND DOWN		13093	U/F		321	J	1	UJ	300	J	0.047	J	<0.0007	U	<0.0007	U	67.4		66.1		10.1	J	0.31	J	344		42.6	
LITTLE SPRING POND UP		13094	U/F		307	J	1	UJ	284	J	<0.03	UJ	<0.0007	U	<0.0007	U	58.0		58.3		10.5	J	0.32	J	311		40.2	
Non-Contact Cooling Water 1		13070	U/F		460	J	31	J	429	J	0.043	J	0.0054		0.0038		129		128		512	J	0.92	J	591		65.1	
Non-Contact Cooling Water 2		13071	U/F		466	J	44	J	421	J	0.055	J	0.0054		0.0035		131		130		528	J	0.93	J	593		64.7	
Non-Contact Cooling Water 3		13072	U/F		461	J	33	J	428	J	0.045	J	0.0054		0.0037		128		129		512	J	0.89	J	582		64.1	
Non-Contact Cooling Water Pond Inlet		13063	U/F		460	J	1	UJ	460	J	0.037	J	0.0089		0.0084		122		119		62.7	J	0.67	J	550		59.6	
PR-1 Power Return Canal		13073	U/F		511	J	1	UJ	511	J	0.081	J	<0.0007	U	<0.0007	U	79.0		81.7		41.2	J	0.43	J	489		70.7	
SC-01 Soda Up		13067	U/F		511	J	1	UJ	511	J	0.078	J	<0.0007	U	<0.0007	U	79.9		78.7		11.0	J	0.41	J	509		75.2	
SC-02 Soda Weir		13068	U/F		503		1	U	503		0.094		<0.0007	U	<0.0007	U	82.4		80.5		23.8		0.34		522		76.8	
SC-03 Soda Mid		13082	U/F		879	J	1	U	879	J	0.097	J	0.0065		<0.0007	U	121		117		17.6	J	0.84	J	872		138	
SC-04 Soda Down		13084	U/F		822	J	1	UJ	822	J	0.112	J	0.0034		0.0008	J	126		127		41.5	J	0.94	J	844		129	
SC-05 Soda Below Weir		13069	U/F		727	J	1	UJ	727	J	0.319	J	<0.0007	U	<0.0007	U	104		102		14.2	J	0.63	J	701		107	
SC-06 Soda at Property Line		13092	U/F		803	J	1	UJ	792	J	0.038	J	0.0026		<0.0007	U	132		136		41.2	J	0.94	J	882		134	
SC-07 Soda Upstream Power Return		13074	U/F		747	J	1	UJ	747	J	0.049	J	0.0033		<0.0007	U	125		117		41.5	J	0.87	J	834		127	
SC-08 Soda at Octagon Park		13075	U/F		526	J	1	UJ	526	J	0.070	J	<0.0007	U	<0.0007	U	84.5		85.7		27.8	J	0.44	J	517		74.4	
SC-08 Soda at Octagon Park		13101	U/F		526		1	U	526		0.068	J	<0.0007	U	<0.0007	U	89.4		87.2		20.7		0.34		544		77.8	
SC-08 Soda at Octagon Park		13102	U/F	Split	541				541		0.033	J	<0.002	U	<0.002	U	91.7		90.4		21.4		0.30		560		80.9	
SC-09 Soda above Diversion		13088	U/F		520	J	1	UJ	520	J	0.063	J	<0.0007	U	0.0007	J	85.8		90.4		40.5	J	0.44	J	526		75.6	
SC-10 Soda at Railroad Bridge		13091	U/F		586	J	1	UJ	586	J	0.041	J	0.00089	J	0.0008	J	124		121		23.9	J	0.39	J	664		86.0	
SC-11 Soda at Highway 30		13089	U/F		608	J	1	UJ	608	J	0.047	J	0.00086	J	0.0007	J	130		131		28.0	J	0.41	J	687		88.0	
SC-11 Soda at Highway 30		13090	U/F	Duplicate	598	J	1	UJ	598	J	<0.03	UJ	<0.0007	U	<0.0007	U	134		135		26.2	J	0.52	J	708		91.0	

Notes:
"-" Not applicable
na: not analyzed
ns: no sample
J - The result is an estimated value.
J- - The result is an estimated value with low bias.
J+ - The result is an estimated value with high bias.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
D - A dilution was applied for the analysis
N - Unfiltered
Y - Filtered

Table 8b: Analytical Results for Springs, Surface Water, and Non-Contact Cooling Water June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Dissolved Magnesium (mg/L)	Q	Total Recoverable Manganese (mg/L)	Q	Dissolved Manganese (mg/L)	Q	Total Recoverable Molybdenum (mg/L)	Q	Dissolved Molybdenum (mg/L)	Q	Nitrate and Nitrite as N (mg/L)	Q	Phosphorus (Total) (mg/L)	Q	Total Recoverable Potassium (mg/L)	Q	Dissolved Potassium (mg/L)	Q
REMEDIATION GOAL							0.18		0.18						10							
Groundwater - Springs																						
Calf Spring	UBZ-1 γ5?	Not Sampled																				
Big Spring	UBZ-1 γ5?	13087	U/F		44.3		<0.0014	U	<0.0014	U	0.278		0.274		6.62	J	0.090	J	6.11		6.07	
City Park Spring	UBZ-1 γ5?	13086	U/F		64.5		0.0763		0.0732		0.144		0.136		4.23	J	0.132	J	7.60		7.25	
Homestead Spring	UBZ-1 γ5?	13085	U/F		103		<0.0014	U	<0.0014	U	0.0032	J	0.0028	J	11.80	J	0.288	J	6.60		6.39	
MARSH SPRING	UBZ-1 γ5?	13066	U/F		137		0.749		0.919		0.0037	J	0.0025	J	0.06	J	2.380	J	14.2		14.1	
MC-1 Mormon Creek	UBZ-1 γ5?	13083	U/F		124		0.0137		0.0072		0.0427		0.0397		4.49	J	0.369	J	18.7		18.9	
Mormon A Spring	UBZ-1 γ5?	13076	U/F		134		<0.0014	U	<0.0014	U	0.0670		0.0672		6.93	J	0.355	J	24.3		22.6	
Mormon A Spring	UBZ-1 γ5?	13077	U/F	Split	143		<0.001	U	0.002		0.0660		0.0640		6.90		0.326	J	23.7		23.2	
Mormon B Spring	UBZ-1 γ5?	13078	U/F		128		<0.0014	U	<0.0014	U	0.0252		0.0276		5.75	J	0.566	J	15.1		14.4	
Mormon C Spring	UBZ-1 γ5?	13079	U/F		115		<0.0014	U	<0.0014	U	0.0264		0.0286		8.01	J	0.366	J	20.2		19.6	
SW Spring above the confluence with Soda Creek	UBZ-1 γ5?	13081	U/F		131		0.0389		0.0169		0.0164		0.0187		1.78	J	0.412	J	12.6		11.5	
SW Spring at Government Dam Road	UBZ-1 γ5?	13064	U/F		136		0.0152		0.0144		0.0155		0.0128	J	1.87		0.187	J	12.2		12.0	
SW Spring at Government Dam Road	UBZ-1 γ5?	13065	U/F	Duplicate	133		0.0161		0.0138		0.0198	J	0.0192	J	1.92	J	0.230	J	12.1		11.5	
Surface Water/Non-Contact Cooling Water																						
LITTLE SPRING POND DOWN		13093	U/F		42.5		<0.0014	U	<0.0014	U	0.0584		0.0594		0.280	J	<0.01	UJ	2.42		2.28	
LITTLE SPRING POND UP		13094	U/F		40.7		<0.0014	U	<0.0014	U	0.0615		0.0637		0.441	J	<0.01	UJ	2.42		2.45	
Non-Contact Cooling Water 1		13070	U/F		63.6	J	<0.0014	U	<0.0014	U	0.0355		0.0342		3.59	J	0.476	J	7.37		7.41	J
Non-Contact Cooling Water 2		13071	U/F		63.9		<0.0014	U	<0.0014	U	0.0394		0.0392		3.58	J	0.507	J	7.45		7.31	
Non-Contact Cooling Water 3		13072	U/F		64.3		<0.0014	U	<0.0014	U	0.0343		0.0362		3.58	J	0.480	J	7.32		7.46	
Non-Contact Cooling Water Pond Inlet		13063	U/F		58.7		<0.0014	U	<0.0014	U	0.0388		0.0397		3.99	J	0.639	J	7.62		7.19	
PR-1 Power Return Canal		13073	U/F		71.3		0.115		0.103		0.0076	J	0.0073	J	0.745	J	0.096	J	8.01		8.05	
SC-01 Soda Up		13067	U/F		73.9		0.154		0.122		0.0025	J	0.0056	J	0.473	J	0.106	J	8.40		8.31	
SC-02 Soda Weir		13068	U/F		74.2		0.154		0.129		<0.0018	U	0.0051	J	0.525		0.099		8.51		8.30	
SC-03 Soda Mid		13082	U/F		133		0.0896		0.0647		0.0170		0.0166		1.58	J	0.286	J	12.9		12.0	
SC-04 Soda Down		13084	U/F		132		0.112		0.102		0.0189		0.0199		1.61	J	0.357	J	13.6		14.2	
SC-05 Soda Below Weir		13069	U/F		102		0.452		0.310		0.0061	J	0.0079	J	0.089	J	4.940	J	12.5		11.4	
SC-06 Soda at Property Line		13092	U/F		140		0.109		0.0837		0.0157		0.0176		1.51	J	0.280	J	14.0		14.7	
SC-07 Soda Upstream Power Return		13074	U/F		124		0.108		0.0714		0.0133		0.0154		1.49	J	0.326	J	13.7		13.6	
SC-08 Soda at Octagon Park		13075	U/F		73.3		0.112		0.0981		0.0073	J	0.0079	J	0.790	J	0.111	J	8.45		8.36	
SC-08 Soda at Octagon Park		13101	U/F		74.5		0.126		0.118		0.0040	J	0.0042	J	0.736		0.105		8.66		8.40	
SC-08 Soda at Octagon Park		13102	U/F	Split	79.4		0.118		0.111		0.0070		0.0080		0.721		0.103		8.70		8.50	
SC-09 Soda above Diversion		13088	U/F		80.8		0.124		0.102		0.0036	J	0.0049	J	0.620	J	0.129	J	8.57		9.18	
SC-10 Soda at Railroad Bridge		13091	U/F		83.1		0.136		0.127		0.0053	J	0.0042	J	0.489	J	0.087	J	10.5		10.1	
SC-11 Soda at Highway 30		13089	U/F		89.0		0.150		0.147		0.0053	J	0.0054	J	0.501	J	0.068	J	10.7		10.7	
SC-11 Soda at Highway 30		13090	U/F	Duplicate	92.6		0.167		0.155		0.0031	J	0.0046	J	0.495	J	0.068	J	10.9		10.9	

Notes:
"-" Not applicable
na: not analyzed
ns: no sample
J - The result is an estimated value.
J- - The result is an estimated value with low bias.
J+ - The result is an estimated value with high bias.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
D - A dilution was applied for the analysis
N - Unfiltered
Y - Filtered

Table 8b: Analytical Results for Springs, Surface Water, and Non-Contact Cooling Water June 2013 Sample Round

Location	Formation and Zone	Sample Number	Filtered	Sample Type	Total Recoverable Selenium (mg/L)	Q	Dissolved Selenium (mg/L)	Q	Total Recoverable Sodium (mg/L)	Q	Dissolved Sodium (mg/L)	Q	Sulfate (mg/L)	Q	Total Dissolved Solids (mg/L)	Q	Total Recoverable Vanadium (mg/L)	Q	Dissolved Vanadium (mg/L)	Q	Total Recoverable Zinc (mg/L)	Q	Dissolved Zinc (mg/L)	Q
REMEDIATION GOAL					0.05		0.05																	
Groundwater - Springs																								
Calf Spring	UBZ-1 γ5?	Not Sampled																						
Big Spring	UBZ-1 γ5?	13087	U/F		0.0033		0.0034		45.4		45.4		89.2	J	602	J	0.0057		0.0058		<0.0025	U	<0.0025	U
City Park Spring	UBZ-1 γ5?	13086	U/F		0.0031		0.0031		42.0		39.6		96.3	J	773	J	0.0022	J	0.0024	J	<0.0025	U	<0.0025	U
Homestead Spring	UBZ-1 γ5?	13085	U/F		0.039		0.039		37.5		34.8		154.0	J	920	J	0.0046	J	0.0046	J	<0.0025	U	<0.0025	U
MARSH SPRING	UBZ-1 γ5?	13066	U/F		<0.0003	U	<0.0003	U	34.7		33.3		33.9	J	981	J	0.0034	J	<0.0015	U	0.0102		<0.0025	U
MC-1 Mormon Creek	UBZ-1 γ5?	13083	U/F		0.196	J	0.196	J	130.0		130.0		332.0	J	1380	J	0.0109		0.0099		0.105		0.073	
Mormon A Spring	UBZ-1 γ5?	13076	U/F		0.273		0.265		89.3		86.5		446.0	J	1420	J	0.0145		0.0157		0.219		0.211	
Mormon A Spring	UBZ-1 γ5?	13077	U/F	Split	0.294		0.282		94.3		90.8		452.0		1450		0.0150		0.0150		0.220		0.230	
Mormon B Spring	UBZ-1 γ5?	13078	U/F		0.173		0.167		113.0		112.0		263.0	J	1240	J	0.0060		0.0069		<0.0025	U	<0.0025	U
Mormon C Spring	UBZ-1 γ5?	13079	U/F		0.192		0.186		69.9		70.3		389.0	J	1230	J	0.0064		0.0076		<0.0025	U	<0.0025	U
SW Spring above the confluence with Soda Creek	UBZ-1 γ5?	13081	U/F		0.022		0.020		41.4		38.0		59.2	J	942	J	0.0053		0.0050	J	0.0699		0.0324	
SW Spring at Government Dam Road	UBZ-1 γ5?	13064	U/F		0.018		0.017	J	41.4		39.7		59.6		927		0.0056		0.0051		0.0598		0.0545	
SW Spring at Government Dam Road	UBZ-1 γ5?	13065	U/F	Duplicate	0.018	J	0.017	J	40.3		38.9		59.5	J	934	J	0.0052		0.0050	J	0.0572		0.0532	
Surface Water/Non-Contact Cooling Water																								
LITTLE SPRING POND DOWN		13093	U/F		0.00096	J	0.0009	J	15.3		15.2		41.2	J	374	J	0.0164		0.0162		<0.0025	U	<0.0025	U
LITTLE SPRING POND UP		13094	U/F		0.00100	J	0.0011	J	14.9		15.2		42.4	J	353	J	0.0199		0.0199		<0.0025	U	<0.0025	U
Non-Contact Cooling Water 1		13070	U/F		0.016	J	0.015	J	324.0		318.0		142.0	J	1460	J	0.0553		0.0493		0.0183		0.0144	
Non-Contact Cooling Water 2		13071	U/F		0.021		0.015		325.0		322.0		146.0	J	1490	J	0.0515		0.0504		0.0153		0.0125	
Non-Contact Cooling Water 3		13072	U/F		0.017		0.015		322.0		321.0		141.0	J	1480	J	0.0537		0.0489		0.0175		0.0138	
Non-Contact Cooling Water Pond Inlet		13063	U/F		0.017	J	0.017	J	77.8		69.6		150.0	J	800	J	0.0499		0.0494		0.0276		0.0214	
PR-1 Power Return Canal		13073	U/F		0.0019	J	0.0013	J	41.4		41.2		50.2	J	609	J	0.0054		0.0049	J	<0.0025	U	<0.0025	U
SC-01 Soda Up		13067	U/F		0.00026	J	<0.0003	U	22.5		21.8		43.8	J	554	J	<0.0015	U	<0.0015	U	<0.0025	U	<0.0025	U
SC-02 Soda Weir		13068	U/F		0.00057	J	0.0004	J	30.2		25.0		47.7		589		0.0029	J	0.0020	J	<0.0025	U	<0.0025	U
SC-03 Soda Mid		13082	U/F		0.020		0.018		41.4		39.6		60.9	J	932	J	0.0057		0.0041	J	0.0604		0.0278	
SC-04 Soda Down		13084	U/F		0.044		0.044		55.3		56.4		104.0	J	1020	J	0.0053		0.0036	J	0.0419		0.0206	
SC-05 Soda Below Weir		13069	U/F		0.0004	J	<0.0003	U	30.8		29.1		51.9	J	775	J	0.0076		<0.0015	U	0.0057	J	<0.0025	U
SC-06 Soda at Property Line		13092	U/F		0.044		0.041		57.2		58.3		105.0	J	991	J	0.0076		0.0042	J	0.0361		0.0092	J
SC-07 Soda Upstream Power Return		13074	U/F		0.040		0.037		54.9		51.7		100.0	J	972	J	0.0073		0.0043	J	0.0406		0.0063	J
SC-08 Soda at Octagon Park		13075	U/F		0.0026		0.0025		34.7		32.5		55.1	J	627	J	0.0055		0.0050	J	<0.0025	U	<0.0025	U
SC-08 Soda at Octagon Park		13101	U/F		0.0024		0.0024		31.9		30.1		53.5		610		0.0054		0.0048	J	<0.0025	U	<0.0025	U
SC-08 Soda at Octagon Park		13102	U/F	Split	0.0026		0.0024		31.8		30.9		53.9		648		0.0050		0.0040		<0.01	U	<0.01	U
SC-09 Soda above Diversion		13088	U/F		0.0025		0.0024		43.0		44.9		54.4	J	652	J	0.0058		0.0044	J	0.0027	J	<0.0025	U
SC-10 Soda at Railroad Bridge		13091	U/F		0.0020		0.0021		31.8		30.9		130.0	J	773	J	0.0043	J	0.0031	J	<0.0025	U	<0.0025	U
SC-11 Soda at Highway 30		13089	U/F		0.0020		0.0021		33.7		33.8		143.0	J	820	J	0.0037	J	0.0029	J	<0.0025	U	<0.0025	U
SC-11 Soda at Highway 30		13090	U/F	Duplicate	0.0021		0.0022		34.2		34.3		138.0	J	804	J	0.0048	J	0.0032	J	<0.0025	U	<0.0025	U

Notes:
"-" Not applicable
na: not analyzed
ns: no sample
J - The result is an estimated value.
J- - The result is an estimated value with low bias.
J+ - The result is an estimated value with high bias.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
D - A dilution was applied for the analysis
N - Unfiltered
Y - Filtered

Table 9: June 2013 Results Compared to Remediation Goals

Location	Sample Number	Formation	Cadmium (mg/L)	Q	Fluoride (mg/L)	Q	Manganese (mg/L)	Q	Nitrate and Nitrite as N (mg/L)	Q	Selenium (mg/L)	Q
REMEDIATION GOAL			0.005		4		0.18		10		0.05	
Groundwater												
Harris Well	13031	UBZ-2 γ4	<0.0007	U	3.27		<0.0014	U	7.35		**0.258**	
Mormon A Spring[1]	13076	UBZ-1 γ5?	**0.0162**		3.24	J	<0.0014	U	6.93	J	**0.273**	
Mormon A Spring (split ARI)	13077	UBZ-1 γ5?	**0.0160**		2.70		0.001	U	6.90		**0.294**	
PW-01	13098	UBZ,LBZ-4	**0.0449**		0.95		<0.0014	U	4.63		0.042	
PW-02	13097	UBZ,LBZ-4	**0.0149**		0.62		<0.0014	U	4.47		0.019	
PW-03	13096	UBZ,LBZ-4	0.0036		0.46	J	<0.0014	U	3.74	J	0.012	
PW-04	13006	UBZ,LBZ-4	<0.0007	U	0.38		<0.0014	U	3.67		0.0016	J
TW-20	13002	UBZ-2 γ4	0.0040		1.37		<0.0014	U	8.23		**0.065**	
TW-20 (duplicate)	13003	UBZ-2 γ4	0.0039		1.39		<0.0014	U	8.80		**0.070**	
TW-34[2]	13001	UBZ-2 γ3	<0.0007	U	0.64		0.149		0.45		0.020	J
TW-35	13046	UBZ-2 γ3	<0.0007	U	-0.5	UJ	0.159		-0.1	U	<0.00026	U
TW-35 (duplicate)	13047	UBZ-2 γ3	<0.0007	U	-0.1	U	0.162	J	2.10		<0.00026	U
TW-39	13045	UBZ-2 γ4	**0.0260**		**4.12**		<0.0014	U	7.23		**0.385**	
TW-53	13032	UBZ-1 γ5	<0.0007	U	3.09		<0.0014	U	7.18		**0.234**	
TW-54	13033	UBZ-2 γ4	0.0030		2.39	J	0.0017	J	**10.5**		**0.270**	
TW-54 (split ARI)	13034	UBZ-2 γ4	0.0020		1.9	J	0.013	J	**10.2**		**0.252**	
TW-55	13043	UBZ-2 γ3	<0.0007	U	0.59	J	<0.0014	U	3.96		0.020	
TW-55 (split ARI)	13044	UBZ-2 γ3	0.0020		0.3	J	0.003		3.93		0.0231	
Surface Water												
SC-04 Soda Down	13084		0.0034		0.94	J	0.112		1.6	J	0.044	
SC-01 Soda Up	13067		<0.0007	U	0.41	J	0.154		0.5	J	0.00026	J

Notes:

Results in bold indicate remediation goal is exceeded.

1. Alternate point of compliance location for the Harris Well.
2. Natural background.

Q stands for "Qualifier", where:

J - The result is an estimated value. J- is estimated with low bias; J+ is estimated with high bias.

UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

U - The analyte was not detected at the method detection limit.

Table 10: June 2013 Measured Spring Discharge and Streamflows

Stream or Spring	Location	June 2013		Notes/Measurement Method
		Streamflow (cfs)	Streamflow (gpm)	
Soda Creek	SC-01 Soda Up	29.4	13,235	Swoffer
	SC-02 Soda at Diversion Weir	51.0	22,937	Swoffer
	SC-05 Soda Creek below Diversion	0.01	5	Swoffer
	SC-03 Soda Mid	0.5	234	Swoffer
	SC-04 Soda Down	1.0	428	Swoffer
	SC-06 Soda Creek at Property Line	1.0	455	Swoffer
	SC-07 Soda Creek above Power Return	0.7	315	Swoffer
	SC-08 Soda Creek at Octagon Park	45.6	20,538	Swoffer
	SC-09 Soda Creek above Diversion	Not Measured		Unsafe access, high flows
	SC-10 Soda Creek at Railroad Bridge	3.4	1,521	Swoffer
	SC-11 Soda Creek at Highway 30	2.7	1,220	Swoffer
Power Canal	PR-1 Power Canal	39.8	17,919	Swoffer
Mormon Creek (tributary)	Calf Spring	0.0	0.0	Calf Spring was dry
	Mormon A	0.134 to 0.156	60-70	Bucket and stop watch
	Mormon B	0.013	6	Bucket and stop watch
	Mormon C	0.013	6	Bucket and stop watch
	MC-1 Mormon Creek	0.1	50	Swoffer
Southwest Spring (tributary)	At Government Dam Road	1.2	545	Swoffer
	Upstream of Soda Creek Confluence	0.4	200	Swoffer
Homestead Spring (tributary)	Homestead Spring	0.001	0.6	Pyrex measuring cup and stop watch
Little Spring Pond Creek	Crossing at E 1st St	0.18	81.0	Swoffer

Table 11: Short-Term Constituent Concentration Trends at Point of Compliance Wells and Soda Creek

Location	Formation	Cadmium	Fluoride	Manganese	Nitrate as N	Selenium		Chloride [a]	Molybdenum [a]	Sulfate [a]
Remediation Goal (mg/L)		0.005	4	0.18	10	0.05		n/a	n/a	n/a
Groundwater										
Production Wells										
PW-01	UBZ,LBZ-4	⇧ **N**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇩	⇔	⇧
PW-02	UBZ,LBZ-4	⇧ **N**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇔	⇧	⇧
PW-03	UBZ,LBZ-4	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇩	⇔	⇔
PW-04	UBZ,LBZ-4	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇔	⇔	⇔
Southern Plant Fence Line										
TW-20	UBZ-2 γ4	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇩ **N**		⇔	⇩	⇩
TW-34	UBZ-2 γ3	⇔ **Y**	⇔ **Y**	⇩ **Y**	⇔ **Y**	⇧ **Y**		⇔	⇔	⇧
TW-35	UBZ-2 γ3	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇔	⇔	⇔
TW-39	UBZ-2 γ4	⇧ **N**	⇧ **N**	⇔ **Y**	⇔ **Y**	⇔ **N**		⇔	⇧	⇩
Southern Boundary										
TW-53	UBZ-1 γ5	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇧ **Y**	⇔ **N**		⇔	⇔	⇔
TW-54	UBZ-2 γ4	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **N**	⇔ **N**		⇔	⇩	⇔
TW-55	UBZ-2 γ3	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇩ **Y**		⇔	⇔	⇔
Mormon A Spring [b]	UBZ-1 γ5?	⇔ **N**	⇔ **Y**	⇔ **Y**	⇩ **Y**	⇔ **N**		⇔	⇔	⇩
Harris Well	UBZ-2 γ4	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **N**		⇔	⇔	⇧
Soda Creek Surface Water/Non-Contact Cooling Water Discharge										
Soda Up Station (SC-01)	-	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇔	⇔	⇔
Soda Down Station (SC-04)	-	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇩ **Y**		⇔	⇔	⇔
Non-Contact Cooling Water Discharge		⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**	⇔ **Y**		⇧	⇔	⇧

Notes:

a. Constituents included for illustrative purposes only, no remediation goal

b. Proposed alternative point of compliance for Harris Well

* Natural Background

⇔	Concentrations relatively stable overall in the past 5 years (2009 to 2013)
⇩	Concentrations decreased overall in the past 5 years (2009 to 2013)
⇧	Concentrations increased overall in the past 5 years (2009 to 2013)
Y	Equal to or less than EPA Remediation Goal in June 2013
N	Greater than EPA Remediation Goal in June 2013

Table 12: Short-Term Constituent Concentration Trends at Other Wells and Springs

Location	Formation	Cadmium	Fluoride	Manganese	Nitrate as N	Selenium	Chloride	Molybdenum	Sulfate
NW Pond									
TW-29 (background)	UBZ-4 γ3	⇔	⇔	⇔	⇔	⇔	⇩	⇔	⇔
TW-16	UBZ-4 γ3	⇔	⇔	⇔	⇔	⇔	⇧	⇔	⇔
TW-17	UBZ-4 γ3	⇧	⇔	⇧	⇔	⇧	⇧	⇩	⇧
TW-18	LBZ-4	⇔	⇧	⇔	⇔	⇔	⇧	⇔	⇔[b]
Old UFS Pond Area									
TW-57 (background)	UBZ-2 γ5?	⇔	⇔	⇔	⇧	⇔	⇔	⇔	⇧
TW-22	UBZ-2 γ4?	⇔	⇔	⇔	⇩	⇔	⇔	⇔	⇔
TW-24	UBZ-2 γ4	⇔	⇔	⇔	⇔	⇧	⇔	⇔	⇔
TW-37	UBZ-2 γ4	⇧	⇩	⇔	⇩	⇔	⇩	⇩	⇔
TW-45	LBZ-2 γ2	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇔
UFS Piles									
TW-48	UBZ-4 γ3	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇔
TW-49	UBZ-4 γ3	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇧
TW-50	UBZ-4 γ3	⇔	⇧	⇧	⇔	⇩	⇧	⇔	⇧
Old Hydroclarifier and Plant Area Wells									
TW-40	UBZ-4 γ3	⇧	⇔	⇔	⇩	⇧	⇔	⇔	⇧
TW-43	UBZ-4 γ3	⇔	⇔	⇔	⇩	⇧	⇧	⇩	⇧
TW-44	LBZ-4	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇧
TW-26	LBZ-4	⇔	⇔	⇔	⇔	⇔	⇩	⇩	⇔
Southwest Corner Wells									
TW-08	UBZ-1 γ3	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇔
TW-10	UBZ-1 γ5	⇔	⇧	⇔	⇧	⇧	⇩	⇧	⇔
2007 Monitoring Wells									
TW-59	UBZ-2 γ4	⇔	⇔	⇔	⇧	⇩	⇔	⇔	⇩
TW-60	UBZ-1 γ4	⇔	⇔	⇩	⇔	⇔	⇔	⇔	⇔
TW-61	UBZ-1 γ4	⇔	⇧	⇔	⇔	⇔	⇔	⇔	⇔
TW-62	UBZ-2 γ4	⇔	⇔	⇩	⇧	⇩	⇔	⇔	⇩
Springs									
Homestead Spring	UBZ-1 γ5?	⇔	⇔	⇔	⇧	⇧	⇔	⇔	⇧
Mormon A Spring	UBZ-1 γ5?	⇔	⇔	⇔	⇩	⇔	⇔	⇔	⇩
Calf Spring[a]	UBZ-1 γ5?	⇧	⇔	⇧	⇩	⇔	⇔	⇔	⇔

Notes:

⇔ Concentrations relatively stable overall in the past 5 years (2009 to 2013)
⇩ Concentrations decreased overall in the past 5 years (2009 to 2013)
⇧ Concentrations increased overall in the past 5 years (2009 to 2013)

a. Calf Spring dry in 2013
b. 2013 concentration appears to be anomalous

Table 13: June 2013 UBZ-4 Results Compared to 1993 to 2013 Results

Location	Well and Interflow Zone	Constituent of Concern	Maximum Concentration (mg/L)	Maximum Concentration Year	Minimum Concentration (mg/L)	Minimum Concentration Year	June 2013 Concentration (mg/L)	June 2013 Concentration - Percent Reduction from Maximum
Northwest Pond	TW-16 (γ4)	Cadmium[1]	1.49	1984	0.432	2012	0.452	-70%
		Fluoride	3.7	1994	1.69	2010	1.92	-48%
		Manganese	0.06	1993	<0.001	1998	<0.0014	NA
		Nitrate as N	7.5	1997	4.33	2013	4.33	-42%
		Selenium	0.442	1993	0.0566	2007	0.126	-71%
	TW-17 (γ4?)	Cadmium[1]	0.087	1985	0.0015	2007	0.0062	-93%
		Fluoride	2.78	2013	1.5	2009	2.78	0%
		Manganese	3.16	2013	1.47	1993	3.16	0%
		Nitrate as N	0.481	2011	<0.01	1995	0.261	-46%
		Selenium	0.058	2013	<0.002	2000	0.058	0%
	TW-18 (LBZ)	Cadmium[1]	0.013	1986	<0.0002	2000	<0.0007	NA
		Fluoride	0.64	2012	<0.1	2003	<0.5	NA
		Manganese	0.66	2013	0.36	1993	0.66	0%
		Nitrate as N	0.061	2011	0.01	1997	<0.5	NA
		Selenium	0.0013	2013	<0.0001	2011	0.0013	0%
Old Hydroclarifier and Plant Area	TW-40 (γ3)	Cadmium[1]	70.4	1985	0.809	1995	3.07	-96%
		Fluoride	6.3	1997	2.92	2009	4.74	-25%
		Manganese	0.46	1993	0.01	2010	0.0517	-89%
		Nitrate as N	19.3	1999	5.2	1995	12.2	-37%
		Selenium	1.12	2003	0.282	2007	0.85	-24%
	TW-43 (γ3)	Cadmium[1]	62.5	1985	1.5	2012	2.2	-96%
		Fluoride	6.2	1993	3.93	2012	4.3	-31%
		Manganese	0.42	1993	0.0071	2013	0.0071	-98%
		Nitrate as N	15.7	2004	10.5	2013	10.5	-33%
		Selenium	1.19	2003	0.343	2007	0.832	-30%
	TW-44 (LBZ-4)	Cadmium	0.0269	1994	<0.002	2003	0.0028	-90%
		Fluoride	1.4	2000	0.288	2005	0.73	-48%
		Manganese	0.24	2000	0.18	1997	0.23	-4%
		Nitrate as N	1.5	2000	<0.01	1997	<0.5	NA
		Selenium	0.015	1994	<0.0001	2011	0.00038	-97%
	TW-26 (UBZ-4 γ2)	Cadmium[1]	0.021	1986	<0.00059	2012	<0.0007	NA
		Fluoride	2.01	2011	0.94	1993	1.8	-10%
		Manganese	0.95	1995	0.54	2005	0.592	-38%
		Nitrate as N	9.49	1994	3.1	1997	4.23	-55%
		Selenium	0.608	1994	0.032	2004	0.308	-49%
Underflow Solids Piles	TW-48 (UBZ-4 γ3)	Cadmium	0.0021	2004	<0.00013	2009	<0.0007	NA
		Fluoride	0.36	2012	0.19	1993	0.31	-14%
		Manganese	0.11	2004	<0.0015	2009	<0.0014	NA
		Nitrate as N	6.27	2012	3.84	2003	4.78	-24%
		Selenium	0.026	2003	0.0017	2013	0.0017	-93%
	TW-49 (UBZ-4 γ3)	Cadmium	0.0101	1993	<0.00013	2009	<0.007	NA
		Fluoride	0.565	2002	0.1	2011	0.43	-24%
		Manganese	0.0095	2011	<0.001	1994	<0.0014	NA
		Nitrate as N	4.8	1999	3.21	2008	3.71	-23%
		Selenium	0.0047	2009	0.002	1995	0.0027	-43%
	TW-50 (UBZ-4 γ3)	Cadmium	0.0307	2005	<0.0002	1997	0.0046	-85%
		Fluoride	1.16	2013	0.29	2006	1.16	0%
		Manganese	0.756	2010	0.392	1997	0.721	-5%
		Nitrate as N	1.48	2008	0.65	2004	0.683	-54%
		Selenium	0.0892	2010	0.002	1995	0.021	-76%

Table 13: June 2013 UBZ-4 Results Compared to 1993 to 2013 Results

Location	Well and Interflow Zone	Constituent of Concern	Maximum Concentration (mg/L)	Maximum Concentration Year	Minimum Concentration (mg/L)	Minimum Concentration Year	June 2013 Concentration (mg/L)	June 2013 Concentration - Percent Reduction from Maximum
Plant Production Wells	PW-01 (UBZ/LBZ-4)	Cadmium[1]	0.243	1986	0.0261	2003	0.0449	-82%
		Fluoride	1.3	1991	0.46	2003	0.95	-27%
		Manganese	<0.013	1993	<0.0014	2013	<0.0014	NA
		Nitrate as N	5.88	1993	3.5	2001	4.63	-21%
		Selenium	0.098	2005	0.0167	2007	0.042	-57%
	PW-02 (UBZ/LBZ-4)	Cadmium[1]	0.027	1985	0.0016	2006	0.0149	-45%
		Fluoride	0.9	2001	0.175	2005	0.62	-31%
		Manganese	0.02	1993	0.001	1994	<0.0014	NA
		Nitrate as N	5.23	2012	3.31	2004	4.47	-15%
		Selenium	0.038	2010	0.006	2007	0.019	-50%
	PW-03 (UBZ/LBZ-4)	Cadmium[1]	0.016	1985	<0.002	2001	0.0036	-78%
		Fluoride	0.66	2002	0.13	2006	0.46	-30%
		Manganese	0.005	1999	0.001	1994	<0.0014	NA
		Nitrate as N	5.43	1993	3.08	2003	3.74	-31%
		Selenium	0.025	1994	0.0050	2001	0.012	-52%

Notes:
1. The highest concentrations were observed prior to 1993.
J - The result is an estimated value.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
Shaded cells represent the maximum observed concentration between 1993 and 2013 for all stations
Analytical data from primary lab
NA - Not applicable - percent reduction not calculated because of non-detects

Table 14: June 2013 UBZ-1 Results Compared to 1993 to 2013 Results

Location	Well and Interflow Zone	Constituent of Concern	Maximum Concentration (mg/L)	Maximum Concentration Year	Minimum Concentration (mg/L)	Minimum Concentration Year	June 2013 Concentration (mg/L)	June 2013 Concentration - Percent Reduction from Maximum
2007 Wells	TW-60 (UBZ-1 γ4)	Cadmium	<0.002	2007	<0.0005	2011	<0.0007	NA
		Fluoride	0.407	2010	<0.1	2007	0.18	-56%
		Manganese	6.27	2009	5.36	2012	5.56	-11%
		Nitrate as N	<0.05	2012	<0.02	2007	<0.05	NA
		Selenium	0.0007	2008	<0.0001	2011	<0.00026	NA
	TW-61 (UBZ-1 γ4)	Cadmium	<0.002	2007	<0.0005	2011	<0.0007	NA
		Fluoride	1.12	2013	<0.1	2007	1.12	0%
		Manganese	0.542	2013	0.447	2012	0.542	0%
		Nitrate as N	0.876	2012	<0.05	2012	0.09	-90%
		Selenium	0.0011	2008	<0.0001	2011	<0.00026	NA
Southwest Corner	TW-08 (UBZ-1 γ3)	Cadmium	<0.002	2003	<0.0047	2011	<0.0007	NA
		Fluoride	0.68	2012	<0.1	2006	<0.5	NA
		Manganese	0.13	1996	0.1	2012	0.101	-22%
		Nitrate as N	0.042	1996	<0.02	2007	<0.05	NA
		Selenium	0.011	2003	<0.00012	2012	0.00036	-97%
	TW-10 (UBZ-1 γ5)	Cadmium	0.006	1993	<0.0005	2011	<0.0007	NA
		Fluoride	2.43	2013	0.23	2004	2.43	0%
		Manganese	0.009	1994	<0.001	2008	<0.0014	NA
		Nitrate as N	8.33	2005	3.3	1994	6.97	-16%
		Selenium	0.366	2012	0.0376	1993	0.301	-18%
South of Plant	Lewis Well (UBZ-2 γ3 and γ4?)	Cadmium	<0.0086	1994	<0.00047	2011	<0.0007	NA
		Fluoride	0.73	2002	0.2	2007	0.43	-41%
		Manganese	0.015	1993	<0.001	2012	<0.0014	NA
		Nitrate as N	12.2	1993	5.05	2004	7.11	-42%
		Selenium	0.07	1994	0.0085	2007	0.014	-80%
Springs	Southwest Spring (UBZ-1)	Cadmium	0.0067	1993	0.002	2003	0.0039	-42%
		Fluoride	1.2	1996	0.27	2007	0.98	-18%
		Manganese	0.062	1997	0.011	2010	0.0152	-75%
		Nitrate as N	2.2	1998	1.3	2000	1.87	-15%
		Selenium	0.059	2006	0.0102	1994	0.018	-69%
	Calf Spring (UBZ-1)	Cadmium	0.605	2008	<0.005	1993	No sample	NA
		Fluoride	5.4	1996	0.2	2007	No sample	NA
		Manganese	14.7	2007	<0.001	2000	No sample	NA
		Nitrate as N	9.4	1997	0.151	2008	No sample	NA
		Selenium	0.49	2008	0.14	1999	No sample	NA
	Homestead Spring (UBZ-1)	Cadmium	<0.0092	1992	<0.0005	2010	<0.0007	NA
		Fluoride	0.73	2002	0.202	2008	0.5	-32%
		Manganese	0.098	2009	<0.0014	2012	<0.0014	NA
		Nitrate as N	15	2006	5.87	2001	11.8	-21%
		Selenium	0.0492	2010	0.0057	1994	0.039	-21%
	Mormon Creek	Cadmium	0.0084	2008	<0.002	2006	0.007	-17%
		Fluoride	2.86	2007	1.0	2004	2.47	-14%
		Manganese	0.035	2012	0.009	2003	0.0137	-61%
		Nitrate as N	7.89	2011	1.48	2004	4.49	-43%
		Selenium	0.235	2011	0.071	2002	0.196	-17%

Notes:
1. The highest concentrations were observed prior to 1993.
Shaded cells represent the maximum observed concentration between 1993 and 2013 for all stations except 2007 wells (2007 to 2013)
Analytical data from primary lab
NA - Not applicable - percent reduction not calculated because of non-detects

Table 15: June 2013 UBZ-2 Results Compared to 1993 to 2013 Results

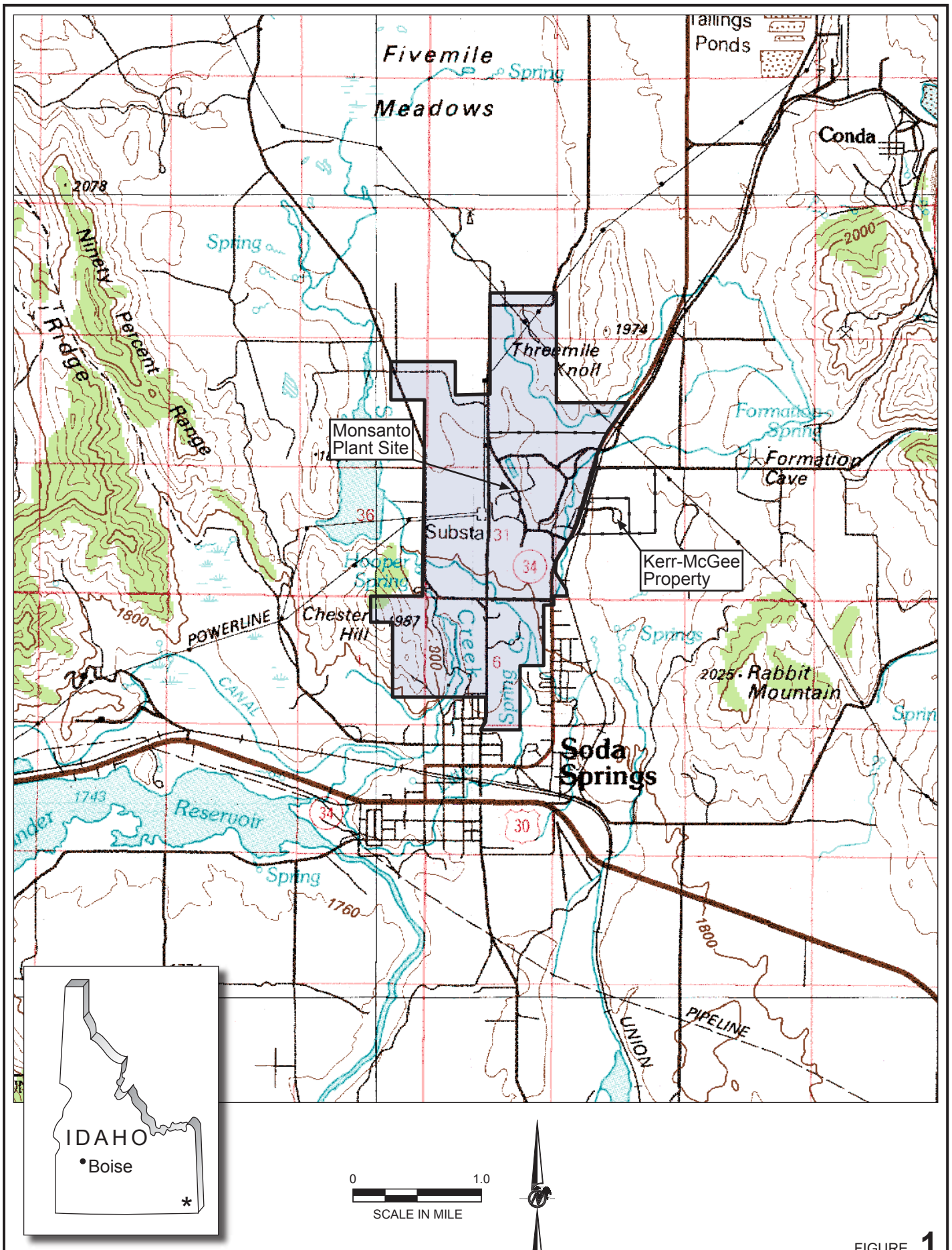
Location	Well and Interflow Zone	Constituent of Concern	Maximum Concentration (mg/L)	Maximum Concentration Year	Minimum Concentration (mg/L)	Minimum Concentration Year	June 2013 Concentration (mg/L)	June 2013 Concentration - Percent Reduction from Maximum
Old Underflow Solids Ponds	TW-22 (γ4)	Cadmium[1]	0.07	1984	0.0224	1995	0.0243	-65%
		Fluoride	8.3	1997	2.46	2010	3.22	-61%
		Manganese	1.34	1997	0.737	2010	0.791	-41%
		Nitrate as N	9.3	1999	2.82	2013	2.82	-70%
		Selenium	0.33	1999	0.105	2007	0.155	-53%
	TW-24 (γ4?)	Cadmium	0.331	1994	0.19	1999	0.27	-18%
		Fluoride	9.0	1996	4.28	2008	4.95	-45%
		Manganese	0.329	2004	0.136	1999	0.266	-19%
		Nitrate as N	8.4	2000	4.32	2004	4.41	-48%
		Selenium	0.47	1997	0.036	2006	0.266	-43%
	TW-37 (γ4)	Cadmium[1]	1.210	1986	0.0027	2013	0.0027	NA
		Fluoride	16	1997	7.7	2013	7.7	-52%
		Manganese	1.35	1994	0.494	1997	0.618	-54%
		Nitrate as N	11.2	2006	5.94	1994	7.53	-33%
		Selenium	0.935	1993	0.162	2007	0.289	-69%
South Plant Fence Line	TW-20 (γ4)	Cadmium	0.0113	2005	0.0021	1994	0.0039	-65%
		Fluoride	5.5	1994	1.39	2013	1.39	-75%
		Manganese	0.0473	1994	0.0013 U	2008	<0.0014	NA
		Nitrate as N	20.7	2006	4.57	2011	8.8	-57%
		Selenium	0.432	2005	0.028	2000	0.07	-84%
	TW-34 (γ3)	Cadmium	0.0067 U	1993	0.00013 U	2009	<0.0007	NA
		Fluoride	0.711	2002	0.01 U	1998	0.64	-10%
		Manganese	0.516	1995	0.149	2013	0.149	-71%
		Nitrate as N	1.12	2002	0.02 U	1993	0.448	-60%
		Selenium	0.020	2013	0.001	1995	0.020	0%
	TW-35 (γ3)	Cadmium	0.0067 U	1993	0.0002 U	2006	<0.0007	NA
		Fluoride	0.601	2002	0.1 U	2011	<0.5	NA
		Manganese	0.168	2002	0.135	2005	0.159	-5%
		Nitrate as N	0.3 U	1993	0.01 U	1997	<0.05	NA
		Selenium	0.01 U	2003	0.0001U	2011	<0.00026	NA
	TW-39 (γ4)	Cadmium	0.0279	1994	0.0093	2007	<0.0007	NA
		Fluoride	5.3	1995	1.96	2004	4.12	-22%
		Manganese	0.06 U	2002	0.001 U	2000	<0.0014	NA
		Nitrate as N	15	1997	3.79	2002	7.23	-52%
		Selenium	0.494	2010	0.03	2006	0.385	-22%
Southern Boundary	TW-53 (γ5)	Cadmium	0.007 U	1994	0.0002 U	2000	<0.0007	NA
		Fluoride	3.65	2009	0.79	1993	3.09	-15%
		Manganese	0.06 U	2002	0.001 U	1999	<0.0014	NA
		Nitrate as N	10.1	1993	4.49	2001	7.18	-29%
		Selenium	0.344	1995	0.0791	2001	0.234	-32%
	TW-54 (γ4)	Cadmium	0.0176	2002	0.0004 U	2000	0.0022	-88%
		Fluoride	7.4	1997	2.24	2003	2.39	-68%
		Manganese	0.06 U	2002	0.001 U	1997	0.0017	NA
		Nitrate as N	12.7	2006	1.04	2002	10.5	-17%
		Selenium	0.635	1993	0.05	2000	0.27	-57%
	TW-55 (γ3)	Cadmium	0.0094 U	1994	0.0002 U	2000	0.711	NA
		Fluoride	1.48	2009	0.1 U	2006	0.59	-60%
		Manganese	0.06 U	2002	0.001 U	2008	<0.0014	NA
		Nitrate as N	4.15	2007	2.58	2003	3.96	-5%
		Selenium	0.206	1991	0.013	2001	0.02	-90%

Table 15: June 2013 UBZ-2 Results Compared to 1993 to 2013 Results

Location	Well and Interflow Zone	Constituent of Concern	Maximum Concentration (mg/L)	Maximum Concentration Year	Minimum Concentration (mg/L)	Minimum Concentration Year	June 2013 Concentration (mg/L)	June 2013 Concentration - Percent Reduction from Maximum
Mormon A Spring and Harris Well	Mormon A Spring (γ5)	Cadmium	0.018	1997	0.0115	2004	0.0162	-10%
		Fluoride	5.9	1996	1.94	2004	3.24	-45%
		Manganese	0.06 U	2002	0.001 U	2000	<0.0014	NA
		Nitrate as N	9.71	2011	4.4	1994	6.93	-29%
		Selenium	0.366	2008	0.136	2007	0.273	-25%
	Harris Well (γ4)	Cadmium	0.0092 U	1994	0.0002 U	2000	<0.0007	NA
		Fluoride	4.4	1997	0.87	1993	3.27	-26%
		Manganese	0.06 U	2002	0.001 U	2000	<0.0014	NA
		Nitrate as N	9.11	2012	4.6	1993	7.35	-19%
		Selenium	0.408	1994	0.080	2000	0.258	-37%
2007 Wells	TW-59 (UBZ-2 γ4)	Cadmium	<0.002	2007	<0.0005	2011	<0.0007	NA
		Fluoride	0.384	2010	<0.1	2011	0.67	74%
		Manganese	0.0101	2010	<0.004	2007	<0.0014	NA
		Nitrate as N	6.9	2012	5.03	2009	6.83	-1%
		Selenium	0.129	2008	0.068	2013	0.068	-47%
	TW-62 (UBZ-2 γ4)	Cadmium	<0.002	2007	<0.0005	2011	<0.0007	NA
		Fluoride	0.61	2013	<0.1	2011	0.61	0%
		Manganese	0.068	2008	<0.004	2007	<0.0014	NA
		Nitrate as N	6.72	2013	4.89	2009	6.72	0%
		Selenium	0.17	2008	0.0456	2007	0.105	-38%
Soda Creek	Soda Down SC-04 (2001 to 2013)	Cadmium	0.0082	2008	0.0018 J	6/2008	0.0034	-59%
		Fluoride	1.1	2001	0.418	2005	0.94	-15%
		Manganese	0.228	2008	0.066	2006	0.112	-51%
		Nitrate as N	2.14	2009	0.36	2003	1.61	-25%
		Selenium	0.0563	2009	0.0112	2007	0.044	-22%

Notes:
1. The highest concentrations were observed prior to 1993.
J - The result is an estimated value.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U - The analyte was not detected at the method detection limit.
Shaded cells represent the maximum observed concentration between 1993 and 2013 for all stations except the Soda Down station (2001 through 2013) and 2007 wells (2007 to 2013).
Analytical data from primary lab.
NA - Not applicable - percent reduction not calculated because of non-detects

FIGURES



Source: Topographic map of the USGS Soda Springs Quadrangle (1:100,000) 1982.

FIGURE 1

MONSANTO PLANT VICINITY MAP

MONSANTO/2013 ANNUAL REPORT/ID

9131101001605afig01_R12.ai | Mod: 12/17/13 | AMP

Golder Associates

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0002-HS-0002.dwg | Layout: 2 FIGURE | Modified: SSimmons 12/20/2013 9:33 AM | Plotted: SSimmons 12/20/2013

LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK

TW-60 — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
LOCATION OF SPRINGS AND WELLS IN THE UPPER BASALT ZONE

Golder Associates

PROJECT No.	9131101.X002.002		FILE No.	9131101x002_002-0002-HS-0002
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	2
CHECK	MK	2013-12-19		
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0003-HS-0003.dwg | Layout: 3 FIGURE | Modified: SSimmons 12/19/2013 10:55 AM | Plotted: SSimmons 12/20/2013

LEGEND

f U D f	FAULT
f U D ? f	FAULT (INFERRED)
f f	FISSURE
LBZ-1	GROUNDWATER ZONE
TW-60	MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-1
TW-59	MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-2
TW-56	MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-3
TW-28	MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-4
PW-1	PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

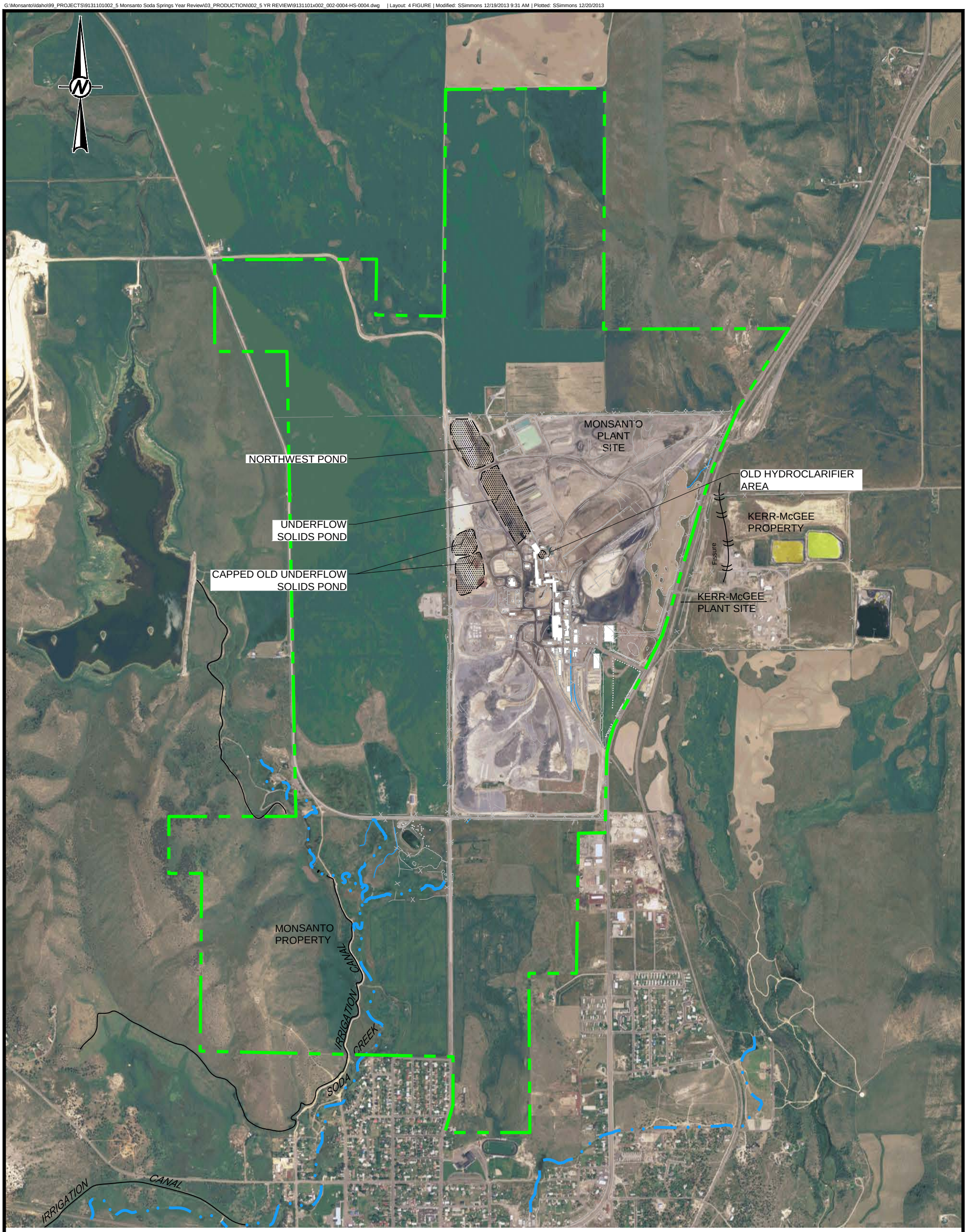
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
LOCATION OF WELLS IN LOWER BASALT ZONE

Golder Associates

PROJECT No.	9131101.X002002		FILE No.	9131101x002_002-0003-HS-0003
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	3
CHECK	MK	2013-12-19		
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0004-HS-0004.dwg | Layout: 4 FIGURE | Modified: SSimmons 12/19/2013 9:31 AM | Plotted: SSimmons 12/20/2013



LEGEND

- MONSANTO PROPERTY BOUNDARY
- PLANT PERIMETER FENCE
- IRRIGATION DITCH
- CREEK
- ORIGINAL SOURCE AREA

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 750 1500 2250
SCALE FEET

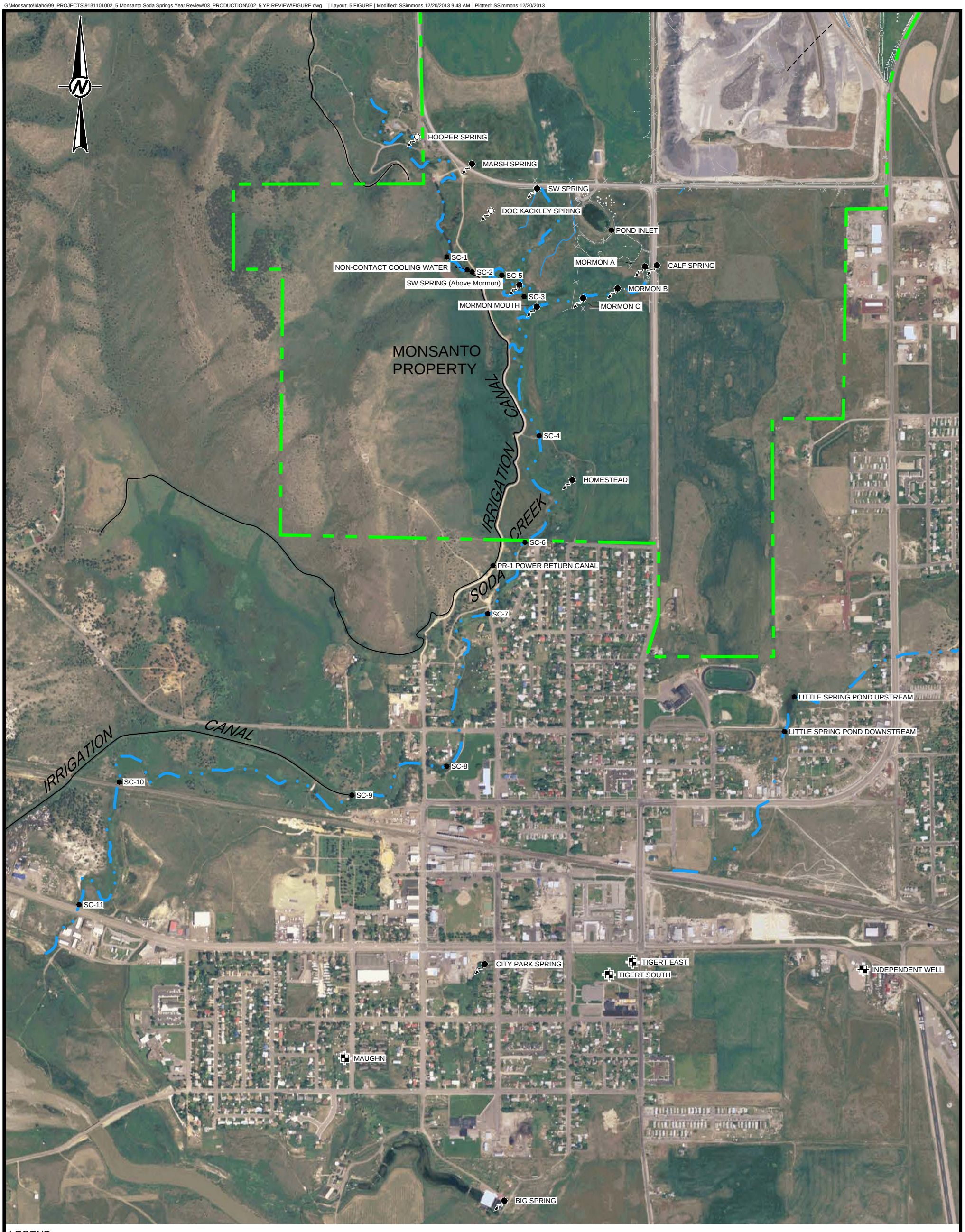
PROJECT
MONSANTO
2013 ANNUALL REPORT
SODA SPRINGS, IDAHO

TITLE
FACILITY MAP

Golder Associates

PROJECT No.	9131101.X002.002		FILE No. 9131101x002_002-0004-HS-0004
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	4
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\FIGURE.dwg | Layout: 5 FIGURE | Modified: SSimmons 12/20/2013 9:43 AM | Plotted: SSimmons 12/20/2013



LEGEND

- SURFACE WATER SAMPLE LOCATION WITH NAME
- SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOW)
- SPRING LOCATION WITH NAME (WHERE KNOWN)
- WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

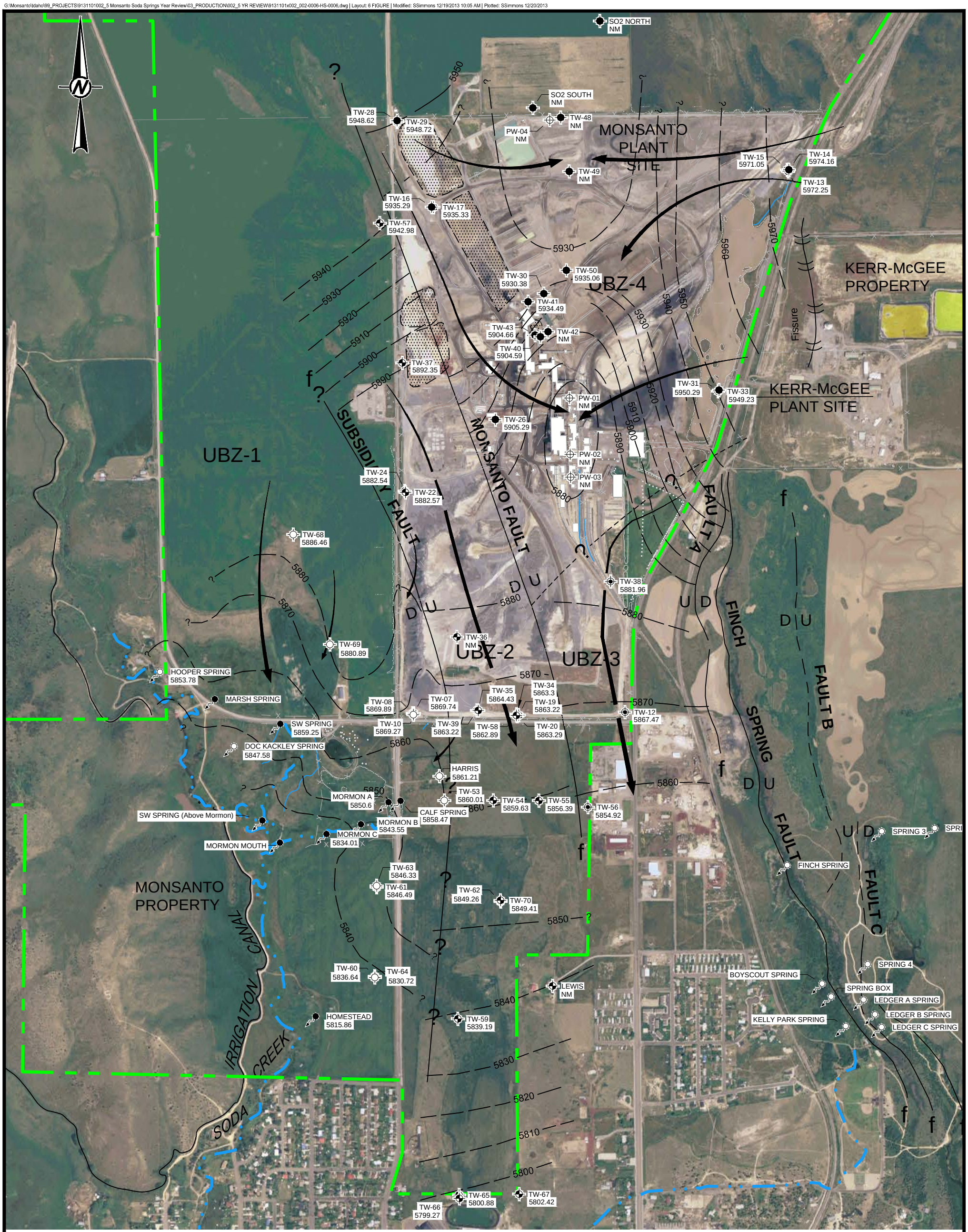
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
LOCATION OF WELLS IN SODA SPRINGS AND SODA CREEK AND SPRINGS SAMPLING LOCATIONS

Golder Associates

PROJECT No.	9131101.X002.002		FILE No.	FIGURE
DESIGN	DH	2013-09-20	SCALE	AS SHOWN
CADD	SES	2013-09-20	FIGURE	5
CHECK	MK	2013-09-20		
REVIEW	DB	2013-09-20		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0006-HS-0006.dwg | Layout: 6 FIGURE | Modified: SSimmons 12/19/2013 10:05 AM | Plotted: SSimmons 12/20/2013



LEGEND

- f FAULT
- f FAULT (INFERRED)
- f FISSURE
- UBZ-1 GROUNDWATER ZONE
- GROUNDWATER FLOW DIRECTION
- 5840 GROUNDWATER CONTOUR (10 FOOT INTERVAL)
- SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A
- SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC
- SURFACE WATER LOCATION WITH NAME — MORMON CREEK
- GROUNDWATER ELEVATION (FEET) WITH QUALIFIER (IF ANY) — (ND) = NO DATA
- TW-60 (5837.68) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1 AND GROUNDWATER ELEVATION
- TW-59 (5839.05) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2 AND GROUNDWATER ELEVATION
- TW-56 (5853.05) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3 AND GROUNDWATER ELEVATION
- TW-28 (5948.04) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4 AND GROUNDWATER ELEVATION
- PW-1 (ND) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
GROUNDWATER ELEVATION IN THE UPPER BASALT ZONE (JUNE 2013)

Golder Associates

PROJECT No.	9131101.X002.002		FILE No.	9131101x002_002-0006-HS-0006
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	6
CHECK	MK	2013-12-19		
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0007-HS-0007.dwg | Layout: 7 FIGURE | Modified: SSimmons 12/19/2013 10:08 AM | Plotted: SSimmons 12/20/2013

LEGEND

- f U D f FAULT
- f U D ? f FAULT (INFERRED)
- f f FISSURE
- LBZ-1 GROUNDWATER ZONE
- GROUNDWATER FLOW DIRECTION
- 5840 GROUNDWATER CONTOUR (10 FOOT INTERVAL)
- SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A
- SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC
- SURFACE WATER LOCATION WITH NAME — MORMON CREEK
- GROUNDWATER ELEVATION (FEET) WITH QUALIFIER (IF ANY) — (ND) = NO DATA
- TW-60 (5837.68) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-1 AND GROUNDWATER ELEVATIONS
- TW-59 (5839.05) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-2 AND GROUNDWATER ELEVATIONS
- TW-56 (5853.05) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-3 AND GROUNDWATER ELEVATIONS
- TW-28 (5948.04) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE LBZ-4 AND GROUNDWATER ELEVATIONS
- PW-1 (ND) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

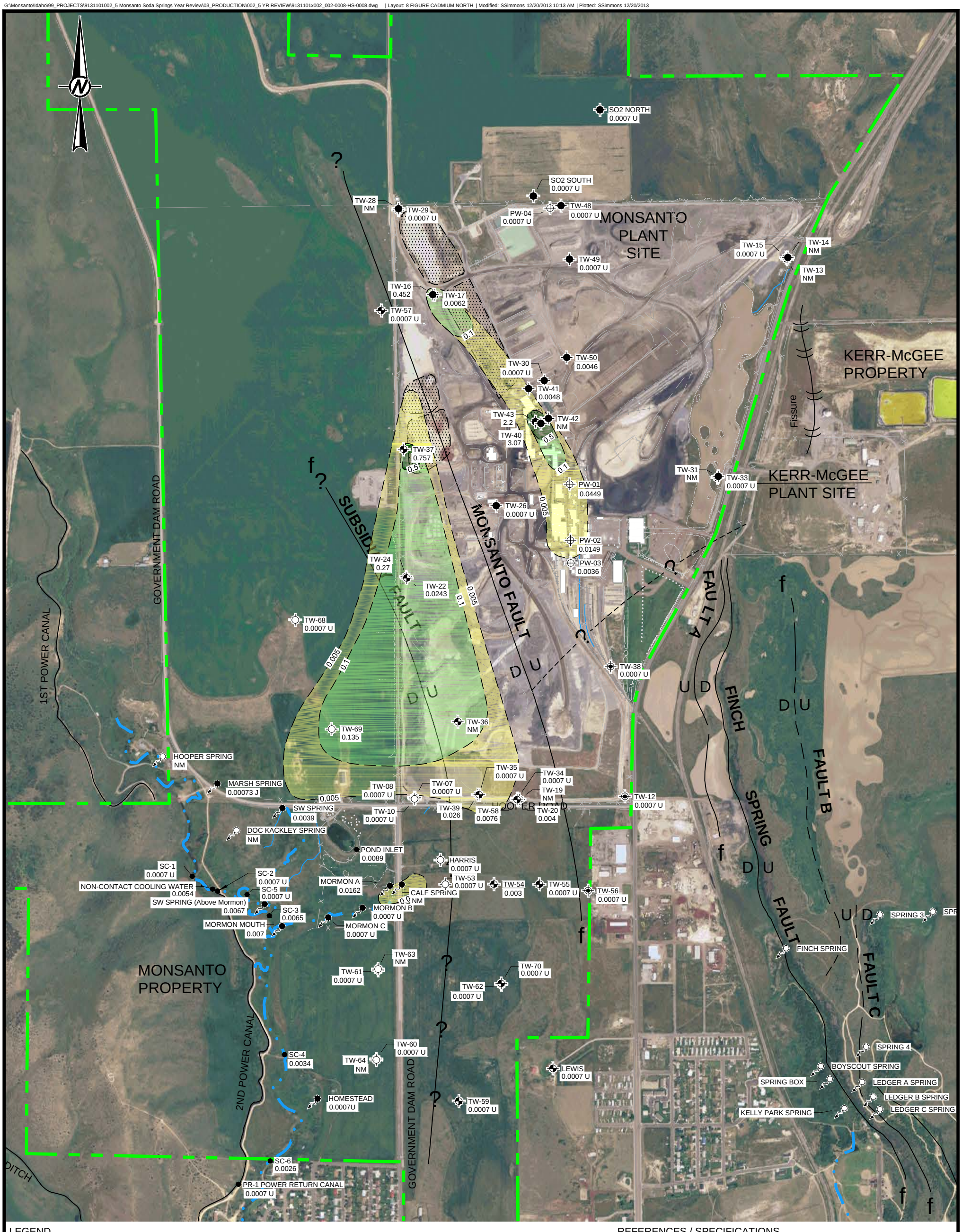
PROJECT
MONSANTO
2013ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
GROUNDWATER ELEVATIONS IN THE LOWER BASALT ZONE (JUNE 2013)

Golder Associates

PROJECT No.	9131101.X002.002		FILE No.	9131101x002_002-0007-HS-0007
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	7
CHECK	MK	2013-12-19		
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0008-HS-0008.dwg | Layout: 8 FIGURE CADMIUM NORTH | Modified: SSimmons 12/20/2013 10:13 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

0.005 0.5 0.10 — CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE; ? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
CADMIUM CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	9131101.X002.002		FILE No.	9131101x002_002-0008-HS-0008
DESIGN	DH	2013-09-20	SCALE	AS SHOWN
CADD	SES	2013-09-20	FIGURE	8
CHECK	MK	2013-09-20		
REVIEW	DB	2013-09-20		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0008-HS-0008.dwg | Layout: 9 FIGURE CADMIUM SOUTH | Modified: SSimmons 12/20/2013 10:13 AM | Plotted: SSimmons 12/20/2013

LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

0.005 0.5 0.10 — CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE; ? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

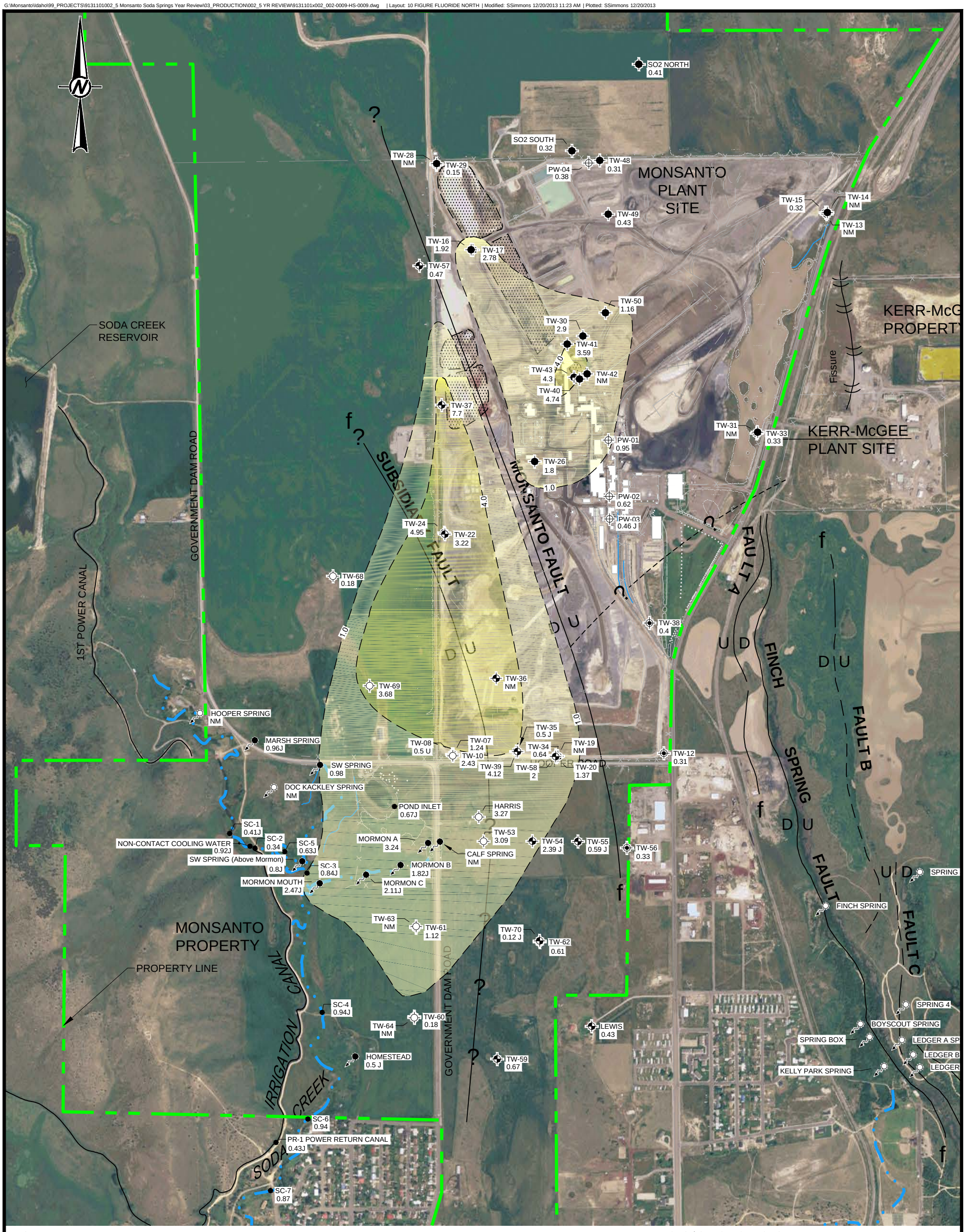
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
CADMIUM CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101.X002.002		FILE No. 9131101x002_002-0008-HS-0008
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	9
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0009-HS-0009.dwg | Layout: 10 FIGURE FLUORIDE NORTH | Modified: SSimmons 12/20/2013 11:23 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

1.0 4.0 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

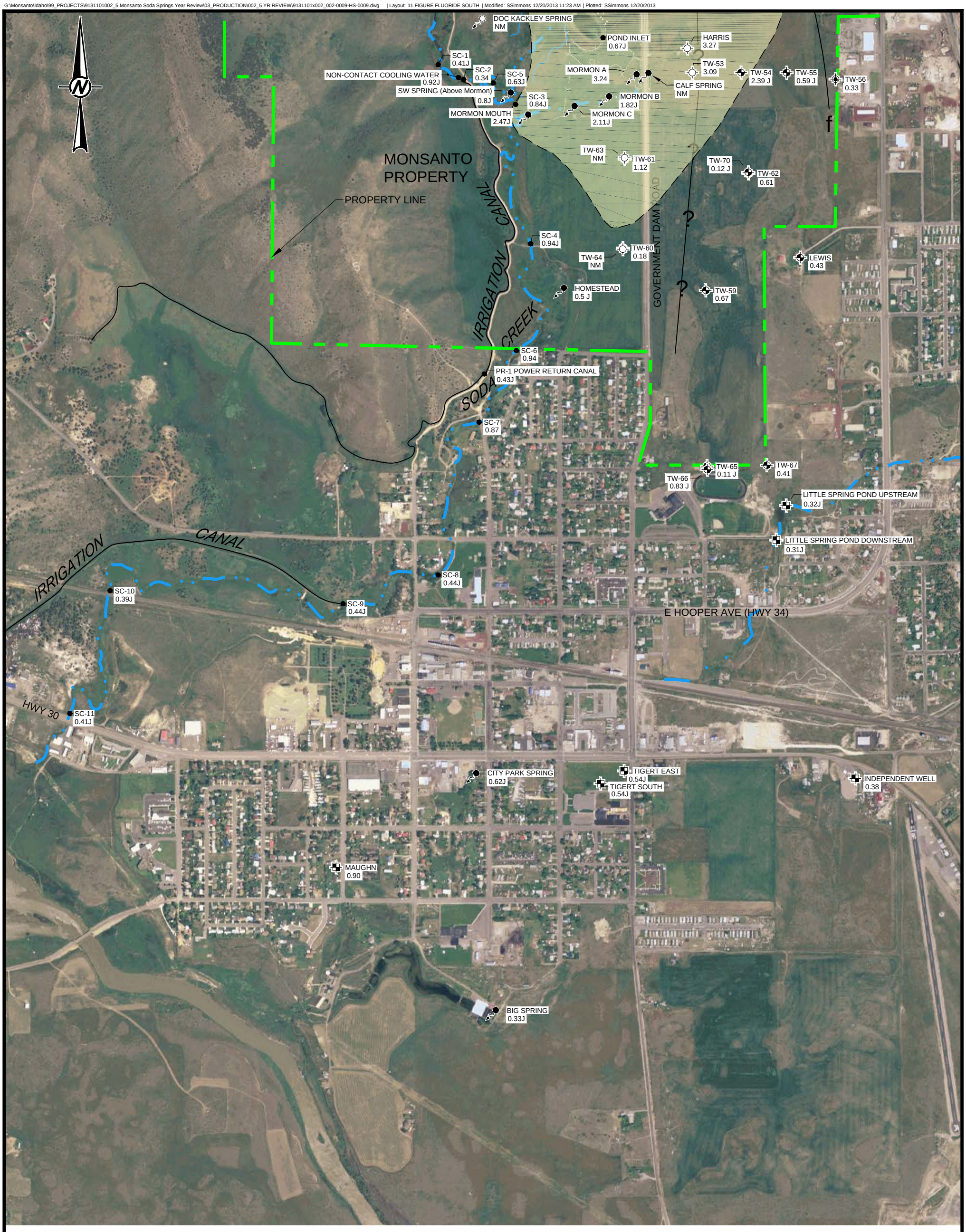
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
FLUORIDE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0009-HS-0009
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	10
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0009-HS-0009.dwg | Layout: 11 FIGURE FLUORIDE SOUTH | Modified: SSimmons 12/20/2013 11:23 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

1.0 4.0 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

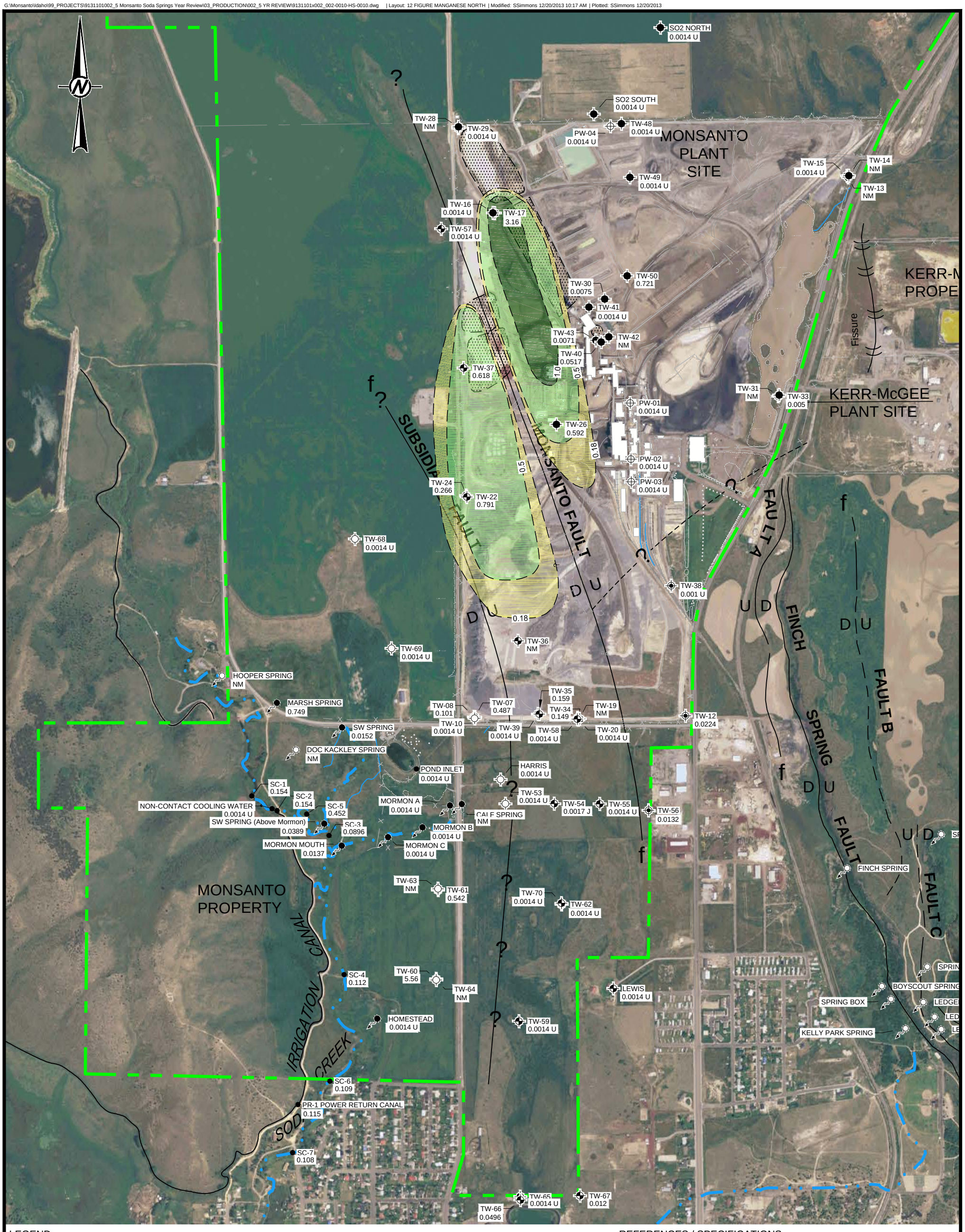
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
FLUORIDE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0009-HS-0009	
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	11
CHECK	MK	2013-12-19		
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0010-HS-0010.dwg | Layout: 12 FIGURE MANGANESE NORTH | Modified: SSimmons 12/20/2013 10:17 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

0.18 1.0 0.5 — CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

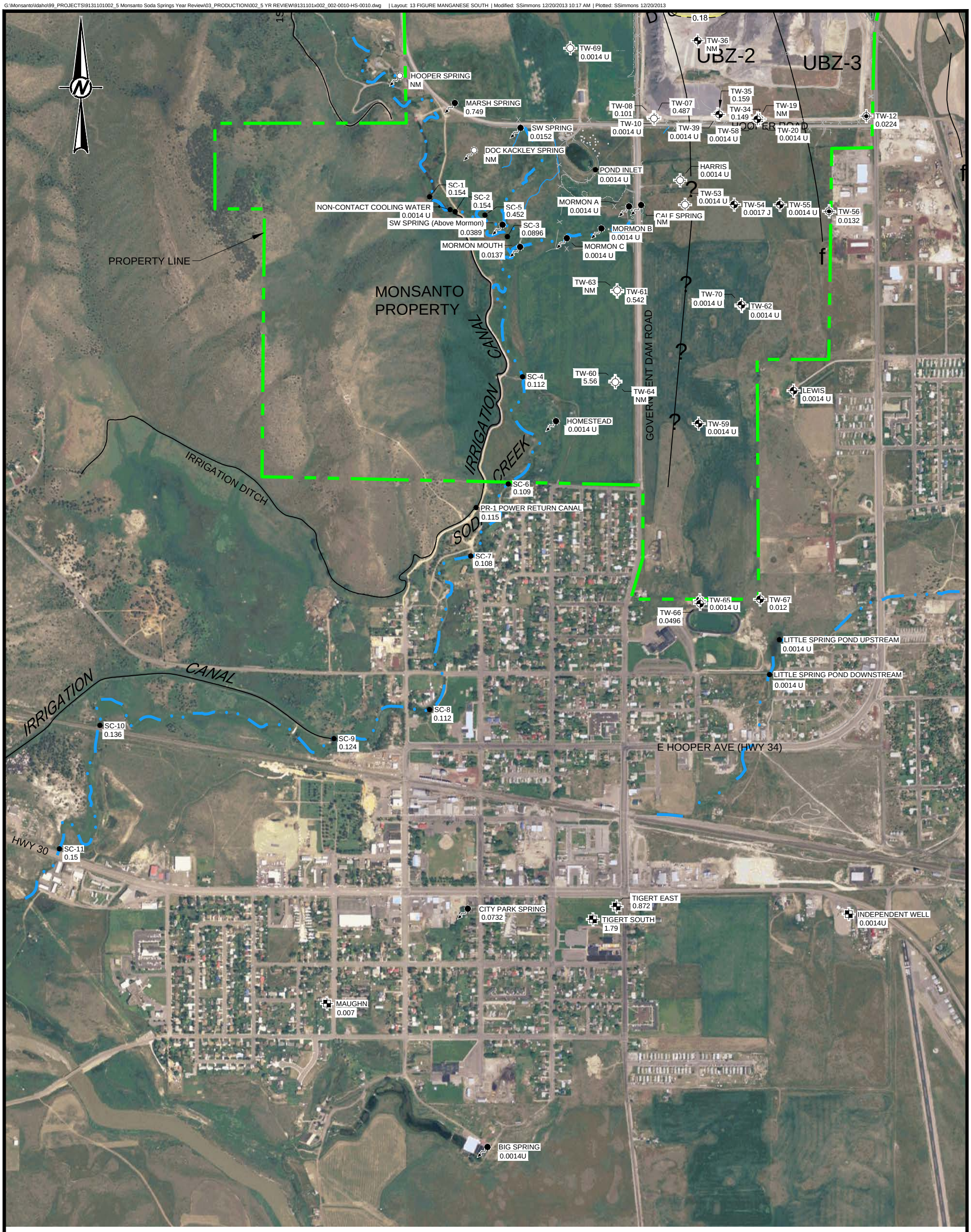
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
MANGANESE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	9131101.X002.002		FILE No. 9131101x002_002-0010-HS-0010
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	12
REVIEW	BD	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0010-HS-0010.dwg | Layout: 13 FIGURE MANGANESE SOUTH | Modified: SSimmons 12/20/2013 10:17 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

-0.18 1.0 0.5 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

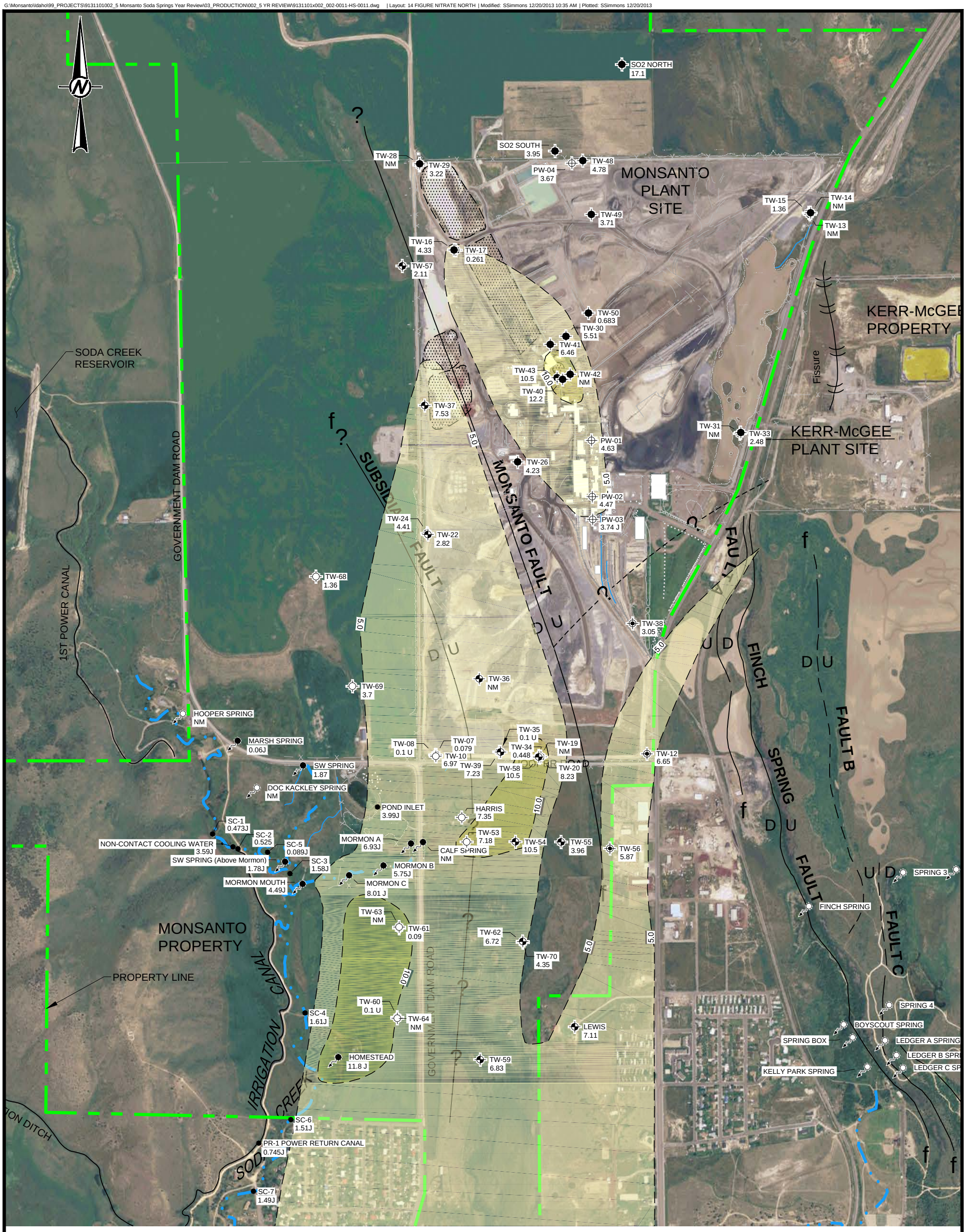
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
MANGANESE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0010-HS-0010
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	13
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0011-HS-0011.dwg | Layout: 14 FIGURE NITRATE NORTH | Modified: SSimmons 12/20/2013 10:35 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

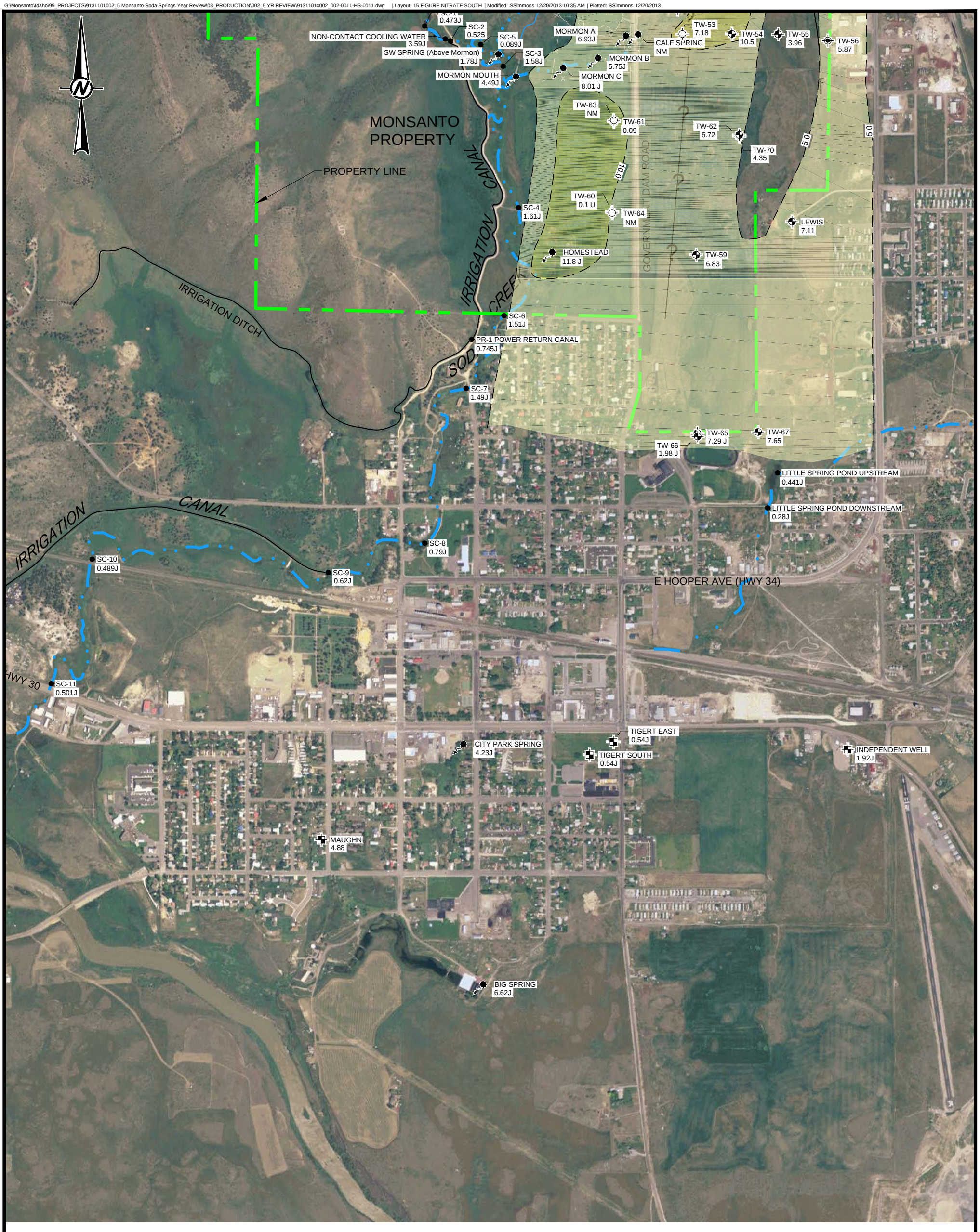
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
NITRATE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	9131101.X002.002		FILE No. 9131101x002_002-0011-HS-0011
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	14
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0011-HS-0011.dwg | Layout: 15 FIGURE NITRATE SOUTH | Modified: SSimmons 12/20/2013 10:35 AM | Plotted: SSimmons 12/20/2013



LEGEND

- FAULT
- FAULT (INFERRED)
- FISSURE
- UBZ-1 — GROUNDWATER ZONE
- SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)
- SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC
- SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)
- WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)
- SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)
- (NM) = NOT MEASURED
- (...U) = NOT DETECTED
- (...J) = ESTIMATED
- TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1
- TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2
- TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3
- TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4
- PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME
- 5.0 / 10.0 — CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE; ? WHERE UNKNOWN
- REMEDIAL GOAL = 0.005 mg/L (MCL)

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

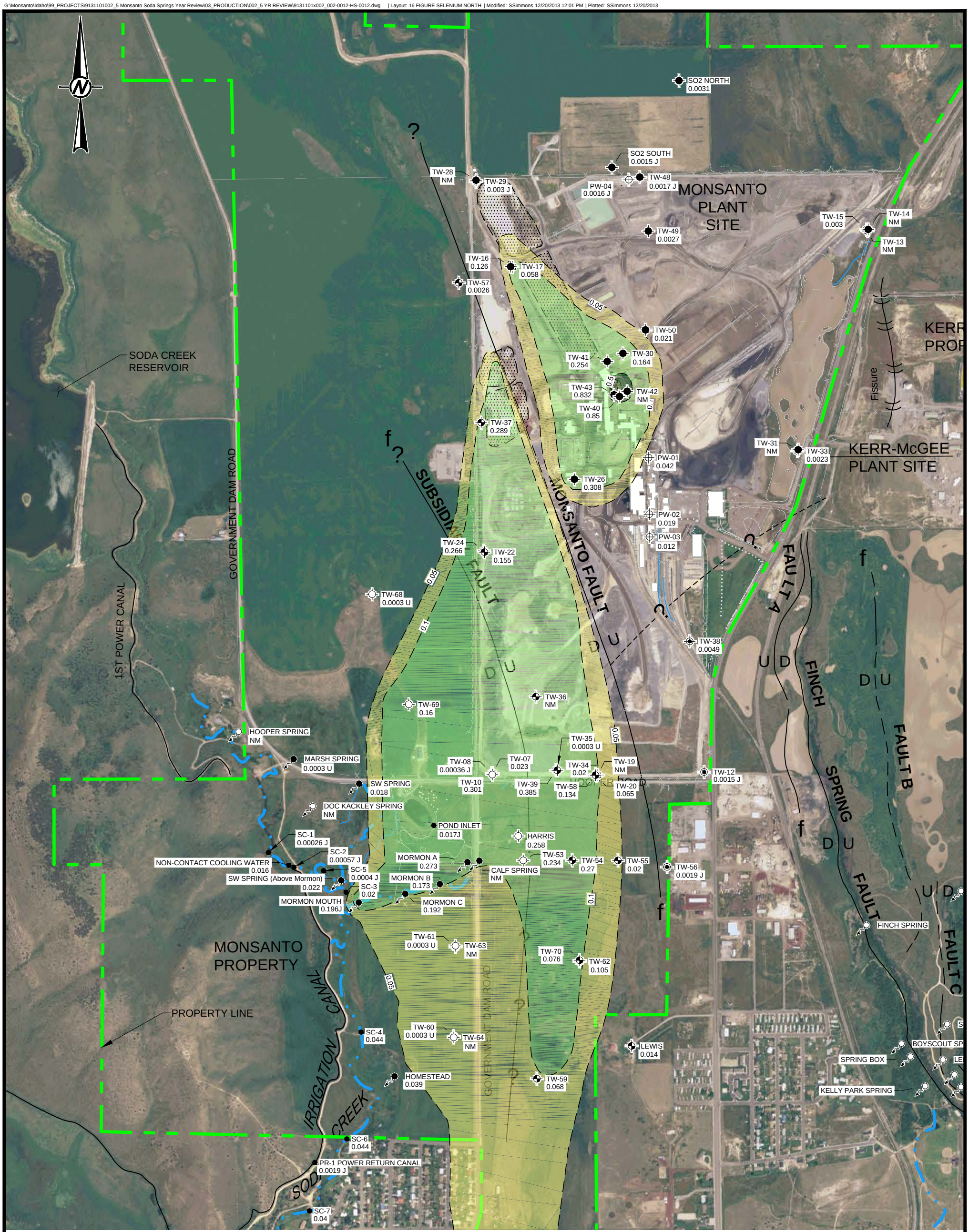
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
NITRATE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0011-HS-0011
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	15
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0012-HS-0012.dwg | Layout: 16 FIGURE SELENIUM NORTH | Modified: SSimmons 12/20/2013 12:01 PM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

-0.05 -0.5 -0.1 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

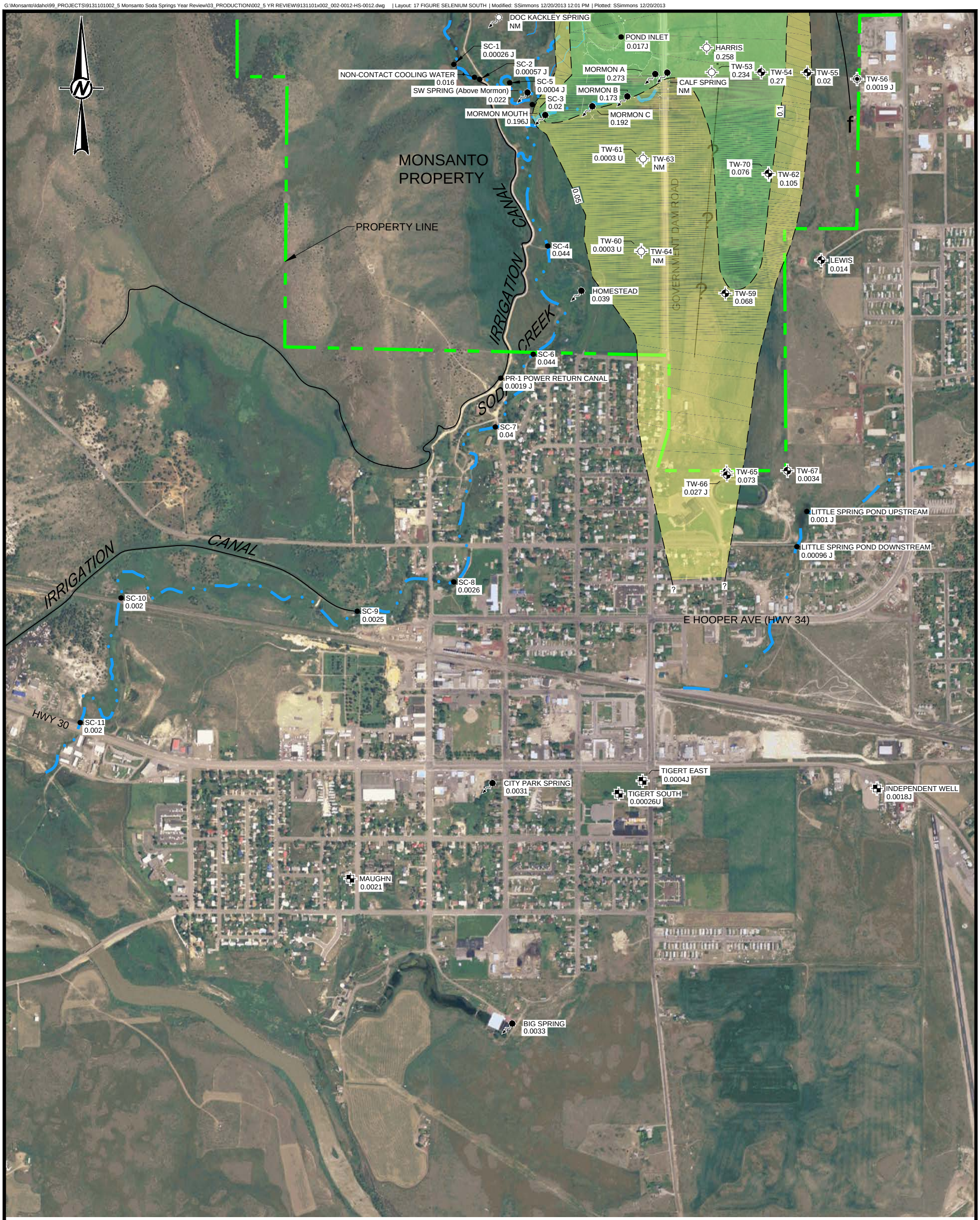
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
SELENIUM CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	931101.X002.002		FILE No. 9131101x002_002-0012-HS-0012
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	16
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0012-HS-0012.dwg | Layout: 17 FIGURE SELENIUM SOUTH | Modified: SSimmons 12/20/2013 12:01 PM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

-0.05 -0.5 -0.1 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

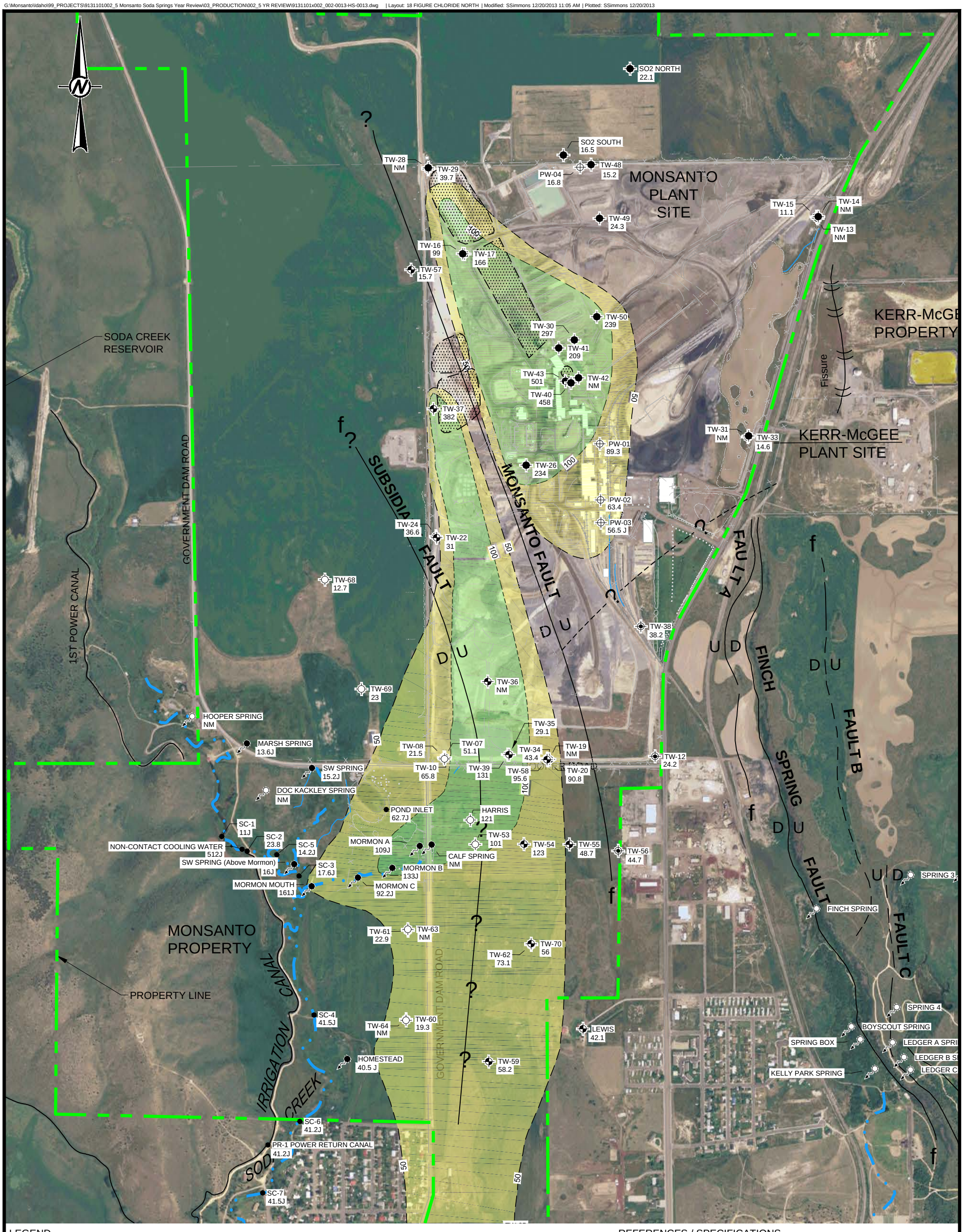
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
SELENIUM CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0012-HS-0012	
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	17
CHECK	MK	2013-12-19		
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0013-HS-0013.dwg | Layout: 18 FIGURE CHLORIDE NORTH | Modified: SSimmons 12/20/2013 11:05 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

50 100 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA APRINGS, IDAHO

TITLE
CHLORIDE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	931101.X002.002		FILE No. 9131101x002_002-0013-HS-0013
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	18
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0013-HS-0013.dwg | Layout: 19 FIGURE CHLORIDE SOUTH | Modified: SSimmons 12/20/2013 11:05 AM | Plotted: SSimmons 12/20/2013

LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

50 100 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

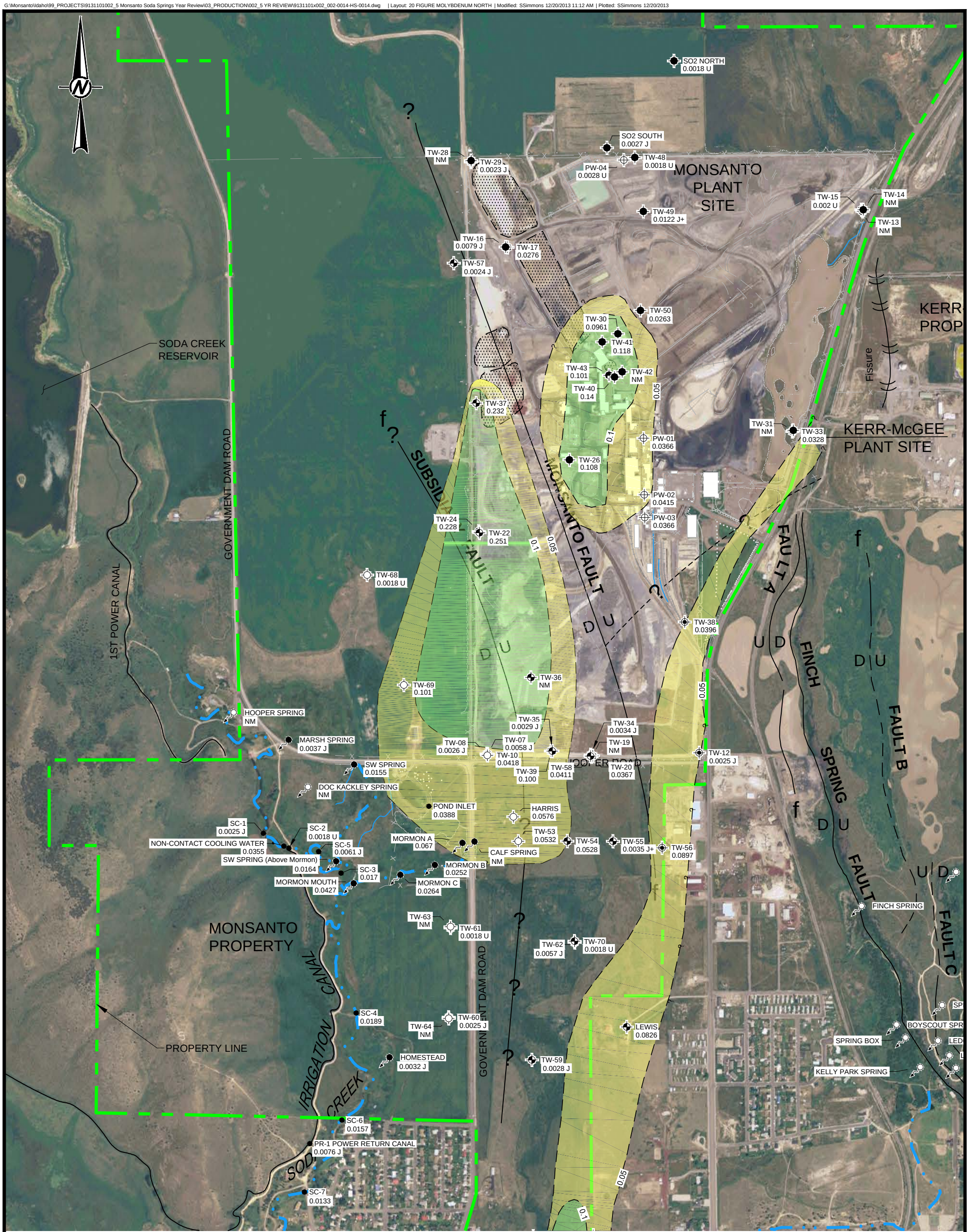
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
CHLORIDE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0013-HS-0013
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	19
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0014-HS-0014.dwg | Layout: 20 FIGURE MOLYBDENUM NORTH | Modified: SSimmons 12/20/2013 11:12 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

-0.05 0.1 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

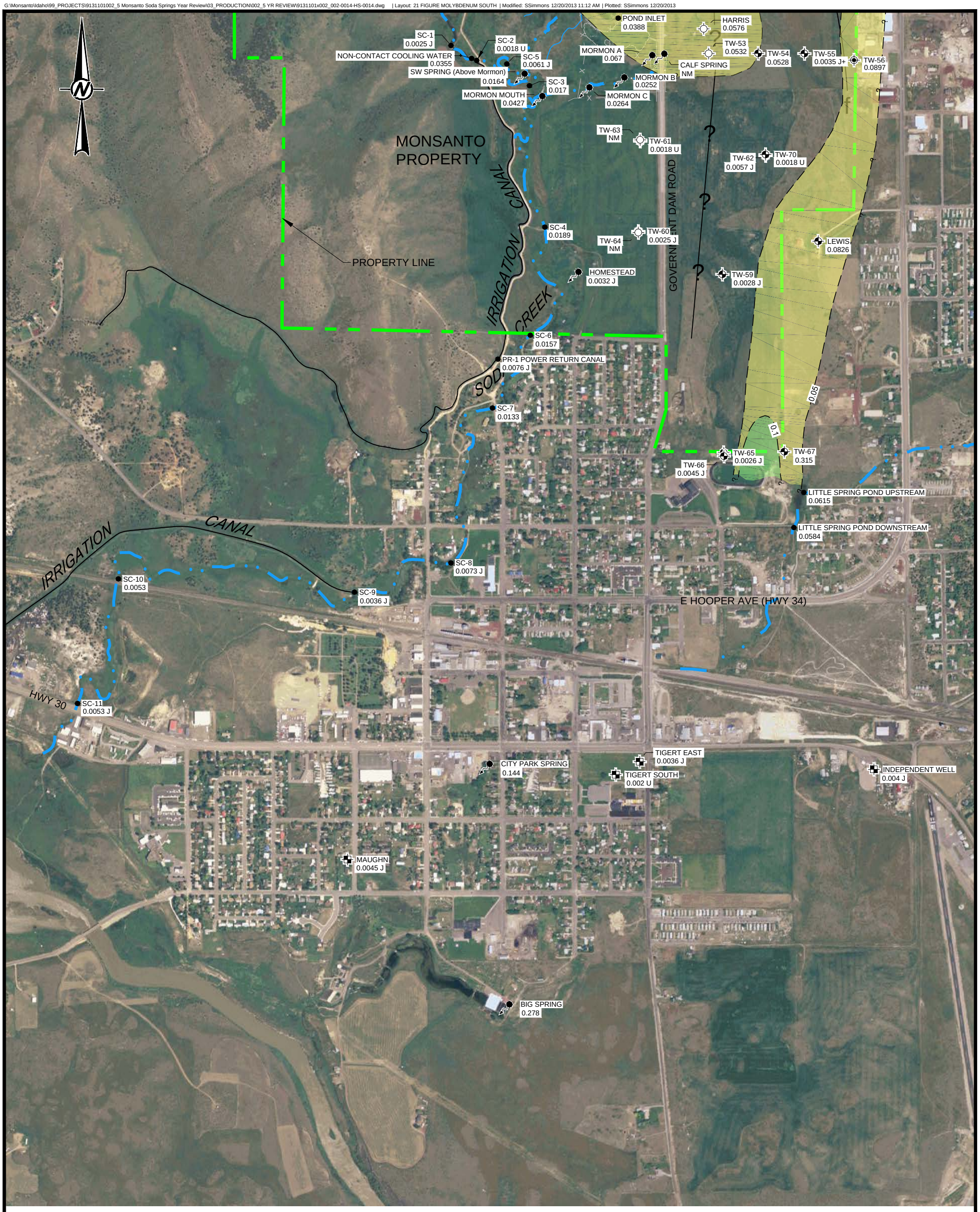
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
MOLYBDENUM CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	9131101.X002.002		FILE No. 9131101x002_002-0014-HS-0014
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	20
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0014-HS-0014.dwg | Layout: 21 FIGURE MOLYBDENUM SOUTH | Modified: SSimmons 12/20/2013 11:12 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

-0.05 0.1 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

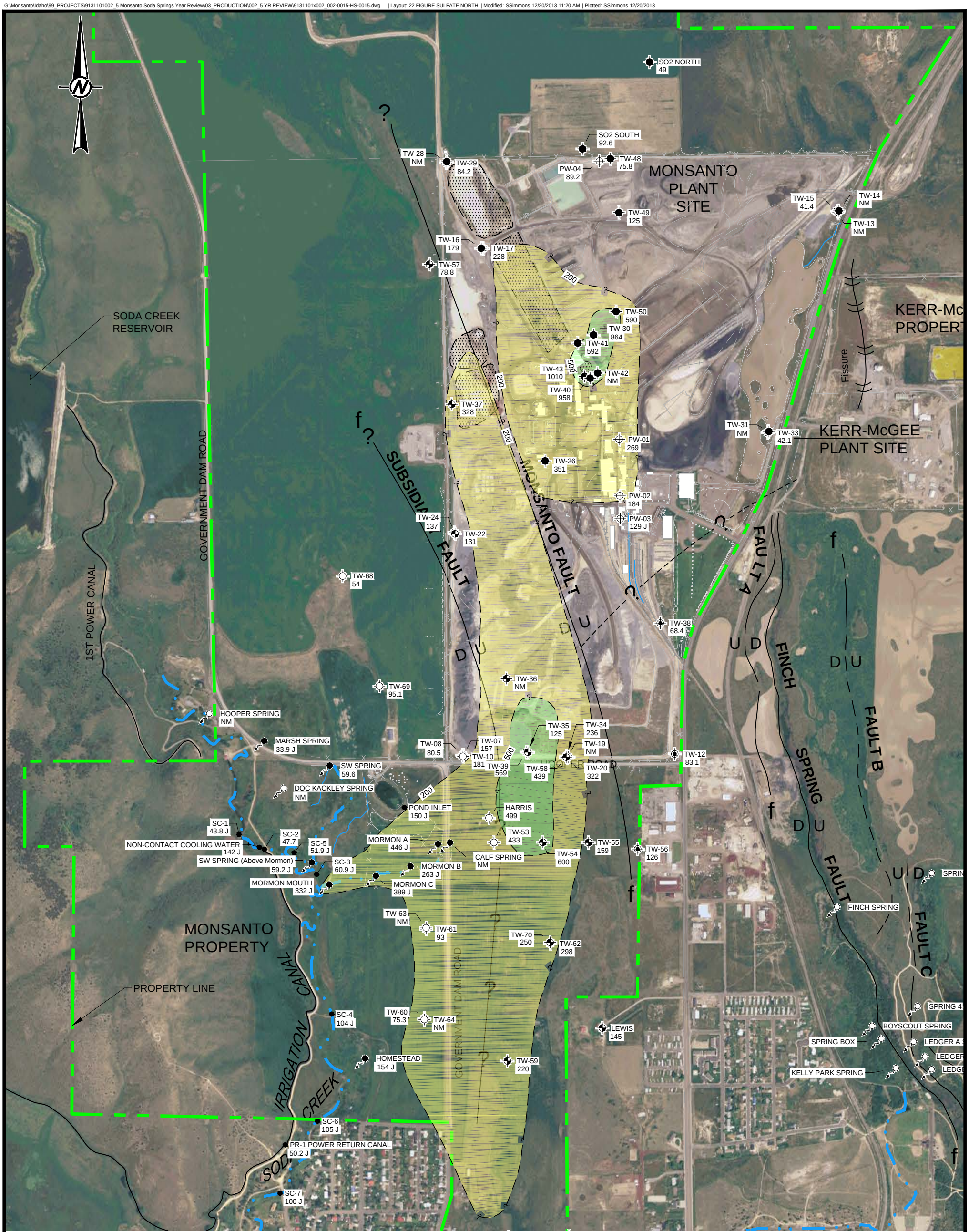
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
MOLYBDENUM CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	931101X002.002		FILE No. 9131101x002_002-0014-HS-0014	
DESIGN	DH	2013-12-19	SCALE	AS SHOWN
CADD	SES	2013-12-19	FIGURE	
CHECK	MK	2013-12-19	21	
REVIEW	DB	2013-12-19		

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0015-HS-0015.dwg | Layout: 22 FIGURE SULFATE NORTH | Modified: SSimmons 12/20/2013 11:20 AM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

200 500 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

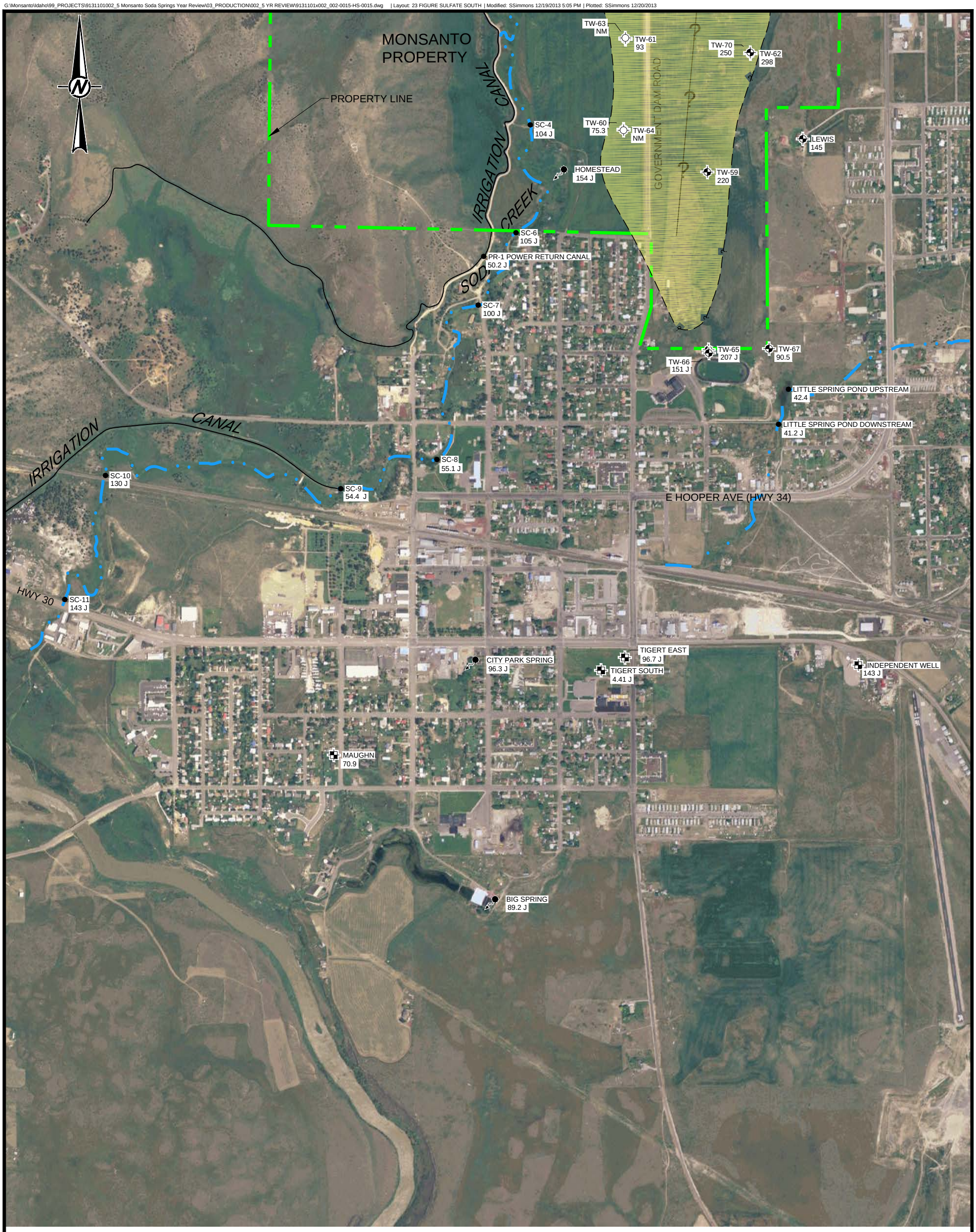
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
SULFATE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 NORTH SHEET

Golder Associates

PROJECT No.	9131101.X002.002		FILE No. 9131101x002_002-0015-HS-0015
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	22
REVIEW	DB	2013-12-19	

G:\Monsanto\Idaho\99_PROJECTS\9131101002_5 Monsanto Soda Springs Year Review\03_PRODUCTION\002_5 YR REVIEW\9131101x002_002-0015-HS-0015.dwg | Layout: 23 FIGURE SULFATE SOUTH | Modified: SSimmons 12/19/2013 5:05 PM | Plotted: SSimmons 12/20/2013



LEGEND

f U D f FAULT

f U D ? f FAULT (INFERRED)

f f FISSURE

UBZ-1 GROUNDWATER ZONE

200 500 CHEMICAL ISOPLETH (mg/L) DASHED WHERE APPROXIMATE

? WHERE UNKNOWN

REMEDIAL GOAL = 0.005 mg/L (MCL)

SPRING LOCATION WITH NAME (WHERE KNOWN) — MORMON A (0.015)

SPRING LOCATION (NOT SAMPLED) WITH NAME (WHERE KNOWN) — DOC

SURFACE WATER LOCATION WITH NAME — MORMON CREEK (NM)

WELL LOCATION IN SODA SPRINGS WITH NAME — (NM)

SAMPLE: CHEMICAL CONCENTRATION (mg/L) WITH QUALIFIER (IF ANY)

(NM) = NOT MEASURED
(...U) = NOT DETECTED
(...J) = ESTIMATED

TW-60 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-1

TW-59 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-2

TW-56 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-3

TW-28 (<0.002 U) — MONITORING WELL LOCATION WITH NAME IN GROUNDWATER ZONE UBZ-4

PW-1 (<0.041) — PRODUCTION WELL LOCATION WITH NAME

REFERENCES / SPECIFICATIONS

1. NAD83 IDAHO STATE PLANES, EAST ZONE, US FOOT.
2. AERIAL PHOTO FROM MONSANTO (5/22/2003).
3. SITE TOPOGRAPHY FROM AERIAL MAPPING, INC., IDAHO (5/11/1996).

0 500 1000 1500
SCALE FEET

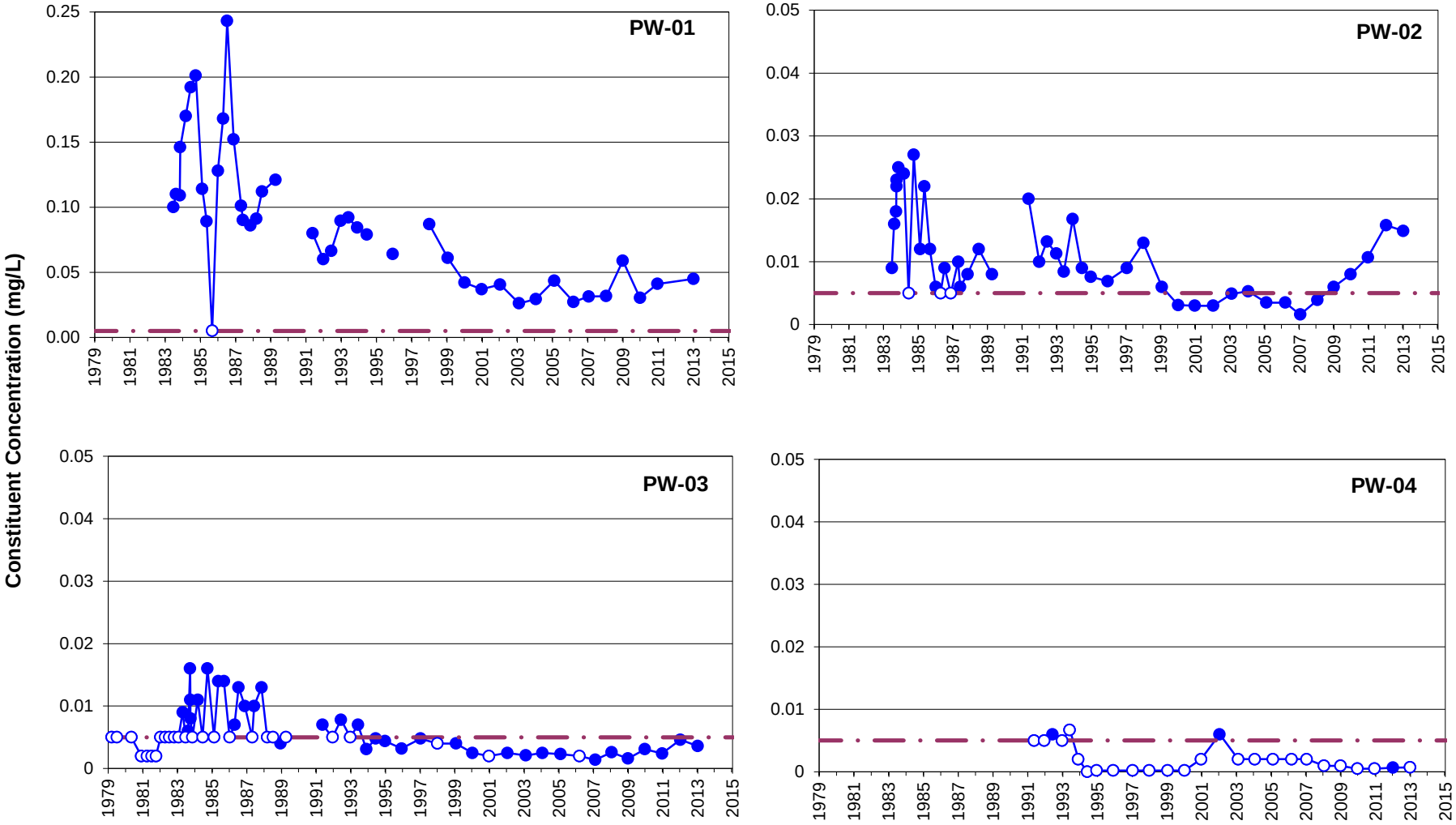
PROJECT
MONSANTO
2013 ANNUAL REPORT
SODA SPRINGS, IDAHO

TITLE
SULFATE CONCENTRATIONS IN GROUNDWATER AND SURFACE WATER JUNE 2013 SOUTH SHEET

Golder Associates

PROJECT No.	9131101X002.002		FILE No. 9131101x002_002-0015-HS-0015
DESIGN	DH	2013-12-19	SCALE AS SHOWN
CADD	SES	2013-12-19	FIGURE
CHECK	MK	2013-12-19	23
REVIEW	DB	2013-12-19	

APPENDIX A
TIME-HISTORY GRAPHS FOR CADMIUM



Remediation goals shown for point of compliance locations only

LEGEND

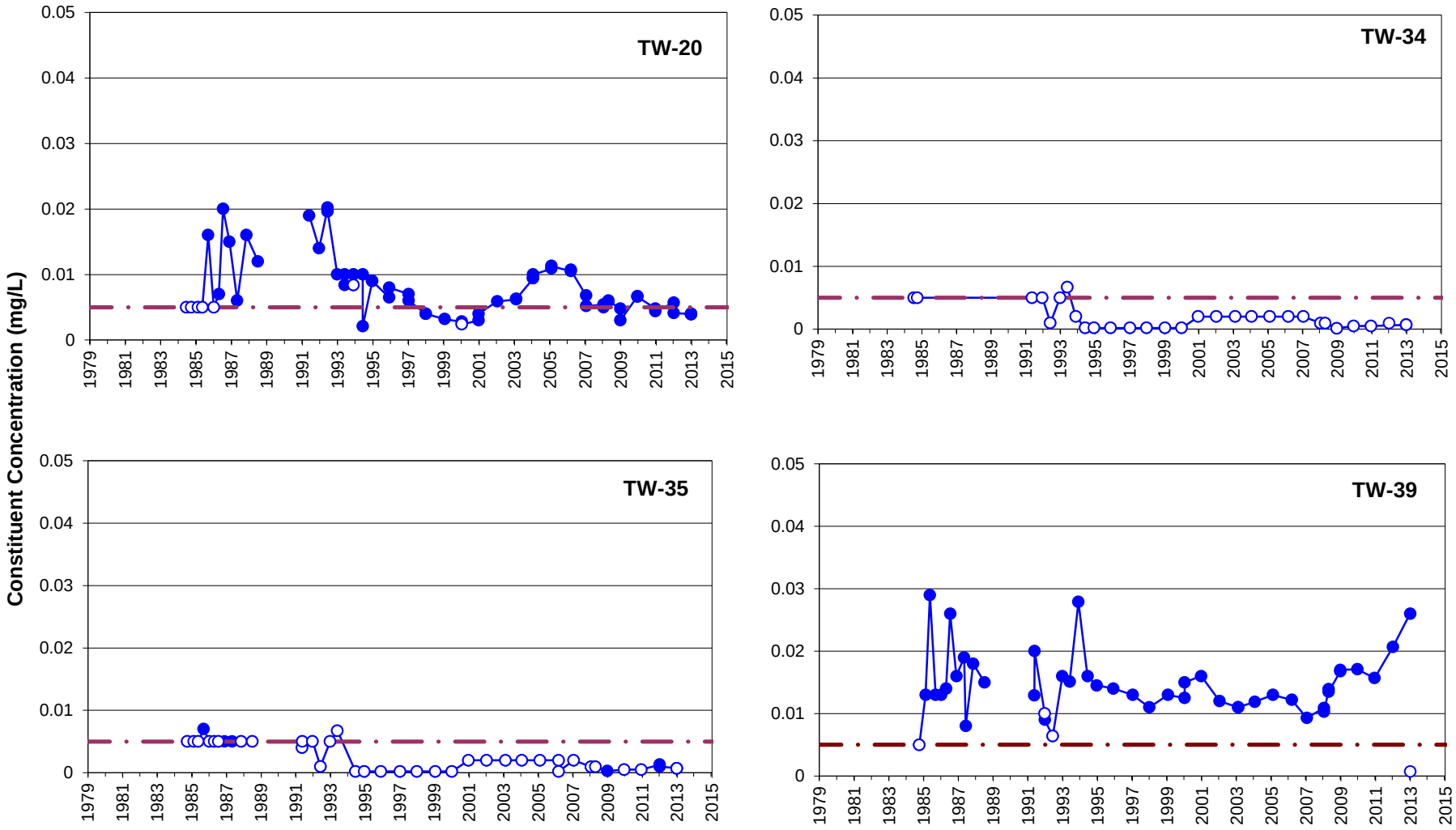
- Constituent Concentration (mg/L)
- Non-Detects
- Cadmium Remediation Goal (0.005 mg/L)

FIGURE **A-1**

CADMIUM IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

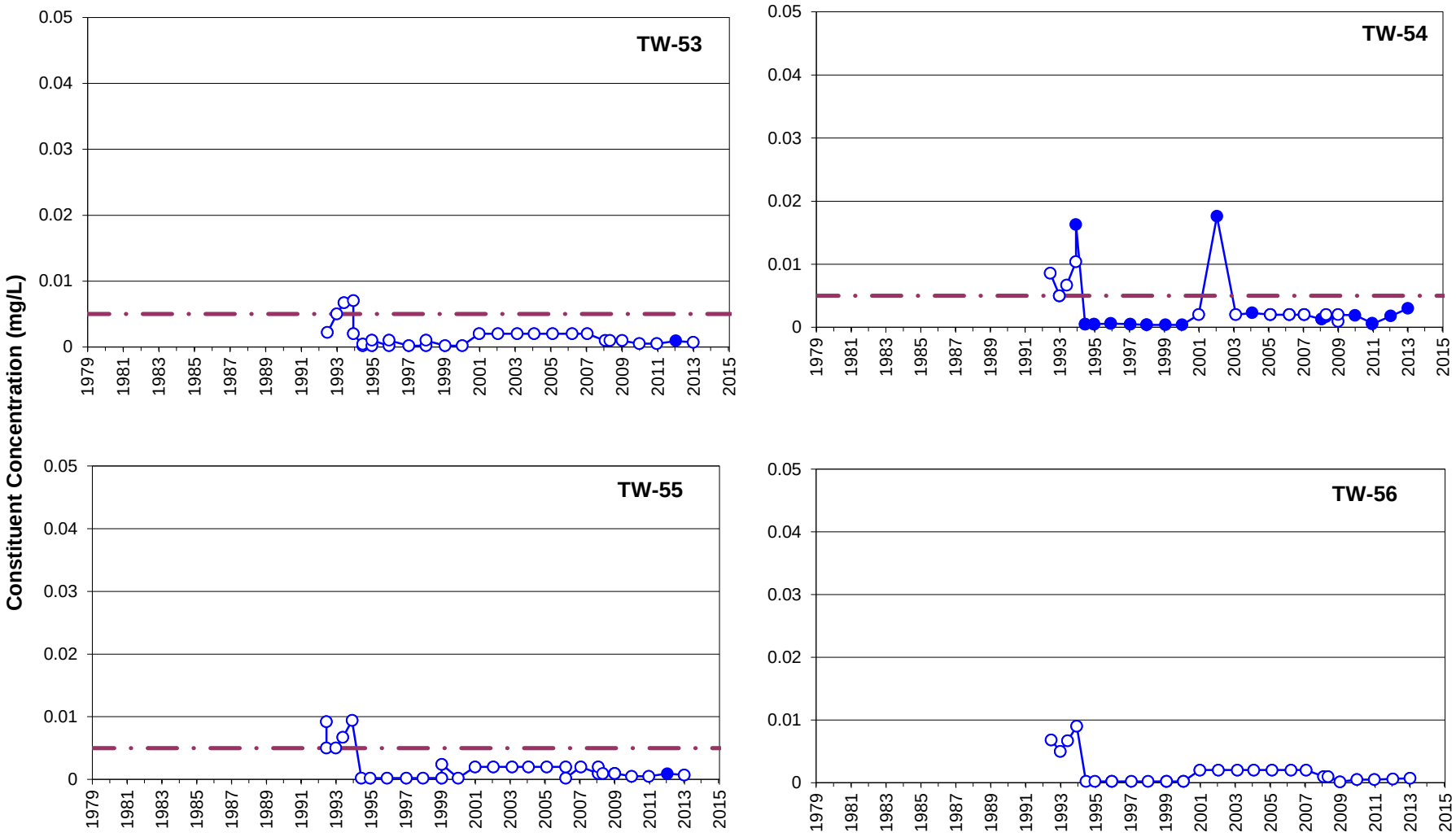
- Constituent Concentration (mg/L)
- Non-Detects
- Cadmium Remediation Goal (0.005 mg/L)

FIGURE **A-2**

CADMIUM IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

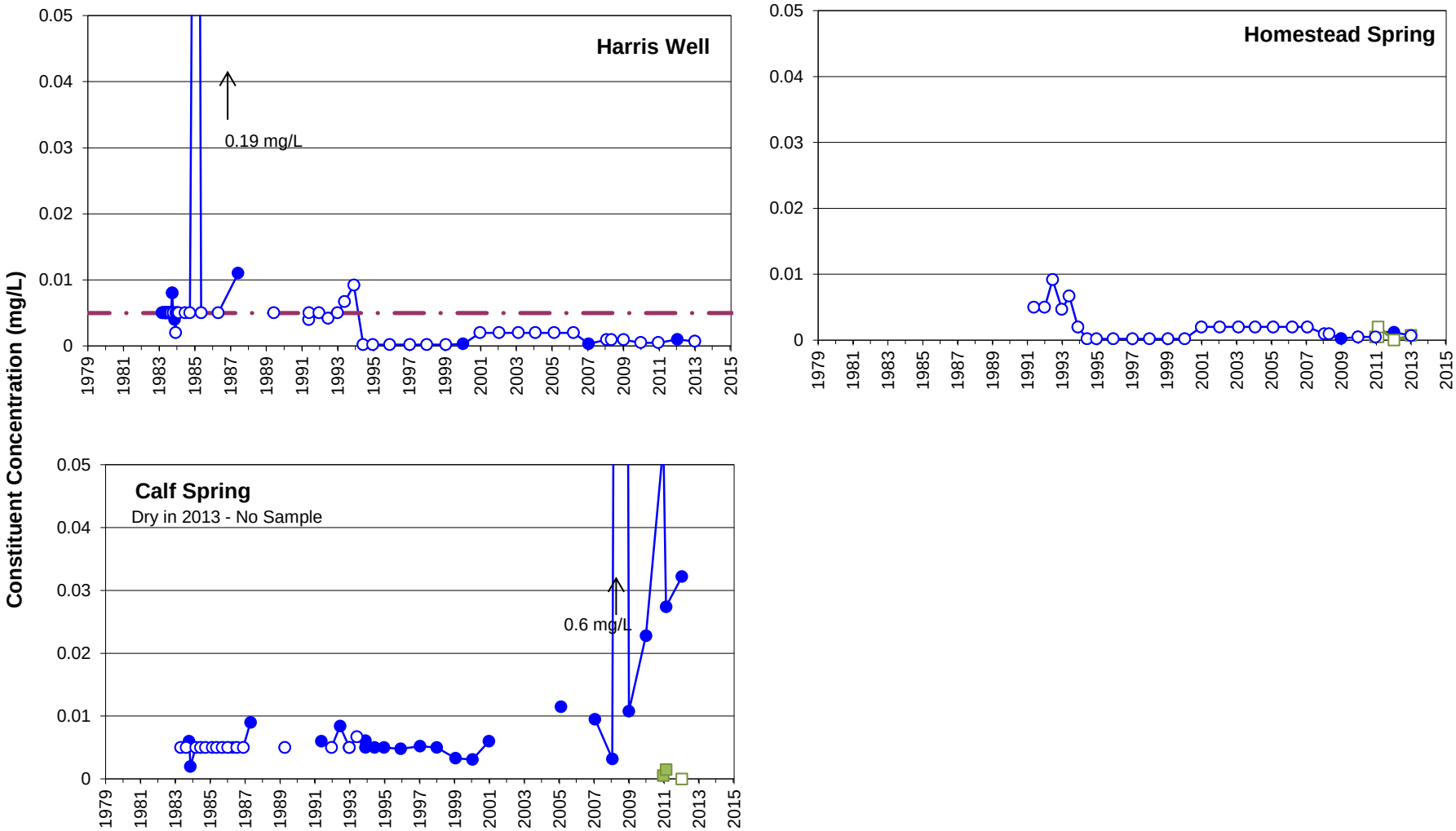
- Constituent Concentration (mg/L)
- Non-Detects
- Cadmium Remediation Goal (0.005 mg/L)

FIGURE **A-3**

CADMIUM IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

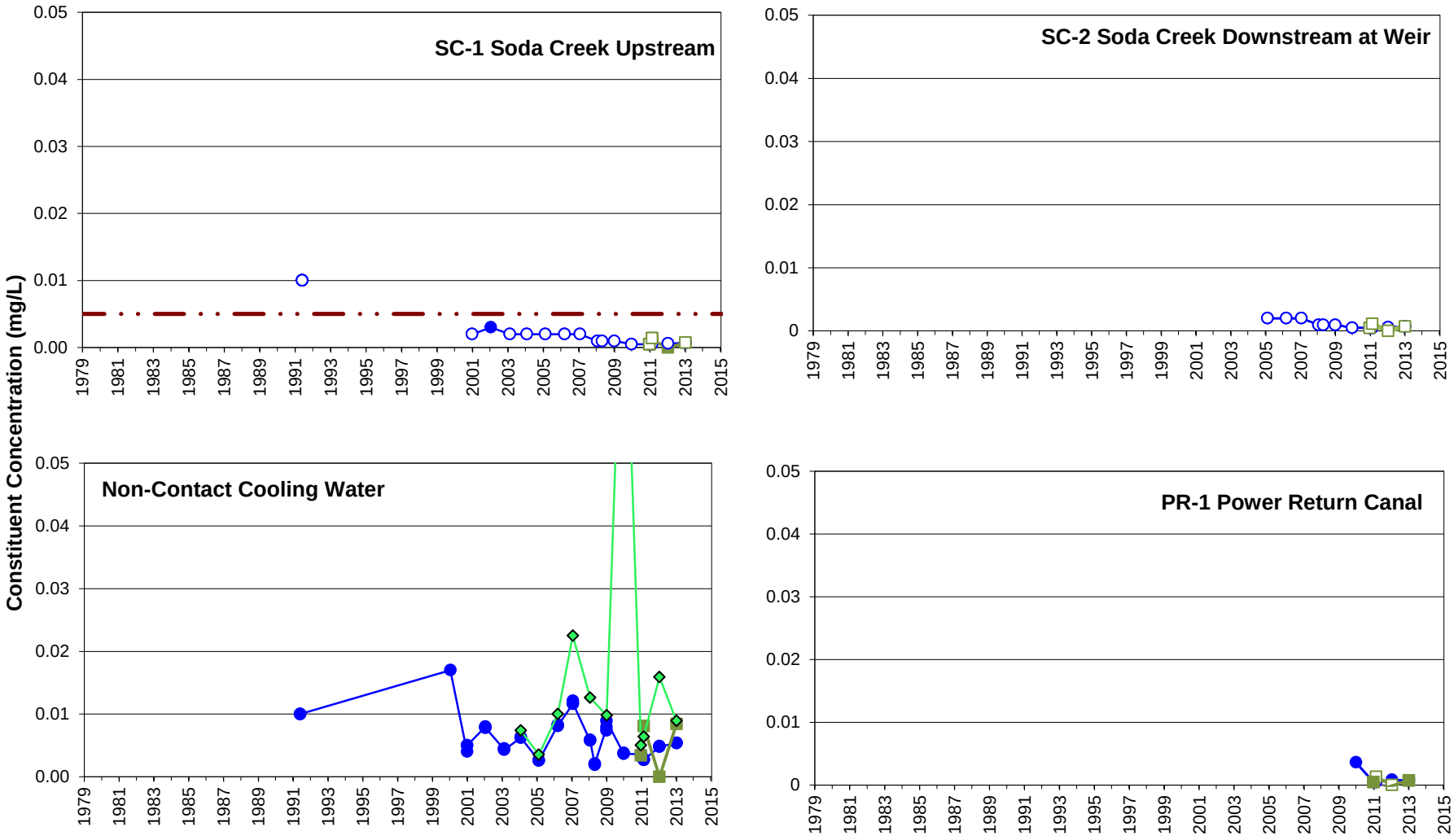
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Cadmium Remediation Goal (0.005 mg/L)

FIGURE **A-4**

CADMIUM IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Cadmium Remediation Goal (0.005 mg/L)
- Pond Inlet

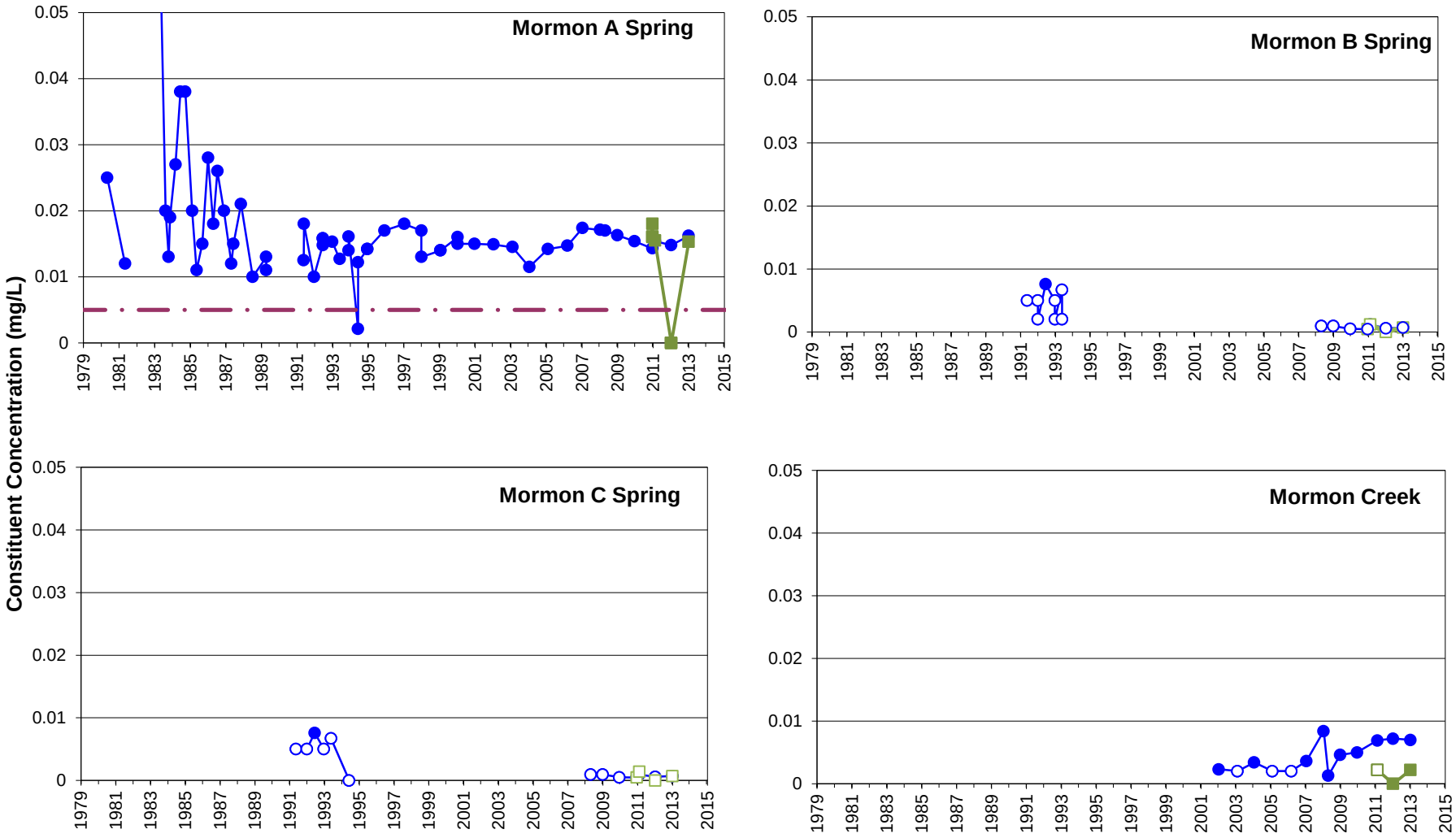
Golder Associates

FIGURE **A-5**

CADMIUM IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Cadmium Remediation Goal (0.005 mg/L)

FIGURE **A-6**

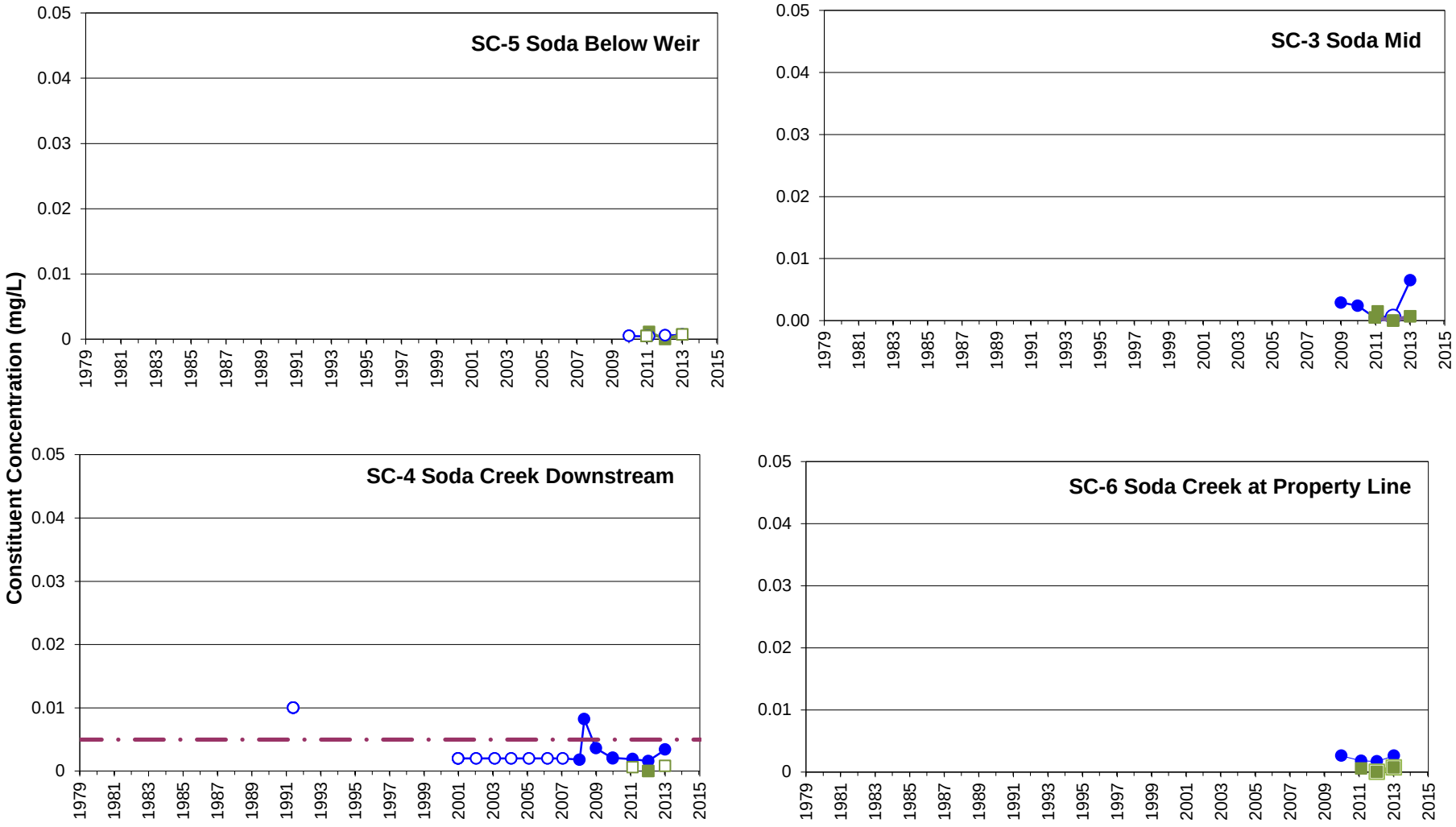
CADMIUM IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002

V:\PROJECTS_1991 PROJECTS\913-1101_Monsanto_Banton\Reports\2013 Annual Report\2013 Chemical Hydrographs\App A Cadmium Charts 2013

Golder Associates



Remediation goals shown for point of compliance locations only

LEGEND

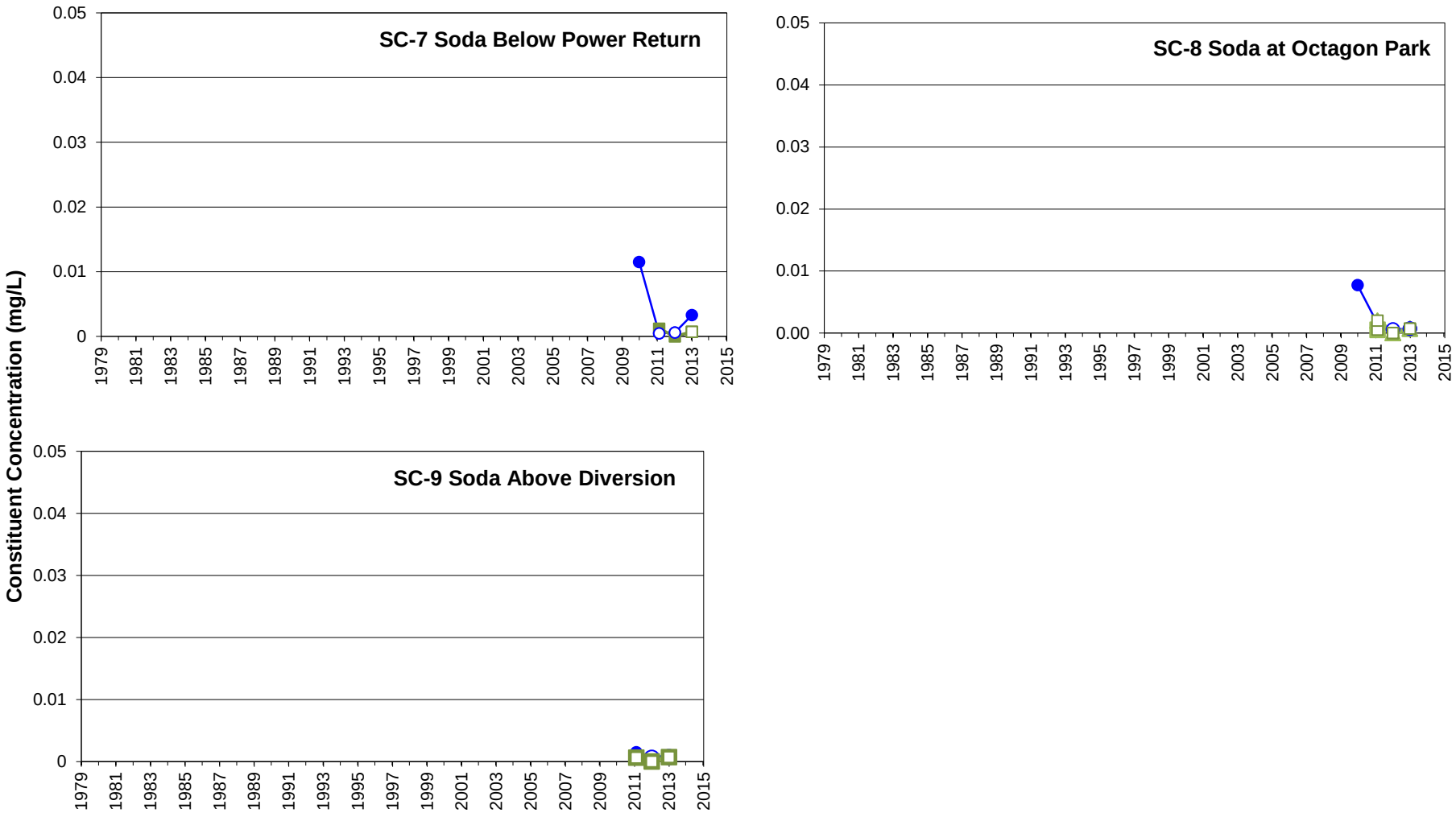
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Cadmium Remediation Goal (0.005 mg/L)

FIGURE **A-7**

CADMIUM IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

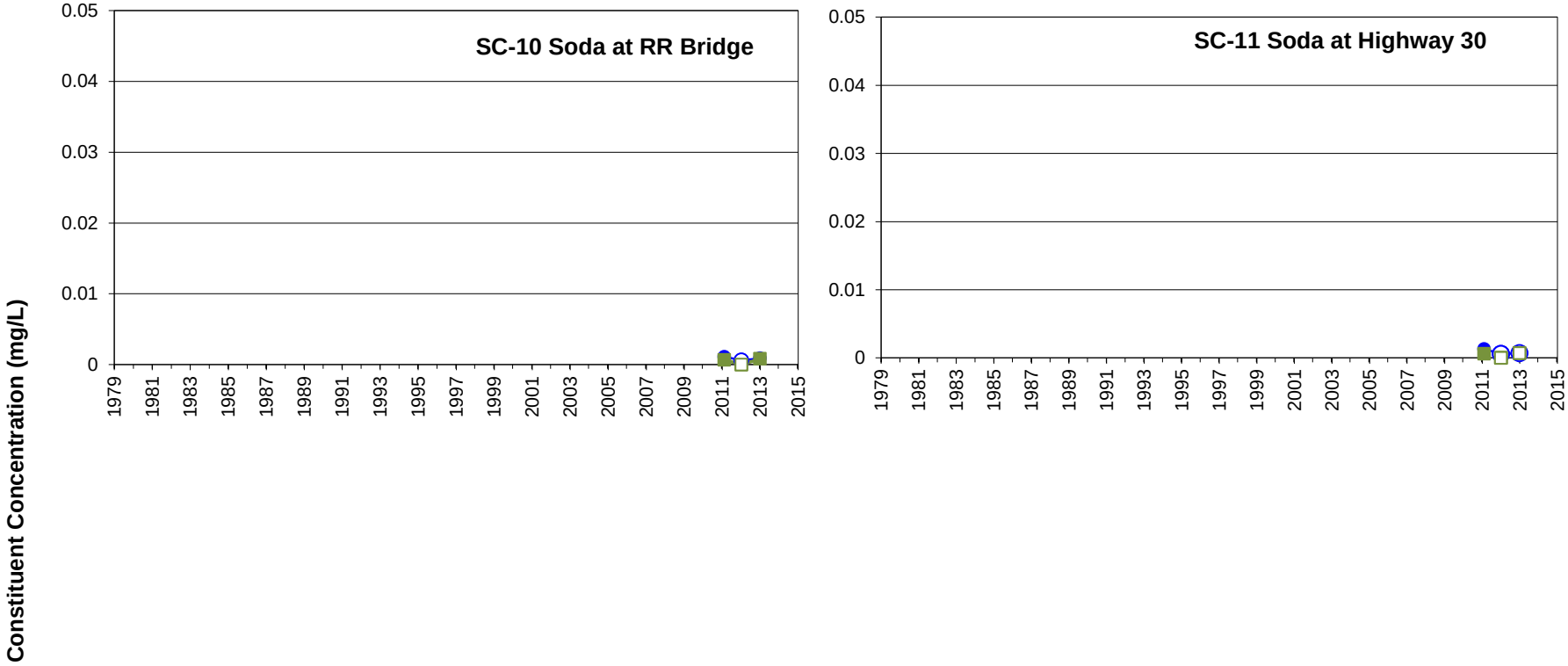
- Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Constituent Concentration (mg/L)
- Dissolved Non-Detect (mg/L)

FIGURE **A-8**

CADMIUM IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

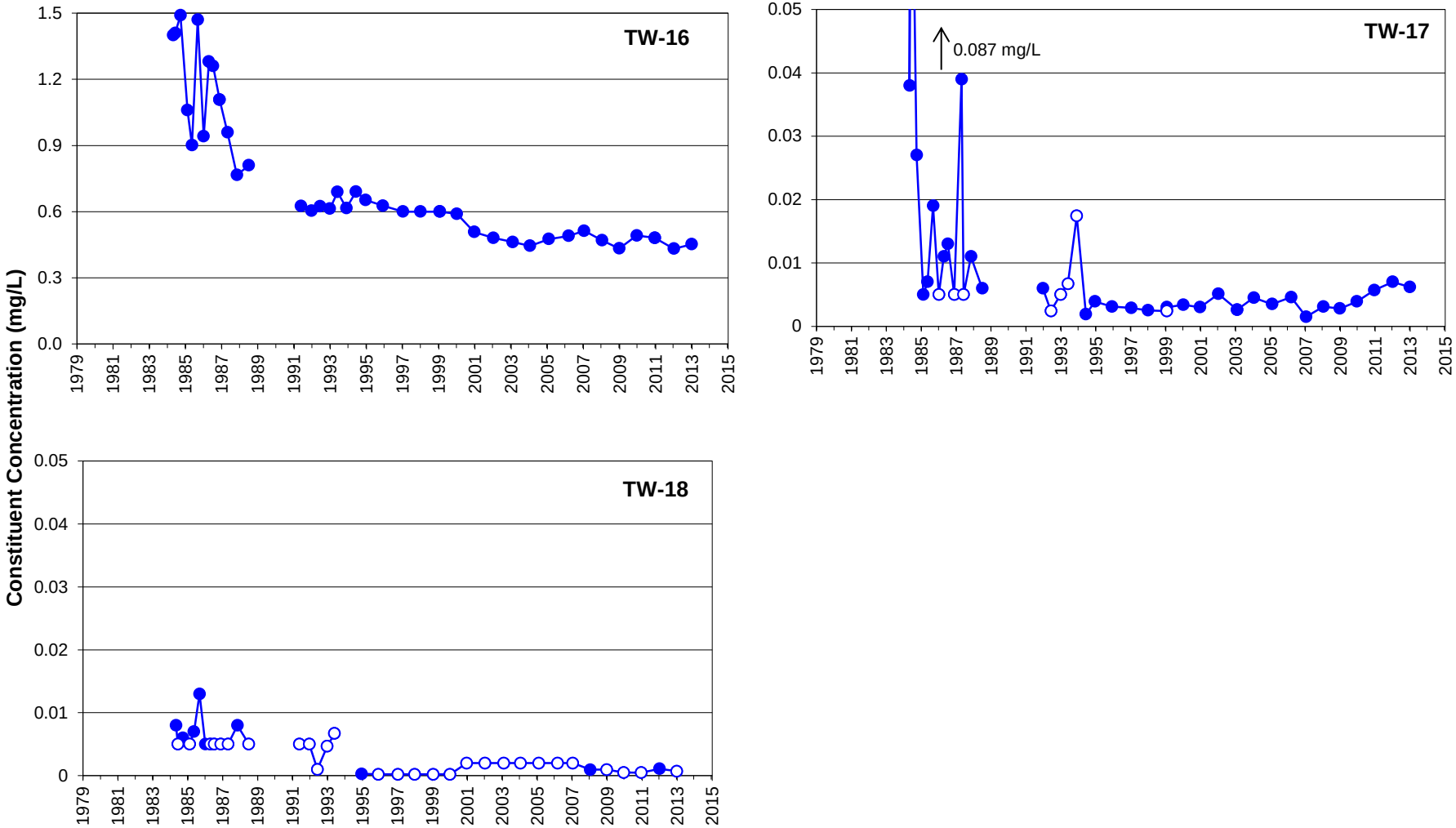
- Constituent Concentration (mg/L)
- Non-detect
- Dissolved Constituent Concentration (mg/L)
- Dissolved Non-Detect (mg/L)

FIGURE **A-9**

CADMIUM IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

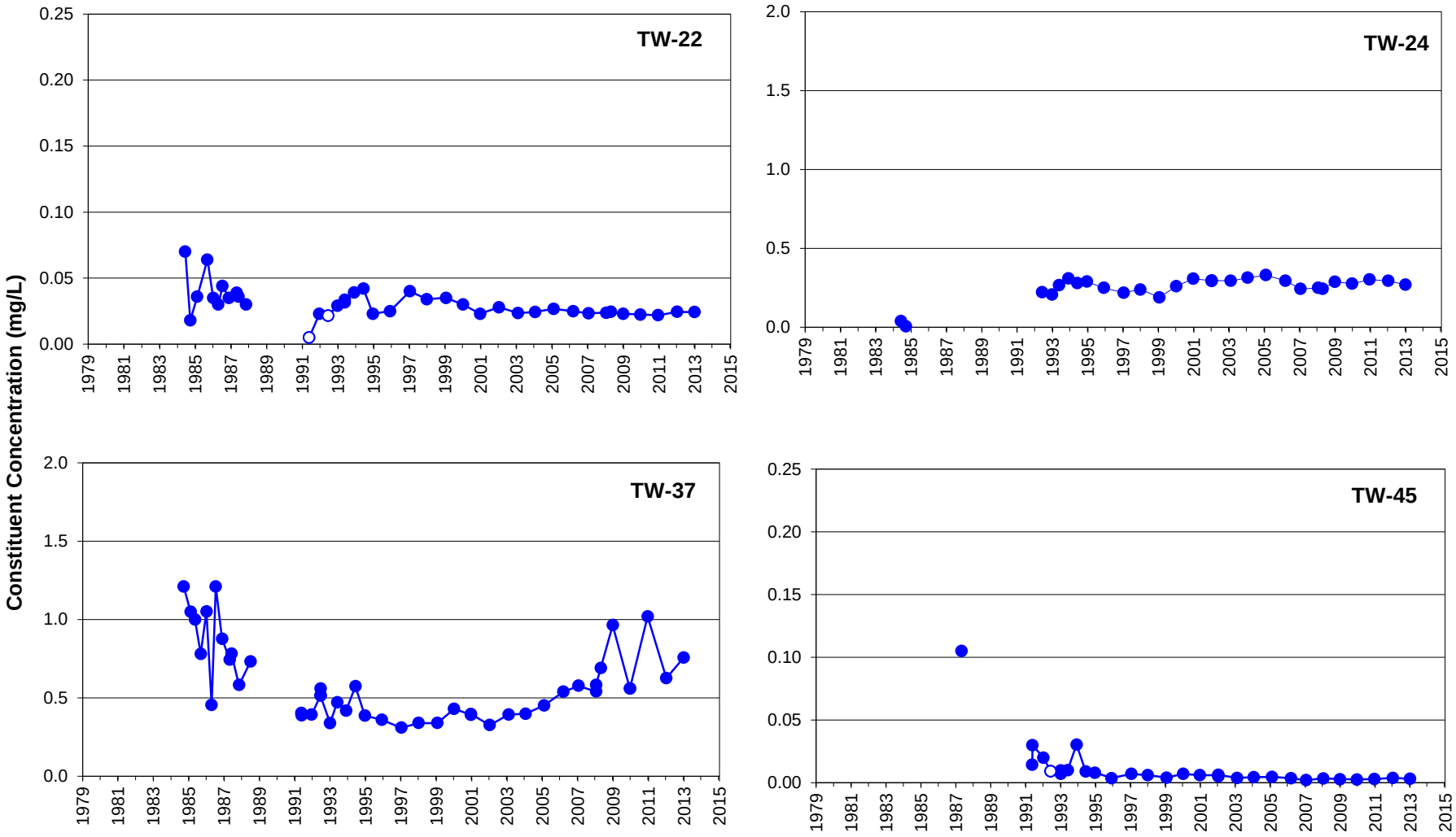
Non-Detects

FIGURE **A-10**

CADMIUM IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

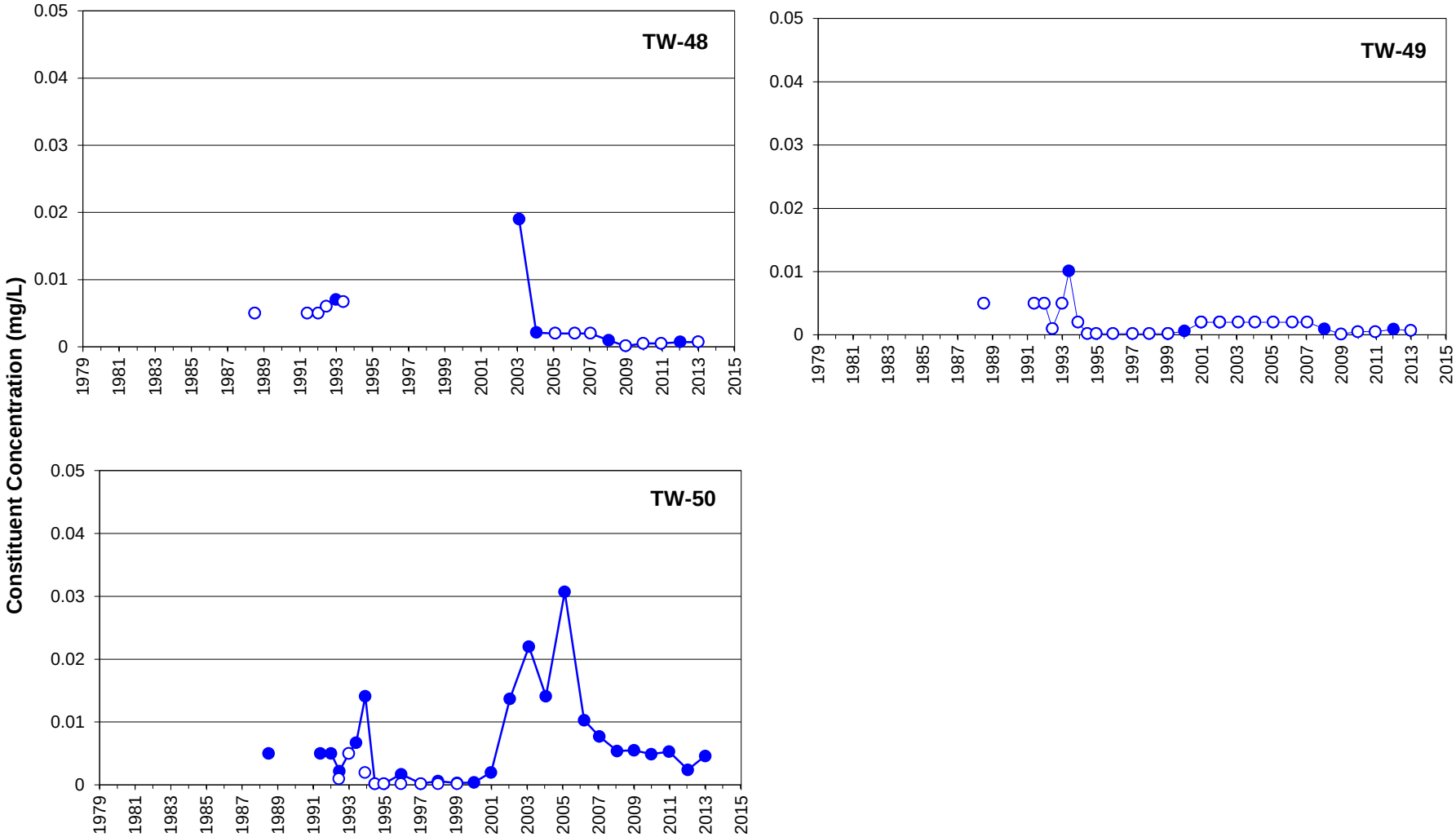
Non-Detects

FIGURE **A-11**

CADMIUM IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

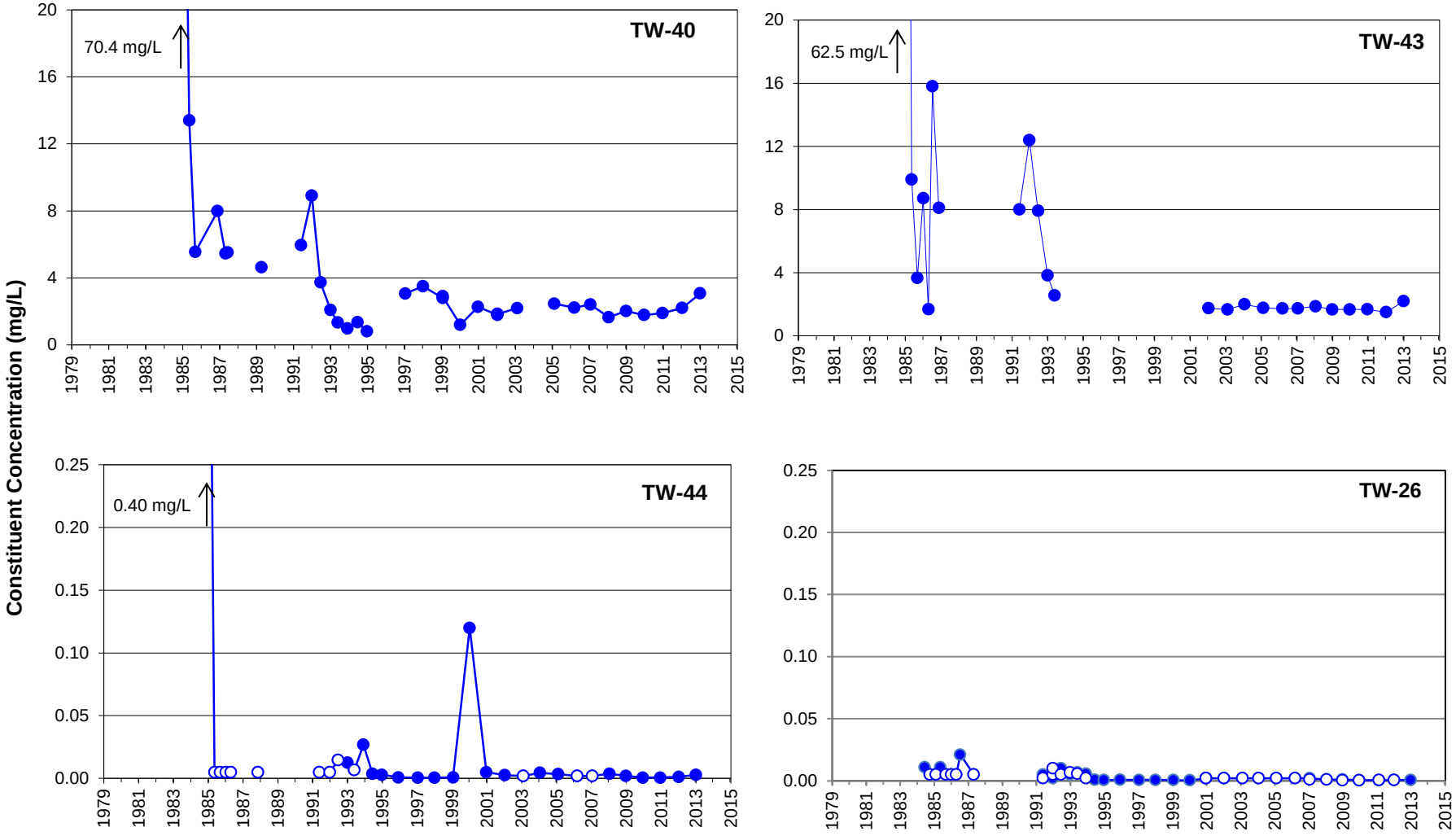
Non-Detects

FIGURE **A-12**

CADMIUM IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

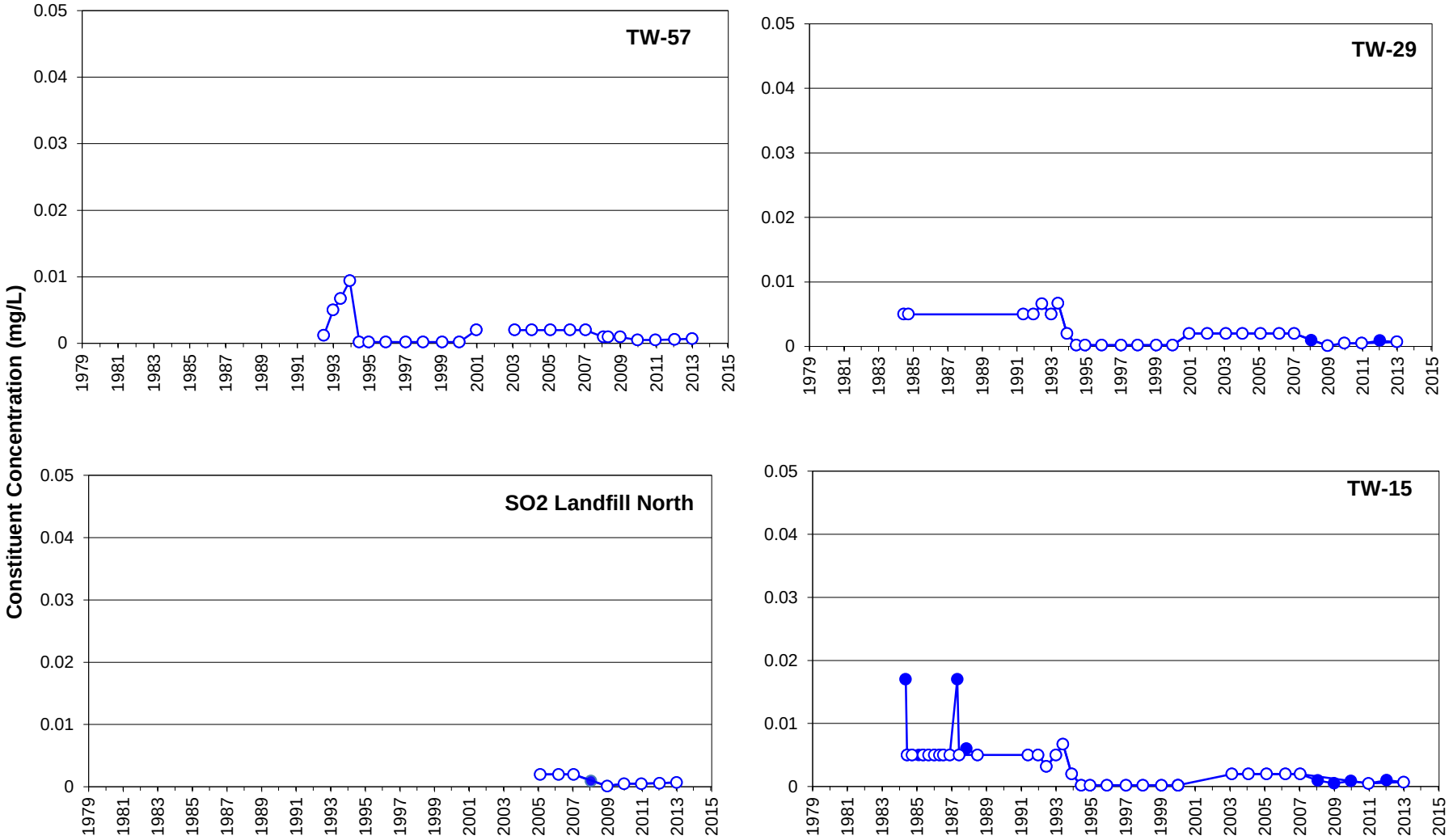
Non-Detects

FIGURE **A-13**

CADMIUM IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

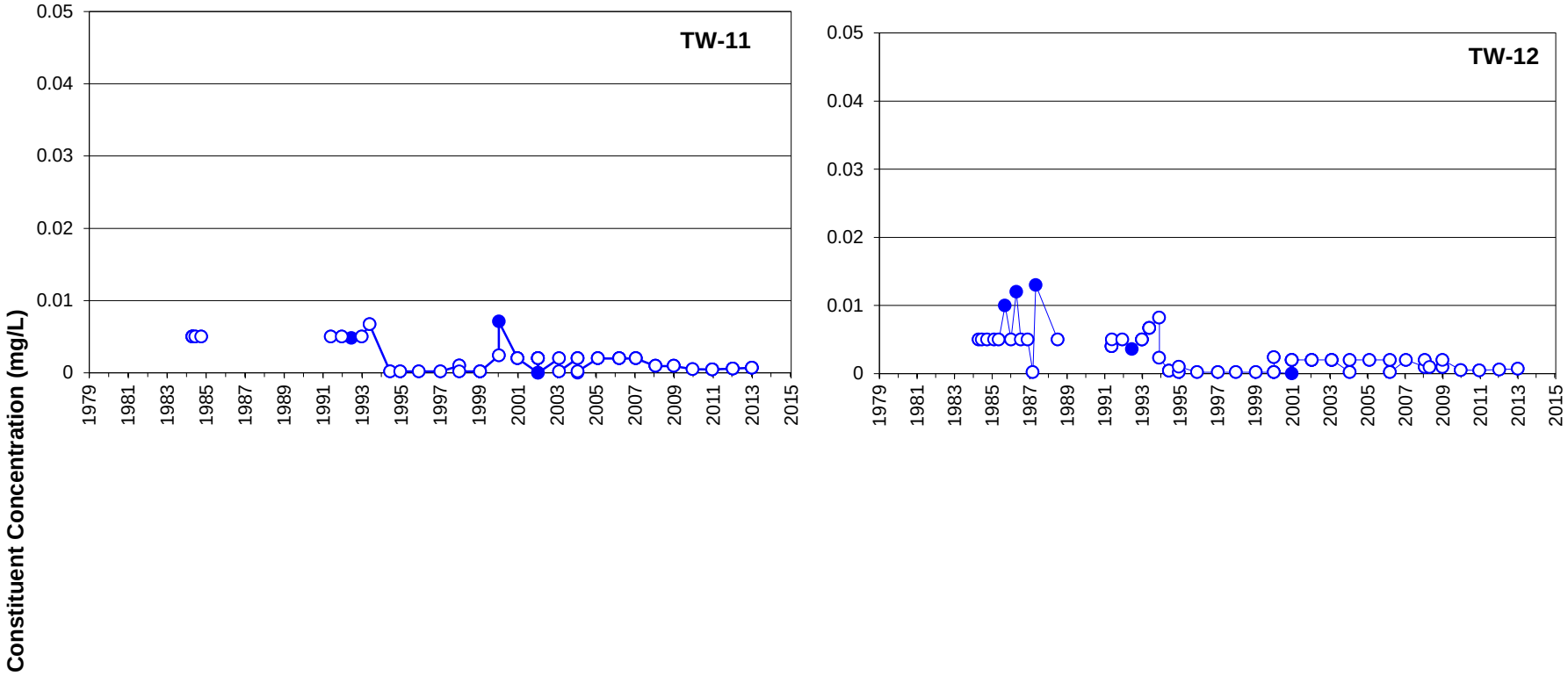
Non-Detects

FIGURE **A-14**

CADMIUM IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

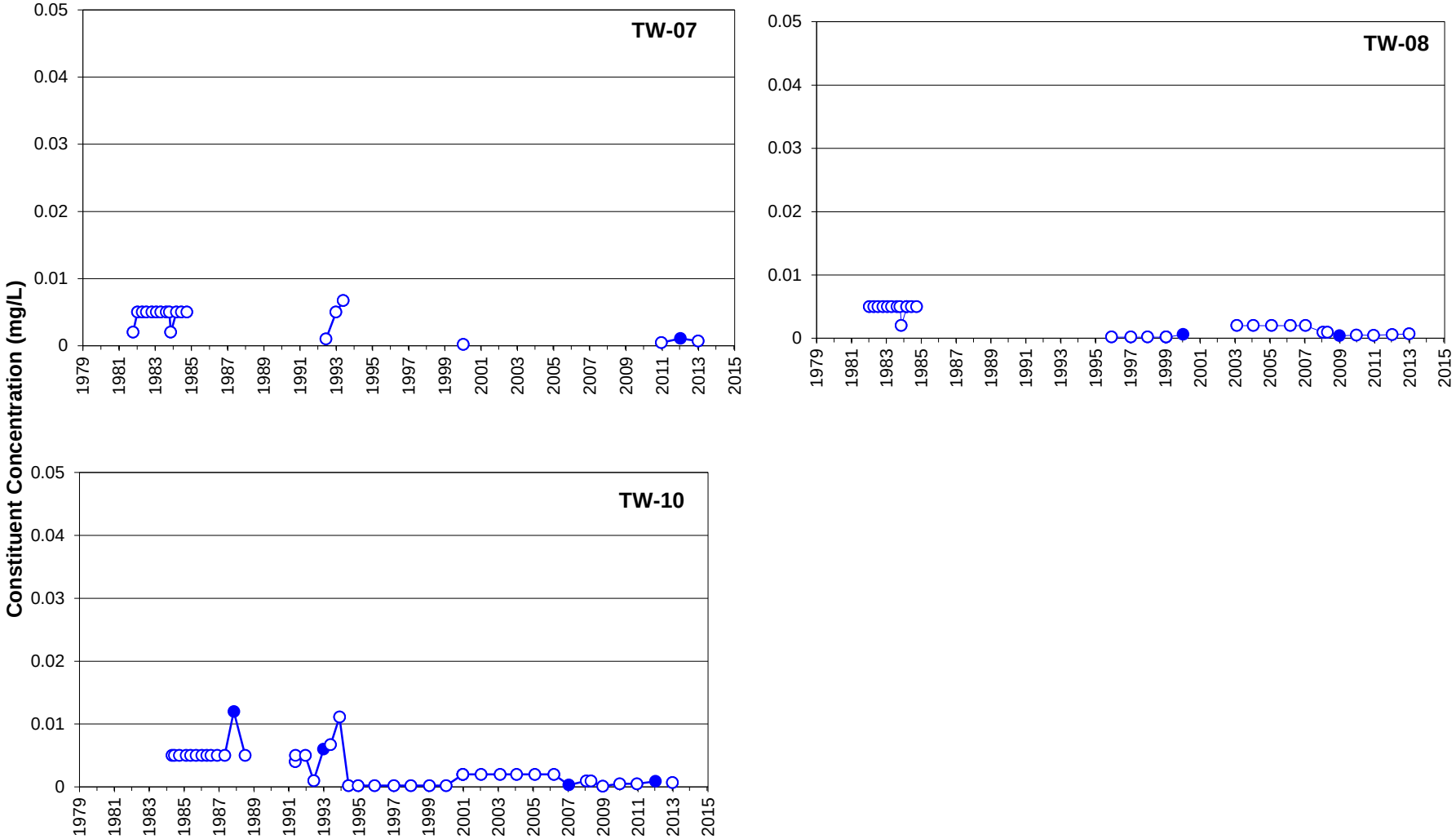
Non-Detects

FIGURE **A-15**

CADMIUM IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

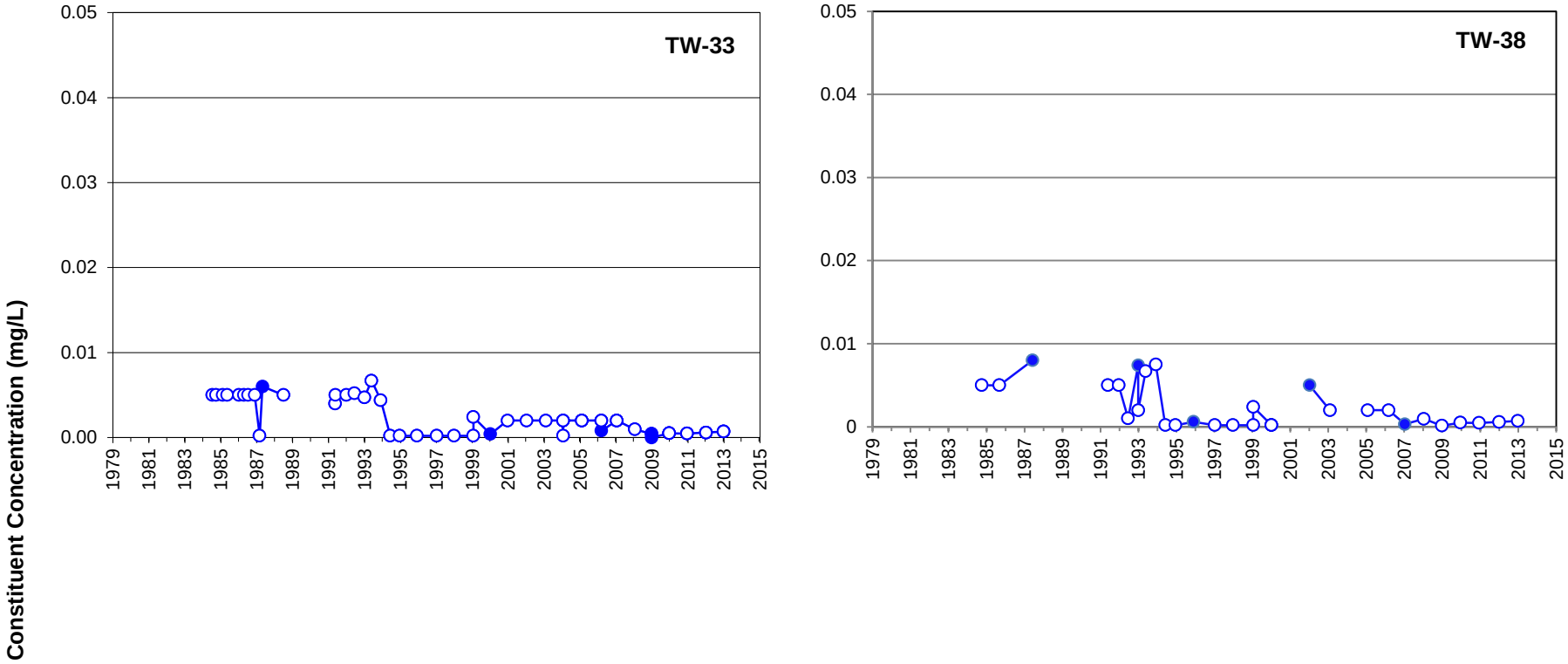
Non-Detects

FIGURE **A-16**

CADMIUM IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

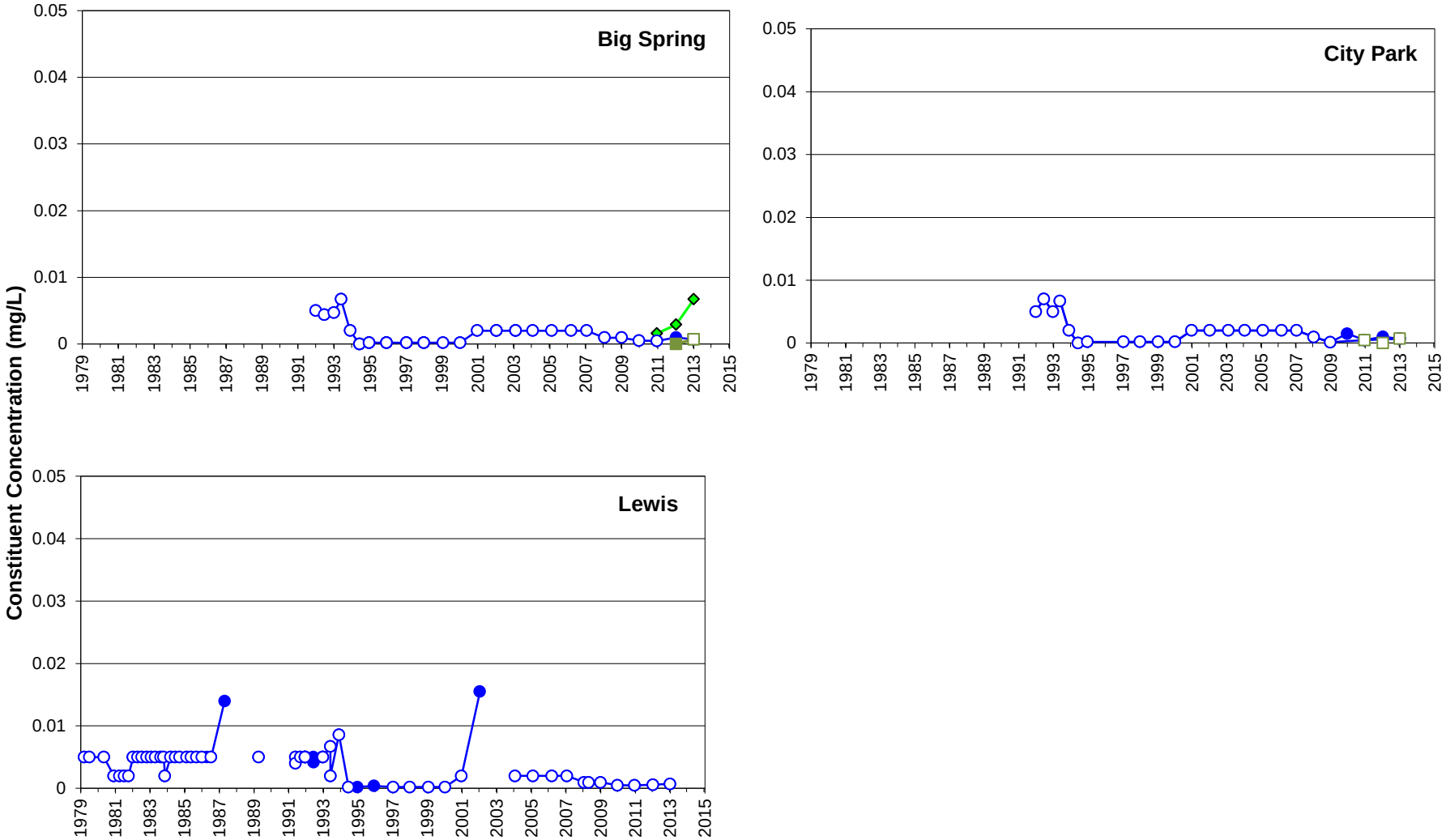
Non-Detects

FIGURE **A-17**

CADMIUM IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

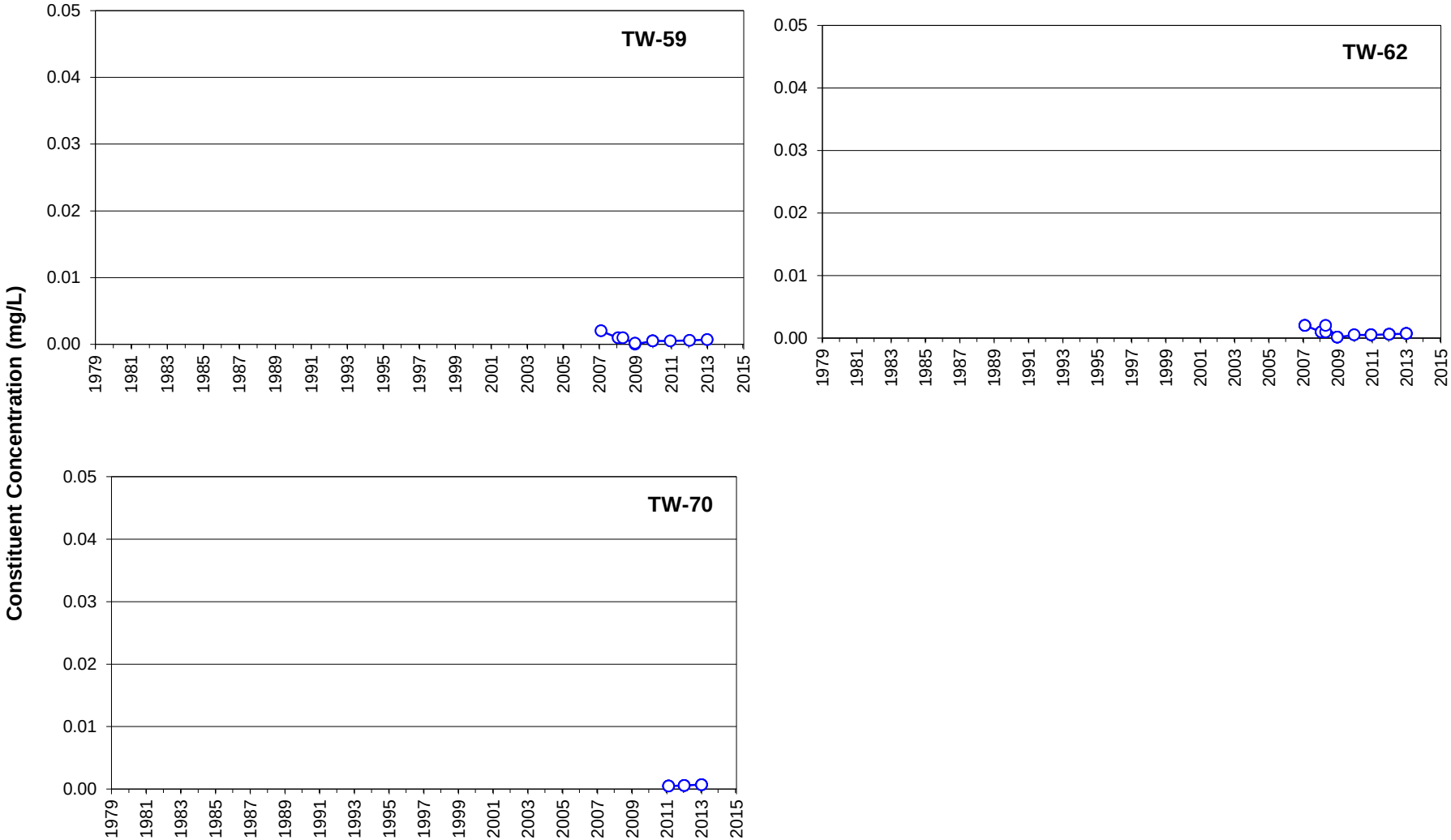
- Constituent Concentration (mg/L)
- Non-Detects
- SW Spring Above Confluence
- Dissolved Constituent Concentration (mg/L)
- Dissolved Non-Detect (mg/L)

FIGURE **A-18**

CADMIUM IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

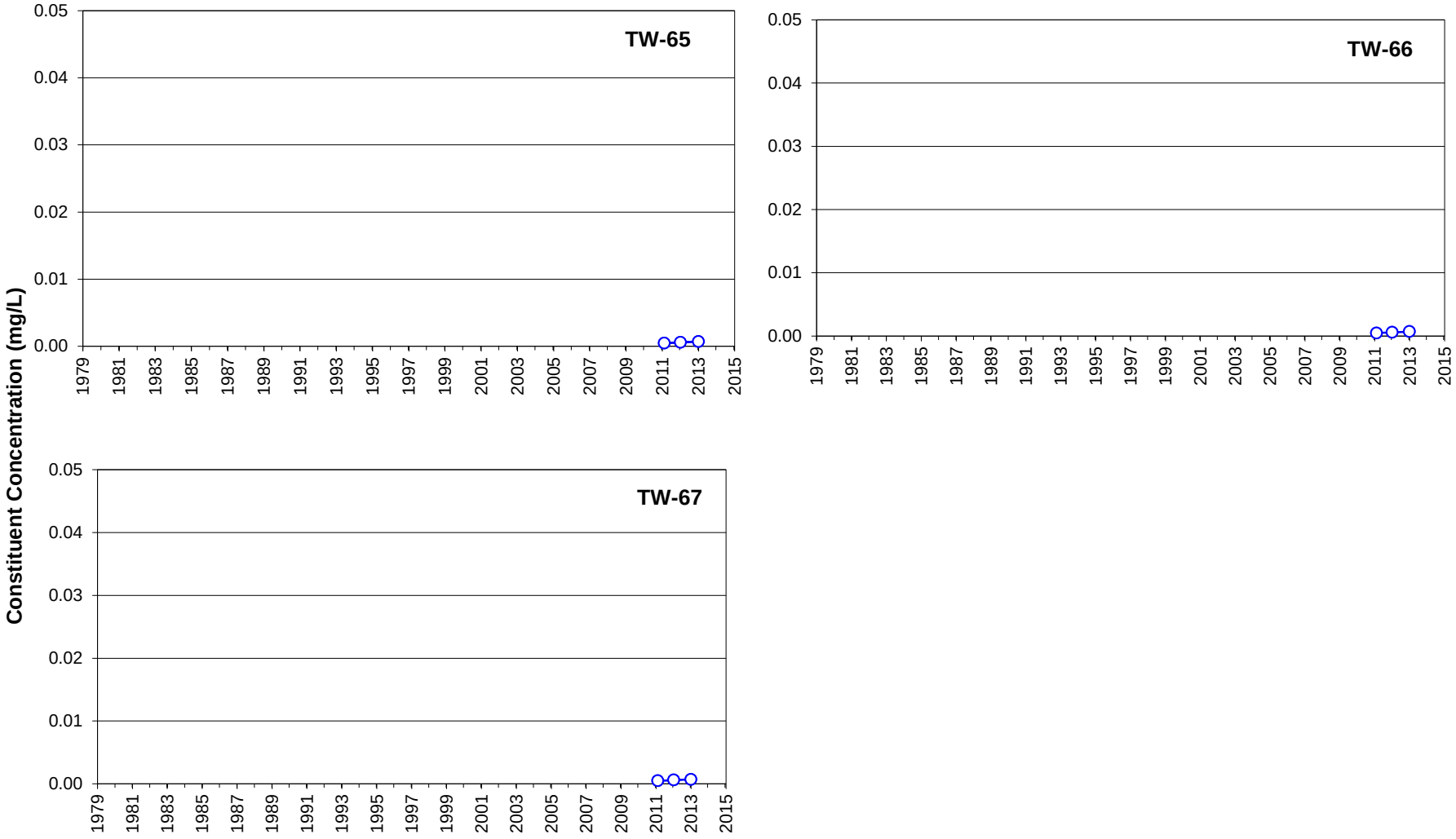
non-detects

FIGURE **A-19**

CADMIUM IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

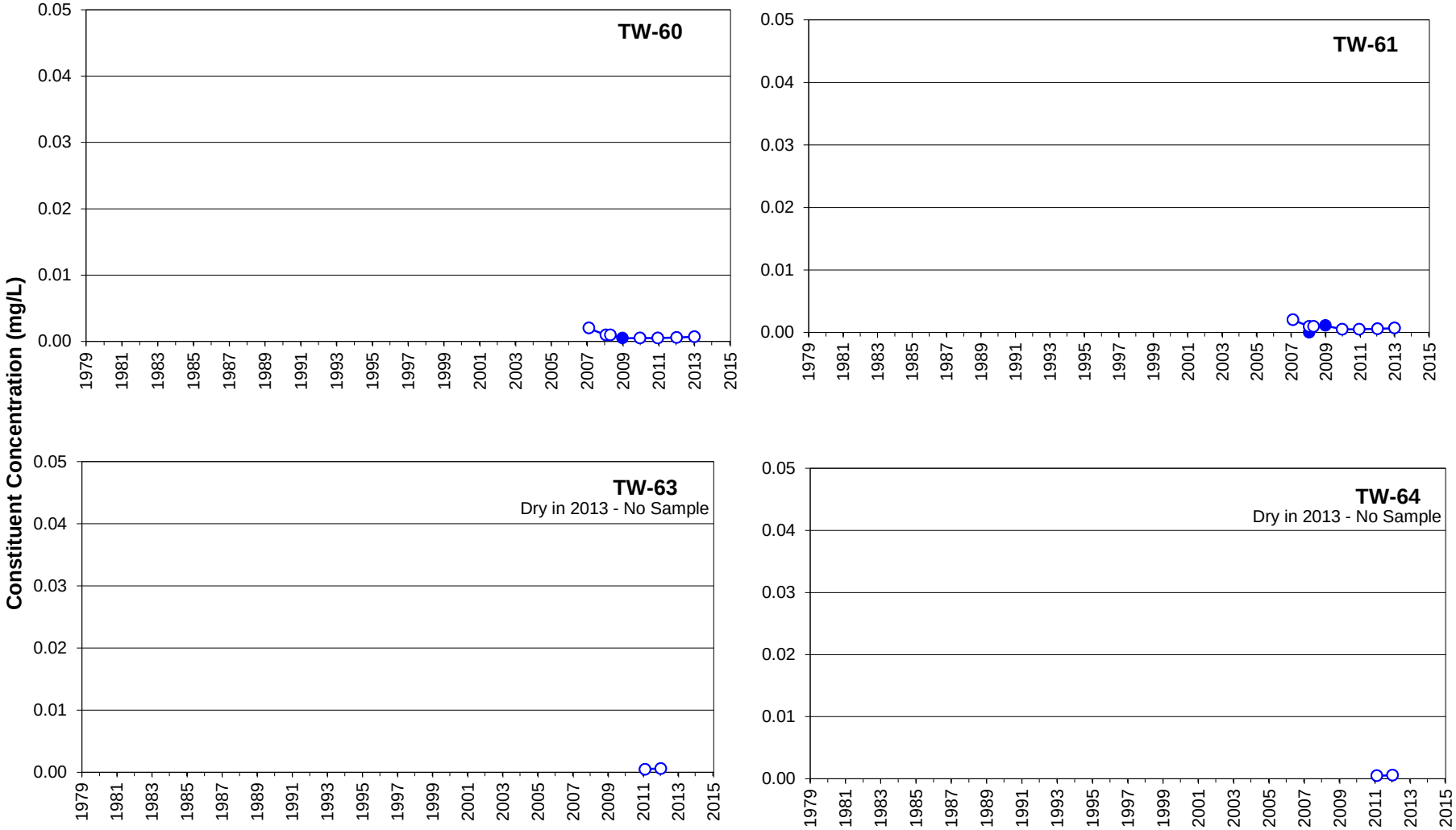
non-detects

FIGURE **A-20**

CADMIUM IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

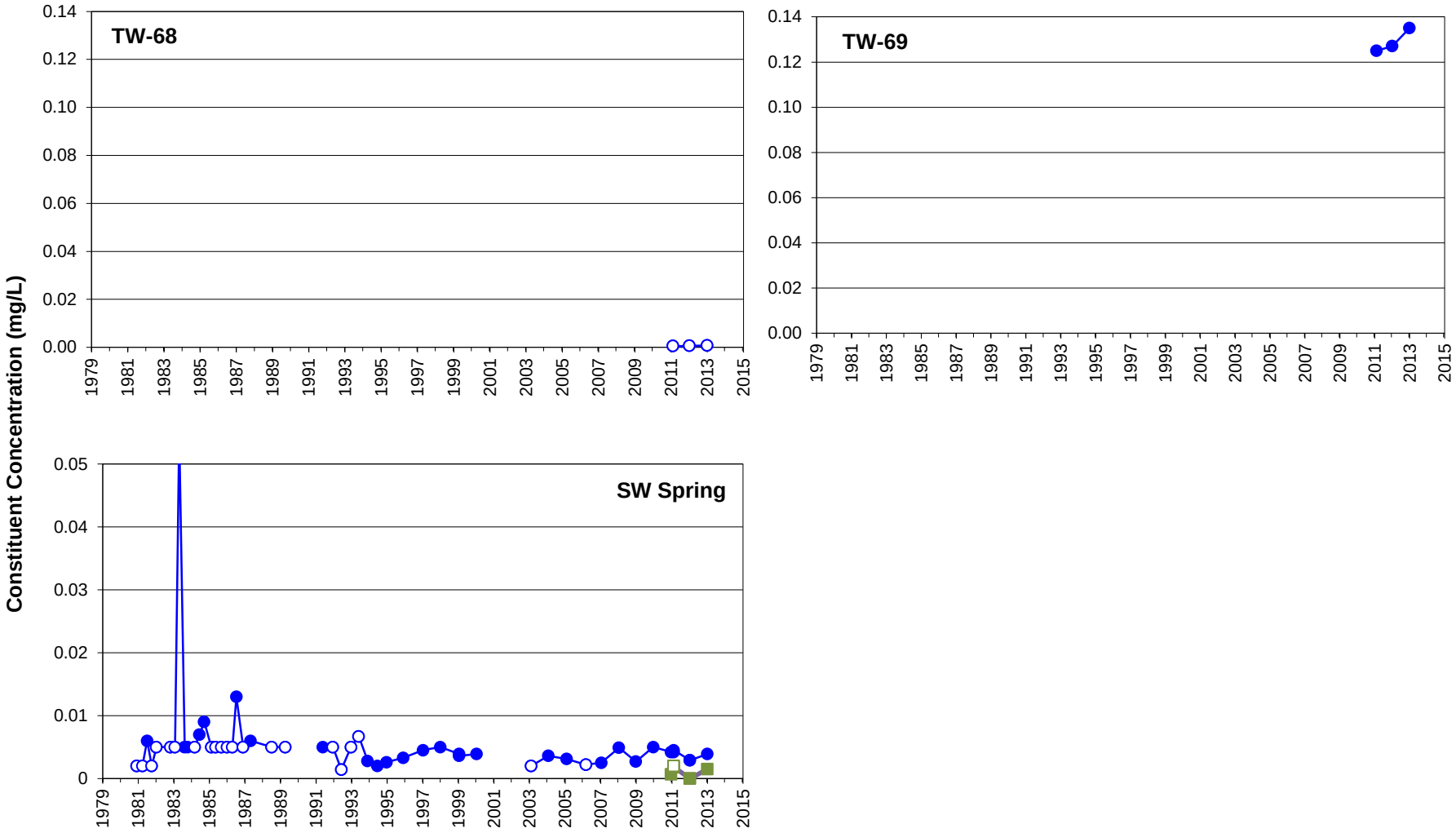
non-detects

FIGURE **A-21**

CADMIUM IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-detects
- Dissolved Constituent Concentration (mg/L)
- Dissolved Non-Detect (mg/L)

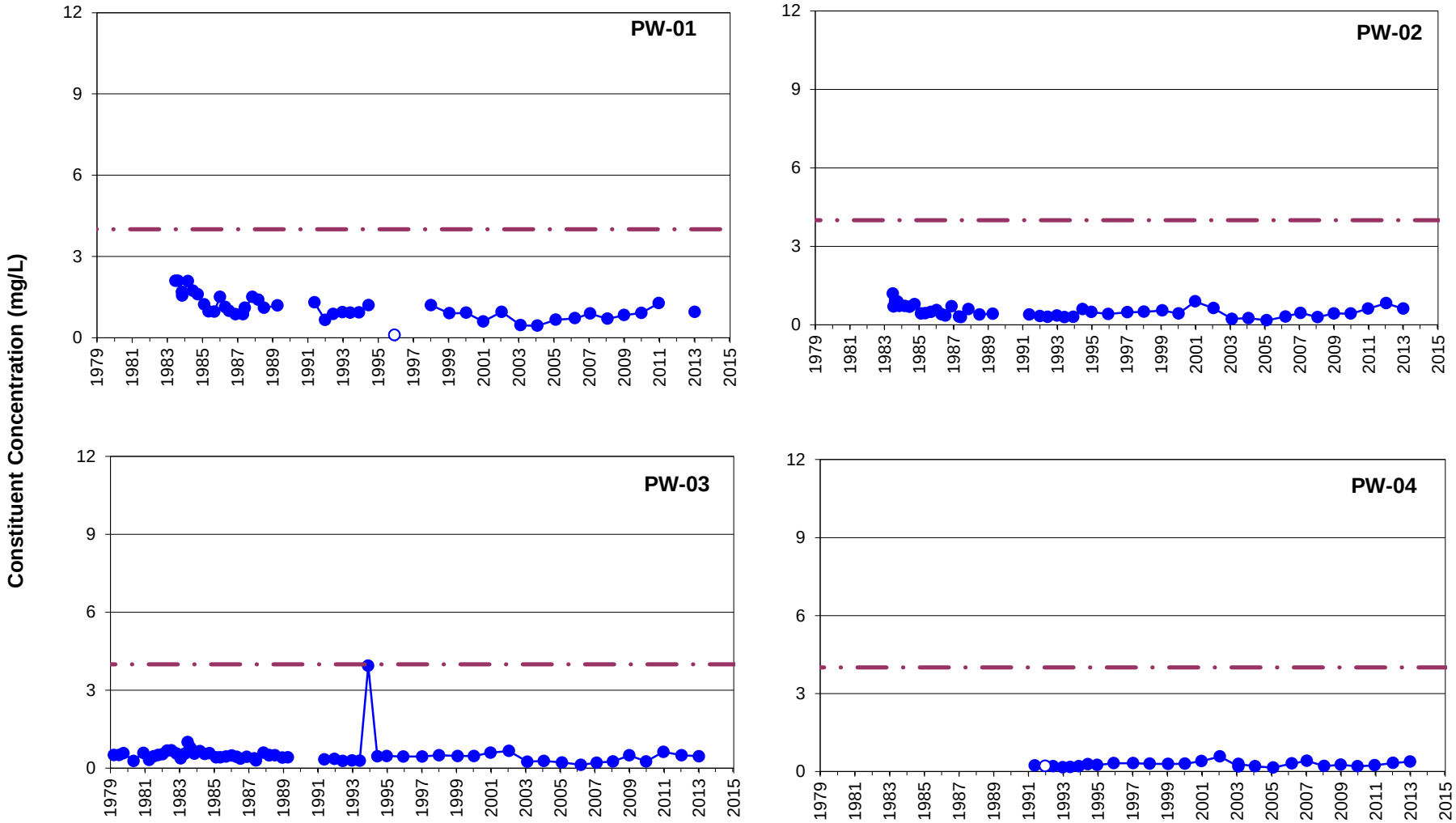
FIGURE **A-22**

CADMIUM IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX B
TIME-HISTORY GRAPHS FOR FLUORIDE



Remediation goals shown for point of compliance locations only

LEGEND

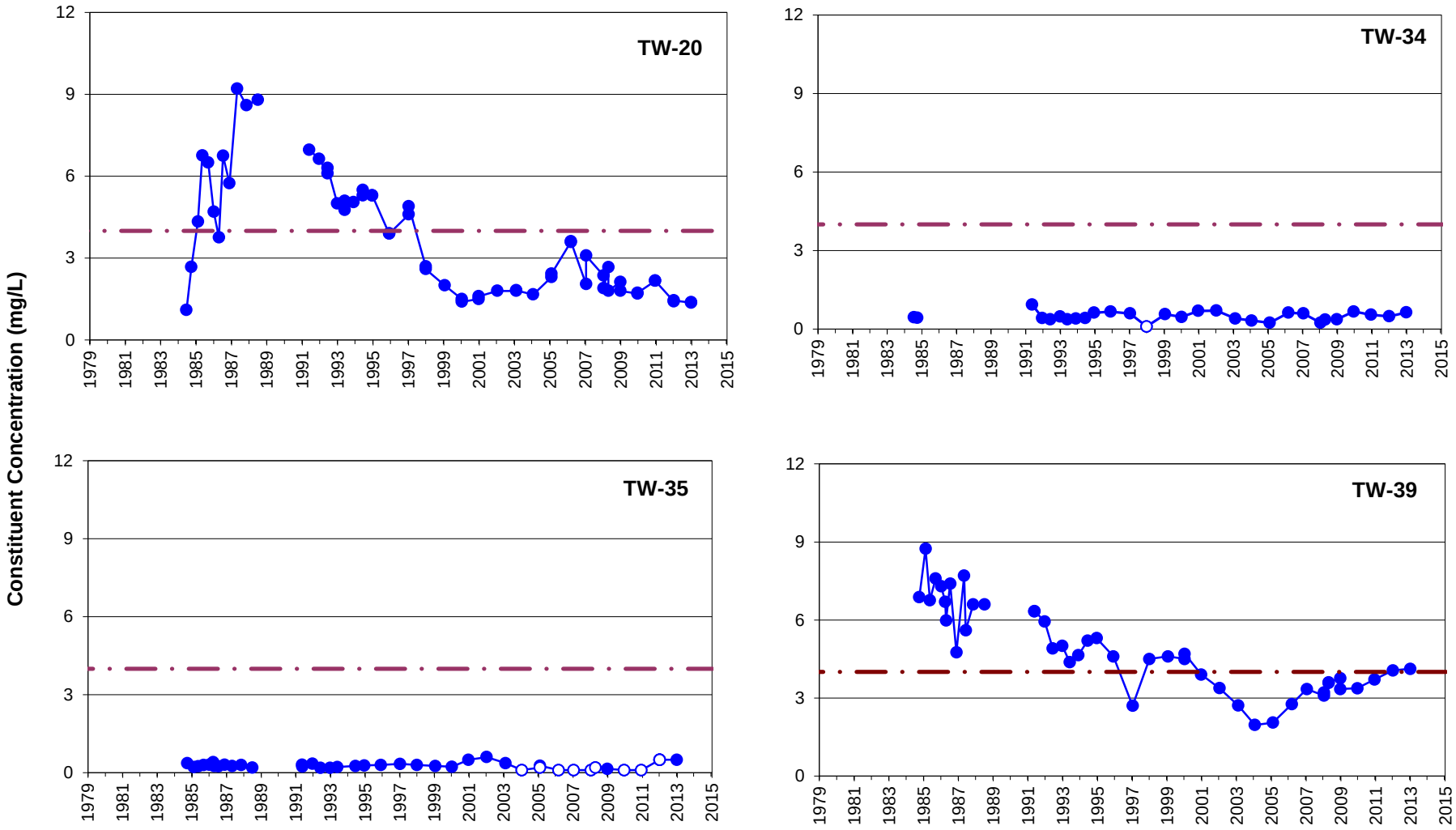
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)

FIGURE **B-1**

FLUORIDE IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

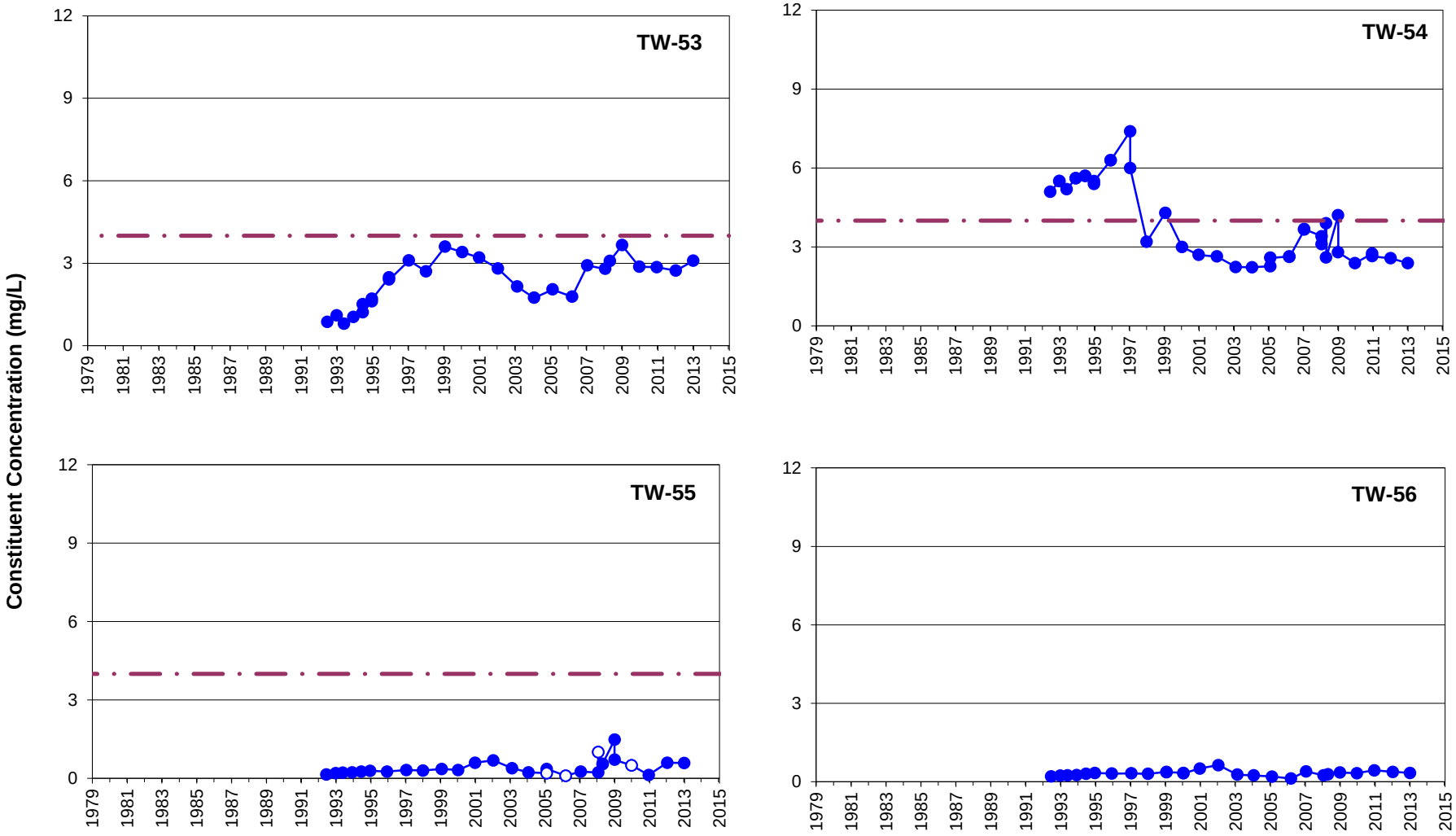
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)

FIGURE **B-2**

FLUORIDE IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

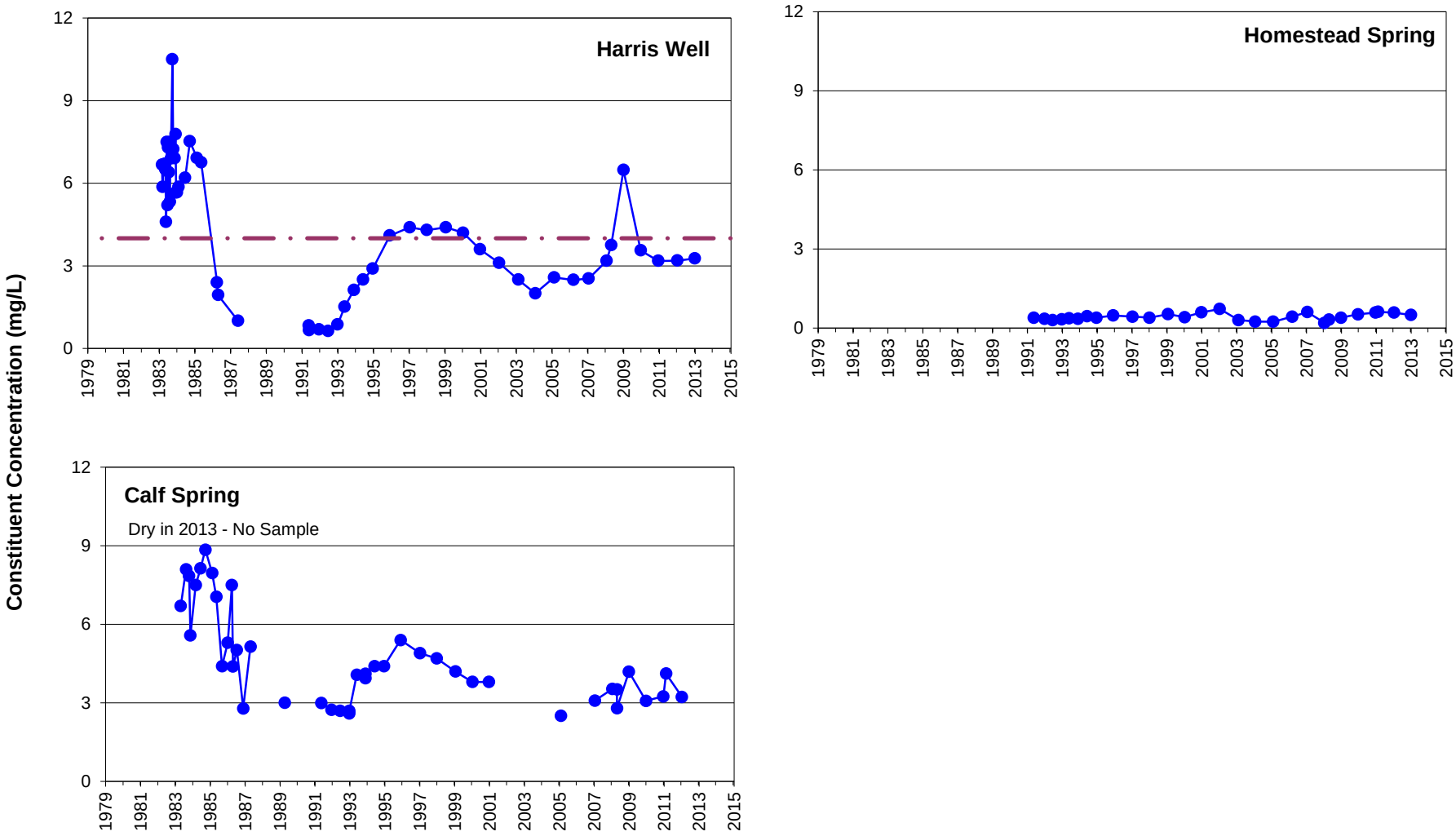
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)

FIGURE **B-3**

FLUORIDE IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

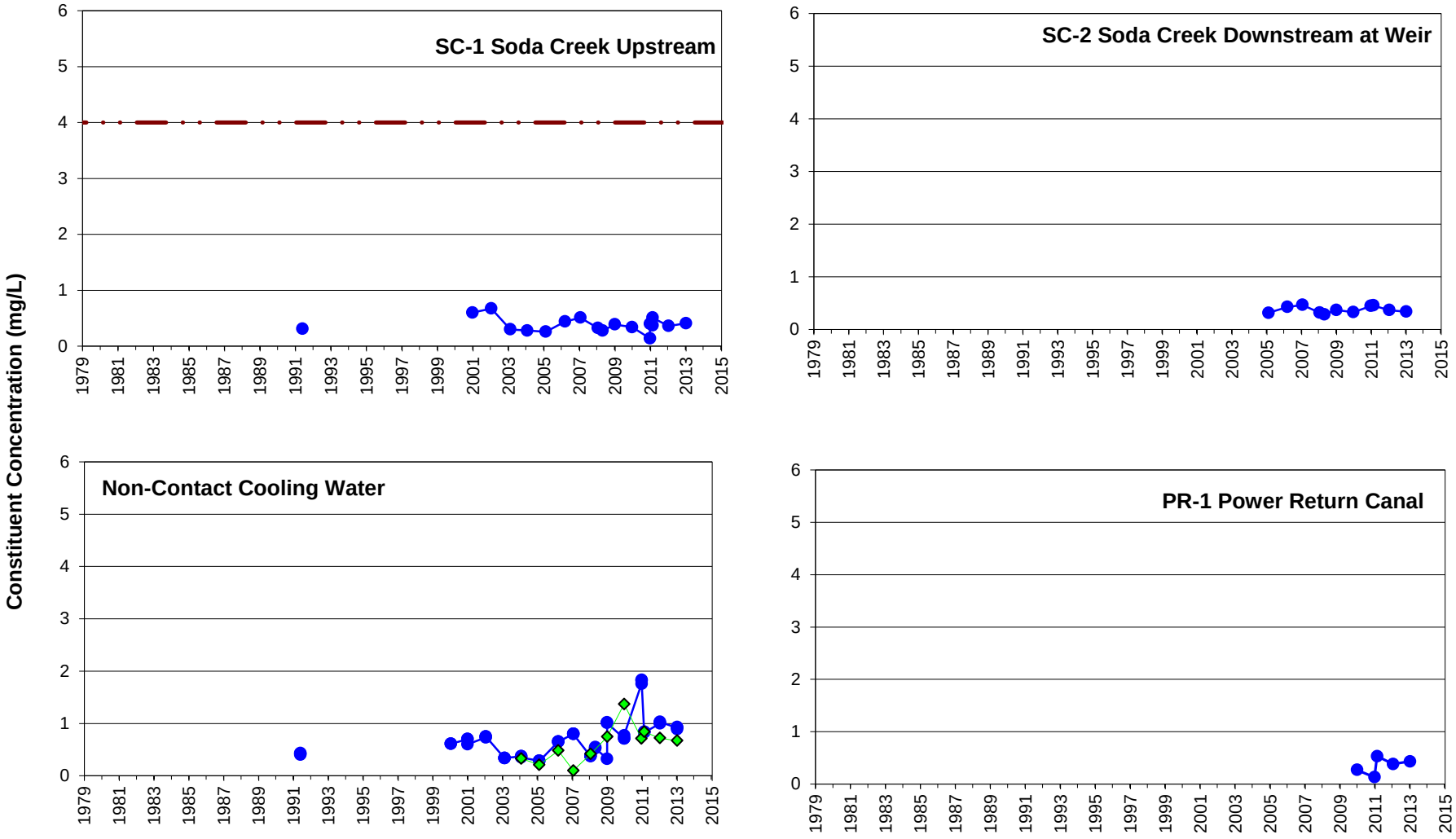
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)

FIGURE **B-4**

FLUORIDE IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

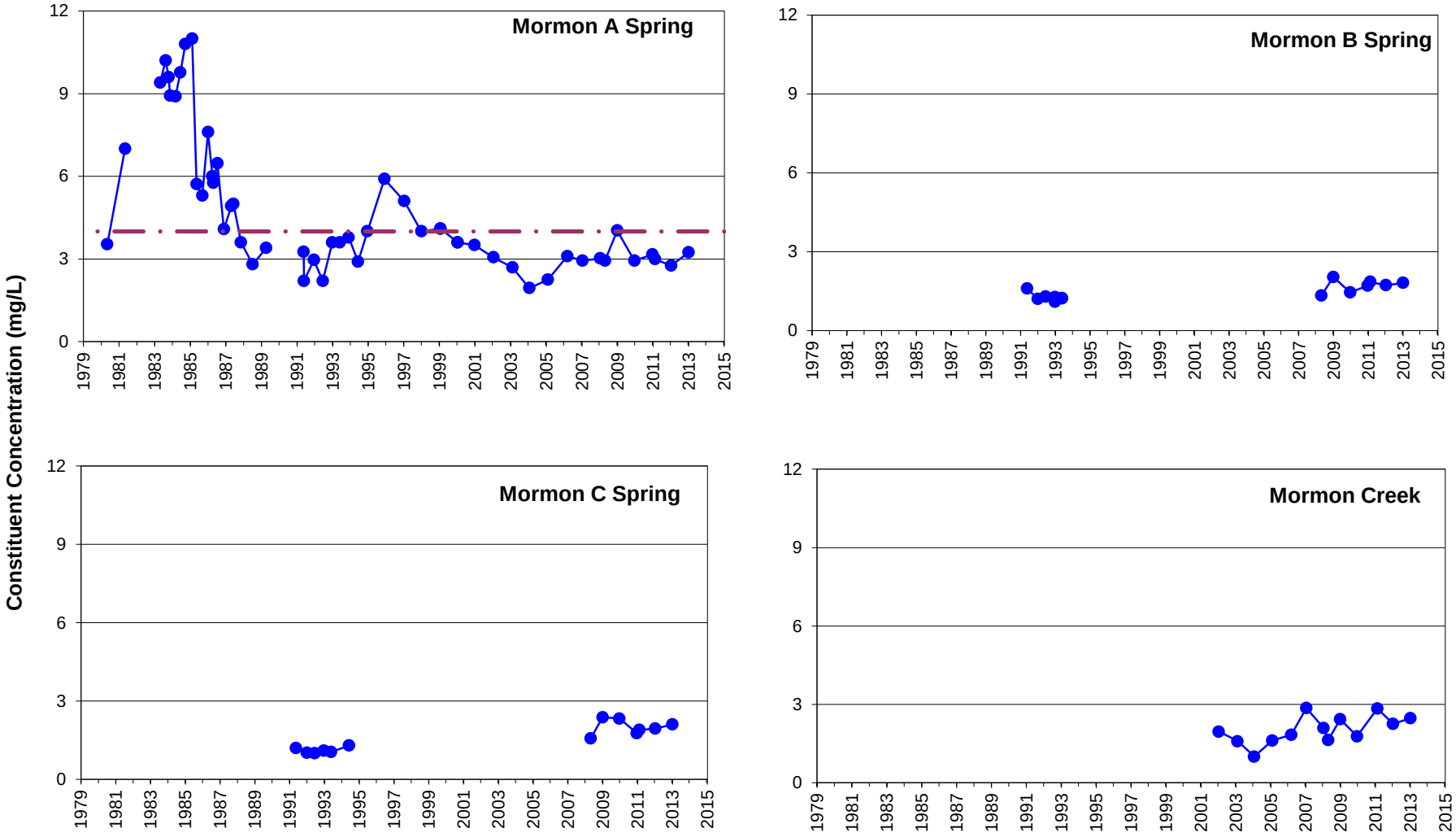
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)
- Pond Inlet

FIGURE **B-5**

FLUORIDE IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

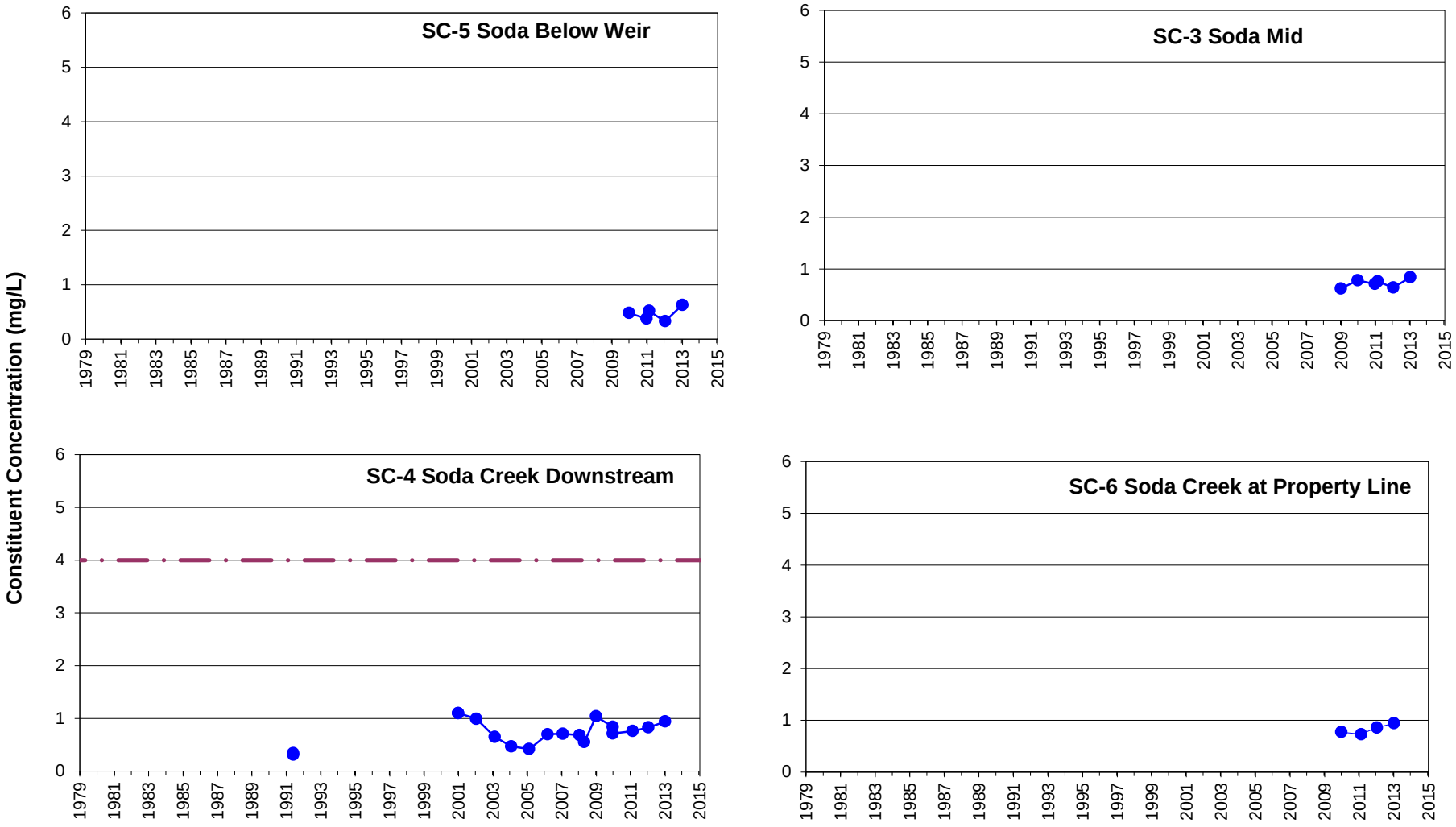
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)

FIGURE **B-6**

FLUORIDE IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

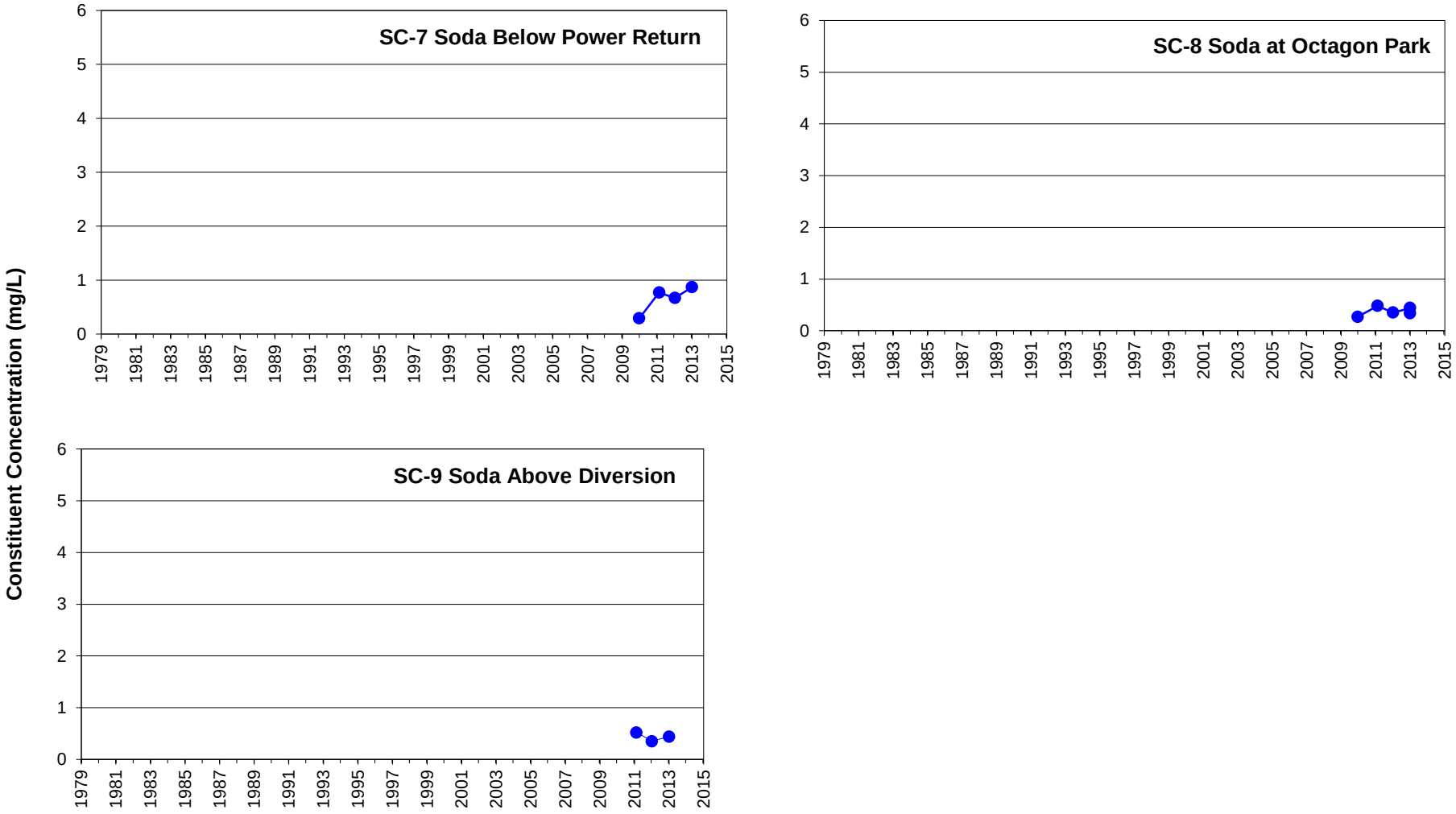
- Constituent Concentration (mg/L)
- Non-Detects
- Fluoride Remediation Goal (4 mg/L)

FIGURE **B-7**

FLUORIDE IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

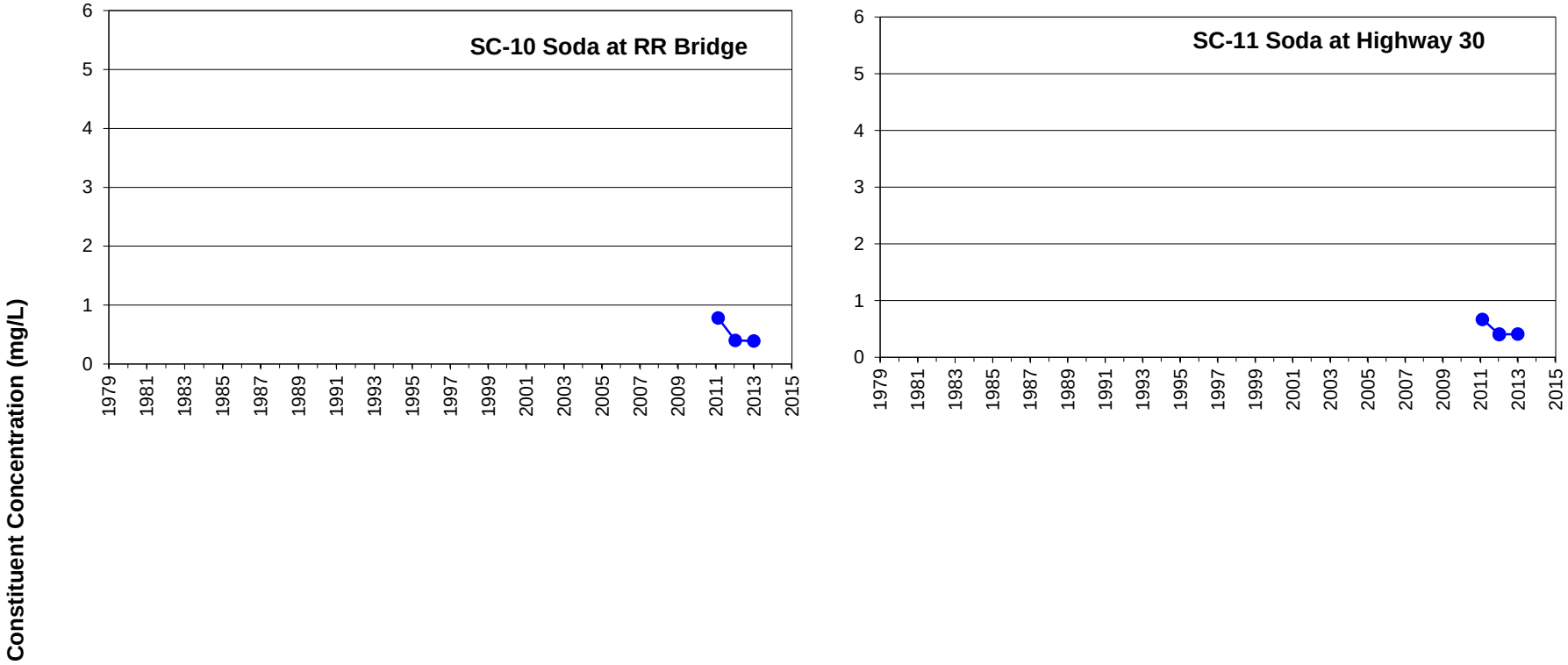
Non-Detects

FIGURE **B-8**

FLUORIDE IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

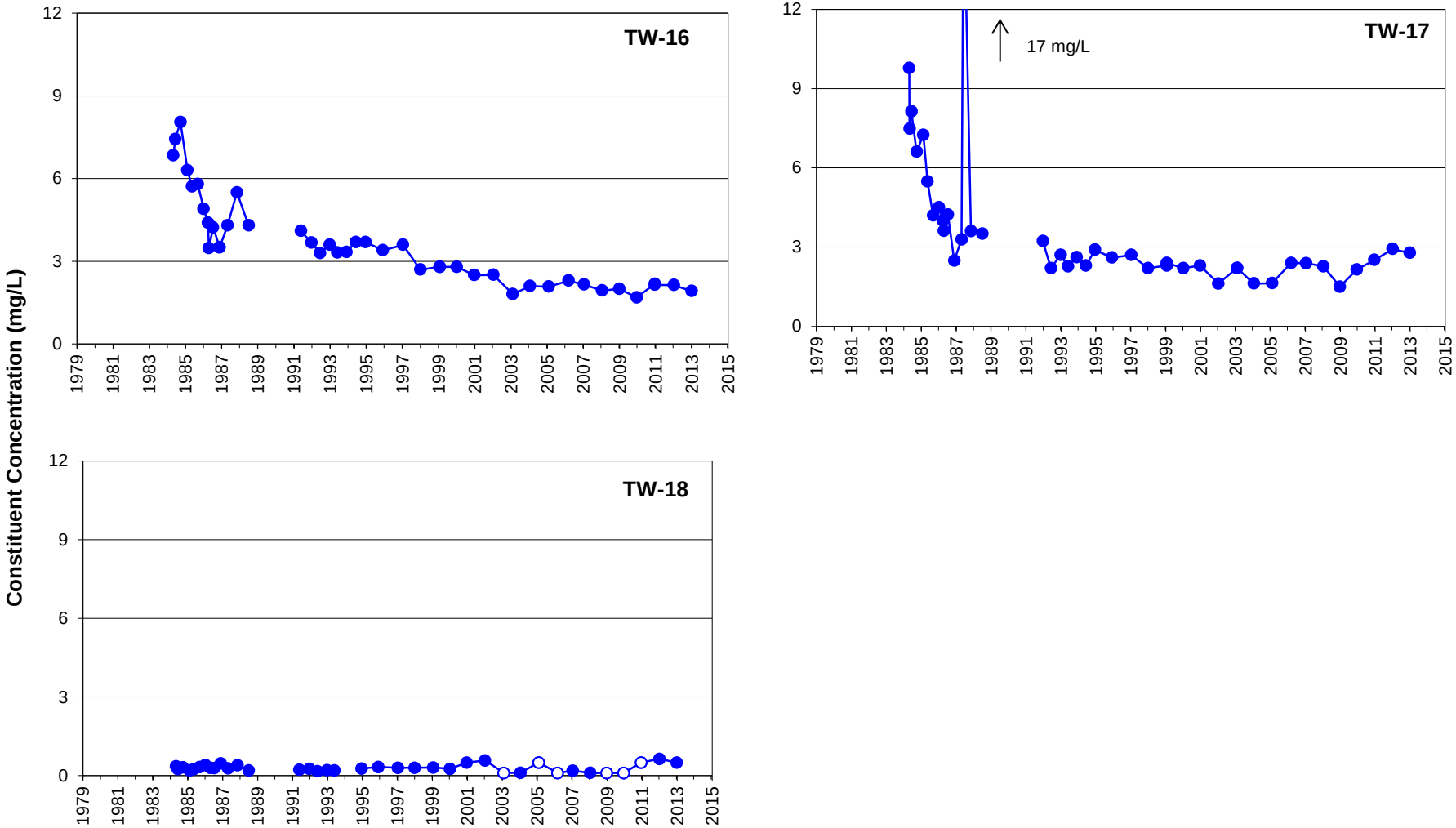
Non-detect

FIGURE **B-9**

FLUORIDE IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

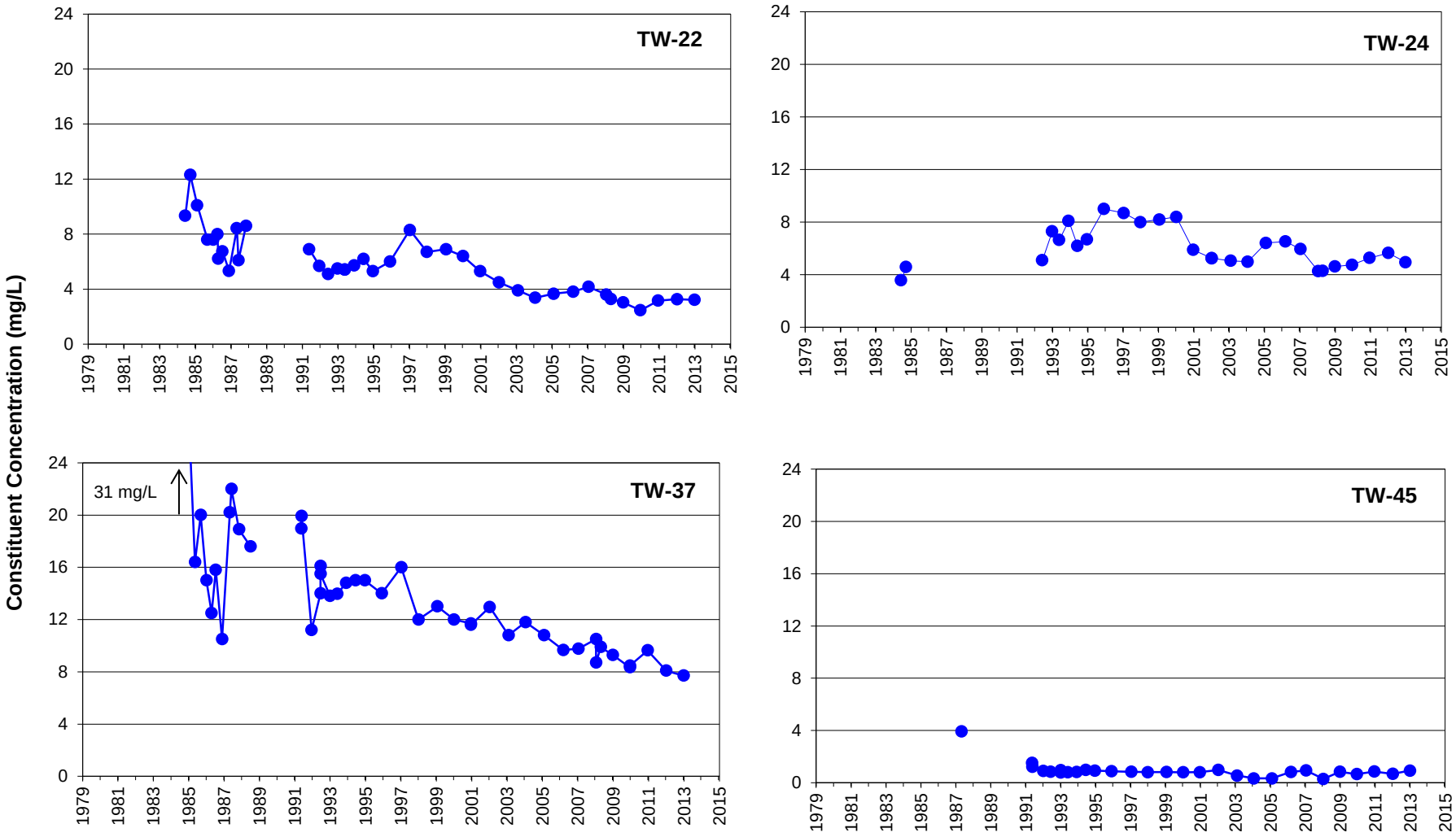
Non-Detects

FIGURE **B-10**

FLUORIDE IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

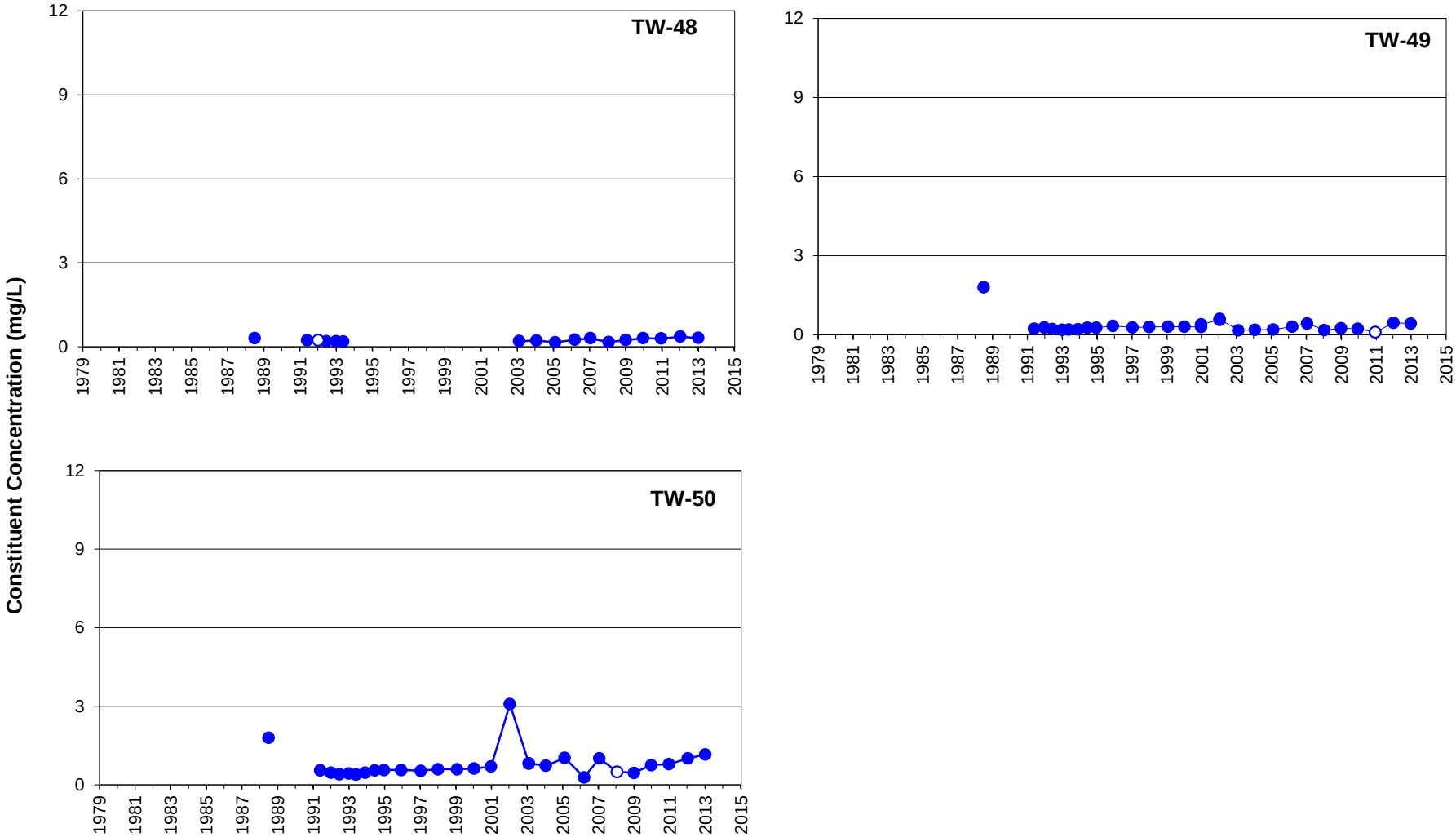
Non-Detects

FIGURE **B-11**

FLUORIDE IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

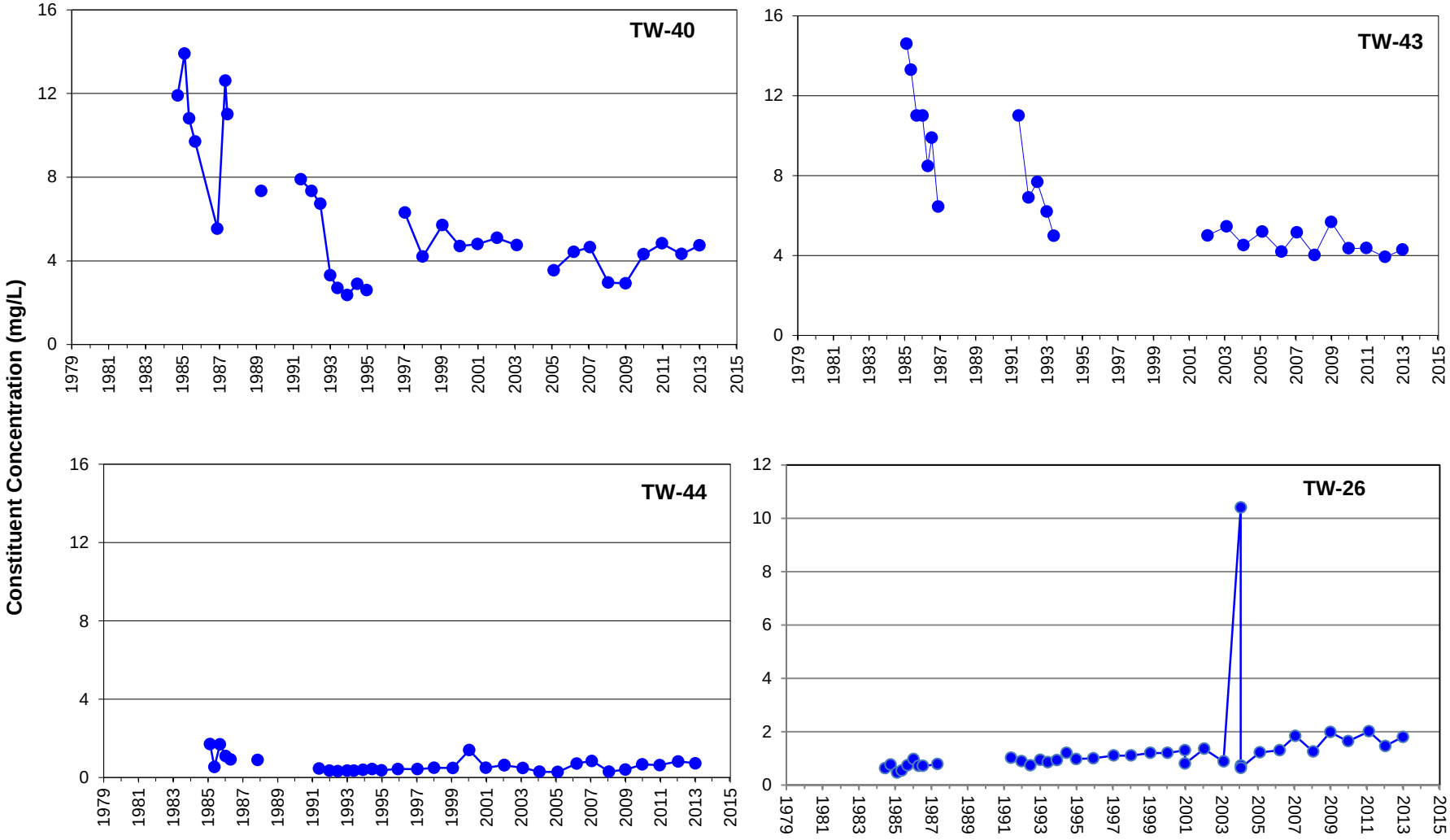
Non-Detects

FIGURE **B-12**

FLUORIDE IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

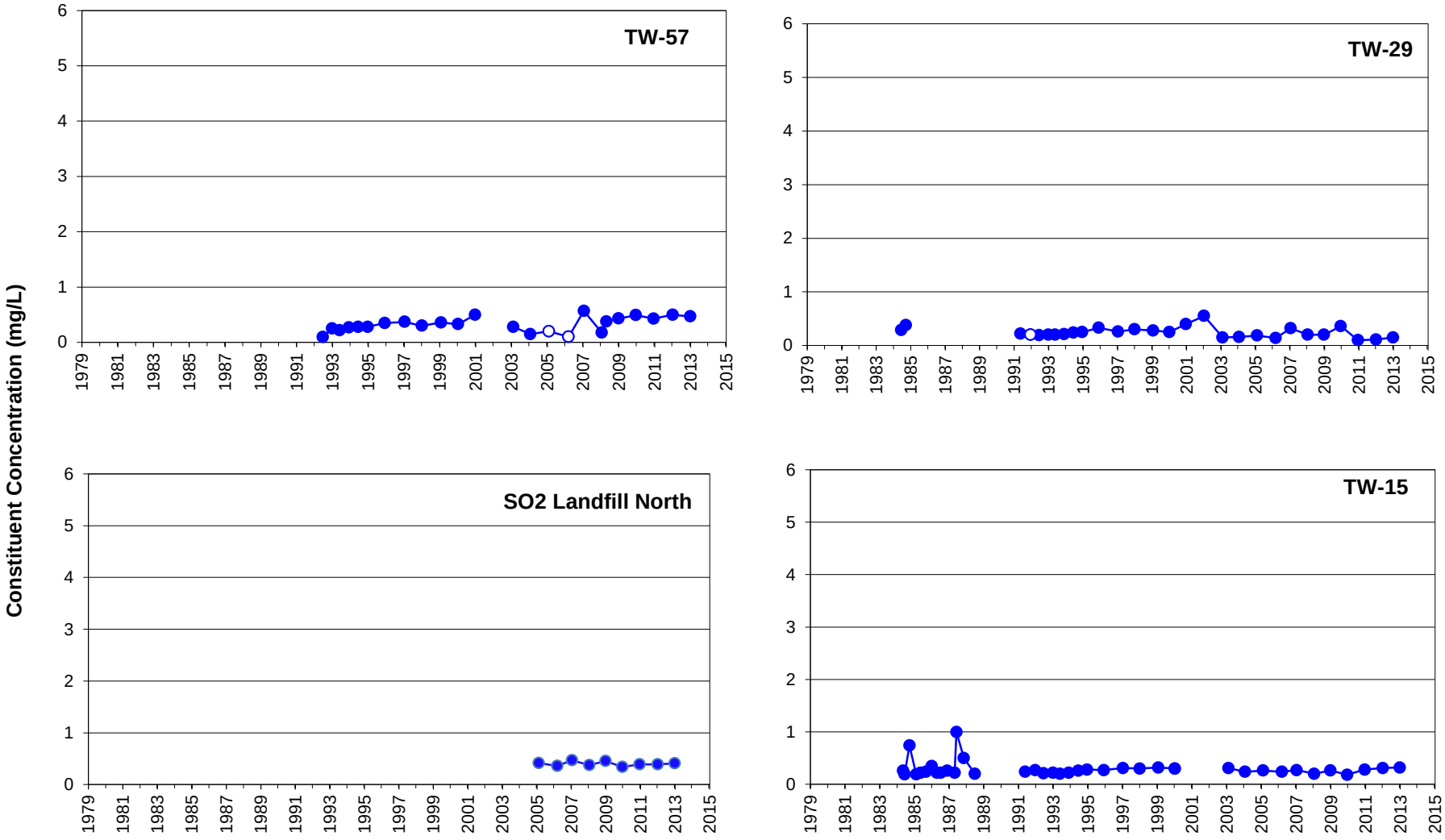
Non-Detects

FIGURE **B-13**

FLUORIDE IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

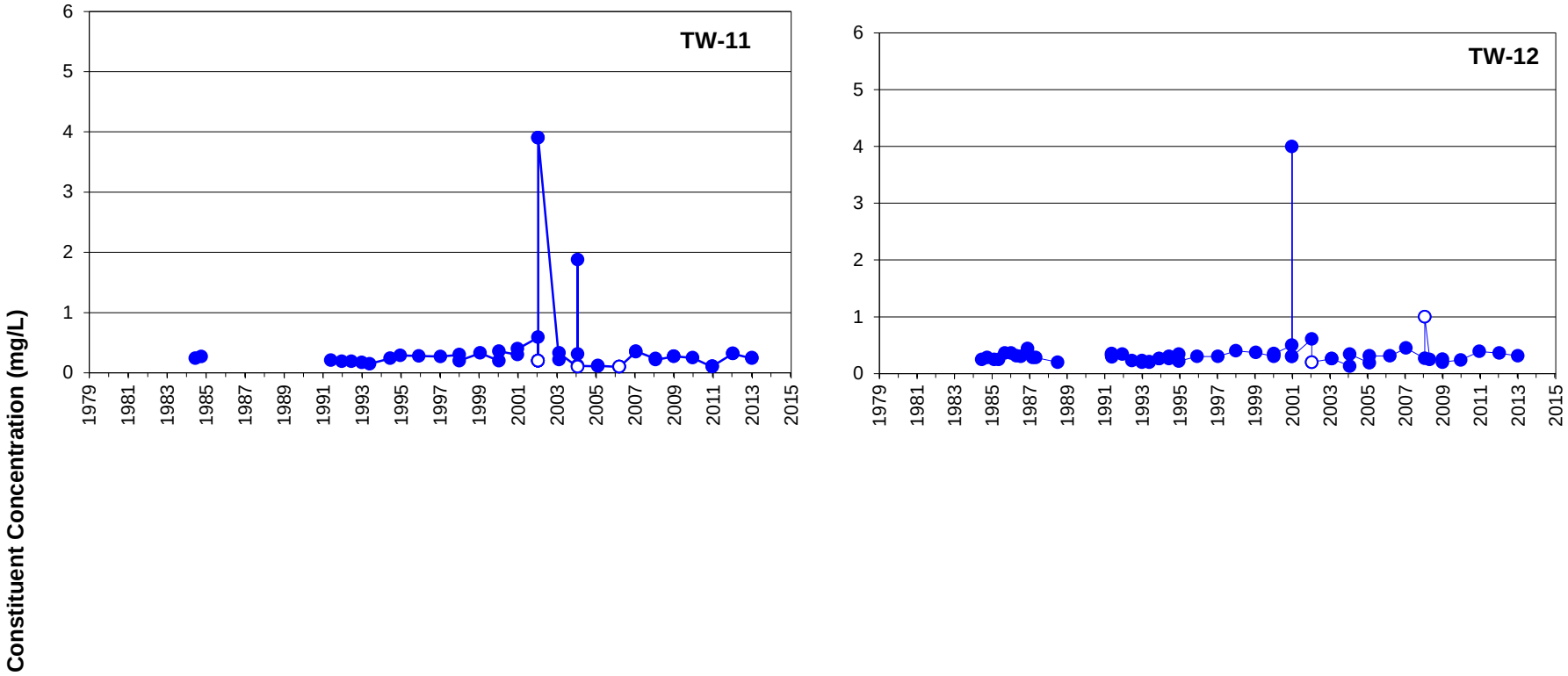
Non-Detects

FIGURE **B-14**

FLUORIDE IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

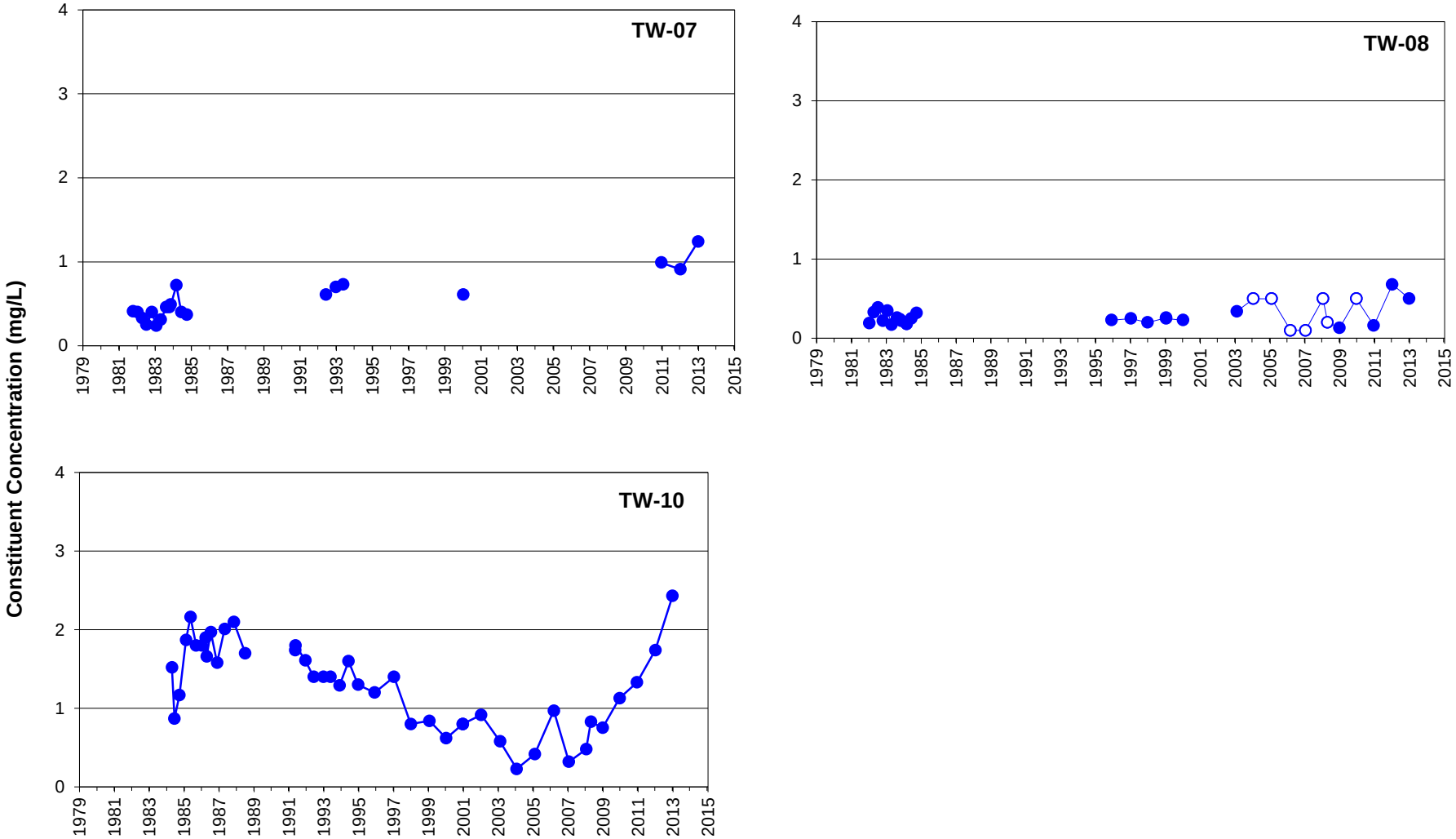
Non-Detects

FIGURE **B-15**

FLUORIDE IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

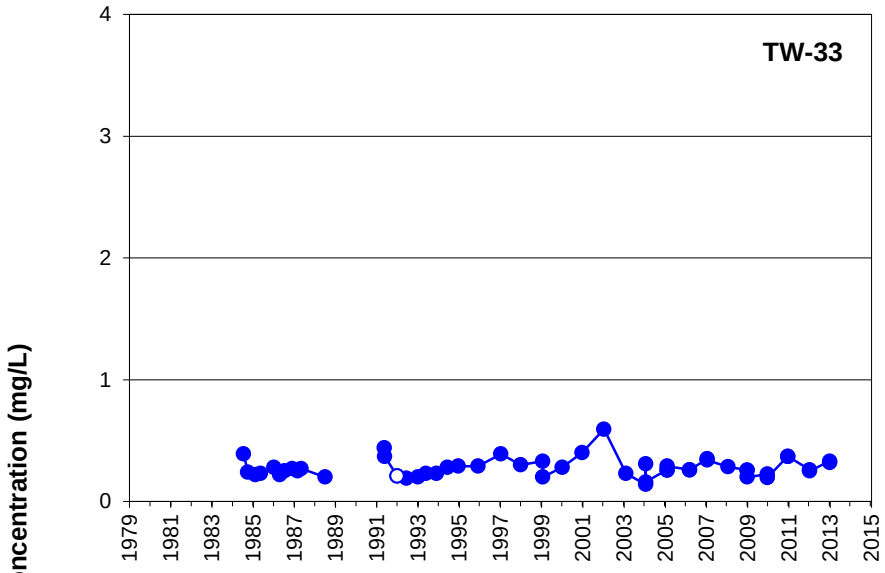
Non-Detects

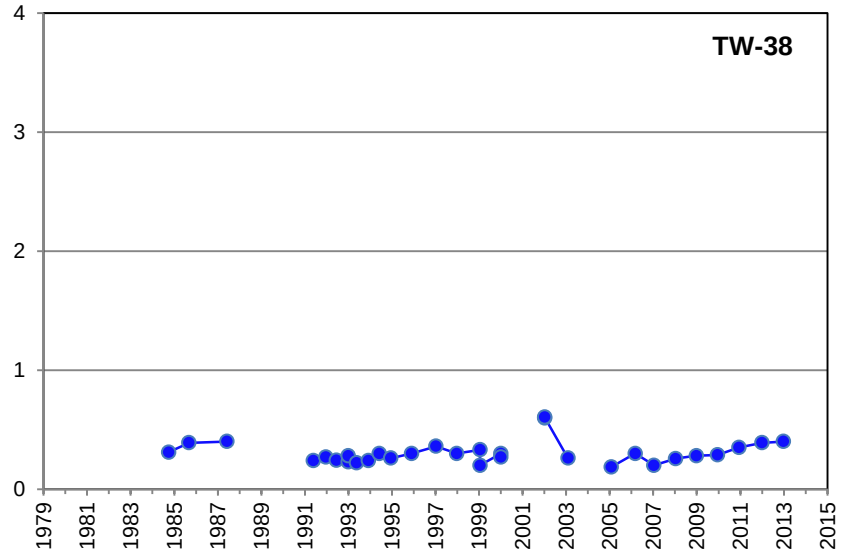
FIGURE **B-16**

FLUORIDE IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002





Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

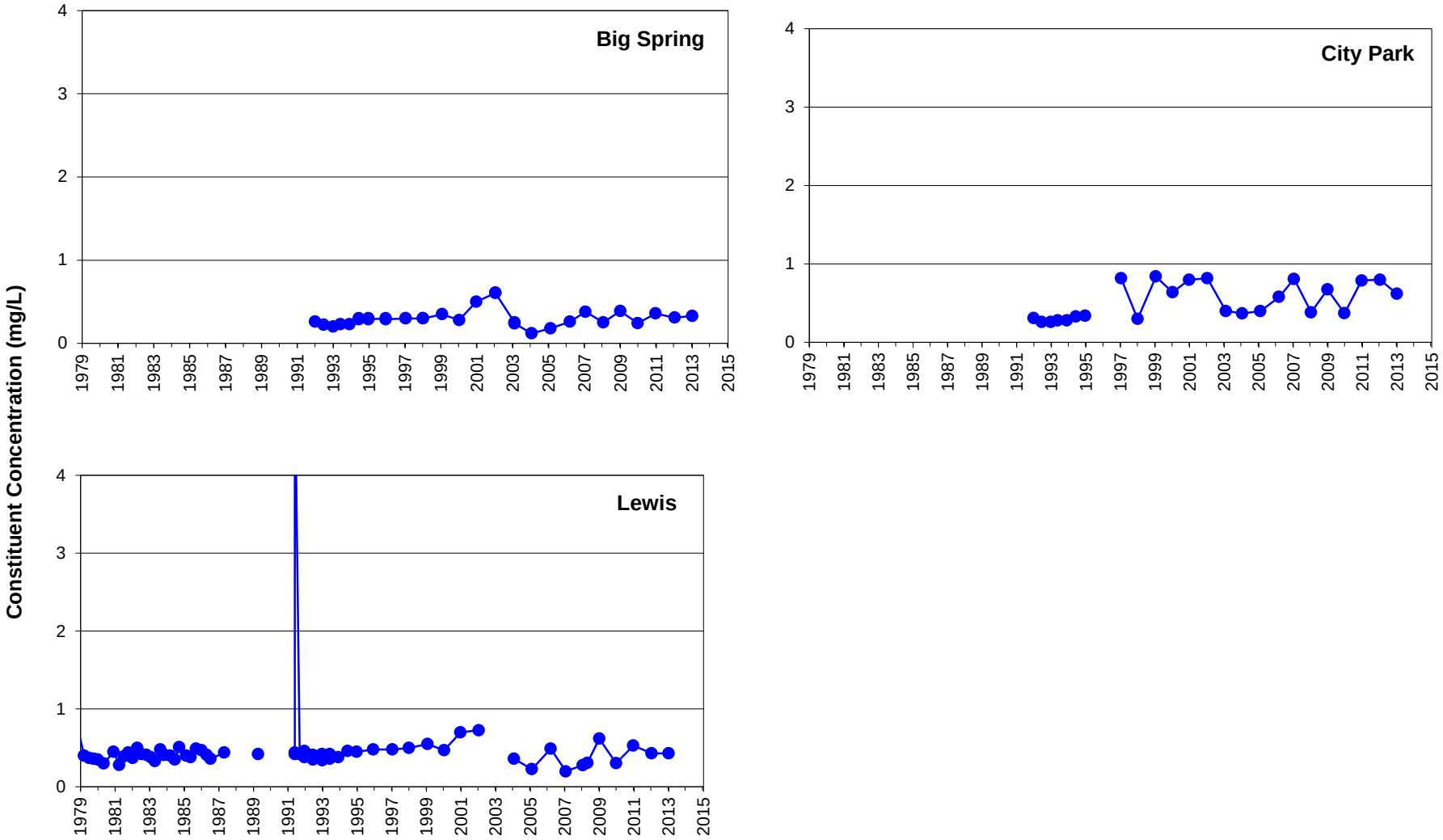
Non-Detects

FIGURE **B-17**

FLUORIDE IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

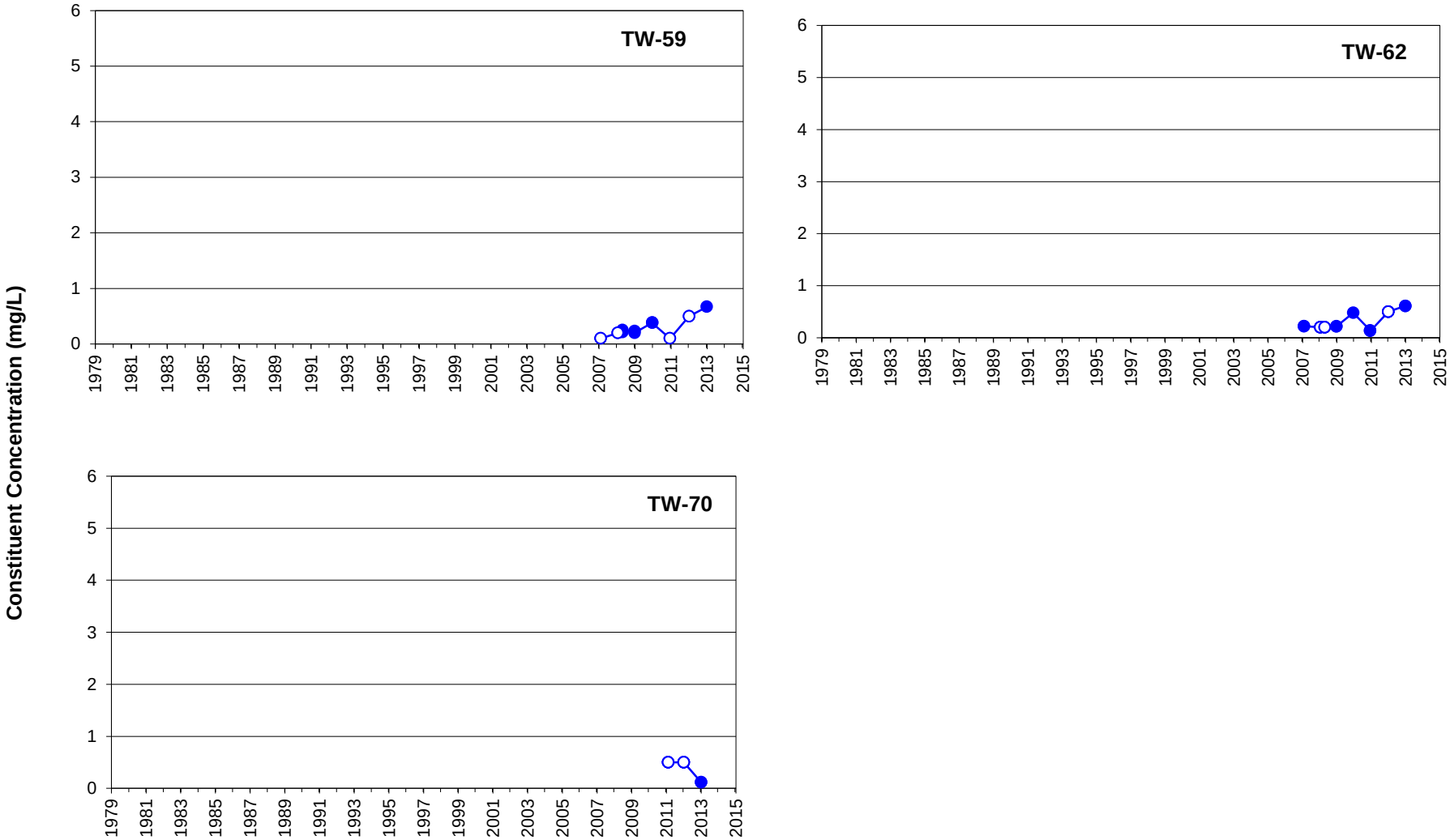
Non-Detects

FIGURE **B-18**

FLUORIDE IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

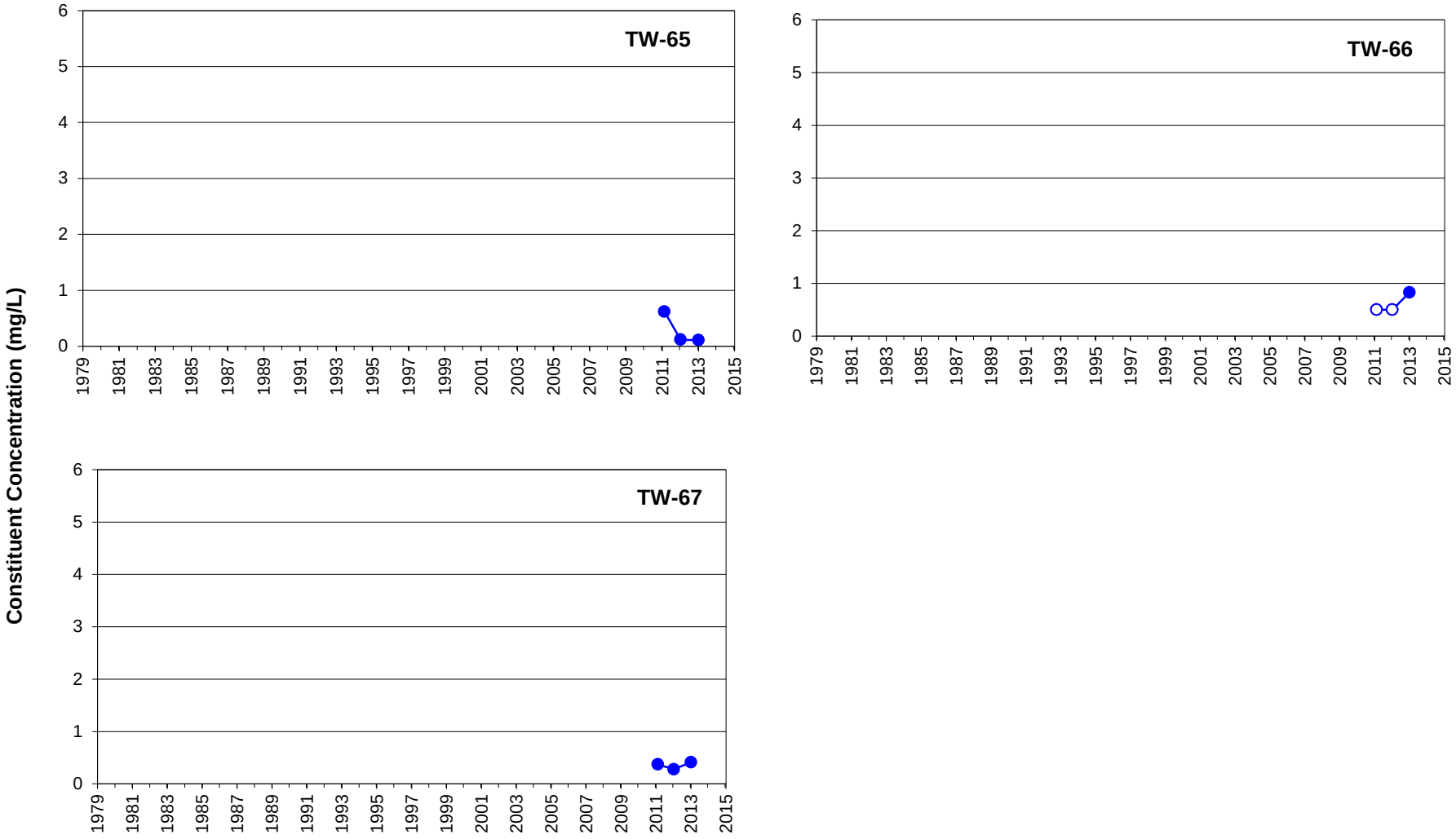
non-detects

FIGURE **B-19**

FLUORIDE IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

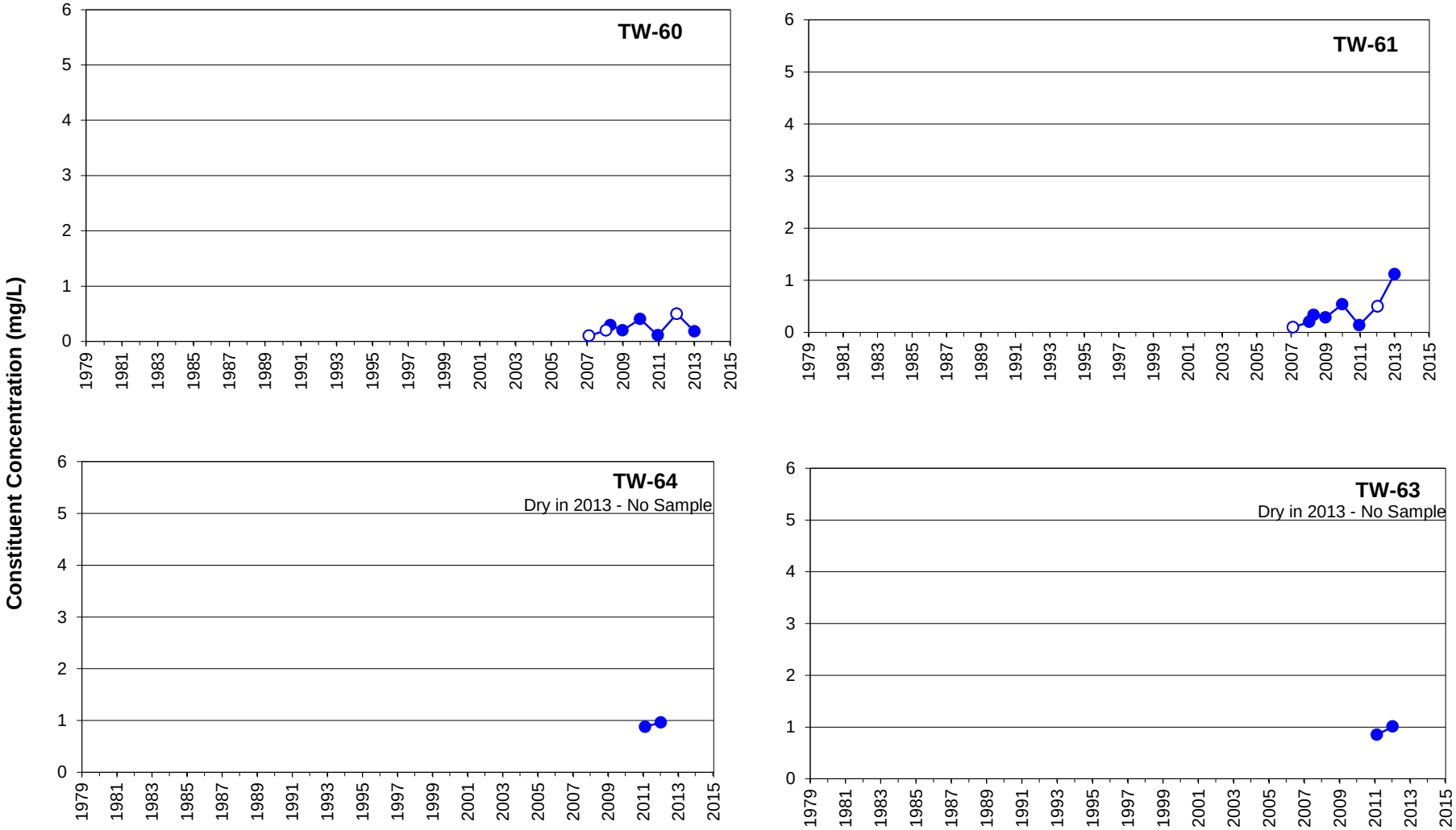
non-detects

FIGURE **B-20**

FLUORIDE IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

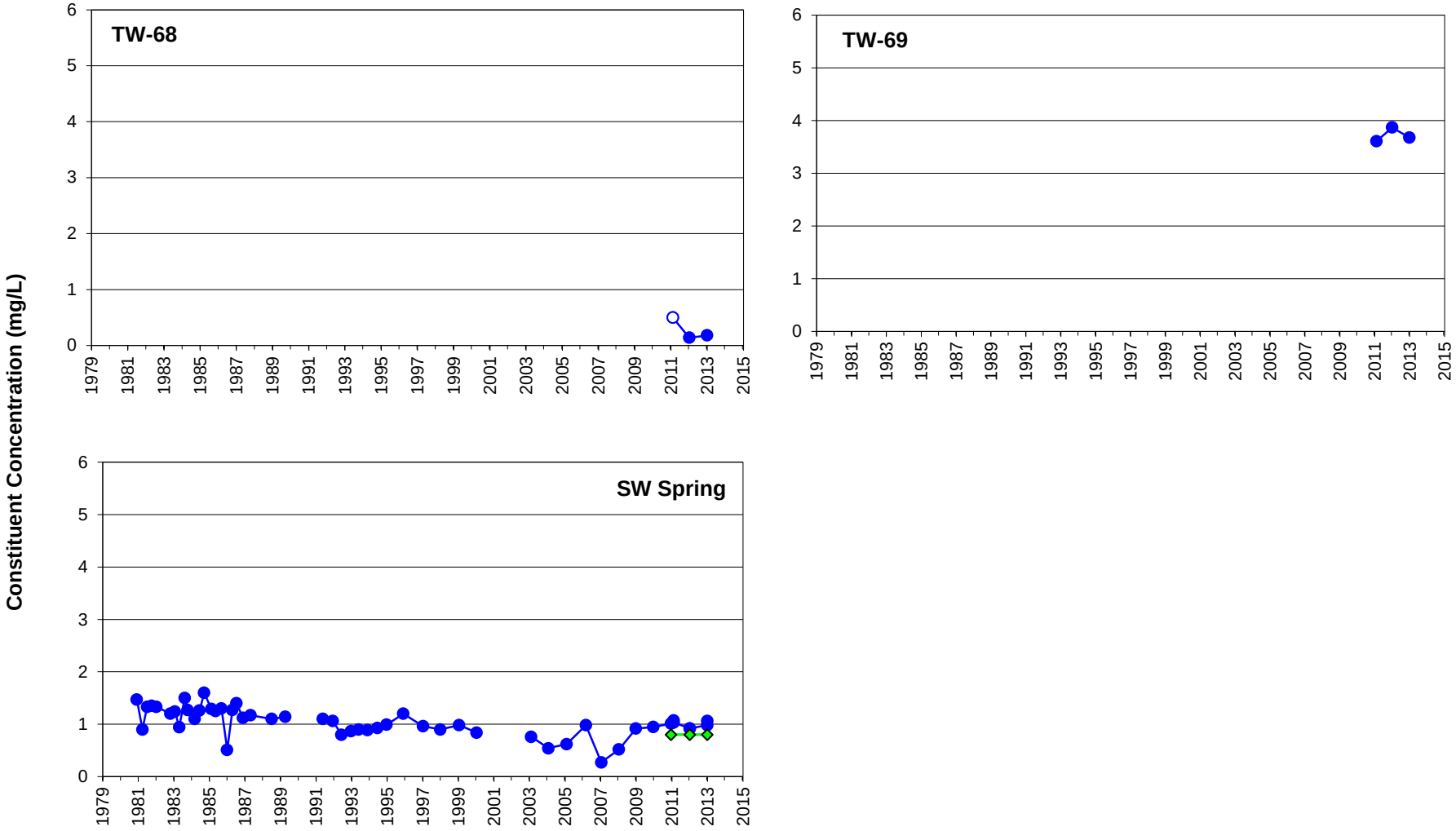
non-detects

FIGURE **B-21**

FLUORIDE IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-detects
- SW Spring above confluence with Soda Creek

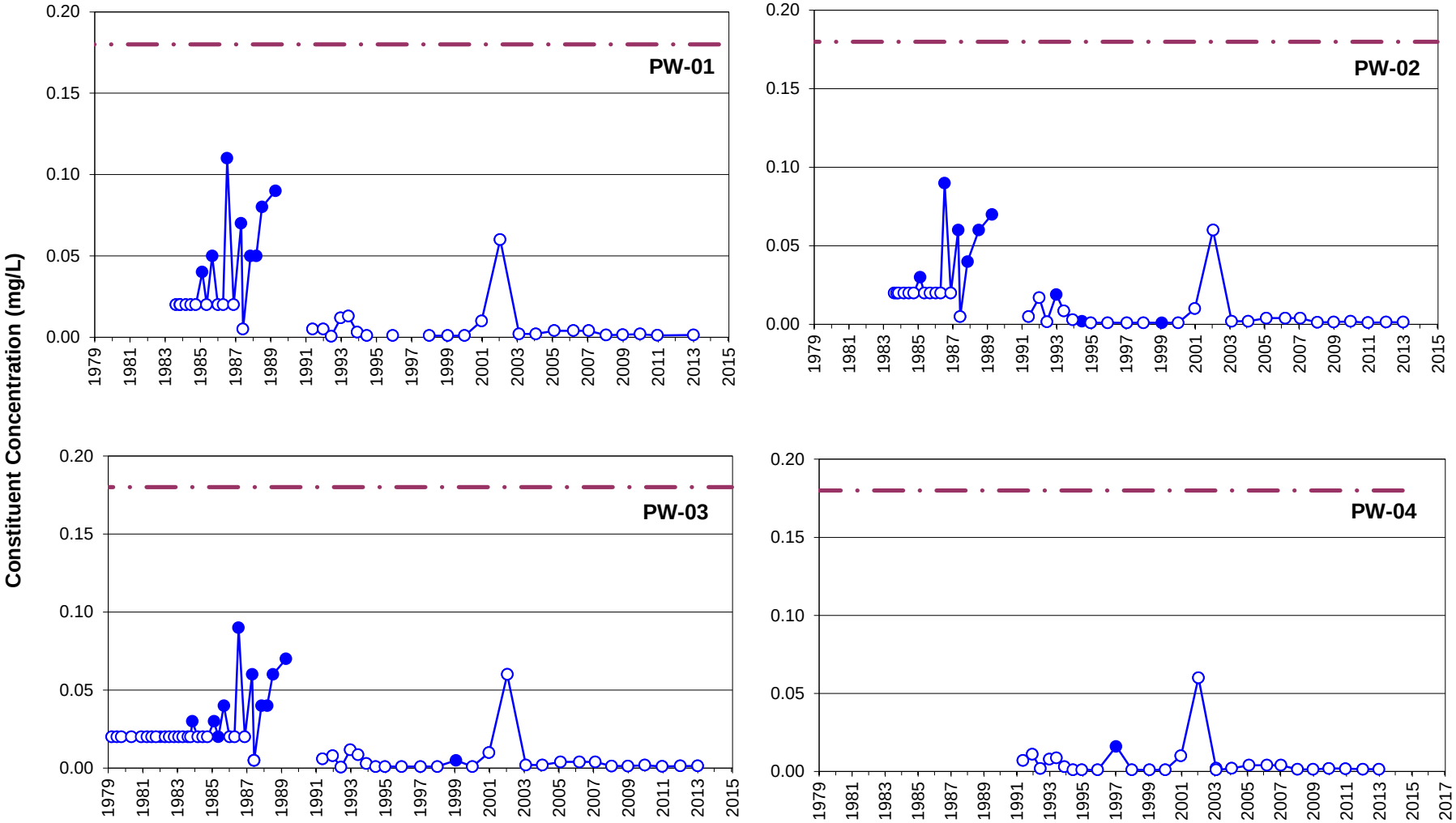
FIGURE **B-22**

FLUORIDE IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX C
TIME-HISTORY GRAPHS FOR MANGANESE



Remediation goals shown for point of compliance locations only

LEGEND

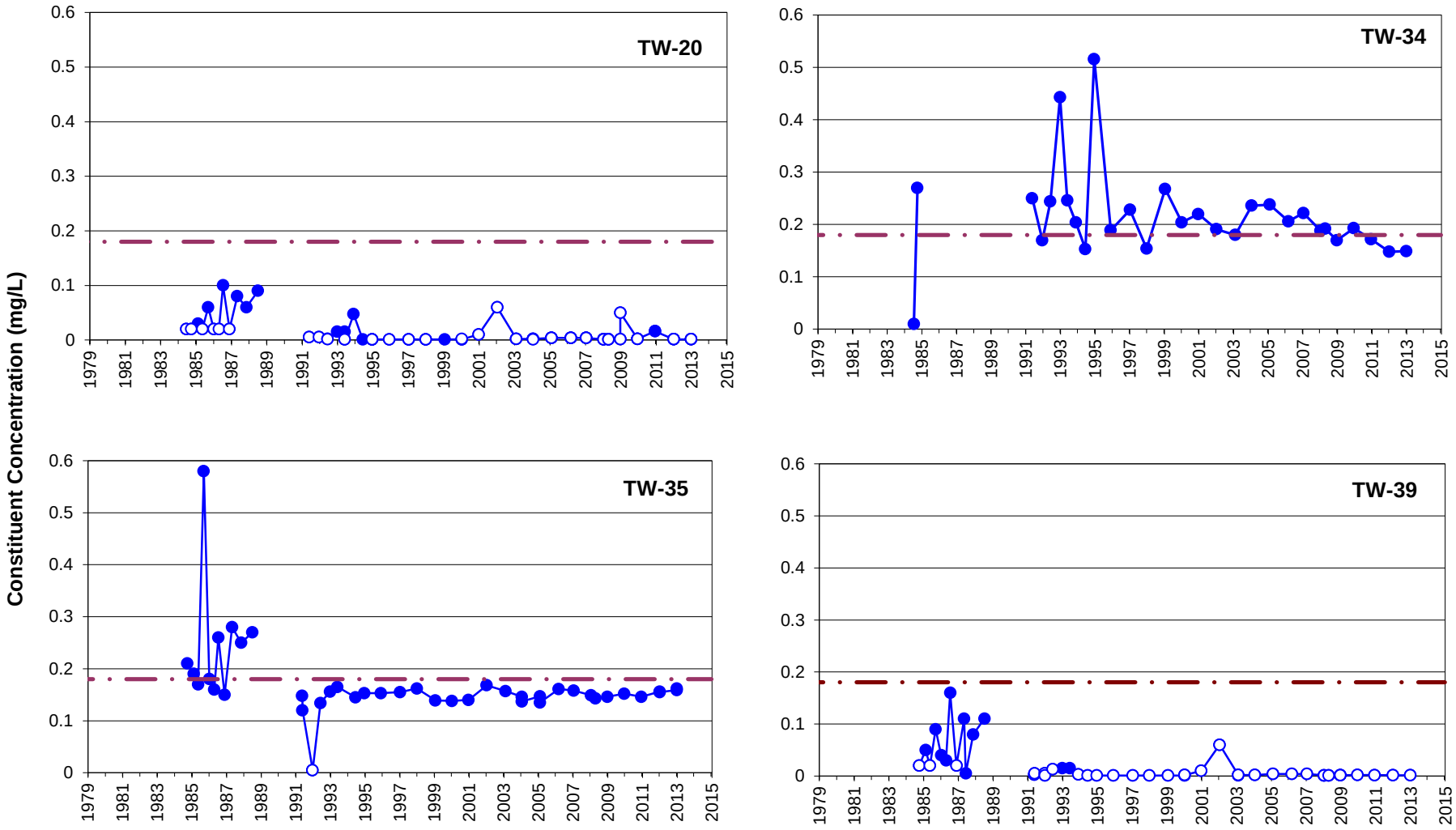
- Constituent Concentration (mg/L)
- Non-Detects
- Manganese Remediation Goal (0.18 mg/L)

FIGURE **C-1**

MANGANESE IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

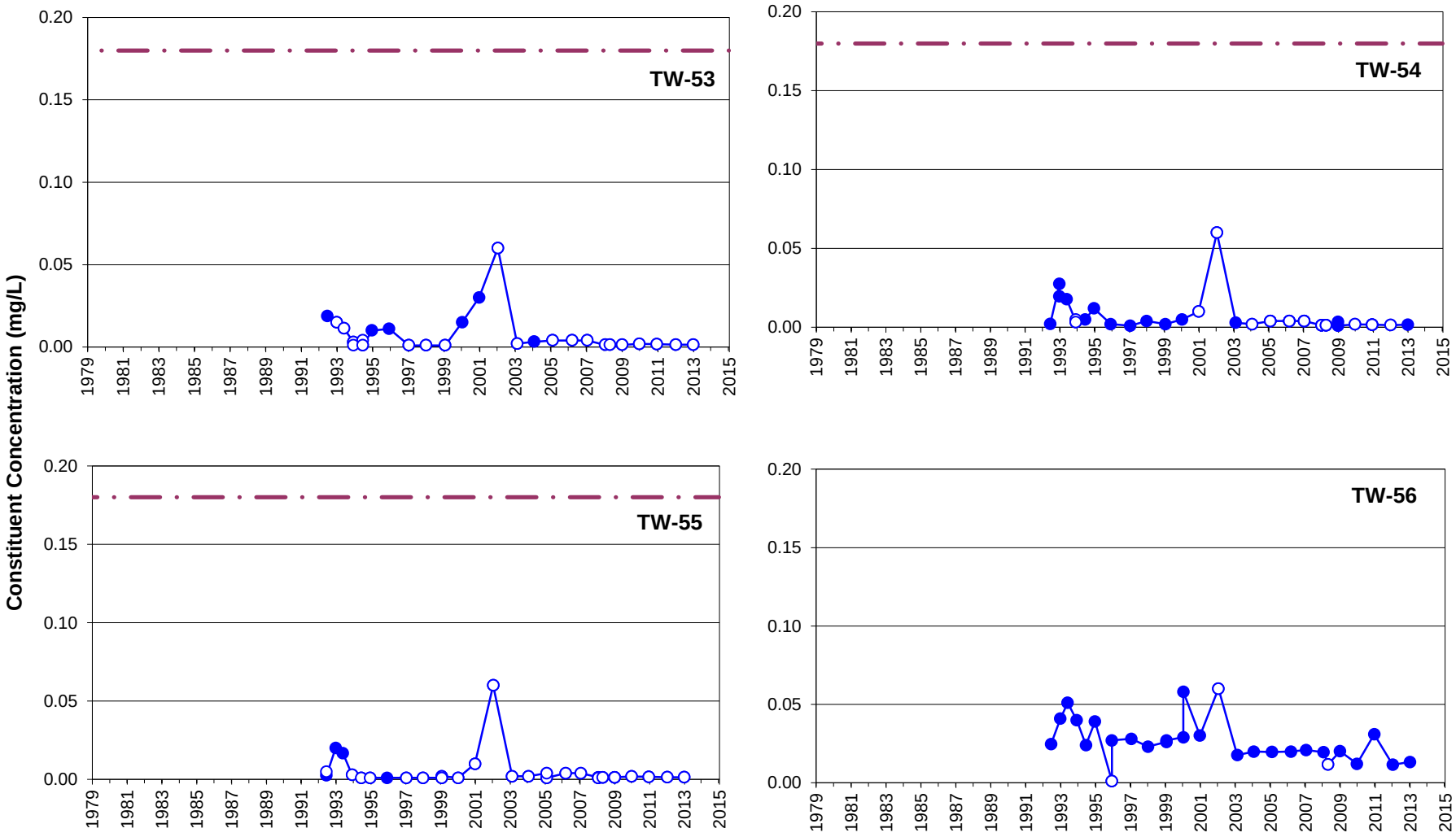
- Constituent Concentration (mg/L)
- Non-Detects
- Manganese Remediation Goal (0.18 mg/L)

FIGURE **C-2**

MANGANESE IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

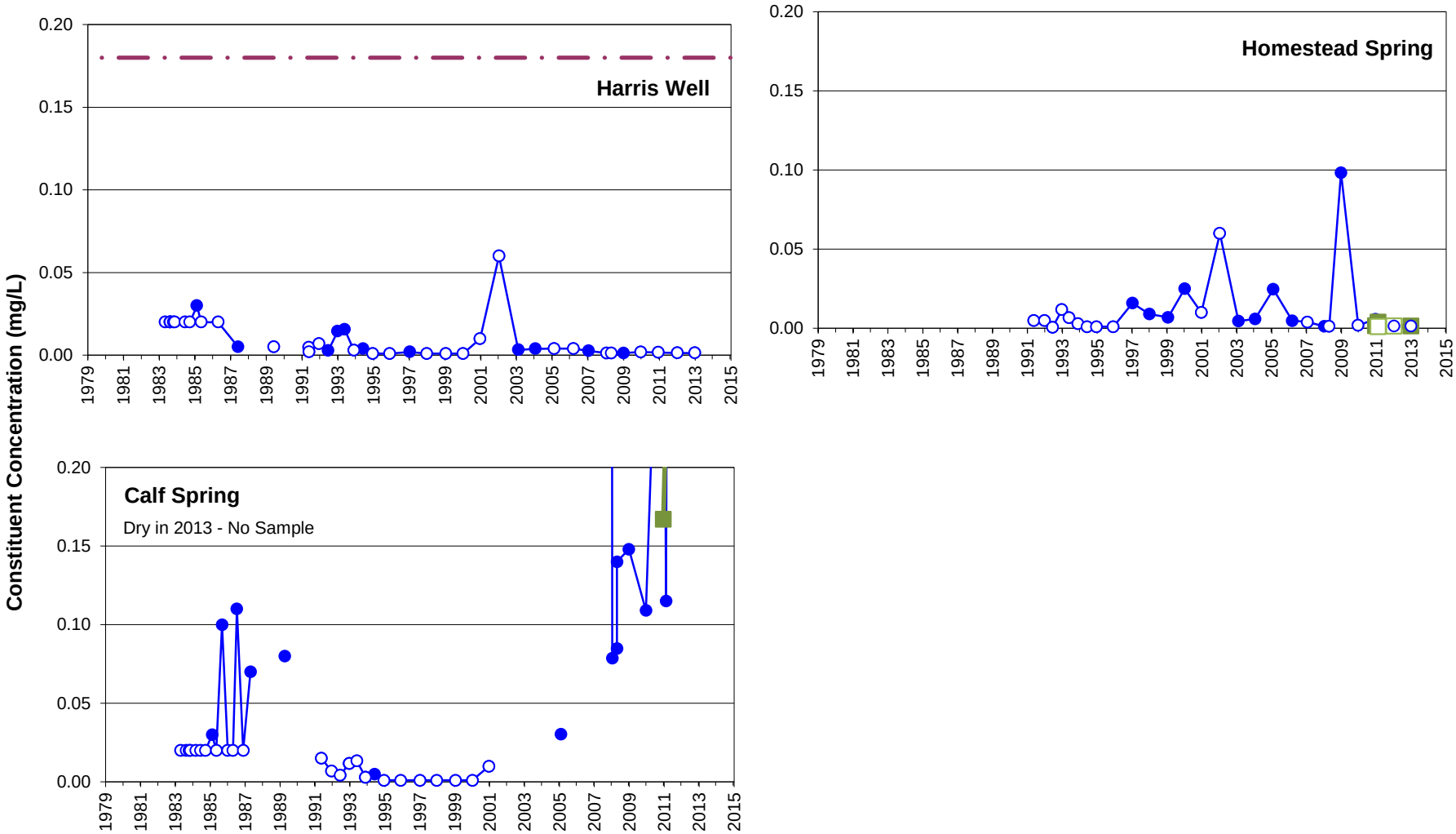
- Constituent Concentration (mg/L)
- Non-Detects
- Manganese Remediation Goal (0.18 mg/L)

FIGURE **C-3**

MANGANESE IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

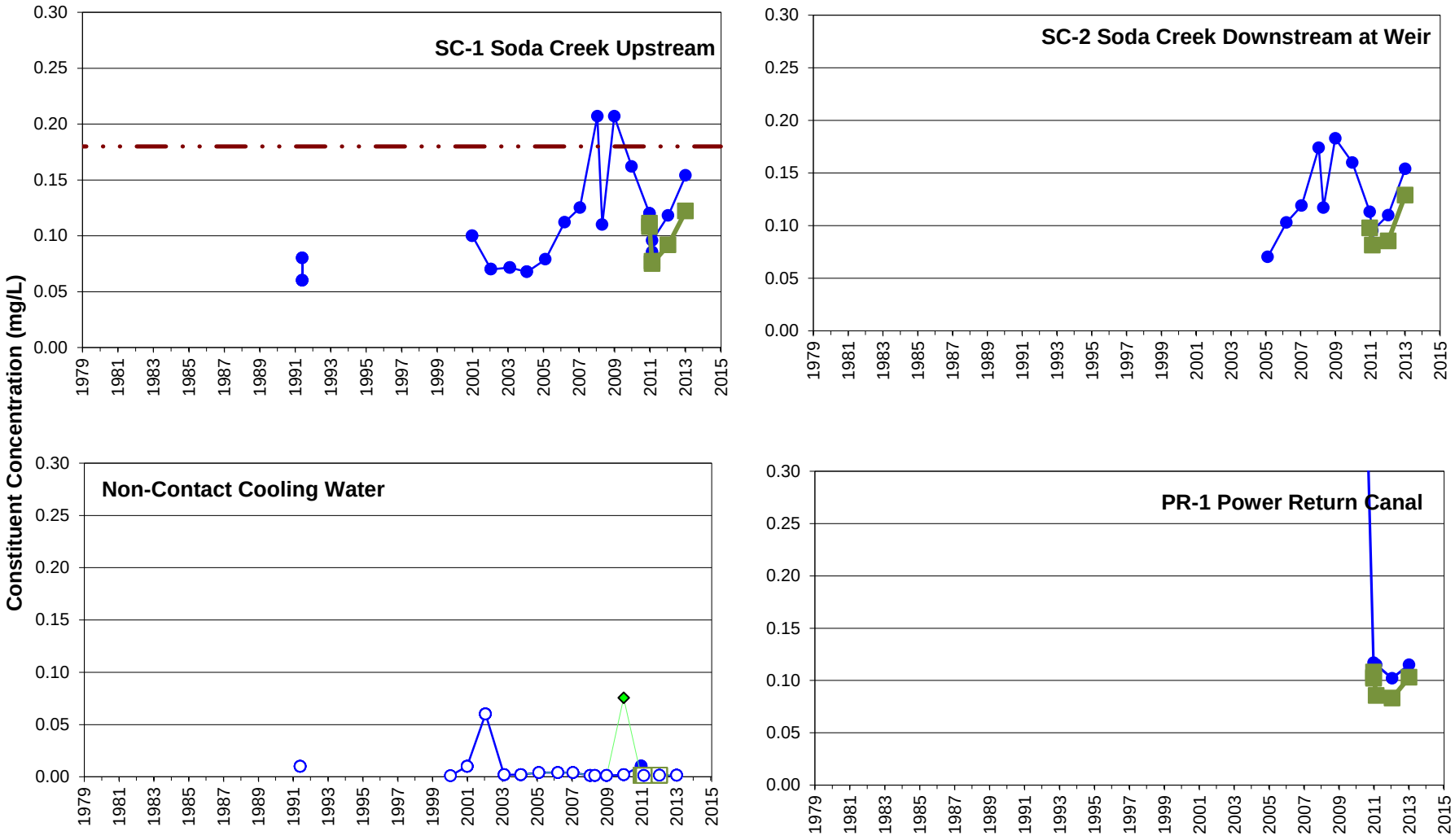
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Manganese Remediation Goal (0.18 mg/L)

FIGURE **C-4**

MANGANESE IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Manganese Remediation Goal (0.18 mg/L)
- Pond Inlet

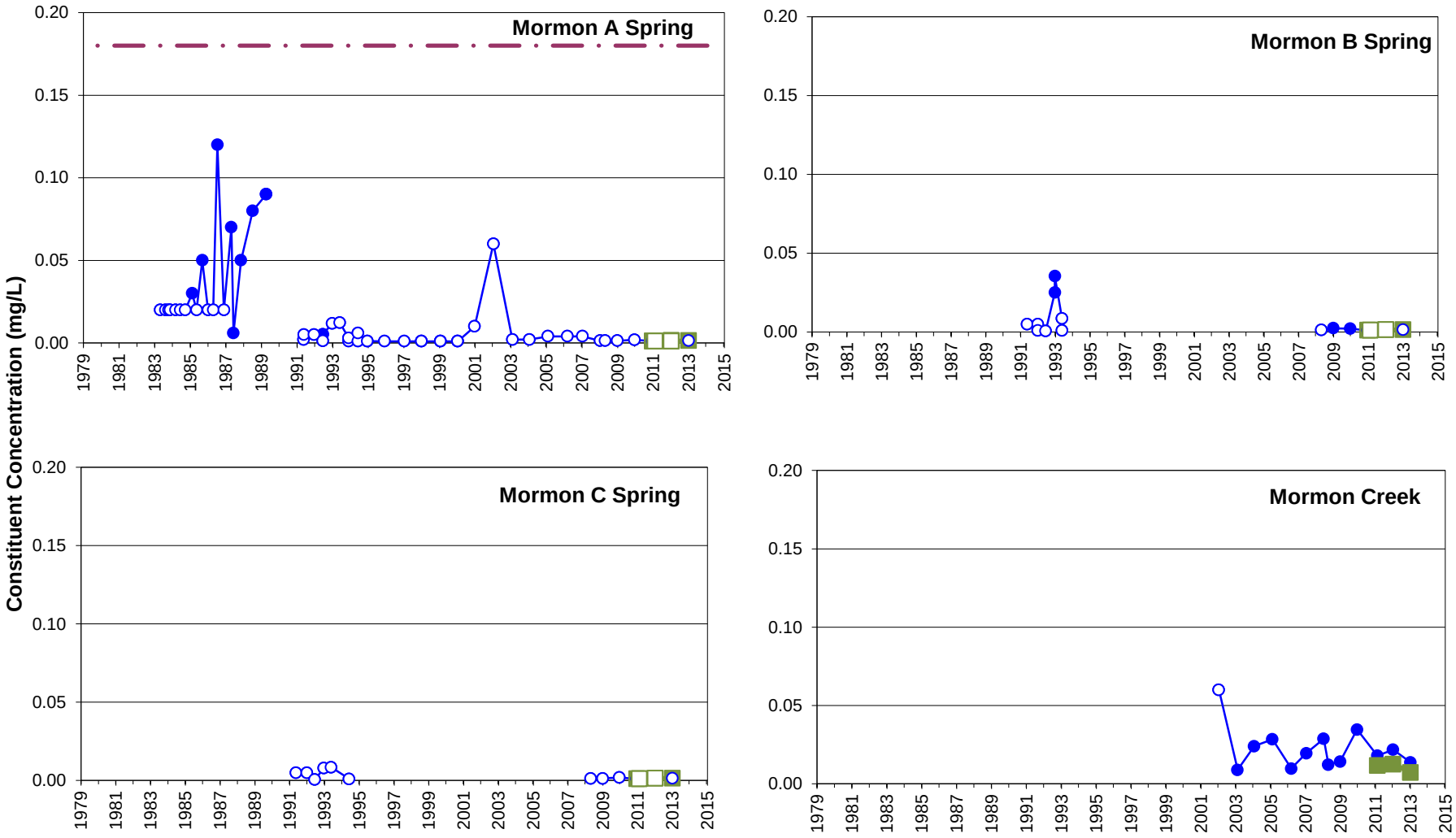
Golder Associates

FIGURE **C-5**

MANGANESE IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

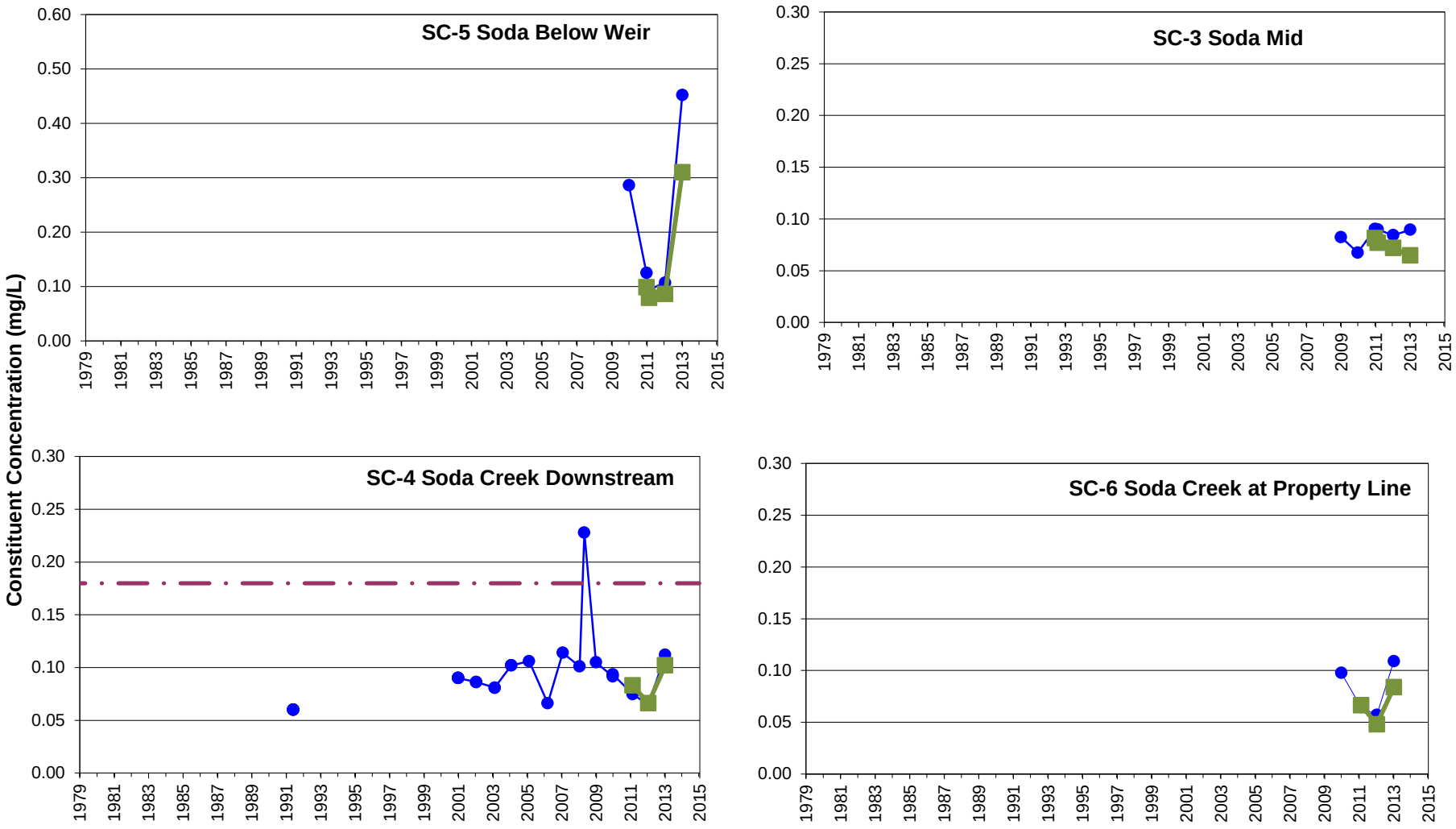
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- d ND
- Manganese Remediation Goal (0.18 mg/L)

FIGURE **C-6**

MANGANESE IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Manganese Remediation Goal (0.18 mg/L)

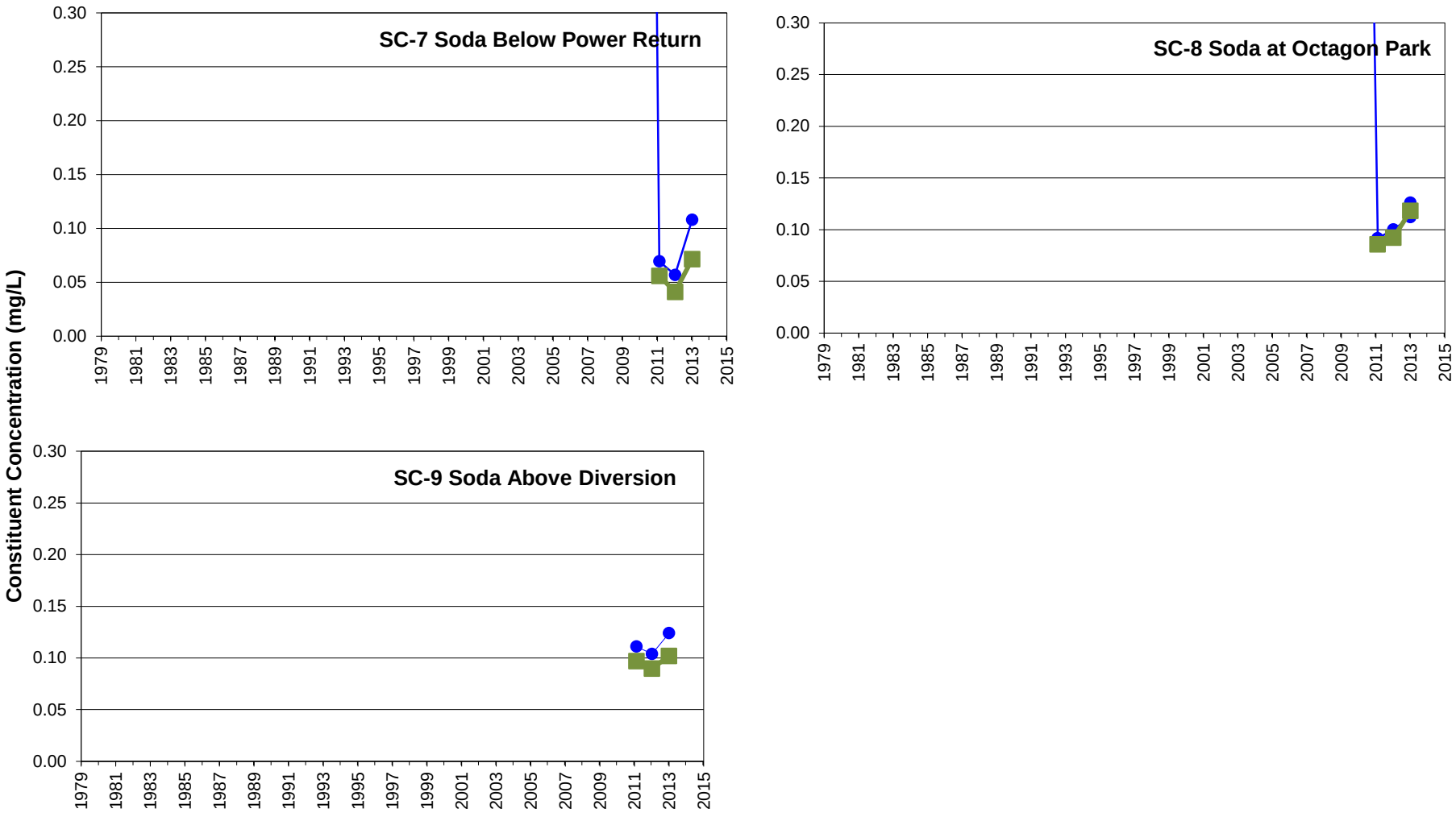
Golder Associates

FIGURE **C-7**

MANGANESE IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

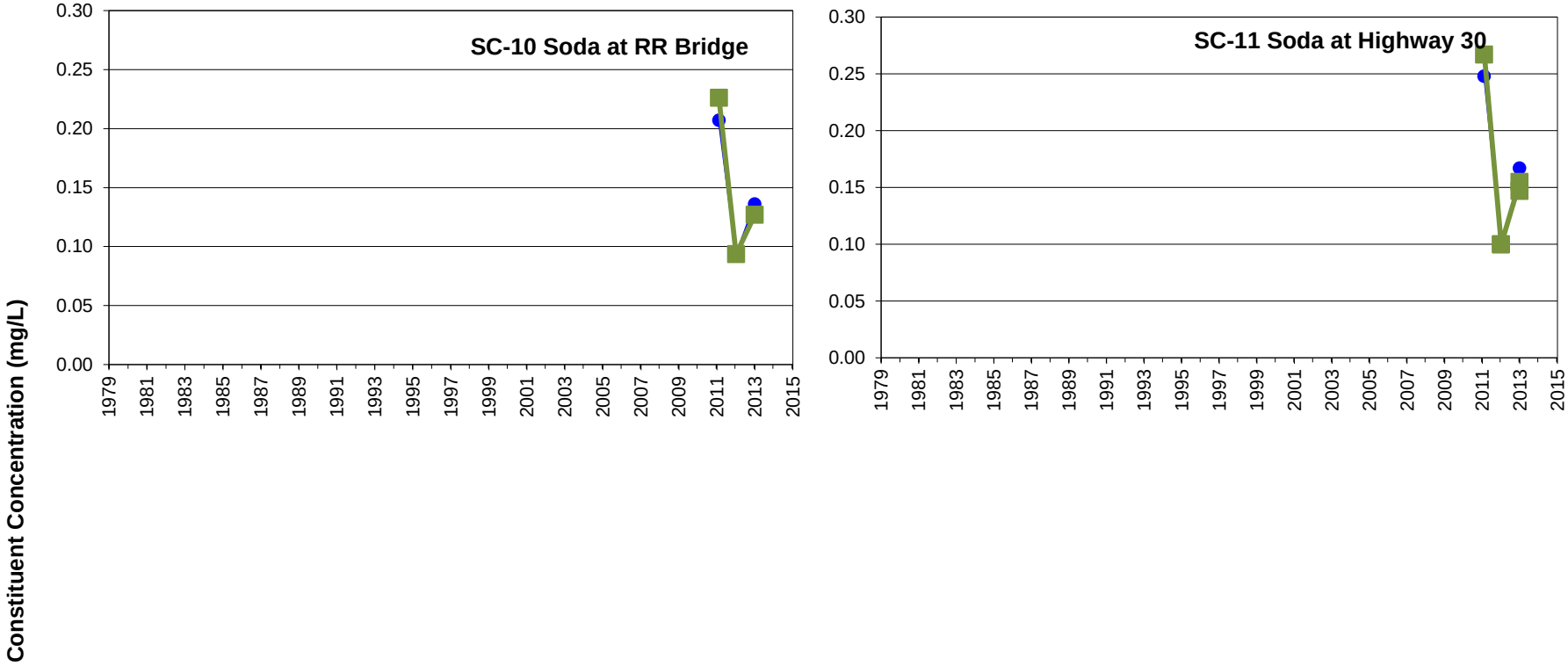
- Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Constituent Concentration (mg/L)
- 0

FIGURE **C-8**

MANGANESE IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

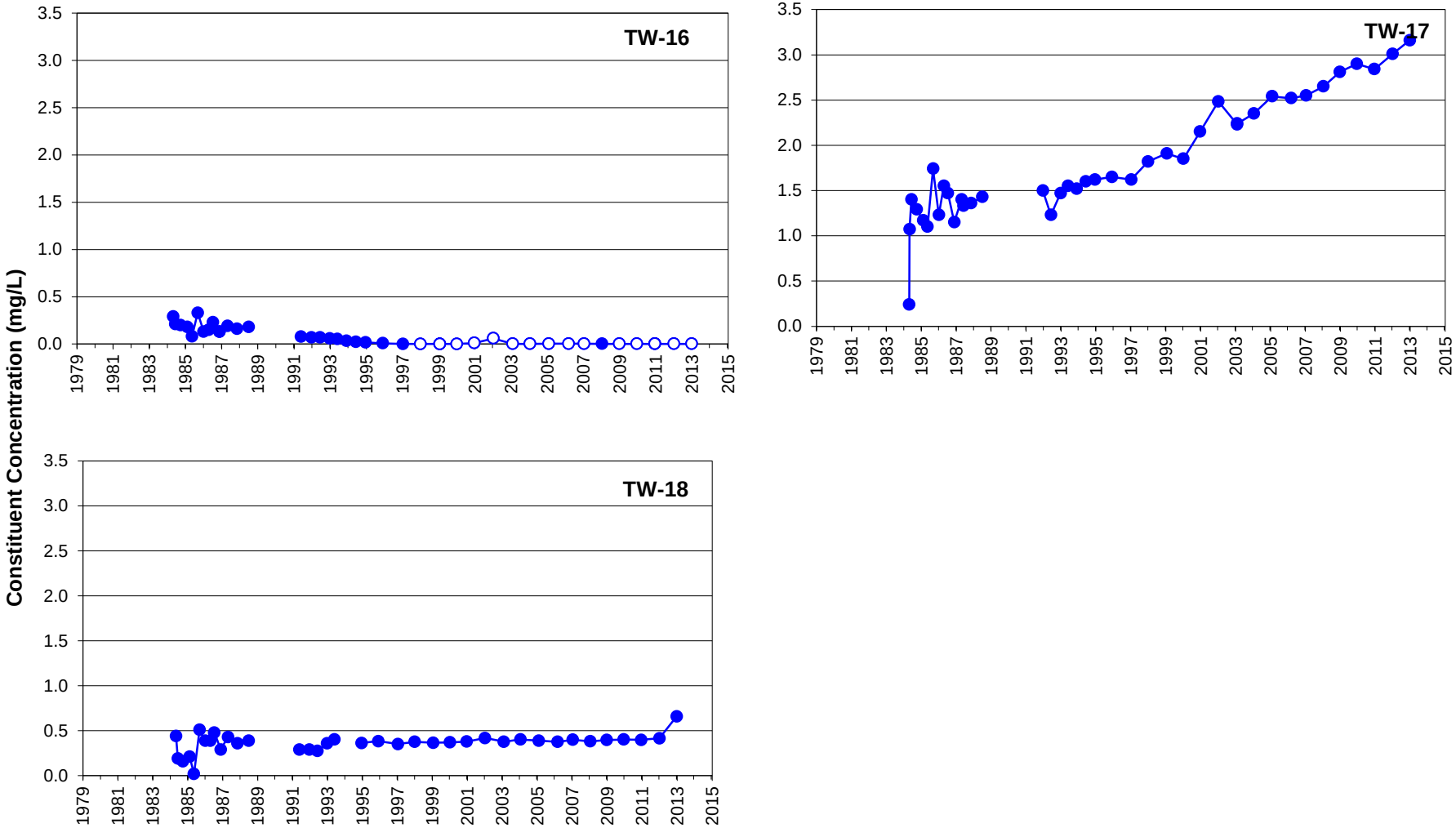
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-detect
- Dissolved Non-Detect (mg/L)

FIGURE **C-9**

MANGANESE IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

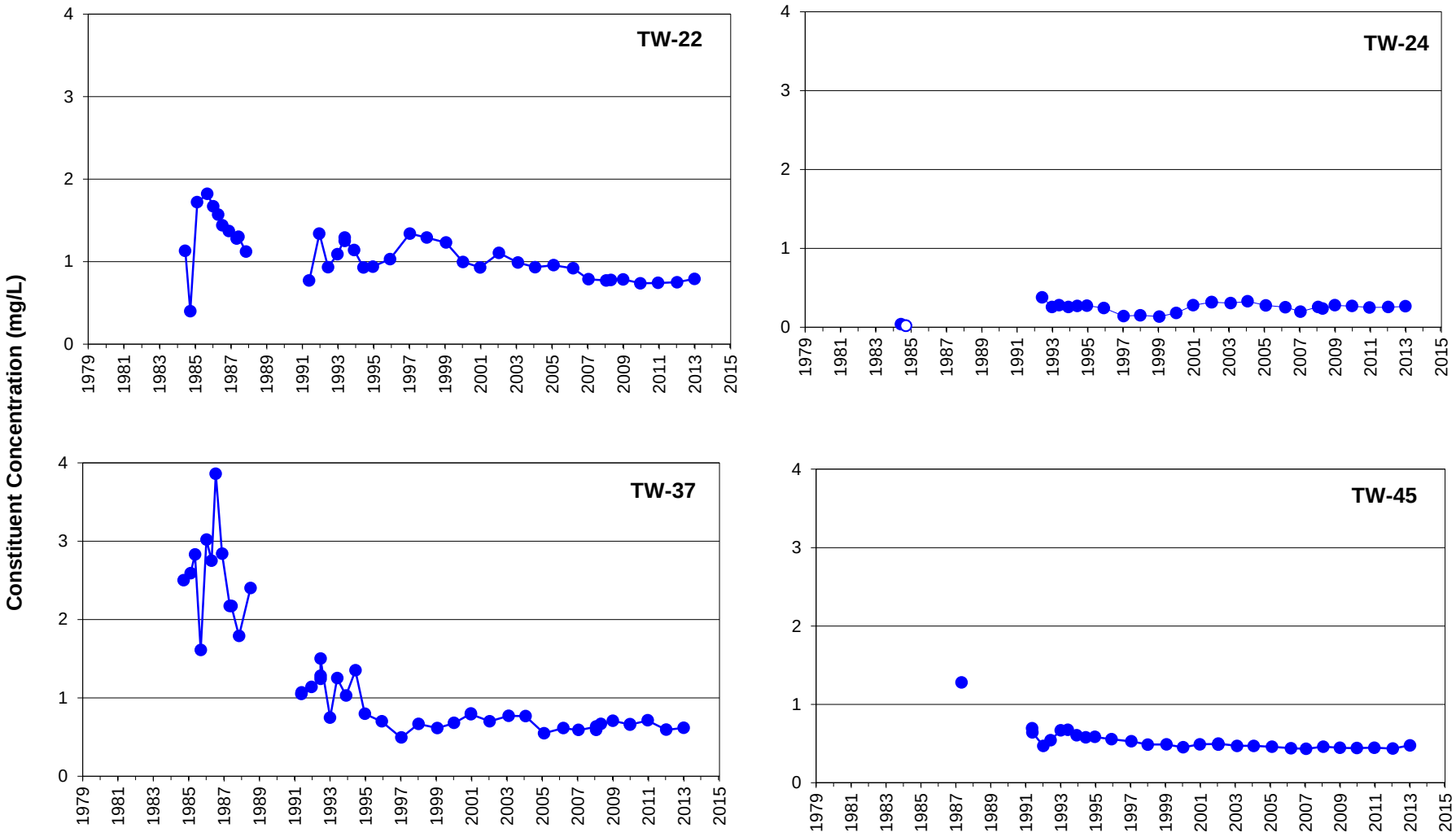
Non-Detects

FIGURE **C-10**

MANGANESE IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

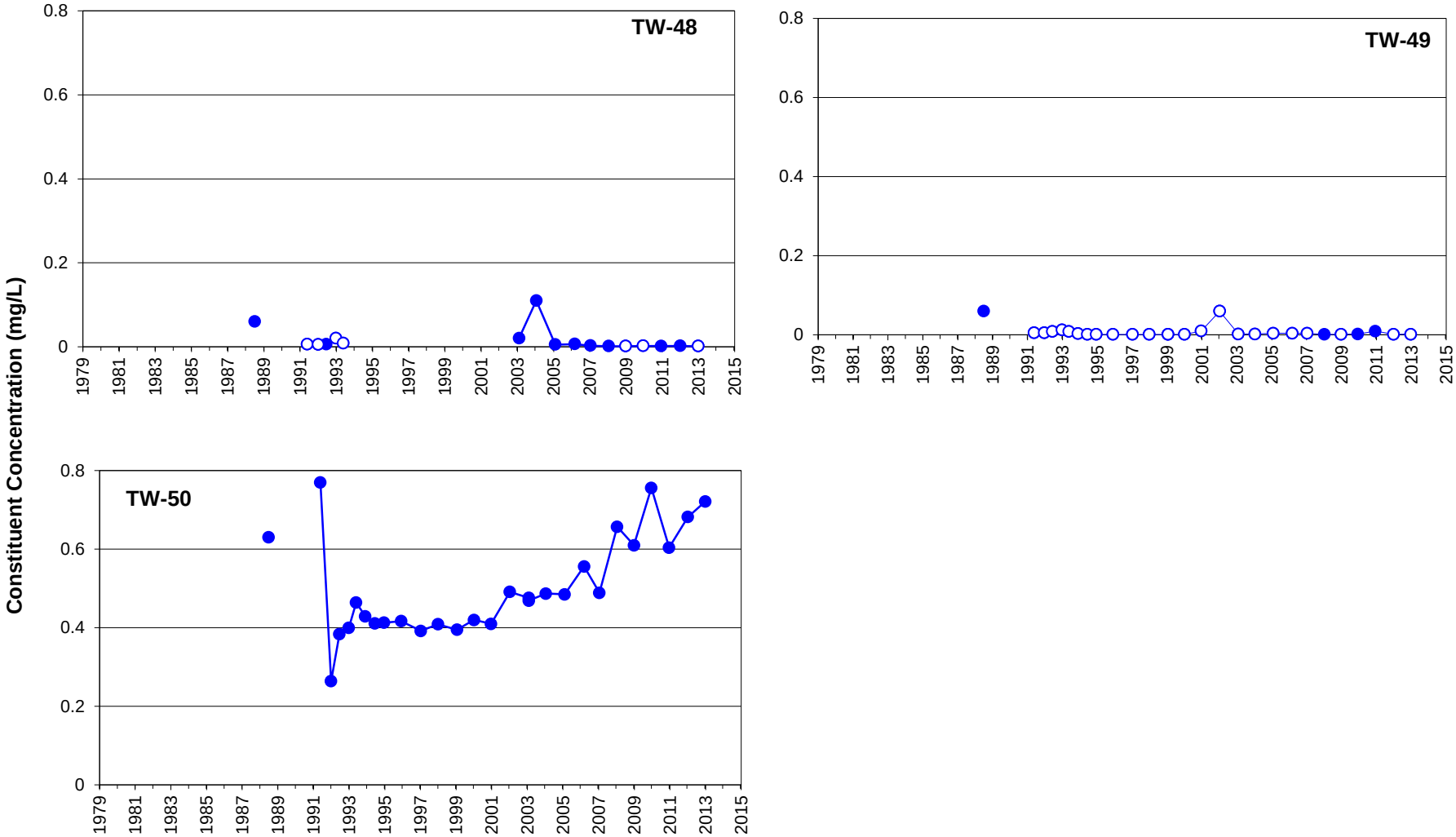
Non-Detects

FIGURE **C-11**

MANGANESE IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

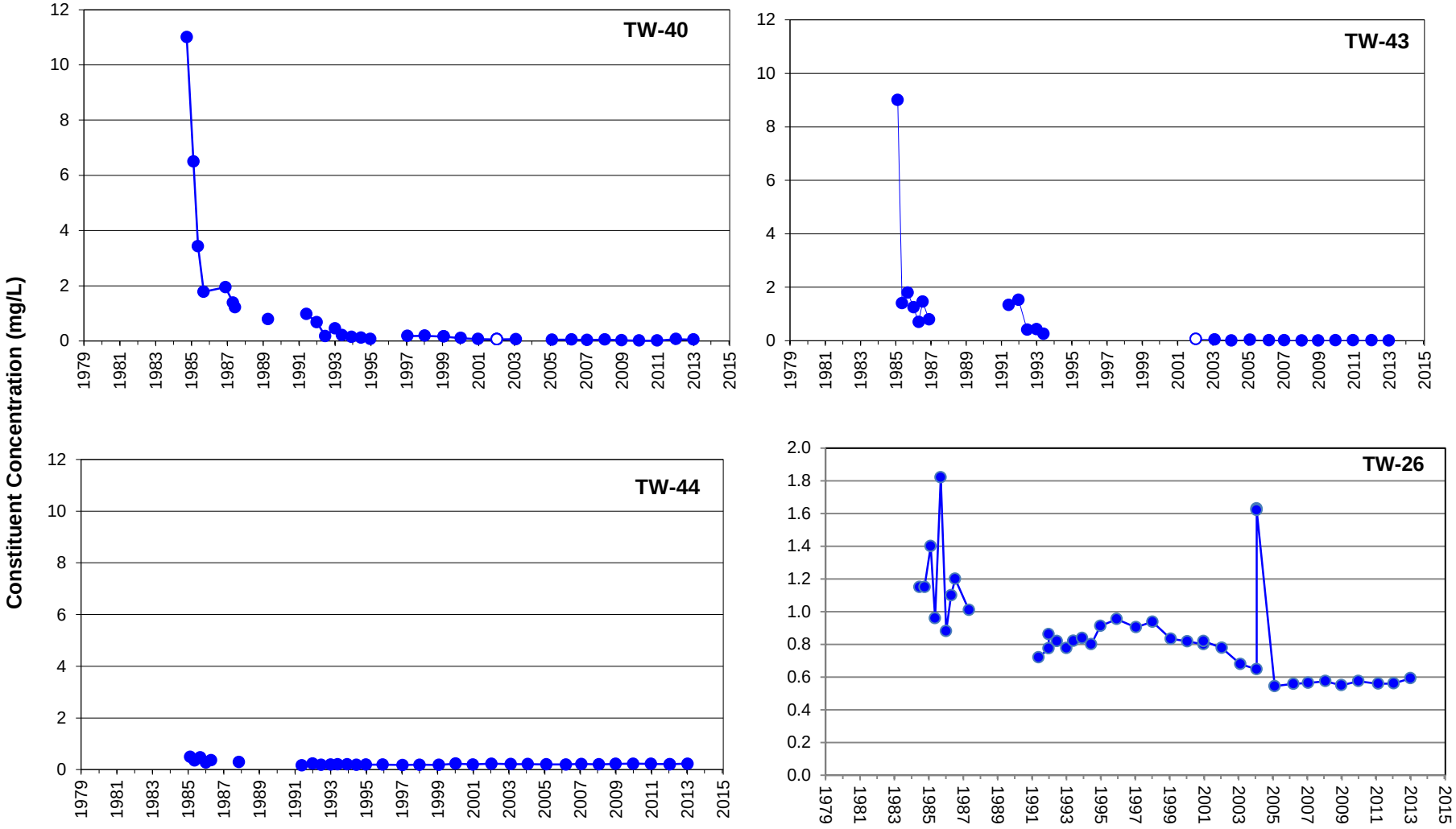
Non-Detects

FIGURE **C-12**

MANGANESE IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

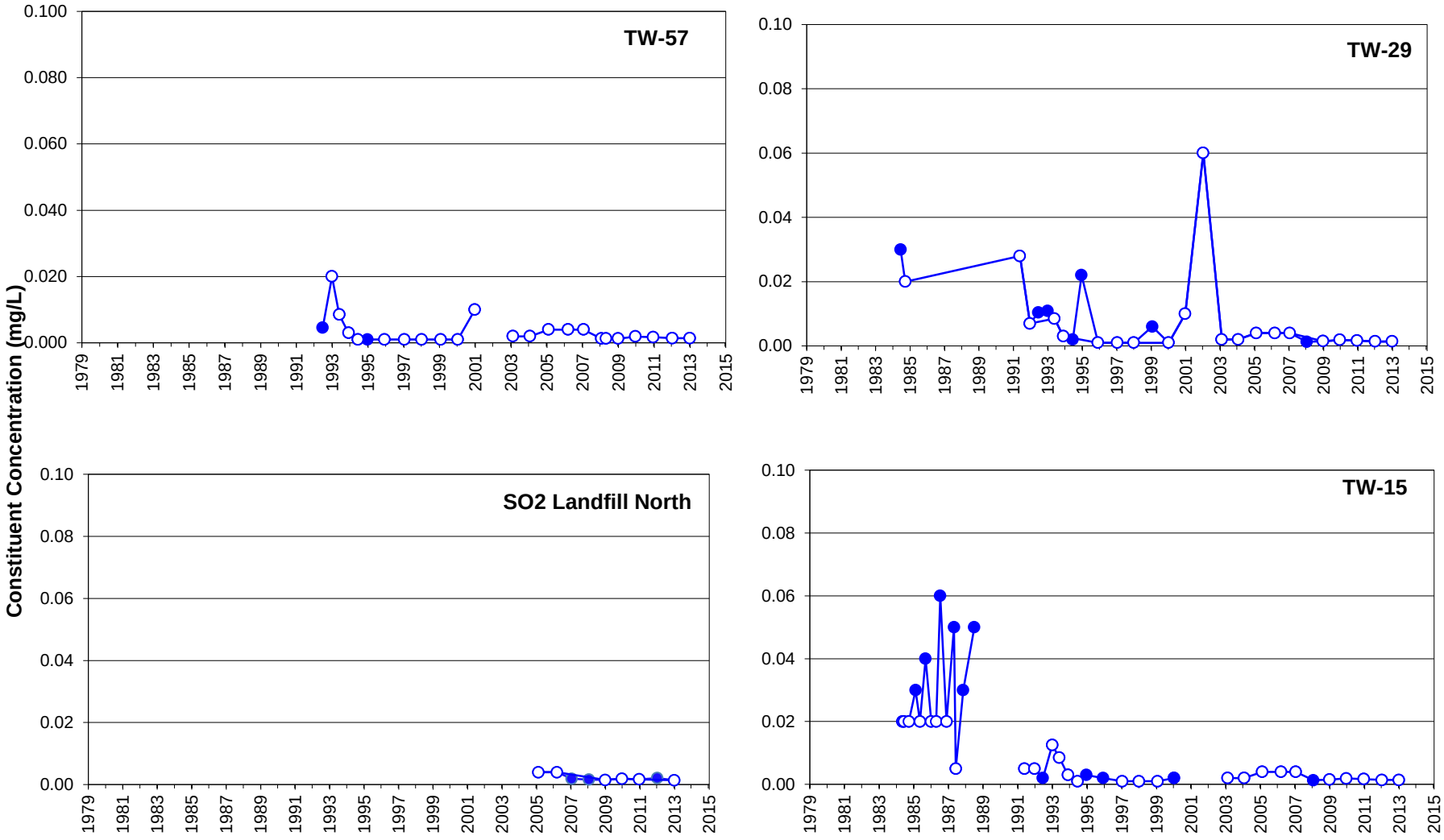
Non-Detects

FIGURE **C-13**

MANGANESE IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

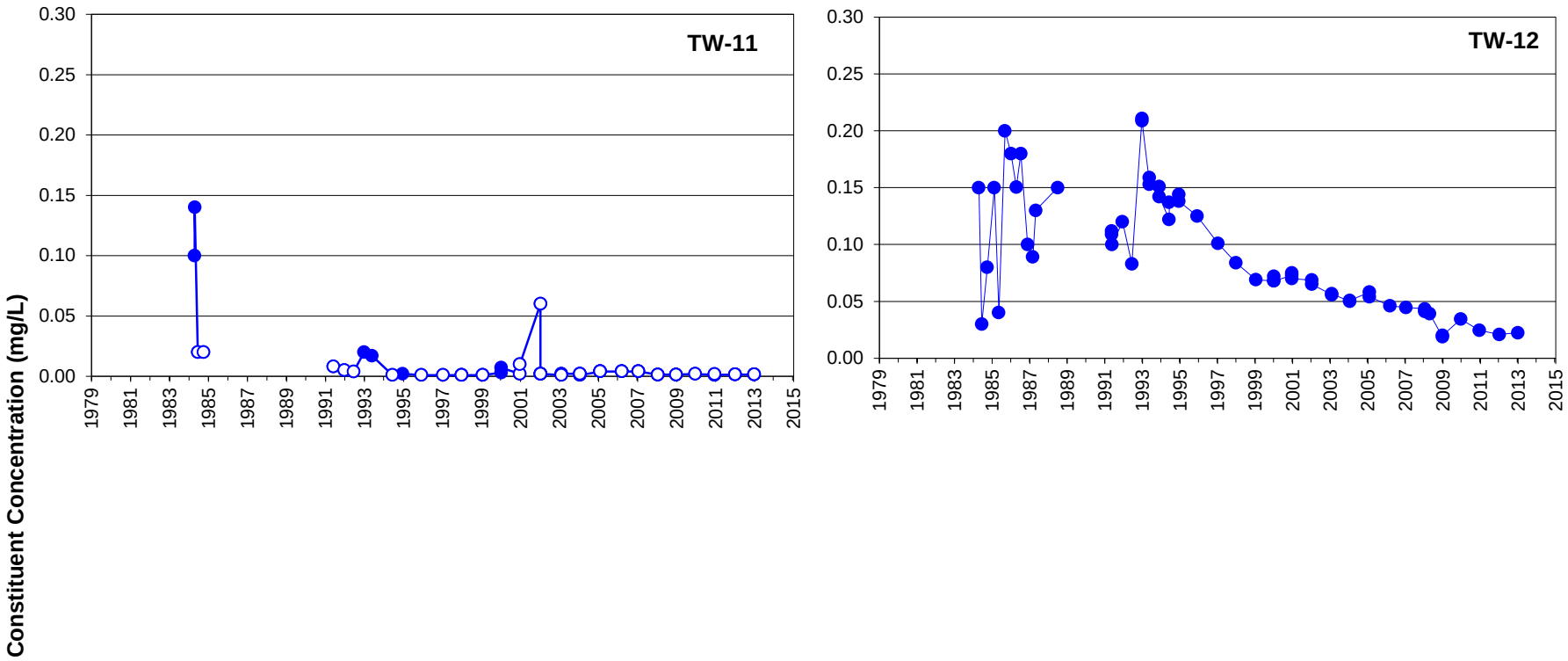
Non-Detects

FIGURE **C-14**

MANGANESE IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

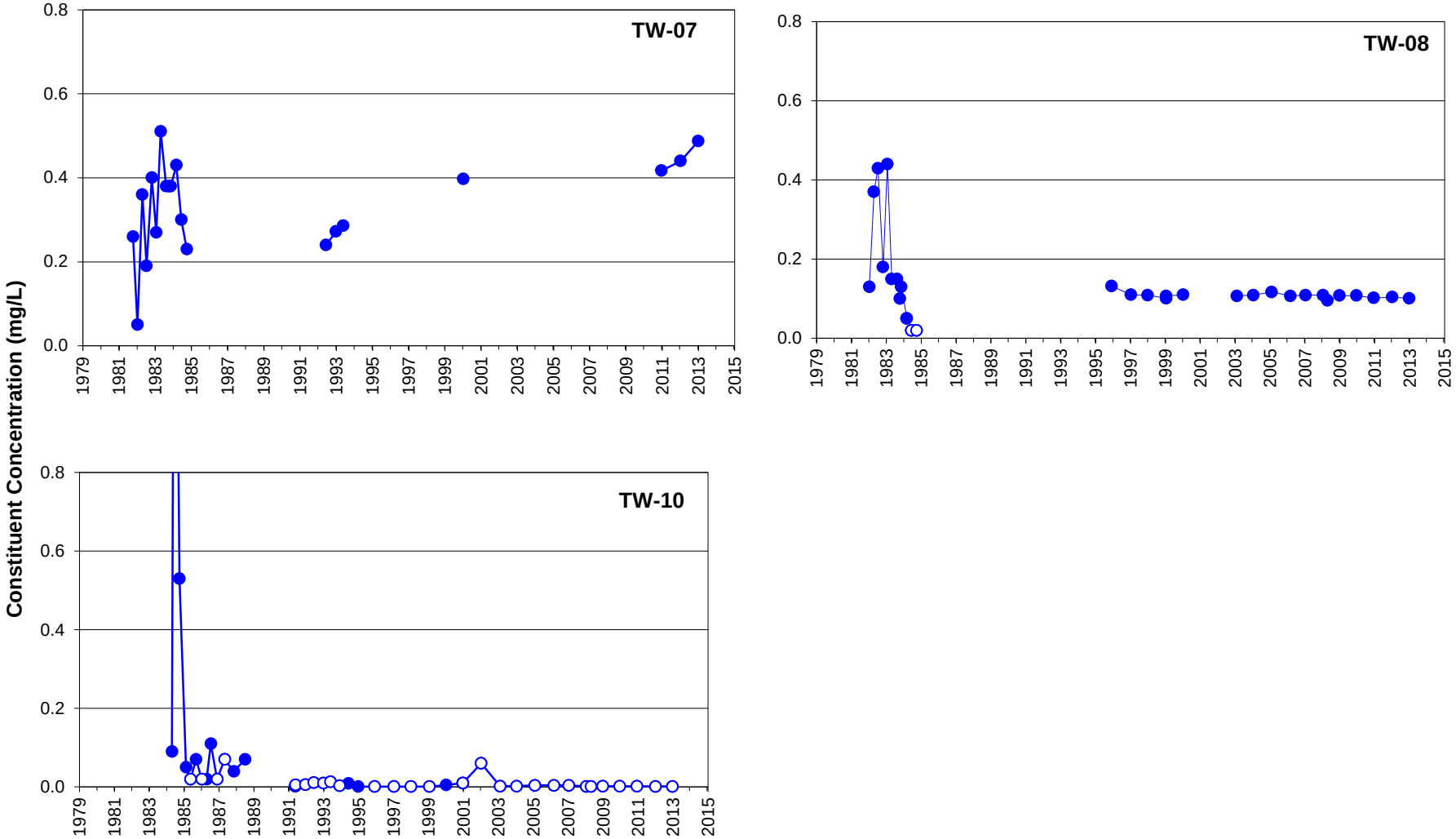
Non-Detects

FIGURE **C-15**

MANGANESE IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

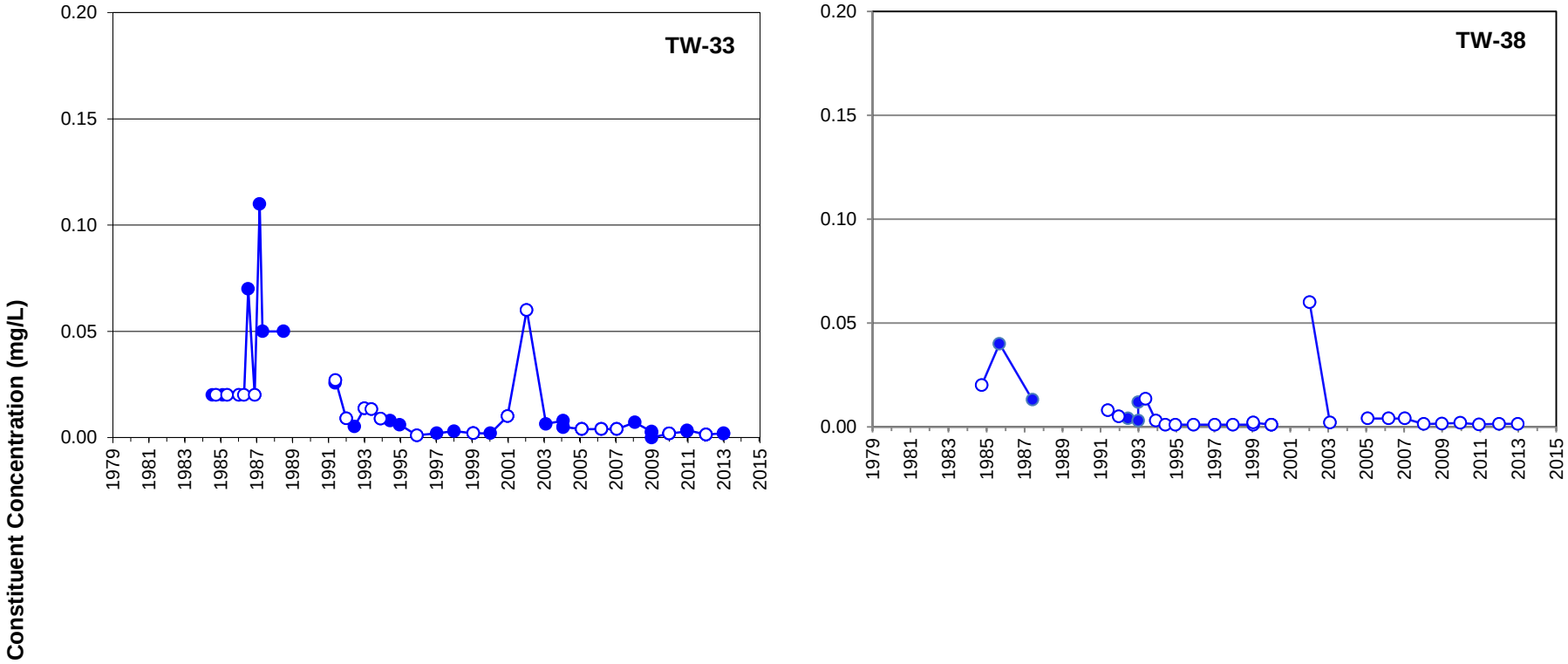
Non-Detects

FIGURE **C-16**

MANGANESE IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

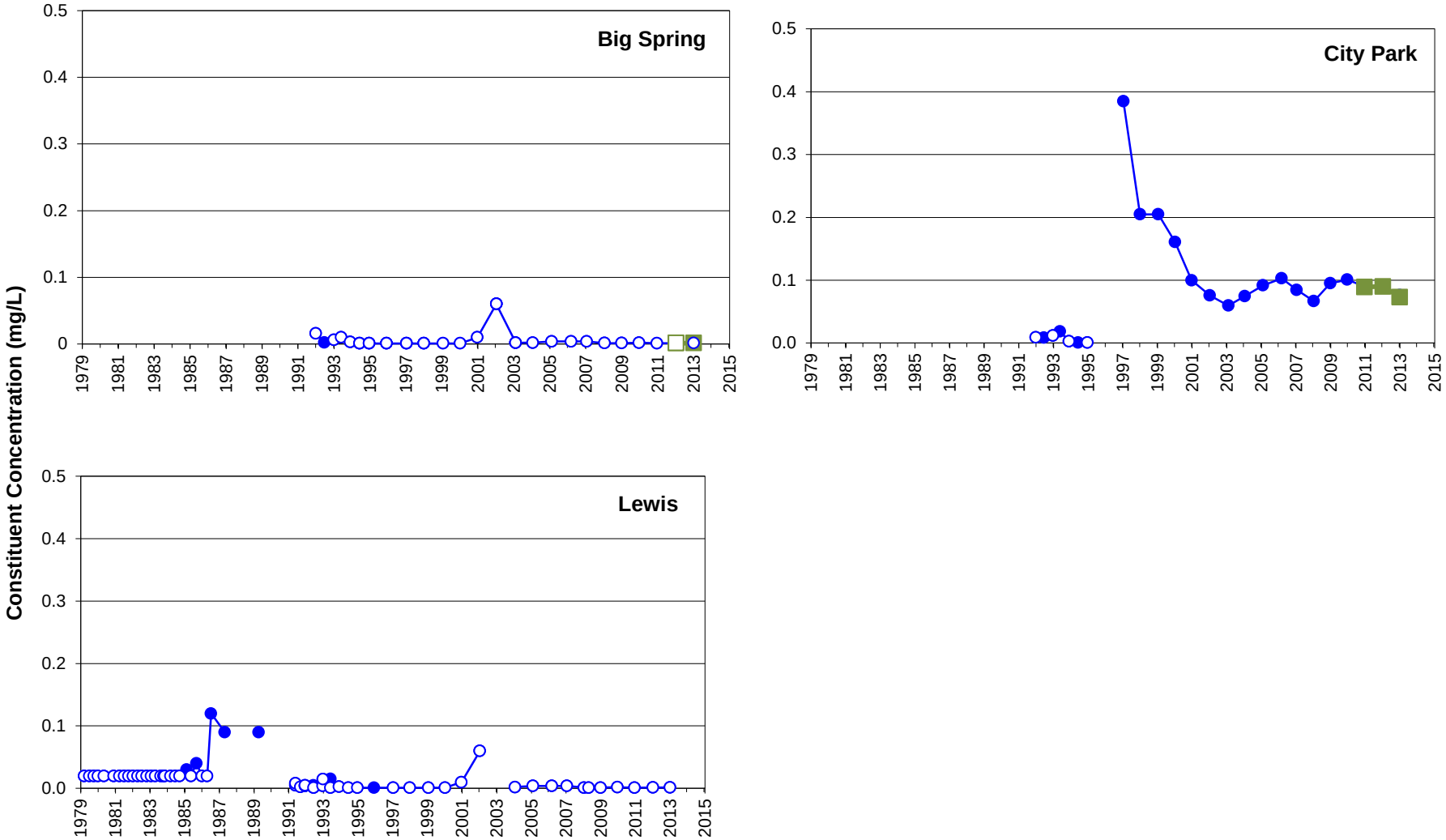
Non-Detects

FIGURE **C-17**

MANGANESE IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

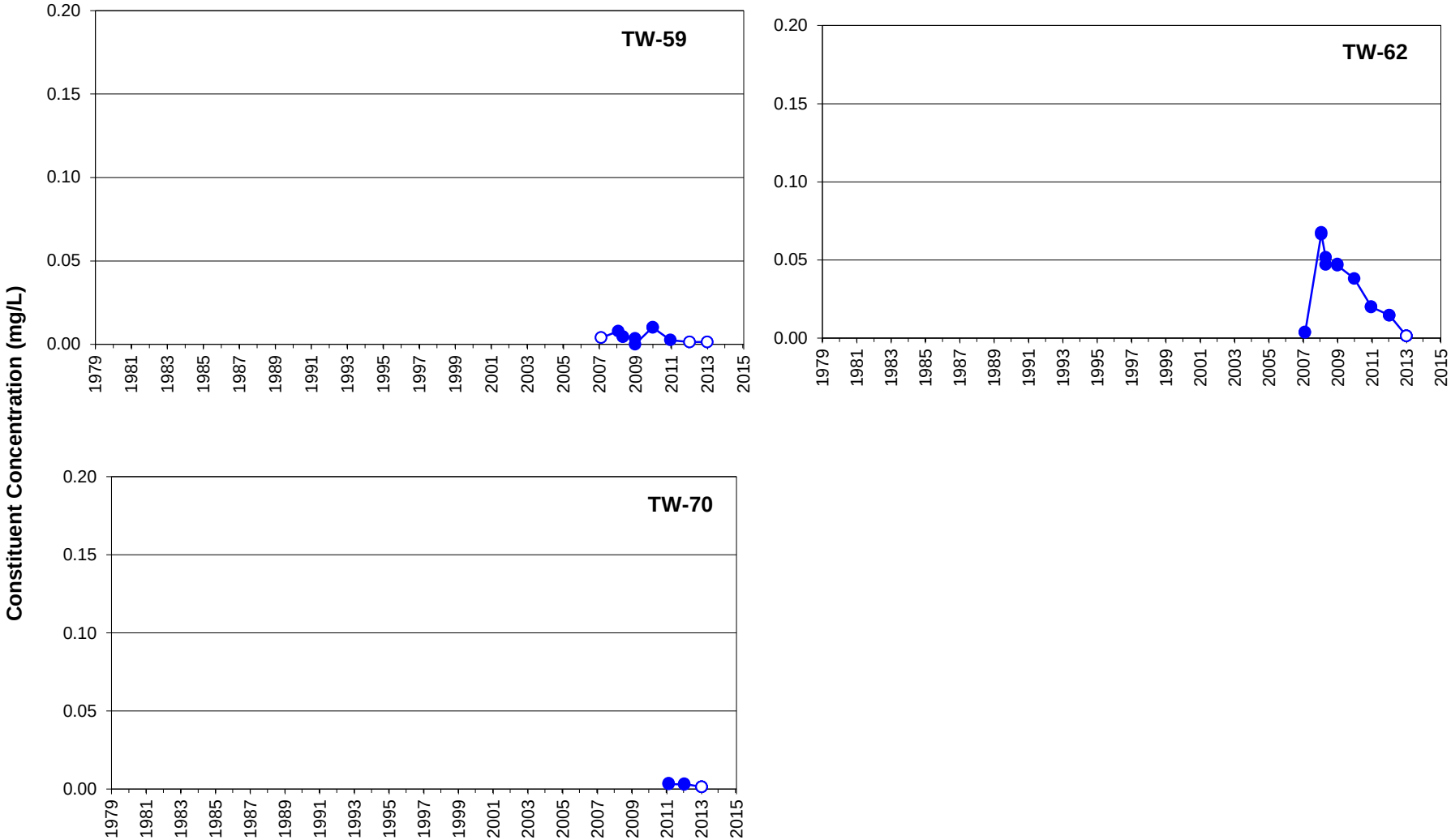
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)

FIGURE **C-18**

MANGANESE IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

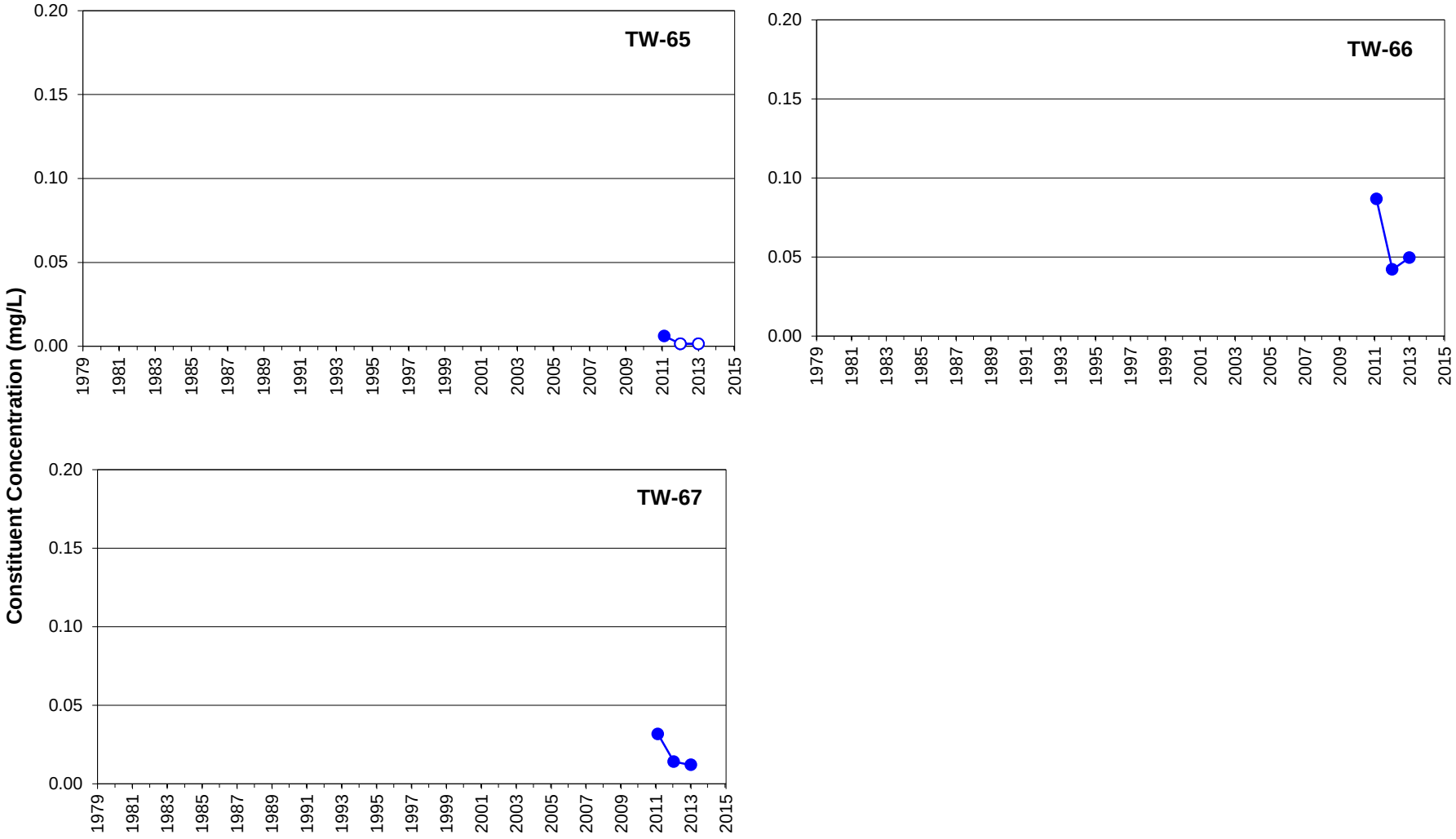
non-detects

FIGURE **C-19**

MANGANESE IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

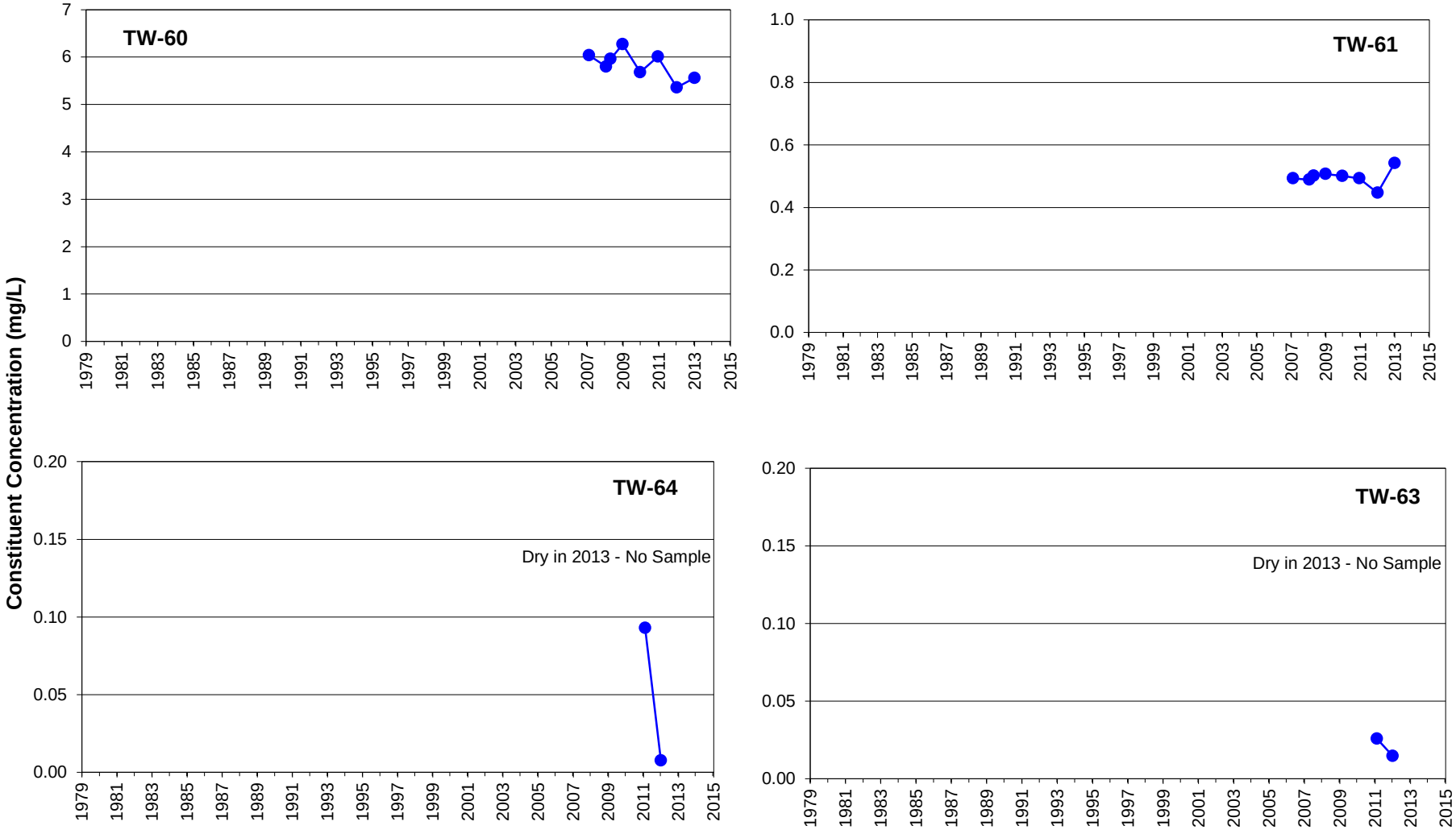
non-detects

FIGURE **C-20**

MANGANESE IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

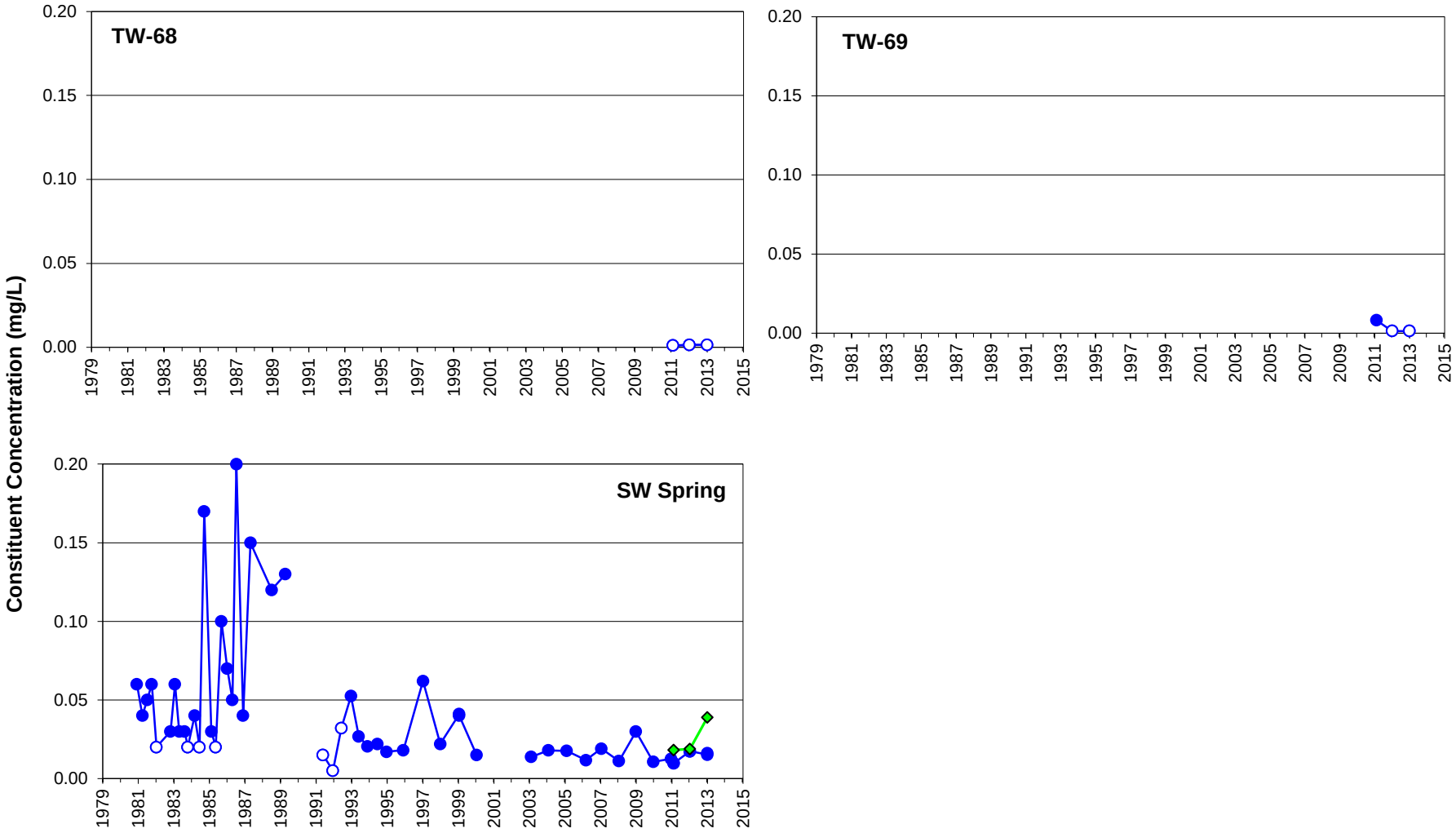
non-detects

FIGURE **C-21**

MANGANESE IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-detects
- SW Spring above confluence with Soda Creek

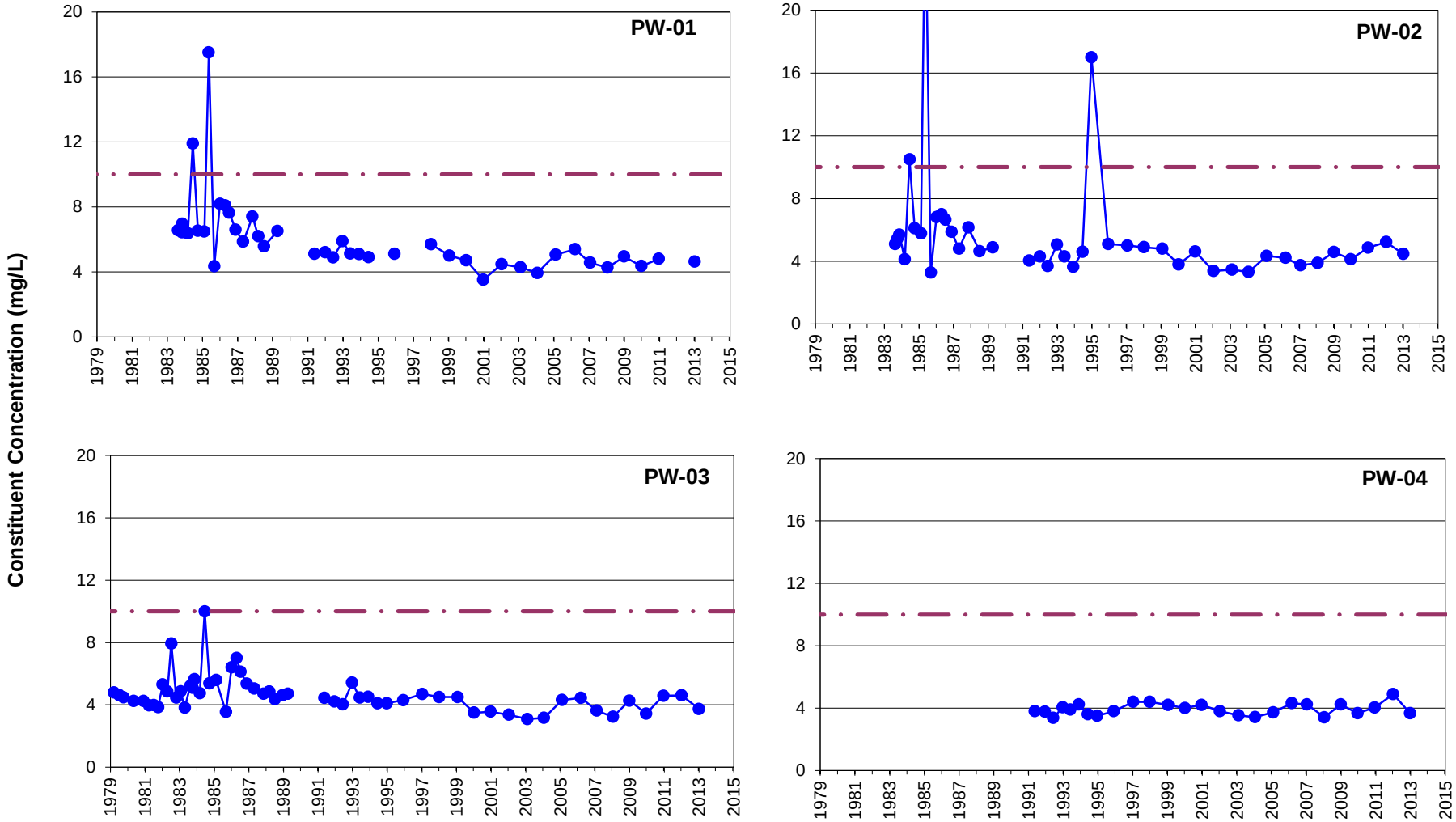
FIGURE **C-22**

MANGANESE IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX D
TIME-HISTORY GRAPHS FOR NITRATE AS N



Remediation goals shown for point of compliance locations only

LEGEND

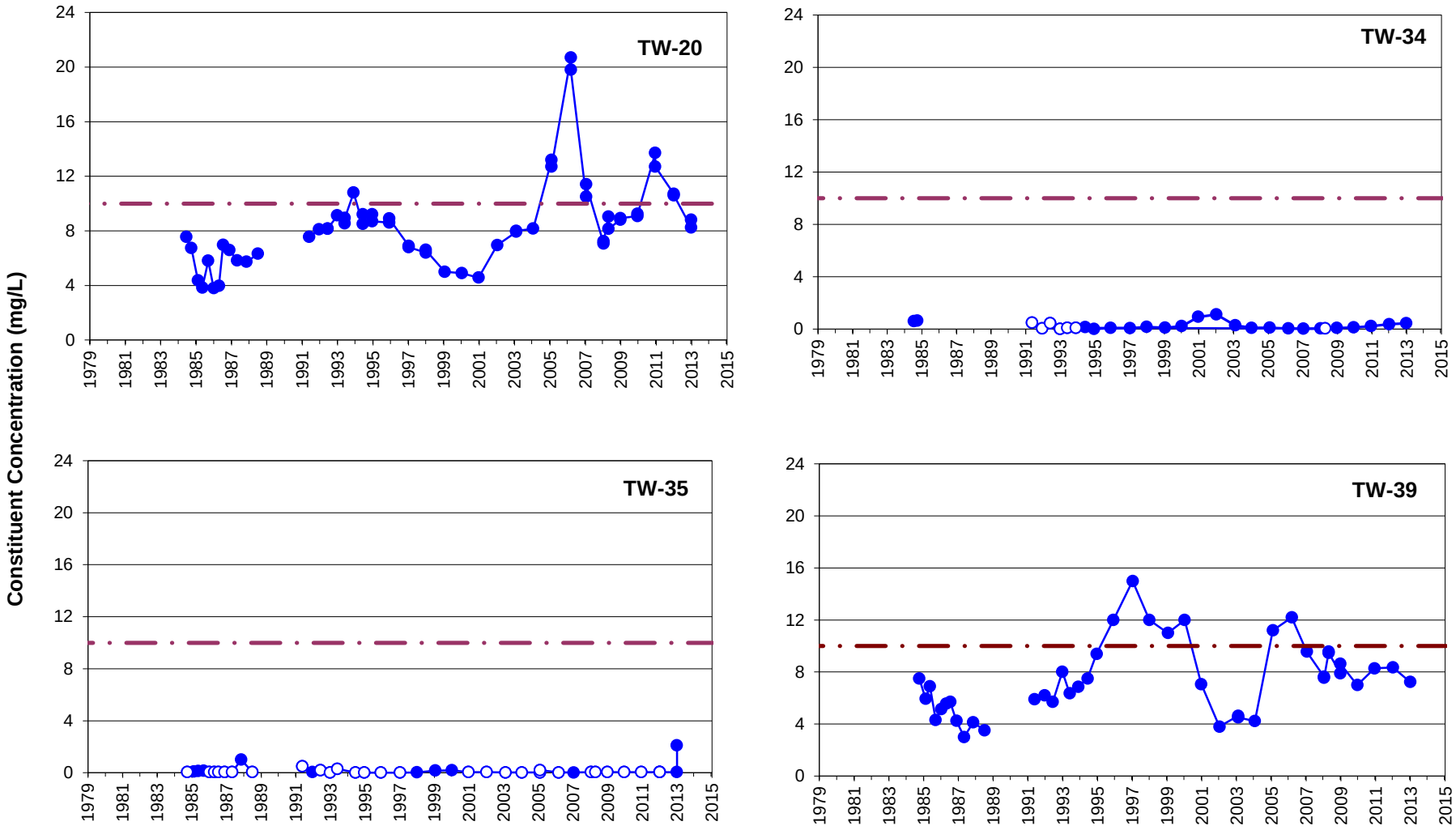
- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)

FIGURE **D-1**

NITRATE AS N IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

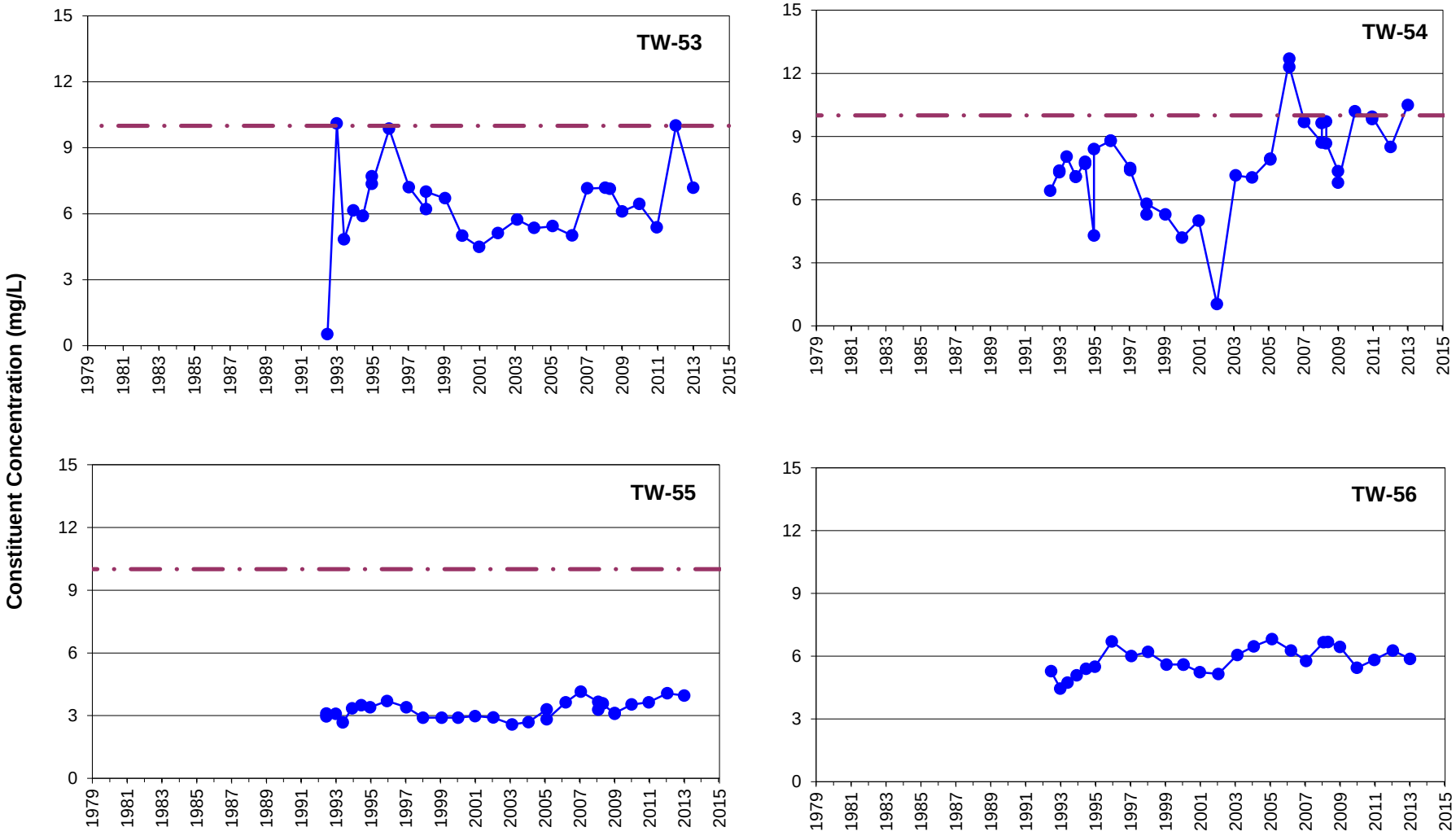
- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)

FIGURE **D-2**

NITRATE AS N IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

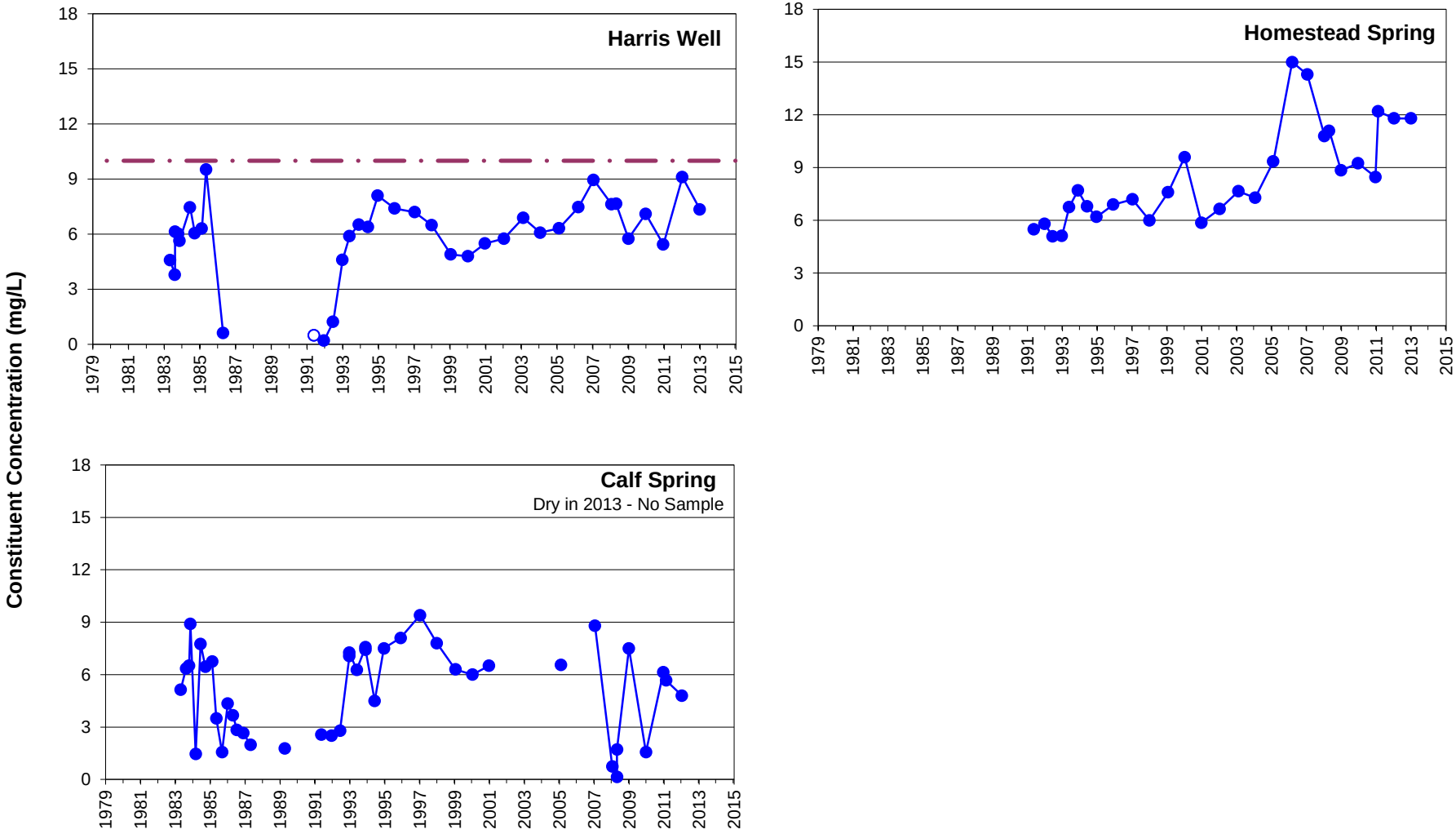
- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)

FIGURE **D-3**

NITRATE AS N IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

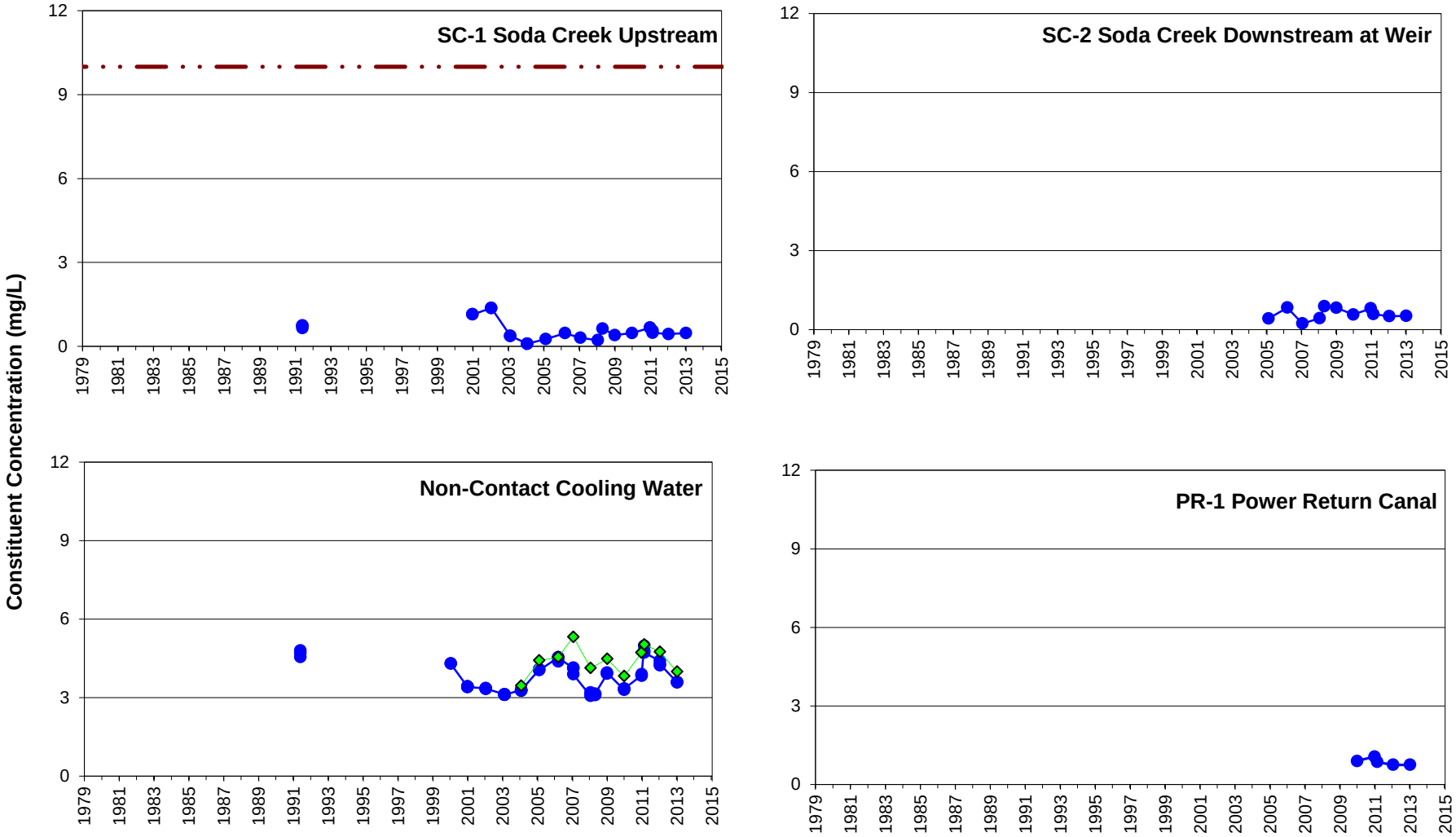
- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)

FIGURE **D-4**

NITRATE AS N IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

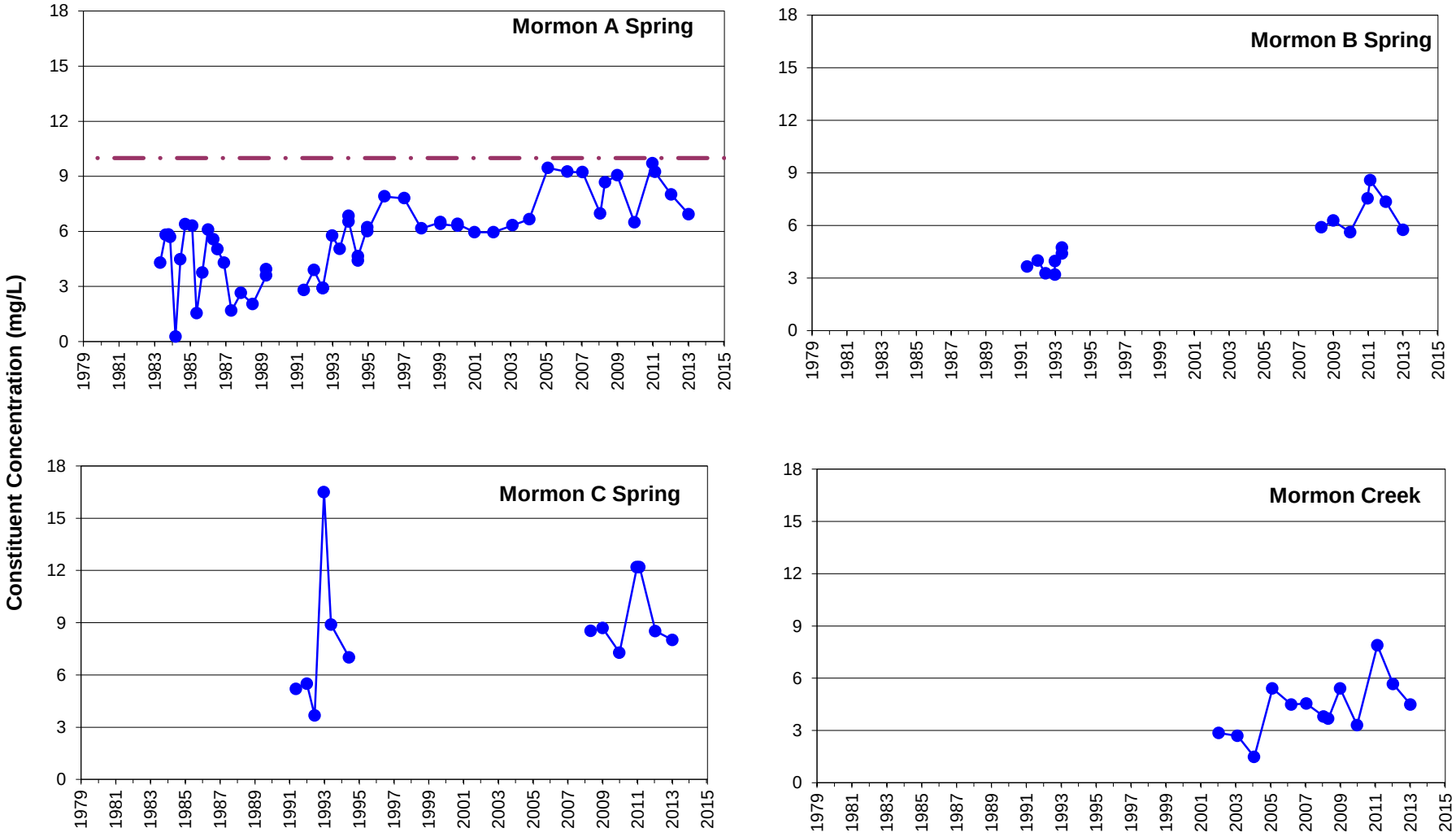
- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)
- Pond Inlet

FIGURE **D-5**

NITRATE AS N IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

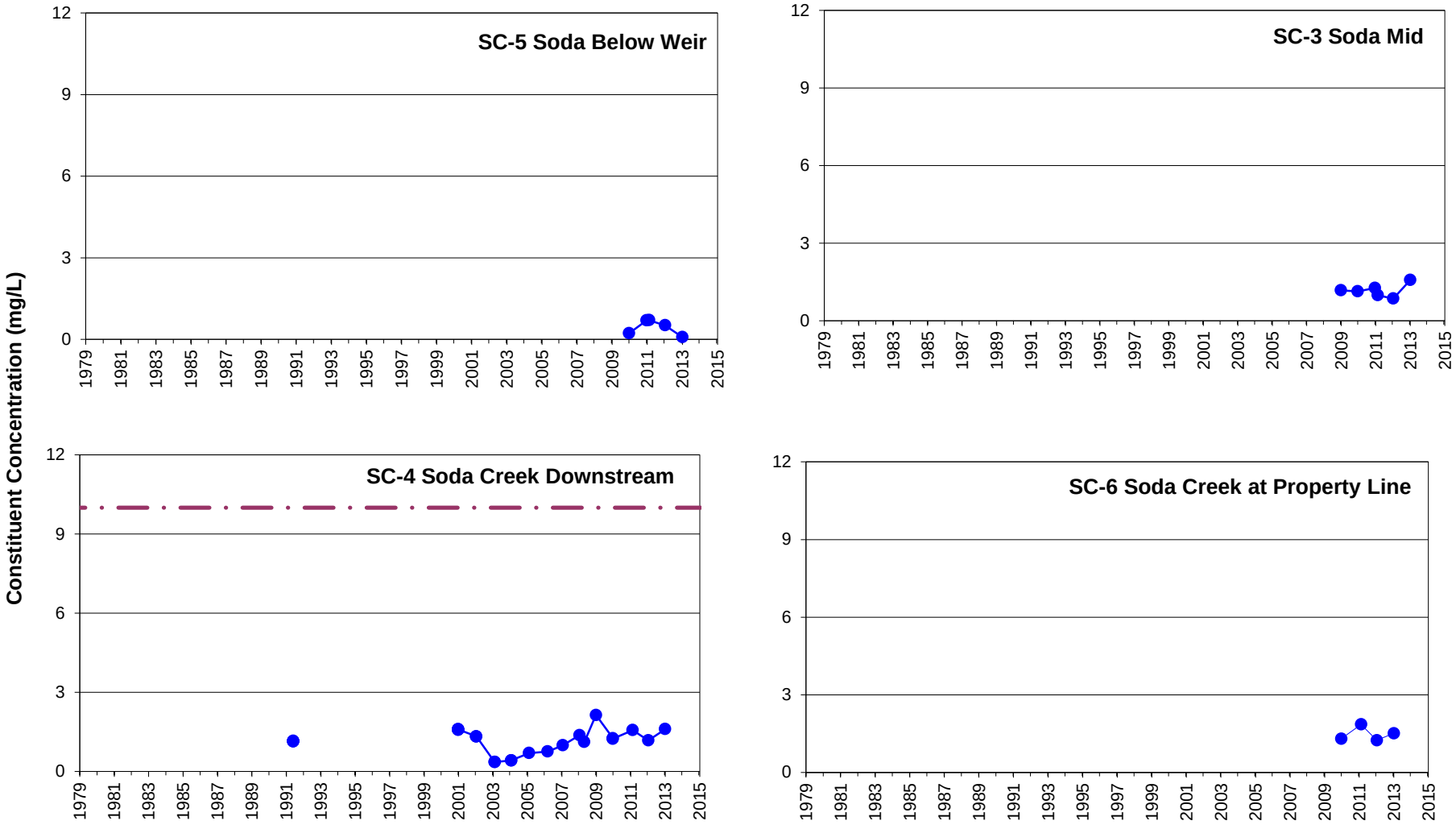
- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)

FIGURE **D-6**

NITRATE AS N IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-Detects
- Nitrate as N Remediation Goal (10 mg/L)

FIGURE **D-7**

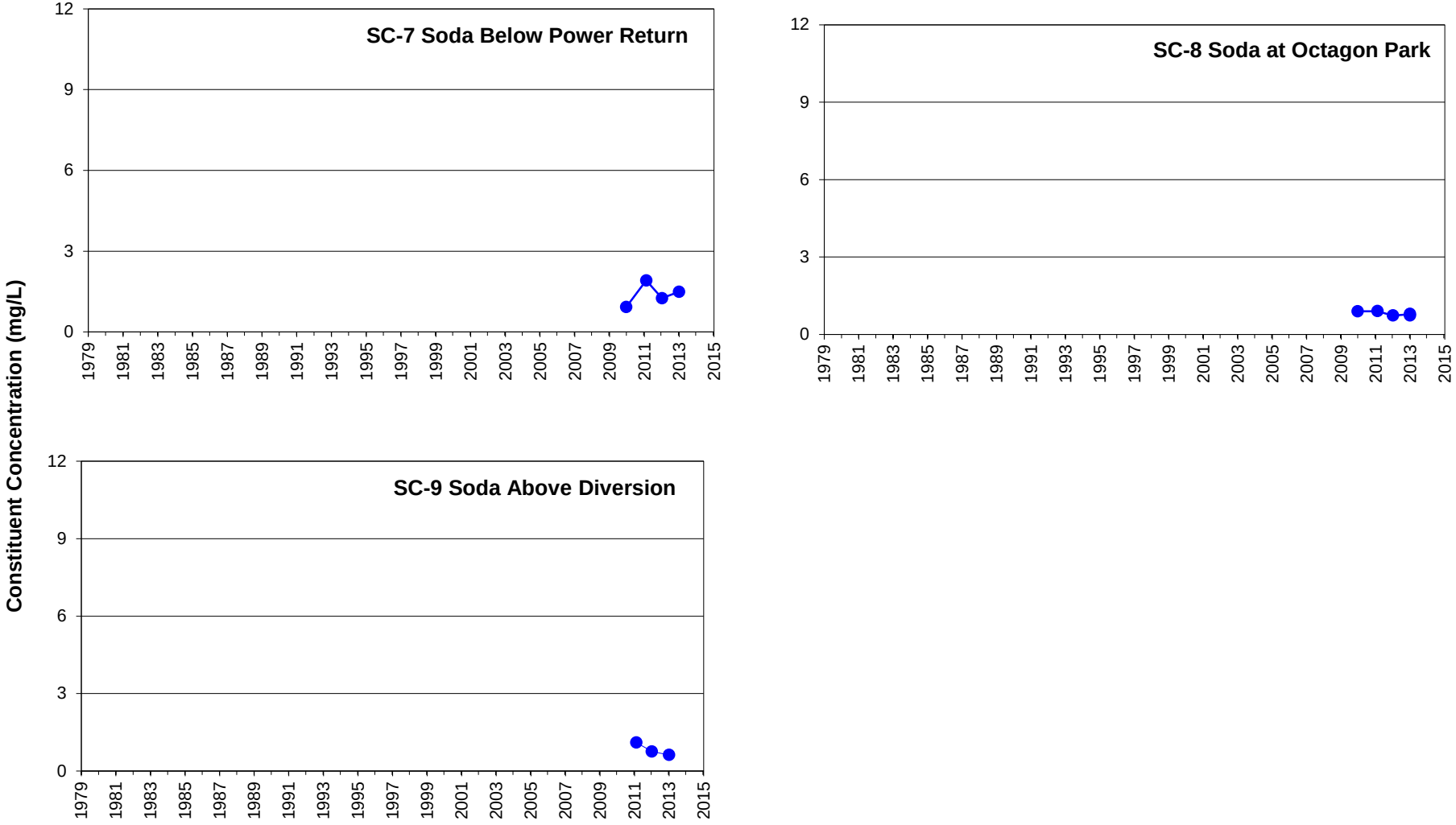
NITRATE AS N IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002

V:\PROJECTS_1991 PROJECTS\913-1101_Monsanto_Banton\Reports\2013 Annual Report\2013 Chemical Hydrographs\App D Nitrates Charts 2013

Golder Associates



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

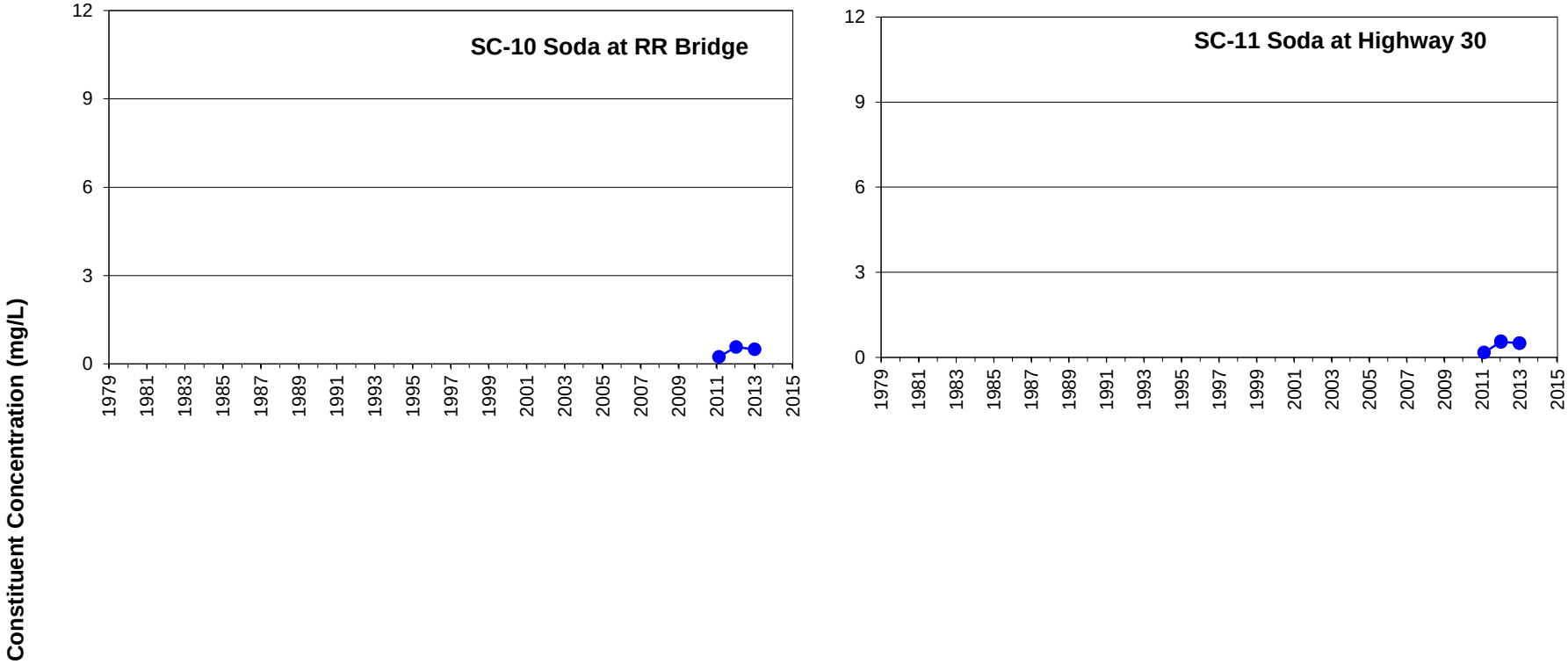
Non-Detects

FIGURE **D-8**

NITRATE AS N IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

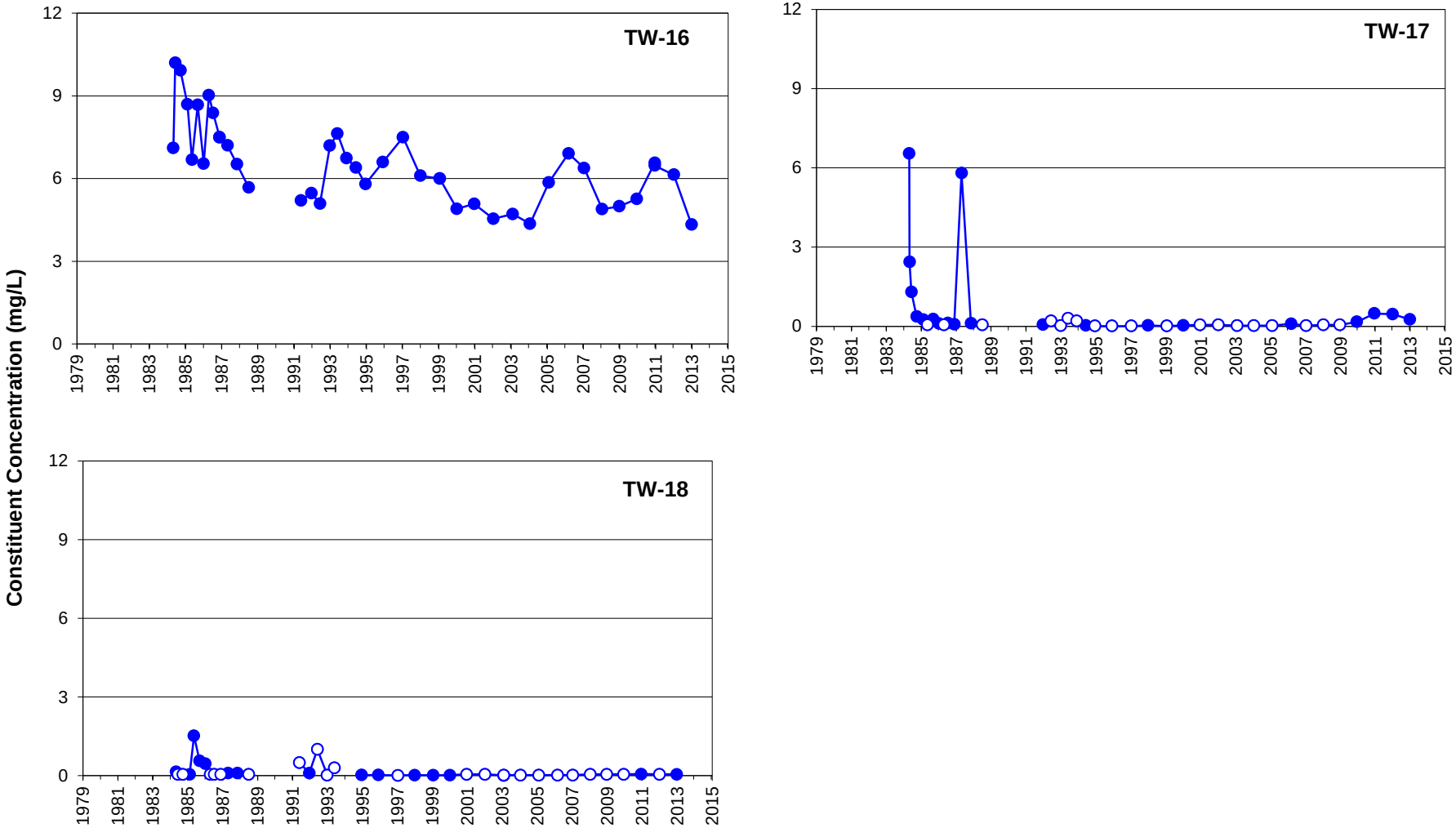
Non-detect

FIGURE **D-9**

NITRATE AS N IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

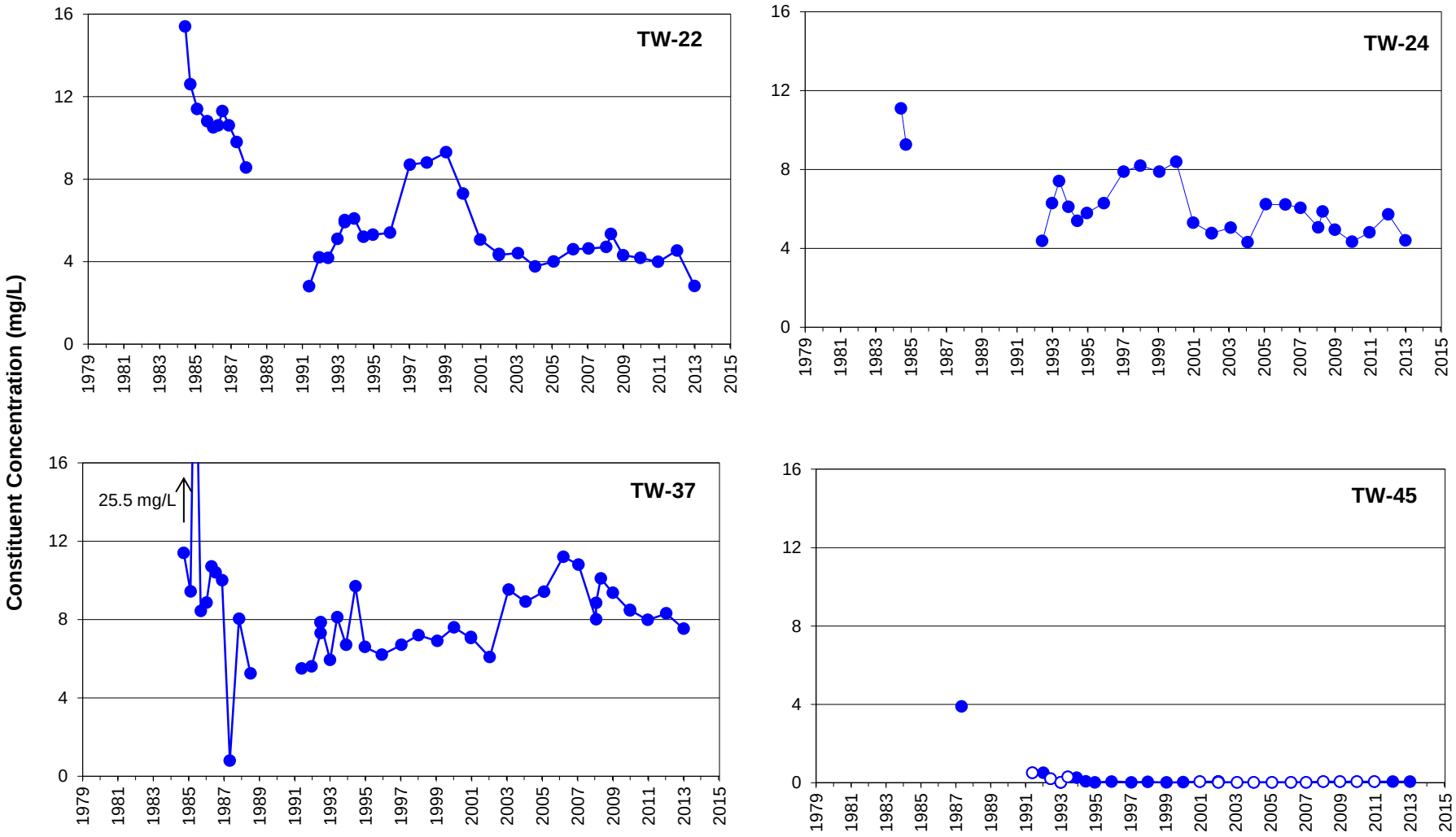
Non-Detects

FIGURE **D-10**

NITRATE AS N IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

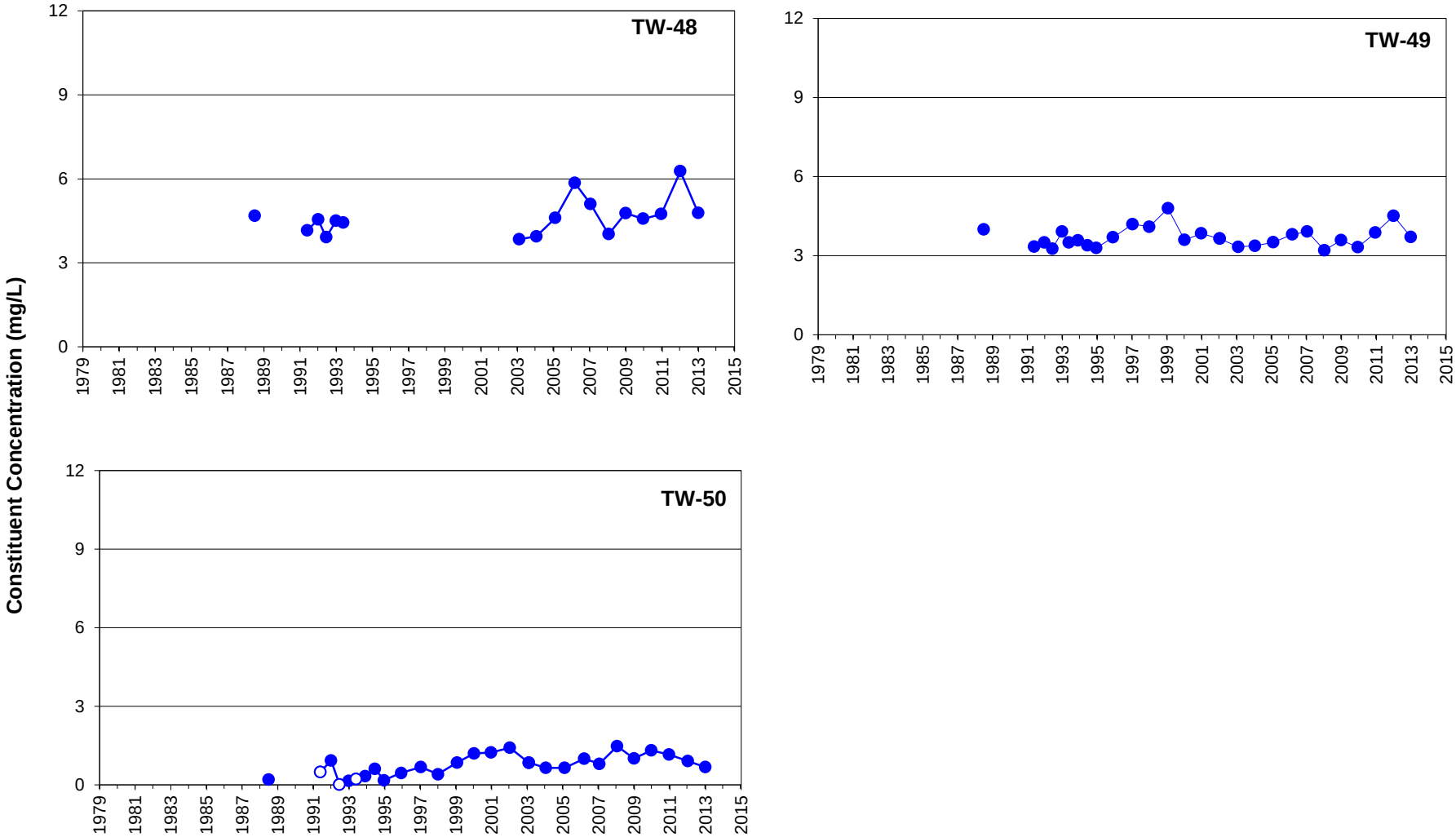
Non-Detects

FIGURE **D-11**

NITRATE AS N IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

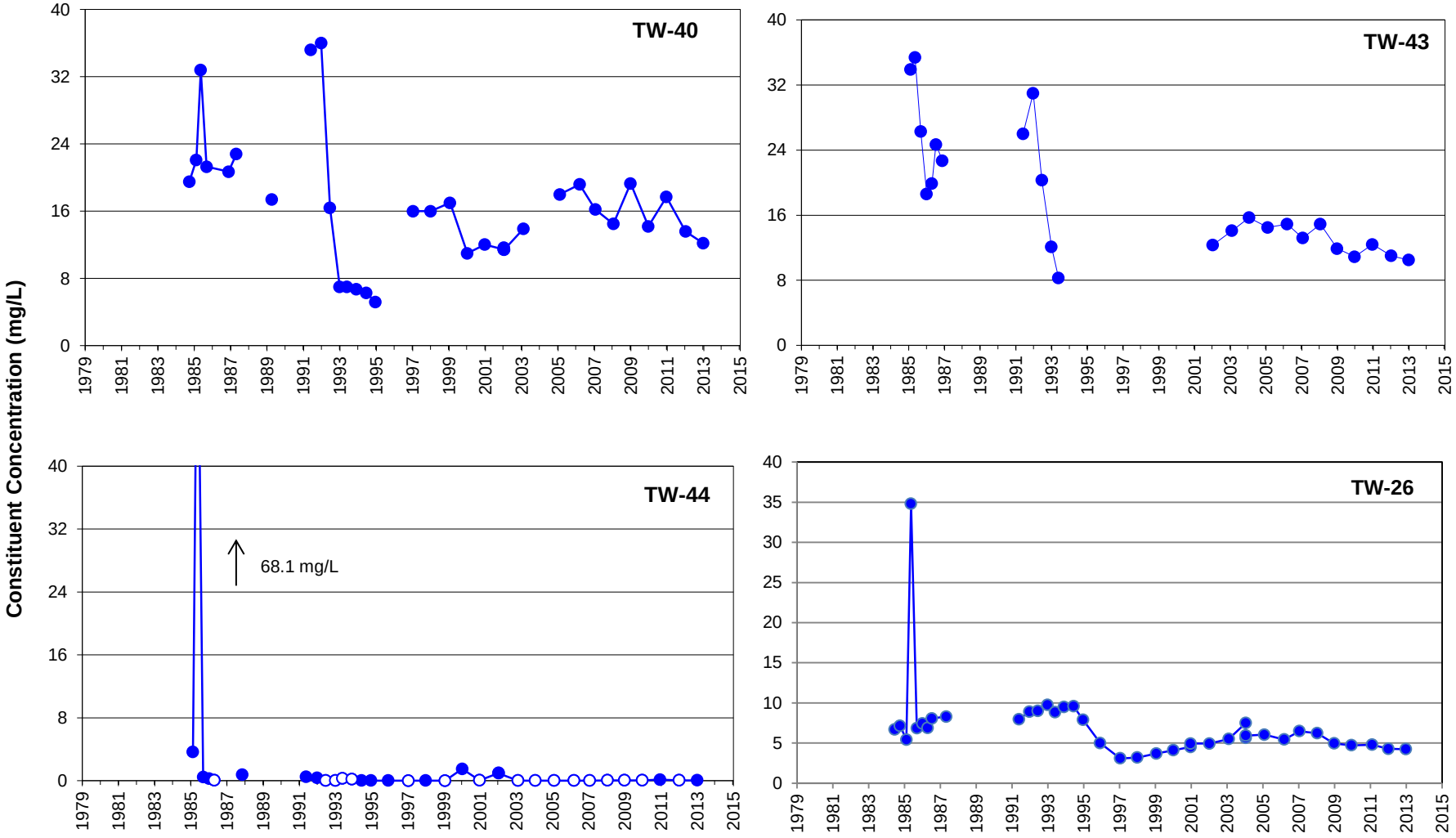
Non-Detects

FIGURE **D-12**

NITRATE AS N IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

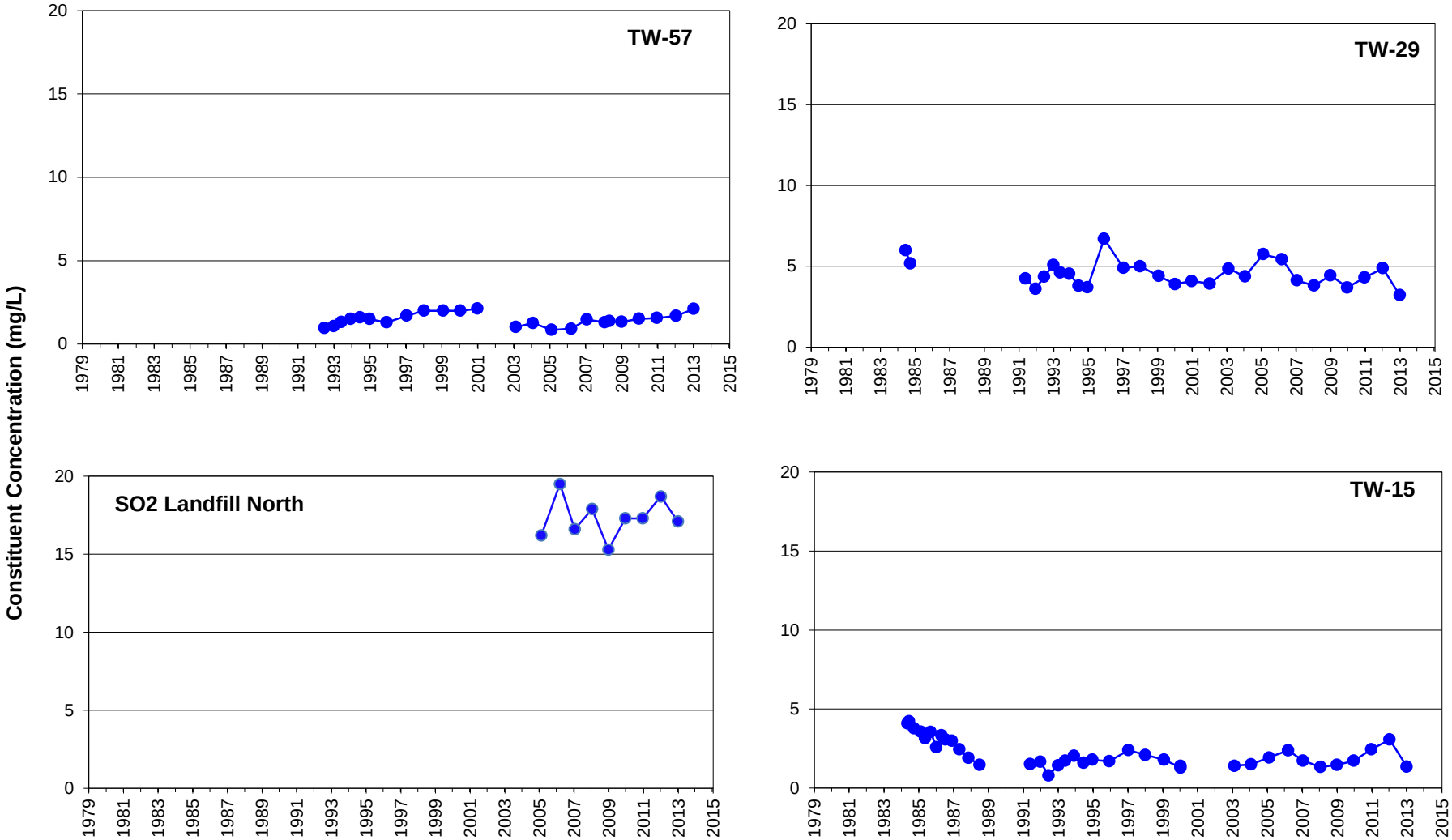
Non-Detects

FIGURE **D-13**

NITRATE AS N IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

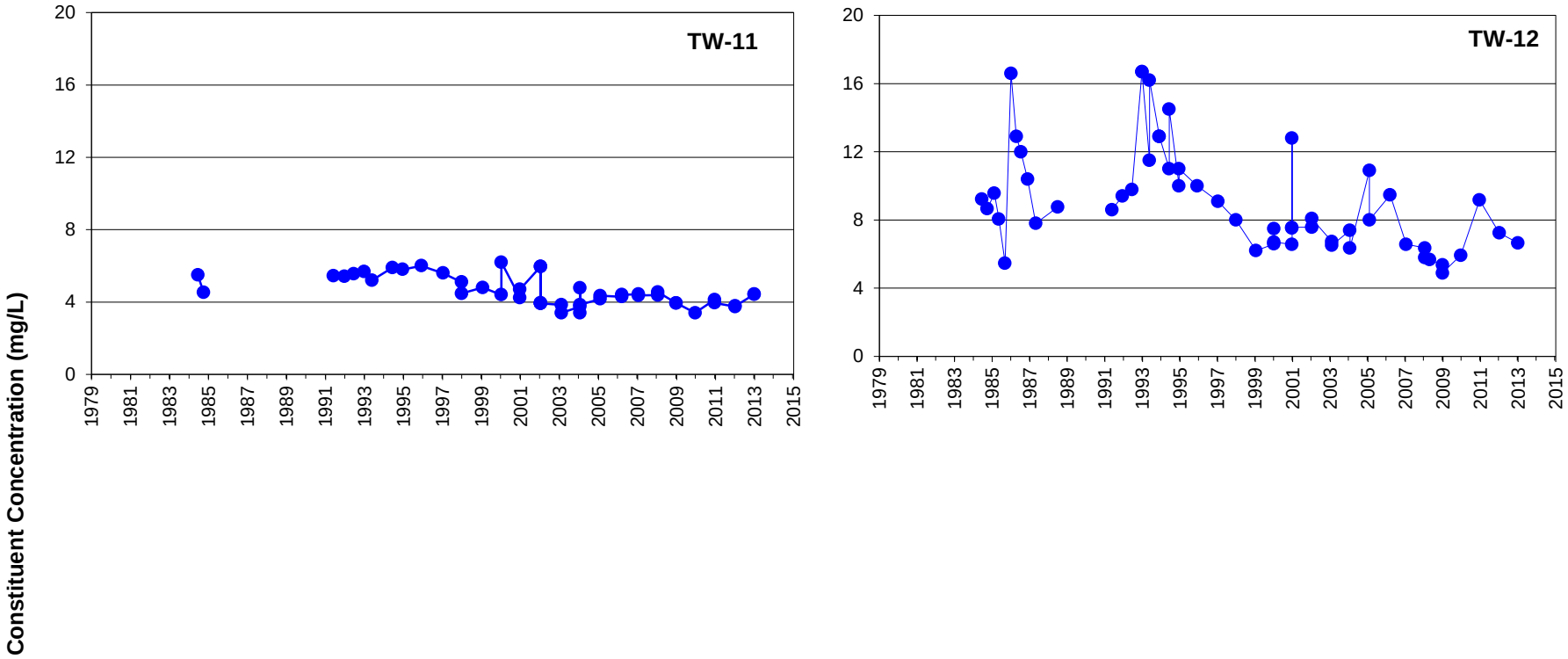
Non-Detects

FIGURE **D-14**

NITRATE AS N IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

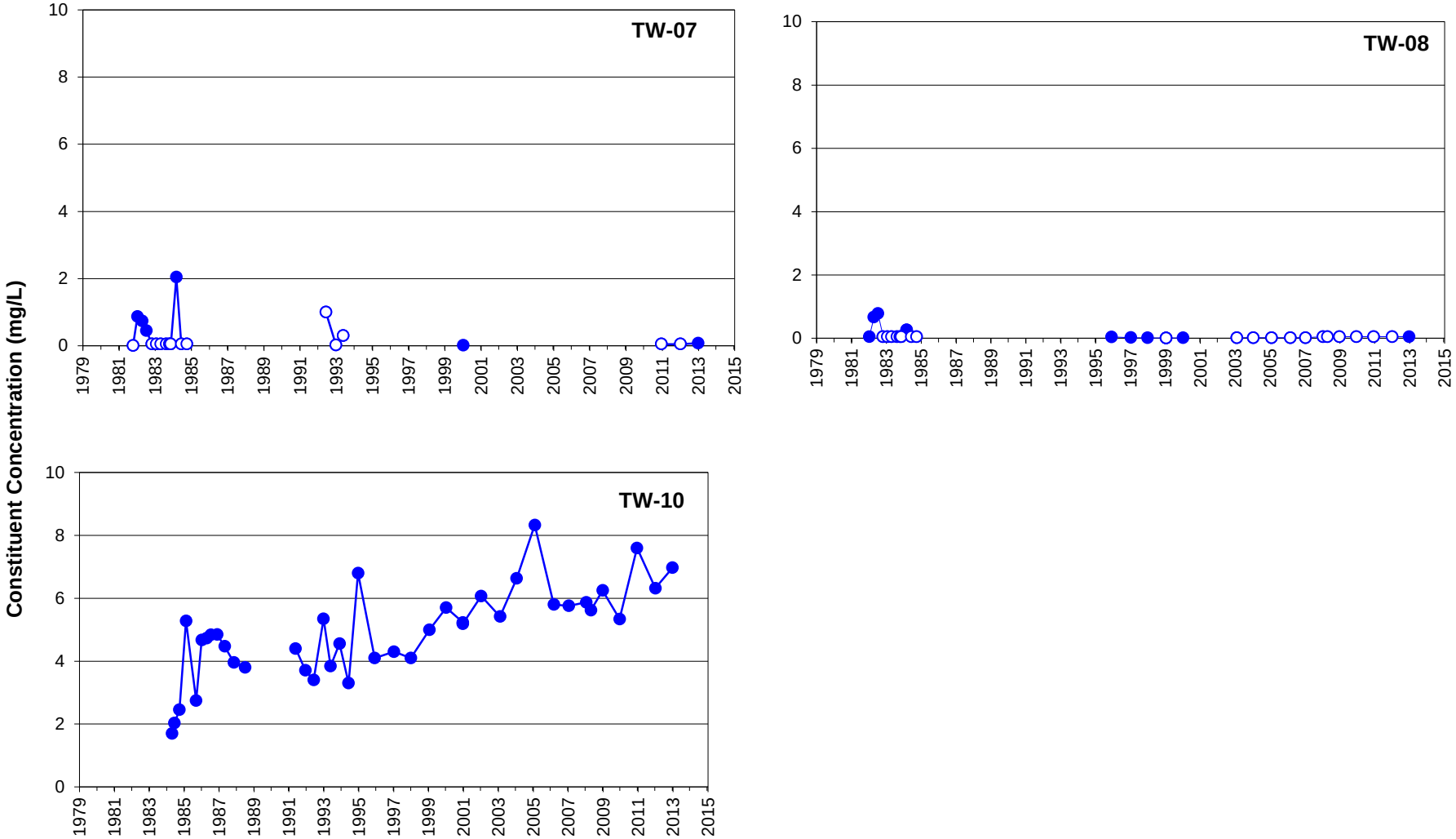
Non-Detects

FIGURE **D-15**

NITRATE AS N IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

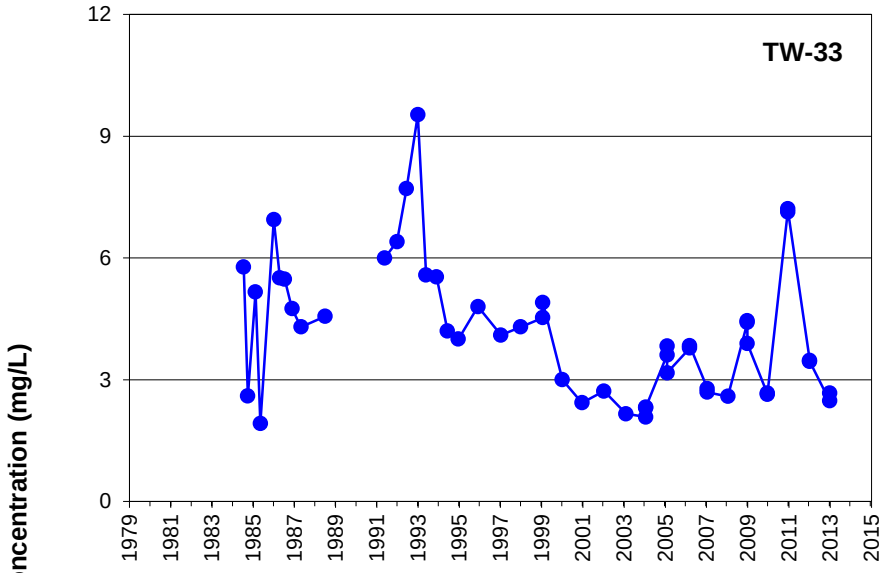
Non-Detects

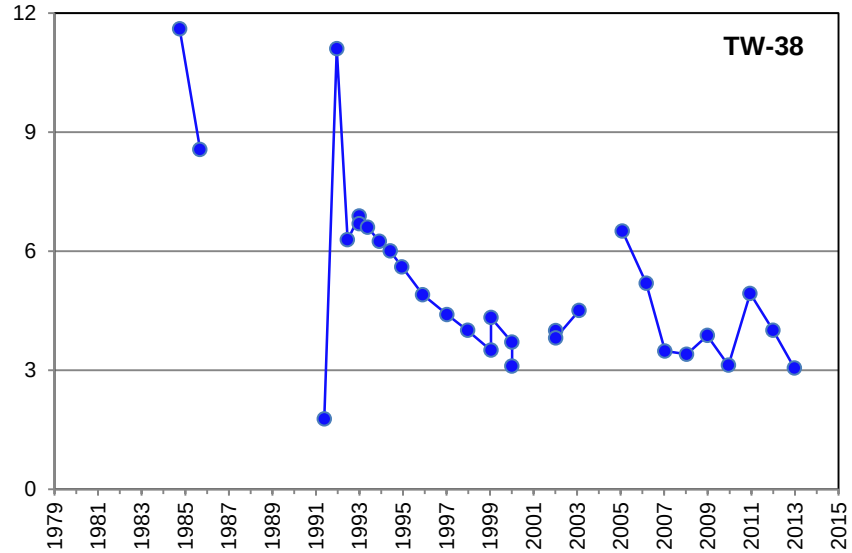
FIGURE **D-16**

NITRATE AS N IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002





Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

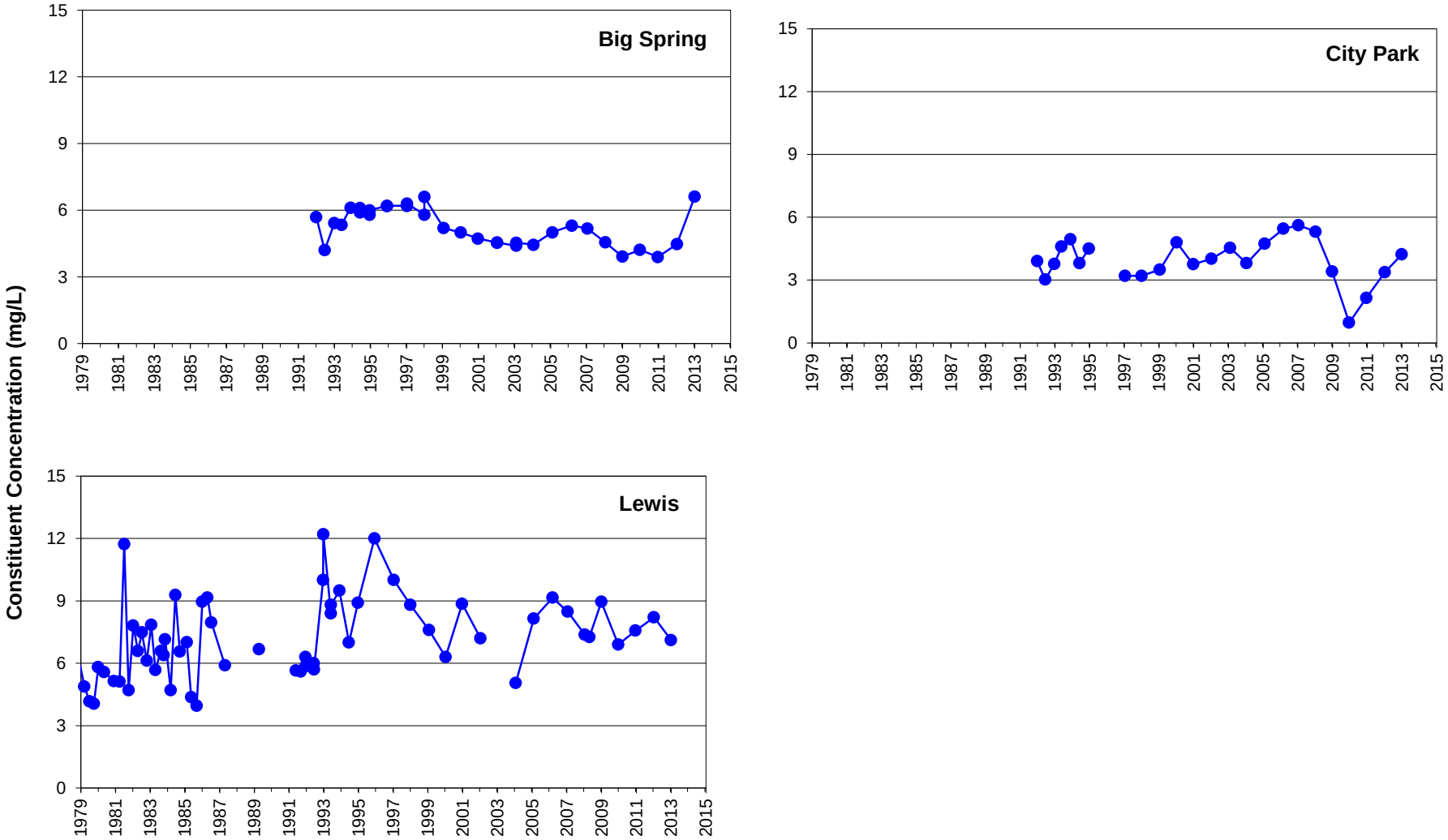
Non-Detects

FIGURE **D-17**

NITRATE AS N IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

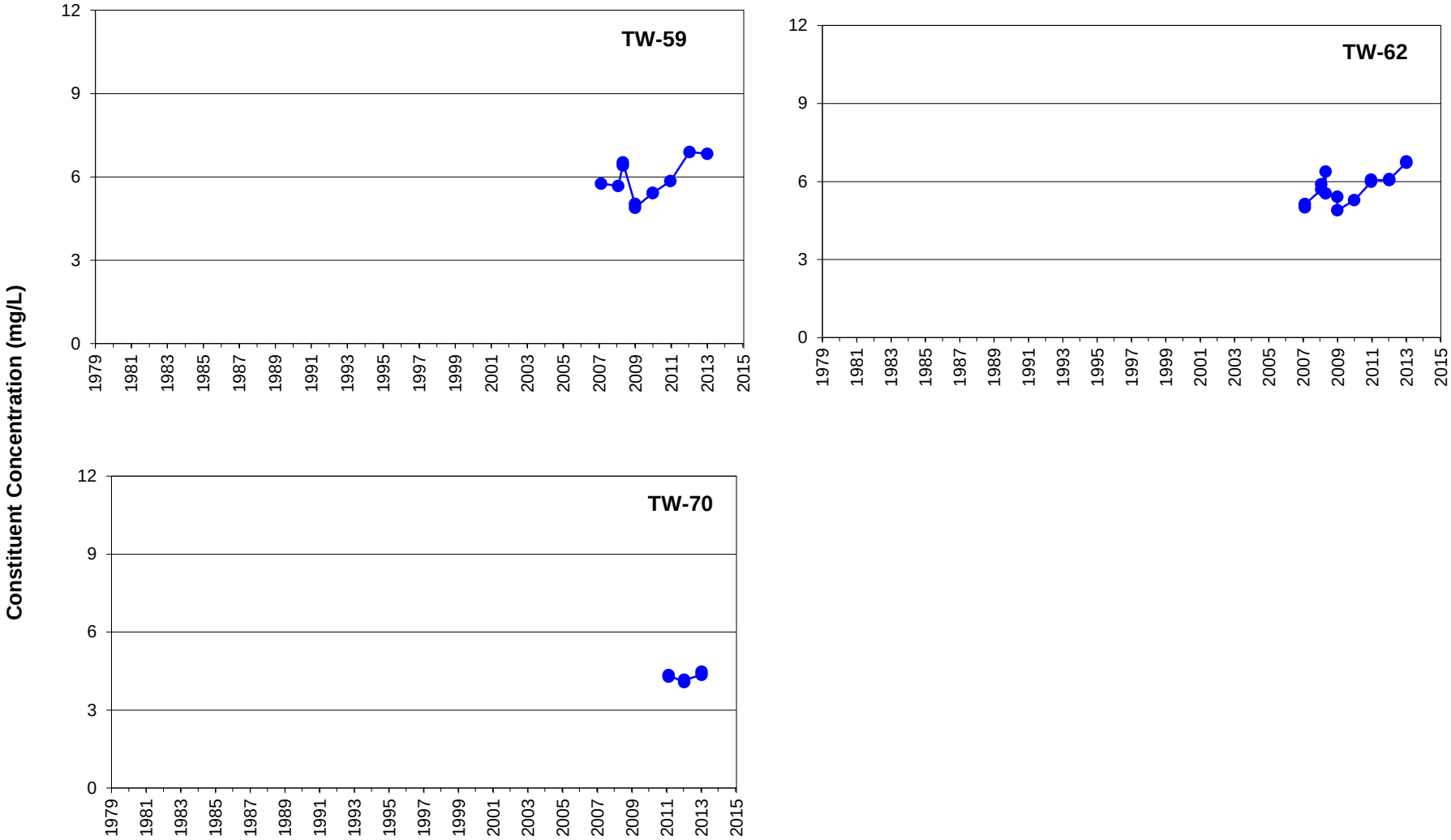
Non-Detects

FIGURE **D-18**

NITRATE AS N IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

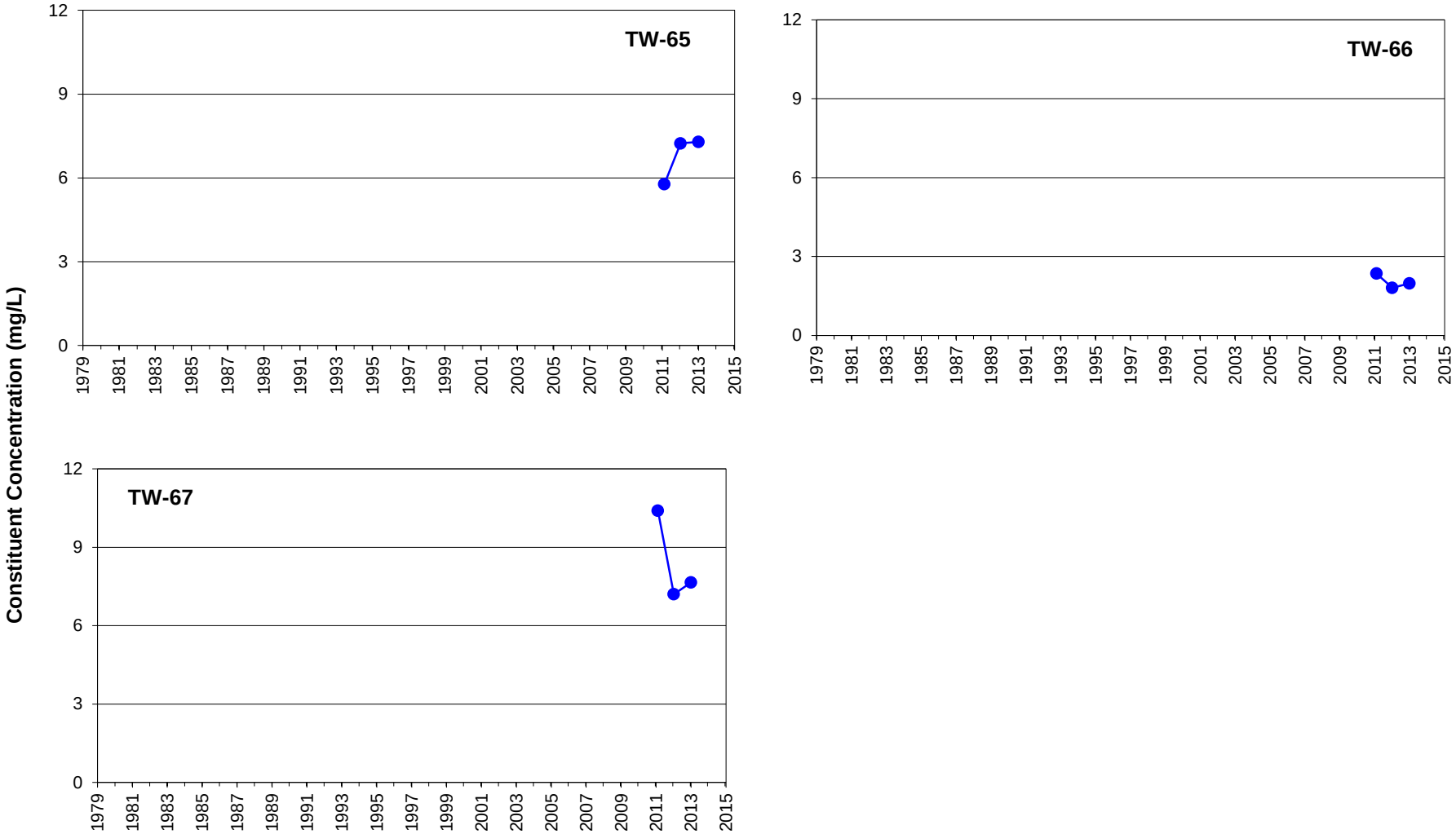
non-detects

FIGURE **D-19**

NITRATE AS N IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

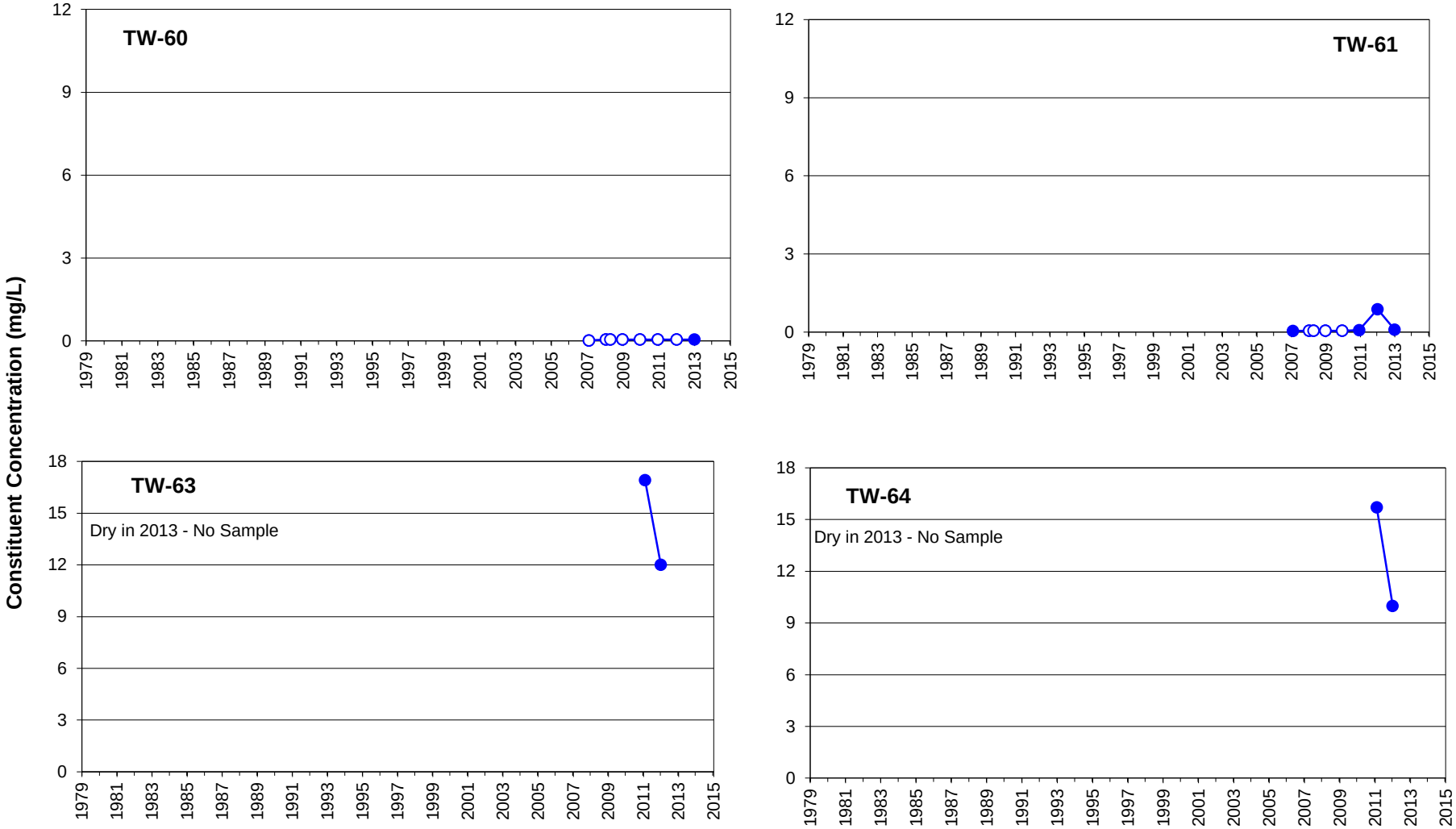
non-detects

FIGURE **D-20**

NITRATE AS N IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

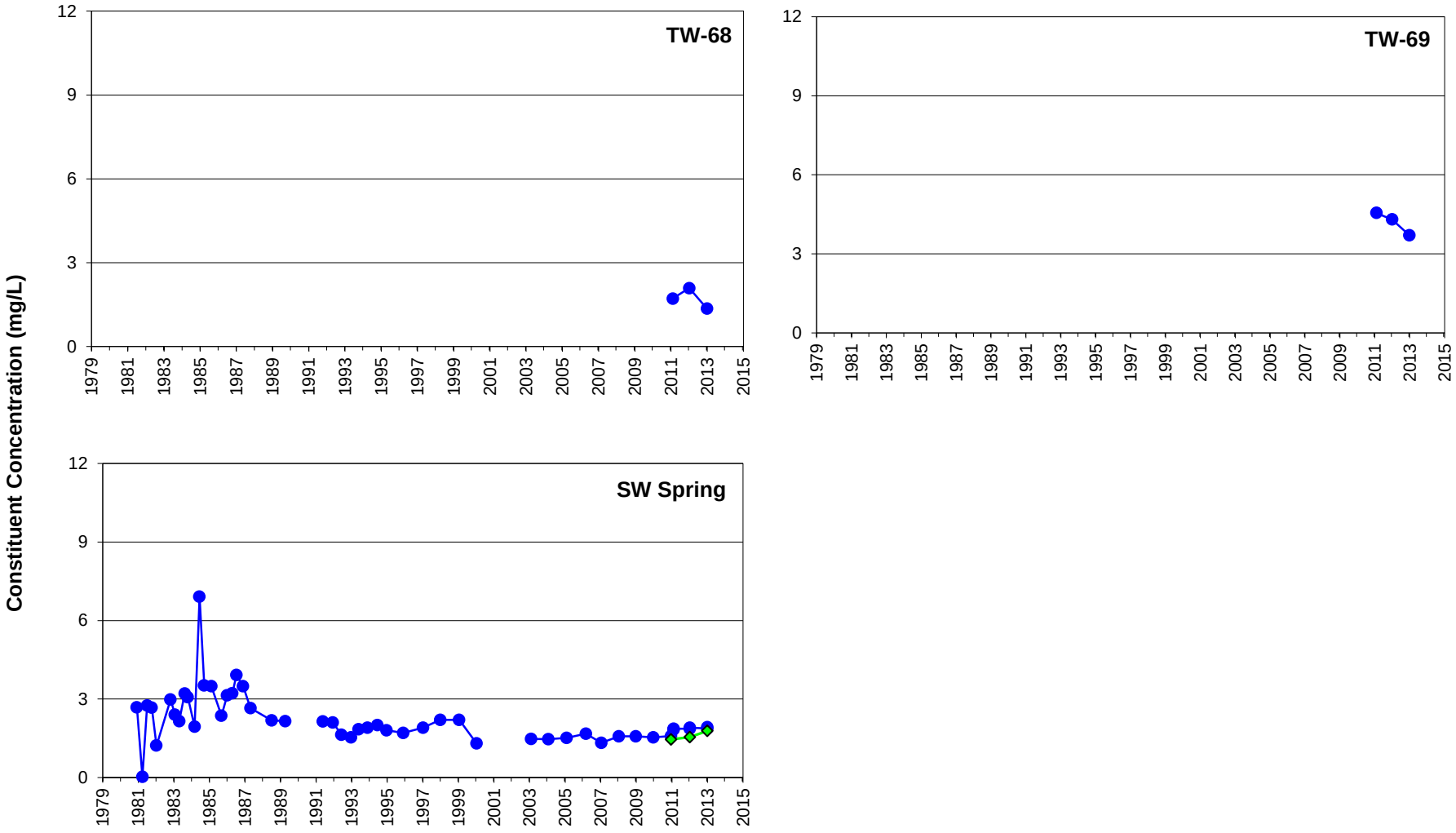
non-detects

FIGURE **D-21**

NITRATE AS N IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-detects
- SW Spring above confluence with Soda Creek

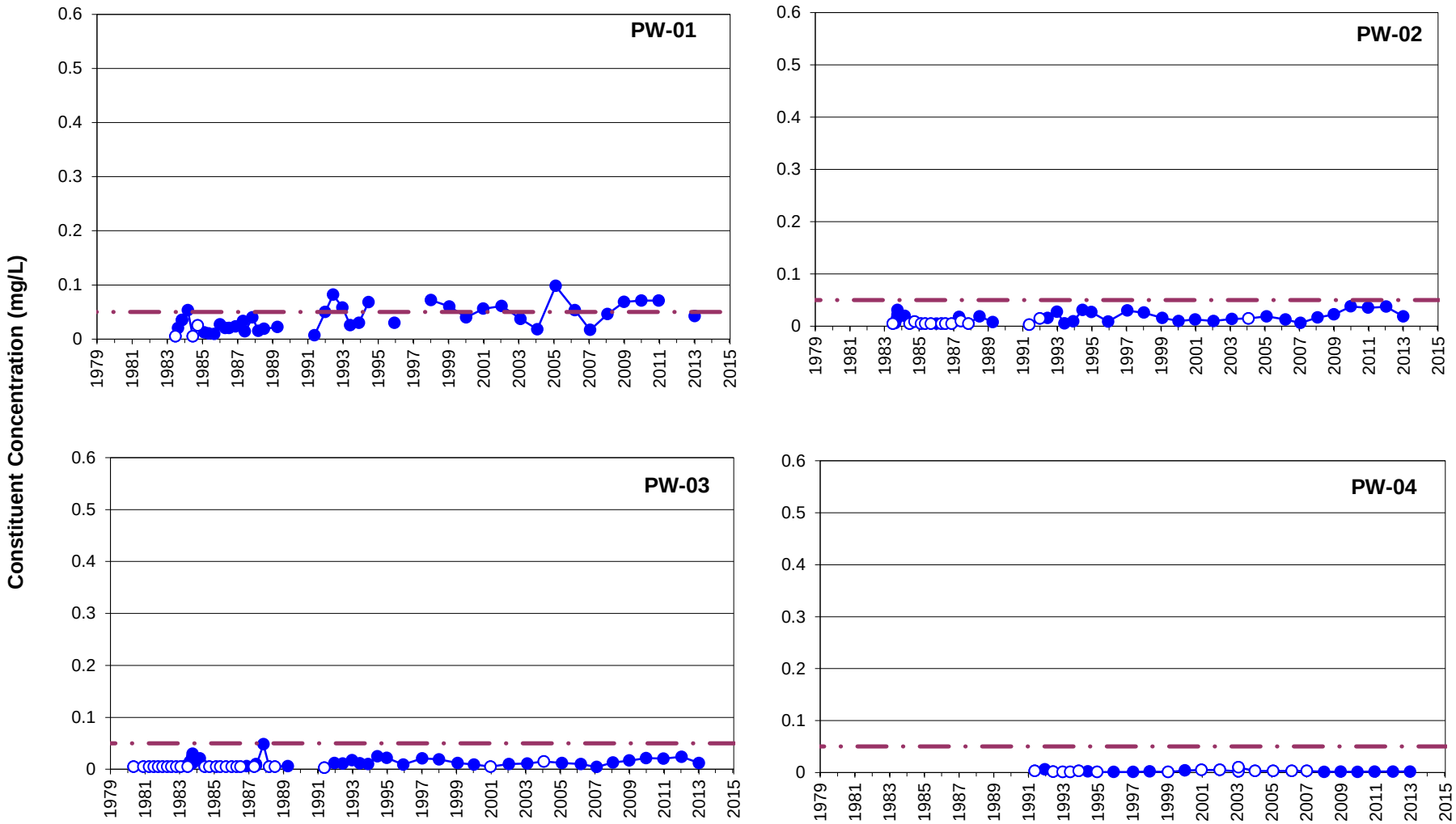
FIGURE **D-22**

NITRATE AS N IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX E
TIME-HISTORY GRAPHS FOR SELENIUM



Remediation goals shown for point of compliance locations only

LEGEND

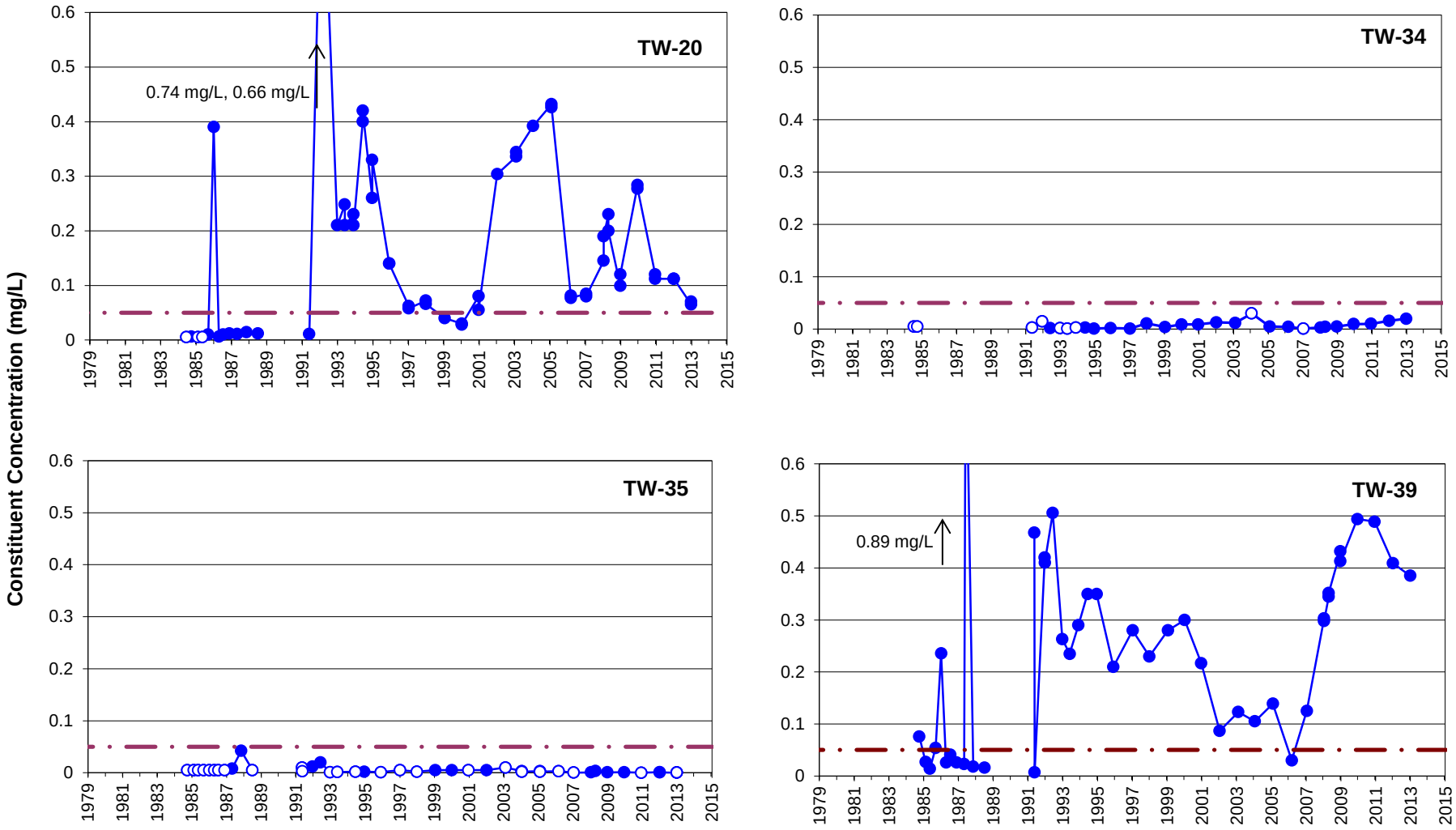
- Constituent Concentration (mg/L)
- Non-Detects
- Selenium Remediation Goal (0.05 mg/L)

FIGURE **E-1**

SELENIUM IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

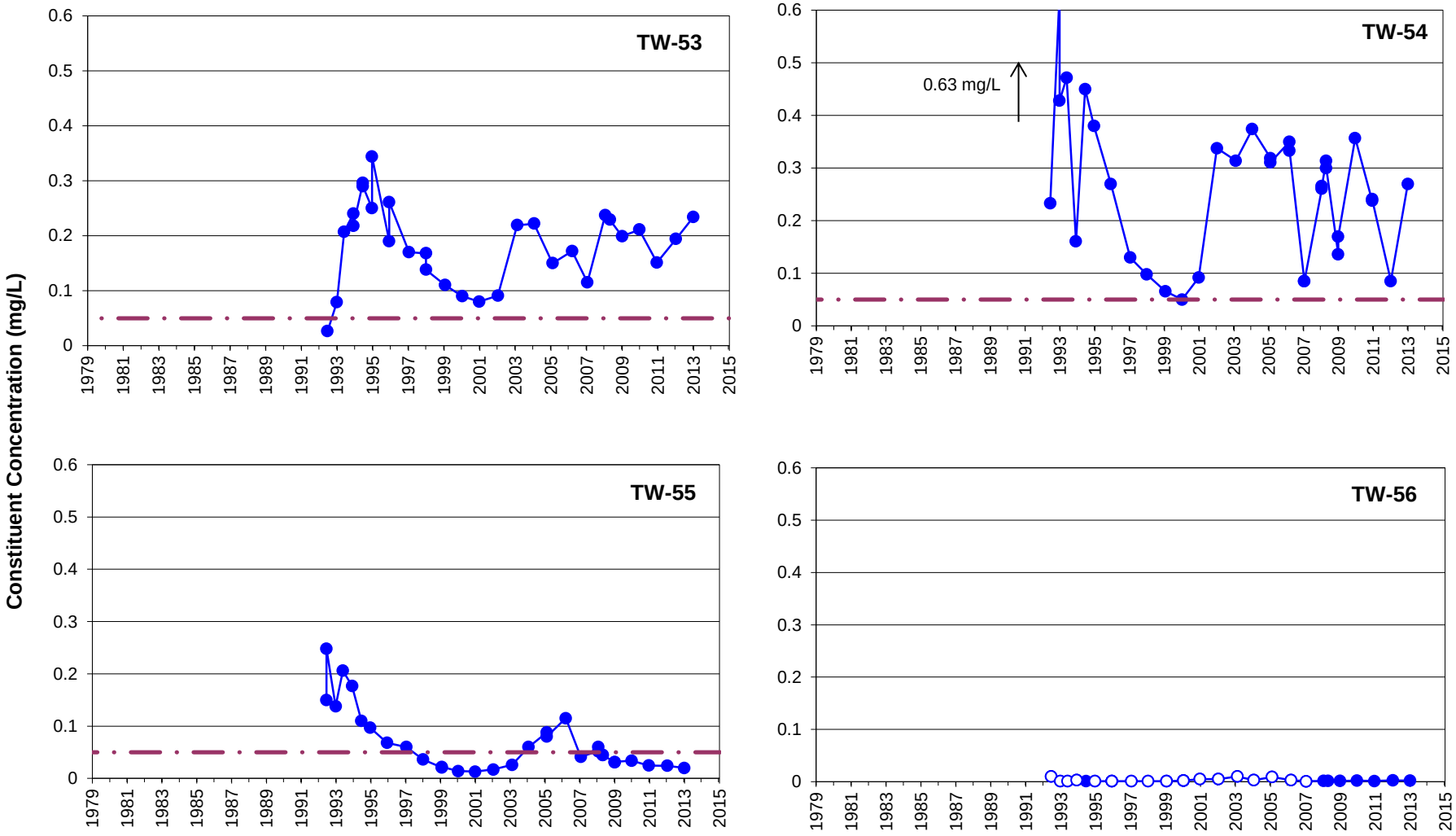
- Constituent Concentration (mg/L)
- Non-Detects
- Selenium Remediation Goal (0.05 mg/L)

FIGURE **E-2**

SELENIUM IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

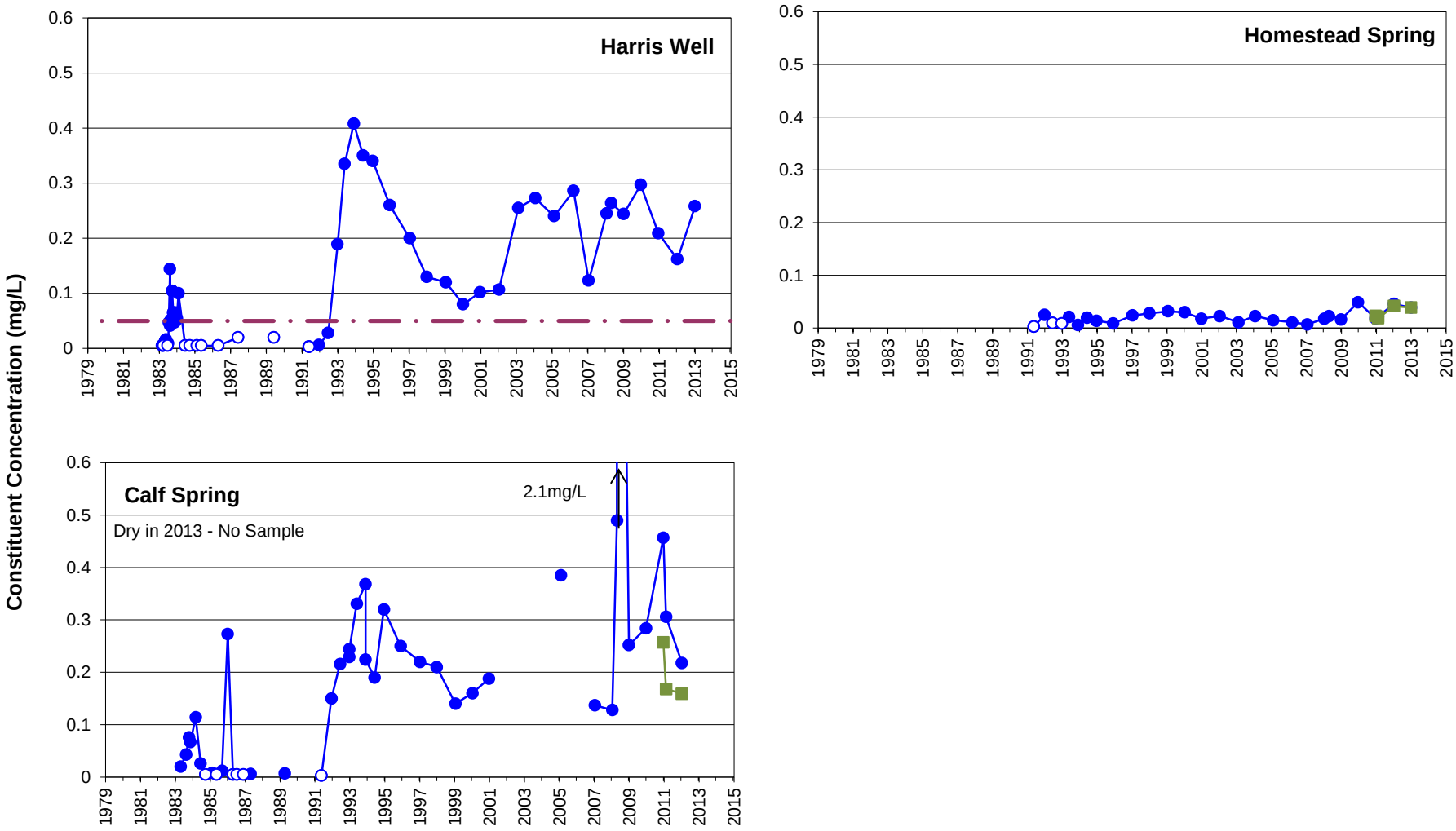
- Constituent Concentration (mg/L)
- Non-Detects
- Selenium Remediation Goal (0.05 mg/L)

FIGURE **E-3**

SELENIUM IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

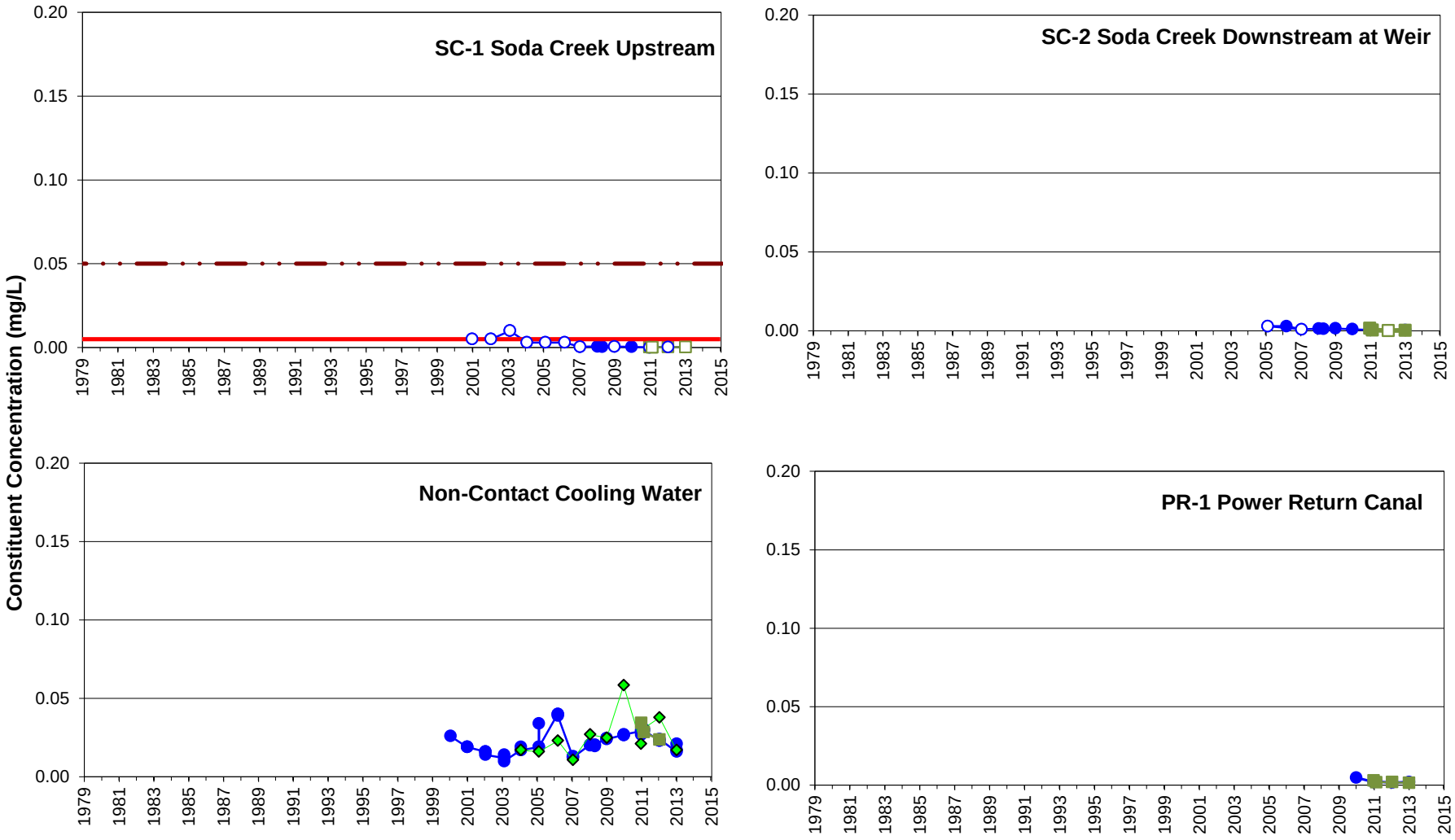
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Selenium Remediation Goal (0.05 mg/L)

FIGURE **E-4**

SELENIUM IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

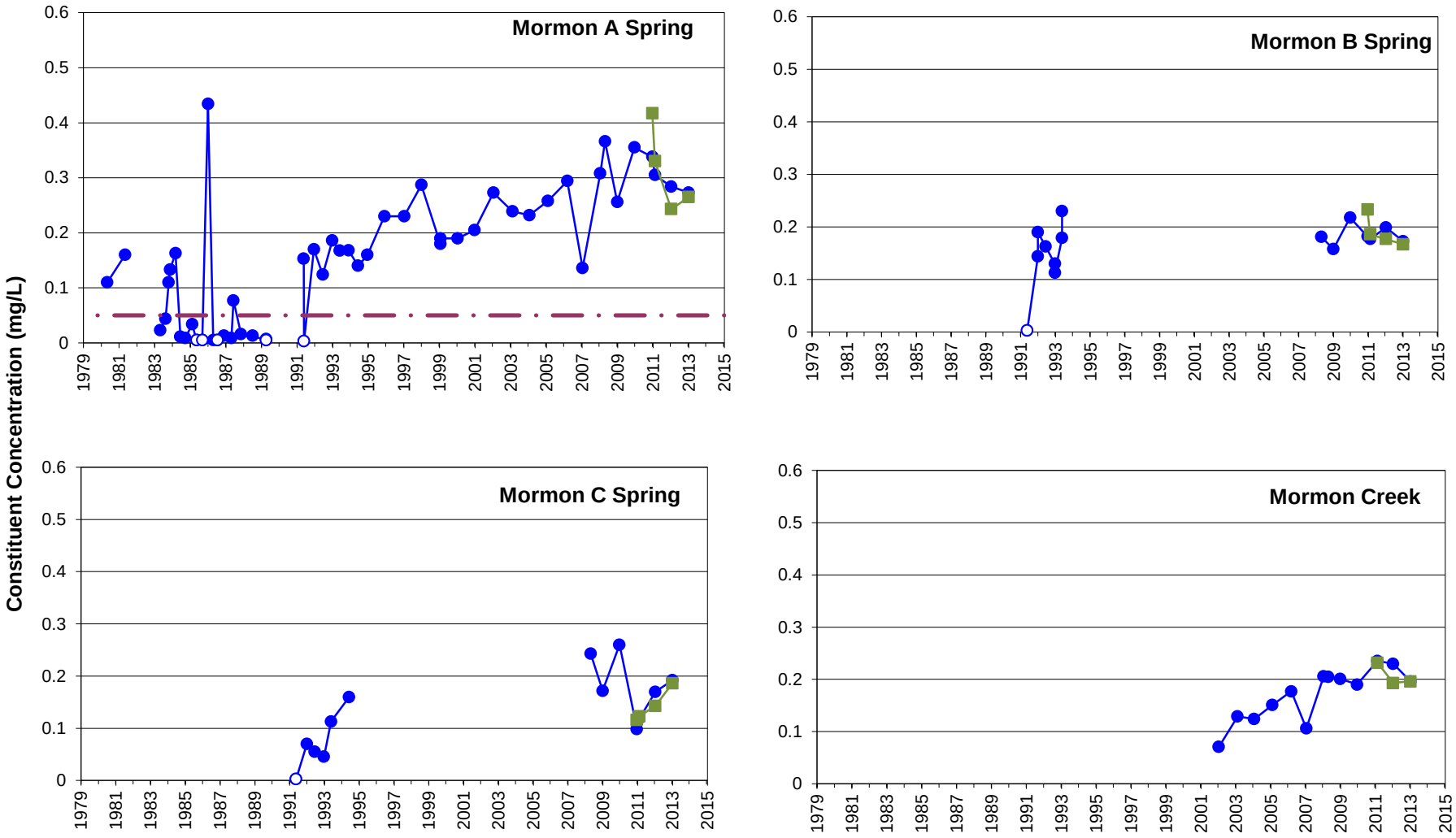
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Selenium Remediation Goal (0.05 mg/L)
- Pond Inlet
- Chronic Selenium Aquatic Standard (0.005 mg/L)

FIGURE **E-5**

SELENIUM IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

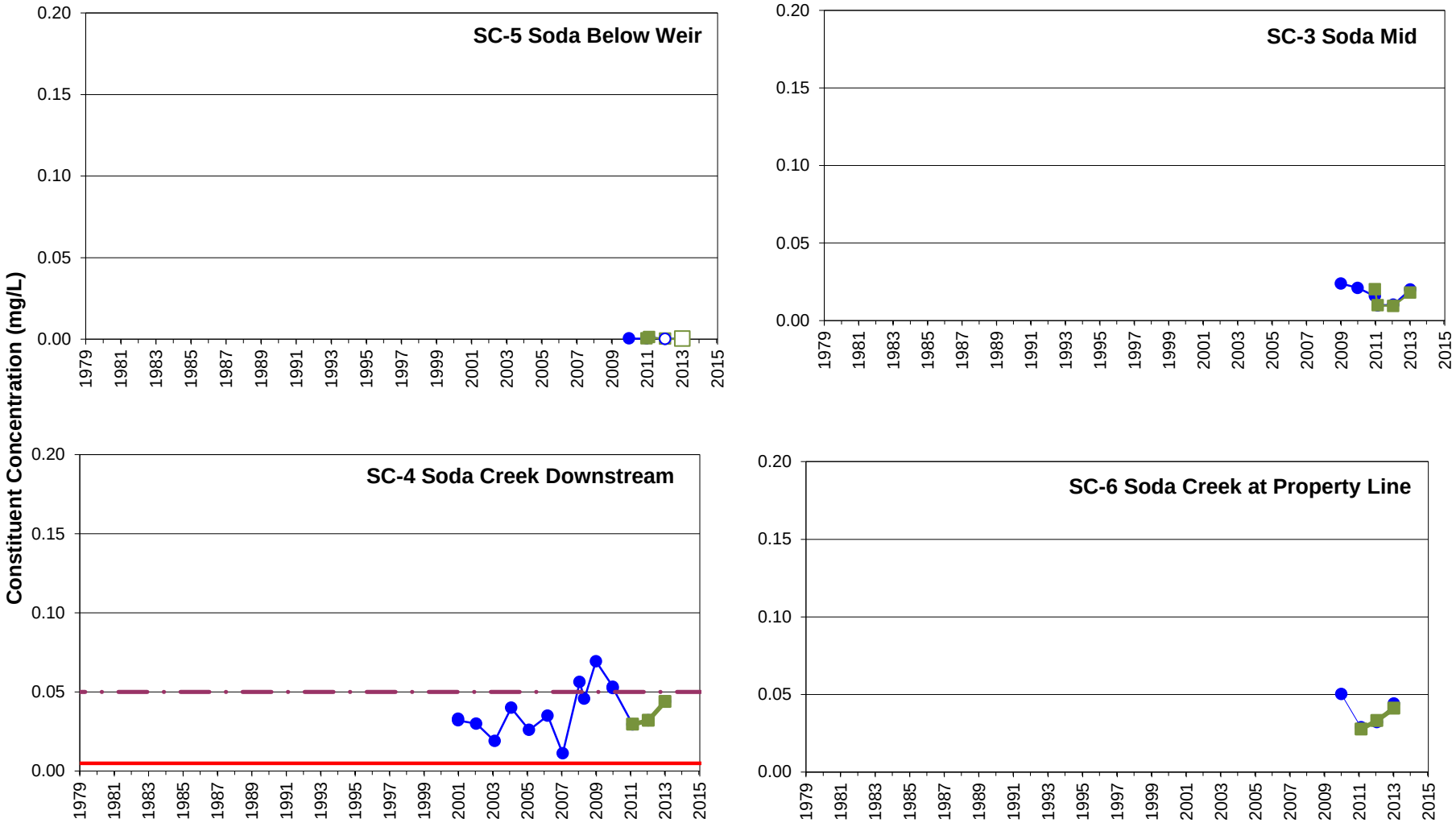
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Selenium Remediation Goal (0.05 mg/L)
- Dissolved Non-Detect (mg/L)

FIGURE **E-6**

SELENIUM IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

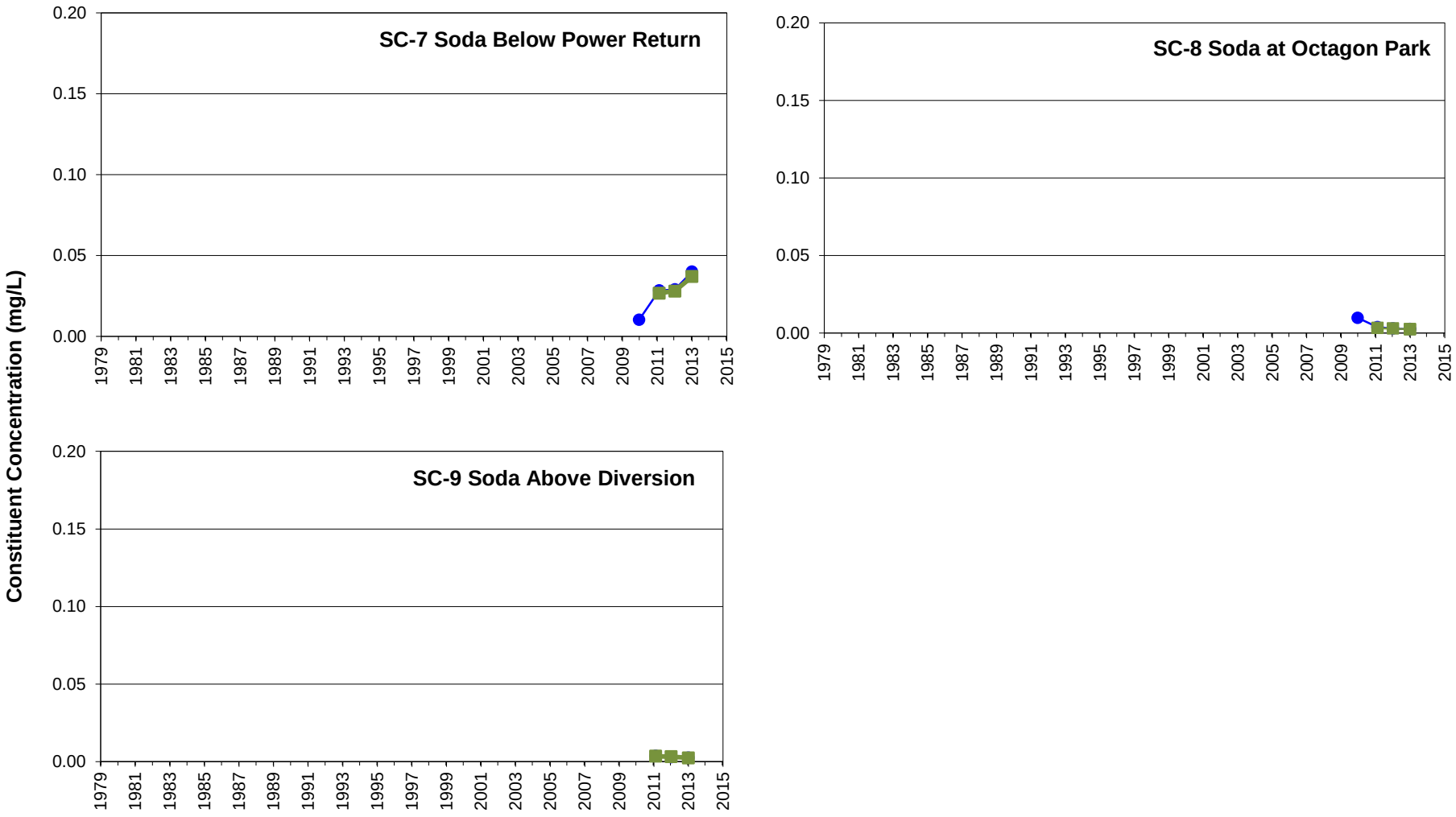
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)

FIGURE **E-7**

SELENIUM IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

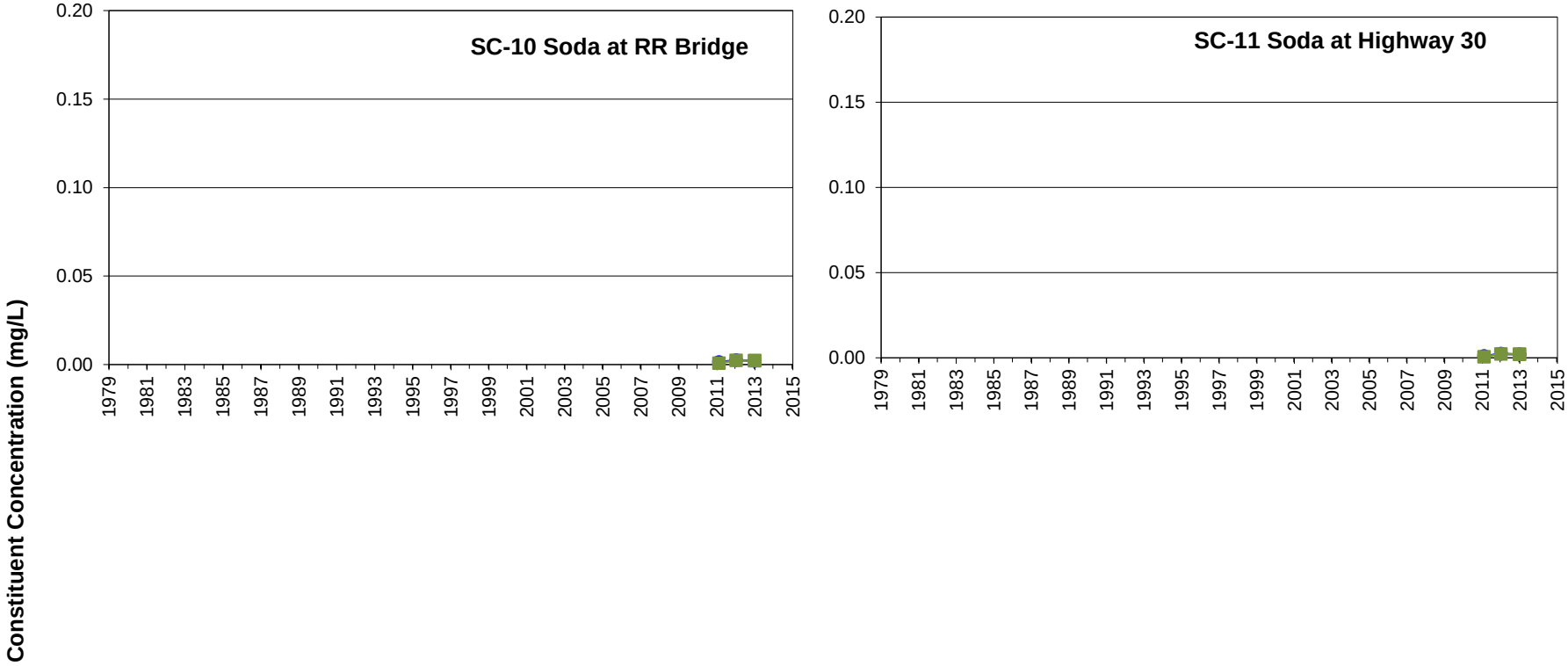
- Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Constituent Concentration (mg/L)

FIGURE **E-8**

SELENIUM IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

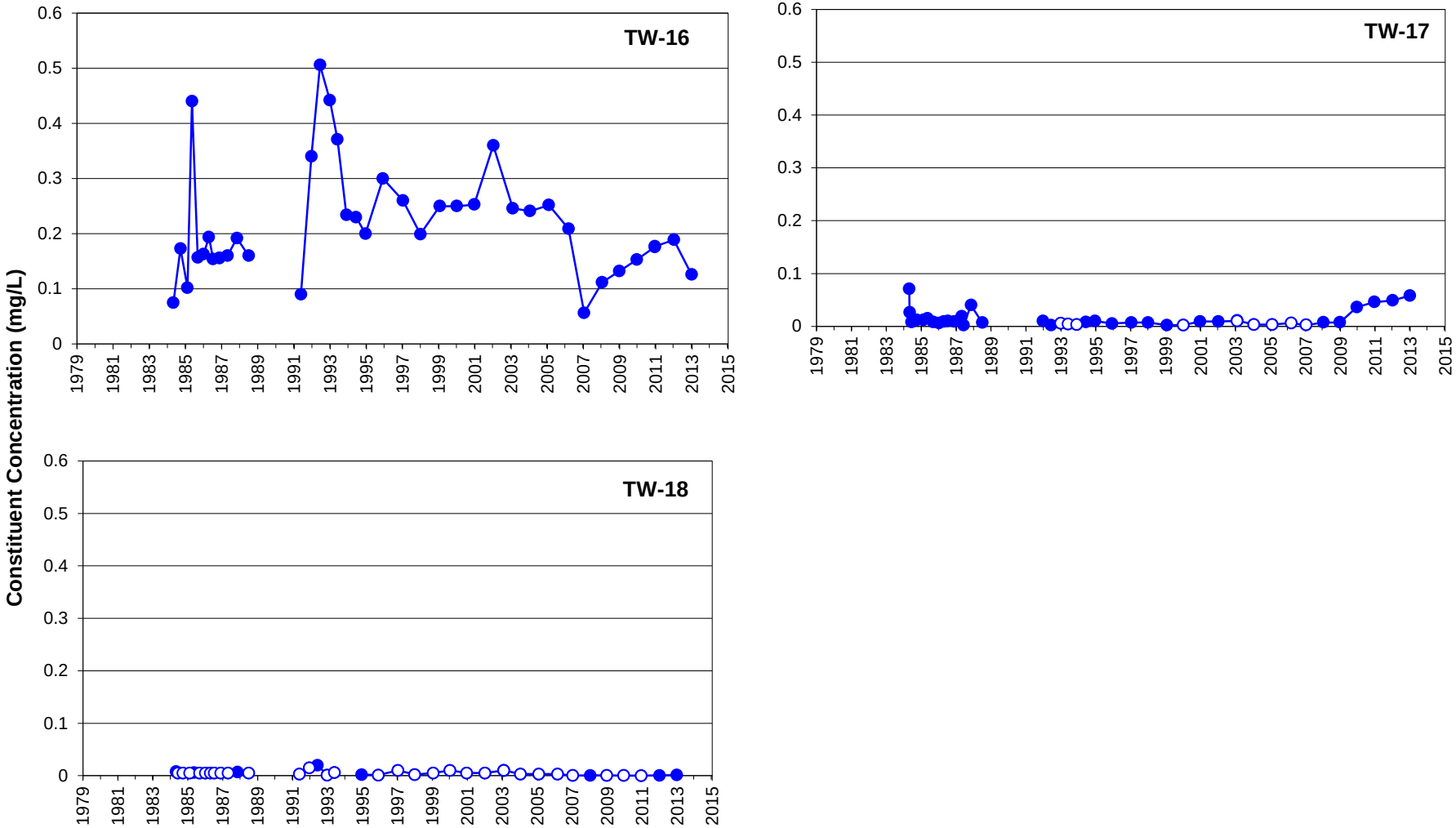
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-detect

FIGURE **E-9**

SELENIUM IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

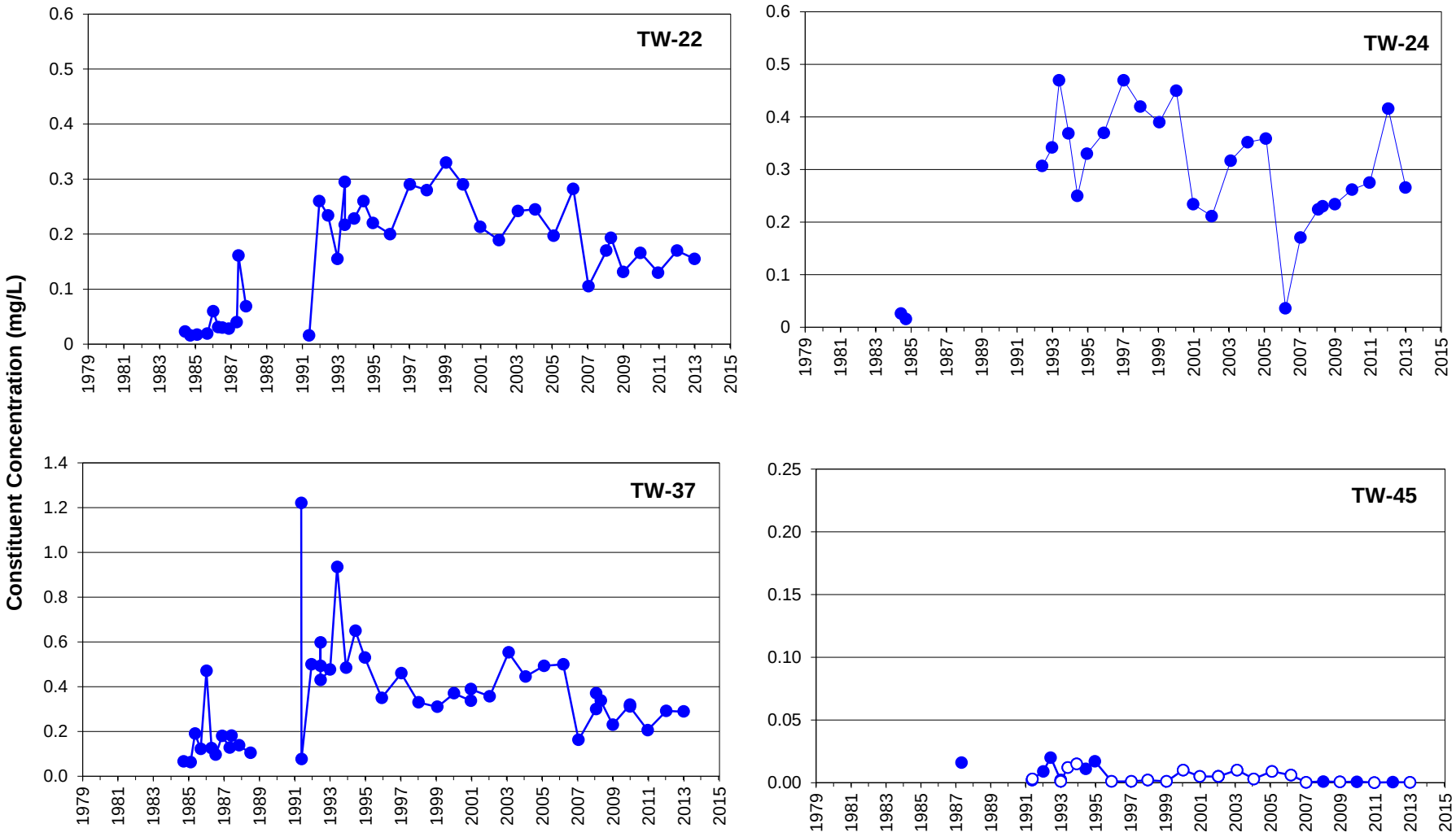
Non-Detects

FIGURE **E-10**

SELENIUM IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

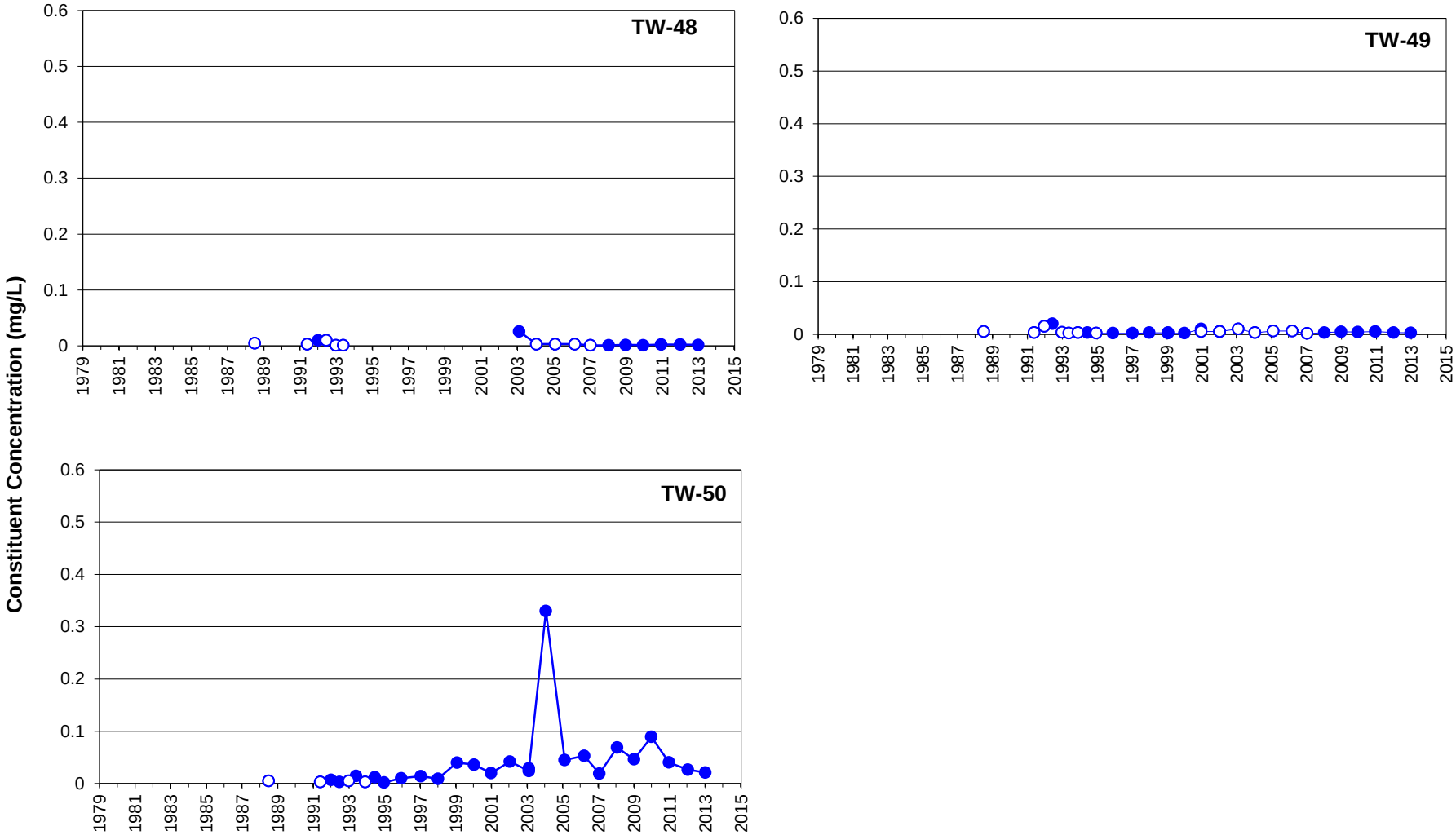
Non-Detects

FIGURE **E-11**

SELENIUM IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

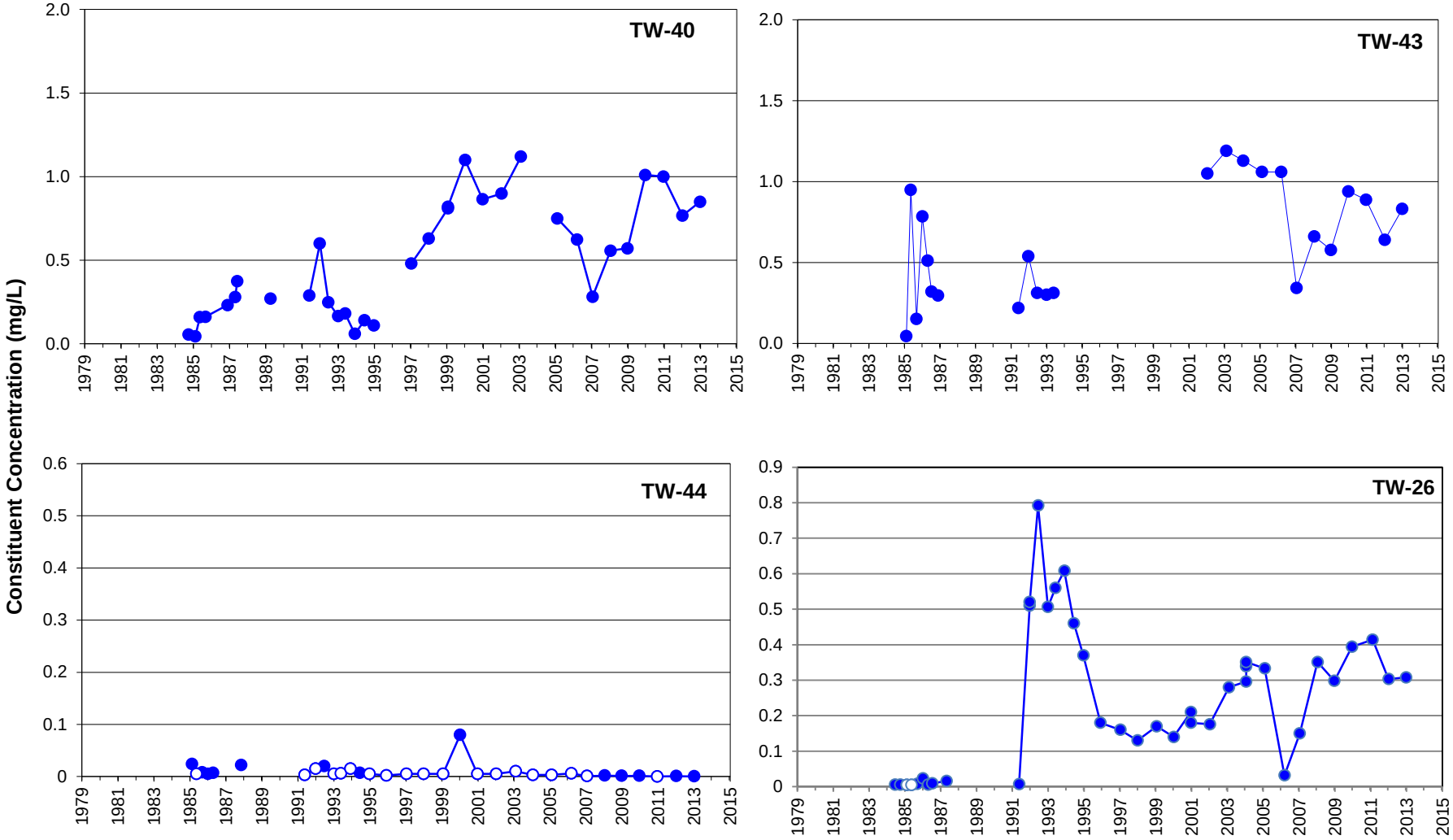
Non-Detects

FIGURE **E-12**

SELENIUM IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

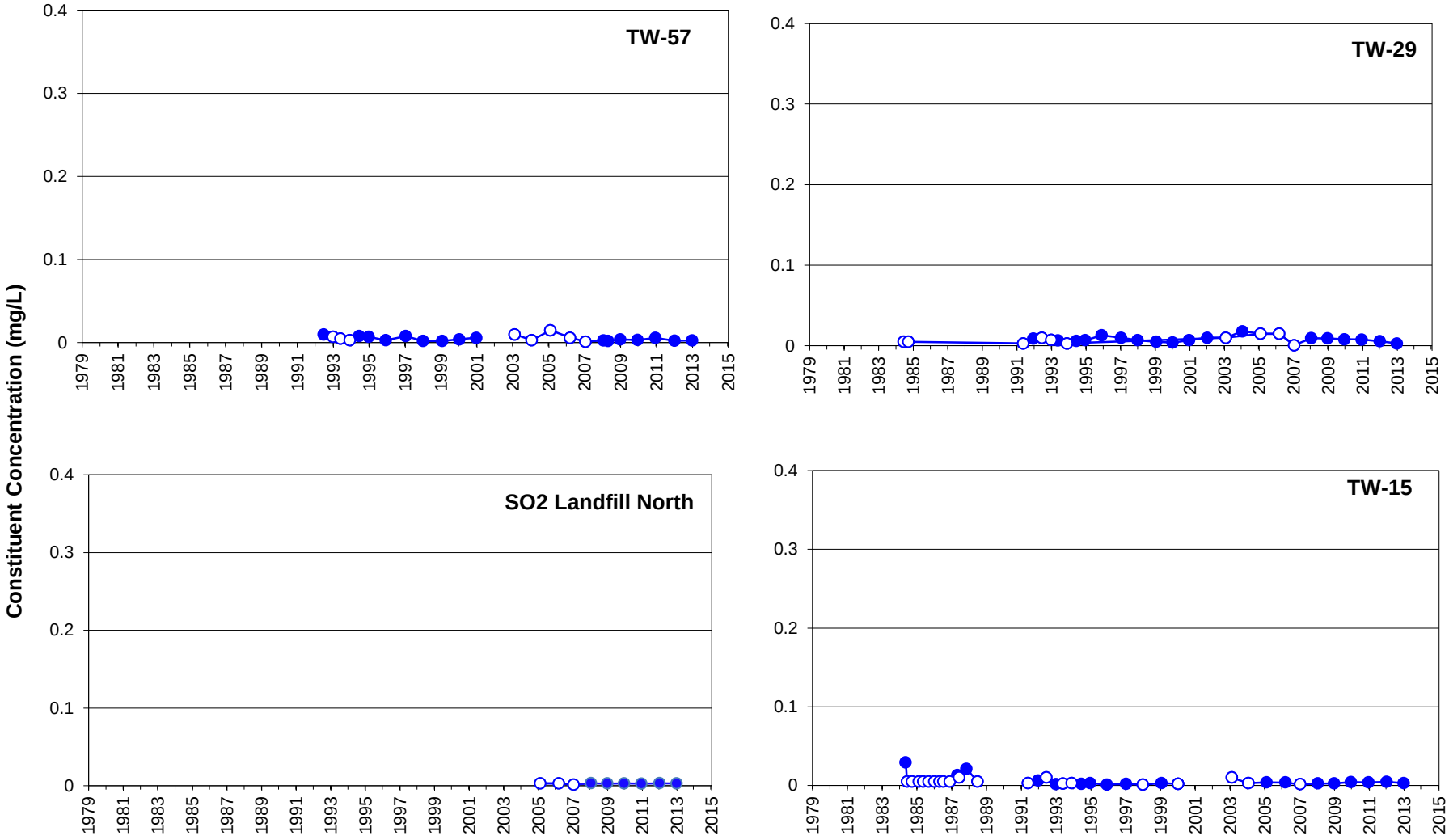
Non-Detects

FIGURE **E-13**

SELENIUM IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

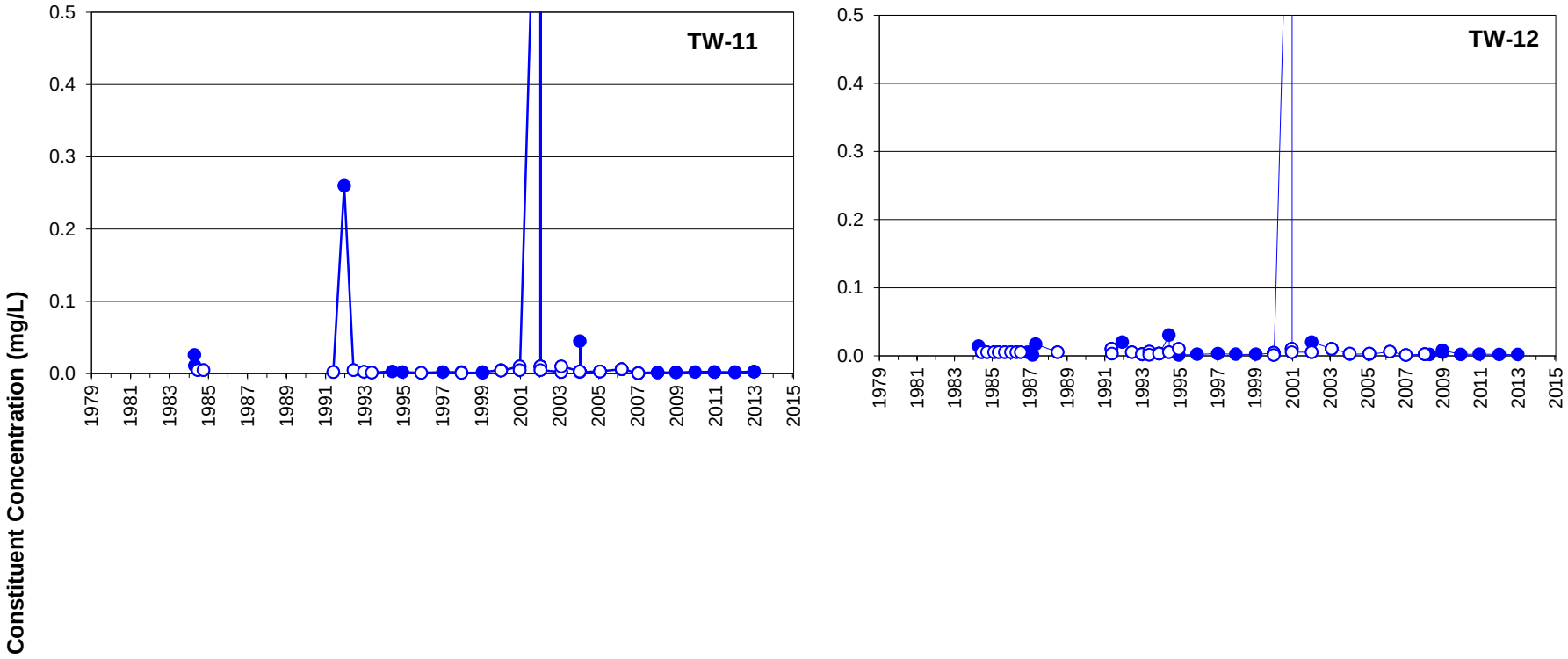
Non-Detects

FIGURE **E-14**

SELENIUM IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

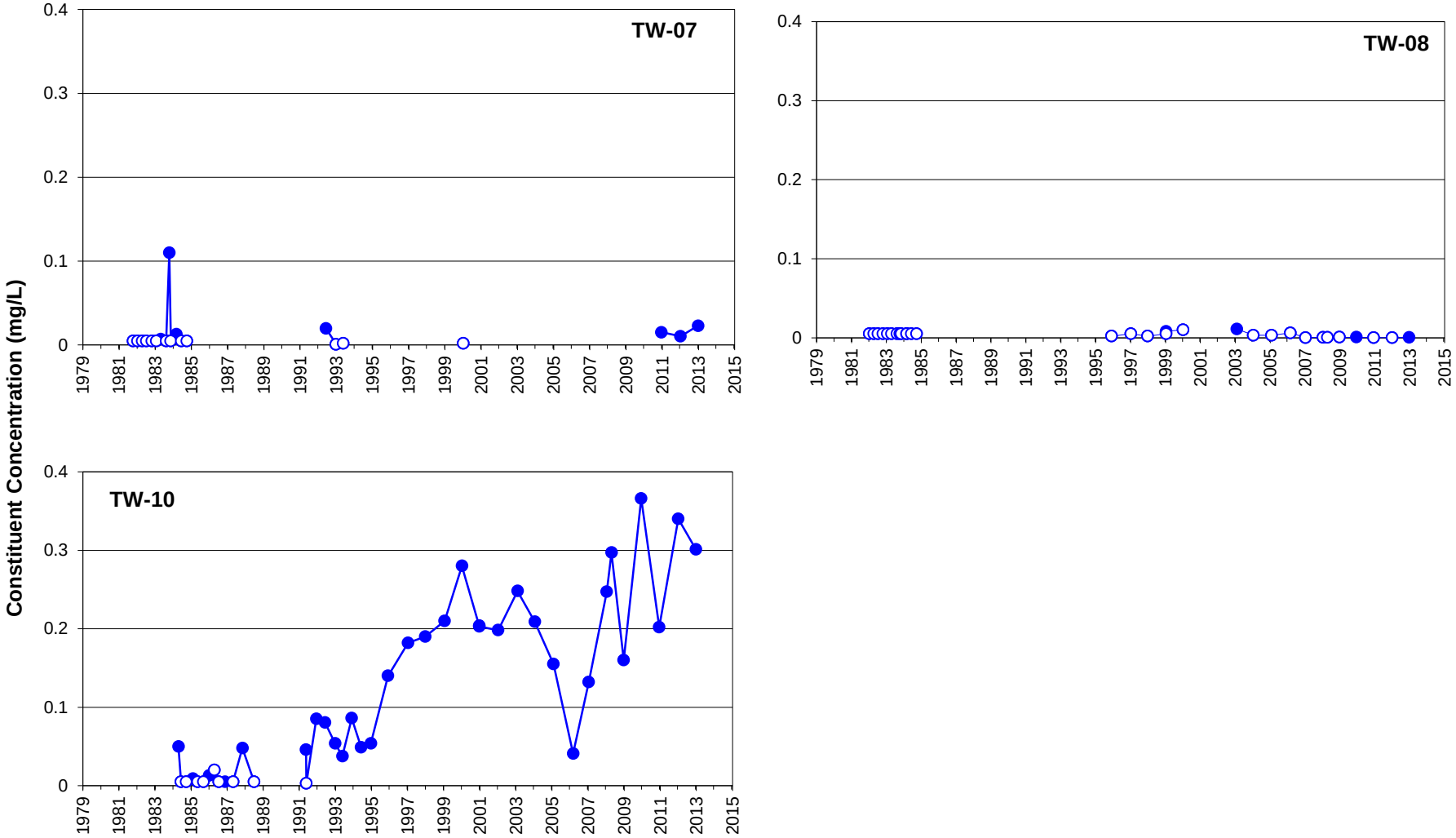
Non-Detects

FIGURE **E-15**

SELENIUM IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

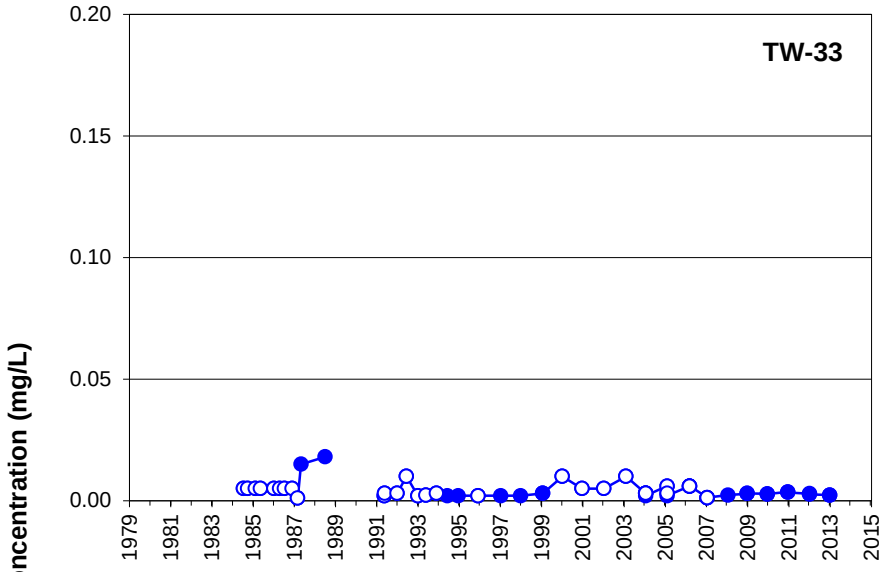
Non-Detects

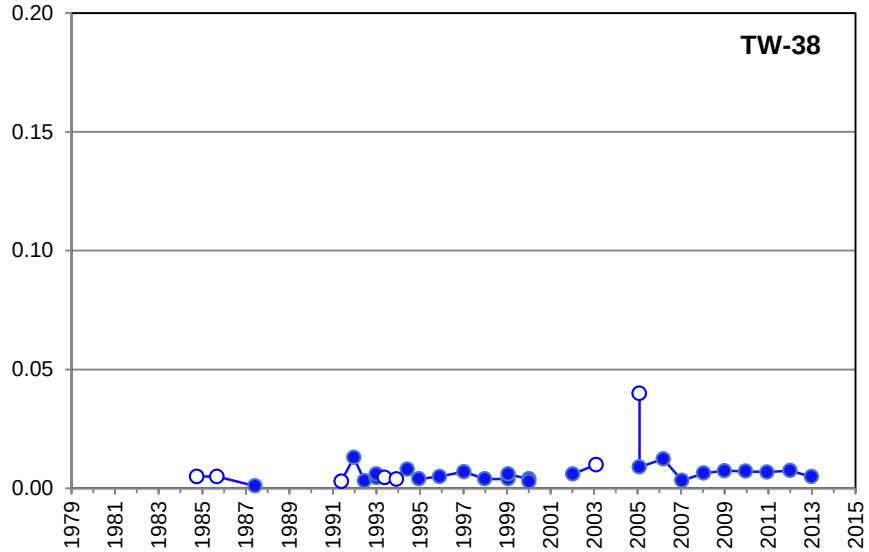
FIGURE **E-16**

SELENIUM IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002





Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

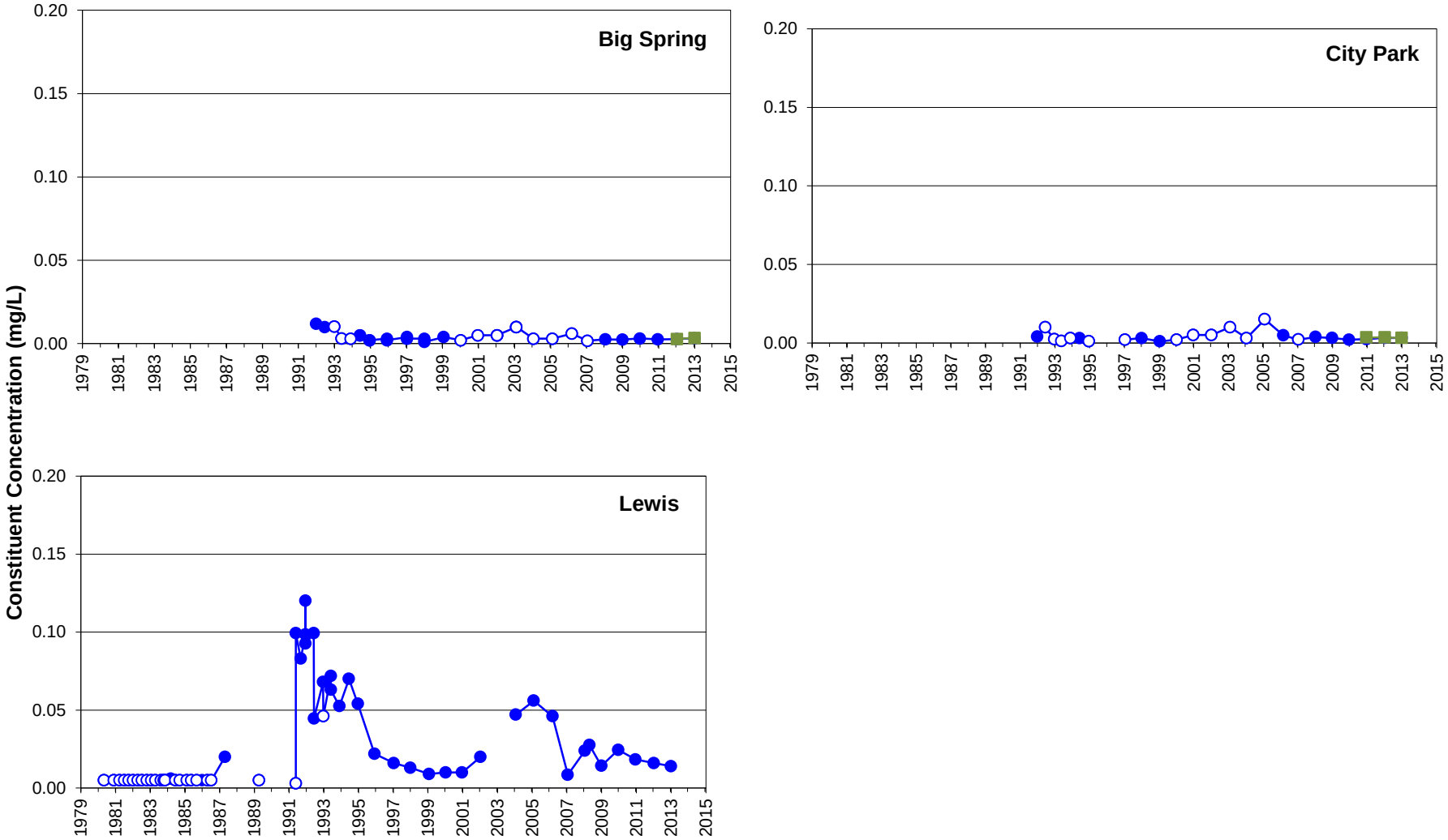
Non-Detects

FIGURE **E-17**

SELENIUM IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

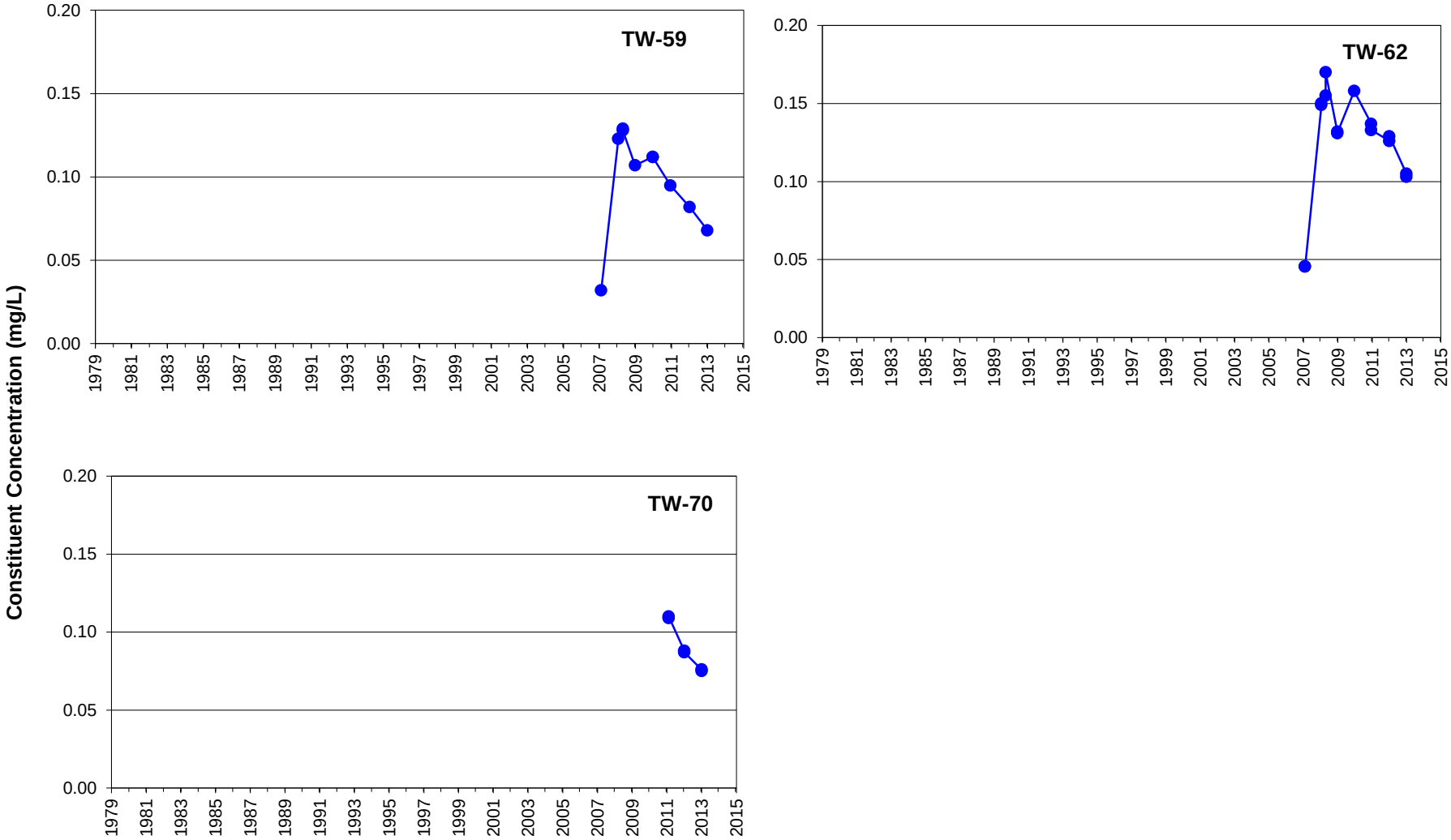
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects

FIGURE **E-18**

SELENIUM IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

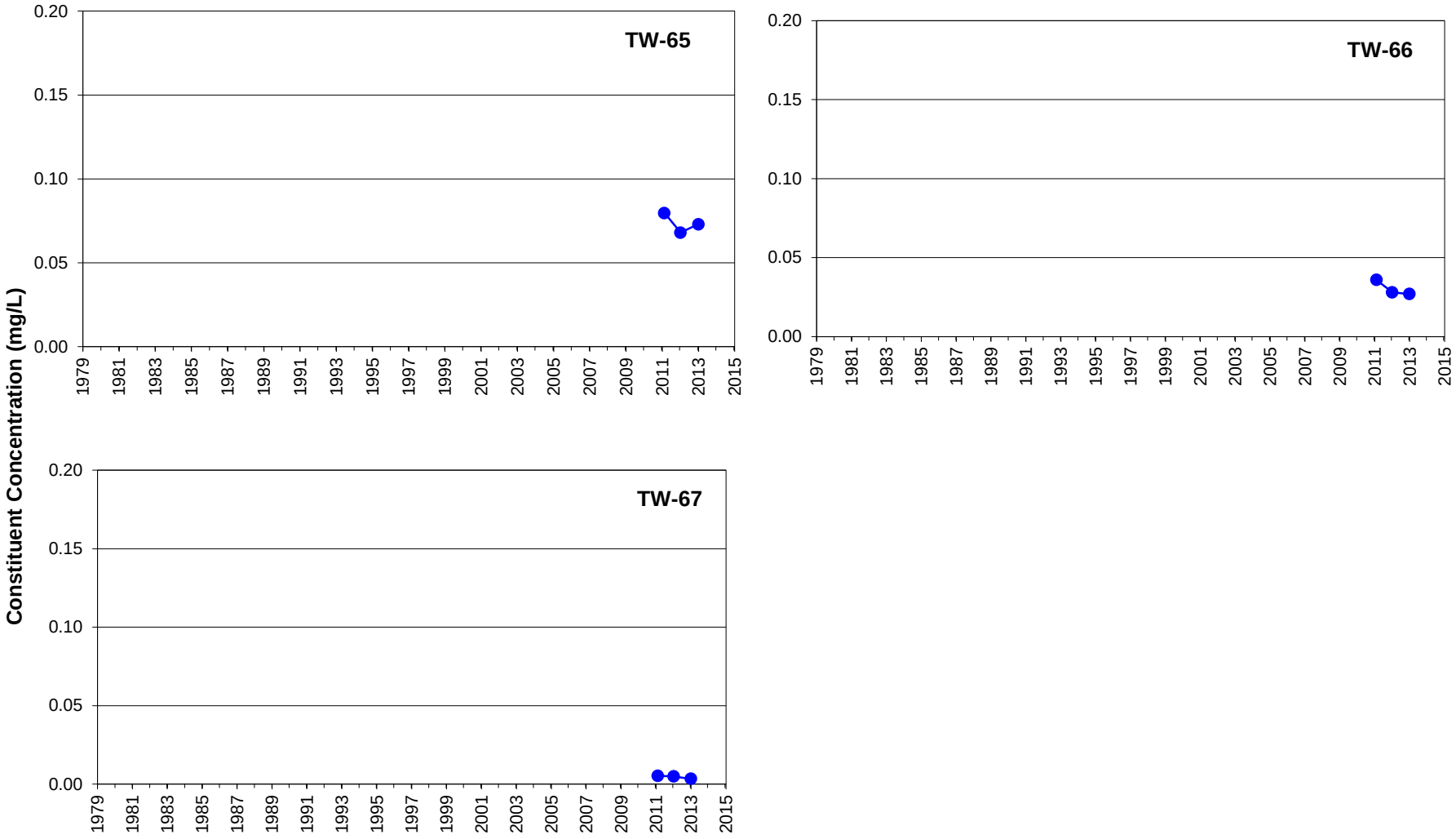
non-detects

FIGURE **E-19**

SELENIUM IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

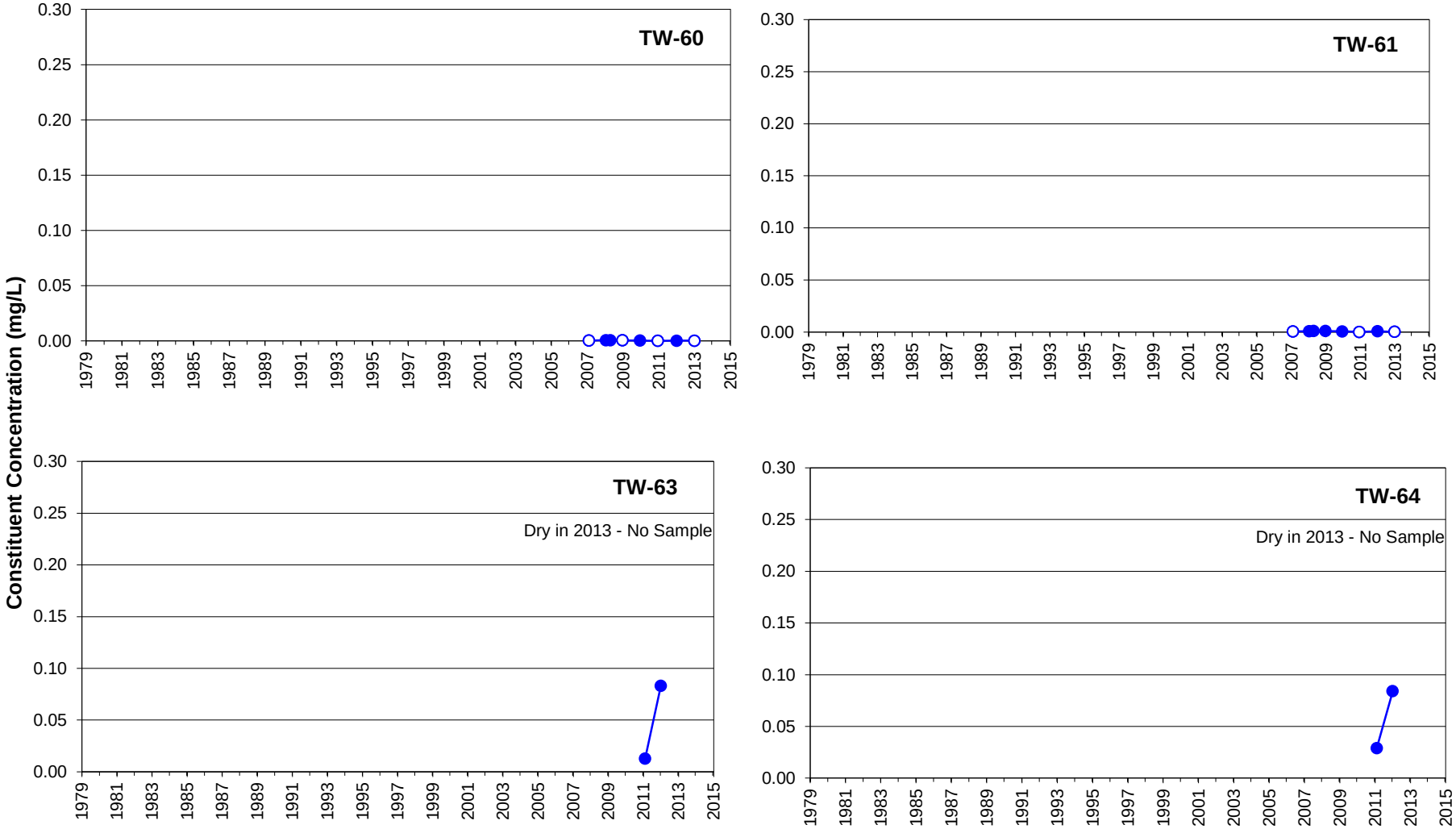
non-detects

FIGURE **E-20**

SELENIUM IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

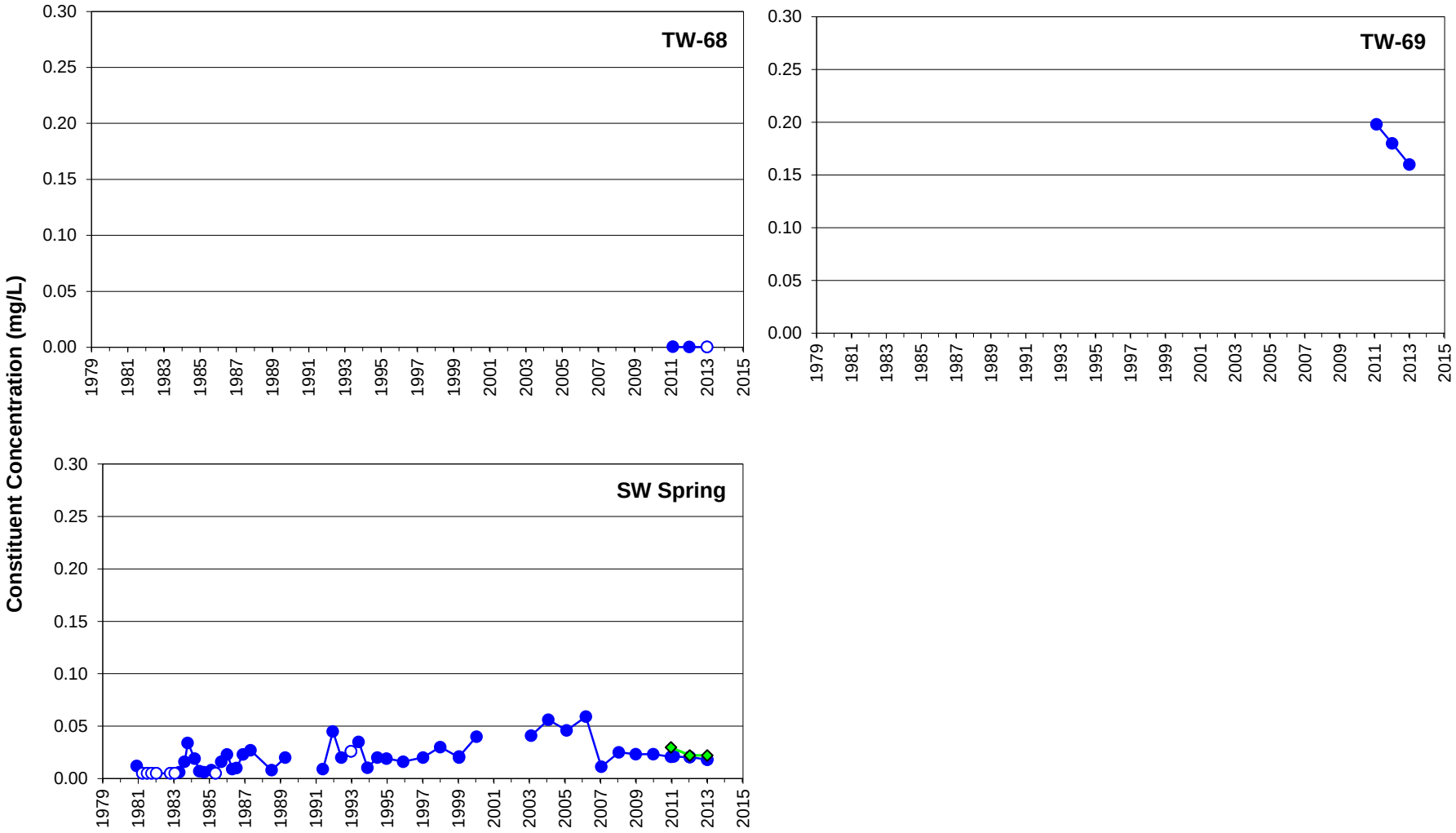
non-detects

FIGURE **E-21**

SELENIUM IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-detects
- SW Spring above confluence with Soda Creek

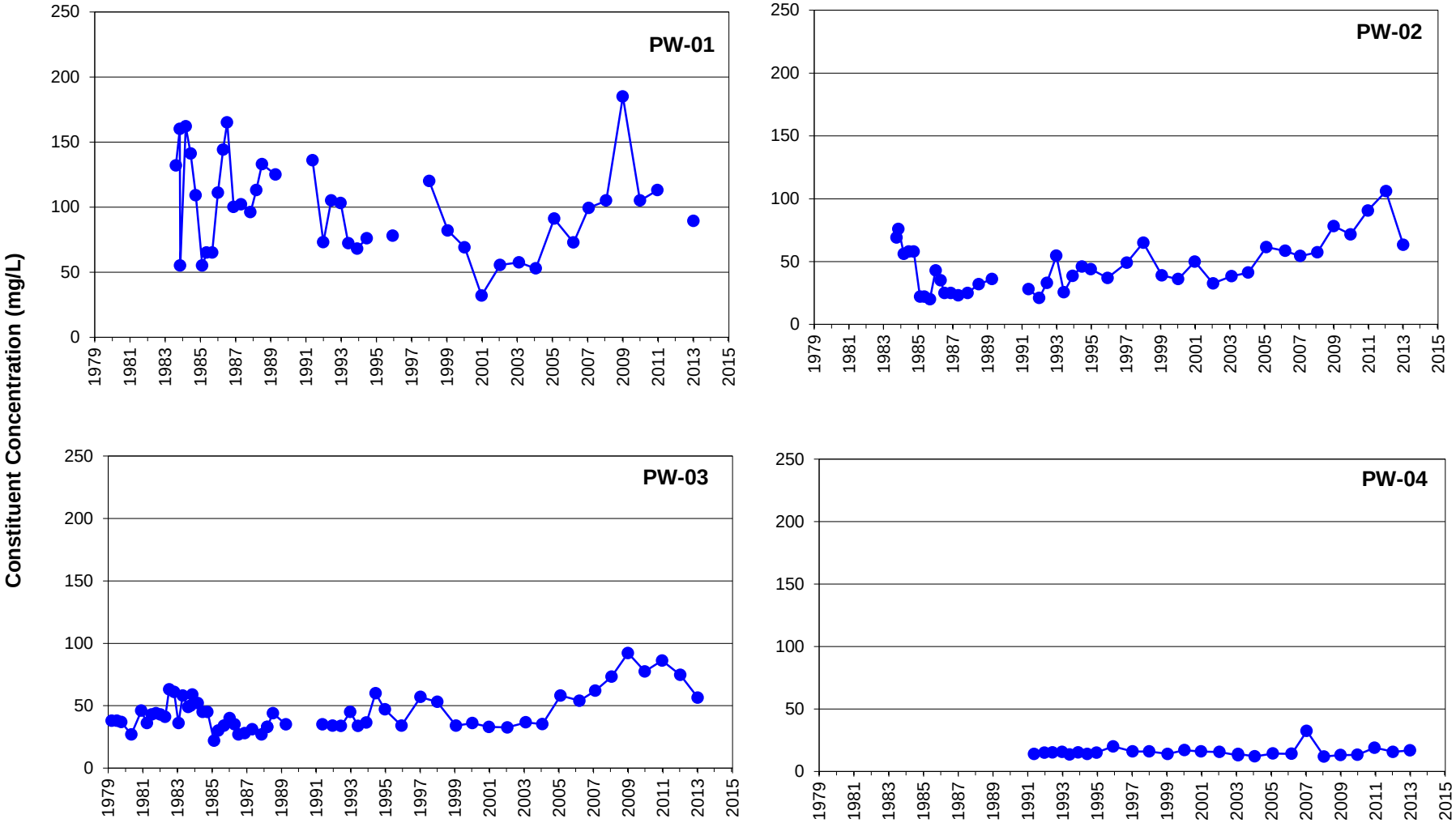
FIGURE **E-22**

SELENIUM IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX F
TIME-HISTORY GRAPHS FOR CHLORIDE



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

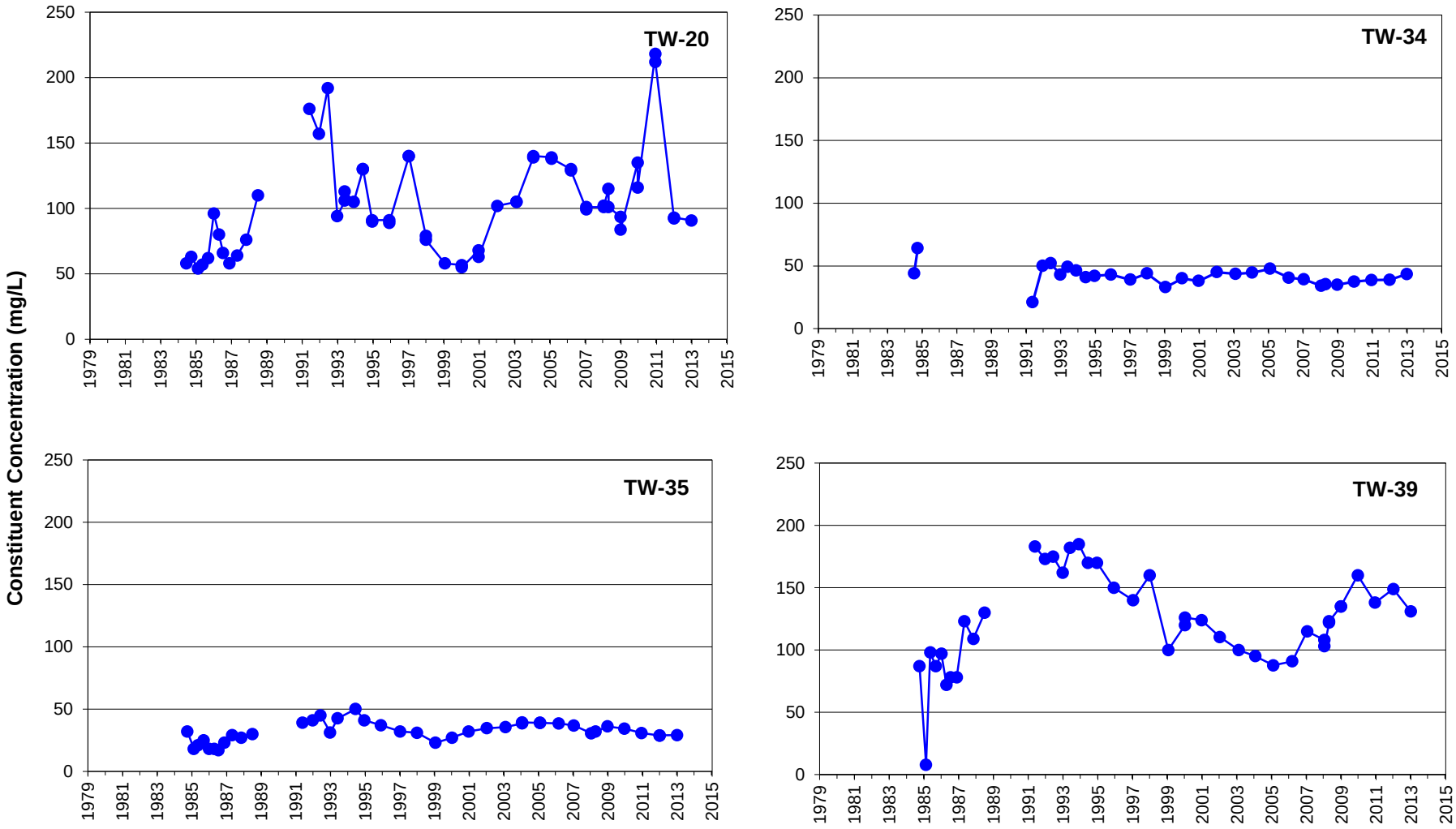
Golder Associates

FIGURE **F-1**

CHLORIDE IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

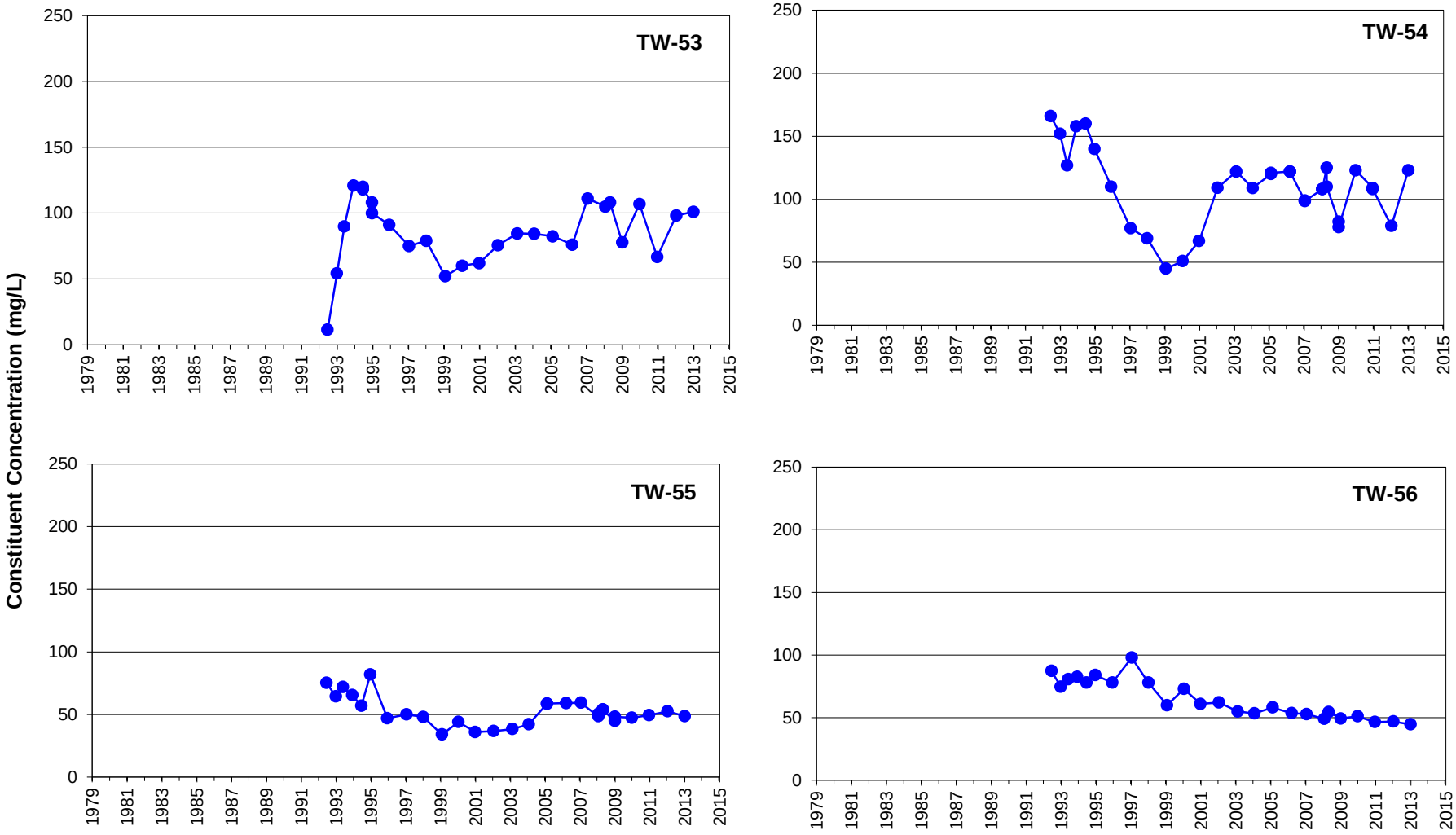
Golder Associates

FIGURE **F-2**

CHLORIDE IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

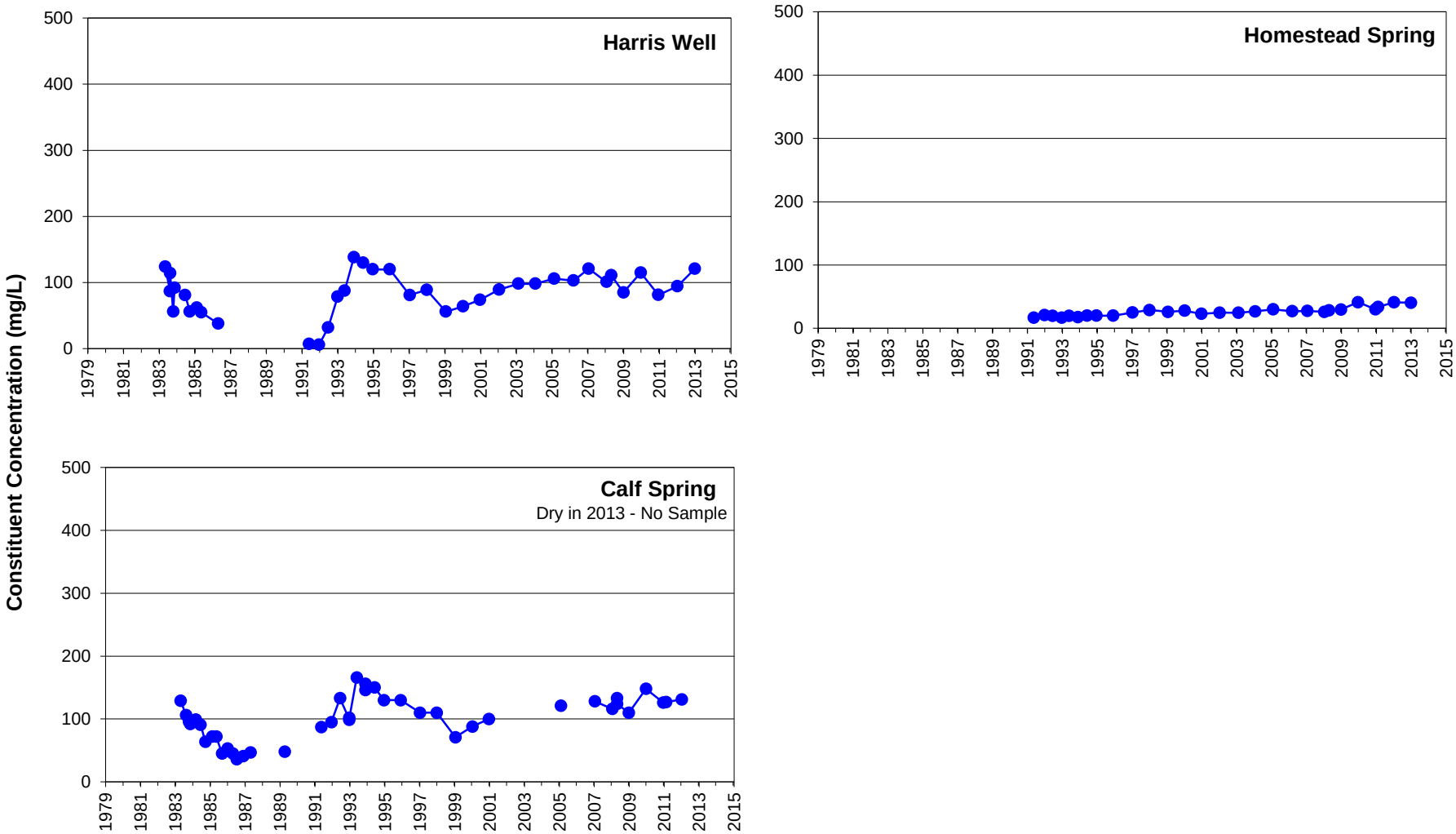
Constituent Concentration (mg/L)

FIGURE **F-3**

CHLORIDE IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

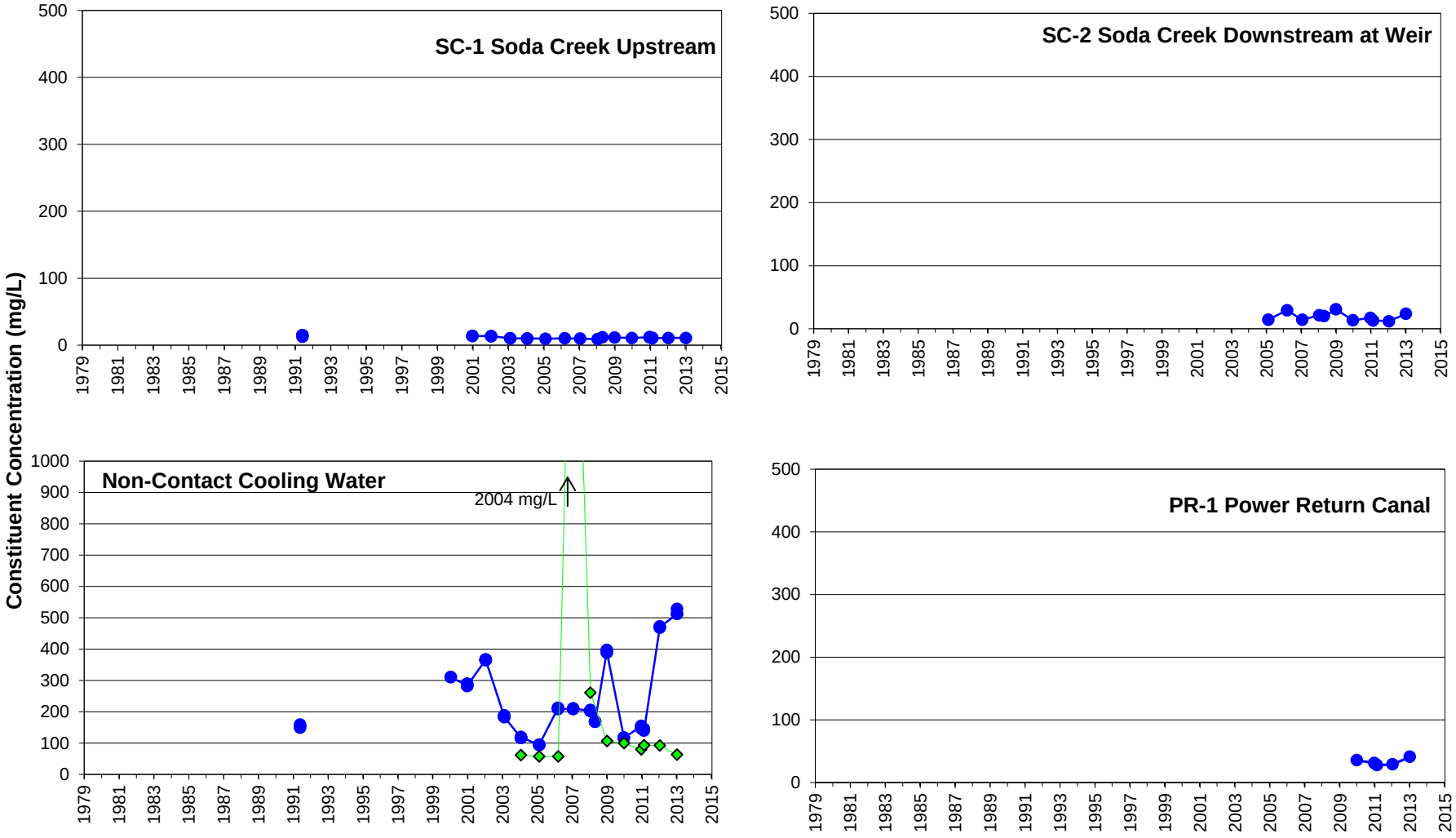
Constituent Concentration (mg/L)

FIGURE **F-4**

CHLORIDE IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

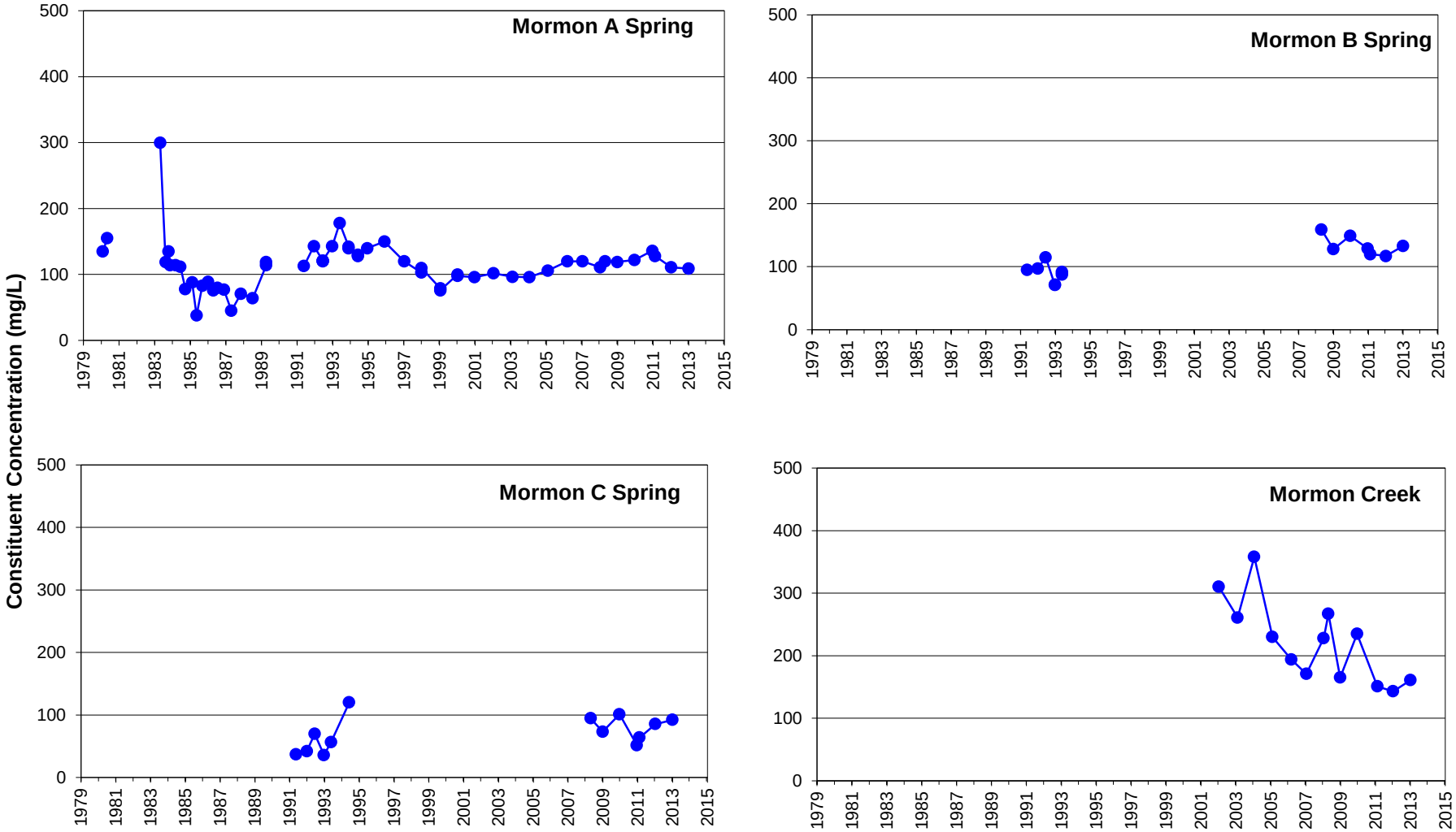
Pond Inlet

FIGURE **F-5**

CHLORIDE IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

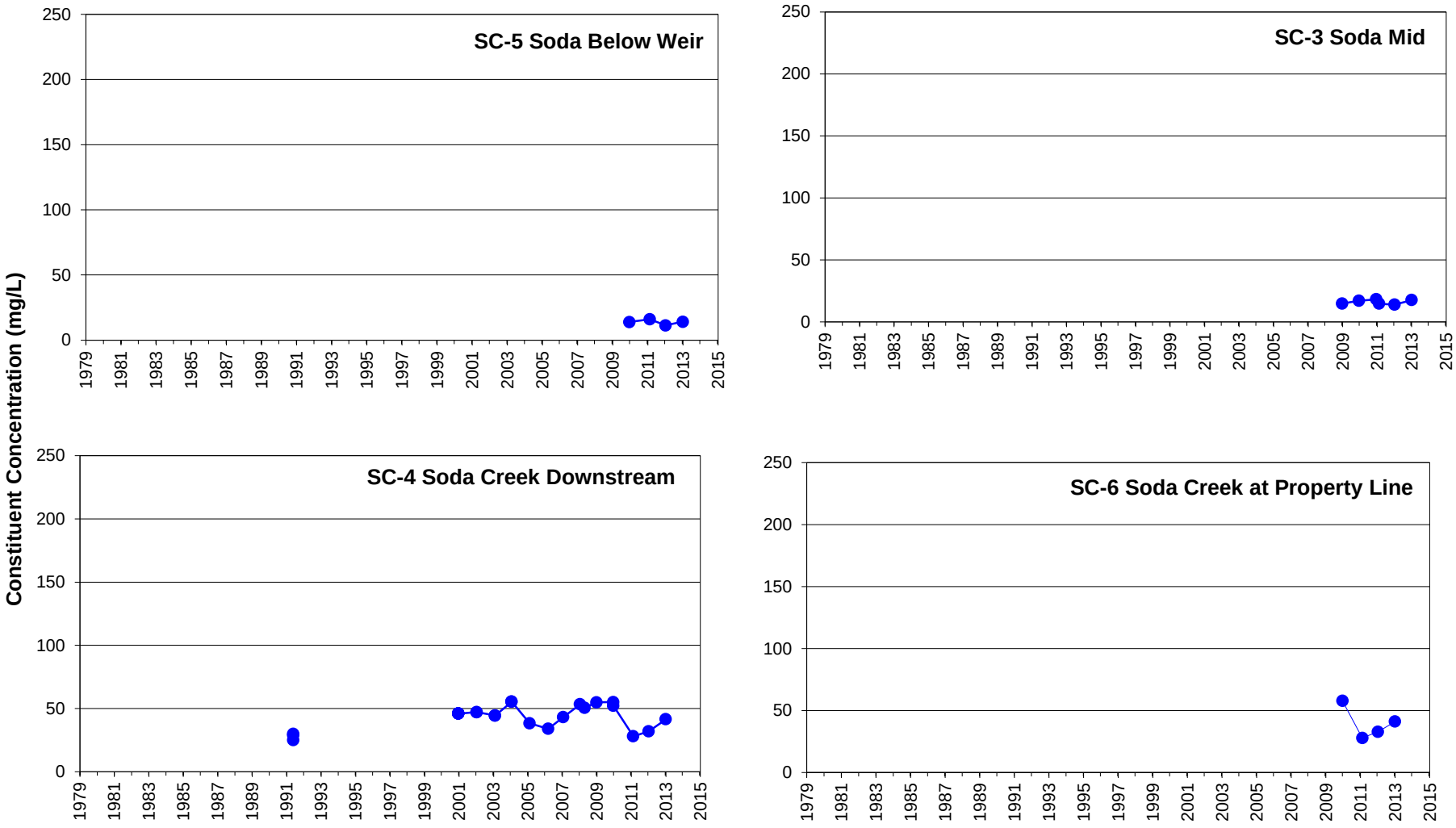
Constituent Concentration (mg/L)

FIGURE **F-6**

CHLORIDE IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

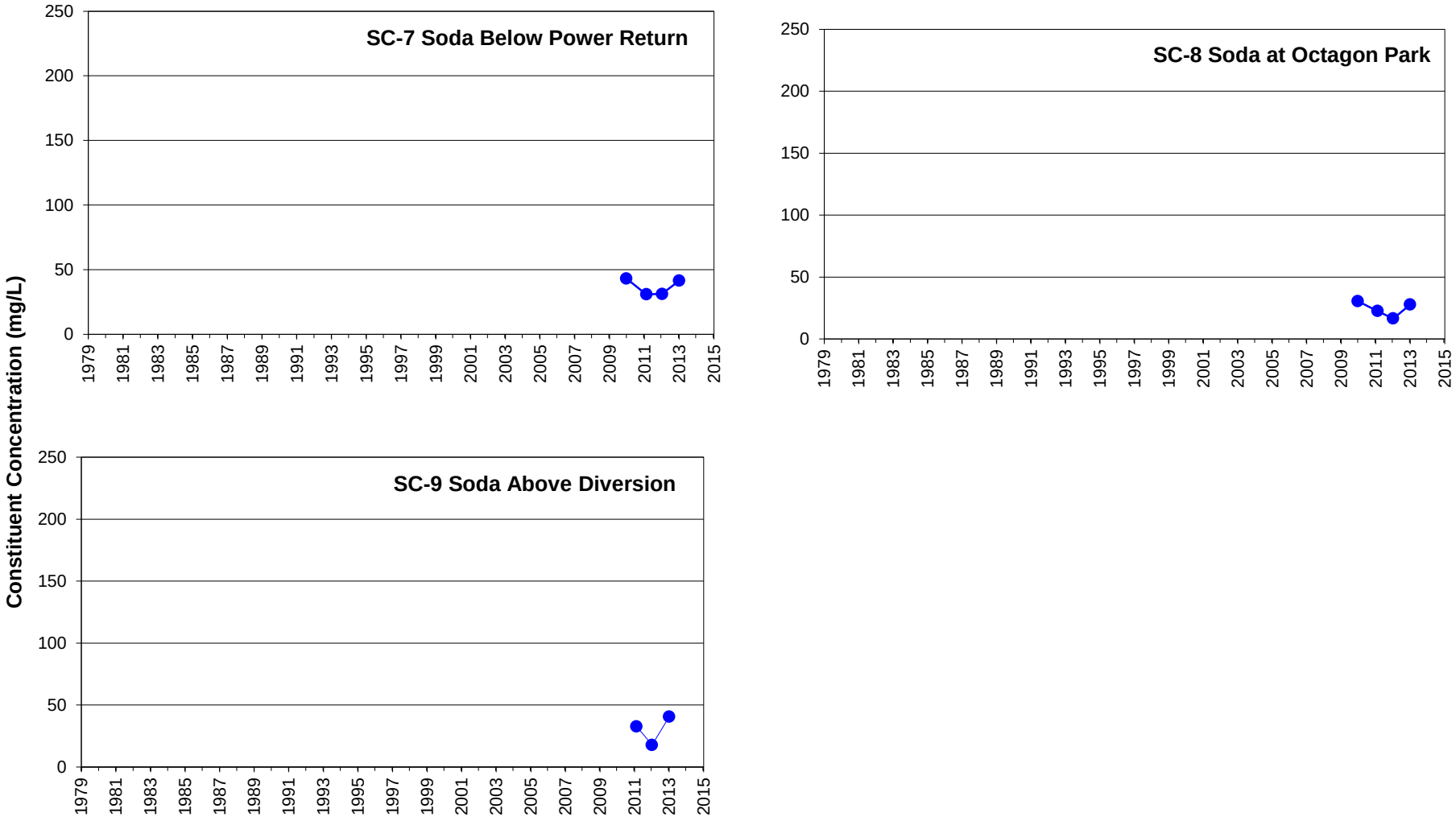
Constituent Concentration (mg/L)

FIGURE **F-7**

CHLORIDE IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

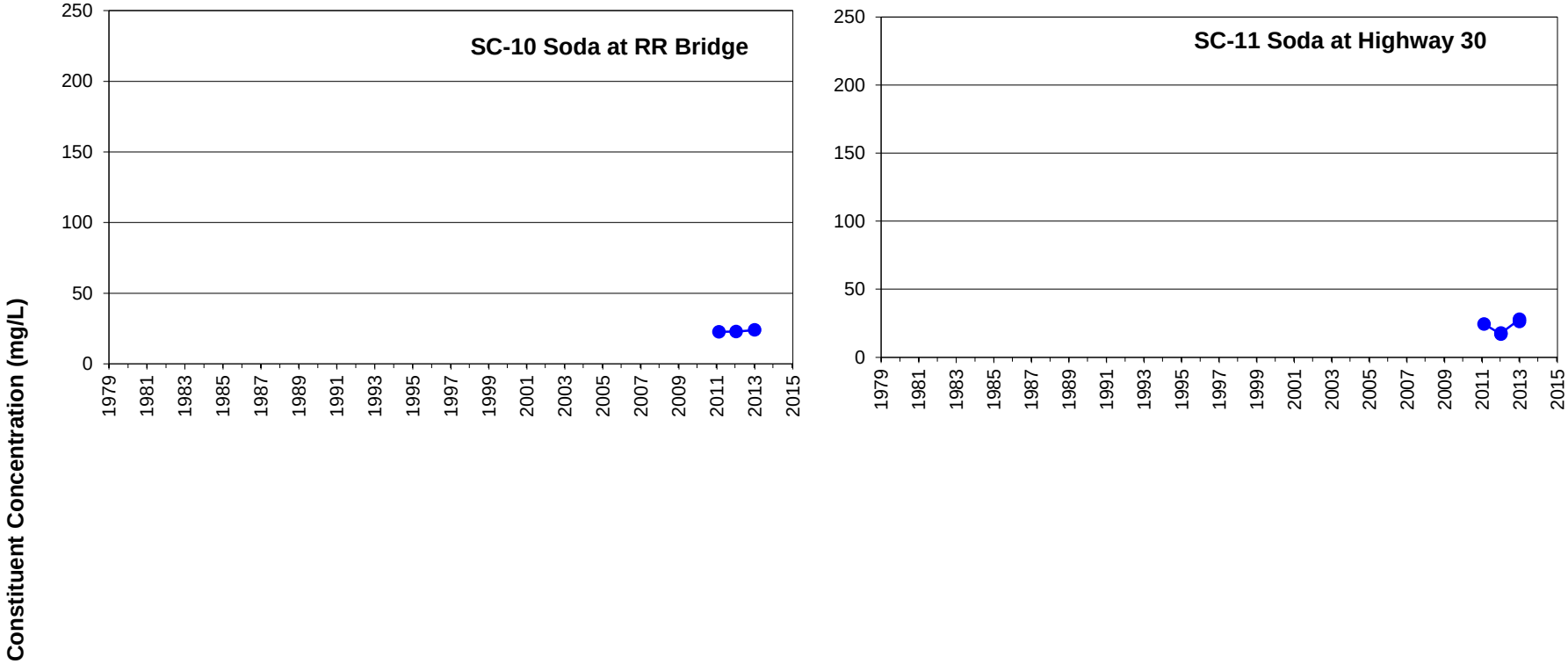
Constituent Concentration (mg/L)

FIGURE **F-8**

CHLORIDE IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

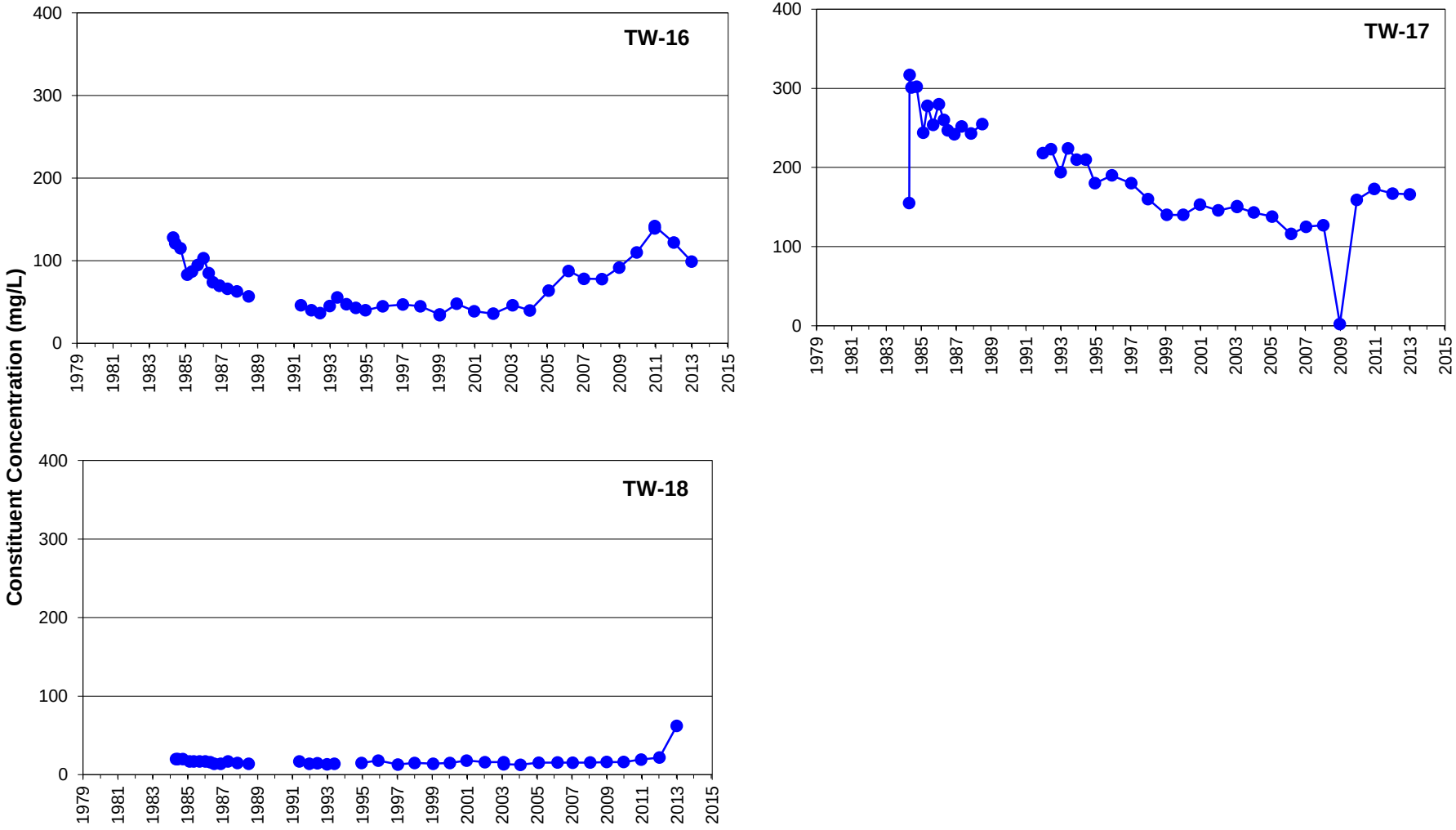
Constituent Concentration (mg/L)

FIGURE **F-9**

CHLORIDE IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

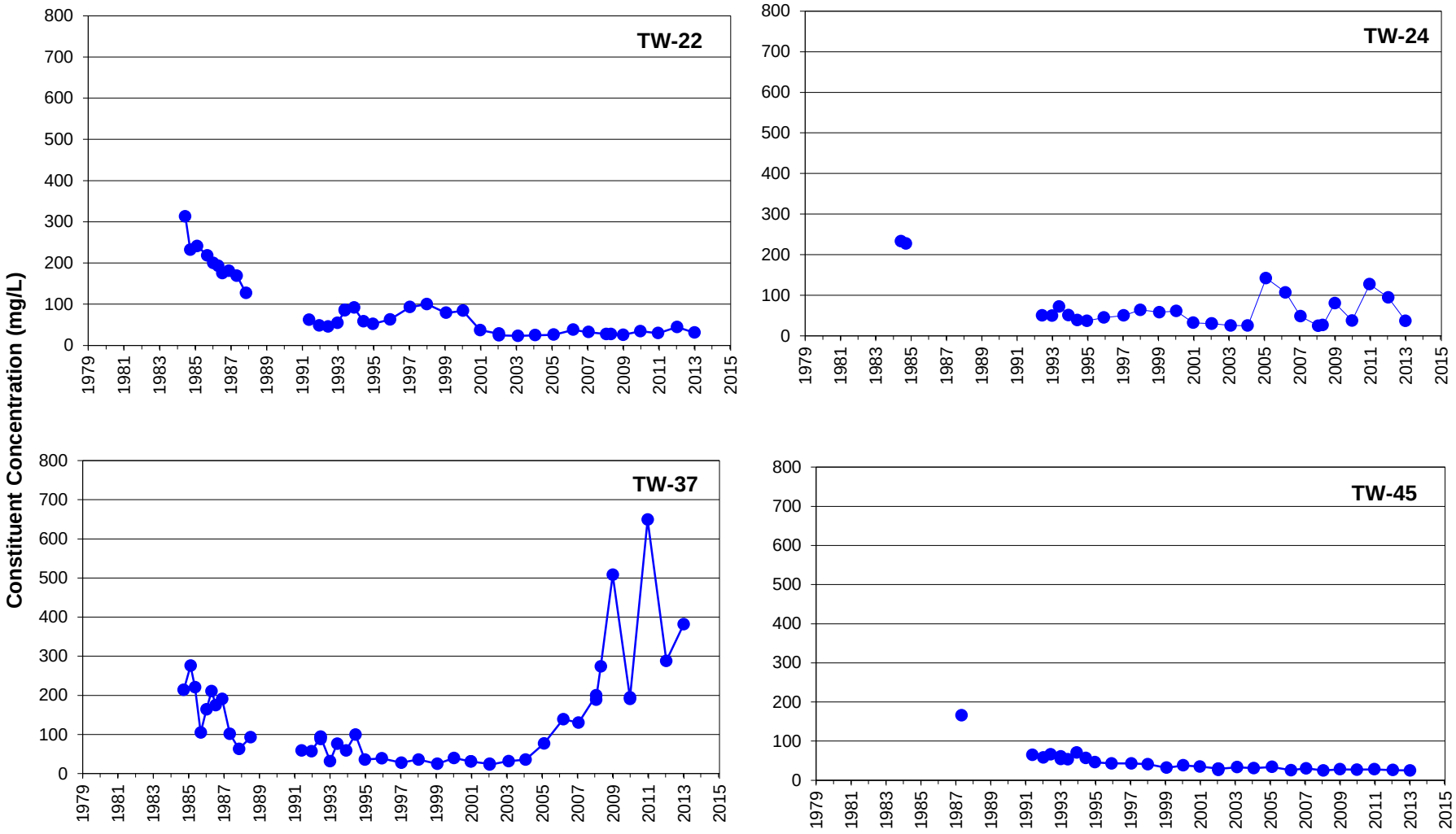
Constituent Concentration (mg/L)

FIGURE **F.-10**

CHLORIDE IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

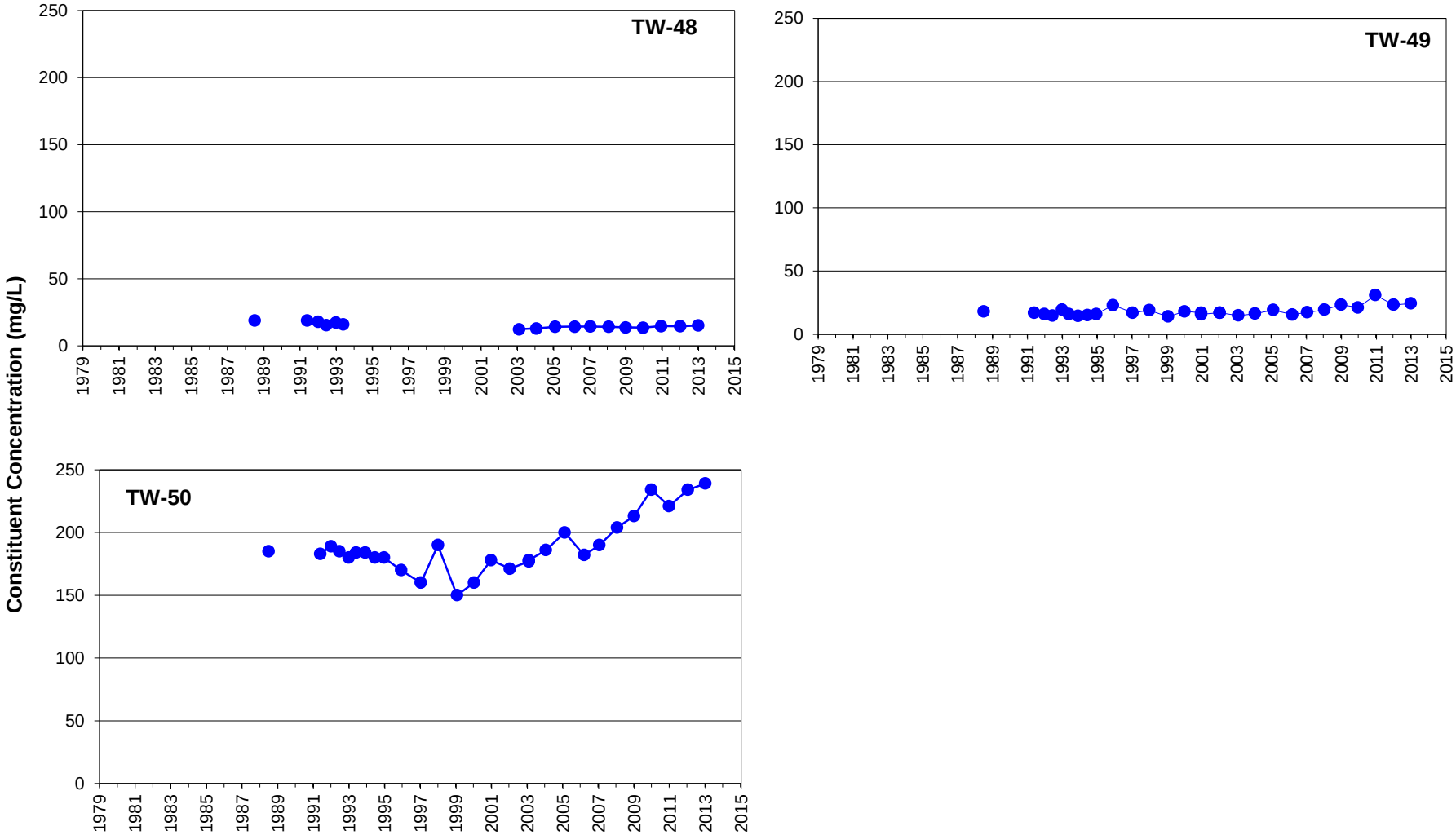
Constituent Concentration (mg/L)

FIGURE **F-11**

CHLORIDE IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

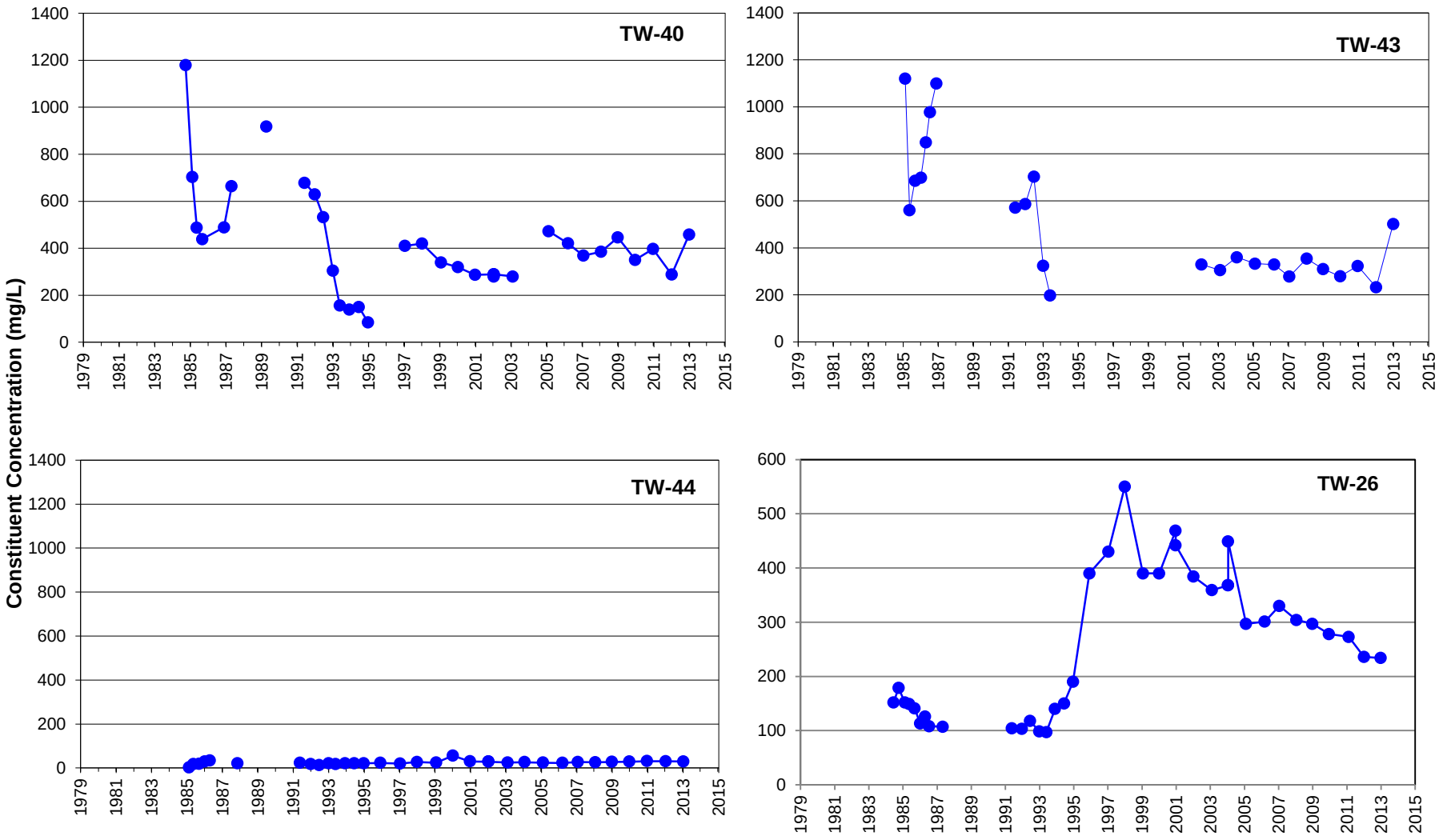
Constituent Concentration (mg/L)

FIGURE **F-12**

CHLORIDE IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

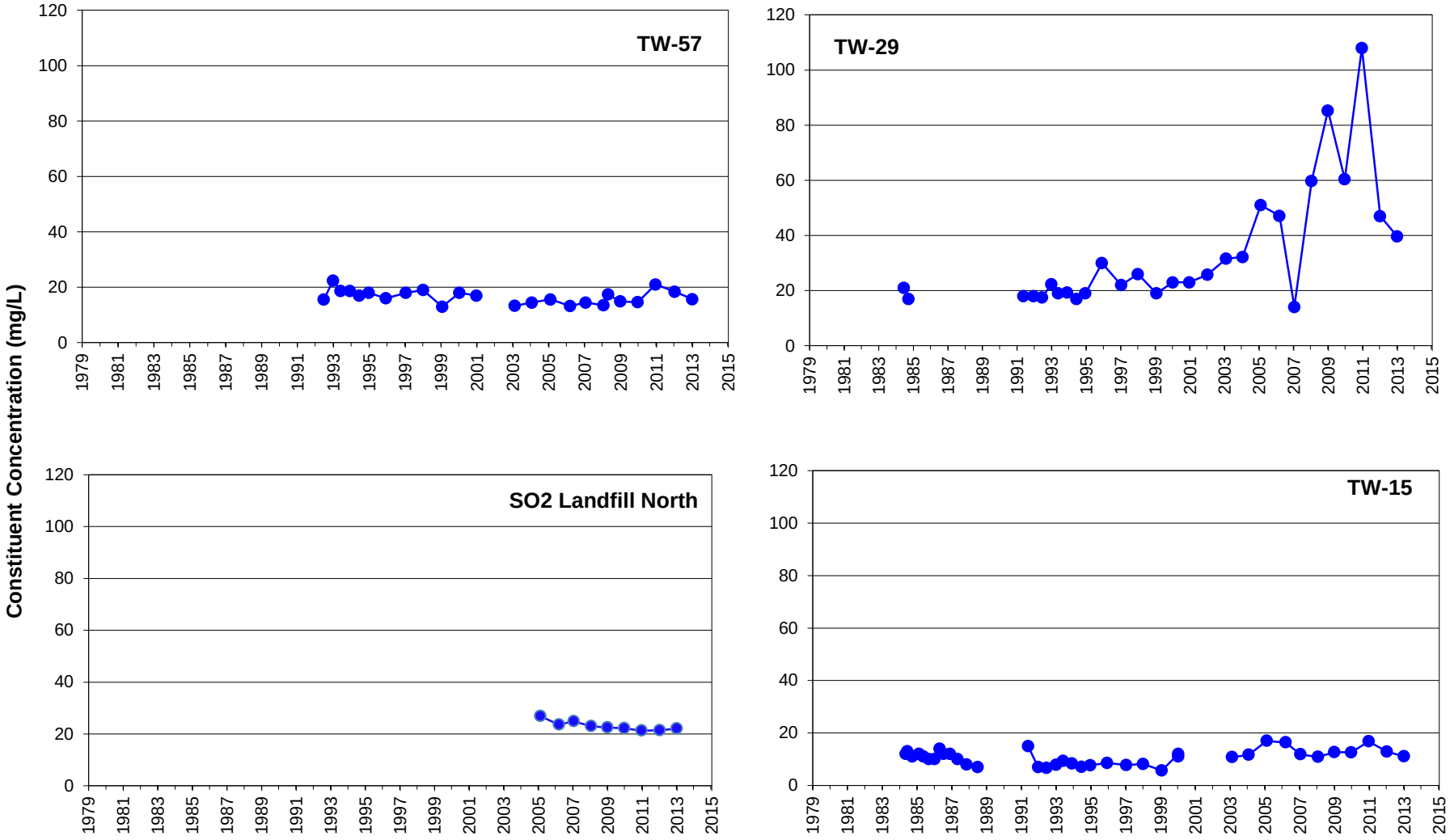
Constituent Concentration (mg/L)

FIGURE **F-13**

CHLORIDE IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

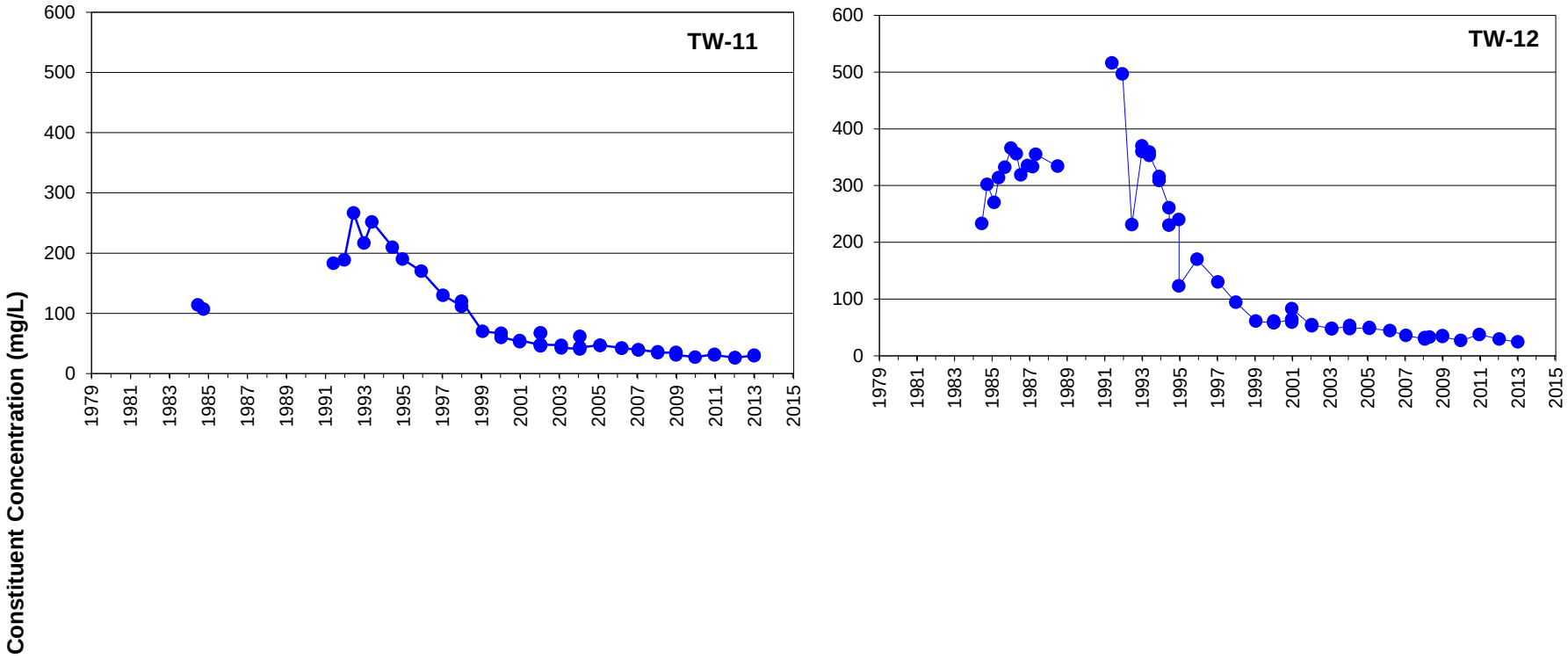
Constituent Concentration (mg/L)

FIGURE **F-14**

CHLORIDE IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

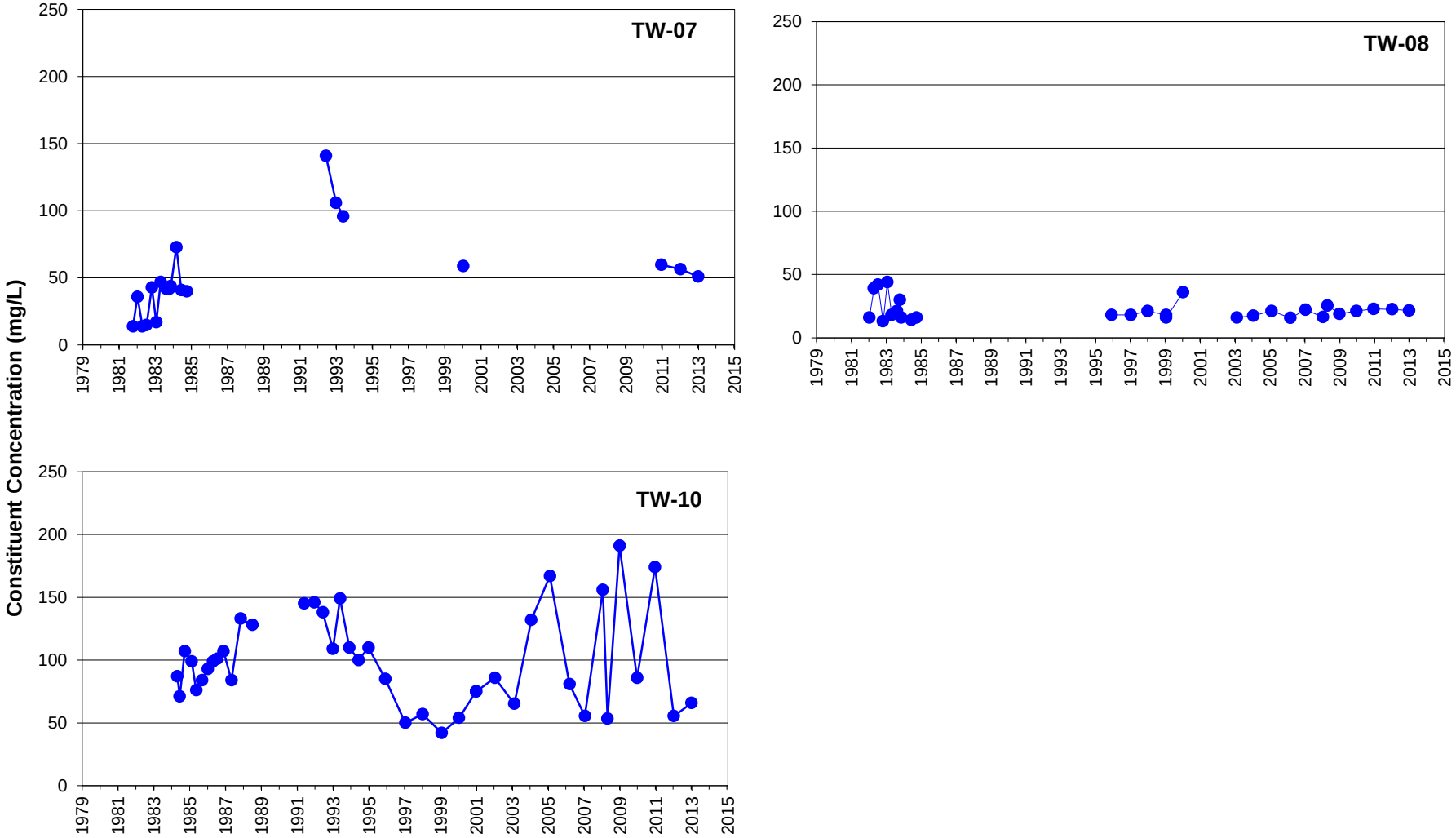
Constituent Concentration (mg/L)

FIGURE **F-15**

CHLORIDE IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

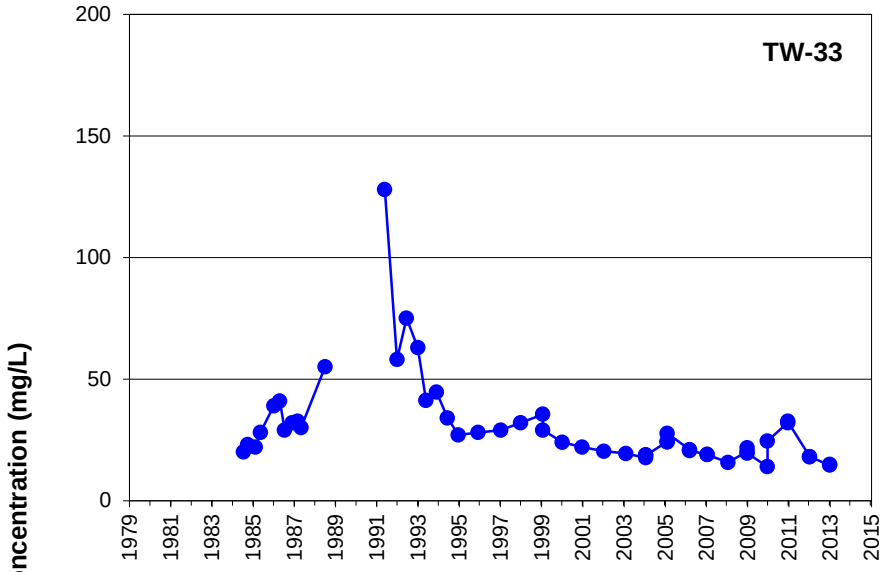
Constituent Concentration (mg/L)

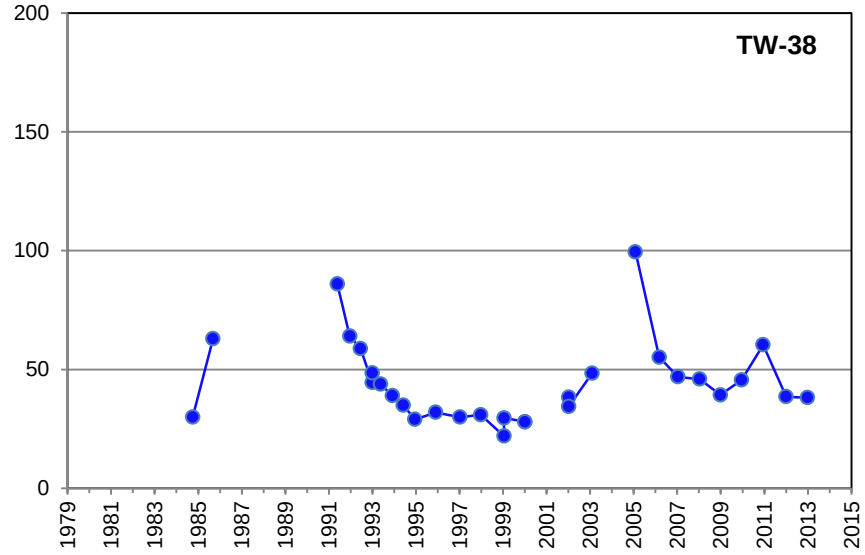
FIGURE **F-16**

CHLORIDE IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002





Remediation goals shown for point of compliance locations only

LEGEND

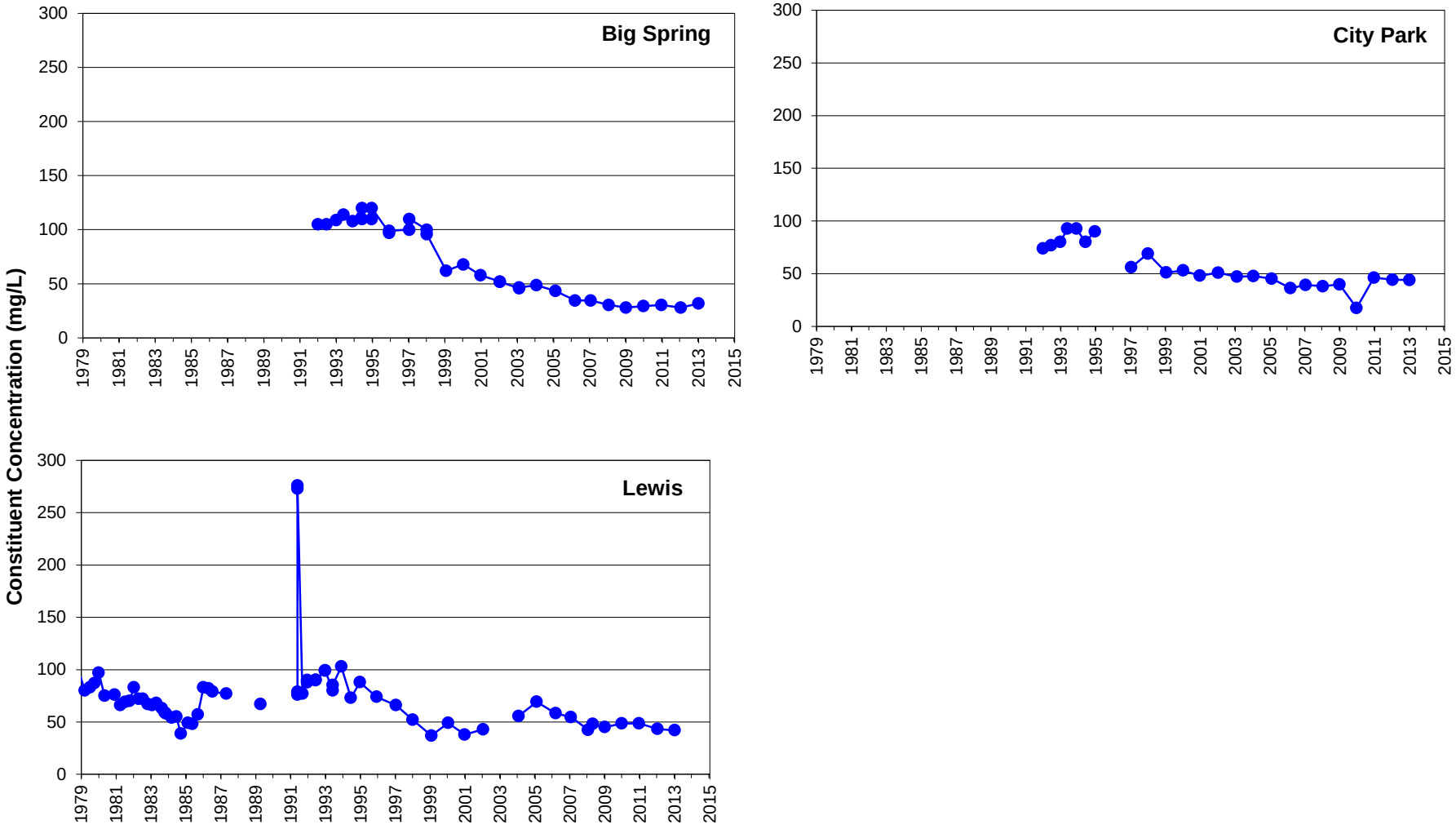
Constituent Concentration (mg/L)

FIGURE **F-17**

CHLORIDE IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

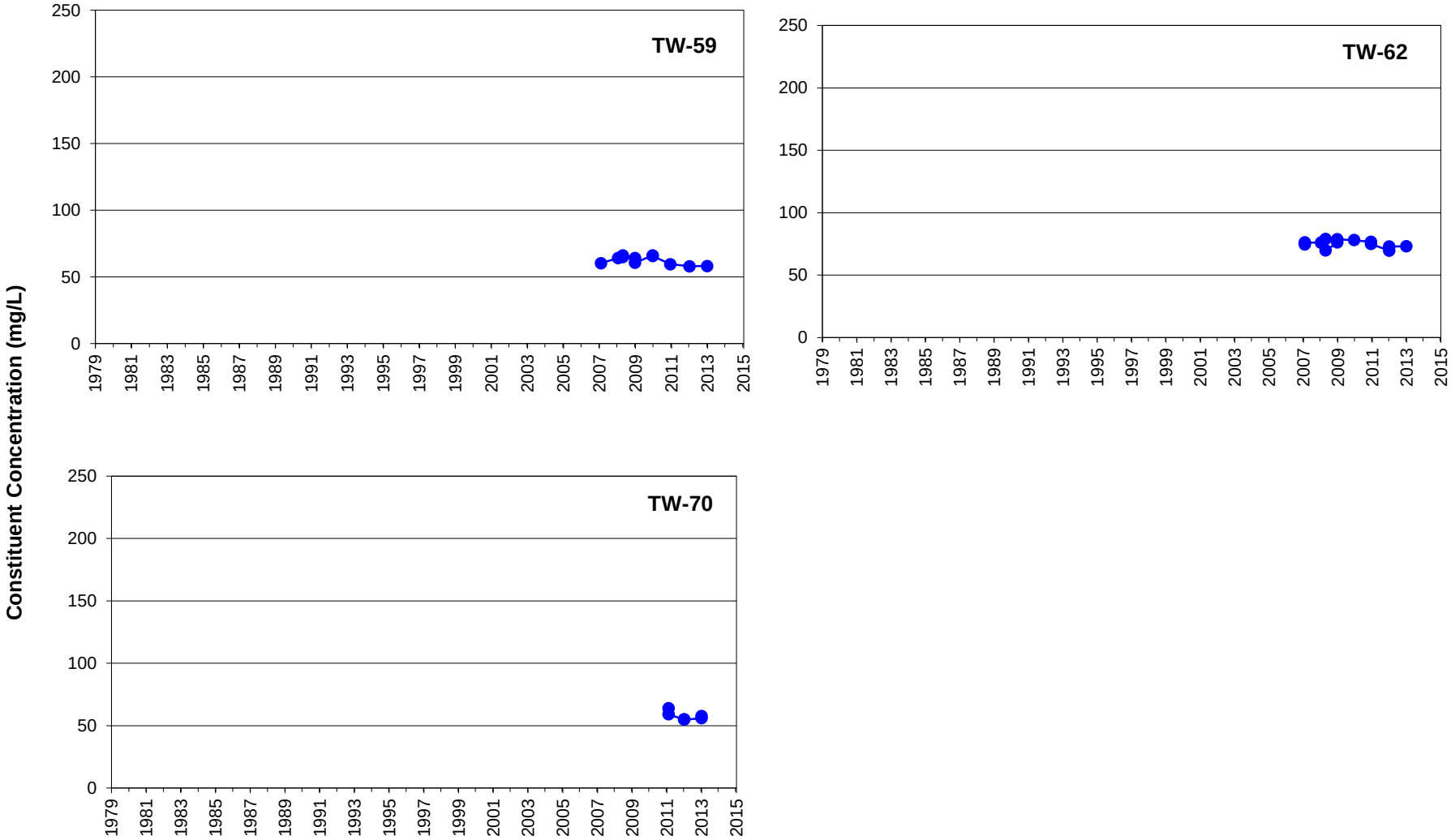
Constituent Concentration (mg/L)

FIGURE **F-18**

CHLORIDE IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

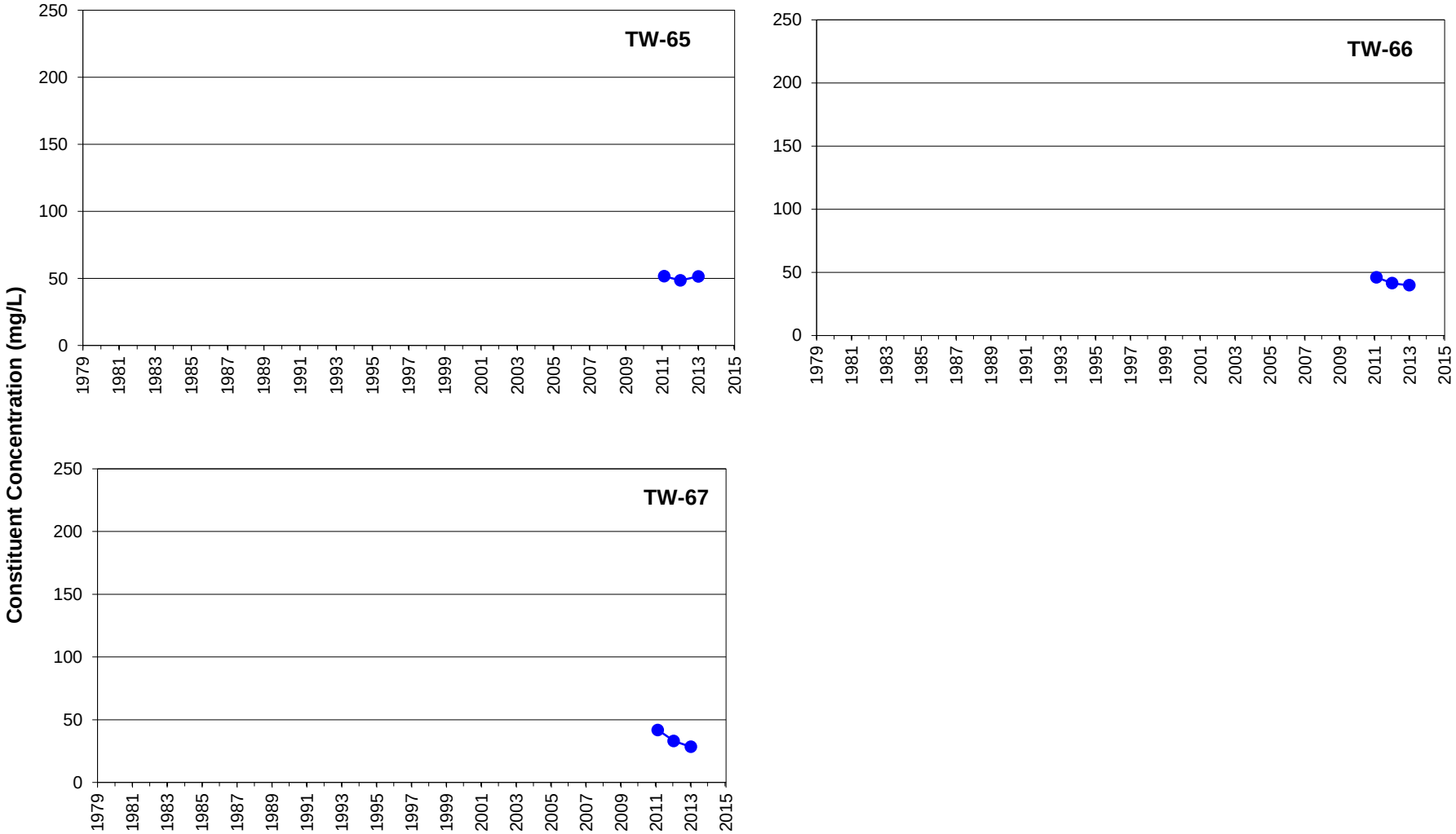
Constituent Concentration (mg/L)

FIGURE **F-19**

CHLORIDE IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

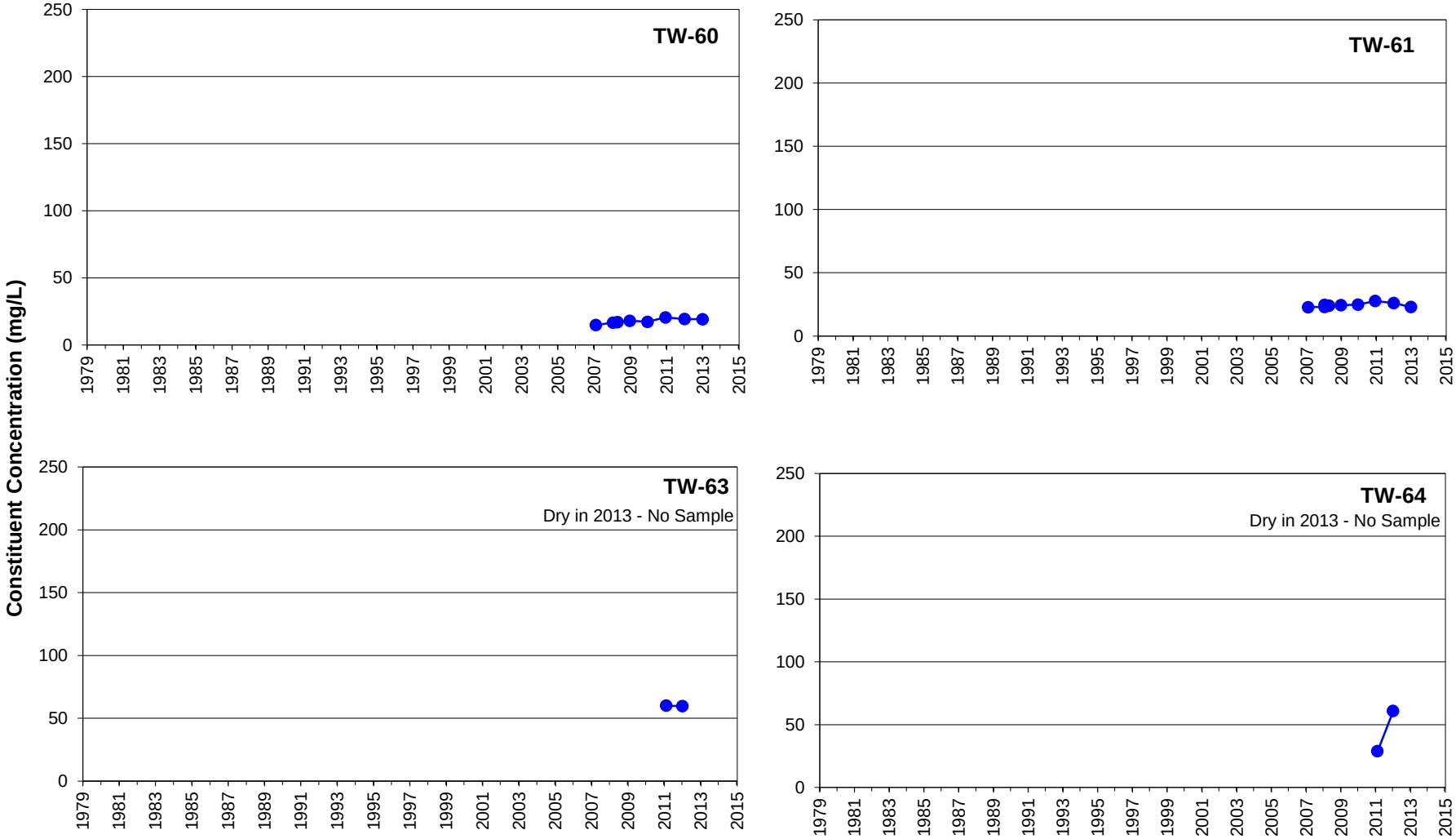
Constituent Concentration (mg/L)

FIGURE **F-20**

CHLORIDE IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

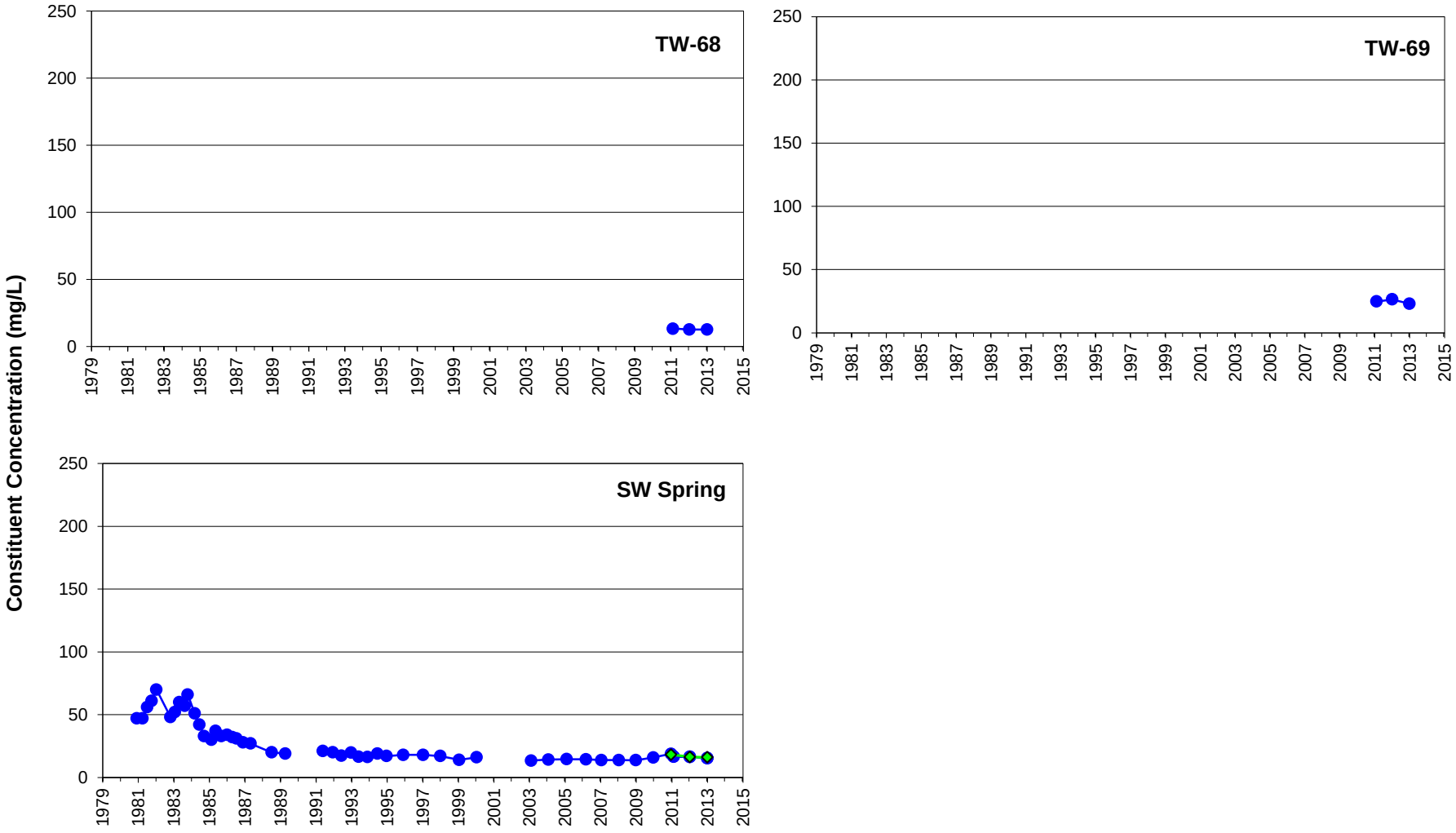
Constituent Concentration (mg/L)

FIGURE **F-21**

CHLORIDE IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

SW Spring above confluence with Soda Creek

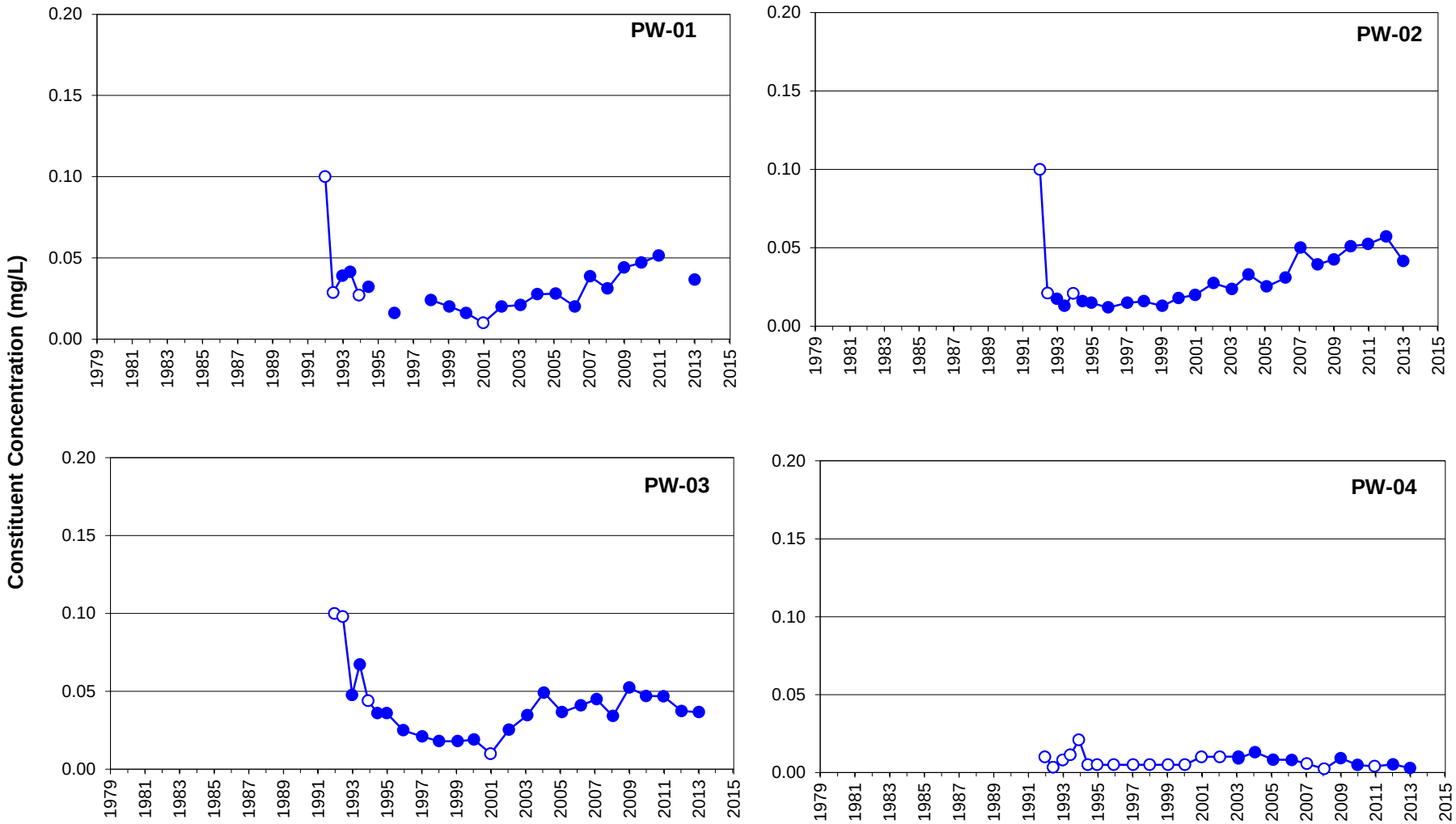
FIGURE **F-22**

CHLORIDE IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX G
TIME-HISTORY GRAPHS FOR MOLYBDENUM



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

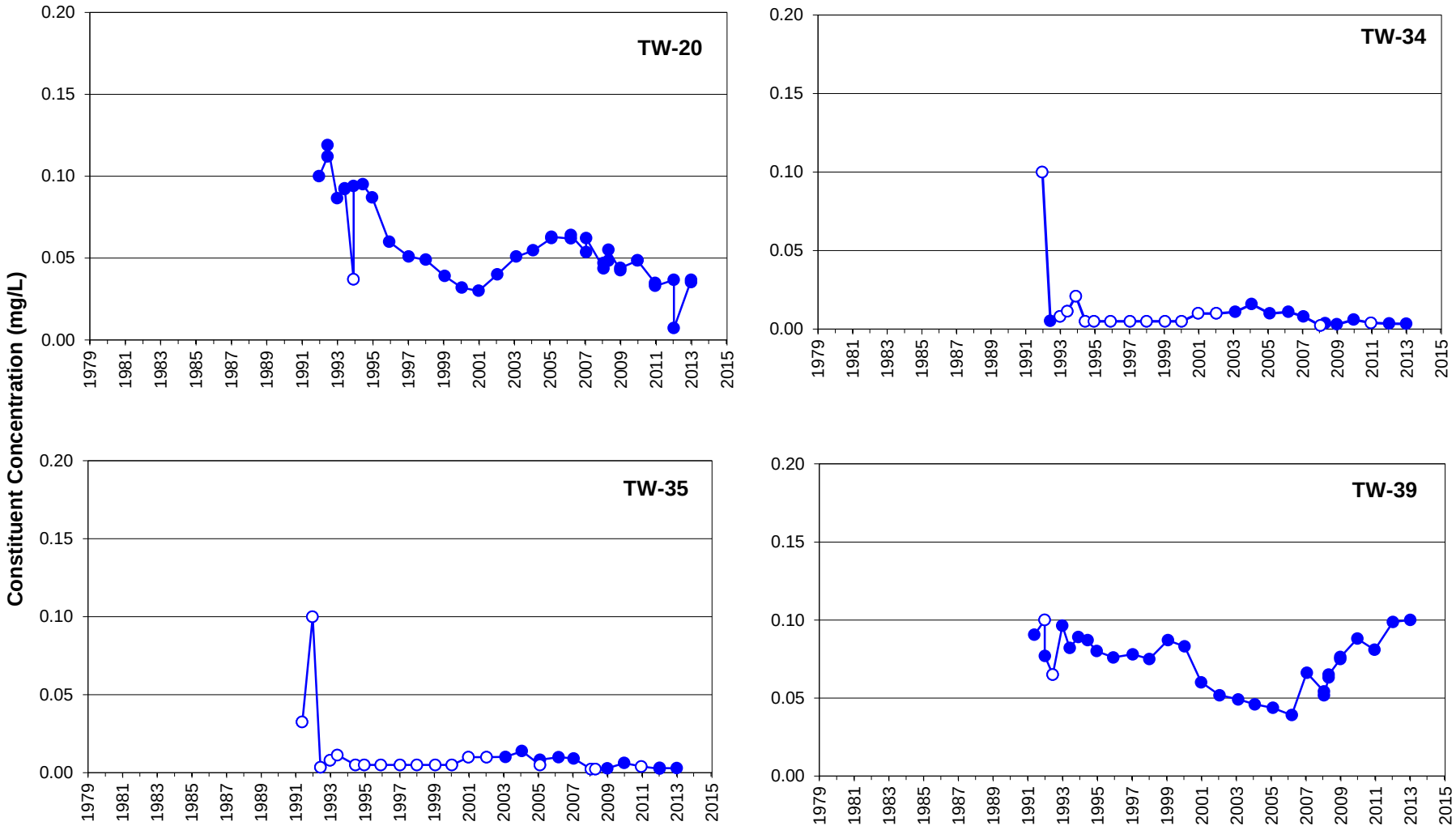
Non-Detects

FIGURE **G-1**

MOLYBDENUM IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Golder Associates

LEGEND

Constituent Concentration (mg/L)

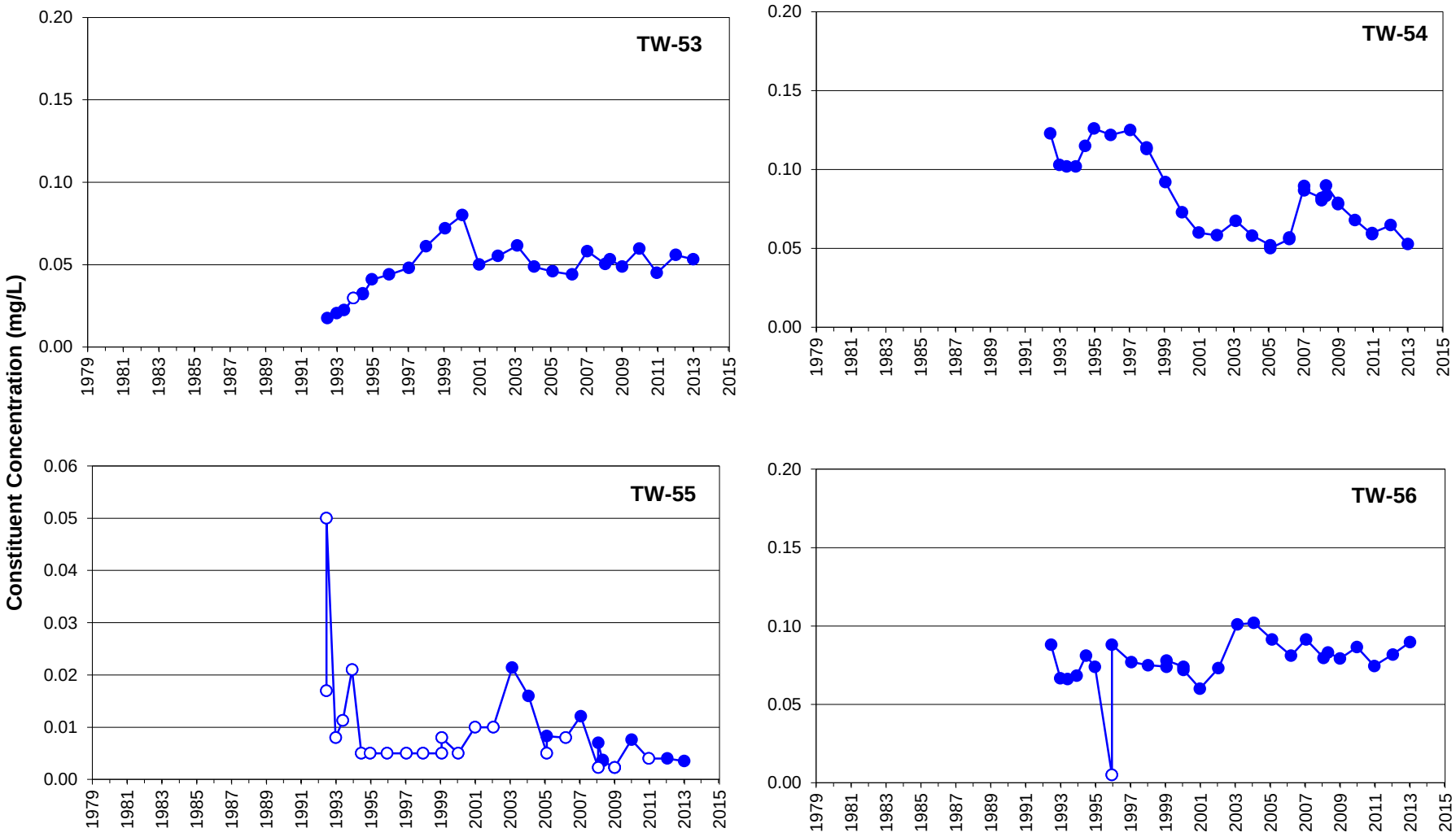
Non-Detects

FIGURE **G-2**

MOLYBDENUM IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

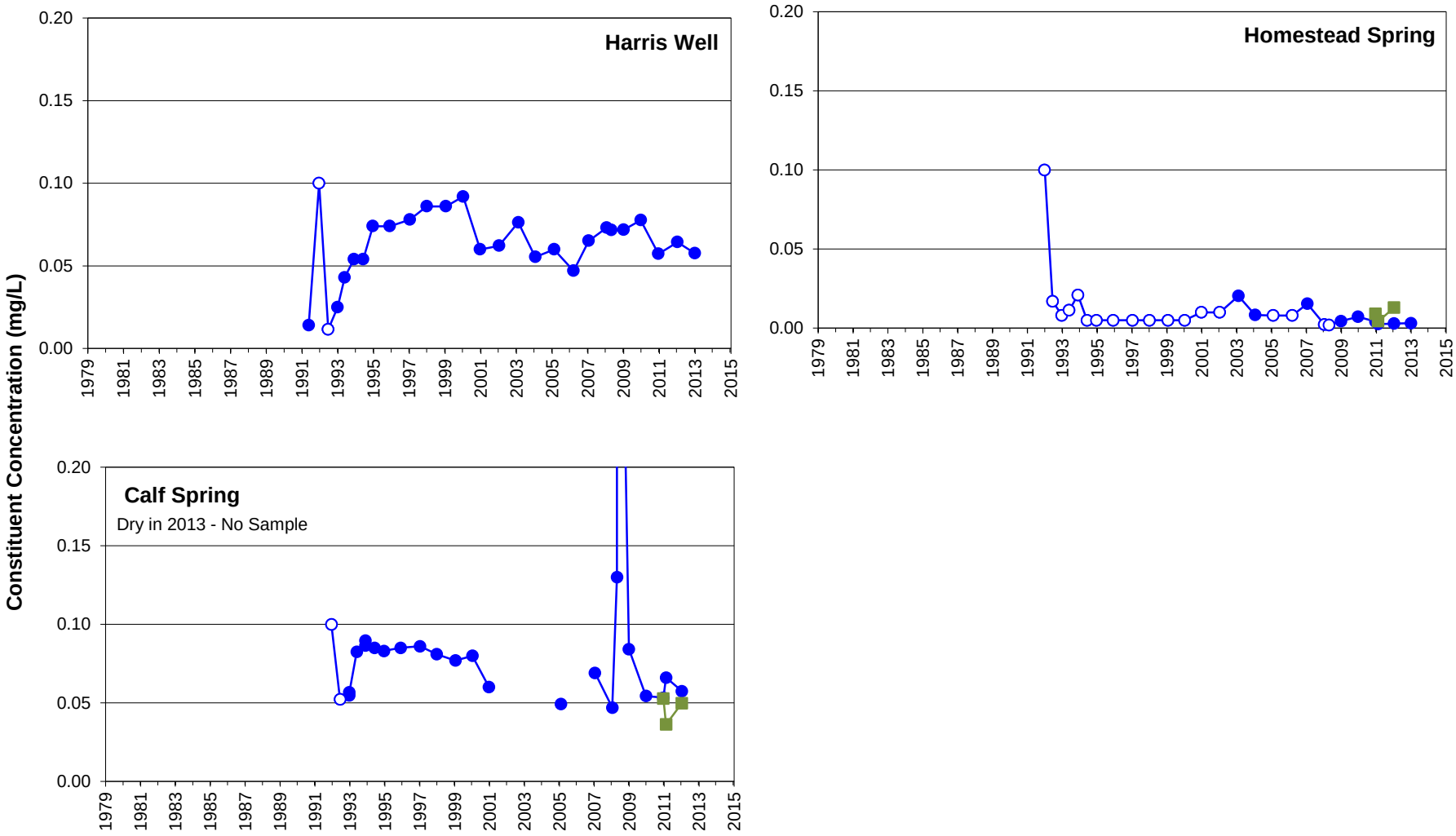
Non-Detects

FIGURE **G-3**

MOLYBDENUM IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

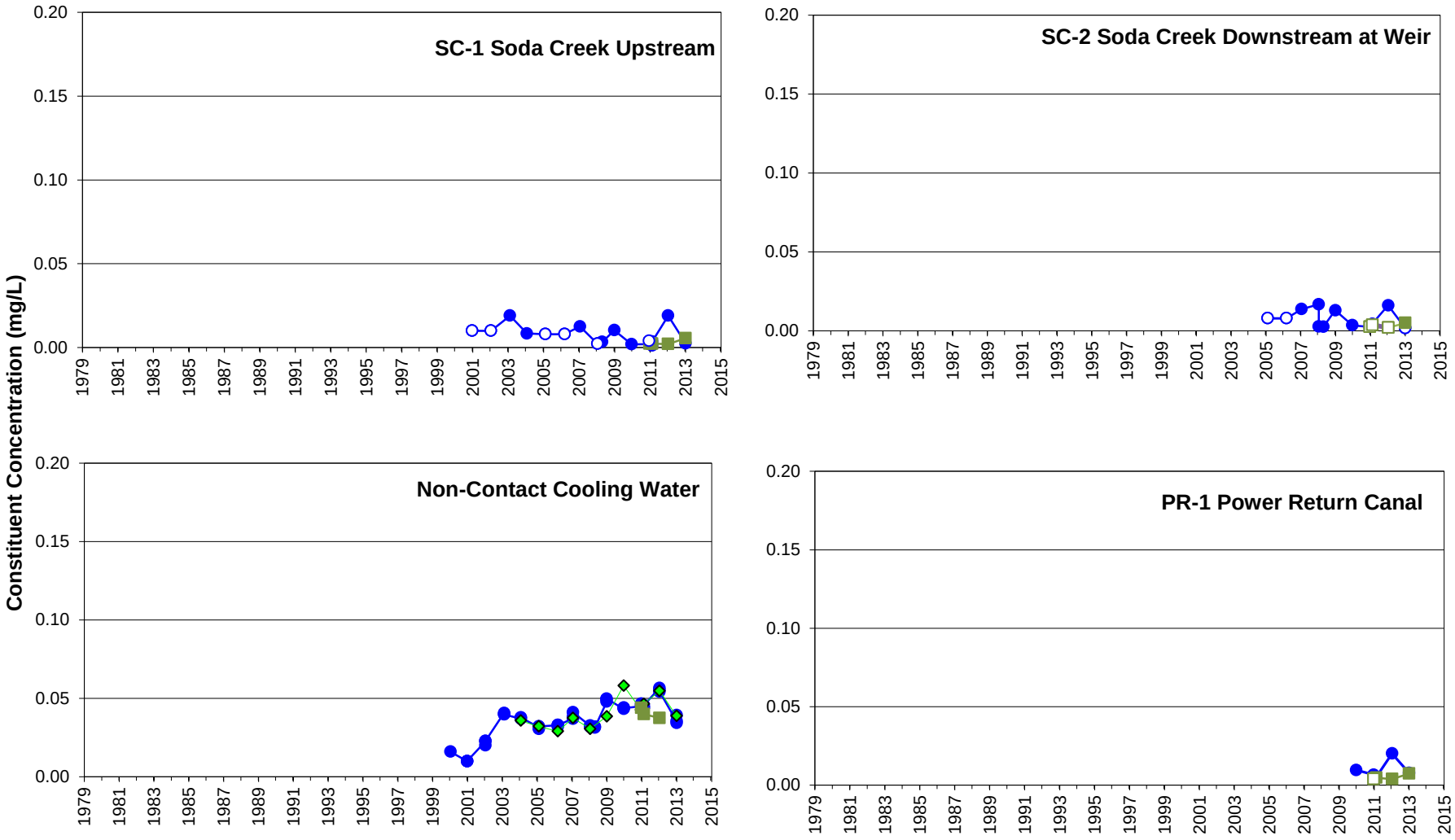
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)

FIGURE **G-4**

MOLYBDENUM IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

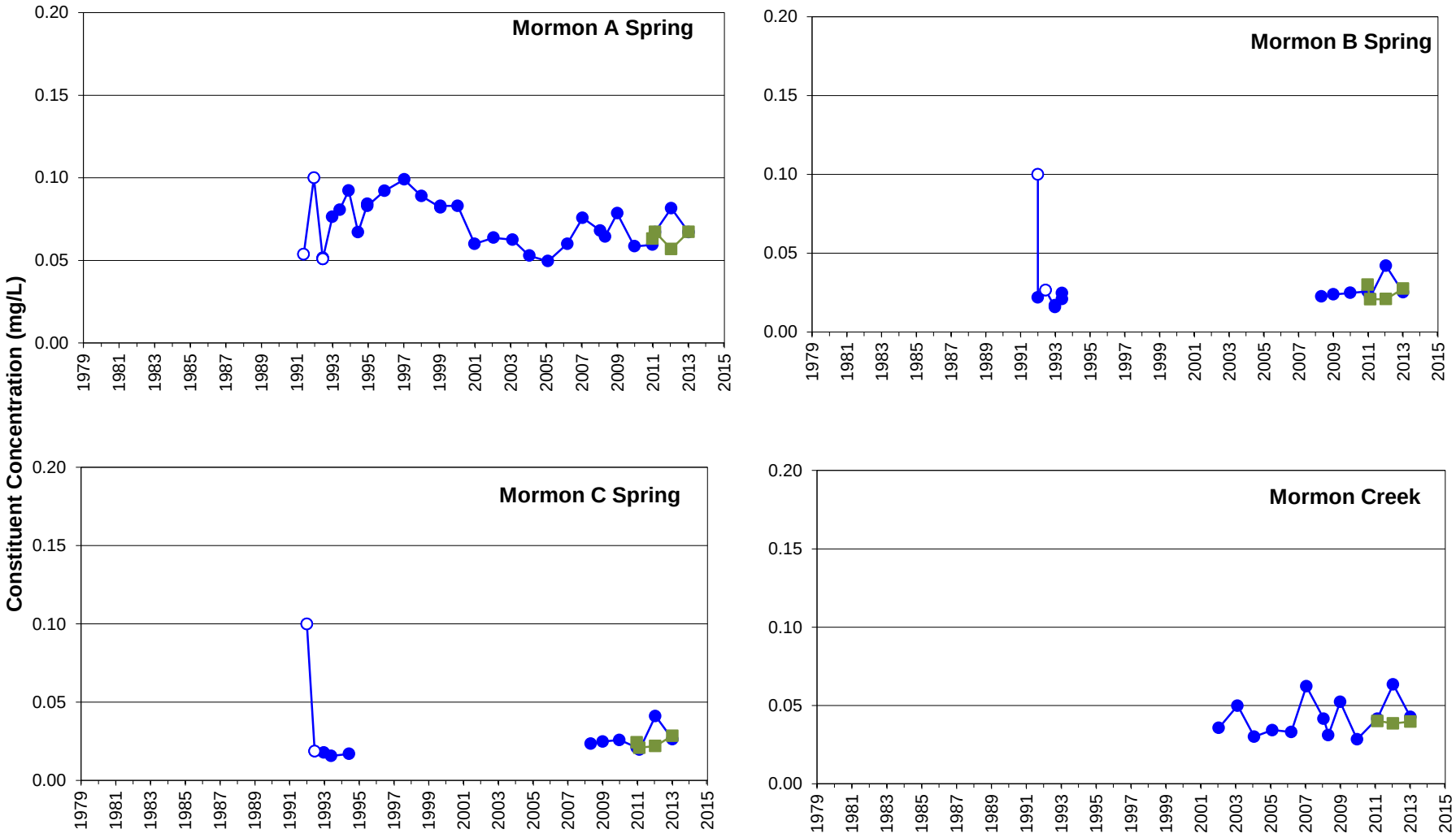
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)
- Pond Inlet

FIGURE **G-5**

MOLYBDENUM IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

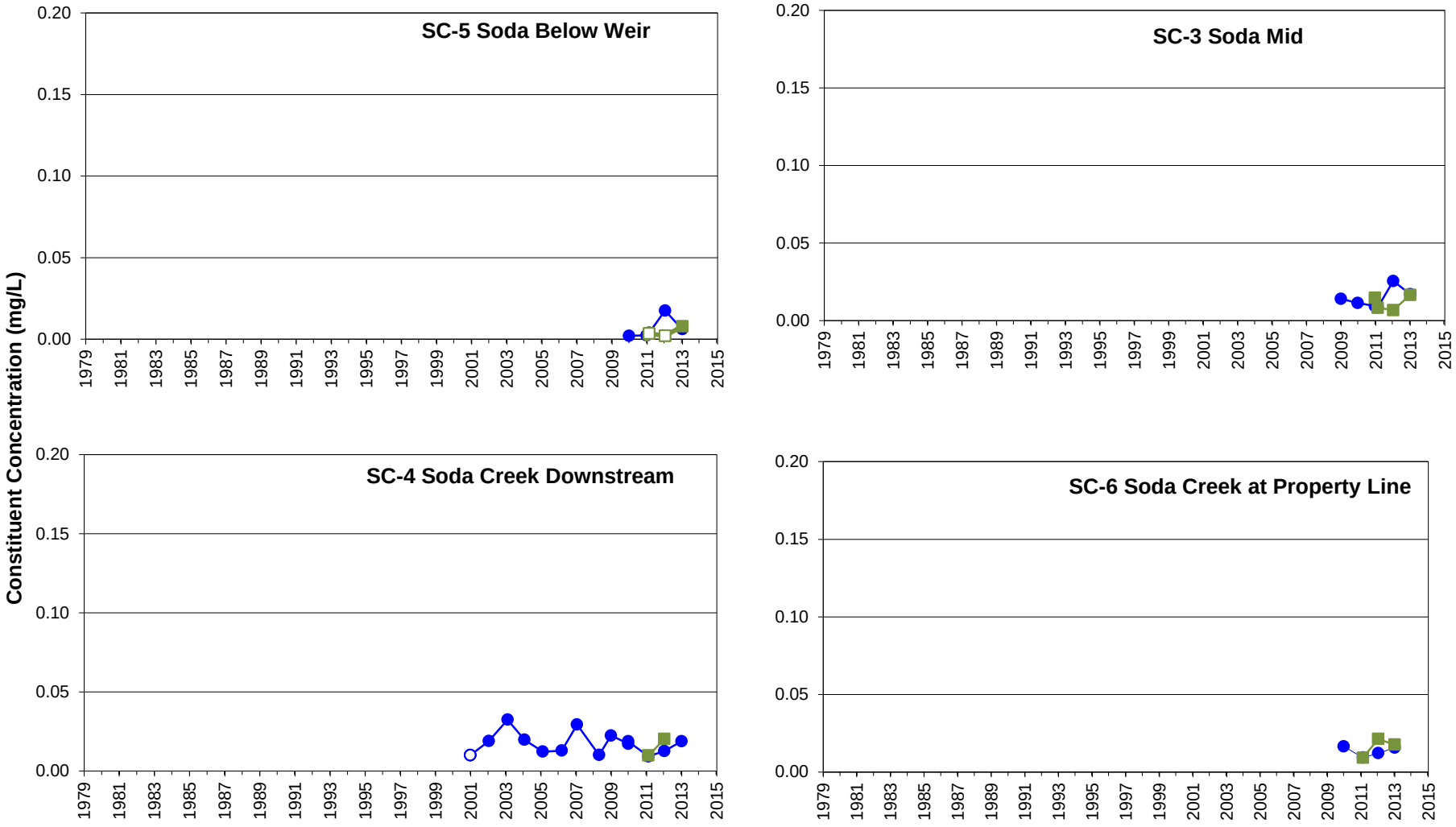
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects

FIGURE **G-6**

MOLYBDENUM IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

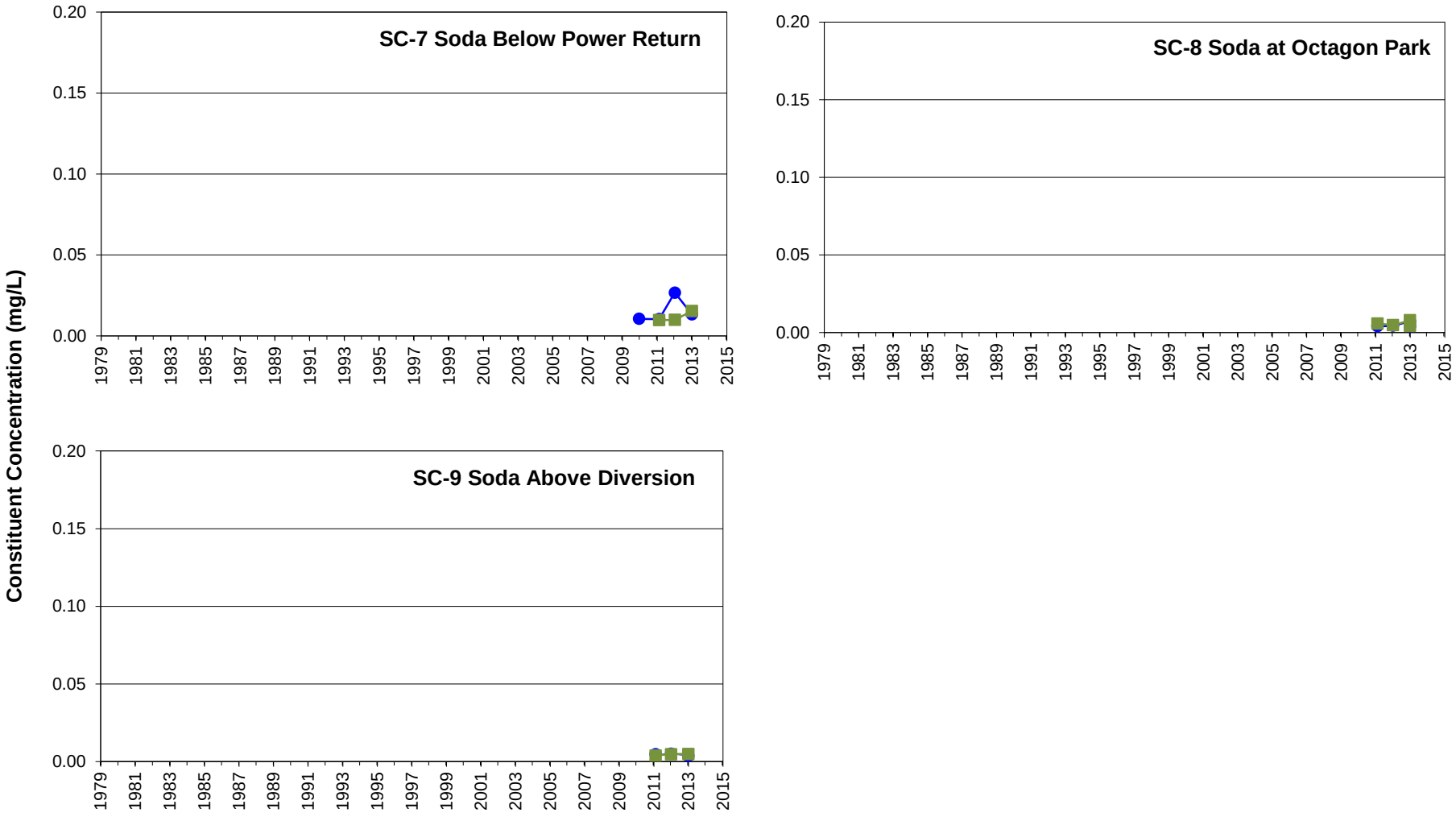
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Non-Detect (mg/L)

FIGURE **G-7**

MOLYBDENUM IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

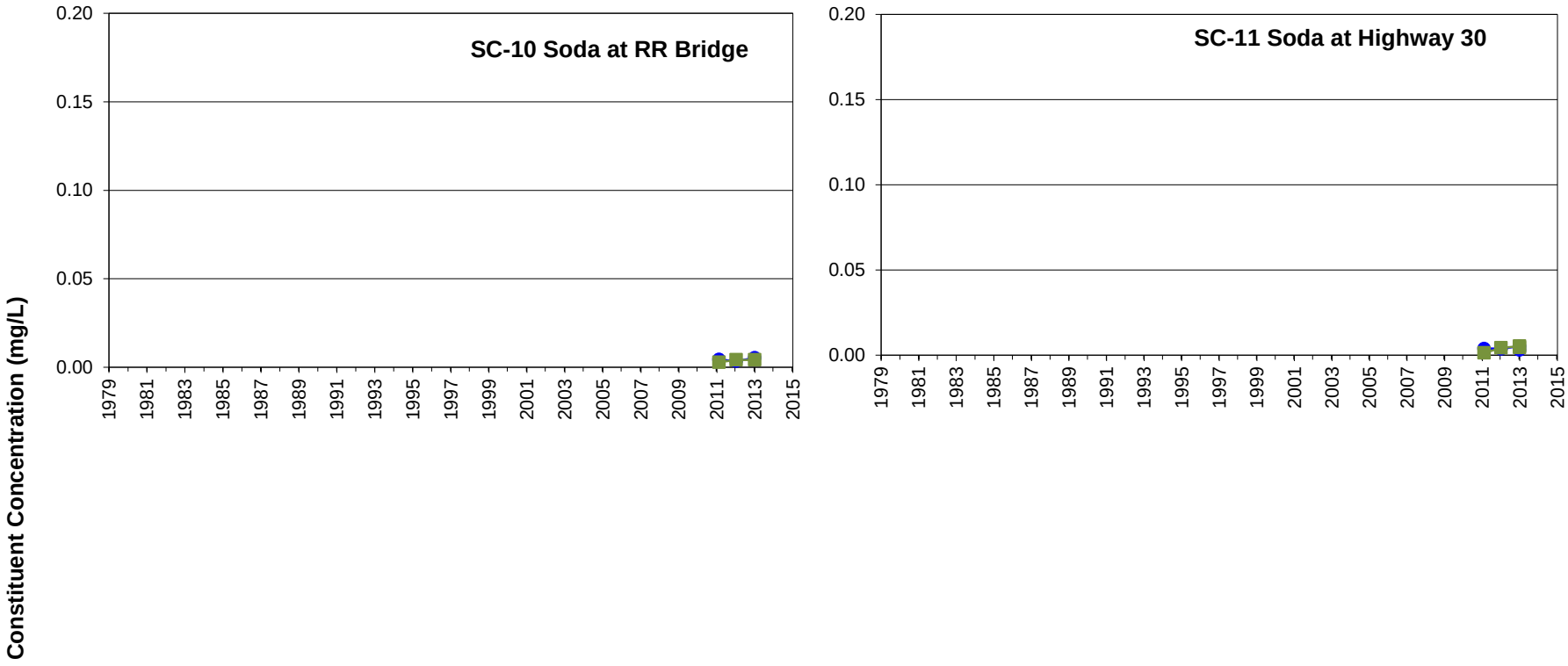
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)

FIGURE **G-8**

MOLYBDENUM IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

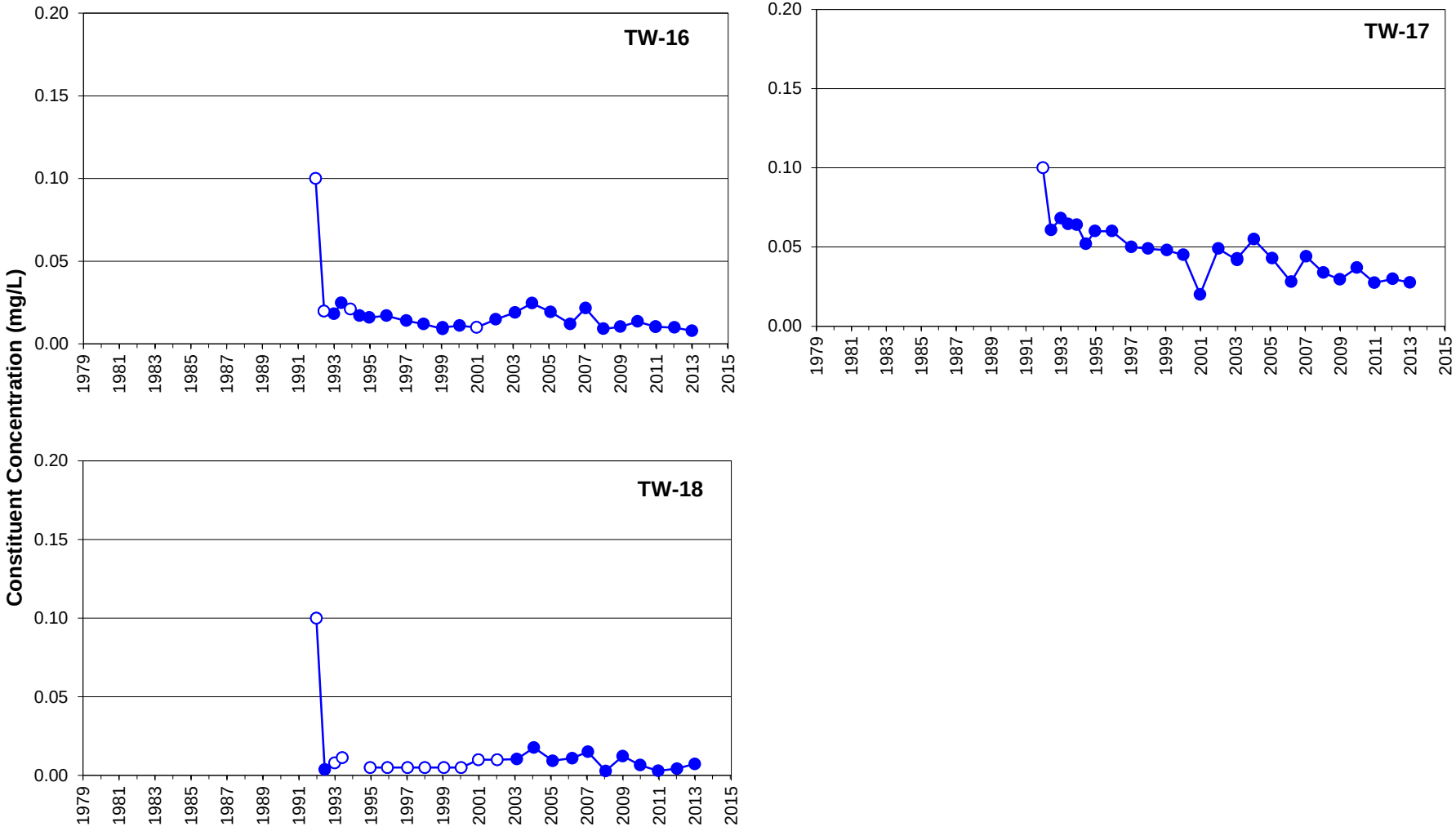
- Constituent Concentration (mg/L)
- Dissolved Constituent Concentration (mg/L)
- Non-detect

FIGURE **G-9**

MOLYBDENUM IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

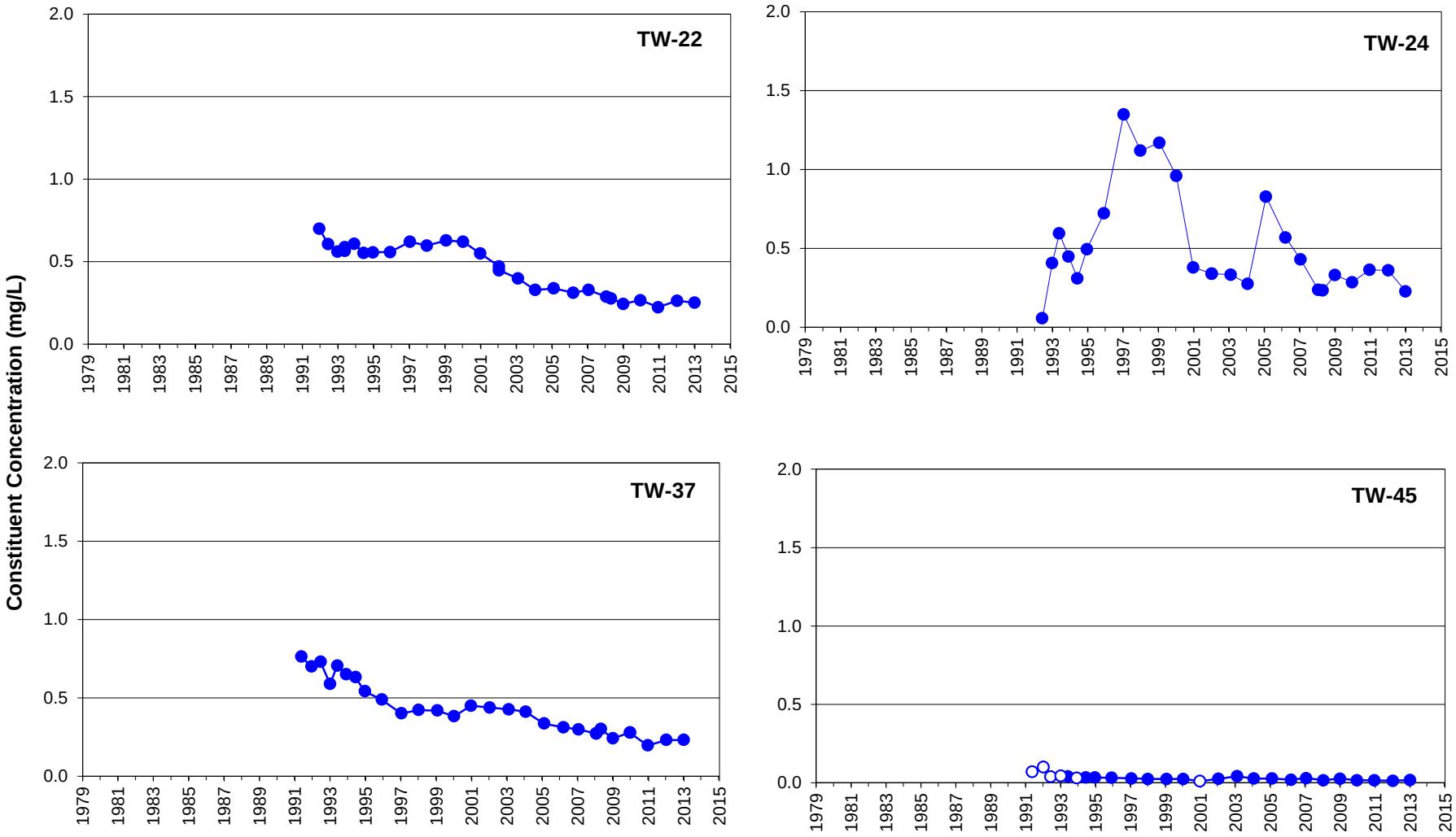
Non-Detects

FIGURE **G-10**

MOLYBDENUM IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

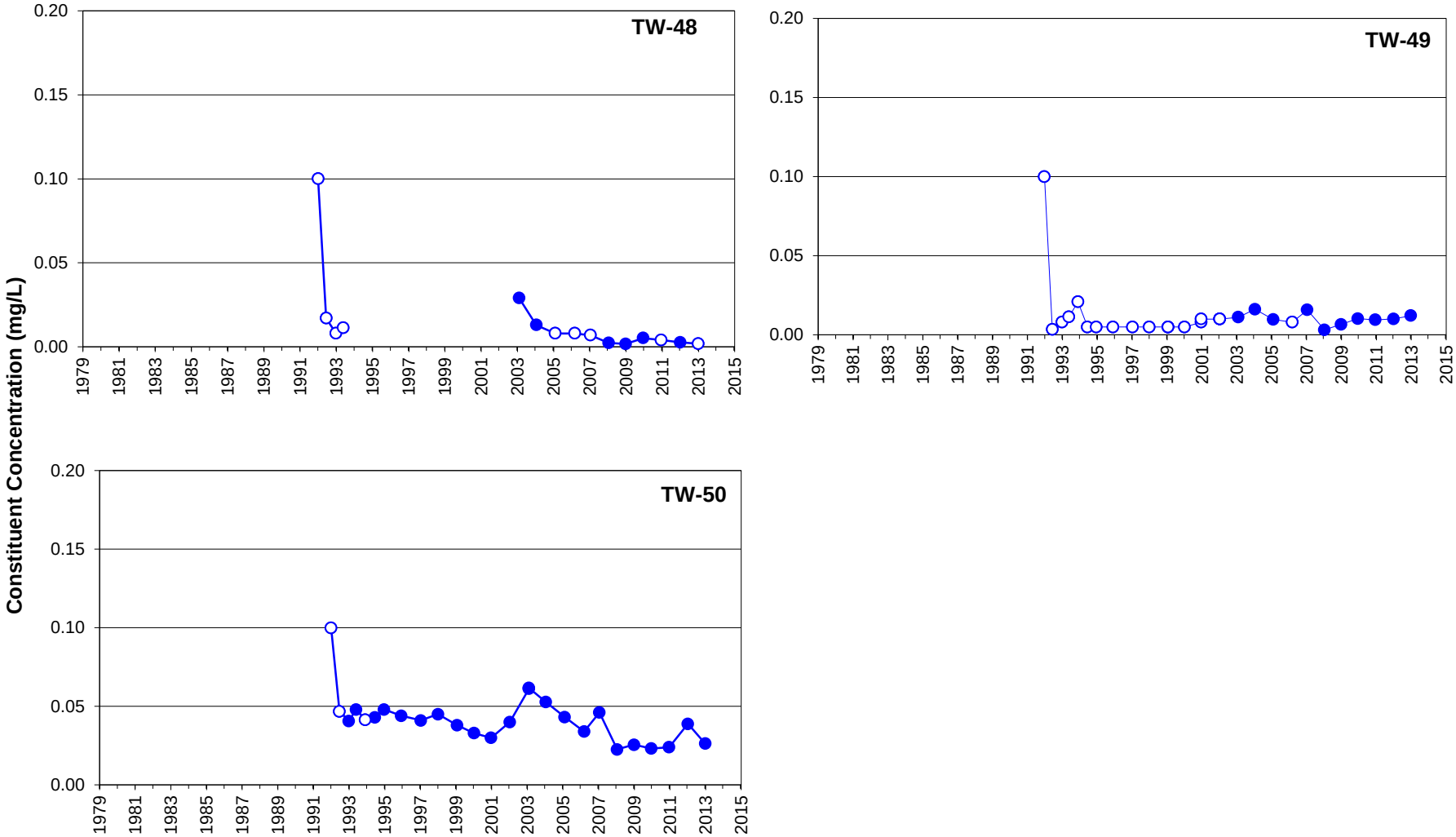
Non-Detects

FIGURE **G-11**

MOLYBDENUM IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

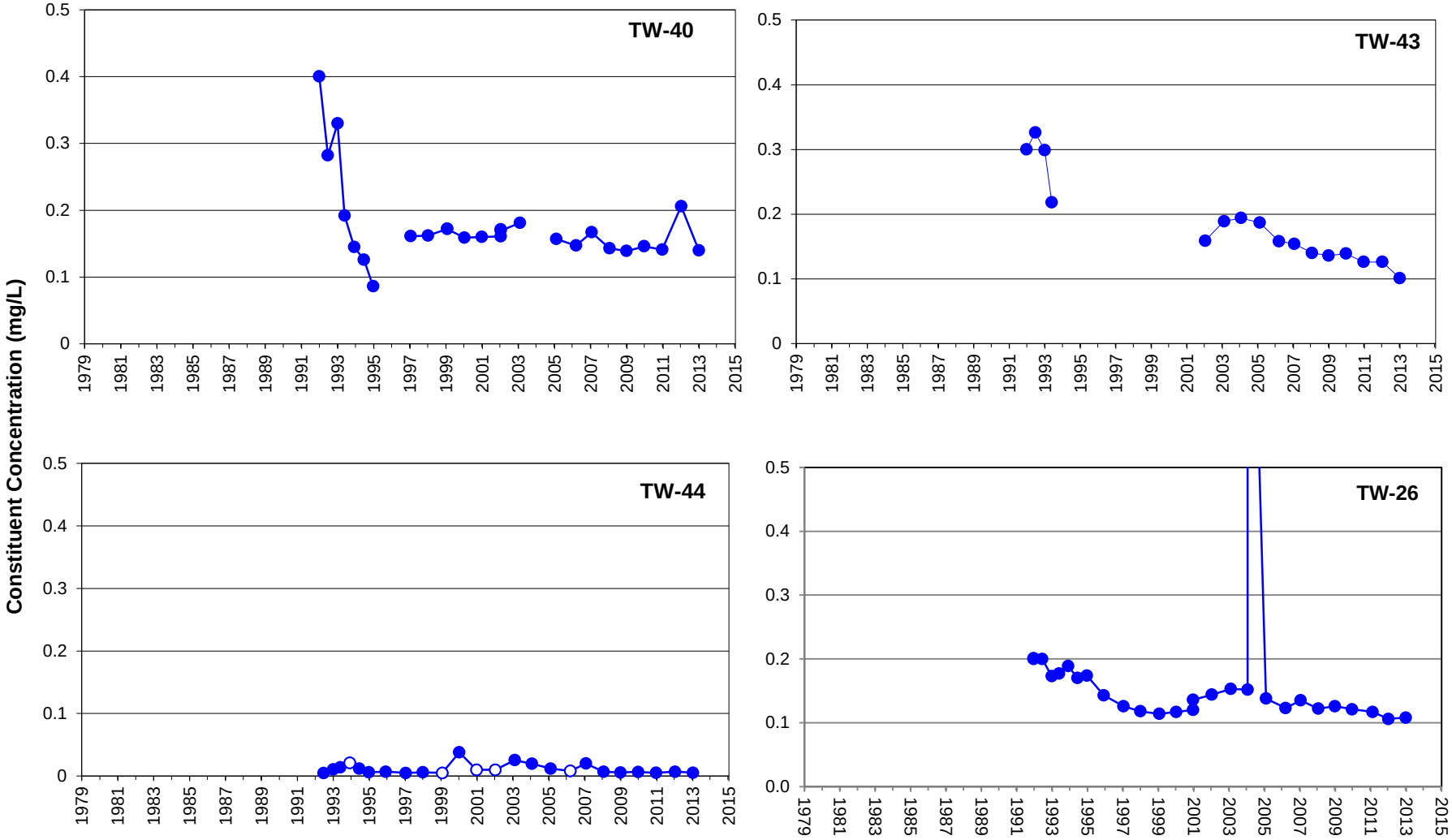
Non-Detects

FIGURE **G-12**

MOLYBDENUM IN UNDERFLOW SOLIDS
PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

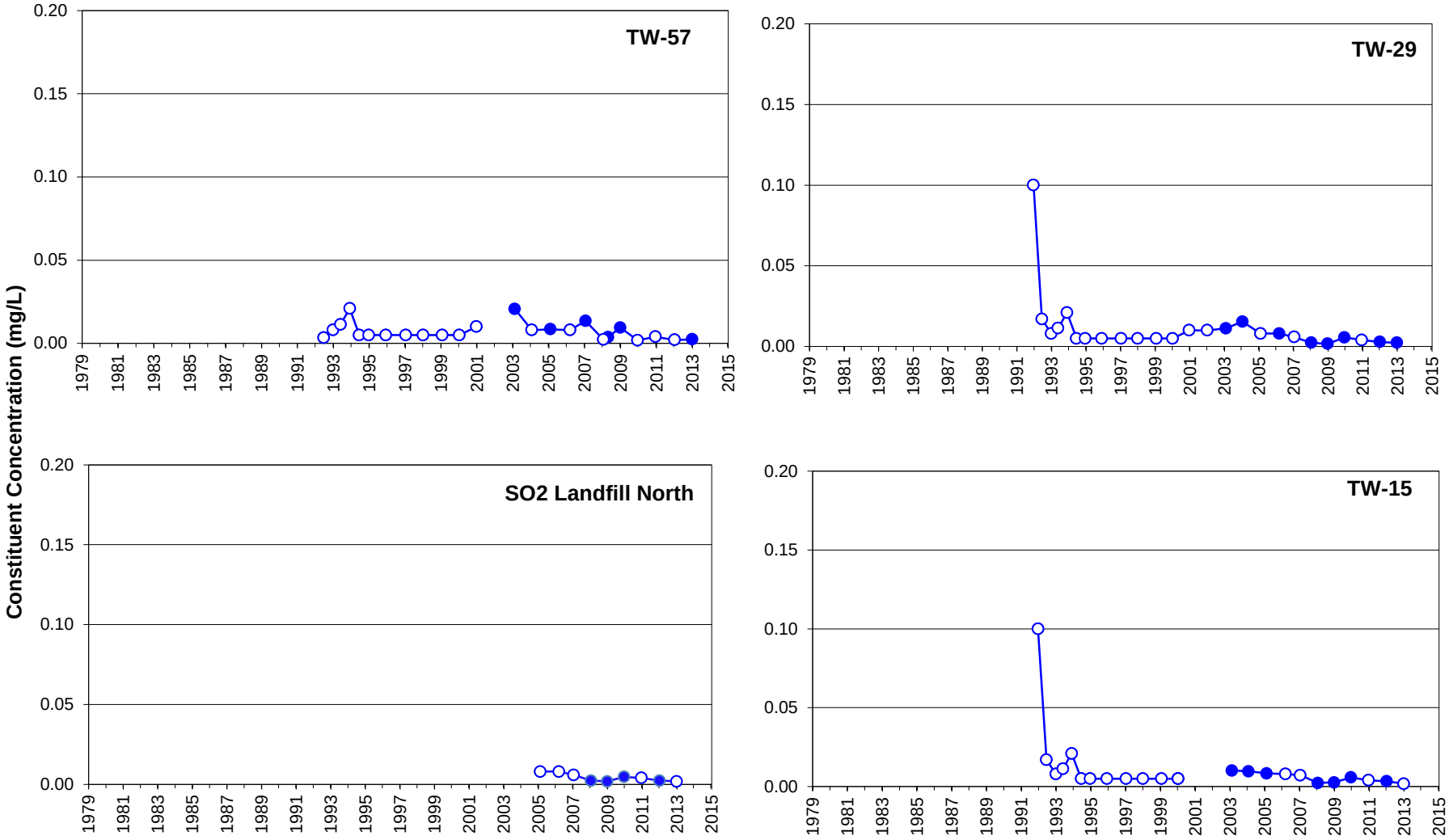
Non-Detects

FIGURE **G-13**

MOLYBDENUM IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

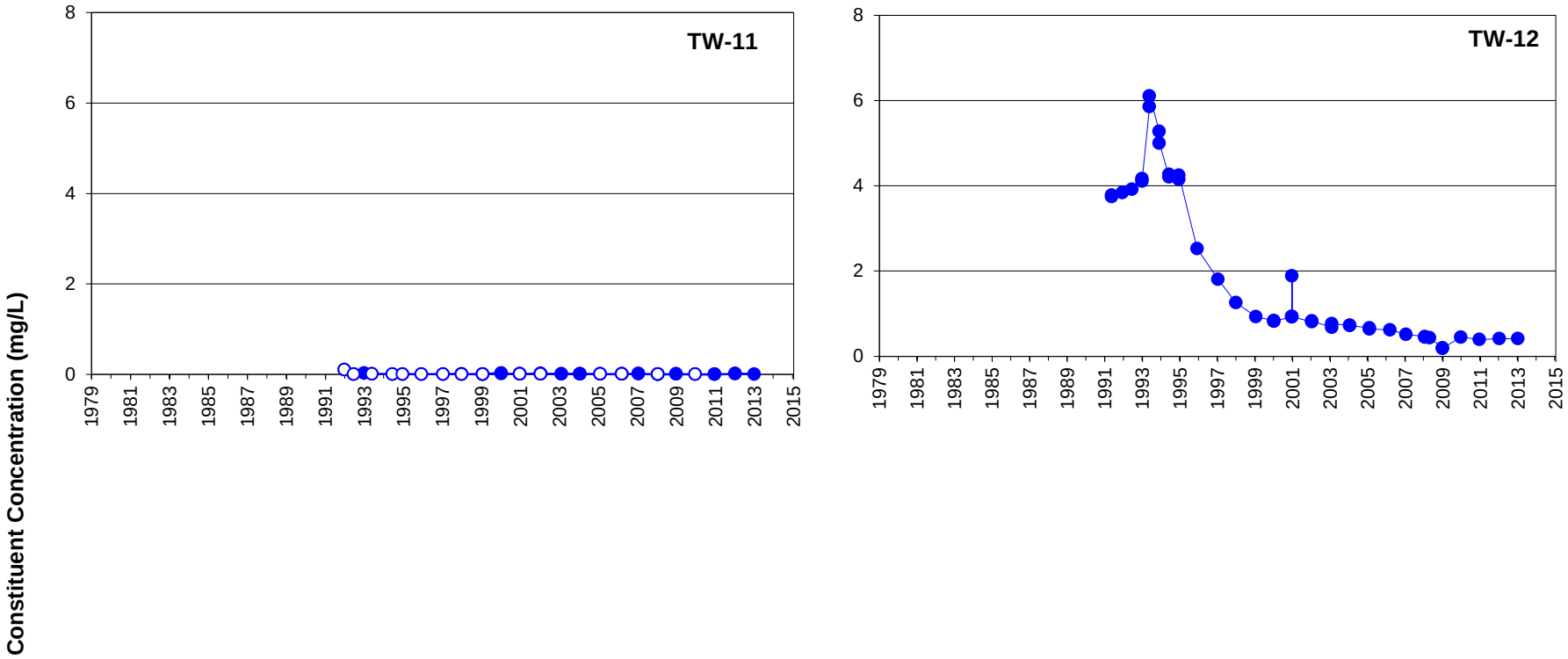
Non-Detects

FIGURE **G-14**

MOLYBDENUM IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

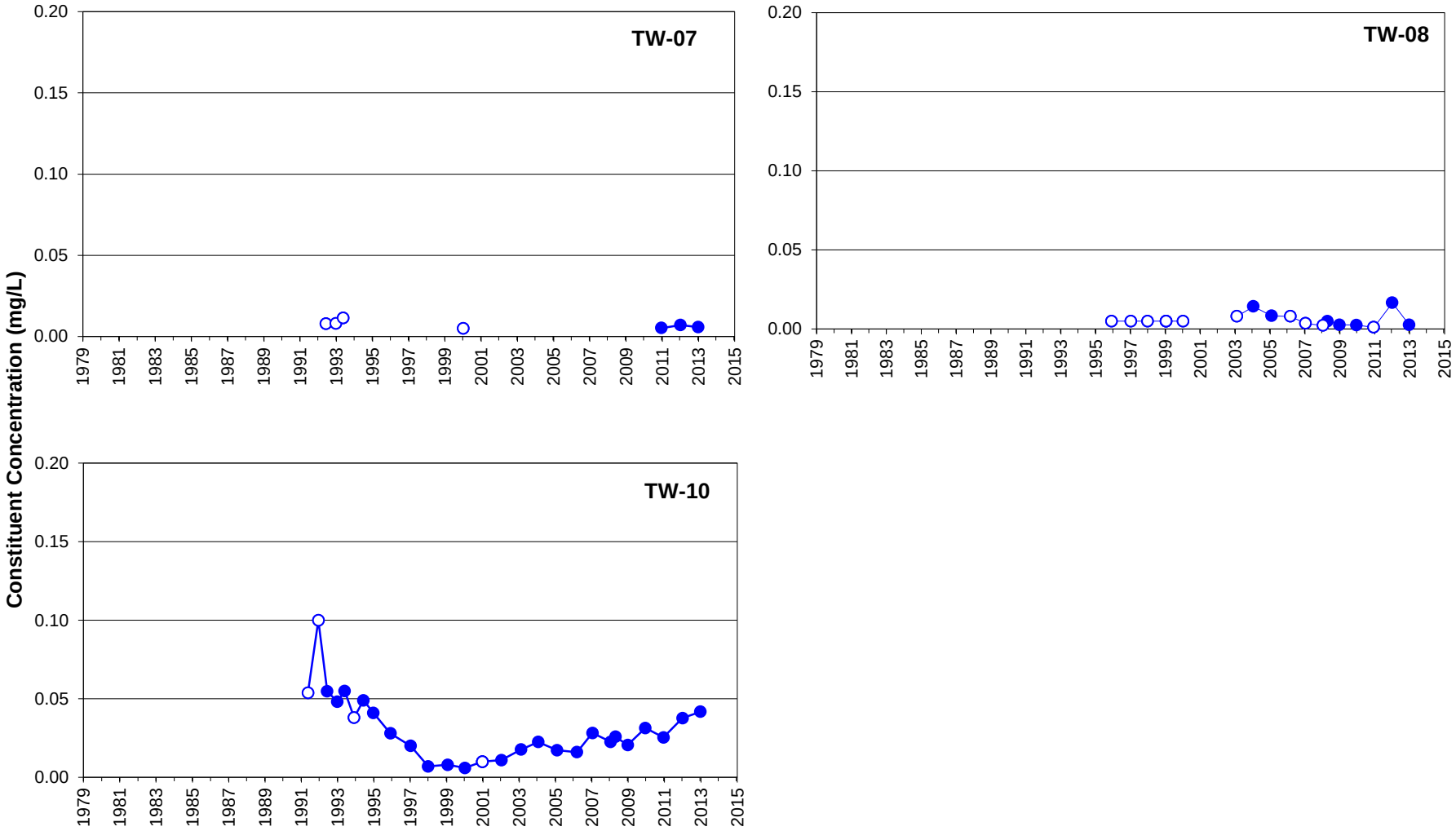
Non-Detects

FIGURE **G-15**

MOLYBDENUM IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

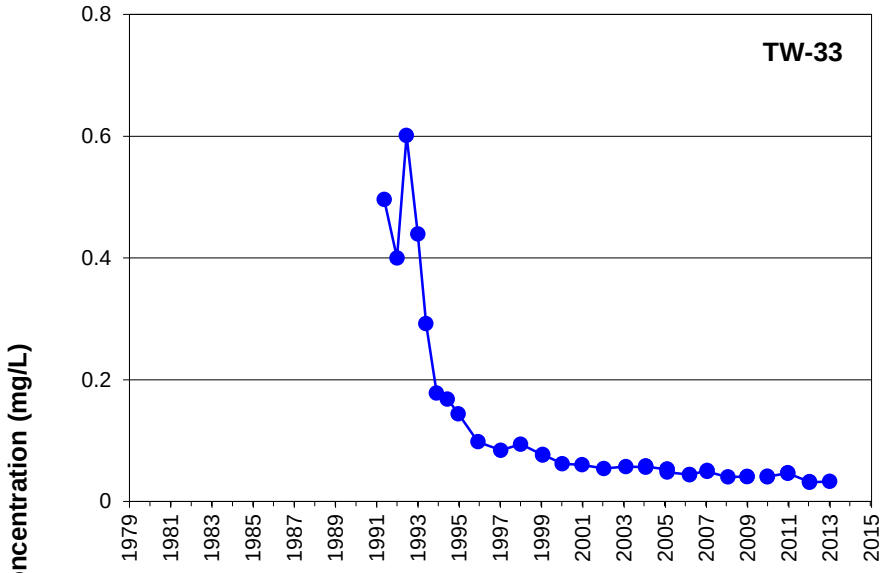
Non-Detects

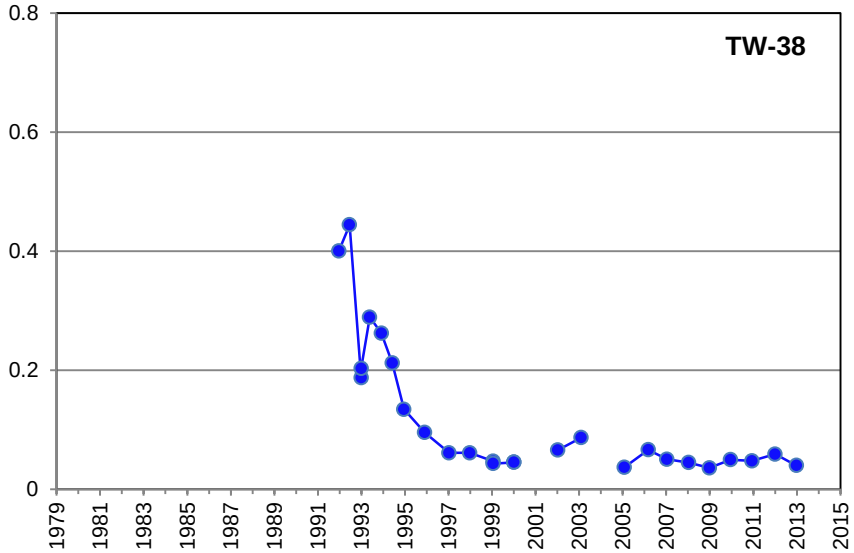
FIGURE **G-16**

MOLYBDENUM IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002





Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

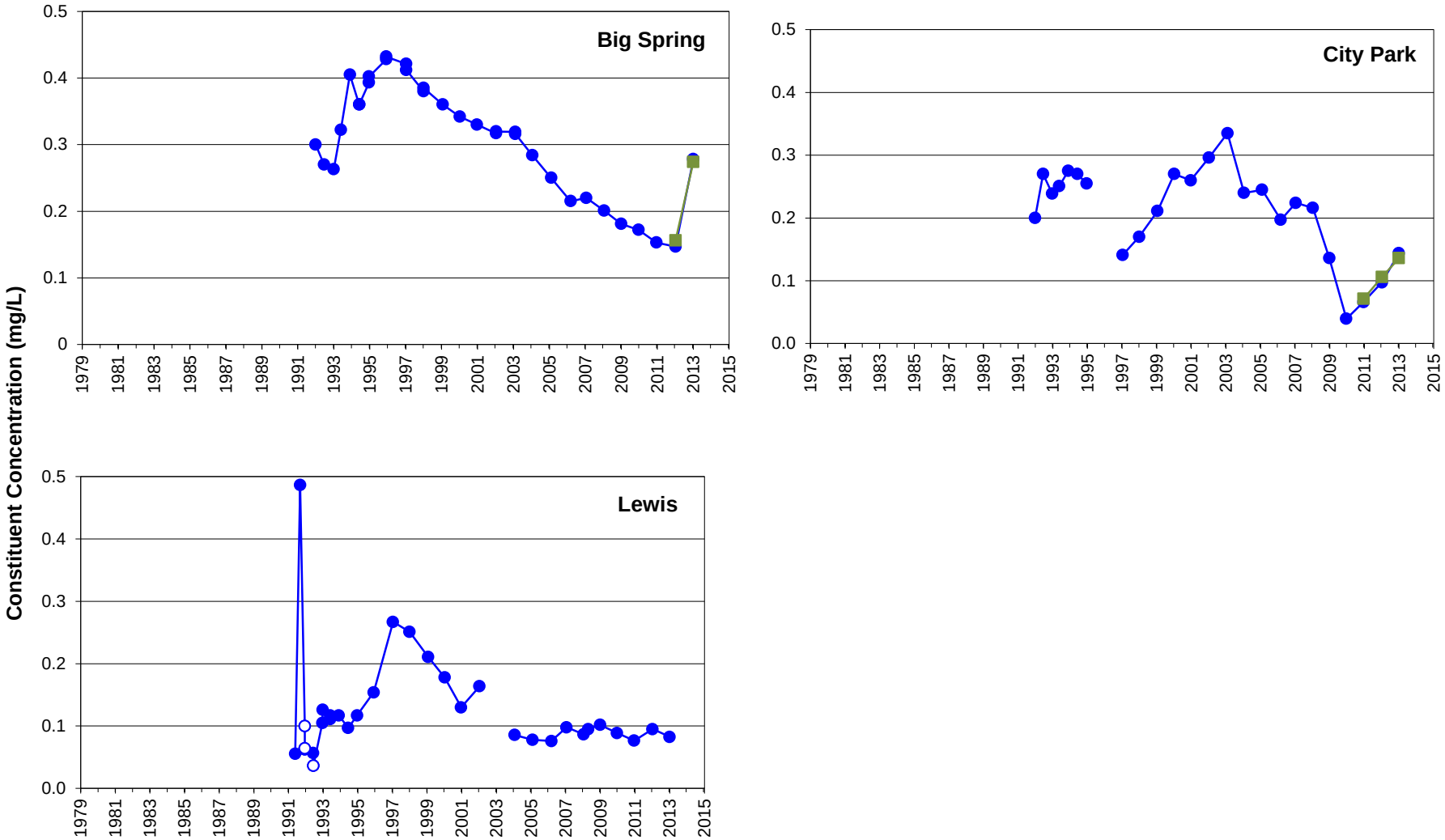
Non-Detects

FIGURE **G-17**

MOLYBDENUM IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

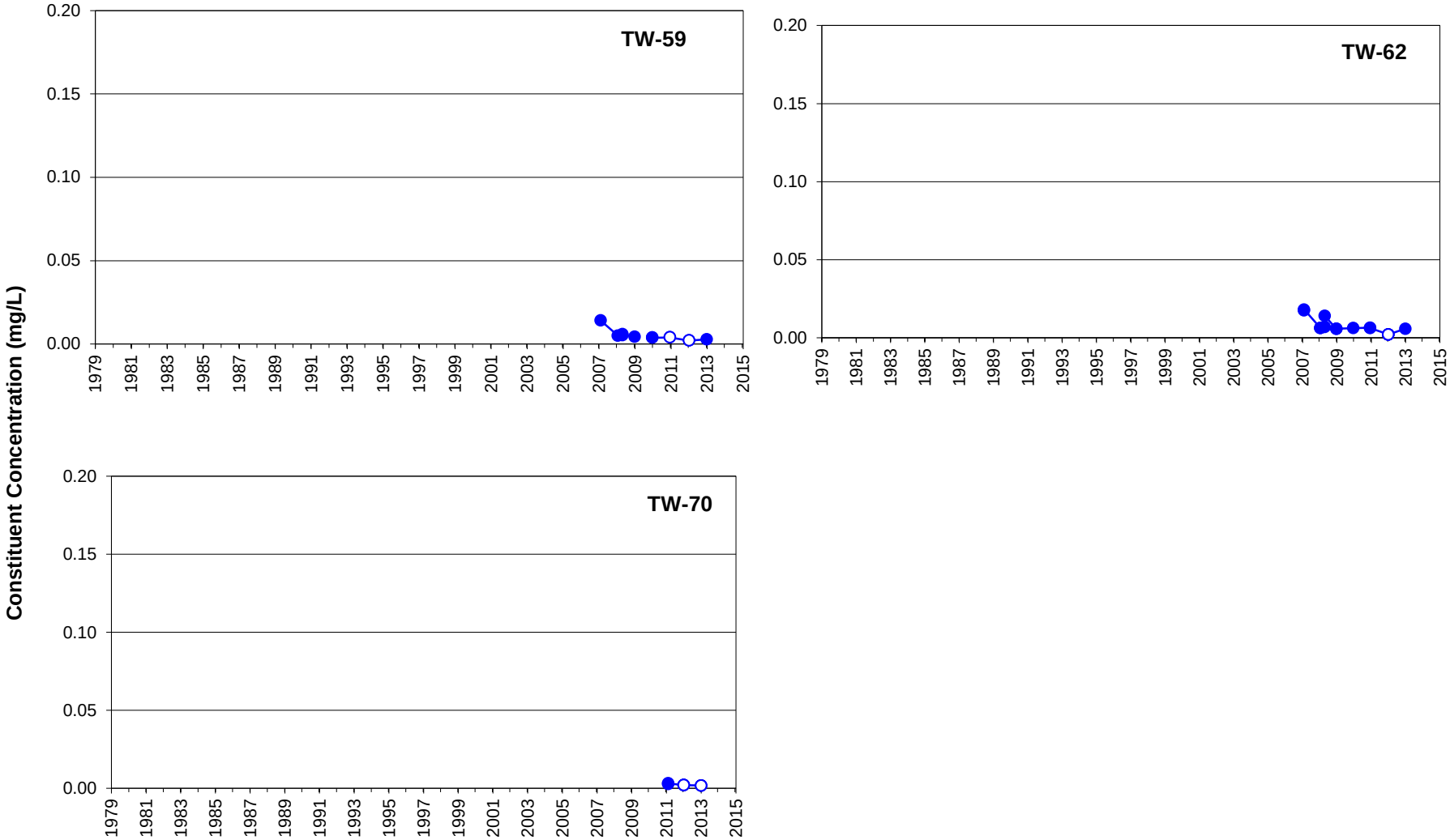
- Constituent Concentration (mg/L)
- Non-Detects
- Dissolved Constituent Concentration (mg/L)

FIGURE **G-18**

MOLYBDENUM IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

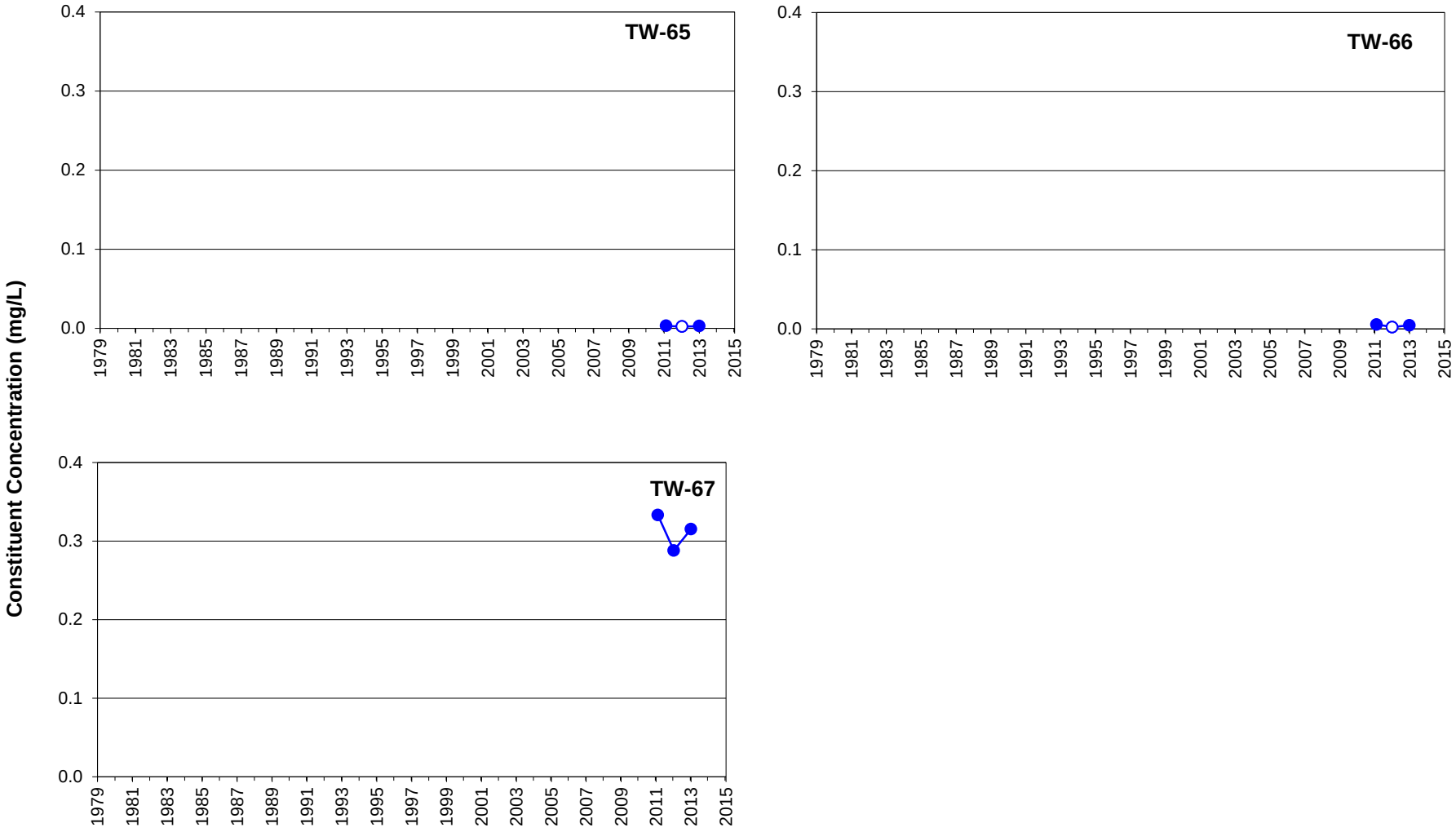
non-detects

FIGURE **G-19**

MOLYBDENUM IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

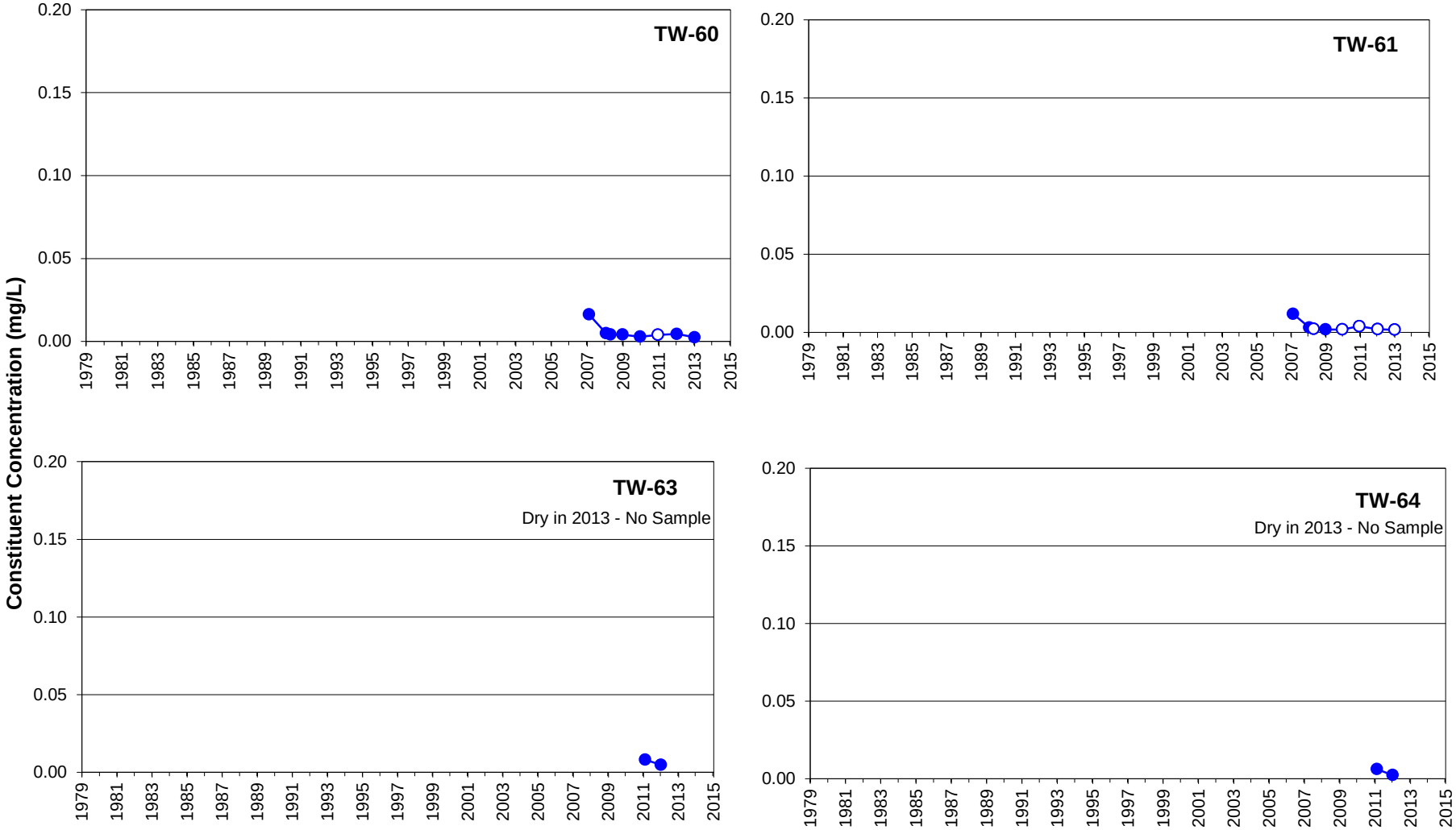
non-detects

FIGURE **G-20**

MOLYBDENUM IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

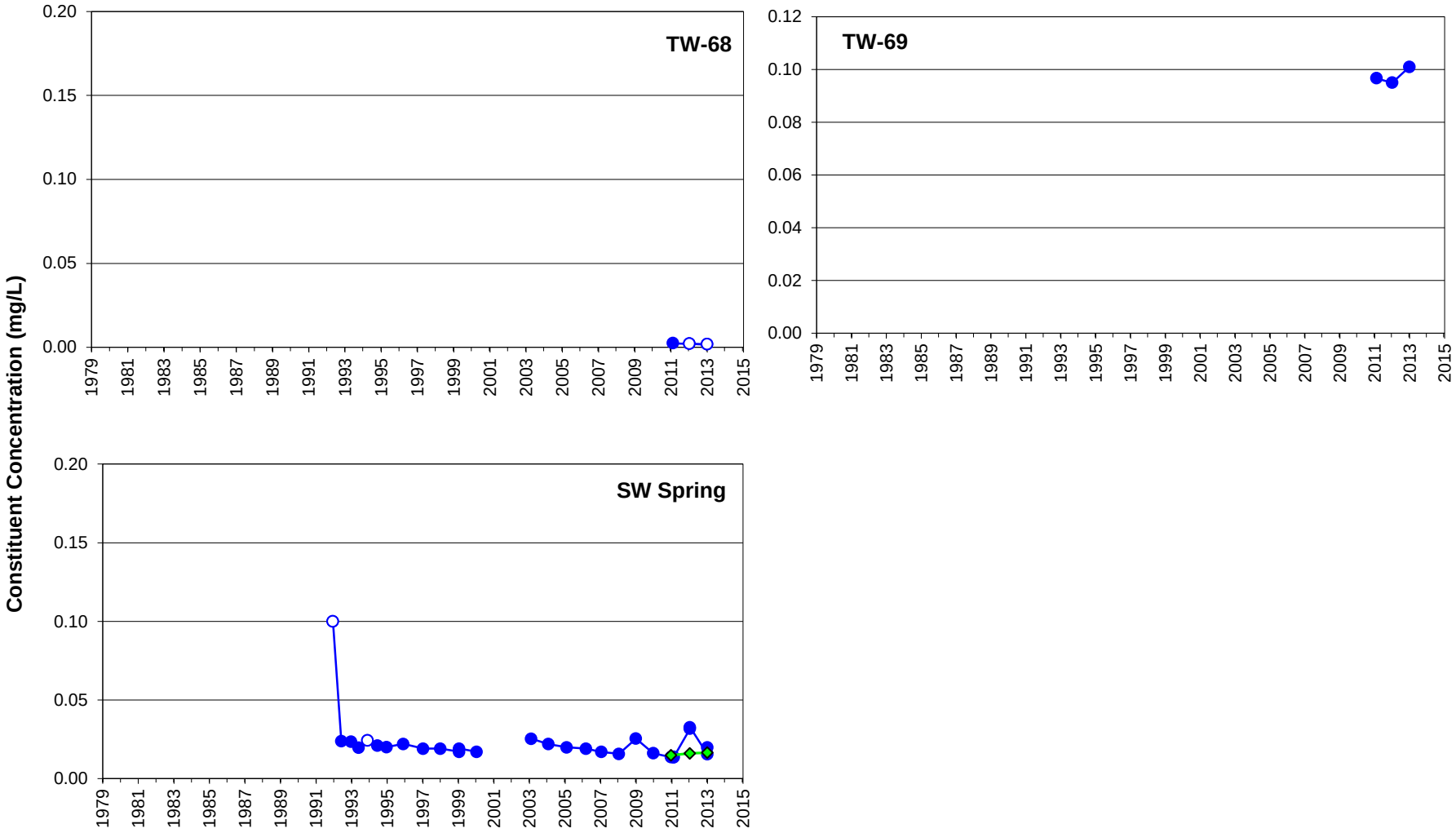
non-detects

FIGURE **G-21**

MOLYBDENUM IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

- Constituent Concentration (mg/L)
- Non-detects
- SW Spring above confluence with Soda Creek

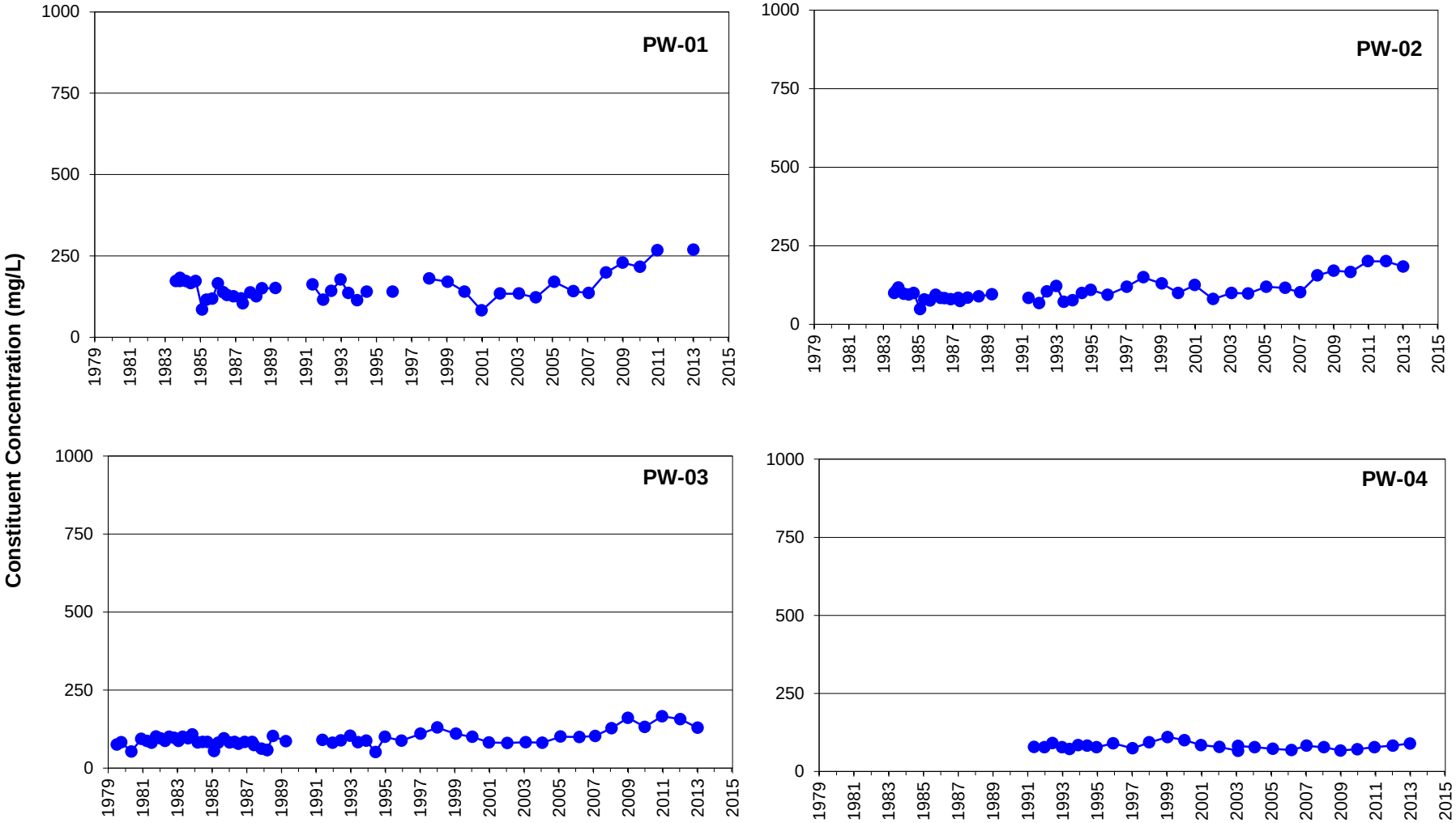
FIGURE **G-22**

MOLYBDENUM IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX H
TIME-HISTORY GRAPHS FOR SULFATE



Remediation goals shown for point of compliance locations only

LEGEND

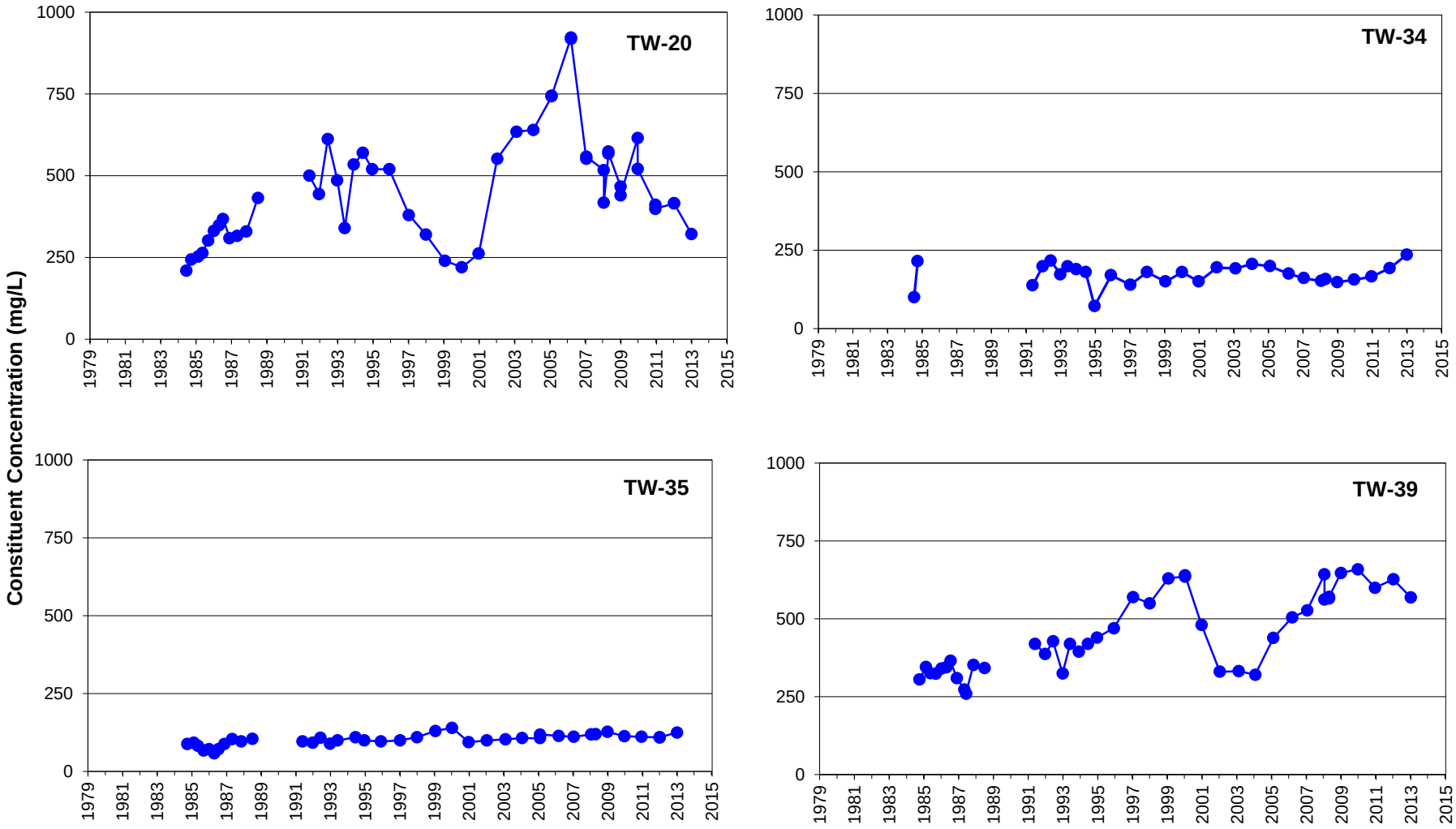
Constituent Concentration (mg/L)

FIGURE **H-1**

SULFATE IN PRODUCTION WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

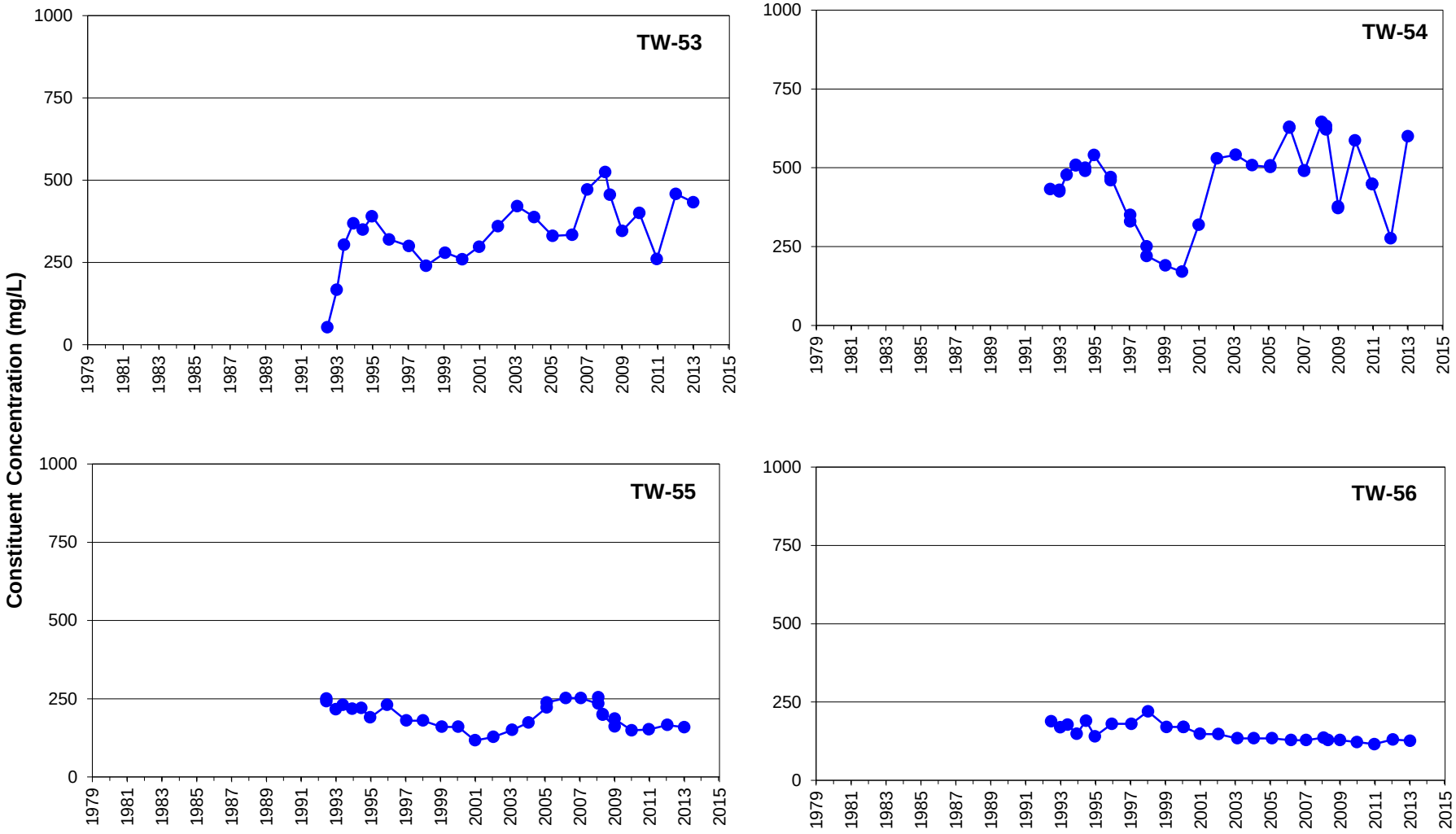
Constituent Concentration (mg/L)

FIGURE **H-2**

SULFATE IN SOUTH FENCELINE WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

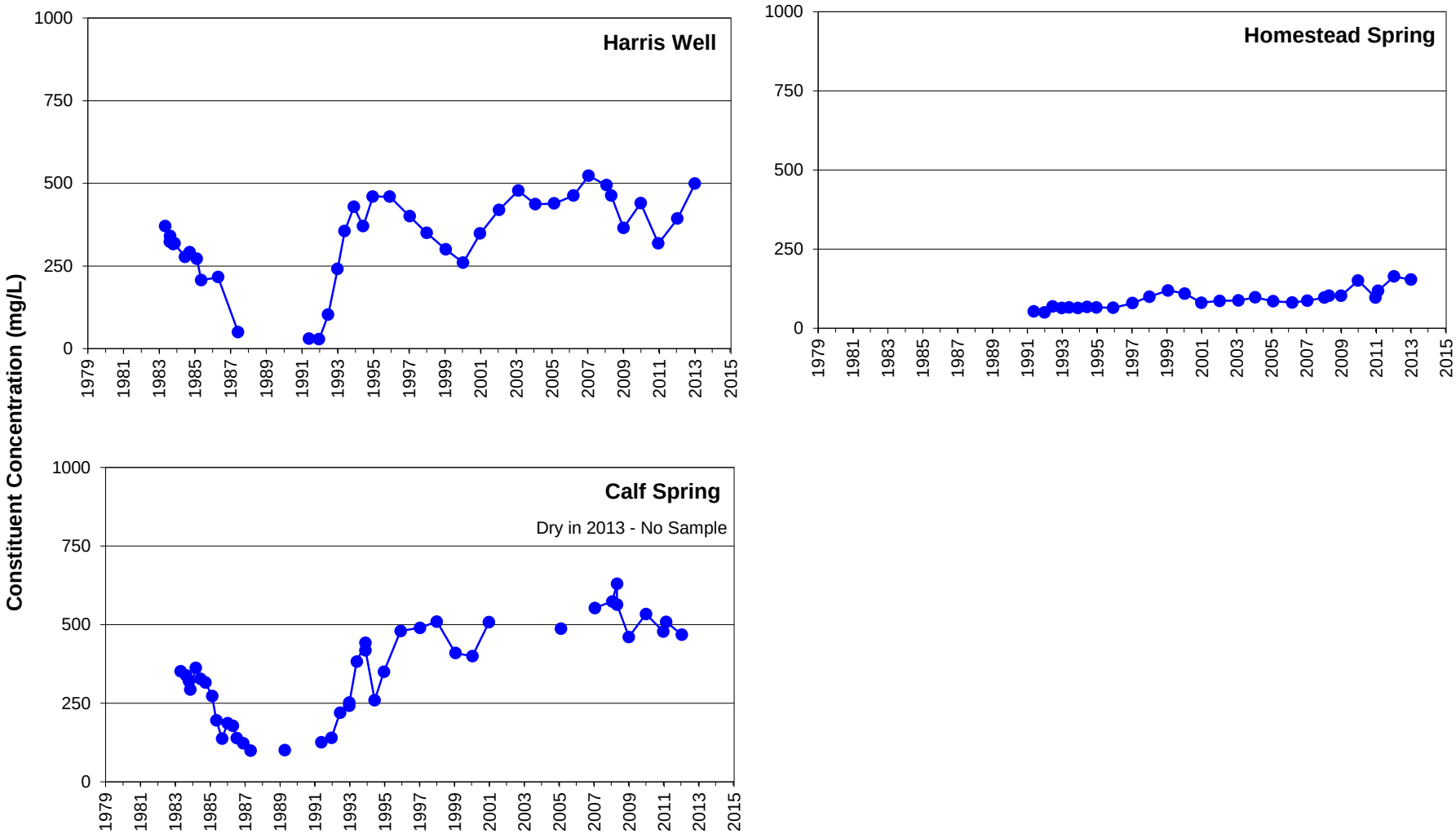
Constituent Concentration (mg/L)

FIGURE **H-3**

SULFATE IN SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

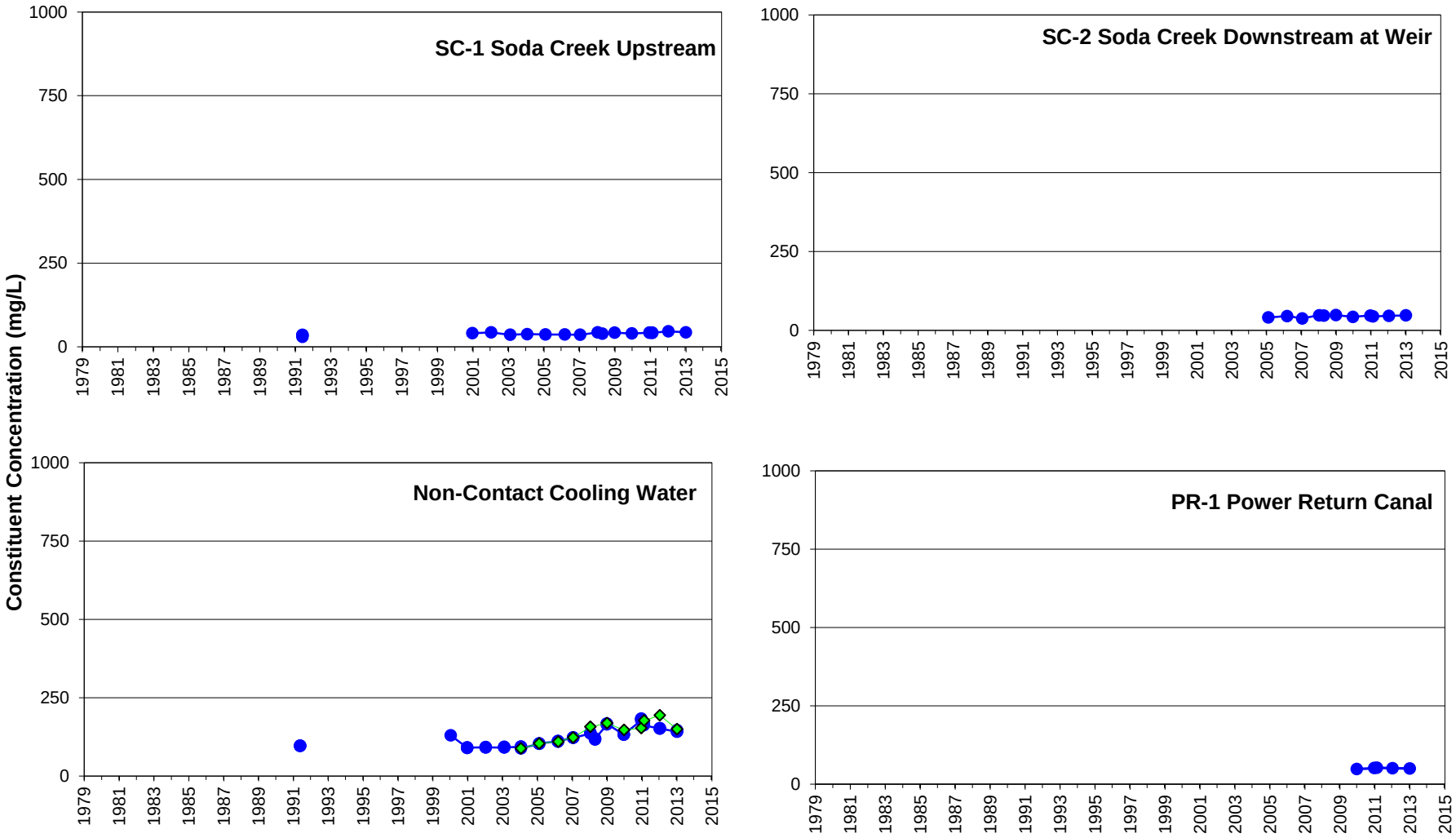
Constituent Concentration (mg/L)

FIGURE **H-4**

SULFATE IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

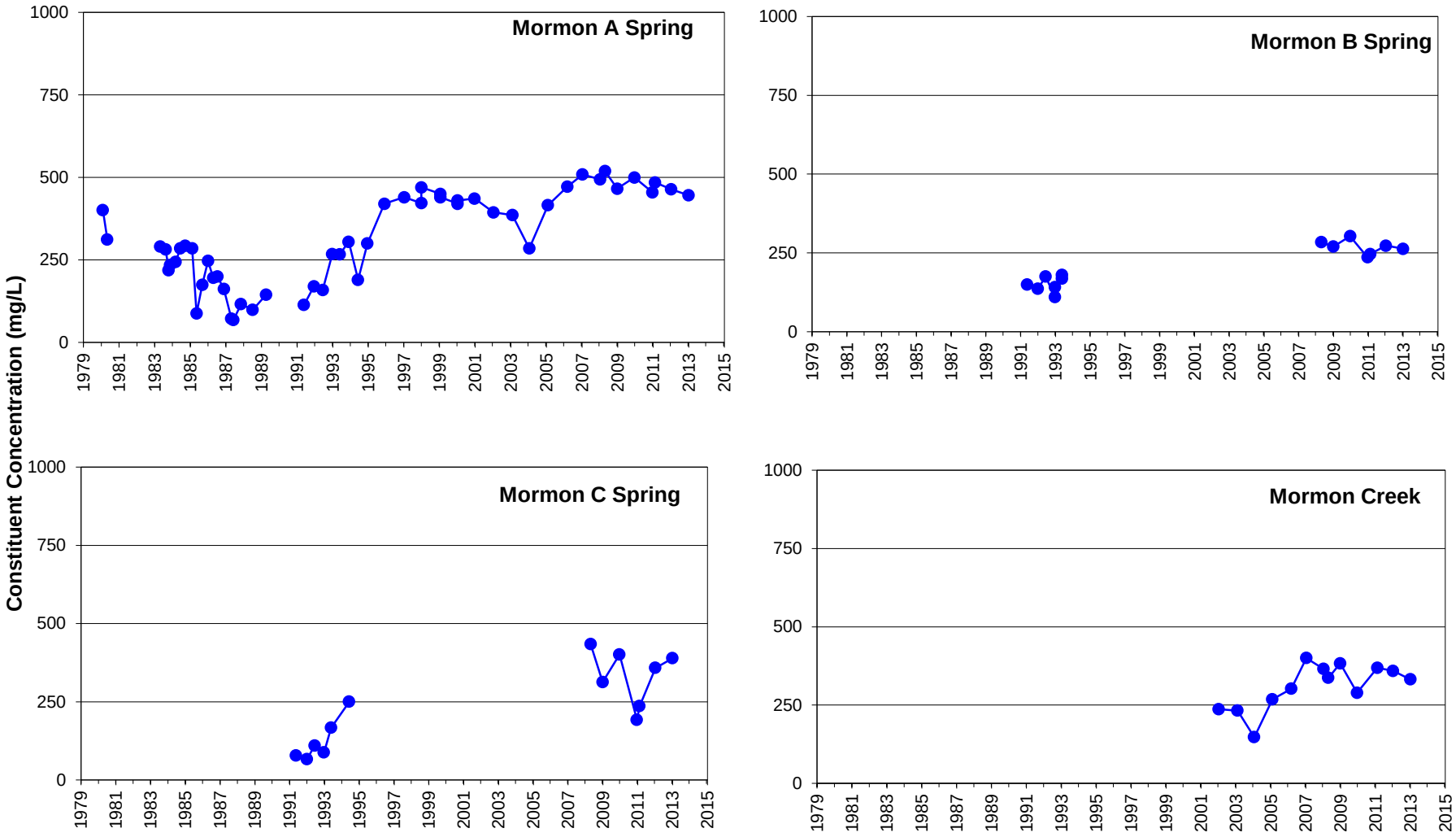
Pond Inlet

FIGURE **H-5**

SULFATE IN SODA CREEK AND NON-CONTACT COOLING WATER DISCHARGE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

FIGURE **H-6**

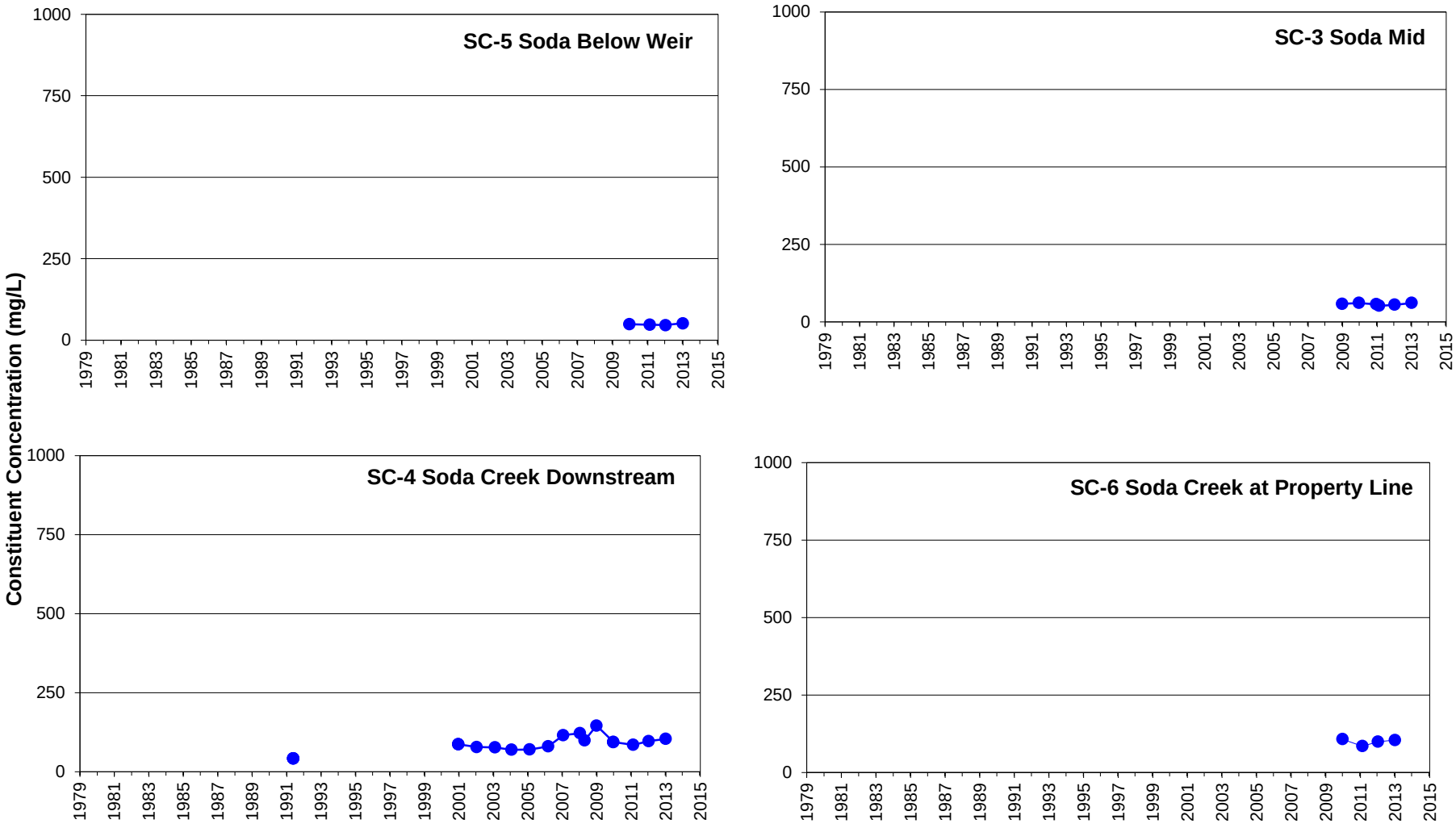
SULFATE IN MORMON A, B, AND C SPRINGS AND MORMON CREEK

Monsanto Annual Groundwater Sampling Report

913-1101-002

V:\PROJECTS_1991 PROJECTS\913-1101_Monsanto_Banton\Reports\2013 Annual Report\2013 Chemical Hydrographs\App H Sulfate Charts 2013

Golder Associates



Remediation goals shown for point of compliance locations only

LEGEND

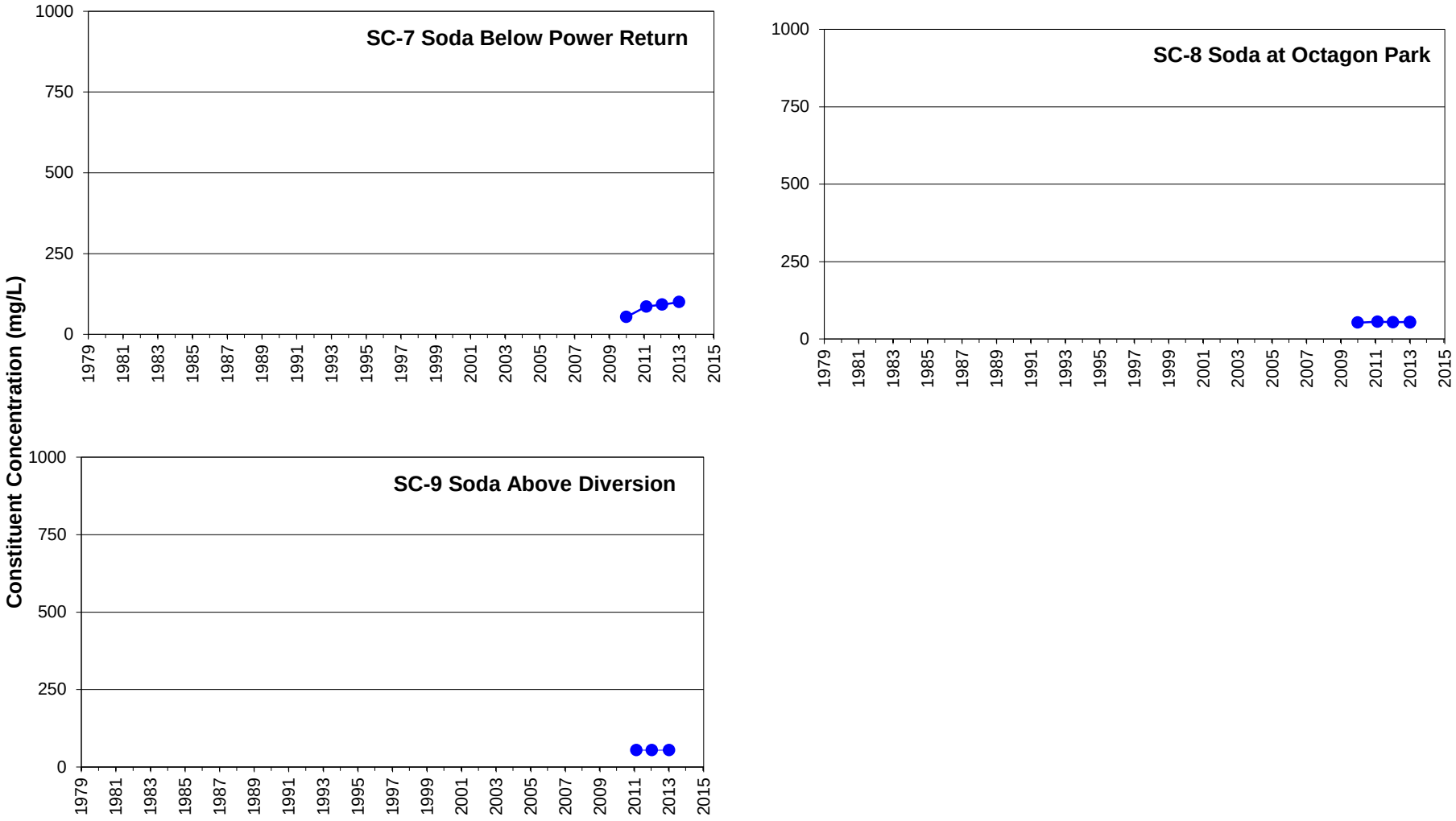
Constituent Concentration (mg/L)

FIGURE **H-7**

SULFATE IN SODA CREEK - WEIR TO PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

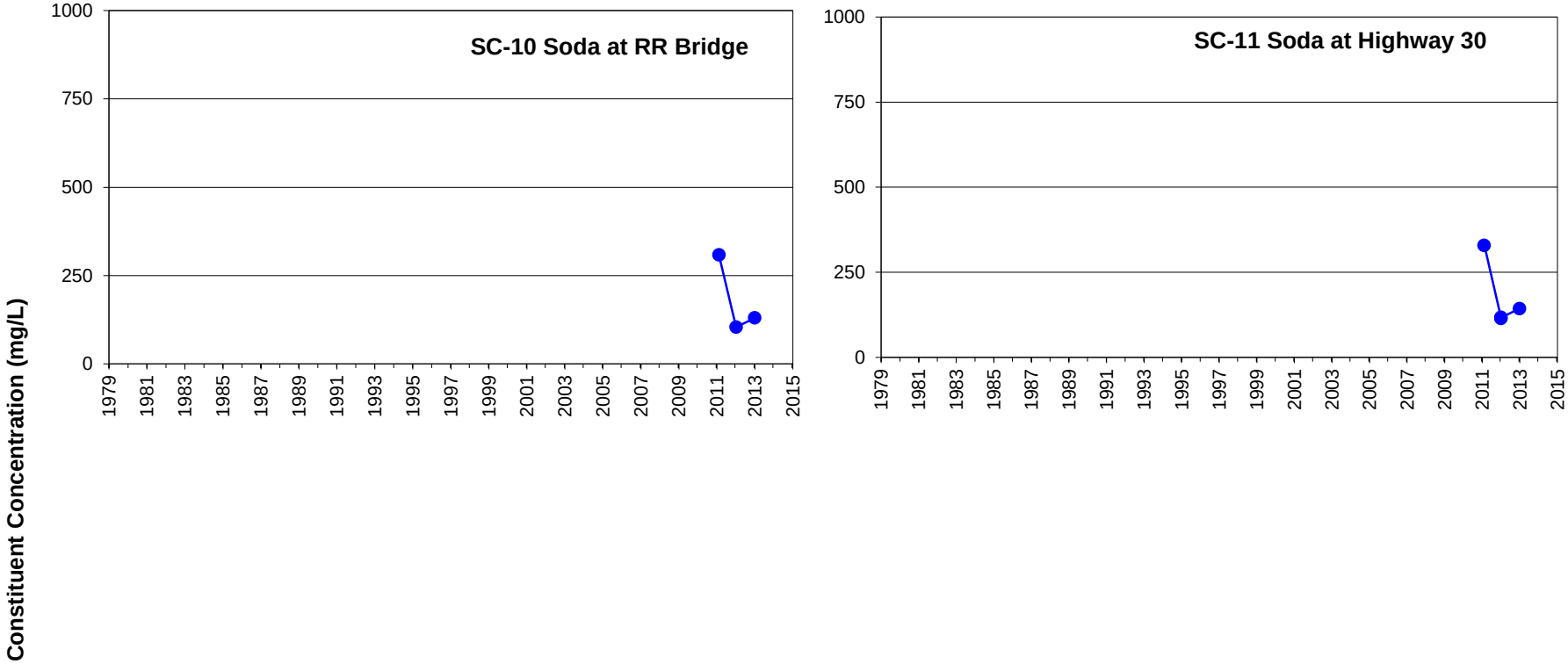
Constituent Concentration (mg/L)

FIGURE **H-8**

SULFATE IN SODA CREEK - BELOW PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

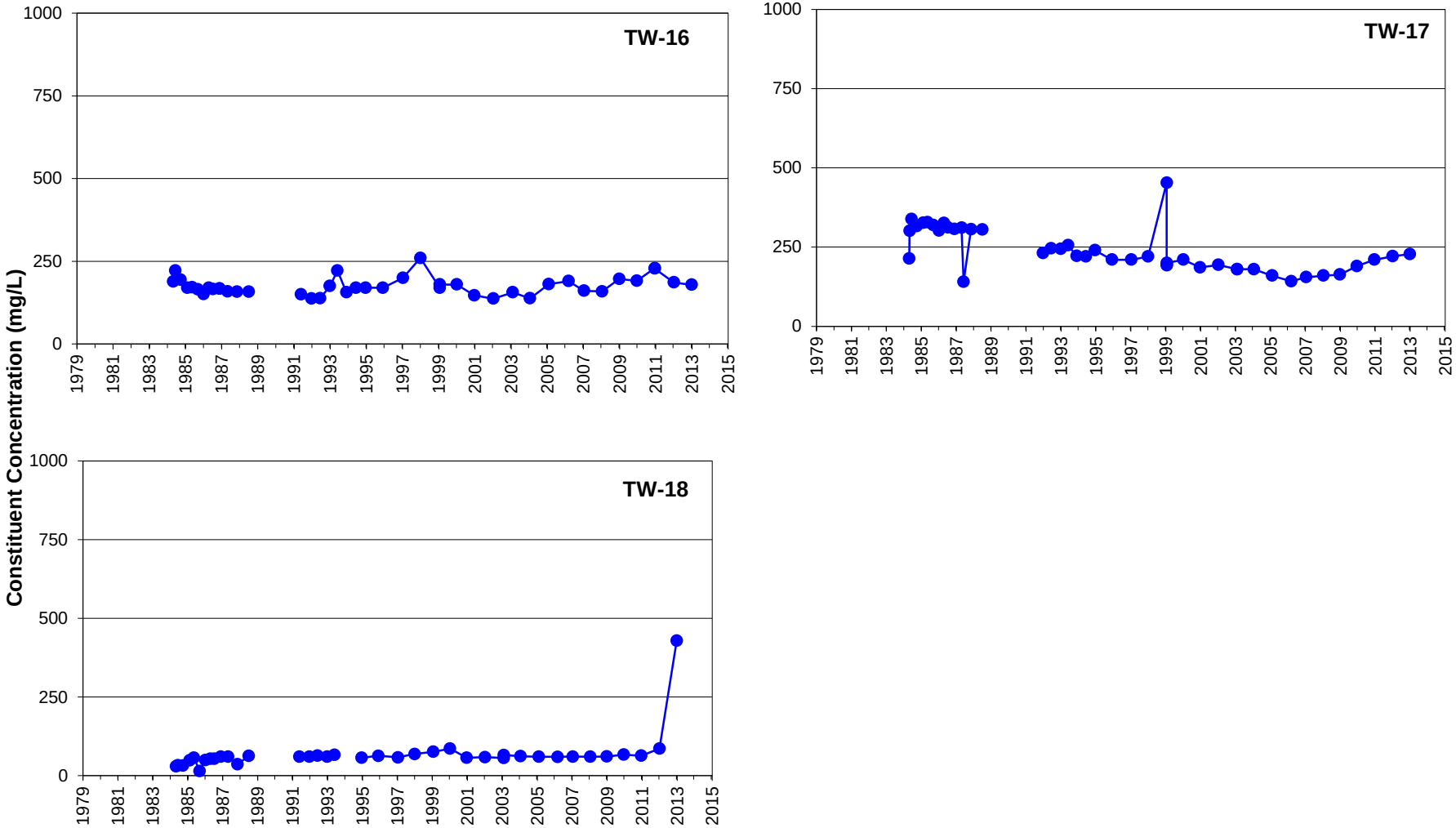
Constituent Concentration (mg/L)

FIGURE **H-9**

SULFATE IN SODA CREEK - ABOVE ALEXANDER RESERVOIR

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

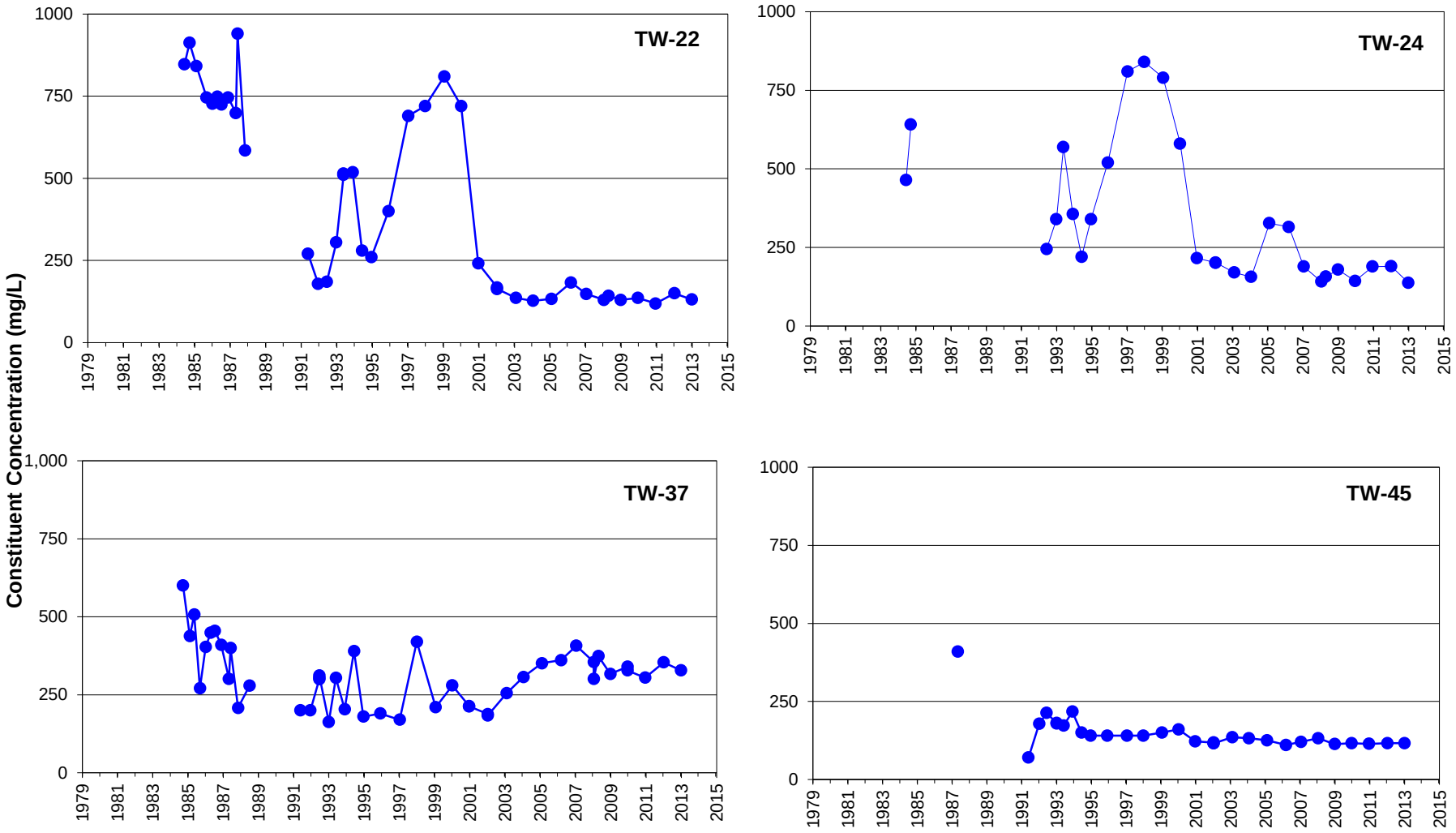
Constituent Concentration (mg/L)

FIGURE **H-10**

SULFATE IN NW POND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

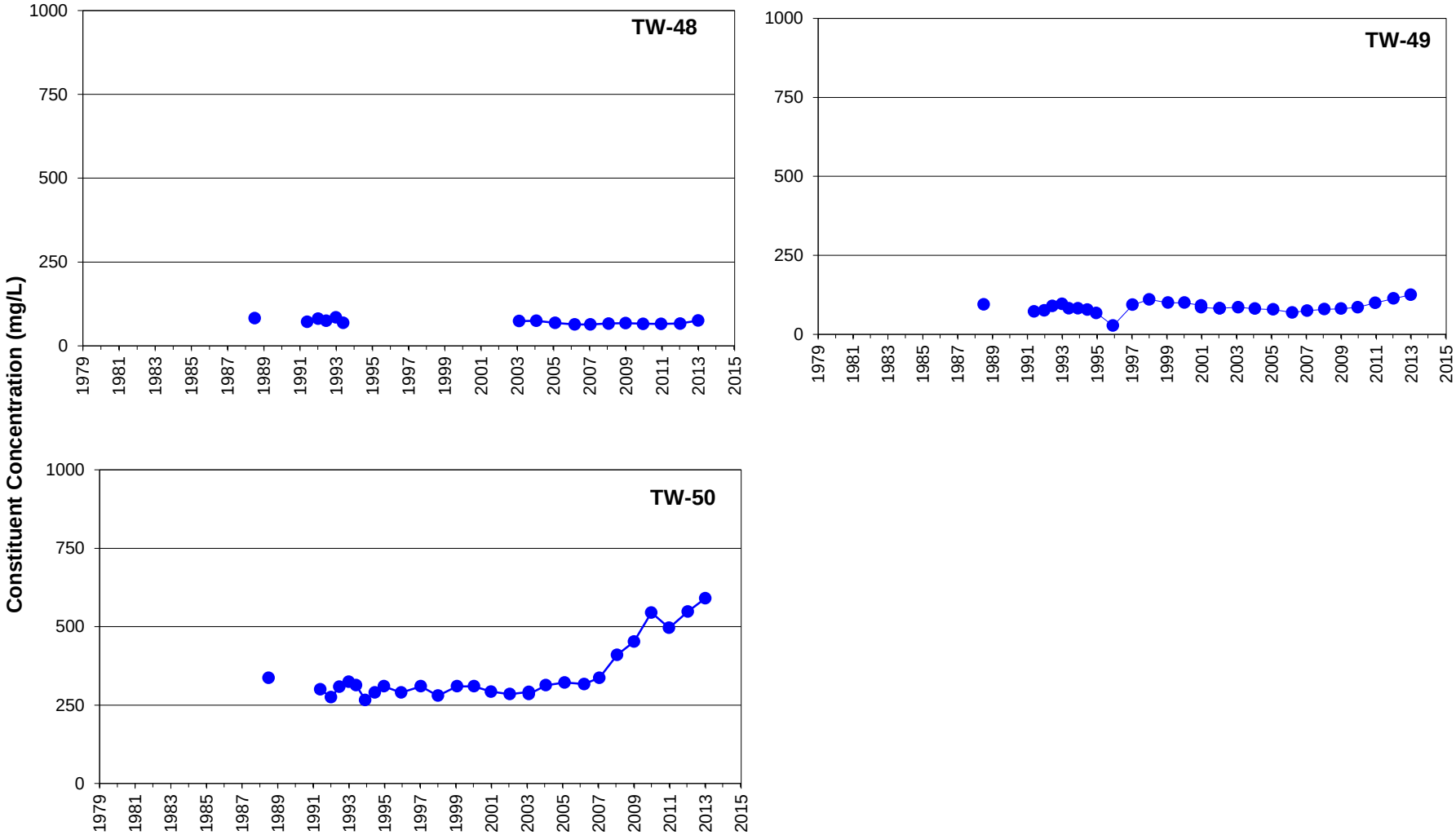
Constituent Concentration (mg/L)

FIGURE **H-11**

SULFATE IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

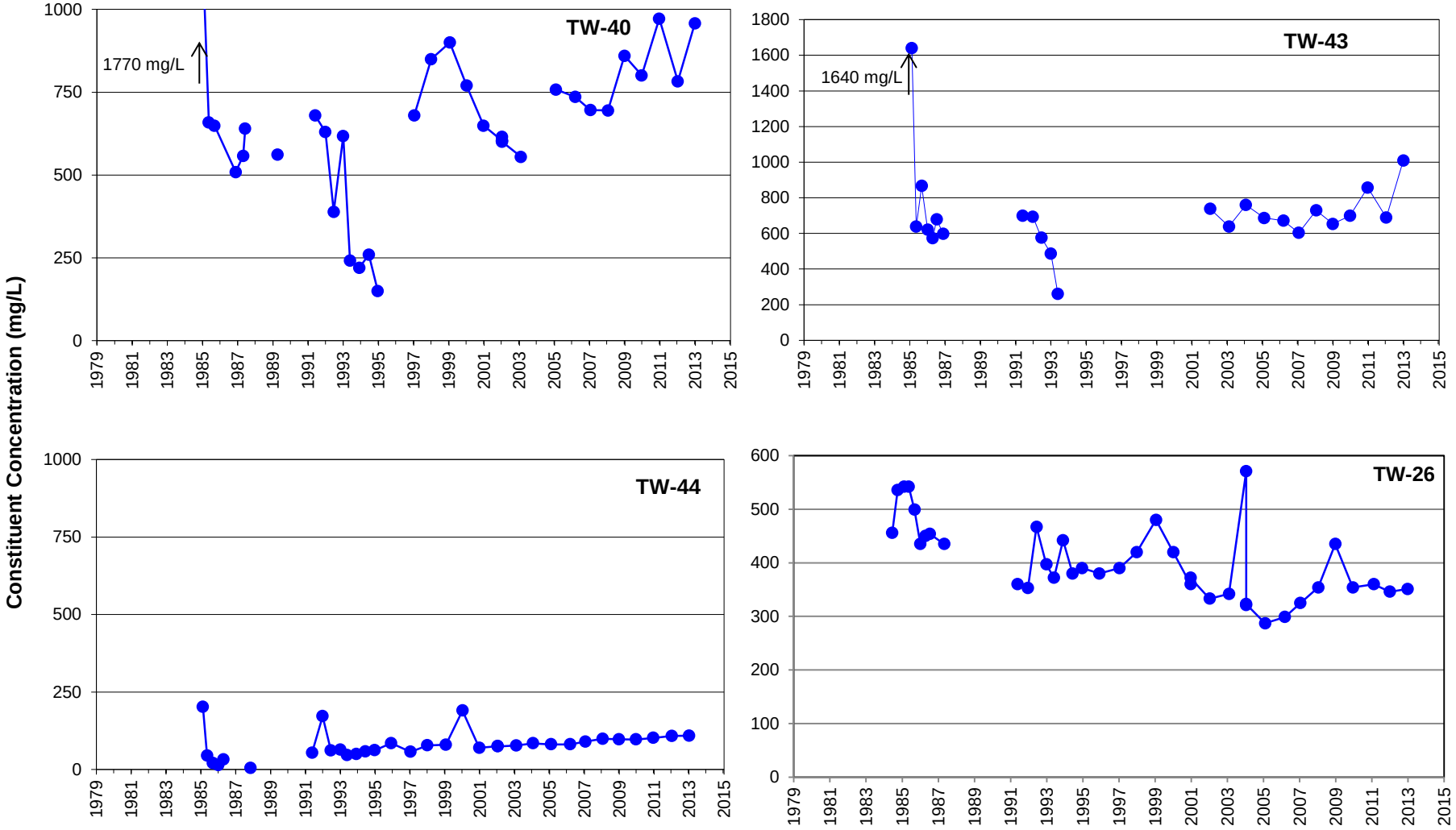
Constituent Concentration (mg/L)

FIGURE **H-12**

SULFATE IN UNDERFLOW SOLIDS PILES AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

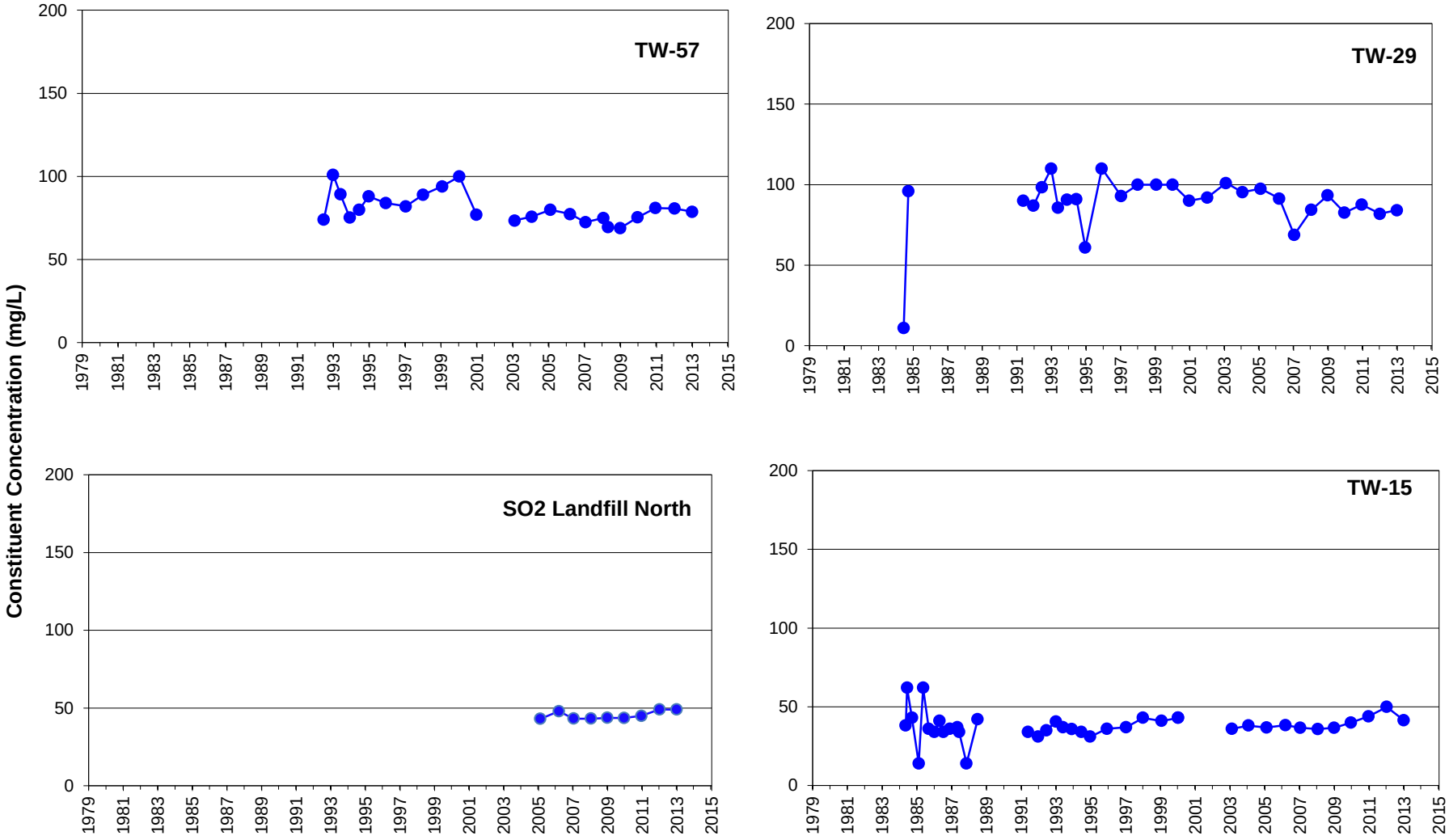
Constituent Concentration (mg/L)

FIGURE **H-13**

SULFATE IN HYDROCLARIFIER AND PLANT AREA WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

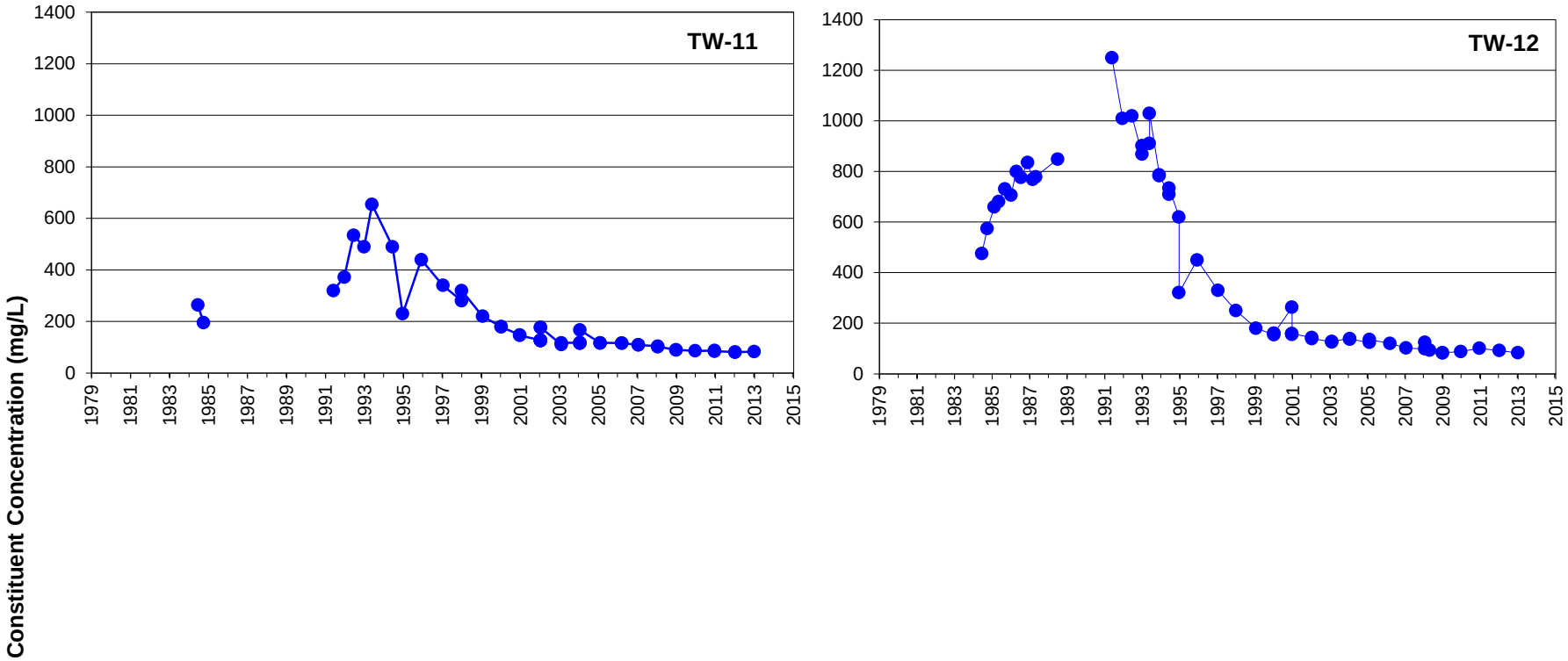
Constituent Concentration (mg/L)

FIGURE **H-14**

SULFATE IN BACKGROUND WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

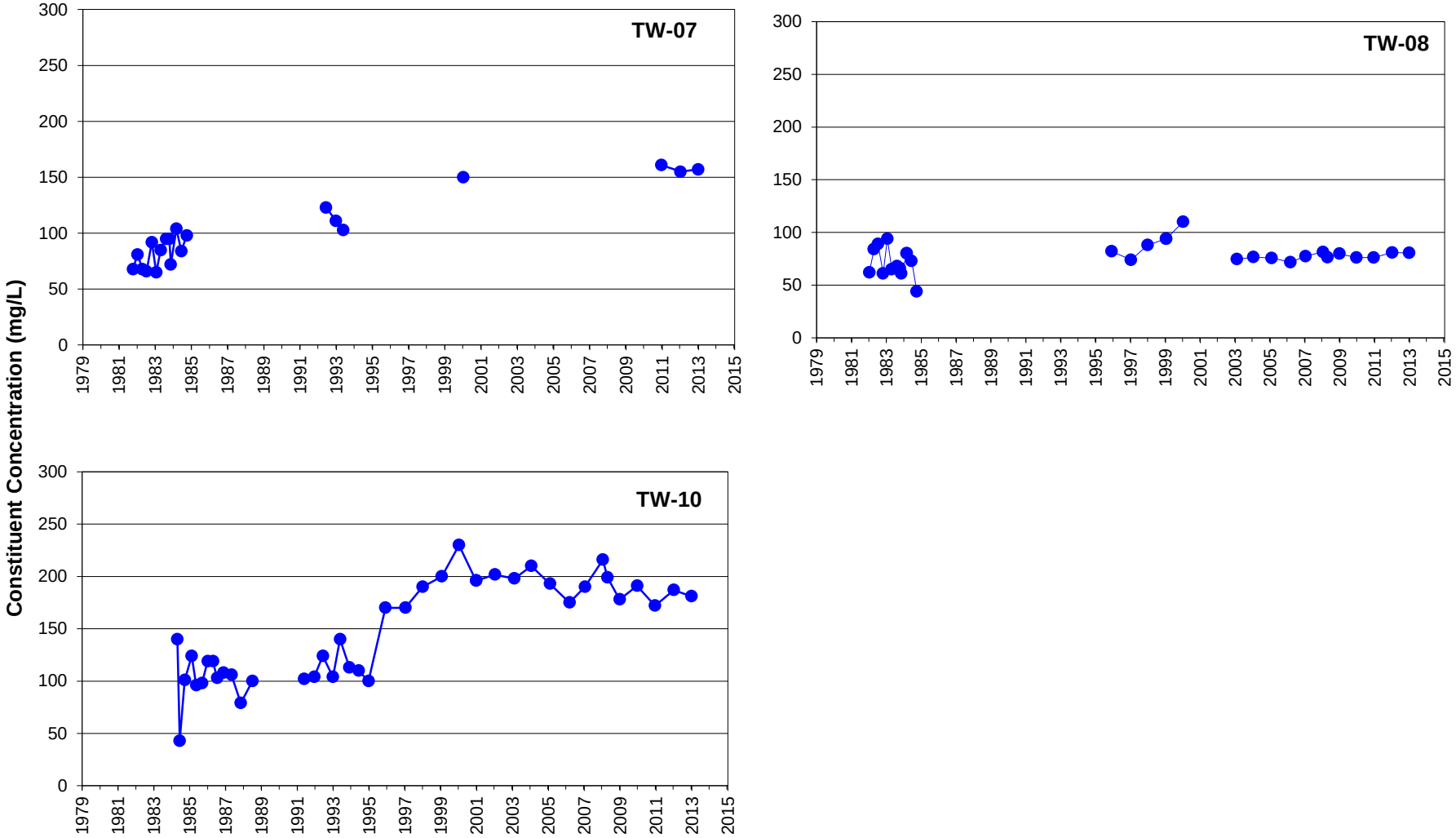
Constituent Concentration (mg/L)

FIGURE **H-15**

SULFATE IN SOUTHEAST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

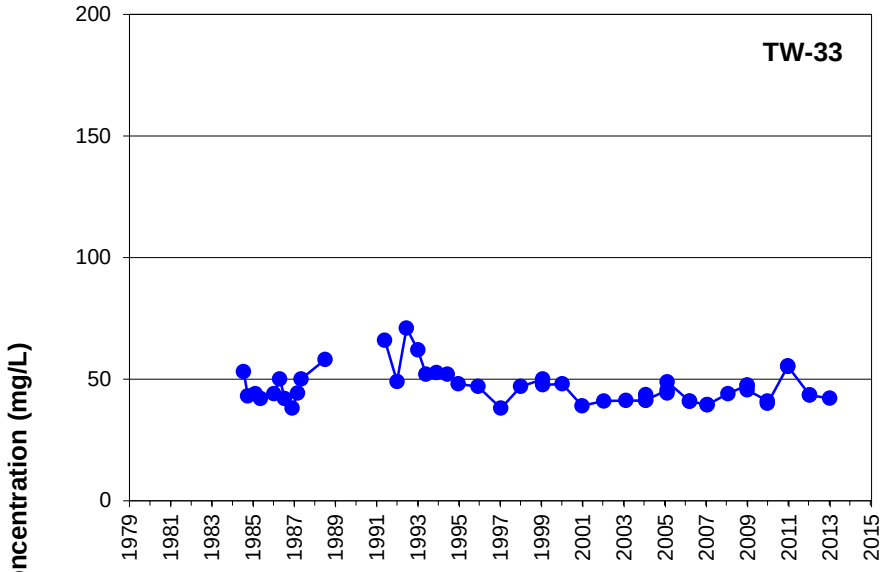
Constituent Concentration (mg/L)

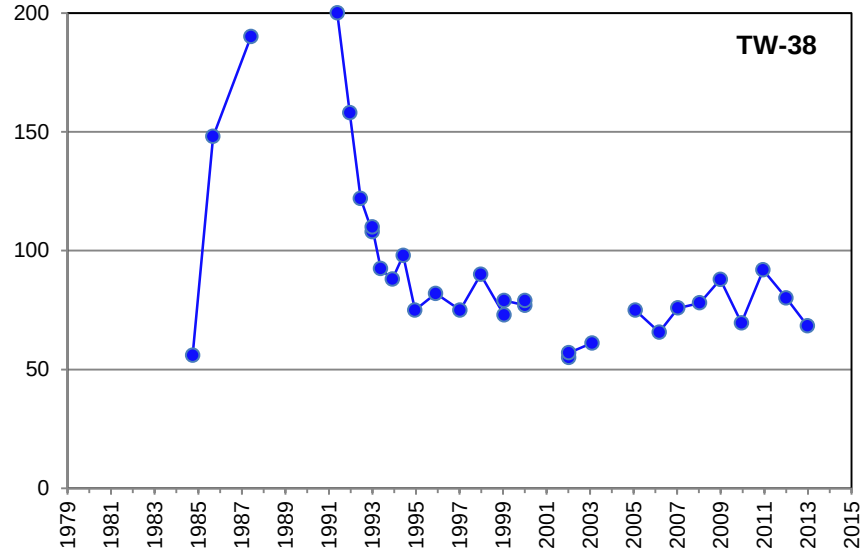
FIGURE **H-16**

SULFATE IN SOUTHWEST CORNER WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002





Remediation goals shown for point of compliance locations only

Golder Associates

LEGEND

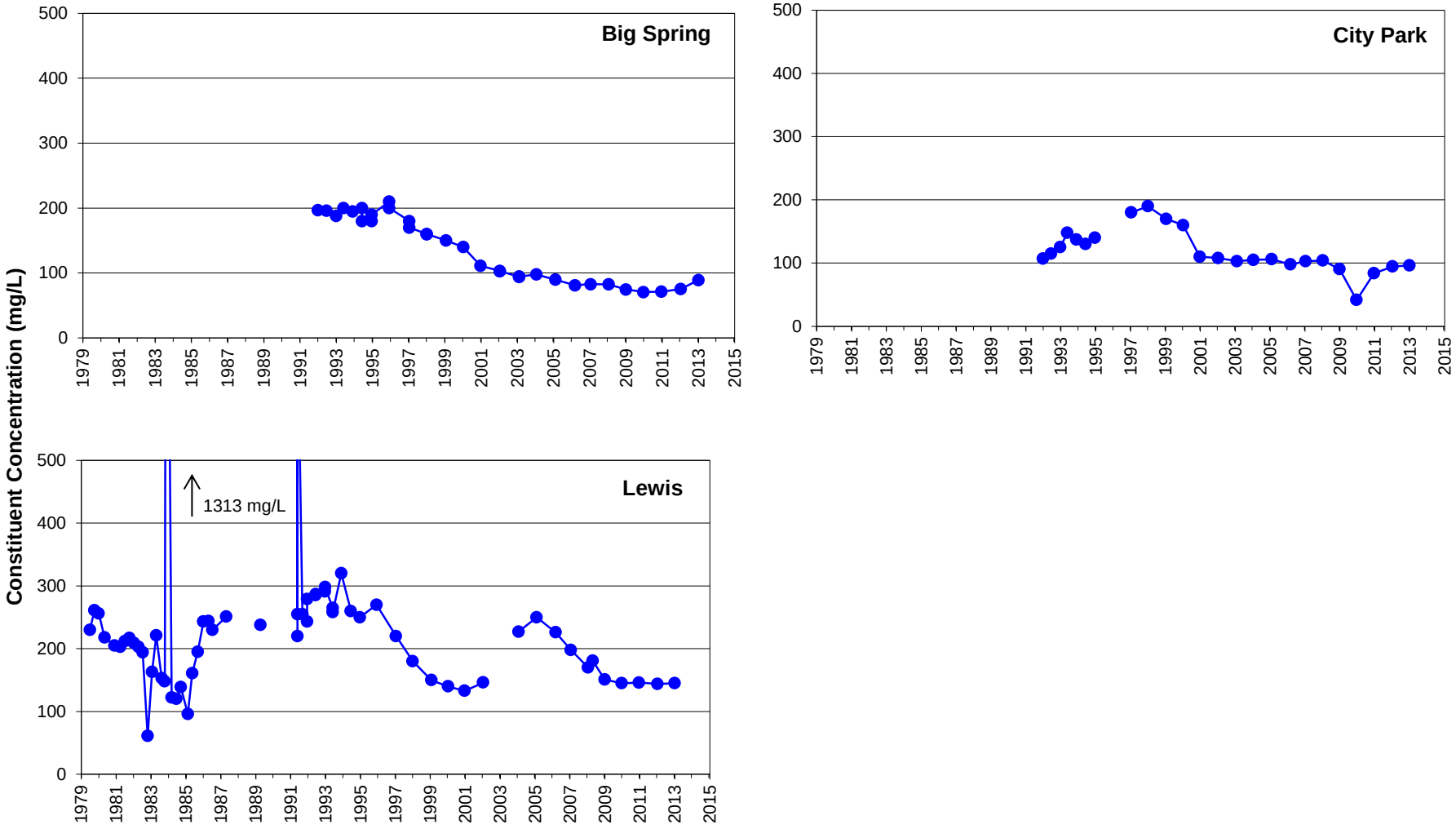
Constituent Concentration (mg/L)

FIGURE **H-17**

SULFATE IN EAST WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

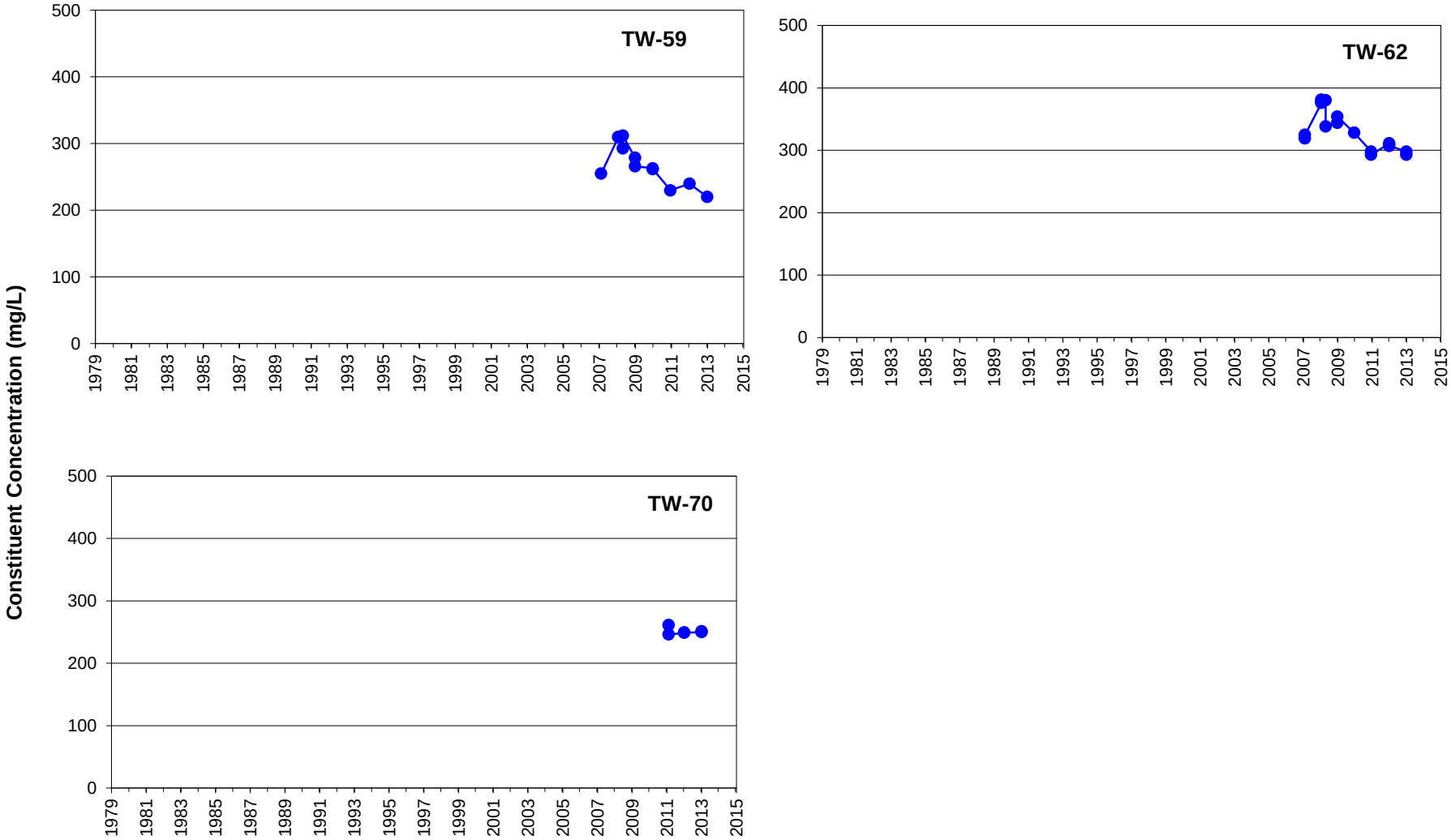
Constituent Concentration (mg/L)

FIGURE **H-18**

SULFATE IN OFFSITE WELLS AND SPRINGS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

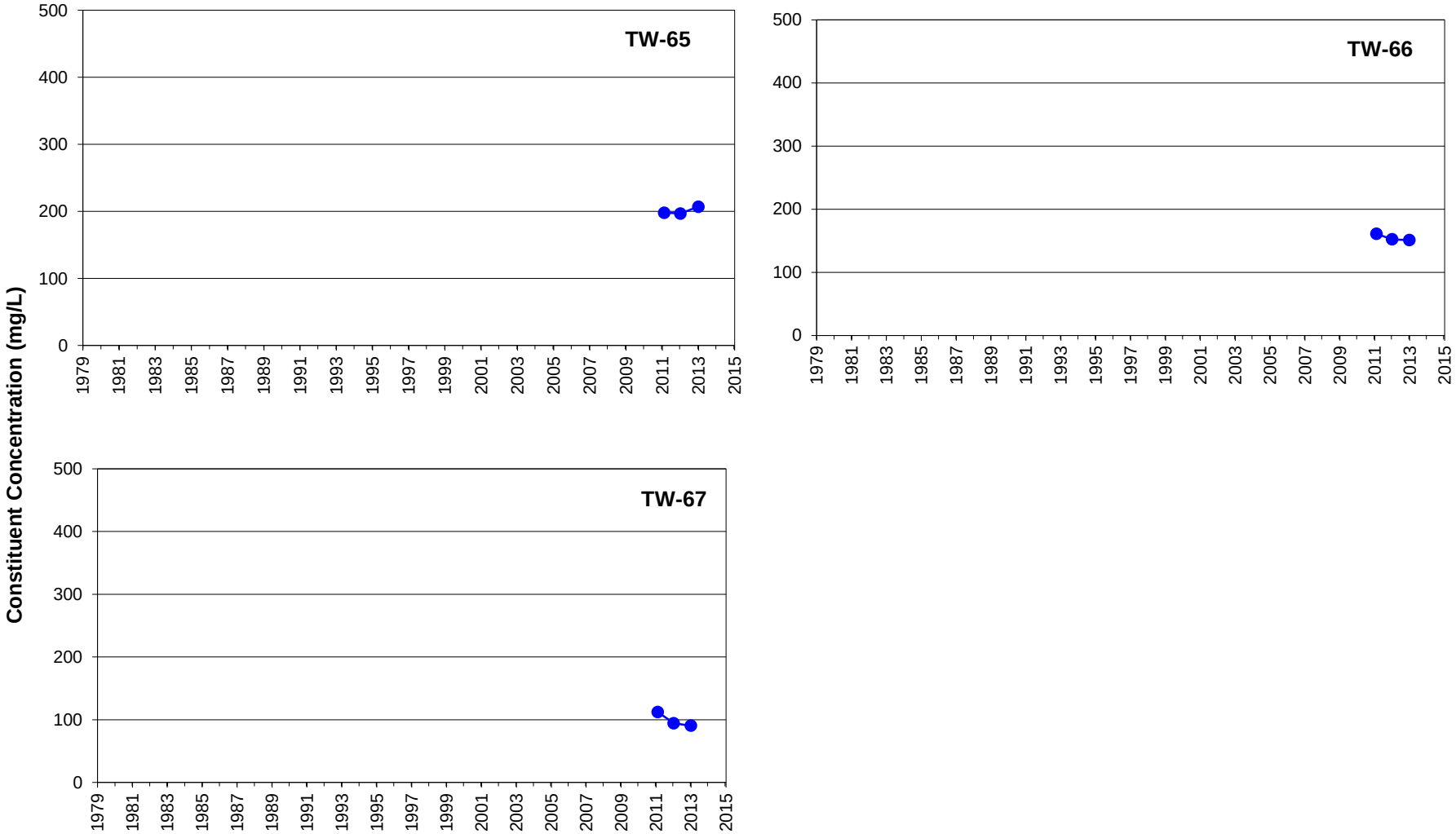
Constituent Concentration (mg/L)

FIGURE **H-19**

SULFATE IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

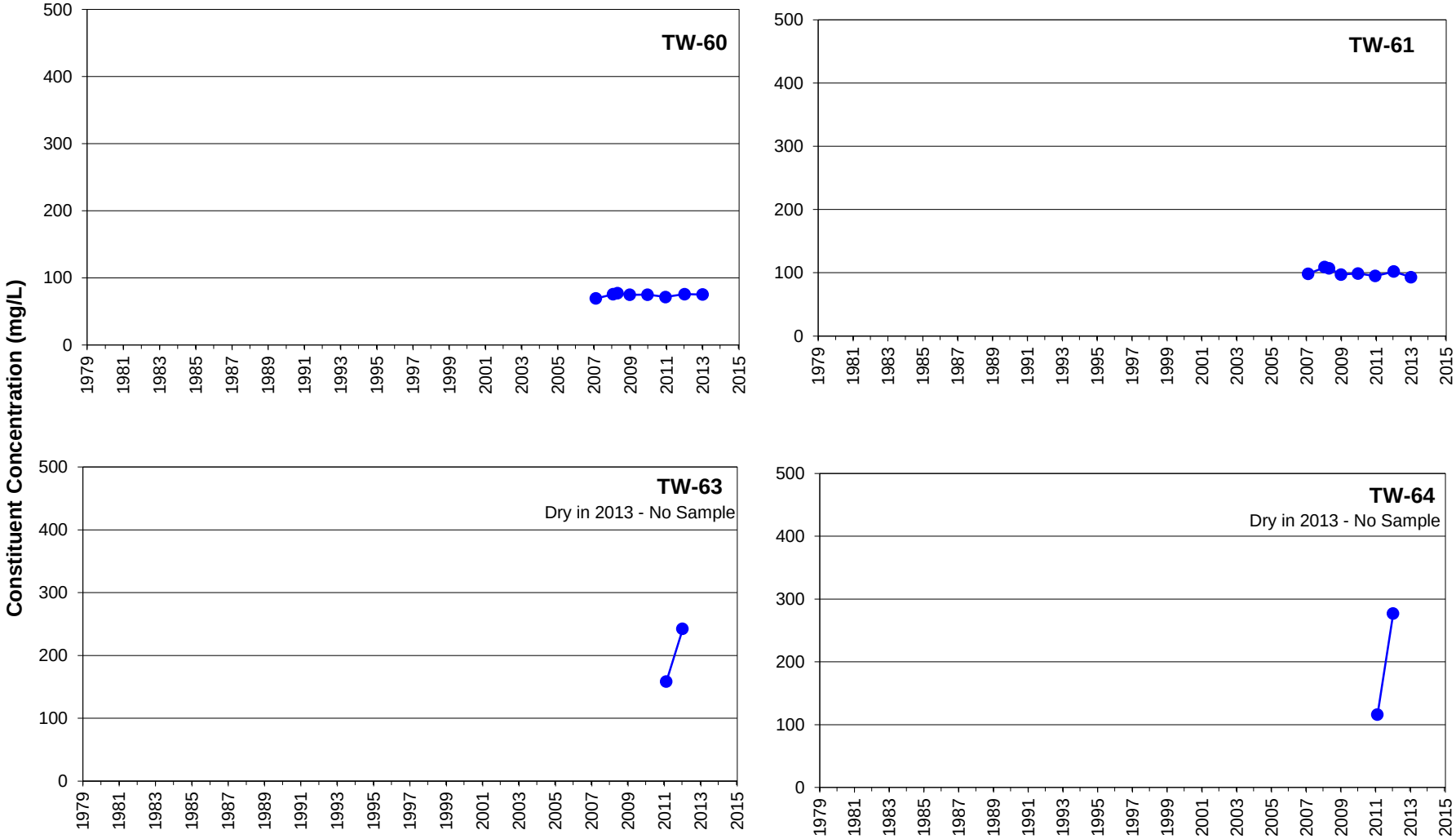
Constituent Concentration (mg/L)

FIGURE **H-20**

SULFATE IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

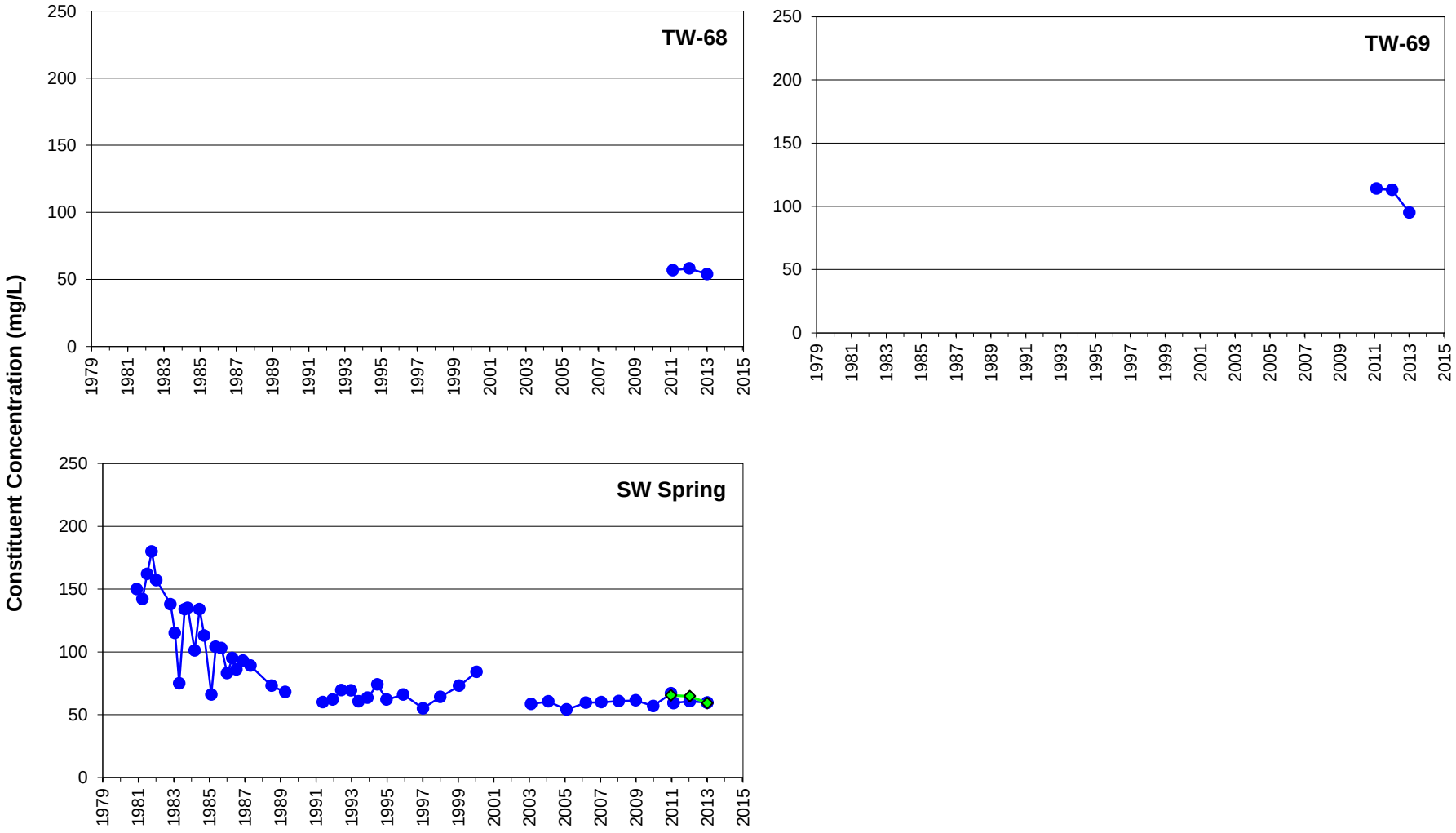
Constituent Concentration (mg/L)

FIGURE **H-21**

SULFATE IN UBZ-1 WELLS SOUTHWEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002



Remediation goals shown for point of compliance locations only

LEGEND

Constituent Concentration (mg/L)

SW Spring above confluence with Soda Creek

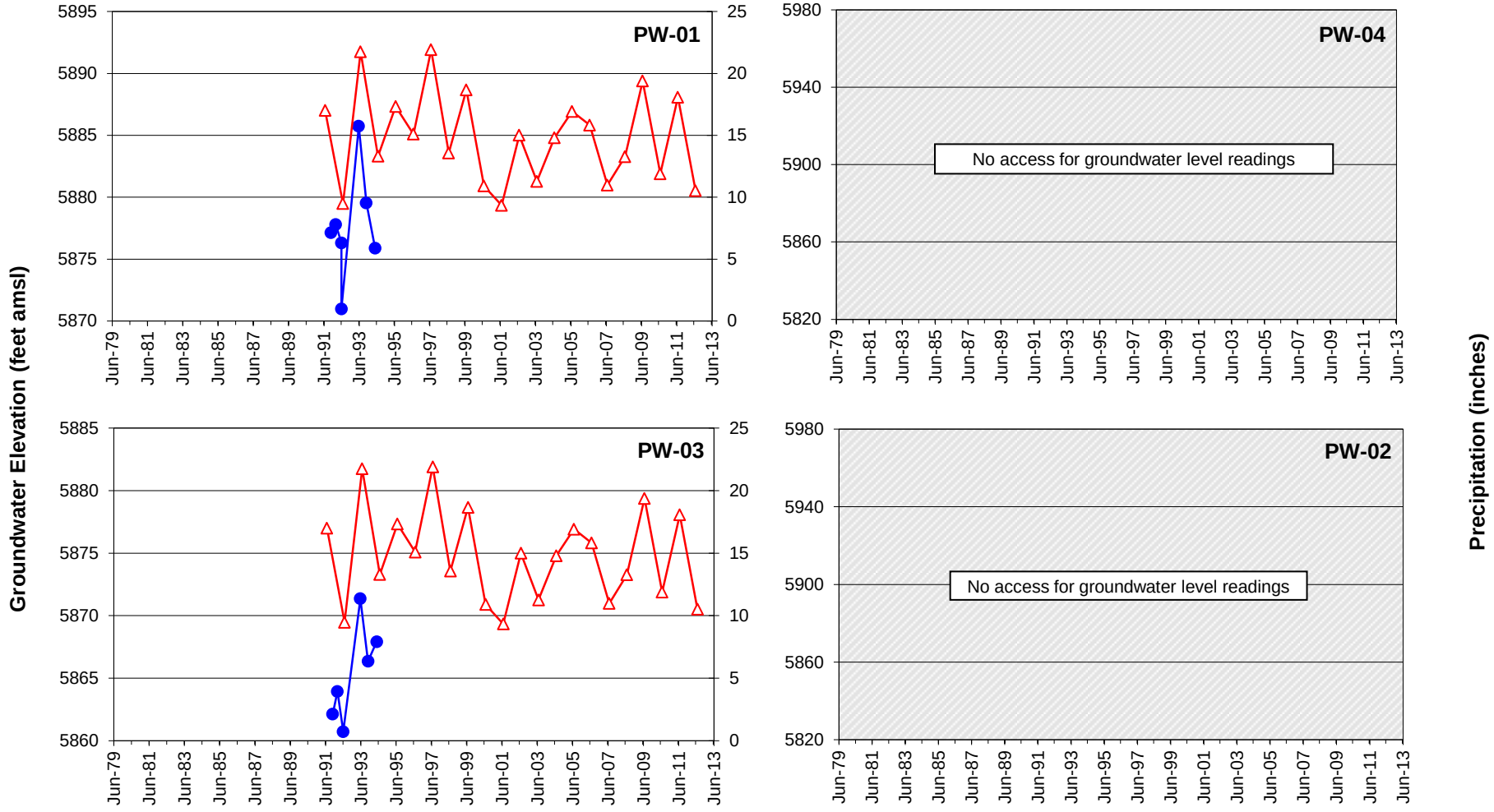
FIGURE **H-22**

SULFATE IN UBZ-1 WELLS AND SPRINGS WEST OF THE PLANT

Monsanto Annual Groundwater Sampling Report

913-1101-002

APPENDIX I
GROUNDWATER ELEVATION HYDROGRAPHS



LEGEND

Groundwater Elevations

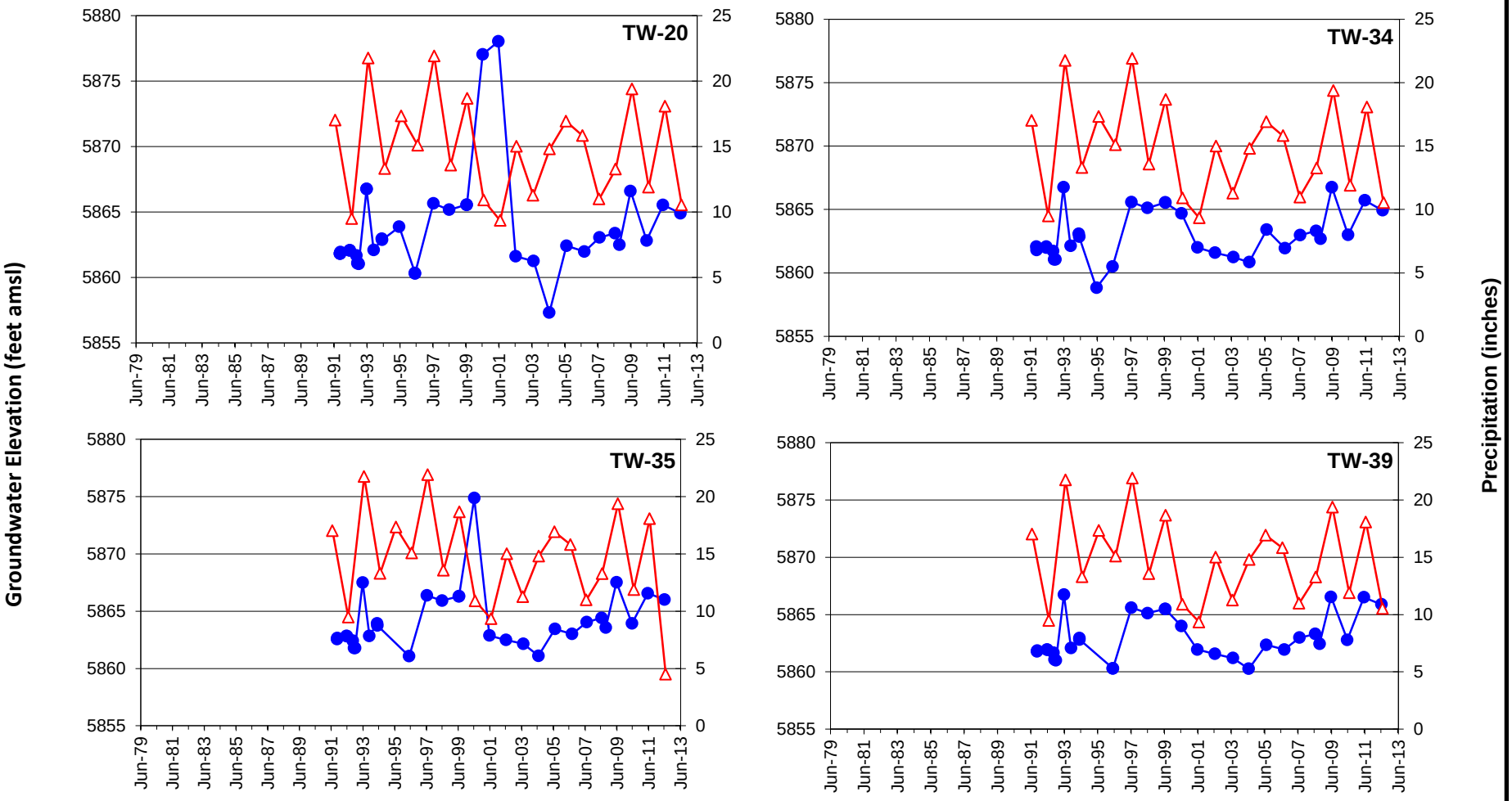
Water Year Precipitation

FIGURE **I-1**

GROUNDWATER ELEVATION IN PRODUCTION WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

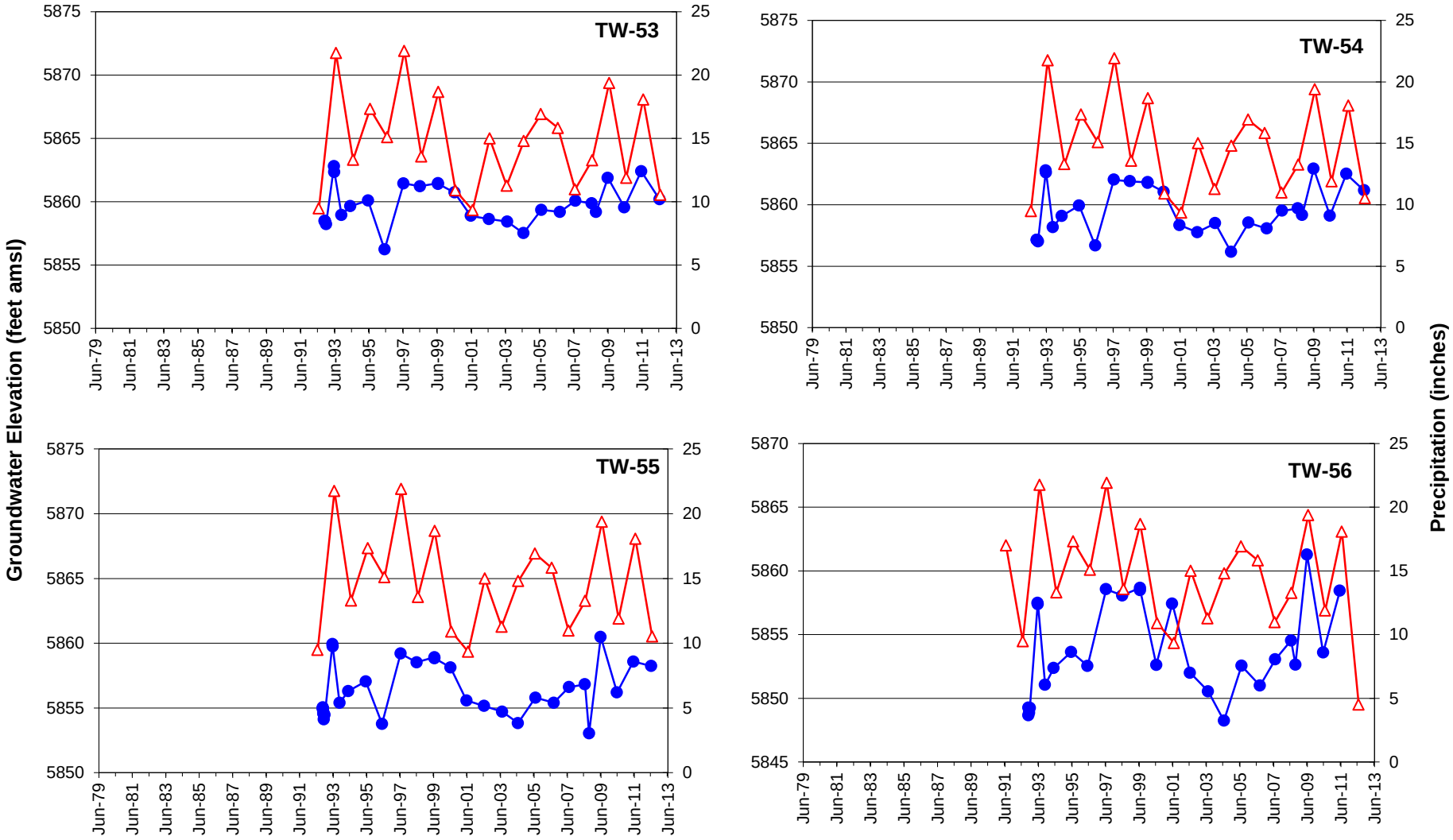
Water Year Precipitaition

FIGURE **I-2**

GROUNDWATER ELEVATION IN SOUTH FENCELINE WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

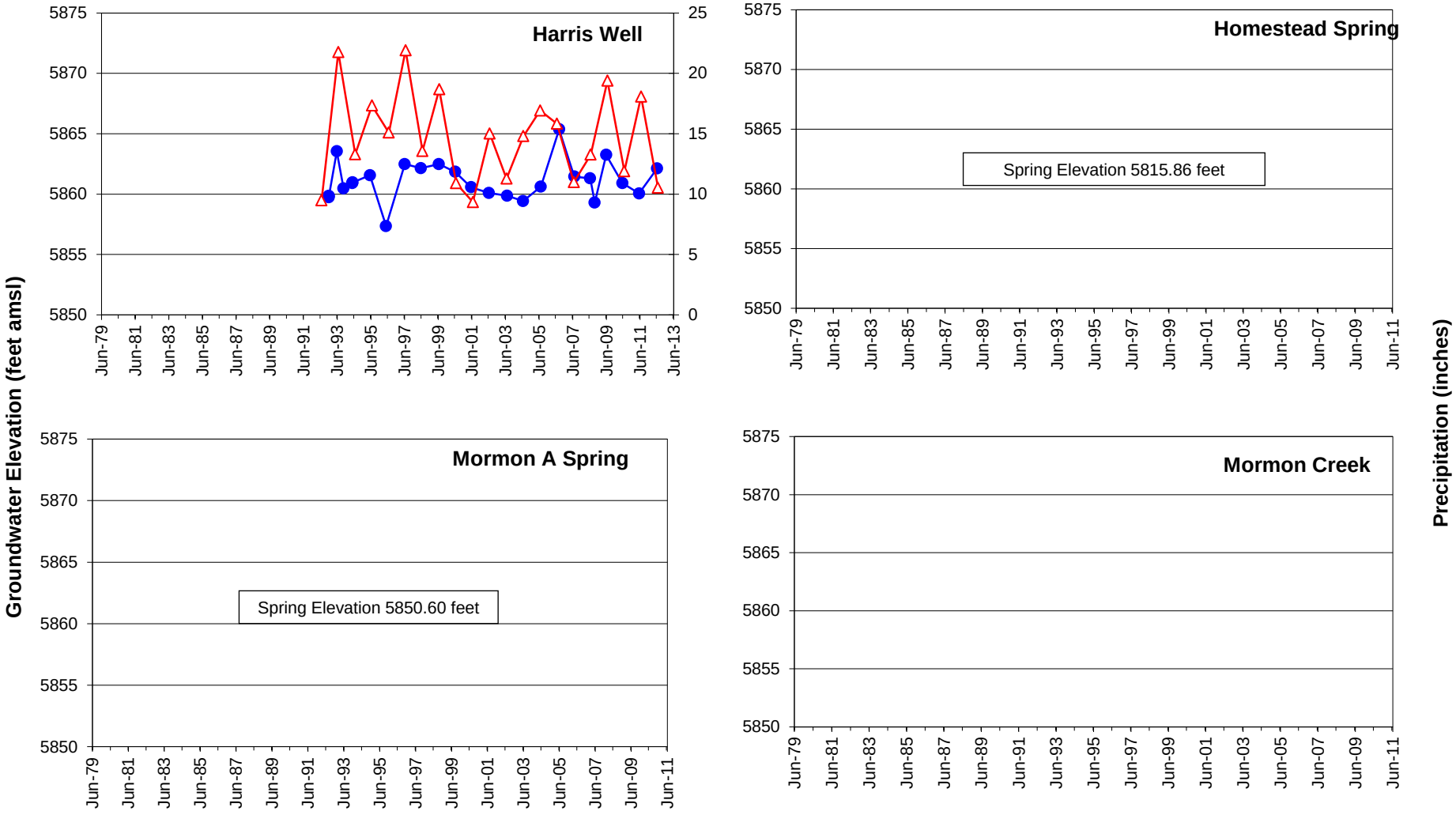
Water Year Precipitation

FIGURE **I-3**

GROUNDWATER ELEVATION IN SOUTHERN BOUNDARY WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevation

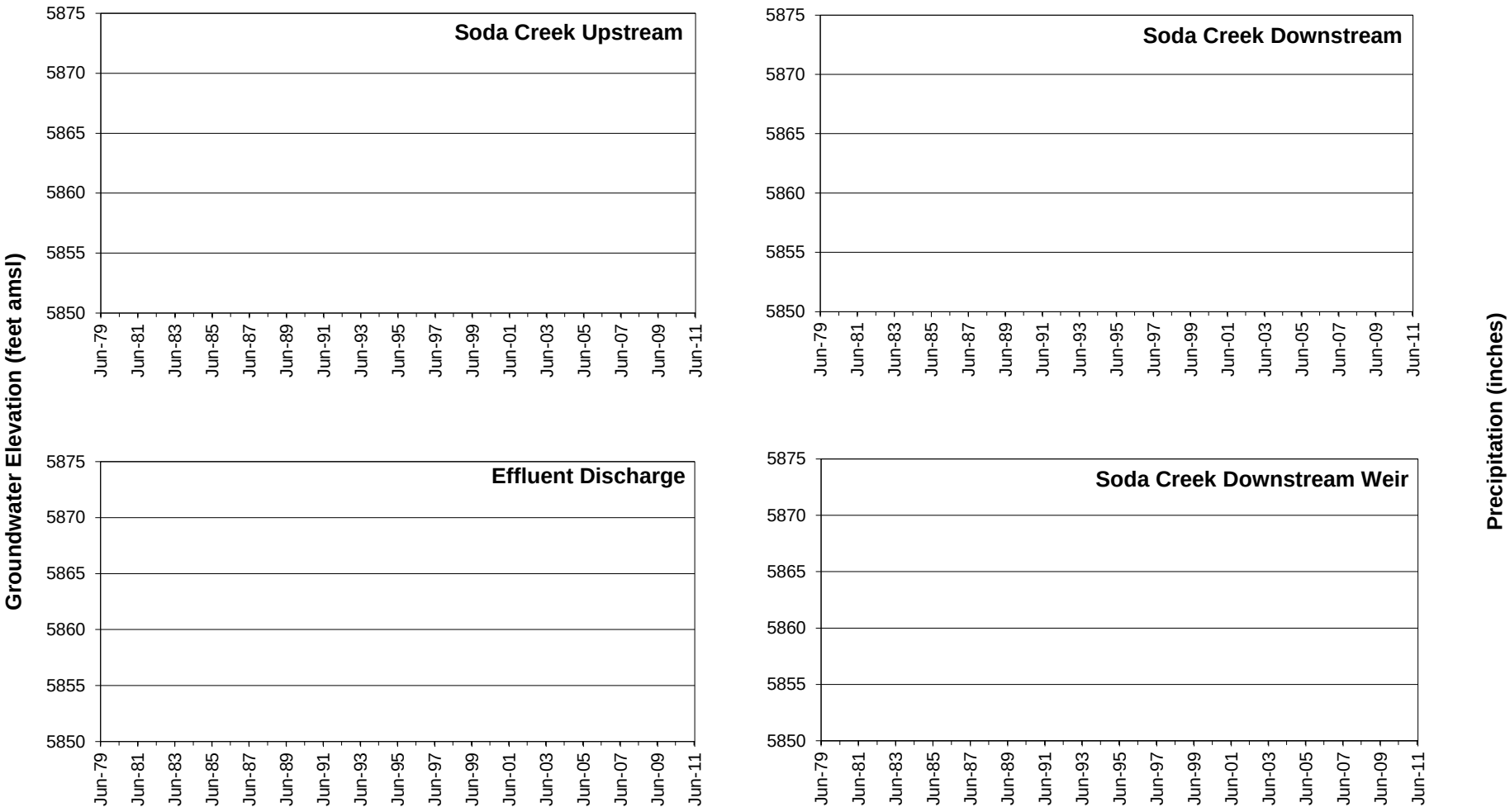
Water Year Precipitaition

FIGURE **I-4**

GROUNDWATER ELEVATION IN HARRIS WELL AND SPRINGS SOUTH OF PLANT

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

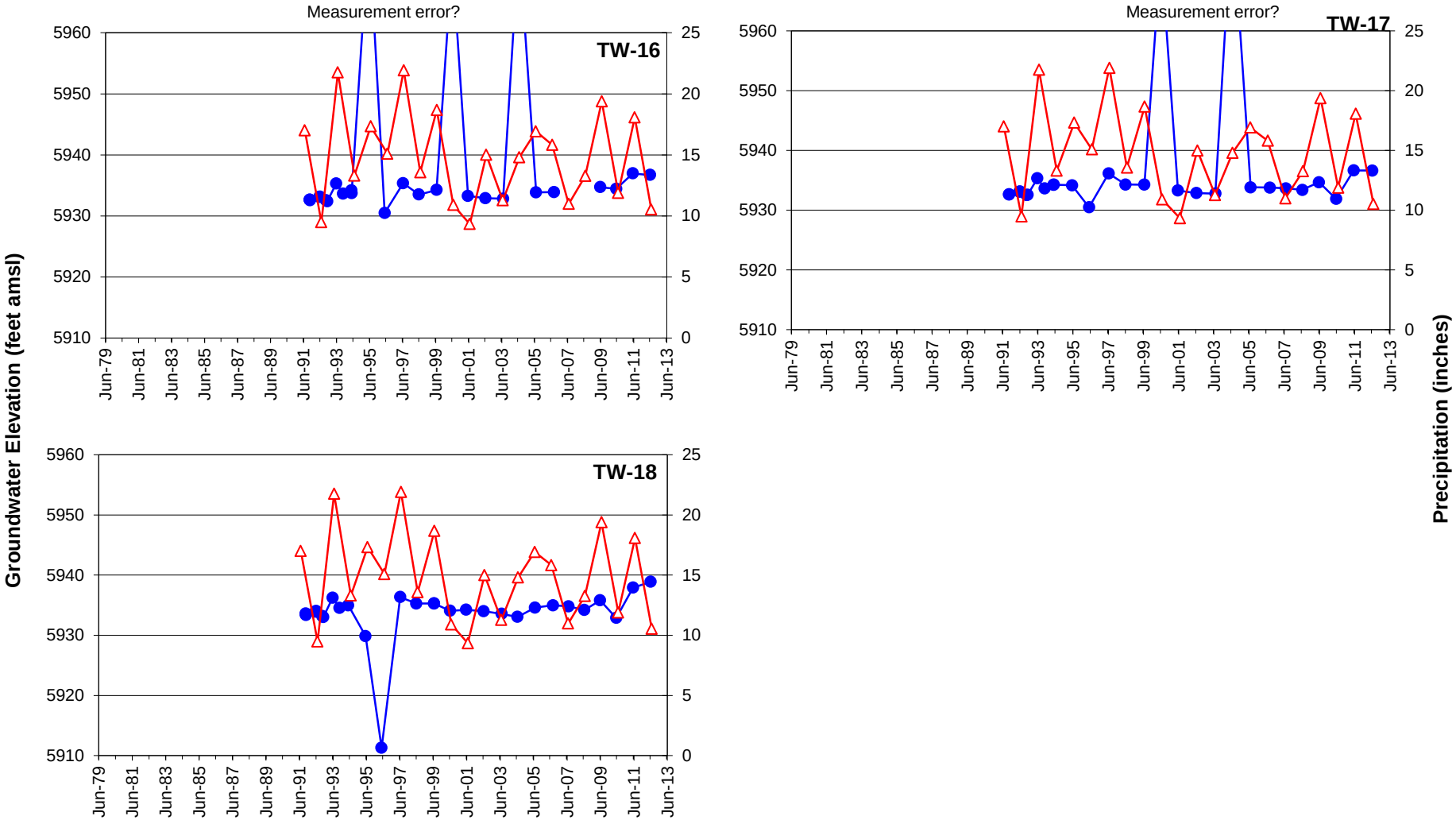
Golder Associates

FIGURE **I-5**

GROUNDWATER ELEVATION IN SODA CREEK AND TREATMENT PLANT EFFLUENT

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

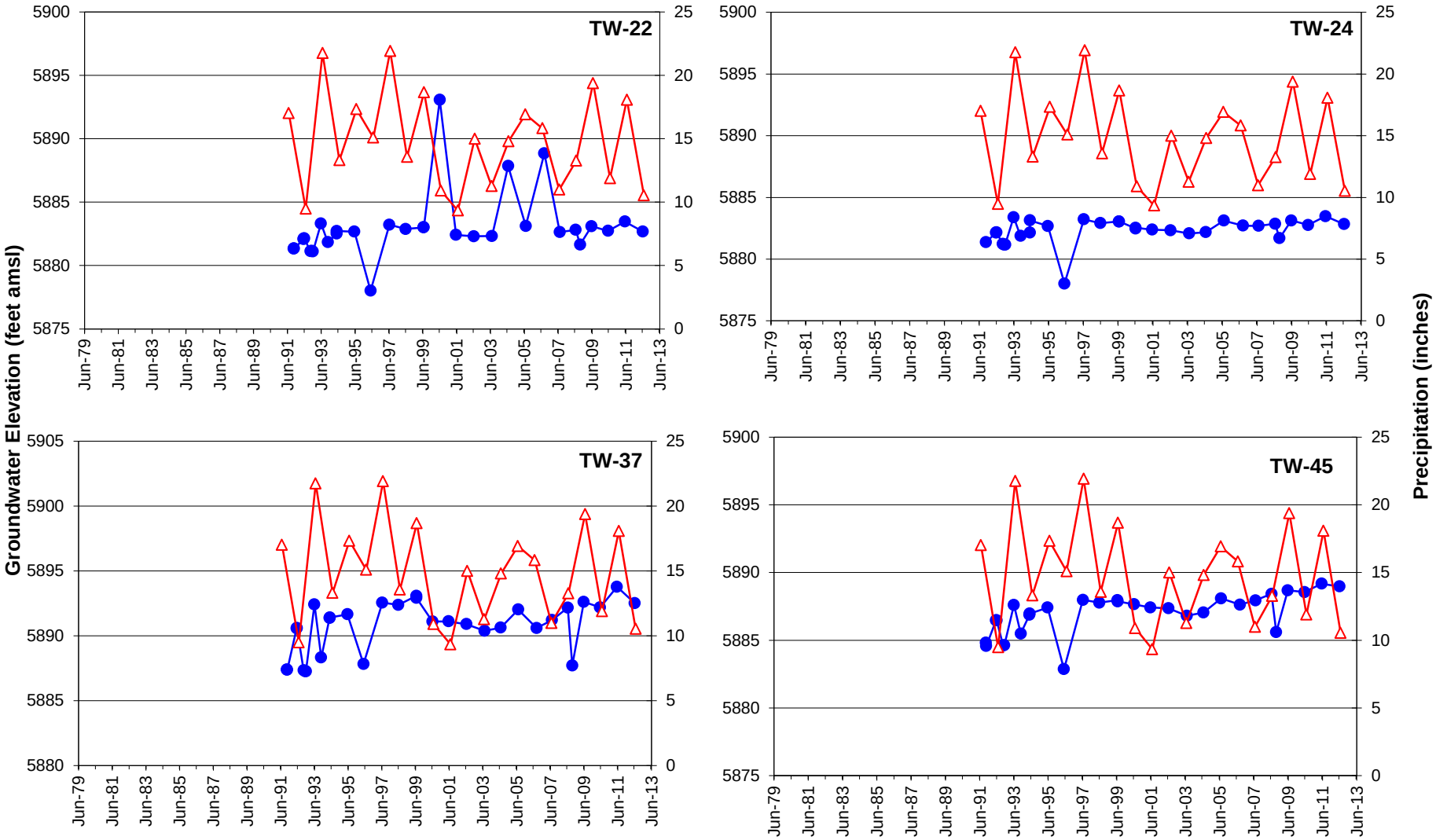
Water Year Precipitation

FIGURE **I-6**

GROUNDWATER ELEVATION IN NW POND WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater elevations

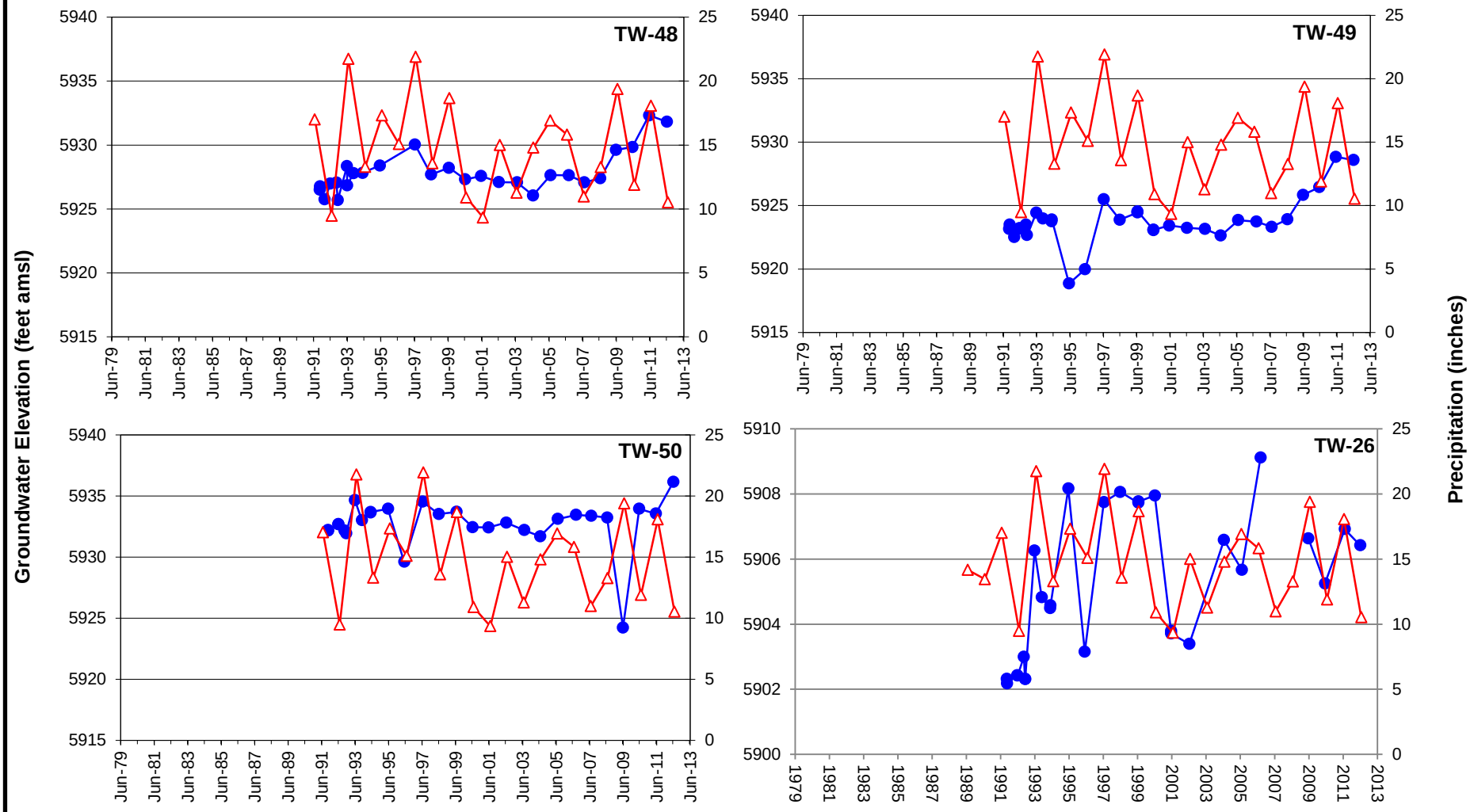
Water Year Precipitaition

FIGURE **I-7**

GROUNDWATER ELEVATION IN OLD UNDERFLOW SOLIDS POND AREA WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

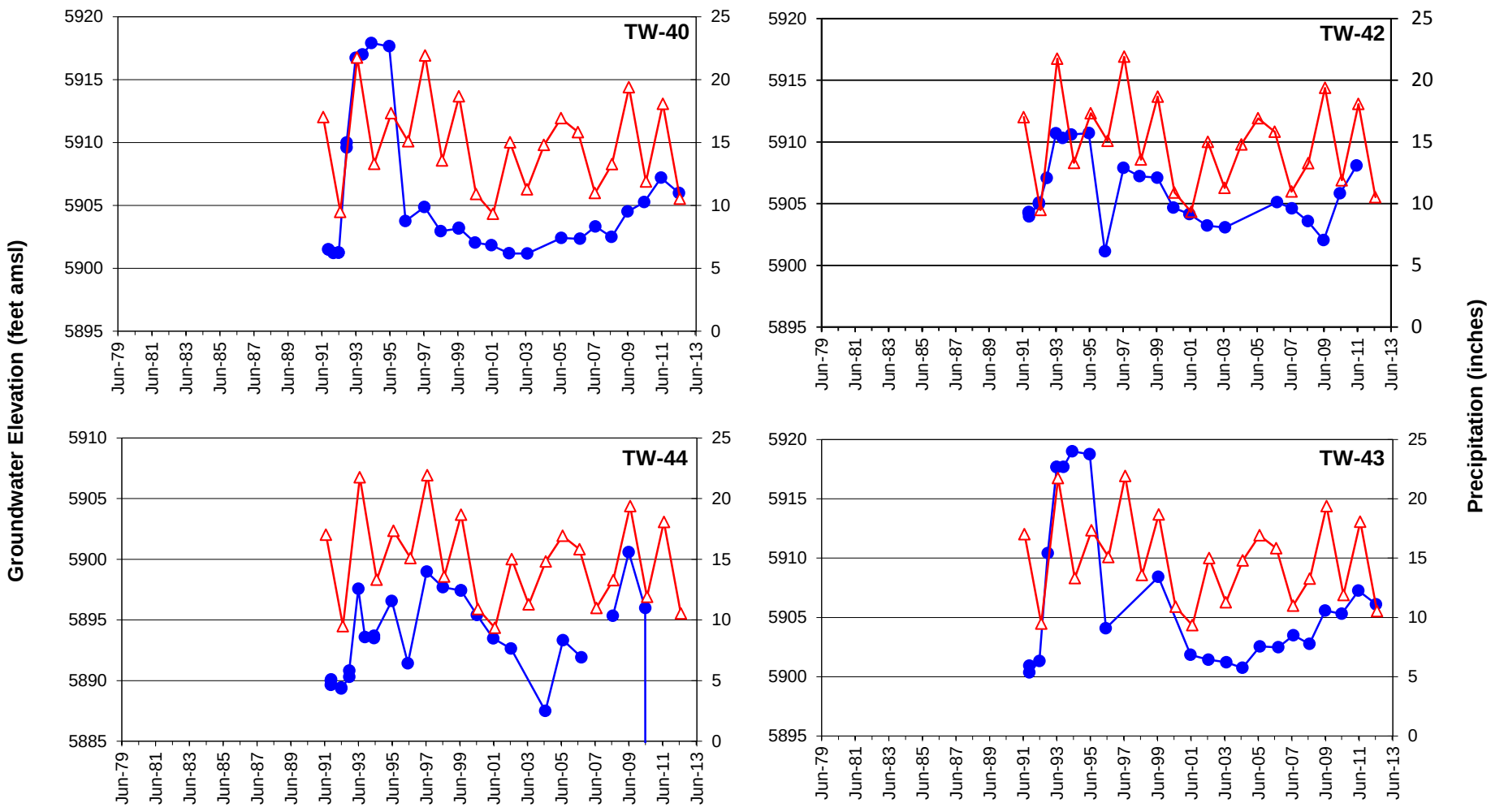
Water Year Precipitaition

FIGURE **I-8**

GROUNDWATER ELEVATION IN UNDERFLOW SOLIDS PILES AND PLANT AREA WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater elevations

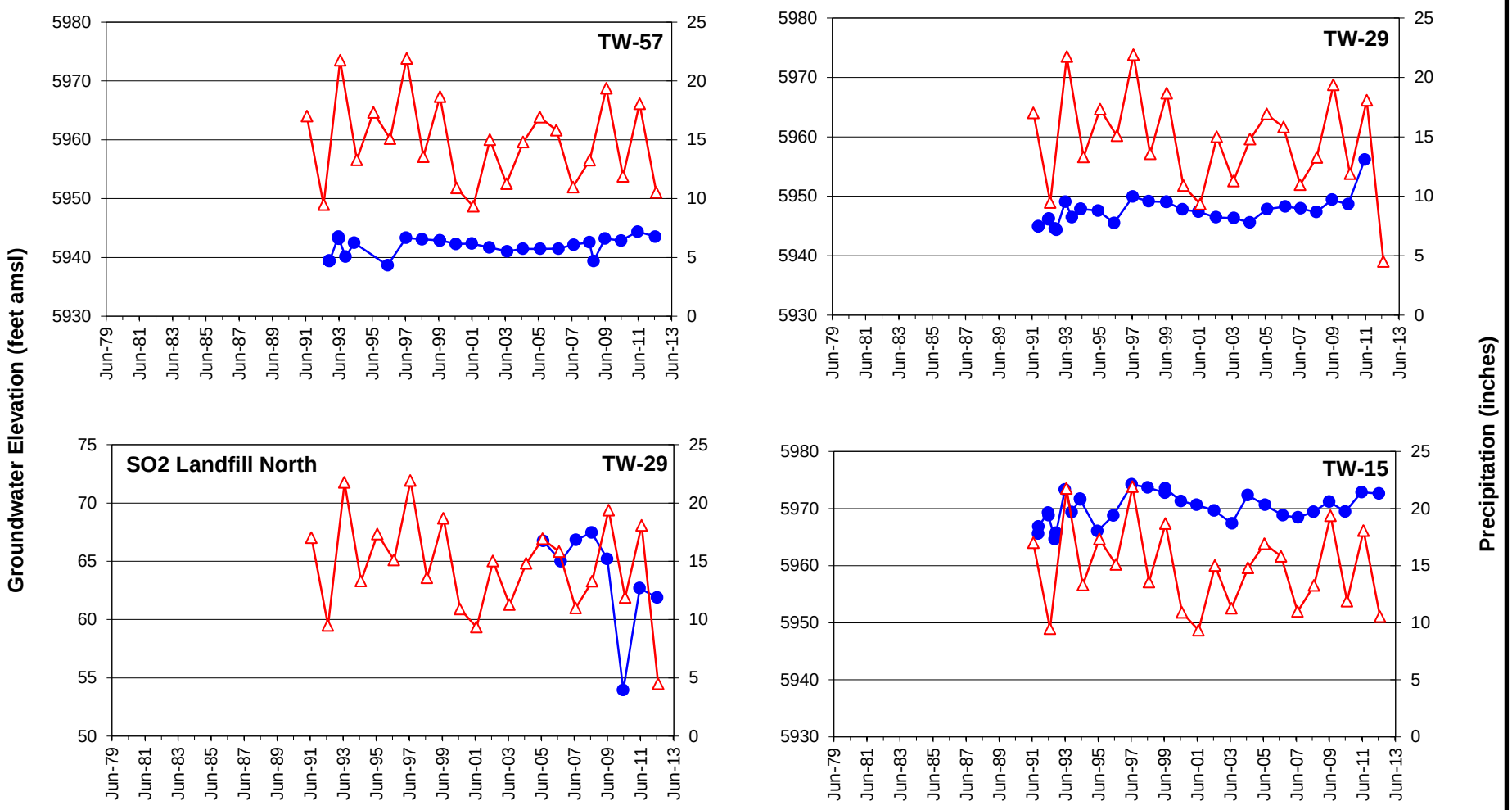
Water Year Precipitaition

FIGURE **I-9**

GROUNDWATER ELEVATION IN HYDROCLARIFIER AREA WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

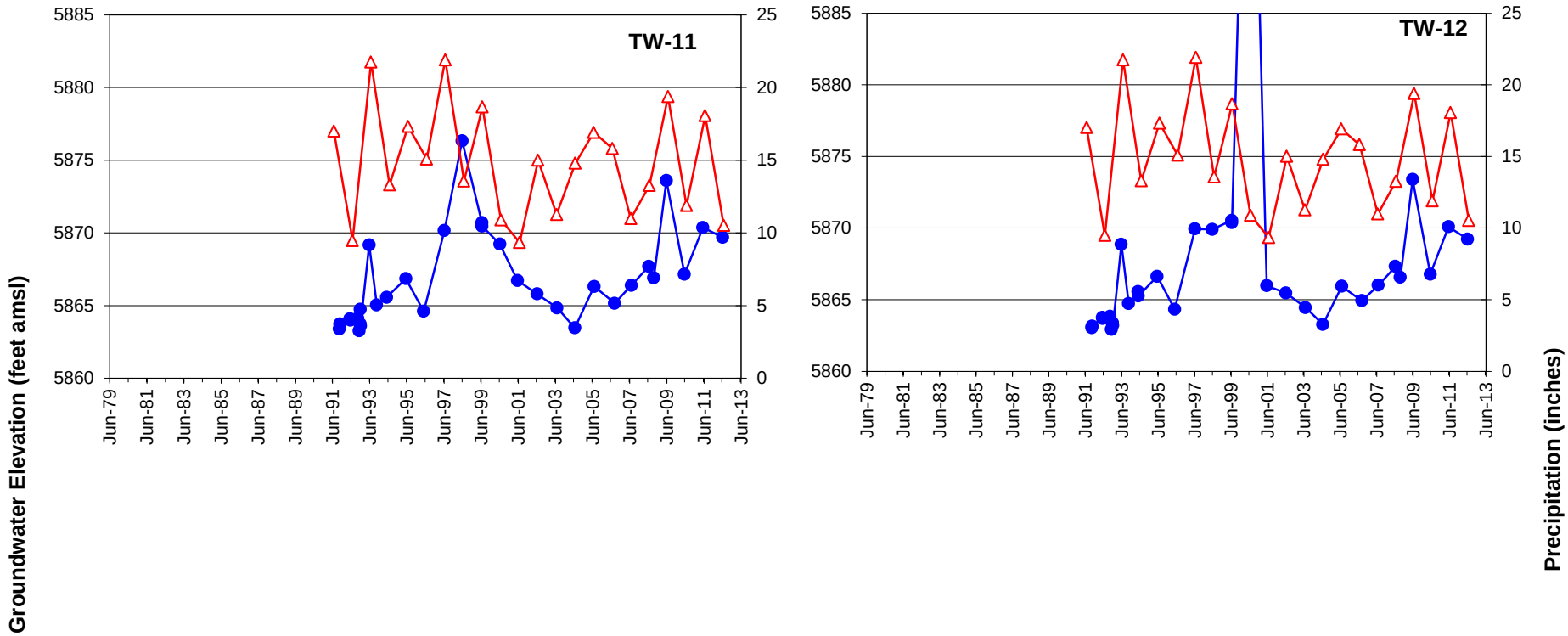
Water Year Precipitaition

FIGURE **I-10**

GROUNDWATER ELEVATION IN BACKGROUND WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

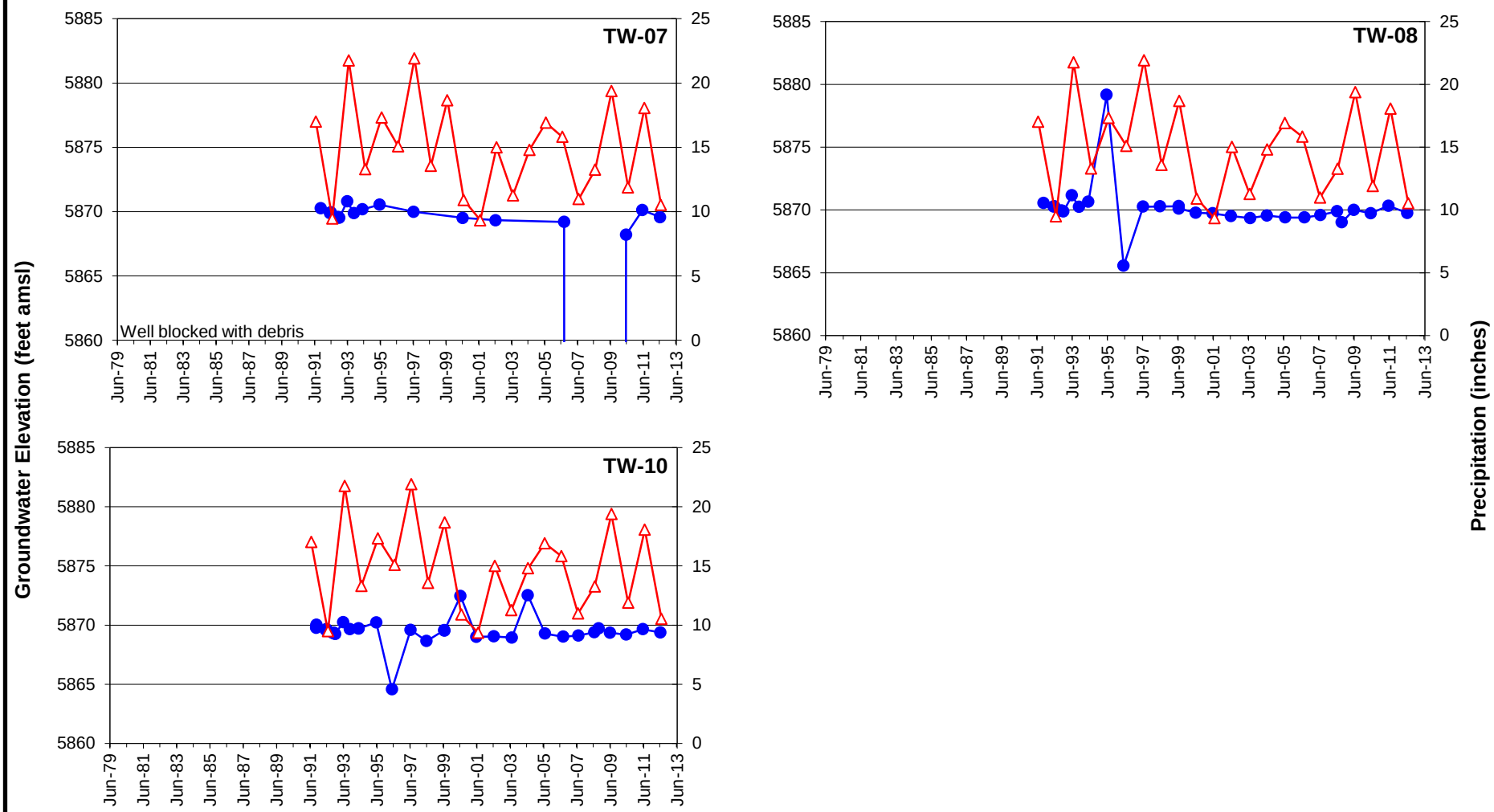
Water Year Precipitaition

FIGURE **I-11**

GROUNDWATER ELEVATION IN SOUTHEAST CORNER WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

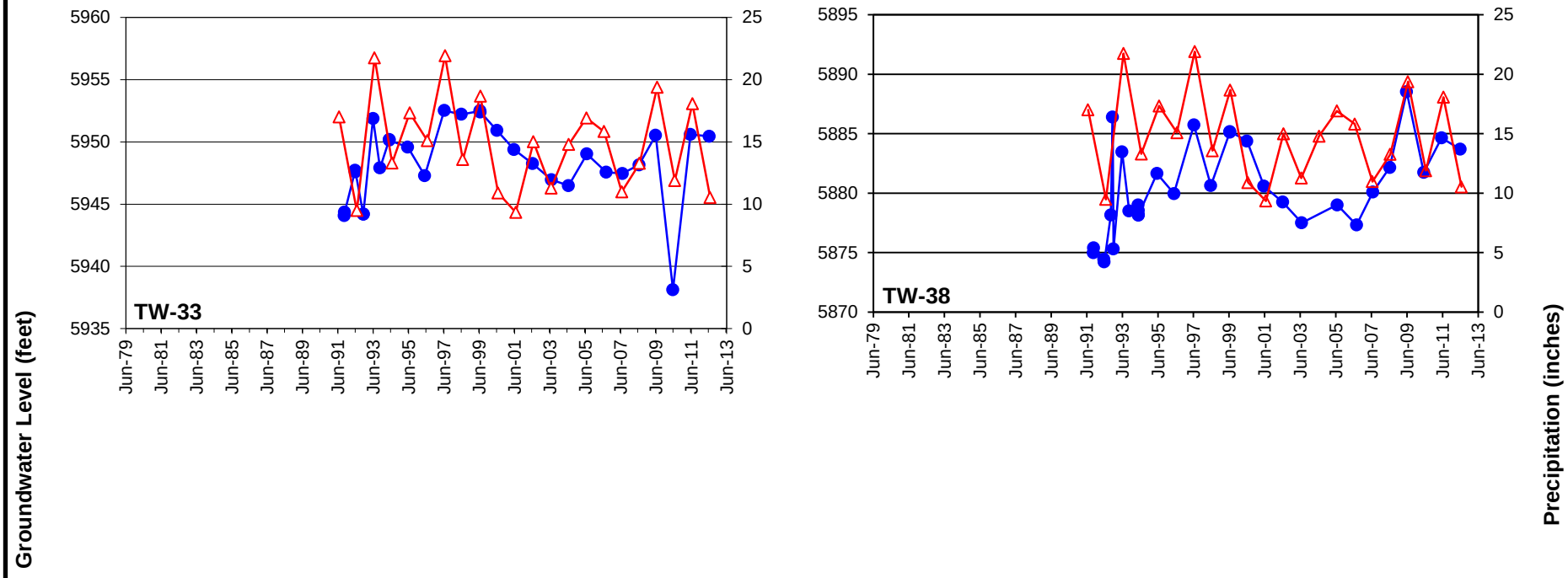
Water Year Precipitaition

FIGURE **I-12**

GROUNDWATER ELEVATION IN SOUTHWEST CORNER WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

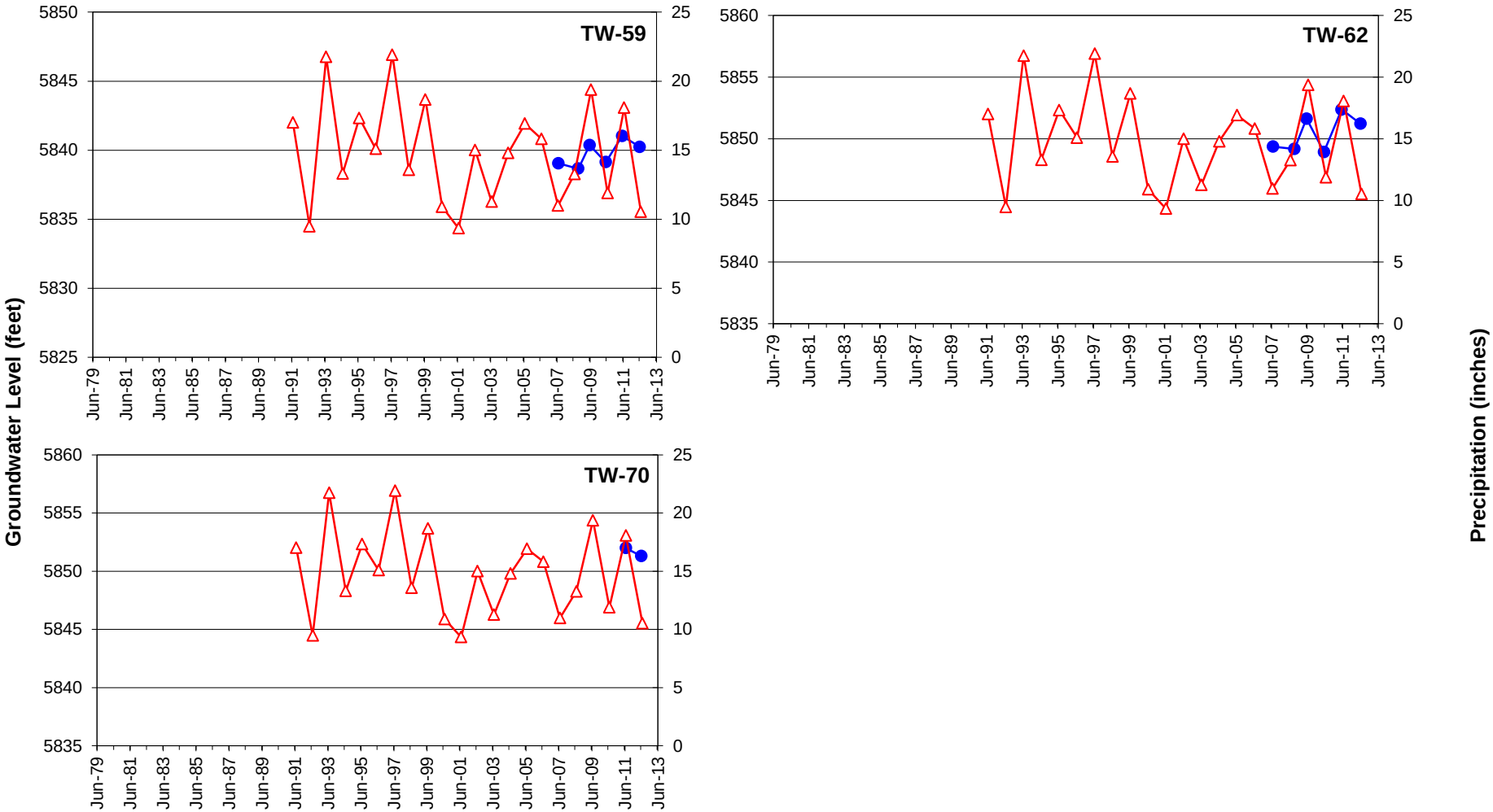
Water Year Precipitaition

FIGURE **I-13**

GROUNDWATER ELEVATION IN EAST WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

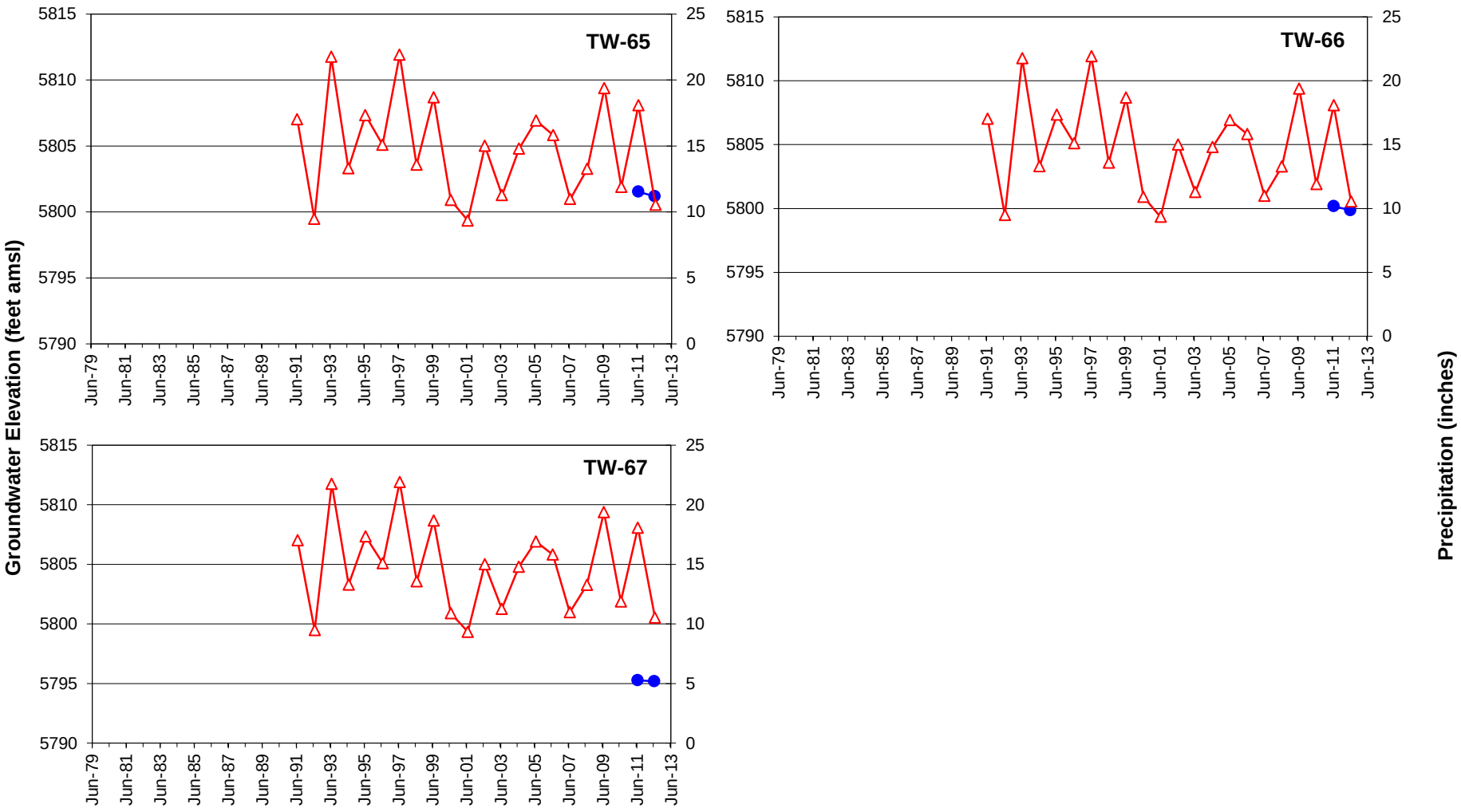
Water Year Precipitaition

FIGURE **I-14**

GROUNDWATER ELEVATION IN UBZ-2 WELLS SOUTH OF SOUTHERN BOUNDARY WELLS

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

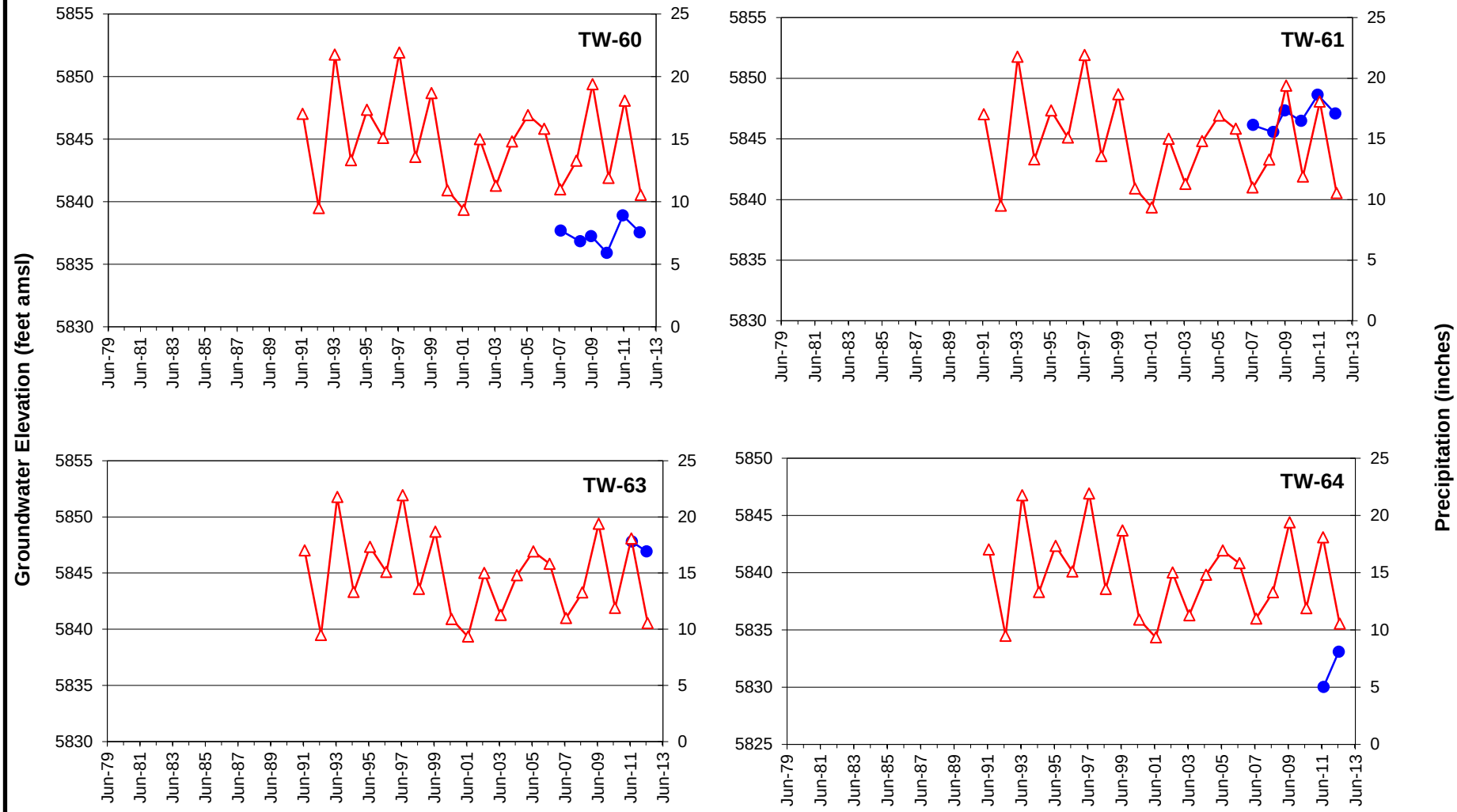
Water Year Precipitaition

FIGURE **I-15**

GROUNDWATER ELEVATION IN UBZ-2 WELLS AT PROPERTY LINE

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

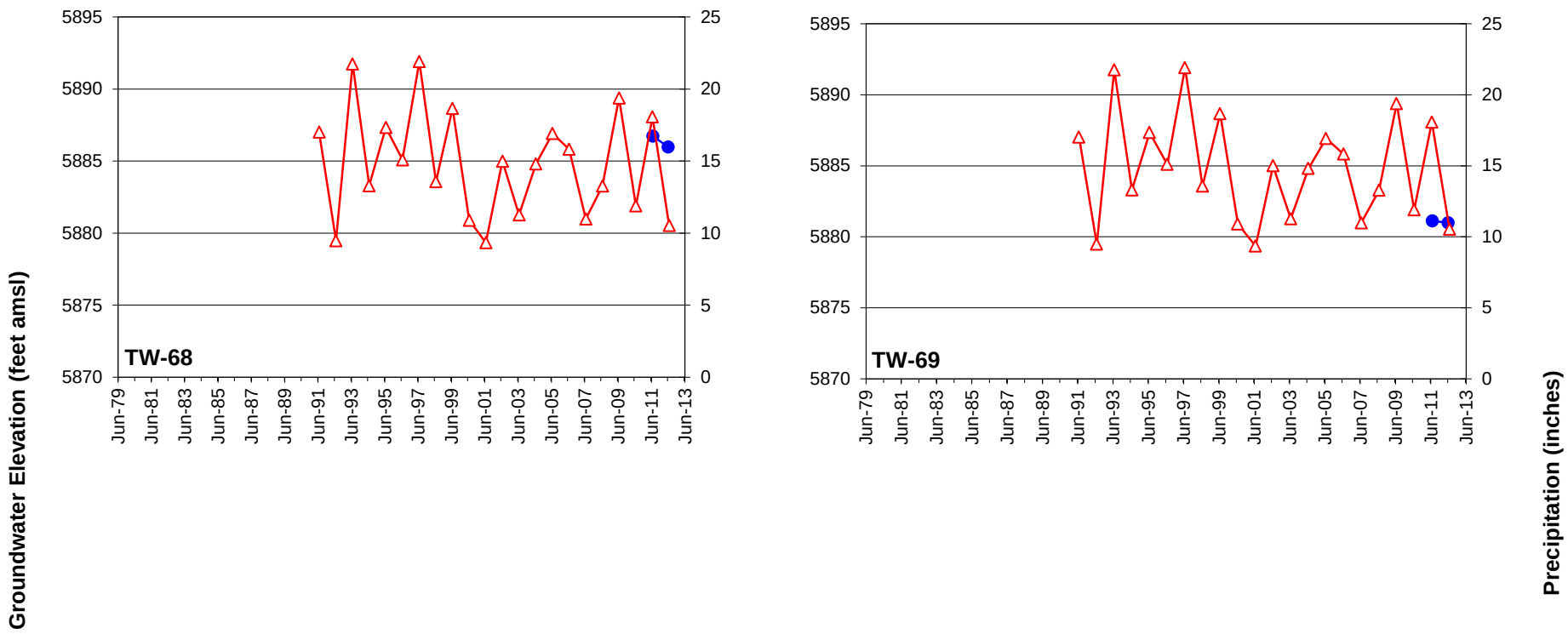
Water Year Precipitaition

FIGURE **I-16**

GROUNDWATER ELEVATION IN UBZ-1 WELLS SOUTHWEST OF PLANT

Monsanto Groundwater Monitoring

913-1101.605a



LEGEND

Groundwater Elevations

Water Year Precipitaition

FIGURE **I-17**

GROUNDWATER ELEVATION IN WELLS WEST OF PLANT

Monsanto Groundwater Monitoring

913-1101.605a

APPENDIX J
DATA VALIDATION SUMMARY FOR 2013 WATER SAMPLING, MONSANTO SODA SPRINGS PLANT

TECHNICAL MEMORANDUM

Date:	March 18, 2014	**Project No.:**	913-1101-002.002.2I
To:	Jim McCulloch	**Company:**	Monsanto, Soda Springs, Idaho
From:	Tom Stapp, Senior Project Chemist		
cc:	Michael Klisch and David Banton		
RE:	**DATA VALIDATION SUMMARY FOR 2013 ANNUAL WATER SAMPLING, MONSANTO SODA SPRINGS**		

Water quality samples were collected at the Monsanto Soda Springs Plant from May 30 to June 9, 2013. Water quality samples were collected from 57 wells, 10 springs, and 14 surface water, and non-contact cooling water locations during the 2013 sampling period.

The groundwater and surface water quality samples were shipped under chain-of-custody to SVL Analytical in Kellogg, Idaho (SVL; primary laboratory) for analysis. Split samples were collected and sent for analysis at Analytical Resources Inc. (ARI) in Seattle, Washington.

1.0 INTRODUCTION

This memo presents the results of data validation on Sample Delivery Groups (SDGs): W3F0043, W3F0045, W3F0046, W3F0207, W3F0208, W3F0223, W3F0227, W3F0228, W3F0231, W3F0233, and W3F0235 prepared by SVL in July 2013 and SDG WT-49 prepared by ARI. A complete summary of sample identifications, locations and sample collection dates is in Table J-5.0. Data qualifiers added to select analytes for select samples are summarized in Table J-5.1. Table J-5.2 provides the analytes and magnitude of detections found in Field Blanks associated with select sample dates and locations. Tables J-5.3a through j, inclusive, provide the Analytical Holding Time Summaries for each analyte or analyte group, and Table J-5.4 provides precision calculations for Field Duplicate collection locations. Finally, Table J-5.5 provides analytical precision calculations for samples split between the two laboratories, ARI and SVL.

Analytical methodology utilized by SVL included the following:

- US Environmental Protection Agency (EPA) Method 6010 B: Ion Coupled Plasma Metals – Atomic Emission Spectrometry
- SM 2320 B: Alkalinity (including Bicarbonate and Carbonate)
- EPA 300.0: Anions (including Chloride [Cl^-], Fluoride [F^-], and Sulfate [SO_4])
- EPA 350.1: Ammonia as N (NH_3)
- EPA 353.2: Nitrate/Nitrite as N (NO_3/NO_2)
- EPA 6020: Selenium

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA
Tel: (425) 883-0777 Fax: (425) 882-5498 www.golder.com

Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation

- SM 2540 C: Total Dissolved Solids (TDS)
- SM 4500 P-E: Total Phosphorus (TP)

Analytical methodology utilized by ARI included the following:

- USEPA Method 6010 B: Ion Coupled Plasma Metals – Atomic Emission Spectrometry
- SM 2320: Alkalinity
- EPA 300.0: Anions (including Chloride [Cl^-], Fluoride [F^-], and Sulfate [SO_4])
- EPA 350.1: Modified: Ammonia (NH_3)
- EPA 353.2: Nitrate + Nitrite (NO_3/NO_2)
- EPA 200.8: Selenium
- EPA 365.2: Total Phosphorus (TP)
- EPA 160.1: Total Dissolved Solids (TDS)

Data validation was conducted in accordance with the USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review (EPA 2010), the Monsanto Quality Assurance Project Plan (QAPP) (Golder 2011), and applicable analytical methods. The data review process provides information on analytical limitations of the data based on specific quality control (QC) criteria outlined in the referenced documents. Sections 2 through 9 of this memorandum describe the QC criteria and the status of acceptability for each set of criteria. Qualification of results is indicated in the Section header as “Qualification Applied” (i.e., qualifiers were applied to selected sample results), or “Acceptable” (there were no qualifiers applied to the referenced sample results). Supporting information is provided in Attachments 1 through 4 as indicated:

- Attachment 1: Glossary of Data Reporting Qualifiers
- Attachment 2: Annotated Laboratory Reports
- Attachment 3: Laboratory Narrative and Chain-of-Custody Documentation
- Attachment 4: Supporting Data Validation Review Forms

2.0 SAMPLE HANDLING AND CUSTODY REQUIREMENTS

Custody of samples being sent off site for analysis were controlled and documented in accordance with Golder Associates Inc. (Golder) technical procedure TP-1.2-23, "Chain-of-Custody" (Golder 1995a). The unique sample identification numbers were recorded on the Chain-of-Custody forms found in Attachment 3.

2.1 General Chemistry Parameters – Qualification Applied

A summary of qualifications applied are provided in Table J-5.1. Qualifier definitions are provided in Attachment 1, and qualifiers added to applicable sample results are provided on the Annotated Laboratory Reports (Attachment 2).

2.1.1 Temperature – Qualification Applied

Sample custody was maintained throughout sample collection, transport, and laboratory receipt. All samples were received at 4 ± 2 degree Celsius (C), with the exception of select samples in SDGs W3F0227, W3F0228, W3F0231, W3F0233, and W3F0235. Samples in these SDGs were received at temperatures ranging from 7.4 to 8.4 degree C, requiring qualification of results for anions, alkalinity, ammonia, total dissolved solids (TDS), dissolved oxygen, nitrate and nitrite as N, and phosphorus as estimated ("J/UJ"). A summary of samples affected is provided in Table J-5.1.

Transport cooler temperatures were measured with an infra-red instrument and recorded at the laboratory upon receipt.

2.1.2 Preservation

Samples were collected in pre-preserved bottles or preserved in the field with vials of acid provided by the laboratory and designated for the appropriate analysis (e.g. sulfuric acid added to pH<2 for nitrate and nitrate as N). Samples were checked for preservation by SVL just prior to preparation and analysis or upon receipt (ARI checked preservations upon receipt). All samples that required preservation were preserved to pH < 2.

2.2 Metals – All Associated Sample Results are Acceptable

Sample custody was maintained throughout sample collection, transport, and laboratory receipt. All samples were received at 4 ± 2 degree C with the exception of select samples in SDGs W3F0227, W3F0228, W3F0231, W3F0233, and W3F0235. Samples in these SDGs were received at temperatures ranging from 7.4 to 8.4 degree C.

The EPA guidance document 'Low Stress Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells' (EPA 1996) states "Metal samples, after acidification to a pH <2 do not need to be cooled." All sample bottles prepared for metal analysis were properly preserved, in the field, with nitric acid according to chain of custody and sample receipt records. Therefore no qualification was applied.

3.0 HOLDING TIMES

Holding times are evaluated to determine the acceptable and cumulative period of time for sample shipment, storage, and preparation before analysis is performed. The objective is to ascertain the validity of analytical results based on the holding time of the sample from the time of collection to the time of analysis. Tables J-5.3 provides a summary of holding time data for each analysis performed for each SDG.

3.1 General Chemistry Parameters – Qualification Applied

All analyses were extracted and performed within the recommended maximum holding time, with the exception of:

- Samples 13033, 13034, 13035, and 13036, in SDG W3F0207 (SVL) were analyzed for TDS on Day 9. Samples 13017, 13034, 13038, and 13044, in SDG WT49 (ARI) were tested on Days 8 through 11. Therefore, the analyses were performed after the recommended 7 day holding period and are qualified as estimated "J".
- Sample 13103 was re-analyzed on Day 15 for total alkalinity, carbonate alkalinity, and bicarbonate alkalinity, which exceeds the recommended 14 day holding period. Therefore, sample 13103 in SDG W3F0233 (SVL) was qualified as estimated "J".
- Samples in SDGs W3F0043, W3F0207, W3F0208, W3F0223, W3F0227, W3F0228, W3F0231, W3F0233, and W3F0235 for analysis of dissolved oxygen were analyzed past the 15 minute holding limit, requiring qualification as estimated "J". A summary of the samples affected is provided in Table J-5.1.

Table J-5.0 provides a cross reference for sample numbers to location names, and a summary of qualifiers applied are provided in Table J-5.1. Qualifiers are added to applicable sample results in the Annotated Laboratory Reports (Attachment 2), and Data Validation Summary Checklists (Attachment 4) provide narrative on the qualifier applied.

3.2 Metals – All Associated Sample Results are Acceptable

All analyses were extracted and performed within the recommended maximum holding time.

4.0 CALIBRATION/INSTRUMENT PERFORMANCE MONITORING

Compliance requirements for satisfactory instrument calibration and performance monitoring were evaluated (EPA 2007a and 2007b). Initial calibration demonstrates that the method used is capable of acceptable quantitative and qualitative performance before proceeding with QC and sample analysis. Continuing calibration demonstrates that the method is capable of performance on a continuing basis during and including sample and QC analyses. The required procedures, frequency, and performance were evaluated.

4.1 General Chemistry – All Associated Sample Results are Acceptable

4.1.1 Performance and Calibration

Method performance and calibration criteria were met. Initial calibration verification (ICV) and continuing calibration verifications (CCVs) were performed demonstrating acceptable performance.

4.2 Metals – All Associated Sample Results are Acceptable

4.2.1 Performance and Calibration

Method performance and calibration criteria were met. ICV and CCVs were performed demonstrating acceptable performance.

5.0 BLANKS

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory activities. In addition, the evaluation of field blanks is assessed to monitor field related activities and is discussed in Section 8.

5.1 General Chemistry – All Associated Sample Results are Acceptable

Method blanks were analyzed at the required frequency in each SDG and were target analyte-free. Therefore, the method blank stands as an indicator that the associated samples contained in the analytical batch are also unaffected by contamination from laboratory preparation procedures.

5.2 Metals – Qualification Applied

Method blanks (preparation blanks) and continuing calibration blanks (CCBs) were analyzed at the required frequency in each SDG and were target analyte-free, with the exception of molybdenum in the CCB associated with SDG W3F0043 and W3F0207. Molybdenum in selected samples was qualified as not detected ("U") at the reporting limit (RL), and estimated with high bias ("J+") for detected values less than 10 times the contaminant result.

Table J-5.1 provides a summary of samples and analytes affected by blank contaminants. Qualification of these results deviates slightly from data validation guidelines. The guidelines suggest raising a detected amount in a sample between the method detection limit (MDL) and the reporting limit (RL), to the RL with a non-detect qualifier (U) when associated with analyte detections in initial or continuing calibration blanks. Alternately, professional judgment is allowed to apply an estimated qualifier with a high bias (J+) when analyte detections are associated with preparation blanks and CCBs. Additionally, samples are qualified as estimated with a low bias (J-) when associated with 'negative value' preparation blanks and CCBs. This allows a blank bias to show for analytes present at trace or up to ten times the blank value, for the affected sample. The "J+" (or J-) qualifier for Monsanto samples was applied in cases where the result was greater than the RL but less than 10X the absolute value of the preparation blank or CCB contamination in each case specified. A "U" qualifier was applied in cases where a result was greater than the MDL, but less than the RL associated with preparation blank or CCB contamination. A not detected – estimated ("UJ") qualifier was applied in cases where a result was greater than the MDL, but less than the RL associated with a 'negative value' preparation blank contamination.

Table J-5.0 provides a sample number cross referenced to location names, and a summary of qualifications applied are provided in Table J-5.1. Qualifiers are added to applicable sample results in the Annotated Laboratory Reports (Attachment 2), and Data Validation Summary Checklists (Attachment 4) provide narrative on the qualifier applied.

6.0 SYSTEM MONITORING

System monitoring serves as a monitor for specific portions of the overall performance of the analytical method. System monitoring includes instrument checks, sample batch checks, and individual sample performance checks. Data for laboratory control samples (LCS) or standard reference materials (SRM) are provided in order to evaluate the accuracy and performance of the analytical method. Performance criteria ensure that instrument sensitivity and responses are stable throughout the analysis.

For metal analytes, an ICP Serial Dilution of select samples is performed to determine whether or not significant physical or chemical interferences exist due to sample matrix.

6.1 General Chemistry – Associated Sample Results are Acceptable

6.1.1 Laboratory Control Sample or Standard Reference Material

LCS or SRM samples were analyzed associated with each SDG. Goals for recovery of LCS or SRM samples were met. Therefore, general chemistry analytes exhibit stable instrument response during the period of batch analysis, and sample results are deemed acceptable for accuracy and precision associated with each SDG.

6.2 Metals – Qualification Applied

6.2.1 Laboratory Control Sample

LCS samples were analyzed associated with each SDG. Goals for recovery of LCS samples were met. Therefore, metal analytes exhibit stable instrument response during the period of batch analysis, and sample results are deemed acceptable for accuracy and precision associated with each SDG.

6.2.2 Serial Dilution

A Serial Dilution was performed for each SDG with the exception of the ARI data package, associated with the ICP-MS (6020C) selenium analyses. Goals for acceptable percent difference (%D) of the serial dilutions were met with the exception of:

- Select sample results for selenium in SDGs W3F0043, W3F0045, W3F0046, W3F0223, W3F0227, W3F0228, W3F0231, W3F0233, and W3F0235.

The Serial Dilution %D was out of control high (between 15 and 29%, with a high of 584%). The selenium samples selected for serial dilution in these SDGs were qualified as estimated (J/UJ) and could have significant physical or chemical interferences due to sample matrix.

Qualifier definitions are provided in Attachment 1. Table J-5.0 provides a sample number cross referenced to location names, and a summary of qualifications applied are provided in Table J-5.1. Qualifiers are added to applicable sample results in the Annotated Laboratory Reports (Attachment 2), and Data Validation Summary Checklists (Attachment 4) provide narrative on the qualifier applied.

7.0 MATRIX SPIKE AND DUPLICATE ANALYSES

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. Non-homogeneous samples can impact the apparent method recovery. Aqueous samples are generally homogeneous and soil samples are generally homogeneous within a factor of two or three. The data validator has assumed samples selected for spiking to be of a homogeneous nature, however similarity of matrix from sample to sample could be highly variable. If out-of-limit conditions exist for a spiked sample, associated samples have not been summarily qualified. Therefore, the scope of influence on associated samples should be considered.

7.1 General Chemistry – Qualification Applied

7.1.1 Precision and Accuracy

Matrix spike (MS) analyses were performed on samples associated with chloride, fluoride, sulfate, ammonia, nitrate, and phosphorus analyses. Goals for precision and accuracy were met in each SDG with the exception of:

- Ammonia and fluoride in SDG W3F0207 associated with sample 13046 (TW-35) were qualified as estimated “J” due to low and high recovery respectively.
- Fluoride in SDG W3F0208 for sample 13056 (TW-70), qualified as estimated “J” due to high recovery.
- Ammonia in SDG W3F0223 for sample 13060 (Independent Well), qualified as estimated “J” due to high recovery.
- Chloride in SDG W3F0233 for sample 13094 (Little Spring Pond Up), qualified as estimated “J” due to low recovery.

7.1.2 Exceptions and Notes

Analytical methodology and data validation guidelines for inorganic analytes state that qualification of results ‘does not apply’ when the sample result for the MS contains more than four times the level of the spiking solution. The MS performed on the general chemistry analytes were spiked at appropriate levels, however selected samples exhibited high analyte levels and the condition of “more than four times the level of the spiking solution” was observed requiring no qualification.

Qualifier definitions are provided in Attachment 1. Table J-5.0 provides a sample number cross referenced to location names, and a summary of qualifications applied are provided in Table J-5.1.

Qualifiers are added to applicable sample results in the Annotated Laboratory Reports (Attachment 2), and Data Validation Summary Checklists (Attachment 4) provide narrative on the qualifier applied.

7.2 Metals – Associated Sample Results are Acceptable

7.2.1 Precision and Accuracy

Matrix spike (MS) analyses were performed on selected samples in the indicated SDGs for all associated analytes. Goals for precision and accuracy were met in each SDG with the exception of dissolved magnesium and potassium in SDG W3F0231 for sample 13070, qualified as estimated "J" due to high recovery.

A summary of qualifications is provided in Table J-5.1, and qualifiers added to applicable samples are provided on the Annotated Laboratory Reports (Attachment 3), and qualification descriptions are provided on the Data Validation Summary Checklists.

8.0 FIELD QUALITY CONTROL SAMPLES

Blind field duplicates and field blanks were collected to give an indication of overall field sampling precision and overall performance. The field blank sample was analyzed to determine the existence and magnitude of contamination resulting from field activities. Field split samples were collected and analyzed for identical parameters but at different laboratories. The field duplicate and field split sample results may have more variability than laboratory duplicates, which measures only analytical or method precision. Therefore, relative percent differences between field duplicates and field splits are noted for review, but results for these QC samples and the sample results associated with them are typically not qualified.

8.1 General Chemistry and Metals – Associated Sample Results are Acceptable

8.1.1 Field Duplicate– Advisory Conditions Noted

Sample locations Southwest Spring at Government Dam Road, SC-11, TW-11, TW-20, TW-33, TW-35, TW-62, and TW-70 were identified for field duplicate analysis. Table J-5.0 lists the sample locations and field duplicate pair sample identification numbers. Table J-5.4 provides a field duplicate comparison with relative percent difference (RPD) calculations for each analyte. RPDs were within the +/- 20% limit for all field duplicate pair analyses with the following exceptions:

- For the samples collected at Southwest Spring at Government Dam Road in SDG W3F0233, phosphorus, cadmium, dissolved molybdenum, and total recoverable molybdenum exceed the RPD 20% limit, ranging from 20.6 to 78.6%.
- For the samples collected at SC-11 in SDG W3F0231, fluoride, and total recoverable molybdenum exceed the RPD 20% limit, ranging from 23.7 to 52.4%.
- For the samples collected at TW-33 in SDG W3F0045, phosphorus exceeds the RPD 20% limit, at 132%.

- For the samples collected at TW-35 in SDG W3F0208, nitrate and nitrite as N exceeds the RPD 20% limit, at 210%.
- For the samples collected at TW-70 in SDG W3F0208, dissolved oxygen exceeds the RPD 20% limit, at 21.2%.

Qualification for field duplicate pair results that are out of limit are not applied in Data Validation assessments according to National Functional Guidelines (EPA 2010). However, the project manager may comment on the level of acceptability for field duplicate performance, since variability can be a consequence of field handling, sample storage, or laboratory performance.

8.1.2 Field Blanks – Advisory Conditions Noted

Sample 13007 is identified as a deionized water field blank in SDG W3F0043, and sample 13103 is identified as a de-ionized water equipment blank for the temporary Grundfos sampling pump in SDG W3F0223. Trace analytes below the RL were detected in:

- 13007 for nitrate and nitrite as N, calcium, and sodium.
- 13007 for TDS detected slightly above the RL (10 milligrams/Liter [mg/L]) at 22 mg/L.
- 13103 for hardness, dissolved oxygen, and sodium.
- 13103 for calcium was detected slightly above the RL (40 micrograms/Liter [ug/L]) at 43 ug/L.

The data does not show a significant contamination trend. Using data validation guidelines for blank contamination, the TDS and calcium contaminants would show bias to associated samples in the SDG group, causing associated sample results to be raised to the contaminant level and qualified as non-detect ("U" qualifier). However, all associated sample results in the SDG group are more than ten times the blank amounts and qualification does not apply. The project manager may comment on the level of acceptability for field blank performance, since variability can be a consequence of field handling, sample storage, or laboratory performance. A summary of detections found is provided in Table J-5.2.

8.1.3 Field Split Comparison – Advisory Conditions Noted

Sample locations Mormon A Spring, SC-8, TW-12, TW-33, TW-44, TW-54, TW-55, and TW-67 were selected for field split collection and analysis at separate certified laboratories. Representative media from each location was sent to SVL, in Kellogg, Idaho, and ARI, in Seattle, Washington. The samples were tested using identical methodology in most cases, however reporting limit differences were recorded. Table J-5.0 lists the sample locations and field split sample identification numbers. Table J-5.5 associated with ARI provides a field split comparison with RPD calculations for each analysis requested. RPDs were within the ± 20% limit, or the plus/minus RL for all field spilt analyses, with the exception of the following analytes:

- Phosphorus and fluoride in TW-33.
- Phosphorus and TDS in TW-55.
- Ammonia in SC-8.
- Ammonia, fluoride, and TDS in TW-44.
- Fluoride, ammonia, and total recoverable manganese in TW-54.

Qualification for field split results that are out of limit are not applied in data validation assessments according to National Functional Guidelines (EPA 2010). However, the project manager may comment on the level of acceptability for field split performance, since variability can be a consequence of field handling, sample storage, or laboratory performance.

9.0 OVERALL ASSESSMENT

Overall assessment was performed on the entire data package. Review of the data results was performed in conjunction with the governing plans. The governing plans encompass the National Functional Guidelines for Inorganic Superfund Data Review (EPA 2010), the Monsanto Quality Assurance Project Plan (QAPP) (Golder 2011), and the Sampling Plan (Golder 2012), and applicable analytical methods.

9.1 General Chemistry – All Associated Sample Results are Acceptable.

An assessment of the following criteria associated with general chemistry results was performed and the criteria were found to meet the guidelines of the governing plan with the exceptions noted.

9.1.1 Detection Limits

Detection limit goals as stated in the QAPP (Golder 2011) were met for all results with the exception of select results for ammonia as N (0.05 mg/L reported; 0.01 mg/L is required), analyzed by ARI associated with SDG WT-49. Selected sample analyte non-detects did not meet detection limit goals for other samples due to dilutions. RLs are reported at QAPP guidance limits for other associated sample results and no qualification has been applied.

SVL reported elevated RLs for ammonia as N (0.03 mg/L) in all SDGs with the exception of W3F0228. No action was taken other than to note in the data validation check sheet.

9.1.2 Target Analyte Identification and Quantitation

All sample results were supported in the raw data with the exception of data provided by ARI, for which raw data was not provided. No action was taken since the purpose of the sample results from ARI was for field split comparisons.

9.1.3 Completeness

The data packages were complete for all requested analyses. A total of 96 samples were validated in the data packages with a total of 1,023 general chemistry determinations reported, all of which were deemed valid. This results in a completeness of 100%, which meets normal work plan objectives of 90%.

9.2 Metals – All Associated Sample Results are Acceptable

An assessment of the following criteria associated with metal results was performed and the criteria were found to meet the guidelines of the governing plan.

9.2.1 Detection Limits

Detection limit goals as stated in the QAPP (Golder 2011) were met. Detection limit goals for samples analyzed by ARI were met with the exception of select results where dilutions were required. Results are as reported and qualification is not applied.

Detection limit goals were met for all SVL results.

9.2.2 Target Analyte Identification and Quantitation

All sample results were supported in the raw data with the exception of data provided by ARI for which raw data was not provided. No action was taken since the purpose of the sample results from ARI was for field split comparisons.

9.2.3 Completeness

The data packages were complete for all requested analyses. A total of 96 samples were validated in the data packages for dissolved fraction and total recoverable fraction, with a total of 1,367 metal determinations reported (including hardness), all of which were deemed valid. This results in a completeness of 100%, which meets normal work plan objectives of 90%.

10.0 DATA VALIDATION AND USABILITY

Data were validated by Golder personnel, based on the applicable elements of the USEPA Functional Guidelines for Inorganic Superfund Data Review, USEPA Contract Laboratory Program (EPA 2010), Golder technical procedure TP-2-2-12 “Analytical Data Management” (Golder 1995b), applicable reference method requirements as appropriate, and the Quality Assurance Project Plan (Golder 2011).

Data generated in the field or by the subcontractor laboratory were reviewed. Original data was copied and retained in the project file. Working copies were reviewed by the Lead Analytical Chemist for validating/verifying analytical data and to provide reference to this report.

Validation/verification and data management activities were organized by analytical fraction (i.e. Metals, General Chemistry). All hard copy or electronic deliverable data were reviewed against chain-of-custody

for verification of sample identification and analyses requested. Any incorrect data or discrepancies noted in the verification were resolved with project management and/or the data generator, and a record of the resolution was noted in the data validation report or checklists. Any corrections to the original data were noted in the checklists and corrected data sheets or electronic deliverables were issued if necessary. After the completion of data validation/verification any qualifiers or other comments noted in the validation/verification process assigned to the data are entered into the qualifier or comment section of the database as appropriate. The final database summary report is reviewed by appropriate personnel and added to the project file.

The analytical data resulting from analysis of surface and ground water quality monitoring in support of the Monsanto groundwater compliance monitoring are acceptable for their intended use with the exception of those deficiencies noted. Limitations and sources of existing data are stated and clearly identified where applicable. A validated data summary of individual qualifiers applied to select samples is included in Table J-5.1.

11.0 REFERENCES

Environmental Protection Agency (EPA). 1996. Region 1. 'Low Stress (low flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells', SOP #GW0001, July 30.

EPA, 2007a. USEPA SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, Method 6010C, Final Update, February, 2007a.

EPA, 2007b. USEPA SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, Method 6020A, Final Update, February, 2007b.

EPA. 2010. USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review, EPA-540/R-10-11, January.

Golder Associates Inc.(Golder). 1995a. Golder Associates Inc., Technical Procedure TP-1.2-23, "Chain of Custody", Golder Associates Inc., Redmond, Washington.

Golder. 1995b. Technical Procedure TP-2.2-12, "Analytical Data Management", Golder Associates Inc., Redmond, Washington.

Golder. 2011. Quality Assurance Project Plan for Groundwater and Surface Water Sampling, Monsanto Soda Springs Facility, Soda Springs, Idaho; Submitted to Monsanto Company, June 9.

Golder. 2012. Groundwater and Surface Water Sampling Work Plan, Monsanto Soda Springs Idaho Plant; Submitted to Monsanto Company, June 4.

List of Tables

Table J-5.0 Sample Collection Summary June 2013

Table J-5.1 Data Qualification Summary

Table J-5.2 Field Blank Summary

Table J-5.3a-j Analytical Holding Time Summary

Table J-5.4 Field Duplicate Comparison Summary

Table J-5.5 Laboratory Split Comparison/ SVL Analytical and Analytical Resources

List of Attachments

Attachment 1 Glossary of Data Reporting Qualifiers

Attachment 2 Annotated Laboratory Reports

Attachment 3 Laboratory Narrative and Chain-of-Custody Documentation

Attachment 4 Supporting Data Validation Review Forms

TABLES

Table J-5.0: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Disposal Method	Filter/ Unfilter	Filter Size	Notes
Surface Water/Non-Contact Cooling Water									
Non-Contact Cooling Water 1	13070	NA	June 7, 2013	12:00	Grab	NA	U/F	0.45	
Non-Contact Cooling Water 2	13071	NA	June 7, 2013	12:00	Grab	NA	U/F	0.45	
Non-Contact Cooling Water 3	13072	NA	June 7, 2013	12:00	Grab	NA	U/F	0.45	
PR-1 Power Return Canal	13073	NA	June 7, 2013	13:25	Grab	NA	U/F	0.45	
SC-01 Soda Up	13067	NA	June 7, 2013	10:40	Grab	NA	U/F	0.45	
SC-02 Soda Weir	13068	NA	June 7, 2013	11:30	Grab	NA	U/F	0.45	
SC-03 Soda Mid	13082	NA	June 8, 2013	09:30	Grab	NA	U/F	0.45	
SC-04 Soda Down	13084	NA	June 8, 2013	11:00	Grab	NA	U/F	0.45	
SC-05 Soda Below Weir	13069	NA	June 7, 2013	11:45	Grab	NA	U/F	0.45	
SC-06 Soda at Property Line	13092	NA	June 8, 2013	16:15	Grab	NA	U/F	0.45	
SC-07 Soda Upstream Power Return	13074	NA	June 7, 2013	14:10	Grab	NA	U/F	0.45	
SC-08 Soda at Octagon Park	13075	NA	June 7, 2013	14:50	Grab	NA	U/F	0.45	
SC-09 Soda above Diversion	13088	NA	June 8, 2013	14:10	Grab	NA	U/F	0.45	
SC-10 Soda at RR Bridge	13091	NA	June 8, 2013	16:00	Grab	NA	U/F	0.45	
SC-11 Soda at Highway 30	13089	NA	June 8, 2013	14:45	Grab	NA	U/F	0.45	
SC-11 Soda at Highway 30	13090	NA	June 8, 2013	14:45	Grab	NA	U/F	0.45	Duplicate
Non-Contact Cooling Water Pond Inlet	13063	NA	June 7, 2013	08:50	Grab	NA	U/F	0.45	
Groundwater - Springs									
Big Spring	13087	UBZ	June 8, 2013	13:35	Grab	NA	U/F	0.45	
Calf Spring	N/A	UBZ-1 γ5?	No Sample		Grab	NA	U/F	0.45	Spring was dry
City Park Spring	13086	UBZ	June 8, 2013	13:10	Grab	NA	U/F	0.45	
Homestead Spring	13085	UBZ-1 γ5?	June 8, 2013	12:00	Grab	NA	U/F	0.45	
Mormon A Spring	13076	UBZ-1 γ5?	June 7, 2013	17:00	Grab	NA	U/F	0.45	
Mormon A Spring	13077	UBZ-1 γ5?	June 7, 2013	17:00	Grab	NA	U/F	0.45	Laboratory Split
Mormon B Spring	13078	UBZ-1 γ5?	June 7, 2013	17:30	Grab	NA	U/F	0.45	
Mormon C Spring	13079	UBZ-1 γ5?	June 7, 2013	17:45	Grab	NA	U/F	0.45	
MC-1 Mormon Creek	13083	UBZ-1 γ5?	June 8, 2013	10:00	Grab	NA	U/F	0.45	
SW Spring at Government Dam Road	13064	UBZ-1 γ5?	June 7, 2013	09:25	Grab	NA	U/F	0.45	
SW Spring at Government Dam Road	13065	UBZ-1 γ5?	June 7, 2013	09:25	Grab	NA	U/F	0.45	Field Duplicate
SW Spring above the confluence with Soda Creek	13081	UBZ-1 γ5?	June 8, 2013	09:00	Grab	NA	U/F	0.45	

Table J-5.0: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Disposal Method	Filter/ Unfilter	Filter Size	Notes
Marsh Spring	13066	UBZ-1 γ5?	June 7, 2013	10:05	Grab	NA	U/F	0.45	
Groundwater - Wells									
PW-01	13098	UBZ,LBZ-4	June 8, 2013	18:45	Operating Well	GROUND	U		
PW-02	13097	UBZ,LBZ-4	June 8, 2013	18:30	Operating Well	GROUND	U		
PW-03	13096	UBZ,LBZ-4	June 8, 2013	18:10	Operating Well	GROUND	U		
PW-04	13006	UBZ/LBZ-4	May 30, 2013	17:40	Operating Well	GROUND	U		
Harris Well	13031	UBZ-2 γ4	June 3, 2013	10:05	Non-Dedicated Pump	GROUND	U		
Independent Well	13060	UBZ	June 6, 2013	12:50	Dedicated Pump	GROUND	U		
Lewis Well	13095	UBZ-2 γ3 and γ	June 8, 2013	17:45	Operating Well	GROUND	U		
Maughn Well	13053	UBZ	June 5, 2013	16:30	Dedicated Pump	GROUND	U		
SO2 Landfill North	13013	UBZ-4 γ3	May 31, 2013	14:45	Dedicated Pump	GROUND	U		
SO2 Landfill South	13014	UBZ-4 γ3	May 31, 2013	15:15	Dedicated Pump	GROUND	U		
Tigert East	TE-1-2	UBZ	June 9, 2013	14:00	Non-Dedicated Pump	GROUND	U		
Tigert South	TS-1-2	UBZ	June 9, 2013	14:00	Non-Dedicated Pump	GROUND	U		
TW-07	13030	UBZ-1 γ4	June 2, 2013	17:45	Non-Dedicated Pump	GROUND	U		
TW-08	13029	UBZ-1 γ3	June 2, 2013	16:45	Non-Dedicated Pump	TANK	U		
TW-09	NS	LBZ-1							
TW-10	13004	UBZ-1 γ5	May 30, 2013	16:00	Dedicated Pump	TANK	U		
TW-11	13035	LBZ-3 γ2	June 3, 2013	12:35	Dedicated Pump	TANK	U		
TW-11	13036	LBZ-3 γ2	June 3, 2013	12:35	Dedicated Pump	TANK	U		Field Duplicate
TW-12	13037	UBZ-3 γ3	June 3, 2013	13:15	Dedicated Pump	TANK	U		
TW-12	13038	UBZ-3 γ3	June 3, 2013	13:15	Dedicated Pump	TANK	U		Laboratory Split
TW-13	NS	UBZ-3 γ3							
TW-14	NS	SDZ							
TW-15	13016	UBZ-4 flow V?	May 31, 2013	16:25	Dedicated Pump	GROUND	U		
TW-16	13009	UBZ-4 γ3	May 31, 2013	10:00	Dedicated Pump	TANK	U		
TW-17	13010	UBZ-4 γ3	May 31, 2013	10:30	Dedicated Pump	TANK	U		
TW-18	13011	LBZ-4	May 31, 2013	13:05	Dedicated Pump	GROUND	U		
TW-19	NS	UBZ-3 flow V							
TW-20	13002	UBZ-2 γ4	May 30, 2013	14:55	Dedicated Pump	TANK	U		
TW-20	13003	UBZ-2 γ4	May 30, 2013	14:55	Dedicated Pump	TANK	U		Field Duplicate

Table J-5.0: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Disposal Method	Filter/ Unfilter	Filter Size	Notes
TW-21	NS	LBZ-2 γ2							
TW-22	13005	UBZ-2 γ4?	May 30, 2013	16:40	Dedicated Pump	TANK	U		
TW-23	NS	LBZ-2 γ2							
TW-24	13028	UBZ-2 γ4	June 2, 2013	13:40	Non-Dedicated Pump	GROUND	U		
TW-26	13020	UBZ-4 γ2	May 31, 2013	18:50	Dedicated Pump	TANK	U		
TW-28	NS	UBZ-4 γ3							
TW-29	13012	UBZ-4 γ3	May 31, 2013	13:45	Dedicated Pump	GROUND	U		
TW-30	13024	UBZ-4 γ3	June 1, 2013	18:10	Dedicated Pump	TANK	U		
TW-31	NS	UBZ-4 γ5							
TW-32	NS	LBZ-4 γ2							
TW-33	13017	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	TANK	U		Laboratory Split
TW-33	13018	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	TANK	U		
TW-33	13019	UBZ-4 γ4	May 31, 2013	17:45	Dedicated Pump	TANK	U		Field Duplicate
TW-34	13001	UBZ-2 γ3	May 30, 2013	14:30	Dedicated Pump	GROUND	U		
TW-35	13046	UBZ-2 γ3	June 4, 2013	17:50	Dedicated Pump	GROUND	U		
TW-35	13046	UBZ-2 γ3	June 4, 2013	17:50	Dedicated Pump	GROUND	U		
TW-37	13041	UBZ-2 γ4	June 4, 2013	13:00	Dedicated Pump	TANK	U		
TW-38	13026	UBZ-3 γ3	June 2, 2013	10:05	Hydrasleeve	TANK	F		
TW-38	13026	UBZ-3 γ3	June 2, 2013	10:05	Non-Dedicated Pump	TANK	U		
TW-39	13045	UBZ-2 γ4	June 4, 2013	16:55	Dedicated Pump	TANK	U		
TW-40	13022	UBZ-4 γ3	June 1, 2013	16:15	Hand Bailed	TANK	F	0.45	
TW-41	13025	UBZ-4 γ3	June 1, 2013	18:35	Dedicated Pump	TANK	U		
TW-42	NS	UBZ-4 γ3							
TW-43	13023	UBZ-4 γ3	June 1, 2013	17:00	Hand Bailed	TANK	F	0.45	
TW-44	13099	LBZ-4	June 9, 2013	10:00	Dedicated Pump	TANK	F	0.45	
TW-45	13039	LBZ-2 γ2	June 4, 2013	09:30	Dedicated Pump	TANK	U		
TW-48	13015	UBZ-4 γ3	May 31, 2013	15:40	Dedicated Pump	GROUND	U		
TW-49	13008	UBZ-4 γ3	May 31, 2013	09:25	Dedicated Pump	GROUND	U		
TW-50	13031	UBZ-4 γ3	June 1, 2013	09:45	Dedicated Pump	TANK	U		
TW-53	13032	UBZ-1 γ5	June 3, 2013	11:15	Dedicated Pump	TANK	U		
TW-54	13033	UBZ-2 γ4	June 3, 2013	11:45	Dedicated Pump	TANK	U		
TW-54	13033	UBZ-2 γ4	June 3, 2013	11:45	Dedicated Pump	TANK	U		
TW-54	13034	UBZ-2 γ4	June 3, 2013	11:45	Dedicated Pump	TANK	U		Laboratory Split

Table J-5.0: Sample Collection Summary June 2013

Location	Sample ID	Formation Monitored	Sample Date	Sample Time	Method	Purge Disposal Method	Filter/ Unfilter	Filter Size	Notes
TW-55	13043	UBZ-2 γ3	June 4, 2013	16:00	Dedicated Pump	TANK	U		
TW-55	13043	UBZ-2 γ3	June 4, 2013	16:00	Dedicated Pump	TANK	U		
TW-55	13044	UBZ-2 γ3	June 4, 2013	16:00	Dedicated Pump	TANK	U		Laboratory Split
TW-56	13042	UBZ-3 γ3	June 4, 2013	14:40	Dedicated Pump	TANK	U		
TW-57	13048	UBZ-2 γ5?	June 5, 2013	09:00	Dedicated Pump	GROUND	U		
TW-58	13027	UBZ-2 γ4	June 2, 2013	12:35					
TW-59	13052	UBZ-2 γ4	June 5, 2013	13:40	Dedicated Pump	TANK	U		
TW-60	13051	UBZ-1 γ4	June 5, 2013	12:20	Dedicated Pump	GROUND	U		
TW-61	13050	UBZ-1 γ4	June 5, 2013	11:00	Dedicated Pump	GROUND	U		
TW-62	13054	UBZ-2 γ4	June 5, 2013	17:55	Dedicated Pump	TANK	U		
TW-62	13055	UBZ-2 γ4	June 5, 2013	17:55	Dedicated Pump	TANK	U		Field Duplicate
TW-63	NS	UBZ-2 γ5	No Sample		Dedicated Pump	NA	U		Well was dry
TW-64	NS	UBZ-2 γ5	No Sample		Dedicated Pump	NA	U		Well was dry
TW-65	13059	UBZ-2 γ4	June 6, 2013	11:40	Dedicated Pump	GROUND	U		
TW-66	13058	UBZ-2 γ3	June 6, 2013	10:00	Dedicated Pump	GROUND	U		
TW-67	13061	UBZ-2 γ4/γ3	June 6, 2013	15:00	Dedicated Pump	GROUND	U		
TW-67	13062	UBZ-2 γ4/γ3	June 6, 2013	15:00	Dedicated Pump	GROUND	U		Laboratory Split
TW-68	13049	UBZ-1 γ5	June 5, 2013	09:50	Dedicated Pump	GROUND	U		
TW-69	13040	UBZ-1 γ5	June 4, 2013	12:00	Dedicated Pump	GROUND	U		
TW-70	13056	UBZ-2 γ3	June 5, 2013	18:20	Dedicated Pump	GROUND	U		
TW-70	13057	UBZ-2 γ3	June 5, 2013	18:20	Dedicated Pump	GROUND	U		Field Duplicate
QA/QC									
DI Blank	13007	NA	May 30, 2013	17:50	Grab	NA	U		Field Blank
Grundfos Blank	13103	NA	June 9, 2013	15:00	Grab	NA	U		Equipment Blank

Notes:

Highlighted are QC samples.

UBZ: Upper Basalt Zone

LBZ: Lower Basalt Zone

SDZ: Surficial Deposit Zone

U: Unfiltered

F: Filtered

NA: Not applicable

NS: No Sample - groundwater level only

Table J-5.1: Data Qualification Summary

DATE VALIDATED: August 18, 2013

SDGs: SVL Analytical # W3F0043, W3F0045, W3F0046, W3F0207, W3F0208, W3F0223, W3F0227, W3F0228, W3F0231, W3F0233, W3F0235. ARI #WT49			
PARAMETER	**QUALIFIER**	**SAMPLES AFFECTED**	**REASON**
SVL SDG # W3F0043 Comments: Total Recoverable ONLY			
Mo	J+	13008	Contaminant detected in ICB and CCB
Mo	U	13001, 13006, 13009	Contaminant detected in ICB and CCB
Se	J	13001	Serial dilution > 10% D for results > 50X IDL
SVL SDG # W3F0045 Comments: Total Recoverable ONLY			
Dissolved Oxygen	J	13011, 13012, 13013, 13014, 13015, 13016, 13017, 13018, 13019, 13020, 13021	Hold Time exceeds 15 min limit
Se	J	13012	Serial dilution > 10% D for results > 50X IDL
Phosphorus (Total Recov.)	J	13018, 13019	Field duplicate (SDG W3F0045) %RPD > 20%
SVL SDG # W3F0046 Comments: Total Recoverable ONLY			
Se	J	13023	Serial dilution > 10% D for results > 50X IDL
SVL SDG # W3F0207 Comments: Total Recoverable ONLY			
Molybdenum (Tot Recov)	U/J+	13035, 13036, 13043, 13046, 13039	Contaminant found in CCB.
Fluoride	J	13033, 13043	Field Split results exceeds 20% RPD
Ammonia-N	J/UJ	13033	Field Split results exceeds 20% RPD
Manganese (Tot Recov)	J	13033	Field Split results exceeds 20% RPD
Total Phosphorus	J	13043	Field Split results exceeds 20% RPD
TDS	J	13043	Field Split results exceeds 20% RPD
Ammonia-N	J	13046	Matrix spike % recovery out of 75-125% control limits
Fluoride	J	13046	Matrix spike % recovery out of 75-125% control limits
Total Ca, Mg, Hardness, K, Na	J	13046	Field duplicate (13047, SDG W3F0208) %RPD > 20%
TDS	J	13033, 13035, 13036, 13037	Hold Time exceeded
Dissolved Oxygen	J	13033, 13035, 13036, 13037, 13039, 13040, 13041, 13042, 13043, 13045, 13046	Hold Time exceeded
SVL SDG # W3F0208 Comments: Total Recoverable ONLY			
Dissolved Oxygen	J	13047, 13048, 13049, 13050, 13051, 13052, 13053, 13054, 13055, 13056, 13057	Hold Time exceeds 15 min limit
Nitrate/Nitrite as N	J	13047	Field duplicate %RPD > 20%
Fluoride	J	13056	Matrix spike % recovery out of 75-125% control limits
Total Ca, Mg, Hardness, K, Na	J	13047	Field duplicate (13046, SDG W3F0207) %RPD > 20%

Table J-5.1: Data Qualification Summary

DATE VALIDATED: August 18, 2013

SDGs:

SVL Analytical # W3F0043, W3F0045, W3F0046, W3F0207, W3F0208, W3F0223, W3F0227, W3F0228, W3F0231, W3F0233, W3F0235.

ARI #WT49

PARAMETER	QUALIFIER	SAMPLES AFFECTED	REASON
SVL SDG # W3F0223 Comments: Total Recoverable + 'Selected' Dissolved Fraction			
Dissolved Oxygen	J	13060, 13061, 13064, 13068, 13095, 13097, 13098, 13099, 13101, 13103	Hold Time exceeds 15 min limit
Alkalinity, carbonate, bicarbonate	UJ	13103	Hold Time exceeds 14 day limit
Ammonia-N	J	13099, 13101	Field Split results exceeds 20% RPD
TDS	J	13099	Field Split results exceeds 20% RPD
Fluoride	J/UJ	13099	Field Split results exceeds 20% RPD
Ammonia-N	J	13060	Matrix spike % recovery out of 75-125% control limits
Se (Dissolved)	J	13064	Serial Dilution exceeds 10% on two successive tests
Phosphorus (Dissolved)	J	13064	Field duplicate (13065 SDG:W3F0233) %RPD > 20%
Cd (Dissolved)	J	13064	Field duplicate (13065 SDG:W3F0233) %RPD > 20%
Mo (Dissolved)	J	13064	Field duplicate (13065 SDG:W3F0233) %RPD > 20%
SVL SDG # W3F0227 Comments: Dissolved AND Total Recoverable			
Anions, Alkalinity, Ammonia, TDS, Dissolv. Oxygen, Nitrate/Nitrite as N, Phosphorus	J/UJ	13063, 13066, 13067, 13076, 13078, 13079, 13081	Cooler temperature exceeds limit
Dissolved Oxygen	J	13063, 13066, 13067, 13076, 13078, 13079, 13081	Hold Time exceeds 15 min limit
Se (Dissolv & Tot Recoverable)	J	13063	Serial Dilution exceeds 10% on two successive tests
SVL SDG # W3F0228 Comments: Dissolved AND Total Recoverable			
Anions, Alkalinity, Ammonia, TDS, Nitrate/Nitrite as N, Phosphorus	J/UJ	13083, 13084, 13085, 13086, 13087, 13089, 13091	Cooler temperature exceeds limit
Dissolved Oxygen	J	13083, 13084, 13085, 13086, 13087, 13089, 13091	Hold Time exceeds 15 min limit
Fluoride	J/UJ	13089	Field duplicate (Sample #13090; SDG W3F0231) %RPD > 20%
Mo (Total Recoverable)	J/UJ	13089	Field duplicate (Sample #13090; SDG W3F0231) %RPD > 20%
Se (Dissolv & Tot Recoverable)	J	13083	Serial Dilution exceeds 10% on two successive tests
SVL SDG # W3F0231 Comments: Dissolved AND Total Recoverable			
Anions, Alkalinity, Ammonia, TDS, Nitrate/Nitrite as N, Phosphorus	J/UJ	13070, 13072, 13074, 13088, 13090, 13092, 13093	Cooler temperature exceeds limit
Dissolved Oxygen	J	13070, 13072, 13074, 13088, 13090, 13092, 13093	Hold Time exceeds 15 min limit
Fluoride	J	13090	Field duplicate %RPD > 20%
Mo	J	13090	Field duplicate %RPD > 20%
Mg, K	J	13070-D	Matrix spike % recovery out of 75-125% control limits
Se (Dissolv & Tot Recoverable)	J	13070-D, 13070-TR	Serial dilution > 10% D for results > 50X IDL

Table J-5.1: Data Qualification Summary

DATE VALIDATED: August 18, 2013

SDGs: SVL Analytical # W3F0043, W3F0045, W3F0046, W3F0207, W3F0208, W3F0223, W3F0227, W3F0228, W3F0231, W3F0233, W3F0235. ARI #WT49			
PARAMETER	**QUALIFIER**	**SAMPLES AFFECTED**	**REASON**
SVL SDG # W3F0233 Comments: Dissolved AND Total Recoverable			
Anions, Alkalinity, Ammonia, TDS, Nitrate/Nitrite as N, Phosphorus	J/UJ	13065, 13069, 13071, 13073, 13075, 13082, 13094	Cooler temperature exceeds limit
Dissolved Oxygen	J	13065, 13069, 13071, 13073, 13075, 13082, 13094	Hold Time exceeds 15 min limit
Chloride	J	13094	Matrix spike % recovery out of 75-125% control limits
Se (Dissolv & Tot Recoverable)	J	13065	Serial Dilution exceeds 10% on two successive tests
Mo (Total Recoverable)	J	13065	Field duplicate (13064 SDG:W3F0223) %RPD > 20%
Mo (Dissolved)	J	13065	Field duplicate (13064 SDG:W3F0223) %RPD > 20%
SVL SDG # W3F0235 Comments: Total Recoverable ONLY			
Dissolved Oxygen	J	13058, 13059, 13096	Hold Time exceeds 15 min limit
Anions, Alkalinity, Ammonia, TDS, Nitrate/Nitrite as N, Phosphorus	J/UJ	13058, 13059, 13096, TS-1-2, TE-1-2	Cooler temperature exceeds limit
Se	J	13058	Serial dilution > 10% D for results > 50X IDL
ARI SDG # WT49 Comments: Total Recoverable ONLY			
Fluoride	J	13034, 13100, 13044, 13017	Field Split results exceeds 20% RPD; Assoc.SDG W3F0045
Ammonia-N	J/UJ	13034, 13101, 13017	Field Split results exceeds 20% RPD
Manganese	J	13034	Field Split results exceeds 20% RPD
TDS	J	13044	Field Split results exceeds 20% RPD
Phosphorus	J	13044, 13017	Field Split results exceeds 20% RPD
TDS	J	13017, 13034, 13038, 13044	Hold Time exceeded
TDS	J+	13100, 13044	Contaminants cited by Lab

Notes:
eg, 13070-D is dissolved fraction;13070-TR is total recoverable fraction; No designation is a total recoverable.

TABLE J-5.2: Field Blank Summary

SDG: SVL Analytical # W3F0043 **DATE VALIDATED: July 29, 2013**

DI BLANK							
SAMPLE ID	**COMPOUND/ ANALYTE**	**UNITS**	**RESULT**	**QUALIFIER**	**PQL**	**MDL**	**STATUS**
13007	Chloride	mg/L	-0.2	U	0.2	0.06	Accept
13007	Fluoride	mg/L	-0.1	U	0.1	0.02	Accept
13007	Sulfate as SO4	mg/L	-0.3	U	0.3	0.07	Accept
13007	Ammonia as N	mg/L	-0.03	U	0.03	0.014	Accept
13007	Nitrate/Nitrite as N	mg/L	0.059		0.05	0.01	DETECT
13007	Bicarbonate	mg/L	-1	U	1		Accept
13007	Carbonate	mg/L	-1	U	1		Accept
13007	Total Alkalinity	mg/L	-1	U	1		Accept
13007	Hardness	µg/L	-128	U	350	128	Accept
13007	Total Diss. Solids	mg/L	22		10		DETECT
13007	Phosphorus	mg/L	-0.01	U	0.01	0.005	Accept
13007	Selenium	µg/L	-0.26	U	2	0.26	Accept
13007	Cadmium	µg/L	-0.7	U	2	0.7	Accept
13007	Calcium	µg/L	29.2	J	40	15	DETECT
13007	Magnesium	µg/L	-22	U	60	22	Accept
13007	Manganese	µg/L	-1.4	U	4	1.4	Accept
13007	Molybdenum	µg/L	-1.8	U	8	1.8	Accept
13007	Potassium	µg/L	-140	U	500	140	Accept
13007	Sodium	µg/L	418	J	500	110	DETECT
13007	Vanadium	µg/L	-1.5	U	5	1.5	Accept
13007	Zinc	µg/L	-2.5	U	10	2.5	Accept

SDG: SVL Analytical # W3F0223 **DATE VALIDATED: July 29, 2013**

GRUNDFOS BLANK							
SAMPLE ID	**COMPOUND/ ANALYTE**	**UNITS**	**RESULT**	**QUALIFIER**	**PQL**	**MDL**	**STATUS**
13103	Chloride	mg/L	-0.2	U	0.2	0.06	Accept
13103	Fluoride	mg/L	-0.1	U	0.1	0.02	Accept
13103	Sulfate as SO4	mg/L	-0.3	U	0.3	0.07	Accept
13103	Ammonia as N	mg/L	-0.03	U	0.03	0.014	Accept
13103	Nitrate/Nitrite as N	mg/L	-0.05	U	0.05	0.01	Accept
13103	Bicarbonate	mg/L	-1	U	1	0.3	Accept
13103	Carbonate	mg/L	-1	U	1	0.3	Accept
13103	Total Alkalinity	mg/L	-1	U	1	0.3	Accept
13103	Hardness	ug/L	162	J	350	128	DETECT
13103	Total Diss. Solids	mg/L	-10	U	10	10	Accept
13103	Dissolv. Oxygen	mg/L	8.1				DETECT
13103	Phosphorus	mg/L	-0.01	U	0.01	0.005	Accept
13103	Selenium	µg/L	-0.26	U	2	0.26	Accept
13103	Cadmium	µg/L	-0.7	U	2	0.7	Accept
13103	Calcium	µg/L	43		40	15	DETECT
13103	Magnesium	µg/L	-22	U	60	22	Accept
13103	Manganese	µg/L	-1.4	U	4	1.4	Accept
13103	Molybdenum	µg/L	-1.8	U	8	1.8	Accept
13103	Potassium	µg/L	-140	U	500	140	Accept
13103	Sodium	µg/L	276	J	500	110	DETECT
13103	Vanadium	µg/L	-1.5	U	5	1.5	Accept
13103	Zinc	µg/L	-2.5	U	10	2.5	Accept

Table J-5.3a: Holding Time Summary SM 2540 C / Total Dissolved Solids

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-01	13001	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-02	13002	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-03	13003	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-04	13004	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-05	13005	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-06	13006	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-07	13007	Water	5/30/2013	6/5/2013	6/5/2013	6	6	7	Accept
W3F0043-08	13008	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0043-09	13009	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0043-10	13010	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-01	13011	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-02	13012	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-03	13013	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-04	13014	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-05	13015	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-06	13016	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-07	13018	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-08	13019	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-09	13020	Water	5/31/2013	6/5/2013	6/5/2013	5	5	7	Accept
W3F0045-10	13021	Water	6/1/2013	6/5/2013	6/5/2013	4	4	7	Accept
W3F0045-11	13022	Water	6/1/2013	6/5/2013	6/5/2013	4	4	7	Accept
W3F0046-01	13023	Water	6/1/2013	6/5/2013	6/5/2013	4	4	7	Accept
W3F0046-02	13024	Water	6/1/2013	6/5/2013	6/5/2013	4	4	7	Accept
W3F0046-03	13025	Water	6/1/2013	6/5/2013	6/5/2013	4	4	7	Accept
W3F0046-04	13026	Water	6/2/2013	6/5/2013	6/5/2013	3	3	7	Accept
W3F0046-05	13027	Water	6/2/2013	6/5/2013	6/5/2013	3	3	7	Accept
W3F0046-06	13028	Water	6/2/2013	6/5/2013	6/5/2013	3	3	7	Accept
W3F0046-07	13029	Water	6/2/2013	6/5/2013	6/5/2013	3	3	7	Accept
W3F0046-08	13030	Water	6/2/2013	6/5/2013	6/5/2013	3	3	7	Accept
W3F0046-09	13031	Water	6/3/2013	6/5/2013	6/5/2013	2	2	7	Accept
W3F0046-10	13032	Water	6/3/2013	6/5/2013	6/5/2013	2	2	7	Accept
W3F0207-01	13033	Water	6/3/2013	6/12/2013	6/12/2013	9	9	7	Qual. J
W3F0207-02	13035	Water	6/3/2013	6/12/2013	6/12/2013	9	9	7	Qual. J
W3F0207-03	13036	Water	6/3/2013	6/12/2013	6/12/2013	9	9	7	Qual. J
W3F0207-04	13037	Water	6/3/2013	6/12/2013	6/12/2013	9	9	7	Qual. J
W3F0207-05	13039	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0207-06	13040	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0207-07	13041	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0207-08	13042	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0207-09	13043	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0207-10	13045	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0207-11	13046	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0208-01	13047	Water	6/4/2013	6/11/2013	6/11/2013	7	7	7	Accept
W3F0208-02	13048	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-03	13049	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-04	13050	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-05	13051	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-06	13052	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-07	13053	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-08	13054	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-09	13055	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-10	13056	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0208-11	13057	Water	6/5/2013	6/12/2013	6/12/2013	7	7	7	Accept
W3F0235-01	13058	Water	6/6/2013	6/13/2013	6/13/2013	7	7	7	Accept
W3F0235-02	13059	Water	6/6/2013	6/13/2013	6/13/2013	7	7	7	Accept
W3F0223-01	13060	Water	6/6/2013	6/12/2013	6/12/2013	6	6	7	Accept
W3F0223-02	13061	Water	6/6/2013	6/12/2013	6/12/2013	6	6	7	Accept
W3F0227-01	13063	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0223-03	13064	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0233-01	13065	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0227-02	13066	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept

Table J-5.3a: Holding Time Summary SM 2540 C / Total Dissolved Solids

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0227-03	13067	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0223-04	13068	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0233-02	13069	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0231-01	13070	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0233-03	13071	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0231-02	13072	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0233-04	13073	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0231-03	13074	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0233-05	13075	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0227-04	13076	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0227-05	13078	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0227-06	13079	Water	6/7/2013	6/12/2013	6/12/2013	5	5	7	Accept
W3F0227-07	13081	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0233-06	13082	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-01	13083	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-02	13084	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-03	13085	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-04	13086	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-05	13087	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0231-04	13088	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-06	13089	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0231-05	13090	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0228-07	13091	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0231-06	13092	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0231-07	13093	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0233-07	13094	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0223-05	13095	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0235-03	13096	Water	6/8/2013	6/13/2013	6/13/2013	5	5	7	Accept
W3F0223-06	13097	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0223-07	13098	Water	6/8/2013	6/12/2013	6/12/2013	4	4	7	Accept
W3F0223-08	13099	Water	6/9/2013	6/12/2013	6/12/2013	3	3	7	Accept
W3F0223-09	13101	Water	6/9/2013	6/12/2013	6/12/2013	3	3	7	Accept
W3F0223-10	13103	Water	6/9/2013	6/12/2013	6/12/2013	3	3	7	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/13/2013	6/13/2013	4	4	7	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/13/2013	6/13/2013	4	4	7	Accept

Table J-5.3b: Holding Time Summary SM 4500 P / Total Phosphorus

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-01	13001	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-02	13002	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-03	13003	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-04	13004	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-05	13005	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-06	13006	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-07	13007	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-08	13008	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0043-09	13009	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0043-10	13010	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-01	13011	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-02	13012	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-03	13013	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-04	13014	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-05	13015	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-06	13016	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-07	13018	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-08	13019	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-09	13020	Water	5/31/2013	6/14/2013	6/14/2013	14	14	28	Accept
W3F0045-10	13021	Water	6/1/2013	6/14/2013	6/14/2013	13	13	28	Accept
W3F0045-11	13022	Water	6/1/2013	6/14/2013	6/14/2013	13	13	28	Accept
W3F0046-01	13023	Water	6/1/2013	6/14/2013	6/14/2013	13	13	28	Accept
W3F0046-02	13024	Water	6/1/2013	6/14/2013	6/14/2013	13	13	28	Accept
W3F0046-03	13025	Water	6/1/2013	6/14/2013	6/14/2013	13	13	28	Accept
W3F0046-04	13026	Water	6/2/2013	6/14/2013	6/14/2013	12	12	28	Accept
W3F0046-05	13027	Water	6/2/2013	6/14/2013	6/14/2013	12	12	28	Accept
W3F0046-06	13028	Water	6/2/2013	6/14/2013	6/14/2013	12	12	28	Accept
W3F0046-07	13029	Water	6/2/2013	6/14/2013	6/14/2013	12	12	28	Accept
W3F0046-08	13030	Water	6/2/2013	6/14/2013	6/14/2013	12	12	28	Accept
W3F0046-09	13031	Water	6/3/2013	6/14/2013	6/14/2013	11	11	28	Accept
W3F0046-10	13032	Water	6/3/2013	6/14/2013	6/14/2013	11	11	28	Accept
W3F0207-01	13033	Water	6/3/2013	6/20/2013	6/20/2013	17	17	28	Accept
W3F0207-02	13035	Water	6/3/2013	6/20/2013	6/20/2013	17	17	28	Accept
W3F0207-03	13036	Water	6/3/2013	6/20/2013	6/20/2013	17	17	28	Accept
W3F0207-04	13037	Water	6/3/2013	6/20/2013	6/20/2013	17	17	28	Accept
W3F0207-05	13039	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0207-06	13040	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0207-07	13041	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0207-08	13042	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0207-09	13043	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0207-10	13045	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0207-11	13046	Water	6/4/2013	6/20/2013	6/20/2013	16	16	28	Accept
W3F0208-01	13047	Water	6/4/2013	6/21/2013	6/21/2013	17	17	28	Accept
W3F0208-02	13048	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-03	13049	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-04	13050	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-05	13051	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-06	13052	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-07	13053	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-08	13054	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-09	13055	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-10	13056	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0208-11	13057	Water	6/5/2013	6/21/2013	6/21/2013	16	16	28	Accept
W3F0235-01	13058	Water	6/6/2013	6/24/2013	6/24/2013	18	18	28	Accept
W3F0235-02	13059	Water	6/6/2013	6/24/2013	6/24/2013	18	18	28	Accept
W3F0223-01	13060	Water	6/6/2013	6/24/2013	6/24/2013	18	18	28	Accept
W3F0223-02	13061	Water	6/6/2013	6/24/2013	6/24/2013	18	18	28	Accept
W3F0227-01	13063	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0223-03	13064	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept

Table J-5.3b: Holding Time Summary SM 4500 P / Total Phosphorus

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0233-01	13065	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0227-02	13066	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0227-03	13067	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0223-04	13068	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0233-02	13069	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0231-01	13070	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0233-03	13071	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0231-02	13072	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0233-04	13073	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0231-03	13074	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0233-05	13075	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0227-04	13076	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0227-05	13078	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0227-06	13079	Water	6/7/2013	6/25/2013	6/25/2013	18	18	28	Accept
W3F0227-07	13081	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0233-06	13082	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0228-01	13083	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0228-02	13084	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0228-03	13085	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0228-04	13086	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0228-05	13087	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0231-04	13088	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0228-06	13089	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0231-05	13090	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0228-07	13091	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0231-06	13092	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0231-07	13093	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0233-07	13094	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0223-05	13095	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0235-03	13096	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0223-06	13097	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0223-07	13098	Water	6/8/2013	6/25/2013	6/25/2013	17	17	28	Accept
W3F0223-08	13099	Water	6/9/2013	6/25/2013	6/25/2013	16	16	28	Accept
W3F0223-09	13101	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept
W3F0223-10	13103	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept

Table J-5.3c: Holding Time Summary SM 2320 B / Total Alkalinity

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-01	13001	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-02	13002	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-03	13003	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-04	13004	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-05	13005	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-06	13006	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-07	13007	Water	5/30/2013	6/7/2013	6/7/2013	8	8	14	Accept
W3F0043-08	13008	Water	5/31/2013	6/12/2013	6/12/2013	12	12	14	Accept
W3F0043-09	13009	Water	5/31/2013	6/7/2013	6/7/2013	7	7	14	Accept
W3F0043-10	13010	Water	5/31/2013	6/11/2013	6/12/2013	11	12	14	Accept
W3F0045-01	13011	Water	5/31/2013	6/5/2013	6/12/2013	5	12	14	Accept
W3F0045-02	13012	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-03	13013	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-04	13014	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-05	13015	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-06	13016	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-07	13018	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-08	13019	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-09	13020	Water	5/31/2013	6/5/2013	6/5/2013	5	5	14	Accept
W3F0045-10	13021	Water	6/1/2013	6/5/2013	6/5/2013	4	4	14	Accept
W3F0045-11	13022	Water	6/1/2013	6/5/2013	6/5/2013	4	4	14	Accept
W3F0046-01	13023	Water	6/1/2013	6/6/2013	6/6/2013	5	5	14	Accept
W3F0046-02	13024	Water	6/1/2013	6/6/2013	6/6/2013	5	5	14	Accept
W3F0046-03	13025	Water	6/1/2013	6/6/2013	6/6/2013	5	5	14	Accept
W3F0046-04	13026	Water	6/2/2013	6/6/2013	6/6/2013	4	4	14	Accept
W3F0046-05	13027	Water	6/2/2013	6/6/2013	6/6/2013	4	4	14	Accept
W3F0046-06	13028	Water	6/2/2013	6/6/2013	6/6/2013	4	4	14	Accept
W3F0046-07	13029	Water	6/2/2013	6/11/2013	6/12/2013	9	10	14	Accept
W3F0046-08	13030	Water	6/2/2013	6/6/2013	6/6/2013	4	4	14	Accept
W3F0046-09	13031	Water	6/3/2013	6/6/2013	6/6/2013	3	3	14	Accept
W3F0046-10	13032	Water	6/3/2013	6/6/2013	6/6/2013	3	3	14	Accept
W3F0207-01	13033	Water	6/3/2013	6/13/2013	6/13/2013	10	10	14	Accept
W3F0207-02	13035	Water	6/3/2013	6/13/2013	6/13/2013	10	10	14	Accept
W3F0207-03	13036	Water	6/3/2013	6/13/2013	6/13/2013	10	10	14	Accept
W3F0207-04	13037	Water	6/3/2013	6/13/2013	6/13/2013	10	10	14	Accept
W3F0207-05	13039	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0207-06	13040	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0207-07	13041	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0207-08	13042	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0207-09	13043	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0207-10	13045	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0207-11	13046	Water	6/4/2013	6/13/2013	6/13/2013	9	9	14	Accept
W3F0208-01	13047	Water	6/4/2013	6/12/2013	6/13/2013	8	9	14	Accept
W3F0208-02	13048	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-03	13049	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-04	13050	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-05	13051	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-06	13052	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-07	13053	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-08	13054	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-09	13055	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-10	13056	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0208-11	13057	Water	6/5/2013	6/12/2013	6/13/2013	7	8	14	Accept
W3F0235-01	13058	Water	6/6/2013	6/14/2013	6/14/2013	8	8	14	Accept
W3F0235-02	13059	Water	6/6/2013	6/14/2013	6/14/2013	8	8	14	Accept
W3F0223-01	13060	Water	6/6/2013	6/13/2013	6/13/2013	7	7	14	Accept
W3F0223-02	13061	Water	6/6/2013	6/13/2013	6/13/2013	7	7	14	Accept
W3F0227-01	13063	Water	6/7/2013	6/13/2013	6/19/2013	6	12	14	Accept
W3F0223-03	13064	Water	6/7/2013	6/13/2013	6/13/2013	6	6	14	Accept

Table J-5.3c: Holding Time Summary SM 2320 B / Total Alkalinity

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0233-01	13065	Water	6/7/2013	6/14/2013	6/14/2013	7	7	14	Accept
W3F0227-02	13066	Water	6/7/2013	6/13/2013	6/19/2013	6	12	14	Accept
W3F0227-03	13067	Water	6/7/2013	6/13/2013	6/19/2013	6	12	14	Accept
W3F0223-04	13068	Water	6/7/2013	6/13/2013	6/13/2013	6	6	14	Accept
W3F0233-02	13069	Water	6/7/2013	6/14/2013	6/14/2013	7	7	14	Accept
W3F0231-01	13070	Water	6/7/2013	6/17/2013	6/17/2013	10	10	14	Accept
W3F0233-03	13071	Water	6/7/2013	6/14/2013	6/14/2013	7	7	14	Accept
W3F0231-02	13072	Water	6/7/2013	6/17/2013	6/17/2013	10	10	14	Accept
W3F0233-04	13073	Water	6/7/2013	6/14/2013	6/14/2013	7	7	14	Accept
W3F0231-03	13074	Water	6/7/2013	6/17/2013	6/17/2013	10	10	14	Accept
W3F0233-05	13075	Water	6/7/2013	6/14/2013	6/14/2013	7	7	14	Accept
W3F0227-04	13076	Water	6/7/2013	6/13/2013	6/19/2013	6	12	14	Accept
W3F0227-05	13078	Water	6/7/2013	6/13/2013	6/19/2013	6	12	14	Accept
W3F0227-06	13079	Water	6/7/2013	6/13/2013	6/19/2013	6	12	14	Accept
W3F0227-07	13081	Water	6/8/2013	6/13/2013	6/19/2013	5	11	14	Accept
W3F0233-06	13082	Water	6/8/2013	6/14/2013	6/14/2013	6	6	14	Accept
W3F0228-01	13083	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0228-02	13084	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0228-03	13085	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0228-04	13086	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0228-05	13087	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0231-04	13088	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0228-06	13089	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0231-05	13090	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0228-07	13091	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0231-06	13092	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0231-07	13093	Water	6/8/2013	6/17/2013	6/17/2013	9	9	14	Accept
W3F0233-07	13094	Water	6/8/2013	6/14/2013	6/14/2013	6	6	14	Accept
W3F0223-05	13095	Water	6/8/2013	6/13/2013	6/13/2013	5	5	14	Accept
W3F0235-03	13096	Water	6/8/2013	6/14/2013	6/14/2013	6	6	14	Accept
W3F0223-06	13097	Water	6/8/2013	6/13/2013	6/13/2013	5	5	14	Accept
W3F0223-07	13098	Water	6/8/2013	6/13/2013	6/13/2013	5	5	14	Accept
W3F0223-08	13099	Water	6/9/2013	6/13/2013	6/13/2013	4	4	14	Accept
W3F0223-09	13101	Water	6/9/2013	6/13/2013	6/13/2013	4	4	14	Accept
W3F0223-10	13103	Water	6/9/2013	6/24/2013	6/24/2013	15	15	14	Qual. J
W3F0235-05	TE-1-2	Water	6/9/2013	6/14/2013	6/14/2013	5	5	14	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/14/2013	6/14/2013	5	5	14	Accept

Table J-5.3d: Holding Time Summary EPA 353.2 / Nitrate/Nitrite as N

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-02	13002	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-03	13003	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-04	13004	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-05	13005	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-06	13006	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-07	13007	Water	5/30/2013	6/17/2013	6/17/2013	18	18	28	Accept
W3F0043-08	13008	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0043-09	13009	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0043-10	13010	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-01	13011	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-02	13012	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-03	13013	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-04	13014	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-05	13015	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-06	13016	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-07	13018	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-08	13019	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-09	13020	Water	5/31/2013	6/17/2013	6/17/2013	17	17	28	Accept
W3F0045-10	13021	Water	6/1/2013	6/17/2013	6/17/2013	16	16	28	Accept
W3F0045-11	13022	Water	6/1/2013	6/17/2013	6/17/2013	16	16	28	Accept
W3F0046-01	13023	Water	6/1/2013	6/17/2013	6/17/2013	16	16	28	Accept
W3F0046-02	13024	Water	6/1/2013	6/17/2013	6/17/2013	16	16	28	Accept
W3F0046-03	13025	Water	6/1/2013	6/17/2013	6/17/2013	16	16	28	Accept
W3F0046-04	13026	Water	6/2/2013	6/17/2013	6/17/2013	15	15	28	Accept
W3F0046-05	13027	Water	6/2/2013	6/17/2013	6/17/2013	15	15	28	Accept
W3F0046-06	13028	Water	6/2/2013	6/17/2013	6/17/2013	15	15	28	Accept
W3F0046-07	13029	Water	6/2/2013	6/17/2013	6/17/2013	15	15	28	Accept
W3F0046-08	13030	Water	6/2/2013	6/17/2013	6/17/2013	15	15	28	Accept
W3F0046-09	13031	Water	6/3/2013	6/17/2013	6/17/2013	14	14	28	Accept
W3F0046-10	13032	Water	6/3/2013	6/17/2013	6/17/2013	14	14	28	Accept
W3F0207-01	13033	Water	6/3/2013	6/20/2013	6/21/2013	17	18	28	Accept
W3F0207-02	13035	Water	6/3/2013	6/20/2013	6/21/2013	17	18	28	Accept
W3F0207-03	13036	Water	6/3/2013	6/20/2013	6/21/2013	17	18	28	Accept
W3F0207-04	13037	Water	6/3/2013	6/20/2013	6/21/2013	17	18	28	Accept
W3F0207-05	13039	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0207-06	13040	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0207-07	13041	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0207-08	13042	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0207-09	13043	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0207-10	13045	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0207-11	13046	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0208-01	13047	Water	6/4/2013	6/20/2013	6/21/2013	16	17	28	Accept
W3F0208-02	13048	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-03	13049	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-04	13050	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-05	13051	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-06	13052	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-07	13053	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-08	13054	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-09	13055	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-10	13056	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0208-11	13057	Water	6/5/2013	6/20/2013	6/21/2013	15	16	28	Accept
W3F0235-01	13058	Water	6/6/2013	6/24/2013	6/25/2013	18	19	28	Accept
W3F0235-02	13059	Water	6/6/2013	6/24/2013	6/25/2013	18	19	28	Accept
W3F0223-01	13060	Water	6/6/2013	6/20/2013	6/21/2013	14	15	28	Accept
W3F0223-02	13061	Water	6/6/2013	6/20/2013	6/21/2013	14	15	28	Accept
W3F0227-01	13063	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0223-03	13064	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0233-01	13065	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0227-02	13066	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0227-03	13067	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept

Table J-5.3d: Holding Time Summary EPA 353.2 / Nitrate/Nitrite as N

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0223-04	13068	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0233-02	13069	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0231-01	13070	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0233-03	13071	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0231-02	13072	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0233-04	13073	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0231-03	13074	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0233-05	13075	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0227-04	13076	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0227-05	13078	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0227-06	13079	Water	6/7/2013	6/20/2013	6/21/2013	13	14	28	Accept
W3F0227-07	13081	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0233-06	13082	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0228-01	13083	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0228-02	13084	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0228-03	13085	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0228-04	13086	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0228-05	13087	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0231-04	13088	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0228-06	13089	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0231-05	13090	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0228-07	13091	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0231-06	13092	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0231-07	13093	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0233-07	13094	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0223-05	13095	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0235-03	13096	Water	6/8/2013	6/24/2013	6/25/2013	16	17	28	Accept
W3F0223-06	13097	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0223-07	13098	Water	6/8/2013	6/20/2013	6/21/2013	12	13	28	Accept
W3F0223-08	13099	Water	6/9/2013	6/20/2013	6/21/2013	11	12	28	Accept
W3F0223-09	13101	Water	6/9/2013	6/20/2013	6/21/2013	11	12	28	Accept
W3F0223-10	13103	Water	6/9/2013	6/20/2013	6/21/2013	11	12	28	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/24/2013	6/25/2013	15	16	28	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/24/2013	6/25/2013	15	16	28	Accept

J-5.3e: Holding Time Summary EPA 350.1 / Ammonia as N

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-02	13002	Water	5/30/2013	6/13/2013	6/18/2013	14	19	28	Accept
W3F0043-03	13003	Water	5/30/2013	6/13/2013	6/18/2013	14	19	28	Accept
W3F0043-04	13004	Water	5/30/2013	6/13/2013	6/18/2013	14	19	28	Accept
W3F0043-05	13005	Water	5/30/2013	6/13/2013	6/18/2013	14	19	28	Accept
W3F0043-06	13006	Water	5/30/2013	6/13/2013	6/18/2013	14	19	28	Accept
W3F0043-07	13007	Water	5/30/2013	6/13/2013	6/18/2013	14	19	28	Accept
W3F0043-08	13008	Water	5/31/2013	6/13/2013	6/18/2013	13	18	28	Accept
W3F0043-09	13009	Water	5/31/2013	6/13/2013	6/18/2013	13	18	28	Accept
W3F0043-10	13010	Water	5/31/2013	6/13/2013	6/18/2013	13	18	28	Accept
W3F0045-01	13011	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-02	13012	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-03	13013	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-04	13014	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-05	13015	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-06	13016	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-07	13018	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-08	13019	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-09	13020	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-10	13021	Water	6/1/2013	6/18/2013	6/19/2013	17	18	28	Accept
W3F0045-11	13022	Water	6/1/2013	6/18/2013	6/19/2013	17	18	28	Accept
W3F0046-01	13023	Water	6/1/2013	6/13/2013	6/18/2013	12	17	28	Accept
W3F0046-02	13024	Water	6/1/2013	6/13/2013	6/18/2013	12	17	28	Accept
W3F0046-03	13025	Water	6/1/2013	6/13/2013	6/18/2013	12	17	28	Accept
W3F0046-04	13026	Water	6/2/2013	6/13/2013	6/18/2013	11	16	28	Accept
W3F0046-05	13027	Water	6/2/2013	6/13/2013	6/18/2013	11	16	28	Accept
W3F0046-06	13028	Water	6/2/2013	6/13/2013	6/18/2013	11	16	28	Accept
W3F0046-07	13029	Water	6/2/2013	6/13/2013	6/18/2013	11	16	28	Accept
W3F0046-08	13030	Water	6/2/2013	6/13/2013	6/18/2013	11	16	28	Accept
W3F0046-09	13031	Water	6/3/2013	6/13/2013	6/18/2013	10	15	28	Accept
W3F0046-10	13032	Water	6/3/2013	6/13/2013	6/18/2013	10	15	28	Accept
W3F0207-01	13033	Water	6/3/2013	6/24/2013	6/25/2013	21	22	28	Accept
W3F0207-02	13035	Water	6/3/2013	6/24/2013	6/25/2013	21	22	28	Accept
W3F0207-03	13036	Water	6/3/2013	6/24/2013	6/25/2013	21	22	28	Accept
W3F0207-04	13037	Water	6/3/2013	6/24/2013	6/25/2013	21	22	28	Accept
W3F0207-05	13039	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0207-06	13040	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0207-07	13041	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0207-08	13042	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0207-09	13043	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0207-10	13045	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0207-11	13046	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0208-01	13047	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0208-02	13048	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-03	13049	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-04	13050	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-05	13051	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-06	13052	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-07	13053	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-08	13054	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-09	13055	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-10	13056	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept
W3F0208-11	13057	Water	6/5/2013	6/24/2013	6/25/2013	19	20	28	Accept

J-5.3e: Holding Time Summary EPA 350.1 / Ammonia as N

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0235-01	13058	Water	6/6/2013	6/26/2013	6/27/2013	20	21	28	Accept
W3F0235-02	13059	Water	6/6/2013	6/26/2013	6/27/2013	20	21	28	Accept
W3F0223-01	13060	Water	6/6/2013	6/24/2013	6/25/2013	18	19	28	Accept
W3F0223-02	13061	Water	6/6/2013	6/24/2013	6/25/2013	18	19	28	Accept
W3F0227-01	13063	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0223-03	13064	Water	6/7/2013	6/24/2013	6/25/2013	17	18	28	Accept
W3F0233-01	13065	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0227-02	13066	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0227-03	13067	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0223-04	13068	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0233-02	13069	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0231-01	13070	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0233-03	13071	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0231-02	13072	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0233-04	13073	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0231-03	13074	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0233-05	13075	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0227-04	13076	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0227-05	13078	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0227-06	13079	Water	6/7/2013	6/26/2013	6/27/2013	19	20	28	Accept
W3F0227-07	13081	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0233-06	13082	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-01	13083	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-02	13084	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-03	13085	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-04	13086	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-05	13087	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0231-04	13088	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-06	13089	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0231-05	13090	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0228-07	13091	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0231-06	13092	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0231-07	13093	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0233-07	13094	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0223-05	13095	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0235-03	13096	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0223-06	13097	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0223-07	13098	Water	6/8/2013	6/26/2013	6/27/2013	18	19	28	Accept
W3F0223-08	13099	Water	6/9/2013	6/26/2013	6/27/2013	17	18	28	Accept
W3F0223-09	13101	Water	6/9/2013	6/26/2013	6/27/2013	17	18	28	Accept
W3F0223-10	13103	Water	6/9/2013	6/26/2013	6/27/2013	17	18	28	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/26/2013	6/27/2013	17	18	28	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/26/2013	6/27/2013	17	18	28	Accept

J-5.3f: Holding Time Summary EPA 300.0 / Chloride, Fluoride, Sulfate as SO_4

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-02	13002	Water	5/30/2013	6/13/2013	6/13/2013	14	14	28	Accept
W3F0043-03	13003	Water	5/30/2013	6/13/2013	6/13/2013	14	14	28	Accept
W3F0043-04	13004	Water	5/30/2013	6/13/2013	6/13/2013	14	14	28	Accept
W3F0043-05	13005	Water	5/30/2013	6/13/2013	6/13/2013	14	14	28	Accept
W3F0043-06	13006	Water	5/30/2013	6/13/2013	6/13/2013	14	14	28	Accept
W3F0043-07	13007	Water	5/30/2013	6/13/2013	6/13/2013	14	14	28	Accept
W3F0043-08	13008	Water	5/31/2013	6/13/2013	6/13/2013	13	13	28	Accept
W3F0043-09	13009	Water	5/31/2013	6/13/2013	6/13/2013	13	13	28	Accept
W3F0043-10	13010	Water	5/31/2013	6/13/2013	6/13/2013	13	13	28	Accept
W3F0045-01	13011	Water	5/31/2013	6/18/2013	6/18/2013	18	18	28	Accept
W3F0045-02	13012	Water	5/31/2013	6/18/2013	6/18/2013	18	18	28	Accept
W3F0045-03	13013	Water	5/31/2013	6/18/2013	6/18/2013	18	18	28	Accept
W3F0045-04	13014	Water	5/31/2013	6/18/2013	6/18/2013	18	18	28	Accept
W3F0045-05	13015	Water	5/31/2013	6/18/2013	6/18/2013	18	18	28	Accept
W3F0045-06	13016	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-07	13018	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-08	13019	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-09	13020	Water	5/31/2013	6/18/2013	6/19/2013	18	19	28	Accept
W3F0045-10	13021	Water	6/1/2013	6/18/2013	6/19/2013	17	18	28	Accept
W3F0045-11	13022	Water	6/1/2013	6/18/2013	6/19/2013	17	18	28	Accept
W3F0046-01	13023	Water	6/1/2013	6/18/2013	6/18/2013	17	17	28	Accept
W3F0046-02	13024	Water	6/1/2013	6/18/2013	6/18/2013	17	17	28	Accept
W3F0046-03	13025	Water	6/1/2013	6/18/2013	6/18/2013	17	17	28	Accept
W3F0046-04	13026	Water	6/2/2013	6/18/2013	6/18/2013	16	16	28	Accept
W3F0046-05	13027	Water	6/2/2013	6/18/2013	6/18/2013	16	16	28	Accept
W3F0046-06	13028	Water	6/2/2013	6/18/2013	6/18/2013	16	16	28	Accept
W3F0046-07	13029	Water	6/2/2013	6/18/2013	6/19/2013	16	17	28	Accept
W3F0046-08	13030	Water	6/2/2013	6/18/2013	6/18/2013	16	16	28	Accept
W3F0046-09	13031	Water	6/3/2013	6/18/2013	6/18/2013	15	15	28	Accept
W3F0046-10	13032	Water	6/3/2013	6/18/2013	6/18/2013	15	15	28	Accept
W3F0207-01	13033	Water	6/3/2013	6/24/2013	6/24/2013	21	21	28	Accept
W3F0207-02	13035	Water	6/3/2013	6/24/2013	6/24/2013	21	21	28	Accept
W3F0207-03	13036	Water	6/3/2013	6/24/2013	6/24/2013	21	21	28	Accept
W3F0207-04	13037	Water	6/3/2013	6/24/2013	6/24/2013	21	21	28	Accept
W3F0207-05	13039	Water	6/4/2013	6/24/2013	6/24/2013	20	20	28	Accept
W3F0207-06	13040	Water	6/4/2013	6/24/2013	6/24/2013	20	20	28	Accept
W3F0207-07	13041	Water	6/4/2013	6/24/2013	6/24/2013	20	20	28	Accept
W3F0207-08	13042	Water	6/4/2013	6/24/2013	6/24/2013	20	20	28	Accept
W3F0207-09	13043	Water	6/4/2013	6/24/2013	6/24/2013	20	20	28	Accept
W3F0207-10	13045	Water	6/4/2013	6/24/2013	6/24/2013	20	20	28	Accept
W3F0207-11	13046	Water	6/4/2013	6/24/2013	6/25/2013	20	21	28	Accept
W3F0208-01	13047	Water	6/4/2013	6/24/2013	6/26/2013	20	22	28	Accept
W3F0208-02	13048	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept
W3F0208-03	13049	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept
W3F0208-04	13050	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept
W3F0208-05	13051	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept
W3F0208-06	13052	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept
W3F0208-07	13053	Water	6/5/2013	6/24/2013	6/24/2013	19	19	28	Accept
W3F0208-08	13054	Water	6/5/2013	6/24/2013	6/24/2013	19	19	28	Accept
W3F0208-09	13055	Water	6/5/2013	6/24/2013	6/24/2013	19	19	28	Accept
W3F0208-10	13056	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept
W3F0208-11	13057	Water	6/5/2013	6/24/2013	6/26/2013	19	21	28	Accept

J-5.3f: Holding Time Summary EPA 300.0 / Chloride, Fluoride, Sulfate as SO_4

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0235-01	13058	Water	6/6/2013	6/27/2013	6/27/2013	21	21	28	Accept
W3F0235-02	13059	Water	6/6/2013	6/27/2013	6/27/2013	21	21	28	Accept
W3F0223-01	13060	Water	6/6/2013	6/24/2013	6/24/2013	18	18	28	Accept
W3F0223-02	13061	Water	6/6/2013	6/24/2013	6/24/2013	18	18	28	Accept
W3F0227-01	13063	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0223-03	13064	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0233-01	13065	Water	6/7/2013	6/27/2013	6/27/2013	20	20	28	Accept
W3F0227-02	13066	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0227-03	13067	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0223-04	13068	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0233-02	13069	Water	6/7/2013	6/27/2013	6/27/2013	20	20	28	Accept
W3F0231-01	13070	Water	6/7/2013	6/26/2013	6/26/2013	19	19	28	Accept
W3F0233-03	13071	Water	6/7/2013	6/27/2013	6/27/2013	20	20	28	Accept
W3F0231-02	13072	Water	6/7/2013	6/26/2013	6/26/2013	19	19	28	Accept
W3F0233-04	13073	Water	6/7/2013	6/27/2013	6/27/2013	20	20	28	Accept
W3F0231-03	13074	Water	6/7/2013	6/26/2013	6/26/2013	19	19	28	Accept
W3F0233-05	13075	Water	6/7/2013	6/27/2013	6/27/2013	20	20	28	Accept
W3F0227-04	13076	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0227-05	13078	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0227-06	13079	Water	6/7/2013	6/24/2013	6/24/2013	17	17	28	Accept
W3F0227-07	13081	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0233-06	13082	Water	6/8/2013	6/27/2013	6/27/2013	19	19	28	Accept
W3F0228-01	13083	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0228-02	13084	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0228-03	13085	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0228-04	13086	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0228-05	13087	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0231-04	13088	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0228-06	13089	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0231-05	13090	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0228-07	13091	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0231-06	13092	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0231-07	13093	Water	6/8/2013	6/26/2013	6/26/2013	18	18	28	Accept
W3F0233-07	13094	Water	6/8/2013	6/27/2013	6/27/2013	19	19	28	Accept
W3F0223-05	13095	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0235-03	13096	Water	6/8/2013	6/27/2013	6/27/2013	19	19	28	Accept
W3F0223-06	13097	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0223-07	13098	Water	6/8/2013	6/24/2013	6/24/2013	16	16	28	Accept
W3F0223-08	13099	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept
W3F0223-09	13101	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept
W3F0223-10	13103	Water	6/9/2013	6/24/2013	6/24/2013	15	15	28	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/27/2013	6/27/2013	18	18	28	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/27/2013	6/27/2013	18	18	28	Accept

Table J-5.3g: EPA 6010 B / Metals / Dissolved

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0223-03	13064	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0233-01	13065	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0227-02	13066	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0227-03	13067	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0223-04	13068	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0233-02	13069	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0231-01	13070	Water	6/7/2013	6/25/2013	6/25/2013	18	18	180	Accept
W3F0233-03	13071	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0231-02	13072	Water	6/7/2013	6/25/2013	6/25/2013	18	18	180	Accept
W3F0233-04	13073	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0231-03	13074	Water	6/7/2013	6/25/2013	6/25/2013	18	18	180	Accept
W3F0233-05	13075	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0227-04	13076	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0227-05	13078	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0227-06	13079	Water	6/7/2013	6/23/2013	6/23/2013	16	16	180	Accept
W3F0227-07	13081	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0233-06	13082	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0228-01	13083	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0228-02	13084	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0228-03	13085	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0228-04	13086	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0228-05	13087	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0231-04	13088	Water	6/8/2013	6/25/2013	6/25/2013	17	17	180	Accept
W3F0228-06	13089	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0231-05	13090	Water	6/8/2013	6/25/2013	6/25/2013	17	17	180	Accept
W3F0228-07	13091	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0231-06	13092	Water	6/8/2013	6/25/2013	6/25/2013	17	17	180	Accept
W3F0231-07	13093	Water	6/8/2013	6/25/2013	6/25/2013	17	17	180	Accept
W3F0233-07	13094	Water	6/8/2013	6/23/2013	6/23/2013	15	15	180	Accept
W3F0223-09	13101	Water	6/9/2013	6/23/2013	6/23/2013	14	14	180	Accept

Table J-5.3h: Holding Time Summary EPA 6010 B / Metals / Total Recoverable

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-01	13001	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-02	13002	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-03	13003	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-04	13004	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-05	13005	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-06	13006	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-07	13007	Water	5/30/2013	6/13/2013	6/18/2013	14	19	180	Accept
W3F0043-08	13008	Water	5/31/2013	6/13/2013	6/18/2013	13	18	180	Accept
W3F0043-09	13009	Water	5/31/2013	6/13/2013	6/18/2013	13	18	180	Accept
W3F0043-10	13010	Water	5/31/2013	6/13/2013	6/18/2013	13	18	180	Accept
W3F0045-01	13011	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-02	13012	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-03	13013	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-04	13014	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-05	13015	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-06	13016	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-07	13018	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-08	13019	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-09	13020	Water	5/31/2013	6/13/2013	6/17/2013	13	17	180	Accept
W3F0045-10	13021	Water	6/1/2013	6/13/2013	6/17/2013	12	16	180	Accept
W3F0045-11	13022	Water	6/1/2013	6/13/2013	6/17/2013	12	16	180	Accept
W3F0046-01	13023	Water	6/1/2013	6/13/2013	6/18/2013	12	17	180	Accept
W3F0046-02	13024	Water	6/1/2013	6/13/2013	6/18/2013	12	17	180	Accept
W3F0046-03	13025	Water	6/1/2013	6/13/2013	6/18/2013	12	17	180	Accept
W3F0046-04	13026	Water	6/2/2013	6/13/2013	6/18/2013	11	16	180	Accept
W3F0046-05	13027	Water	6/2/2013	6/13/2013	6/18/2013	11	16	180	Accept
W3F0046-06	13028	Water	6/2/2013	6/13/2013	6/18/2013	11	16	180	Accept
W3F0046-07	13029	Water	6/2/2013	6/13/2013	6/18/2013	11	16	180	Accept
W3F0046-08	13030	Water	6/2/2013	6/13/2013	6/18/2013	11	16	180	Accept
W3F0046-09	13031	Water	6/3/2013	6/13/2013	6/18/2013	10	15	180	Accept
W3F0046-10	13032	Water	6/3/2013	6/13/2013	6/18/2013	10	15	180	Accept
W3F0207-01	13033	Water	6/3/2013	6/18/2013	6/24/2013	15	21	180	Accept
W3F0207-02	13035	Water	6/3/2013	6/18/2013	6/24/2013	15	21	180	Accept
W3F0207-03	13036	Water	6/3/2013	6/18/2013	6/24/2013	15	21	180	Accept
W3F0207-04	13037	Water	6/3/2013	6/18/2013	6/24/2013	15	21	180	Accept
W3F0207-05	13039	Water	6/4/2013	6/18/2013	6/24/2013	14	20	180	Accept
W3F0207-06	13040	Water	6/4/2013	6/18/2013	6/24/2013	14	20	180	Accept
W3F0207-07	13041	Water	6/4/2013	6/18/2013	6/24/2013	14	20	180	Accept
W3F0207-08	13042	Water	6/4/2013	6/18/2013	6/24/2013	14	20	180	Accept
W3F0207-10	13045	Water	6/4/2013	6/18/2013	6/24/2013	14	20	180	Accept
W3F0207-11	13046	Water	6/4/2013	6/18/2013	6/24/2013	14	20	180	Accept
W3F0208-01	13047	Water	6/4/2013	6/19/2013	6/24/2013	15	20	180	Accept
W3F0208-02	13048	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-03	13049	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-04	13050	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-05	13051	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-06	13052	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-07	13053	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-08	13054	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-09	13055	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-10	13056	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0208-11	13057	Water	6/5/2013	6/19/2013	6/24/2013	14	19	180	Accept
W3F0235-01	13058	Water	6/6/2013	6/20/2013	6/23/2013	14	17	180	Accept
W3F0235-02	13059	Water	6/6/2013	6/20/2013	6/23/2013	14	17	180	Accept
W3F0223-01	13060	Water	6/6/2013	6/19/2013	6/25/2013	13	19	180	Accept
W3F0223-02	13061	Water	6/6/2013	6/19/2013	6/25/2013	13	19	180	Accept

Table J-5.3h: Holding Time Summary EPA 6010 B / Metals / Total Recoverable

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0227-01	13063	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0223-03	13064	Water	6/7/2013	6/19/2013	6/25/2013	12	18	180	Accept
W3F0233-01	13065	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0227-02	13066	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0227-03	13067	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0223-04	13068	Water	6/7/2013	6/19/2013	6/25/2013	12	18	180	Accept
W3F0233-02	13069	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0231-01	13070	Water	6/7/2013	6/20/2013	6/24/2013	13	17	180	Accept
W3F0233-03	13071	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0231-02	13072	Water	6/7/2013	6/20/2013	6/24/2013	13	17	180	Accept
W3F0233-04	13073	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0231-03	13074	Water	6/7/2013	6/20/2013	6/24/2013	13	17	180	Accept
W3F0233-05	13075	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0227-04	13076	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0227-05	13078	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0227-06	13079	Water	6/7/2013	6/20/2013	6/23/2013	13	16	180	Accept
W3F0227-07	13081	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0233-06	13082	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0228-01	13083	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0228-02	13084	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0228-03	13085	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0228-04	13086	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0228-05	13087	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0231-04	13088	Water	6/8/2013	6/20/2013	6/24/2013	12	16	180	Accept
W3F0228-06	13089	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0231-05	13090	Water	6/8/2013	6/20/2013	6/24/2013	12	16	180	Accept
W3F0228-07	13091	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0231-06	13092	Water	6/8/2013	6/20/2013	6/24/2013	12	16	180	Accept
W3F0231-07	13093	Water	6/8/2013	6/20/2013	6/24/2013	12	16	180	Accept
W3F0233-07	13094	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0223-05	13095	Water	6/8/2013	6/19/2013	6/25/2013	11	17	180	Accept
W3F0235-03	13096	Water	6/8/2013	6/20/2013	6/23/2013	12	15	180	Accept
W3F0223-06	13097	Water	6/8/2013	6/19/2013	6/25/2013	11	17	180	Accept
W3F0223-07	13098	Water	6/8/2013	6/19/2013	6/25/2013	11	17	180	Accept
W3F0223-08	13099	Water	6/9/2013	6/19/2013	6/25/2013	10	16	180	Accept
W3F0223-09	13101	Water	6/9/2013	6/19/2013	6/25/2013	10	16	180	Accept
W3F0223-10	13103	Water	6/9/2013	6/19/2013	6/25/2013	10	16	180	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/20/2013	6/23/2013	11	14	180	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/20/2013	6/23/2013	11	14	180	Accept

Table J-5.3i: EPA 6020 or 7740 / Selenium / Dissolved Fraction

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0223-03	13064	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0233-01	13065	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0227-02	13066	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0227-03	13067	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0223-04	13068	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0233-02	13069	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0231-01	13070	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0233-03	13071	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0231-02	13072	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0233-04	13073	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0231-03	13074	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0233-05	13075	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0227-04	13076	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0227-05	13078	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0227-06	13079	Water	6/7/2013	6/25/2013	7/1/2013	18	24	180	Accept
W3F0227-07	13081	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0233-06	13082	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-01	13083	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-02	13084	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-03	13085	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-04	13086	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-05	13087	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0231-04	13088	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-06	13089	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0231-05	13090	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0228-07	13091	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0231-06	13092	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0231-07	13093	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0233-07	13094	Water	6/8/2013	6/25/2013	7/1/2013	17	23	180	Accept
W3F0223-09	13101	Water	6/9/2013	6/25/2013	7/1/2013	16	22	180	Accept

Table J-5.3j: EPA 6020 or 7740 / Selenium / Total Recoverable Fraction

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0043-02	13002	Water	5/30/2013	6/13/2013	6/24/2013	14	25	180	Accept
W3F0043-03	13003	Water	5/30/2013	6/13/2013	6/24/2013	14	25	180	Accept
W3F0043-04	13004	Water	5/30/2013	6/13/2013	6/24/2013	14	25	180	Accept
W3F0043-05	13005	Water	5/30/2013	6/13/2013	6/24/2013	14	25	180	Accept
W3F0043-06	13006	Water	5/30/2013	6/13/2013	6/24/2013	14	25	180	Accept
W3F0043-07	13007	Water	5/30/2013	6/13/2013	6/24/2013	14	25	180	Accept
W3F0043-08	13008	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0043-09	13009	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0043-10	13010	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-01	13011	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-02	13012	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-03	13013	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-04	13014	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-05	13015	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-06	13016	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-07	13018	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-08	13019	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-09	13020	Water	5/31/2013	6/13/2013	6/24/2013	13	24	180	Accept
W3F0045-10	13021	Water	6/1/2013	6/13/2013	6/24/2013	12	23	180	Accept
W3F0045-11	13022	Water	6/1/2013	6/13/2013	6/24/2013	12	23	180	Accept
W3F0046-01	13023	Water	6/1/2013	6/13/2013	6/25/2013	12	24	180	Accept
W3F0046-02	13024	Water	6/1/2013	6/13/2013	6/25/2013	12	24	180	Accept
W3F0046-03	13025	Water	6/1/2013	6/13/2013	6/25/2013	12	24	180	Accept
W3F0046-04	13026	Water	6/2/2013	6/13/2013	6/25/2013	11	23	180	Accept
W3F0046-05	13027	Water	6/2/2013	6/13/2013	6/25/2013	11	23	180	Accept
W3F0046-06	13028	Water	6/2/2013	6/13/2013	6/25/2013	11	23	180	Accept
W3F0046-07	13029	Water	6/2/2013	6/13/2013	6/25/2013	11	23	180	Accept
W3F0046-08	13030	Water	6/2/2013	6/13/2013	6/25/2013	11	23	180	Accept
W3F0046-09	13031	Water	6/3/2013	6/13/2013	6/25/2013	10	22	180	Accept
W3F0046-10	13032	Water	6/3/2013	6/13/2013	6/25/2013	10	22	180	Accept
W3F0207-01	13033	Water	6/3/2013	6/18/2013	7/2/2013	15	29	180	Accept
W3F0207-02	13035	Water	6/3/2013	6/18/2013	7/2/2013	15	29	180	Accept
W3F0207-03	13036	Water	6/3/2013	6/18/2013	7/2/2013	15	29	180	Accept
W3F0207-04	13037	Water	6/3/2013	6/18/2013	7/2/2013	15	29	180	Accept
W3F0207-05	13039	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0207-06	13040	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0207-07	13041	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0207-08	13042	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0207-09	13043	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0207-10	13045	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0207-11	13046	Water	6/4/2013	6/18/2013	7/2/2013	14	28	180	Accept
W3F0208-01	13047	Water	6/4/2013	6/19/2013	7/2/2013	15	28	180	Accept
W3F0208-02	13048	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-03	13049	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-04	13050	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-05	13051	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-06	13052	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-07	13053	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-08	13054	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-09	13055	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-10	13056	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept
W3F0208-11	13057	Water	6/5/2013	6/19/2013	7/2/2013	14	27	180	Accept

Table J-5.3j: EPA 6020 or 7740 / Selenium / Total Recoverable Fraction

SDG #	Sample ID	Matrix	Collection date	Extraction date	Analysis date	Hold Days to Extraction	Hold Days to Analysis	Required	Status
W3F0235-01	13058	Water	6/6/2013	6/20/2013	6/25/2013	14	19	180	Accept
W3F0235-02	13059	Water	6/6/2013	6/20/2013	6/25/2013	14	19	180	Accept
W3F0223-01	13060	Water	6/6/2013	6/19/2013	7/2/2013	13	26	180	Accept
W3F0223-02	13061	Water	6/6/2013	6/19/2013	7/2/2013	13	26	180	Accept
W3F0227-01	13063	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0223-03	13064	Water	6/7/2013	6/19/2013	7/2/2013	12	25	180	Accept
W3F0233-01	13065	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0227-02	13066	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0227-03	13067	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0223-04	13068	Water	6/7/2013	6/19/2013	7/2/2013	12	25	180	Accept
W3F0233-02	13069	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0231-01	13070	Water	6/7/2013	6/20/2013	6/25/2013	13	18	180	Accept
W3F0233-03	13071	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0231-02	13072	Water	6/7/2013	6/20/2013	6/25/2013	13	18	180	Accept
W3F0233-04	13073	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0231-03	13074	Water	6/7/2013	6/20/2013	6/25/2013	13	18	180	Accept
W3F0233-05	13075	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0227-04	13076	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0227-05	13078	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0227-06	13079	Water	6/7/2013	6/20/2013	6/30/2013	13	23	180	Accept
W3F0227-07	13081	Water	6/8/2013	6/20/2013	6/30/2013	12	22	180	Accept
W3F0233-06	13082	Water	6/8/2013	6/20/2013	6/30/2013	12	22	180	Accept
W3F0228-01	13083	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0228-02	13084	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0228-03	13085	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0228-04	13086	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0228-05	13087	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0231-04	13088	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0228-06	13089	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0231-05	13090	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0228-07	13091	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0231-06	13092	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0231-07	13093	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0233-07	13094	Water	6/8/2013	6/20/2013	6/30/2013	12	22	180	Accept
W3F0223-05	13095	Water	6/8/2013	6/19/2013	7/2/2013	11	24	180	Accept
W3F0235-03	13096	Water	6/8/2013	6/20/2013	6/25/2013	12	17	180	Accept
W3F0223-06	13097	Water	6/8/2013	6/19/2013	7/2/2013	11	24	180	Accept
W3F0223-07	13098	Water	6/8/2013	6/19/2013	7/2/2013	11	24	180	Accept
W3F0223-08	13099	Water	6/9/2013	6/19/2013	7/2/2013	10	23	180	Accept
W3F0223-09	13101	Water	6/9/2013	6/19/2013	7/2/2013	10	23	180	Accept
W3F0223-10	13103	Water	6/9/2013	6/19/2013	7/2/2013	10	23	180	Accept
W3F0235-05	TE-1-2	Water	6/9/2013	6/20/2013	6/25/2013	11	16	180	Accept
W3F0235-04	TS-1-2	Water	6/9/2013	6/20/2013	6/25/2013	11	16	180	Accept

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0233 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13064	SW Spring		
BLIND DUPLICATE ID =		13065	SW Spring		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13064**	**13065**		
Ammonia as N		0.074	0.057	+/- RL	Accept
Bicarbonate		867	898	3.5	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Chloride		15.2	15.4	1.3	Accept
Dissolved Oxygen		8.1	7.7	5.1	Accept
Fluoride		0.98	1.06	7.8	Accept
Hardness		874,000	859,000	1.7	Accept
Nitrate/Nitrite as N		1.87	1.92	2.6	Accept
Sulfate as SO4		59.6	59.5	0.2	Accept
Total Alkalinity		867	898	3.5	Accept
Total Diss. Solids		927	934	0.8	Accept
Phosphorus		0.187	0.23	20.6	Fail NA
METALS (Dissolved) (µg/L)		**13064**	**13065**		
Cadmium		3.9	1.7	78.6	Fail J
Calcium		121,000	117,000	3.4	Accept
Magnesium		139,000	133,000	4.4	Accept
Manganese		15.2	13.8	9.7	Accept
Molybdenum		15.5	19.2	21.3	Fail J
Potassium		12,200	11,500	5.9	Accept
Selenium		18	17	5.7	Accept
Sodium		41,400	38,900	6.2	Accept
Vanadium		5.6	5.0	11.3	Accept
Zinc		59.8	53.2	11.7	Accept
METALS (Total) (µg/L)		**13064**	**13065**		
Cadmium		3.9	4.3	9.8	Accept
Calcium		121,000	118,000	2.5	Accept
Magnesium		139,000	137,000	1.4	Accept
Manganese		15.2	16.1	5.8	Accept
Molybdenum		15.5	19.8	24.4	Fail J
Potassium		12,200	12,100	0.8	Accept
Selenium		18	18	0.0	Accept
Sodium		41,400	40,300	2.7	Accept
Vanadium		5.6	5.2	7.4	Accept
Zinc		59.8	57.2	4.4	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0045 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13018	TW-33		
BLIND DUPLICATE ID =		13019	TW-33		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13018**	**13019**		
Chloride		14.6	14.9	2.0	Accept
Fluoride		0.33	0.32	3.1	Accept
Sulfate as SO4		42.1	41.4	1.7	Accept
Ammonia as N		< 0.03	< 0.03	+/- RL	Accept
Nitrate/Nitrite as N		2.48	2.67	7.4	Accept
Bicarbonate		397	399	0.5	Accept
Carbonate		< 0.01	< 1.0	+/- RL	Accept
Total Alkalinity		397	399	0.5	Accept
Total Diss. Solids		477	467	2.1	Accept
Phosphorus		0.16	0.786	132.3	Fail
METALS (µg/L)		**13018**	**13019**		
Selenium		0.0023	0.0022	4.4	Accept
Hardness		456,000	460,000	0.9	Accept
Cadmium		< 0.7	< 0.7	+/- RL	Accept
Calcium		115,000	116,000	0.9	Accept
Magnesium		41,200	41,600	1.0	Accept
Manganese		2	1.8	10.5	Accept
Molybdenum		32.8	33.1	0.9	Accept
Potassium		2,400	2,410	0.4	Accept
Sodium		14,300	14,500	1.4	Accept
Vanadium		403	410	1.7	Accept
Zinc		4.8	4.6	4.3	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0043 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13002	TW-20		
BLIND DUPLICATE ID =		13003	TW-20		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13002**	**13003**		
Chloride		90.8	92.2	1.5	Accept
Fluoride		1.37	1.39	1.4	Accept
Sulfate as SO4		322	325	0.9	Accept
Ammonia as N		< 0.03	< 0.03	+/- RL	Accept
Nitrate/Nitrite as N		8.23	8.8	6.7	Accept
Bicarbonate		393	395	0.5	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Total Alkalinity		393	395	0.5	Accept
Total Diss. Solids		1,090	1,050	3.7	Accept
Phosphorus		0.188	0.192	2.1	Accept
METALS (µg/L)		**13002**	**13003**		
Selenium		65	70	7.4	Accept
Hardness		773,000	772,000	0.1	Accept
Cadmium		4	3.9	2.5	Accept
Calcium		152,000	152,000	0.0	Accept
Magnesium		95,500	95,400	0.1	Accept
Manganese		1.4	1.4	+/- RL	Accept
Molybdenum		36.7	35.3	3.9	Accept
Potassium		11,900	12,000	0.8	Accept
Sodium		55,000	55,300	0.5	Accept
Vanadium		5.8	6	3.4	Accept
Zinc		67.9	69.9	2.9	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0208 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13046	TW-35		
BLIND DUPLICATE ID =		13047	TW-35		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13046**	**13047**		
Ammonia as N		0.228	0.229	0.4	Accept
Bicarbonate		1170	1190	1.7	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Chloride		29.1	29.6	1.7	Accept
Dissolved Oxygen		4.4	4.7	6.6	Accept
Fluoride		< 0.5	< 0.5	+/- RL	Accept
Hardness		1,330,000	1,260,000	5.4	Accept
Nitrate/Nitrite as N		<0.05	2.1	210.0	Fail J
Sulfate as SO4		125	124	0.8	Accept
Total Alkalinity		1,170	1,190	1.7	Accept
Total Diss. Solids		1,280	1,280	0.0	Accept
Phosphorus		0.588	0.556	5.6	Accept
METALS (Total) (µg/L)		**13046**	**13047**		
Cadmium		< 2.0	< 2.0	+/- RL	Accept
Calcium		63,900	61,600	3.7	Accept
Magnesium		284,000	269,000	5.4	Accept
Manganese		159	162	1.9	Accept
Molybdenum		2.9	2.9	0.0	Accept
Potassium		21,200	20,100	5.3	Accept
Selenium		< 2.0	< 2.0	+/- RL	Accept
Sodium		46,300	45,000	2.8	Accept
Vanadium		< 5.0	< 5.0	+/- RL	Accept
Zinc		< 10	< 10	+/- RL	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0208 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13054	TW-62		
BLIND DUPLICATE ID =		13055	TW-62		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13054**	**13055**		
Ammonia as N		< 0.03	< 0.03	+/- RL	Accept
Bicarbonate		640	635	0.8	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Chloride		73.1	70.8	3.2	Accept
Dissolved Oxygen		6.9	7.4	7.0	Accept
Fluoride		0.61	0.61	0.0	Accept
Hardness		963,000	952,000	1.1	Accept
Nitrate/Nitrite as N		6.72	6.77	0.7	Accept
Sulfate as SO4		298	293	1.7	Accept
Total Alkalinity		640	635	0.8	Accept
Total Diss. Solids		1,250	1,240	0.8	Accept
Phosphorus		0.089	0.098	9.6	Accept
METALS (Total) (µg/L)		**13054**	**13055**		
Cadmium		<0.7	<0.7	+/- RL	Accept
Calcium		188,000	186,000	1.1	Accept
Magnesium		120,000	118,000	1.7	Accept
Manganese		<1.4	<1.4	+/- RL	Accept
Molybdenum		5.7	5.7	0.0	Accept
Potassium		11,100	10,900	1.8	Accept
Selenium		105	103	1.9	Accept
Sodium		58,900	58,000	1.5	Accept
Vanadium		3.4	3.1	9.2	Accept
Zinc		<2.5	2.8	+/- RL	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0208 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13056	TW-70		
BLIND DUPLICATE ID =		13057	TW-70		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13056**	**13057**		
Ammonia as N		< 0.03	< 0.03	+/- RL	Accept
Bicarbonate		861	851	1.2	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Chloride		56	57.5	2.6	Accept
Dissolved Oxygen		7.3	5.9	21.2	Fail J
Fluoride		0.12	0.12	0.0	Accept
Hardness		1,100,000	1,100,000	0.0	Accept
Nitrate/Nitrite as N		4.35	4.47	2.7	Accept
Sulfate as SO4		250	251	0.4	Accept
Total Alkalinity		861	851	1.2	Accept
Total Diss. Solids		1,280	1,280	0.0	Accept
Phosphorus		0.116	0.12	3.4	Accept
METALS (Total) (µg/L)		**13056**	**13057**		
Cadmium		<0.7	<0.7	+/- RL	Accept
Calcium		212,000	211,000	0.5	Accept
Magnesium		139,000	139,000	0.0	Accept
Manganese		<1.4	<1.4	+/- RL	Accept
Molybdenum		<1.8	<1.8	+/- RL	Accept
Potassium		10,500	10,500	0.0	Accept
Selenium		76	75	1.3	Accept
Sodium		44,800	44,600	0.4	Accept
Vanadium		2.8	3	6.9	Accept
Zinc		<2.5	<2.5	+/- RL	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0231 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13089	SC-11		
BLIND DUPLICATE ID =		13090	SC-11		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13089**	**13090**		
Chloride		28	26.2	6.6	Accept
Fluoride		0.41	0.52	23.7	Fail J
Sulfate as SO4		143	138	3.6	Accept
Ammonia as N		0.047	< 0.03	+/- RL	Accept
Nitrate/Nitrite as N		0.501	0.495	1.2	Accept
Acidity				NA	NA
Bicarbonate		608	598	1.7	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Total Alkalinity		608	598	1.7	Accept
Total Diss. Solids		820	804	2.0	Accept
Dissolv Oxygen		9.1	9.6	5.3	Accept
Phosphorus		0.068	0.068	0.0	Accept
METALS (µg/L) Total Recoverable		**13089**	**13090**		
Selenium		2	2.1	4.9	Accept
Hardness		687,000	708,000	3.0	Accept
Cadmium		0.86	< 0.7	+/- RL	Accept
Calcium		130,000	134,000	3.0	Accept
Magnesium		88,000	91,000	3.4	Accept
Manganese		150	167	10.7	Accept
Molybdenum		5.3	3.1	52.4	Fail J
Potassium		10,700	10,900	1.9	Accept
Sodium		33,700	34,200	1.5	Accept
Vanadium		3.7	4.8	+/- RL	Accept
Zinc		< 2.5	< 2.5	+/- RL	Accept
METALS (µg/L) Dissolved		**13089**	**13090**		
Selenium		2.1	2.2	4.7	Accept
Cadmium		0.74	0.71	+/- RL	Accept
Calcium		131,000	135,000	3.0	Accept
Magnesium		89,000	92,600	4.0	Accept
Manganese		147	155	5.3	Accept
Molybdenum		5.4	4.6	16.0	Accept
Potassium		10,700	10,900	1.9	Accept
Sodium		33,800	34,300	1.5	Accept
Vanadium		2.9	3.2	+/- RL	Accept
Zinc		< 2.5	< 2.5	+/- RL	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.4: Field Duplicate Comparison Summary

SDG: W3F0207 **DATE VALIDATED: September 5, 2013**

FIELD SAMPLE ID =		13035	TW-11		
BLIND DUPLICATE ID =		13036	TW-11		
COMPOUND/ ANALYTE		**SAMPLE RESULT**	**DUPLICATE RESULT**	**RPD**	**STATUS**
GENERAL CHEMISTRY (mg/L)		**13035**	**13036**		
Ammonia as N		6.55	6.64	1.4	Accept
Bicarbonate		402	406	1.0	Accept
Carbonate		< 1.0	< 1.0	+/- RL	Accept
Chloride		29.6	30.4	2.7	Accept
Dissolved Oxygen		6	6.2	3.3	Accept
Fluoride		0.24	0.25	4.1	Accept
Hardness		423,000	420,000	0.7	Accept
Nitrate/Nitrite as N		4.43	4.42	0.2	Accept
Sulfate as SO4		83	84.4	1.7	Accept
Total Alkalinity		402	406	1.0	Accept
Total Diss. Solids		578	588	1.7	Accept
Phosphorus		0.047	0.053	12.0	Accept
METALS (Total) (µg/L)		**13035**	**13036**		
Cadmium		< 0.70	<0.70	+/- RL	Accept
Calcium		104,000	103,000	1.0	Accept
Magnesium		39,800	39,800	0.0	Accept
Manganese		< 1.4	< 1.4	+/- RL	Accept
Molybdenum		3.2	3	6.5	Accept
Potassium		9,640	9,520	1.3	Accept
Selenium		2.7	2.6	3.8	Accept
Sodium		57,500	56,700	1.4	Accept
Vanadium		2.1	1.9	10.0	Accept
Zinc		<2.5	<2.5	+/- RL	Accept

Notes:
NA - duplicate rule does not apply; J - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0045 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

			SAMPLE RESULT	DUPLICATE RESULT	TRIPLICATE RESULT		
SAMPLE ID	LOCATION	COMPOUND/ ANALYTE	SVL (mg/L)	SVL (mg/L)	ARI (mg/L)	RPD (20% Limit)	STATUS
13017 / 13018 / 13019	TW-33	Ammonia as N	< 0.03	< 0.03	0.08	+/- RL	Accept
13017 / 13018 / 13019	TW-33	Bicarbonate	397	399	420	5.4	Accept
13017 / 13018 / 13019	TW-33	Carbonate	< 1.0	< 1.0	< 1.0	+/- RL	Accept
13017 / 13018 / 13019	TW-33	Chloride	14.6	14.9	13.8	6.6	Accept
13017 / 13018 / 13019	TW-33	Dissolved Oxygen	NA	NA	NA	NA	NA
13017 / 13018 / 13019	TW-33	Fluoride	0.33	0.32	0.2	>+/- RL	Fail J
13017 / 13018 / 13019	TW-33	Hardness	456	460	470	2.6	Accept
13017 / 13018 / 13019	TW-33	Hydroxide	NA	NA	< 1.0	NA	NA
13017 / 13018 / 13019	TW-33	Nitrate/Nitrite as N	2.48	2.67	2.62	1.7	Accept
13017 / 13018 / 13019	TW-33	Sulfate as SO4	42.1	41.4	40.7	2.5	Accept
13017 / 13018 / 13019	TW-33	Total Alkalinity	397	399	420	5.4	Accept
13017 / 13018 / 13019	TW-33	Total Diss. Solids	477	476	497	4.2	Accept
13017 / 13018 / 13019	TW-33	Phosphorus	0.16	0.786	0.16	84.9	Fail J
13017 / 13018 / 13019	TW-33	Cadmium	< 0.002	< 0.002	< 0.002	+/- RL	Accept
13017 / 13018 / 13019	TW-33	Calcium	115	116	118	2.1	Accept
13017 / 13018 / 13019	TW-33	Magnesium	41.2	41.6	42.6	2.9	Accept
13017 / 13018 / 13019	TW-33	Manganese	0.002	0.0018	0.005	+/- RL	Accept
13017 / 13018 / 13019	TW-33	Molybdenum	0.0328	0.0331	0.037	11.8	Accept
13017 / 13018 / 13019	TW-33	Potassium	2.4	2.41	2.5	3.9	Accept
13017 / 13018 / 13019	TW-33	Selenium	0.0023	0.0022	< 0.002	+/- RL	Accept
13017 / 13018 / 13019	TW-33	Sodium	14.3	14.5	14.8	2.8	Accept
13017 / 13018 / 13019	TW-33	Vanadium	0.403	0.41	0.4	1.1	Accept
13017 / 13018 / 13019	TW-33	Zinc	0.0048	0.0046	< 0.01	3.0	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0223 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

			SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13061 / 13062	TW-67	Chloride	28.4	29.1	2.4	Accept
13061 / 13062	TW-67	Fluoride	0.41	0.3	+/- RL	Accept
13061 / 13062	TW-67	Sulfate as SO4	90.5	90.0	0.6	Accept
13061 / 13062	TW-67	Ammonia as N	3.89	4.3	10.0	Accept
13061 / 13062	TW-67	Nitrate/Nitrite as N	7.65	7.56	1.2	Accept
13061 / 13062	TW-67	Bicarbonate	385	402	4.3	Accept
13061 / 13062	TW-67	Carbonate	< 1.0	< 1.0	+/- RL	Accept
13061 / 13062	TW-67	Dissolved Oxygen	7.0		NA	Accept
13061 / 13062	TW-67	Total Alkalinity	385	402	4.3	Accept
13061 / 13062	TW-67	Total Diss. Solids	581	619	6.3	Accept
13061 / 13062	TW-67	Phosphorus	0.379	0.375	1.1	Accept
13061 / 13062	TW-67	Selenium	0.0034	0.0036	5.7	Accept
13061 / 13062	TW-67	Cadmium	< 0.0007	< 0.002	+/- RL	Accept
13061 / 13062	TW-67	Calcium	104	109	4.7	Accept
13061 / 13062	TW-67	Magnesium	43.6	45.2	3.6	Accept
13061 / 13062	TW-67	Manganese	0.012	0.014	15.4	Accept
13061 / 13062	TW-67	Molybdenum	0.315	0.316	0.3	Accept
13061 / 13062	TW-67	Potassium	5.97	6.1	2.2	Accept
13061 / 13062	TW-67	Sodium	43.4	43.1	0.7	Accept
13061 / 13062	TW-67	Vanadium	0.25	0.246	1.6	Accept
13061 / 13062	TW-67	Zinc	< 0.0025	< 0.01	+/- RL	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water; * Submitted to both labs under same sample ID

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0223 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

		Total Recoverable Fraction	SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13101 / 13102	SC-8	Chloride	20.7	21.4	3.3	Accept
13101 / 13102	SC-8	Fluoride	0.34	0.3	12.5	Accept
13101 / 13102	SC-8	Sulfate as SO4	53.5	53.9	0.7	Accept
13101 / 13102	SC-8	Ammonia as N	0.068	0.033	69.3	Fail
13101 / 13102	SC-8	Nitrate/Nitrite as N	0.736	0.721	2.1	Accept
13101 / 13102	SC-8	Bicarbonate	526	541	2.8	Accept
13101 / 13102	SC-8	Carbonate	< 1.0	< 1.0	+/- RL	Accept
13101 / 13102	SC-8	Total Alkalinity	526	541	2.8	Accept
13101 / 13102	SC-8	Total Diss. Solids	610	648	6.0	Accept
13101 / 13102	SC-8	Phosphorus	0.105	0.103	1.9	Accept
13101 / 13102	SC-8	Selenium	0.0024	0.0026	8.0	Accept
13101 / 13102	SC-8	Cadmium	< 0.0007	< 0.002	+/- RL	Accept
13101 / 13102	SC-8	Calcium	89.4	91.7	2.5	Accept
13101 / 13102	SC-8	Magnesium	77.8	80.9	3.9	Accept
13101 / 13102	SC-8	Manganese	0.126	0.118	6.6	Accept
13101 / 13102	SC-8	Molybdenum	0.004	0.007	+/- RL	Accept
13101 / 13102	SC-8	Potassium	8.66	8.7	0.5	Accept
13101 / 13102	SC-8	Sodium	31.9	31.8	0.3	Accept
13101 / 13102	SC-8	Vanadium	0.0054	0.005	7.7	Accept
13101 / 13102	SC-8	Zinc	< 0.0025	< 0.01	+/- RL	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0223 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

		Dissolved Fraction	SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13101 / 13102	SC-8	Cadmium	< 0.002	< 0.002	+/- RL	Accept
13101 / 13102	SC-8	Calcium	87.2	90.4	3.6	Accept
13101 / 13102	SC-8	Magnesium	74.5	79.4	6.4	Accept
13101 / 13102	SC-8	Manganese	0.118	0.111	6.1	Accept
13101 / 13102	SC-8	Molybdenum	0.0042	0.008	+/- RL	Accept
13101 / 13102	SC-8	Potassium	8.4	8.5	1.2	Accept
13101 / 13102	SC-8	Selenium	0.00026	0.0024	+/- RL	Accept
13101 / 13102	SC-8	Sodium	30.1	30.9	2.6	Accept
13101 / 13102	SC-8	Vanadium	0.0048	0.004	18.2	Accept
13101 / 13102	SC-8	Zinc	< 0.0025	< 0.01	+/- RL	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0223 **Sample: 13099** **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49 **Sample: 13100**

			SAMPLE RESULT	DUPLICATE RESULT	TRIPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13099 / 13100	TW-44	Chloride	29.4		30	2.0	Accept
13099 / 13100	TW-44	Fluoride	0.73		0.4	58.4	Fail
13099 / 13100	TW-44	Sulfate as SO4	109		105	3.7	Accept
13099 / 13100	TW-44	Ammonia as N	0.388		0.287	29.9	Fail
13099 / 13100	TW-44	Nitrate/Nitrite as N	< 0.05		< 0.01	+/- RL	Accept
13099 / 13100	TW-44	Bicarbonate	854		878	2.8	Accept
13099 / 13100	TW-44	Carbonate	< 1.0		< 1.0	+/- RL	Accept
13099 / 13100	TW-44	Total Alkalinity	854		878	2.8	Accept
13099 / 13100	TW-44	Total Diss. Solids	954		14400	175.1	Fail
13099 / 13100	TW-44	Phosphorus	2.21		1.98	11.0	Accept
13099 / 13100	TW-44	Selenium	0.00038		0.0007	+/- RL	Accept
13099 / 13100	TW-44	Cadmium	0.0028		0.003	6.9	Accept
13099 / 13100	TW-44	Calcium	56.6		56.2	0.7	Accept
13099 / 13100	TW-44	Magnesium	197		191	3.1	Accept
13099 / 13100	TW-44	Manganese	0.23		0.216	6.3	Accept
13099 / 13100	TW-44	Molybdenum	0.0054		0.009	+/- RL	Accept
13099 / 13100	TW-44	Potassium	12.6		12.1	4.0	Accept
13099 / 13100	TW-44	Sodium	33.5		31.4	6.5	Accept
13099 / 13100	TW-44	Vanadium	0.0026		0.004	+/- RL	Accept
13099 / 13100	TW-44	Zinc	0.068		0.07	2.9	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water; * Field Duplicate also submitted

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0207 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

			SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13033 / 13034	TW-54	Ammonia as N	0.63	< 0.050	170.6	Fail J
13033 / 13034	TW-54	Bicarbonate	436	462	5.8	Accept
13033 / 13034	TW-54	Carbonate	< 1.0	< 1.0	+/- RL	Accept
13033 / 13034	TW-54	Chloride	123	129	4.8	Accept
13033 / 13034	TW-54	Dissolved Oxygen	7.7	NA	NA	NA
13033 / 13034	TW-54	Fluoride	2.39	1.9	22.8	Fail J
13033 / 13034	TW-54	Hardness	1100	1100	0.0	Accept
13033 / 13034	TW-54	Hydroxide	NA	< 1.0	NA	NA
13033 / 13034	TW-54	Nitrate/Nitrite as N	10.5	10.2	2.9	Accept
13033 / 13034	TW-54	Sulfate as SO4	600	611	1.8	Accept
13033 / 13034	TW-54	Total Alkalinity	436	462	5.8	Accept
13033 / 13034	TW-54	Total Diss. Solids	1670	1580	5.5	Accept
13033 / 13034	TW-54	Phosphorus	0.226	0.219	3.1	Accept
13033 / 13034	TW-54	Cadmium	0.003	0.002	+/- RL	Accept
13033 / 13034	TW-54	Calcium	217	215	0.9	Accept
13033 / 13034	TW-54	Magnesium	136	138	1.5	Accept
13033 / 13034	TW-54	Manganese	0.0017	0.013	153.7	Fail J
13033 / 13034	TW-54	Molybdenum	0.0528	0.05	5.4	Accept
13033 / 13034	TW-54	Potassium	21.4	20.1	6.3	Accept
13033 / 13034	TW-54	Selenium	0.27	0.252	6.9	Accept
13033 / 13034	TW-54	Sodium	99.5	98.2	1.3	Accept
13033 / 13034	TW-54	Vanadium	0.0049	0.006	+/- RL	Accept
13033 / 13034	TW-54	Zinc	0.0894	0.09	0.7	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0207 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

			SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13037 / 13038	TW-12	Ammonia as N	7.21	7.56	4.7	Accept
13037 / 13038	TW-12	Bicarbonate	383	401	4.6	Accept
13037 / 13038	TW-12	Carbonate	< 1.0	< 1.0	+/- RL	Accept
13037 / 13038	TW-12	Chloride	24.2	24.8	2.4	Accept
13037 / 13038	TW-12	Dissolved Oxygen	6.5	NA	NA	Accept
13037 / 13038	TW-12	Fluoride	0.31	0.3	3.3	Accept
13037 / 13038	TW-12	Hardness	434	420	3.3	Accept
13037 / 13038	TW-12	Hydroxide	NA	< 1.0	NA	NA
13037 / 13038	TW-12	Nitrate/Nitrite as N	6.65	6.44	3.2	Accept
13037 / 13038	TW-12	Sulfate as SO4	83.1	84.1	1.2	Accept
13037 / 13038	TW-12	Total Alkalinity	383	401	4.6	Accept
13037 / 13038	TW-12	Total Diss. Solids	572	602	5.1	Accept
13037 / 13038	TW-12	Phosphorus	0.559	0.529	5.5	Accept
13037 / 13038	TW-12	Cadmium	< 0.0007	< 0.002	+/- RL	Accept
13037 / 13038	TW-12	Calcium	107	104	2.8	Accept
13037 / 13038	TW-12	Magnesium	40.7	39.8	2.2	Accept
13037 / 13038	TW-12	Manganese	0.0224	0.022	1.8	Accept
13037 / 13038	TW-12	Molybdenum	0.414	0.378	9.1	Accept
13037 / 13038	TW-12	Potassium	6.65	6.1	8.6	Accept
13037 / 13038	TW-12	Selenium	0.0015	0.0016	6.5	Accept
13037 / 13038	TW-12	Sodium	43.3	42.1	2.8	Accept
13037 / 13038	TW-12	Vanadium	0.693	0.657	5.3	Accept
13037 / 13038	TW-12	Zinc	< 0.0025	< 0.01	+/- RL	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0227 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

		Total Recoverable	SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13076 / 13077	Mormon A	Ammonia as N	0.038	< 0.05	+/- RL	Accept
13076 / 13077	Mormon A	Bicarbonate	526	541	2.8	Accept
13076 / 13077	Mormon A	Carbonate	< 1.0	< 1.0	+/- RL	Accept
13076 / 13077	Mormon A	Chloride	109	110	0.9	Accept
13076 / 13077	Mormon A	Dissolved Oxygen	8	NA	NA	NA
13076 / 13077	Mormon A	Fluoride	3.24	2.7	18.2	Accept
13076 / 13077	Mormon A	Hardness	NA	NA	NA	NA
13076 / 13077	Mormon A	Hydroxide	NA	< 1.0	NA	NA
13076 / 13077	Mormon A	Nitrate/Nitrite as N	6.93	6.9	0.4	Accept
13076 / 13077	Mormon A	Sulfate as SO4	446	452	1.3	Accept
13076 / 13077	Mormon A	Total Alkalinity	526	541	2.8	Accept
13076 / 13077	Mormon A	Total Diss. Solids	1420	1450	2.1	Accept
13076 / 13077	Mormon A	Phosphorus	0.355	0.326	8.5	Accept
13076 / 13077	Mormon A	Cadmium	0.0162	0.016	+/- RL	Accept
13076 / 13077	Mormon A	Calcium	158	166	4.9	Accept
13076 / 13077	Mormon A	Magnesium	138	145	4.9	Accept
13076 / 13077	Mormon A	Manganese	< 0.0014	< 0.001	+/- RL	Accept
13076 / 13077	Mormon A	Molybdenum	0.067	0.066	1.5	Accept
13076 / 13077	Mormon A	Potassium	24.3	23.7	2.5	Accept
13076 / 13077	Mormon A	Selenium	0.273	0.294	7.4	Accept
13076 / 13077	Mormon A	Sodium	89.3	94.3	5.4	Accept
13076 / 13077	Mormon A	Vanadium	0.0145	0.015	3.4	Accept
13076 / 13077	Mormon A	Zinc	0.219	0.22	0.5	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0227 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

		Dissolved Fraction	SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13076 / 13077	Mormon A	Cadmium	0.0153	0.016	+/- RL	Accept
13076 / 13077	Mormon A	Calcium	156	165	5.6	Accept
13076 / 13077	Mormon A	Magnesium	134	143	6.5	Accept
13076 / 13077	Mormon A	Manganese	< 0.0014	0.002	+/- RL	Accept
13076 / 13077	Mormon A	Molybdenum	0.0672	0.064	4.9	Accept
13076 / 13077	Mormon A	Potassium	22.6	23.2	2.6	Accept
13076 / 13077	Mormon A	Selenium	0.265	0.282	6.2	Accept
13076 / 13077	Mormon A	Sodium	86.5	90.8	4.9	Accept
13076 / 13077	Mormon A	Vanadium	0.0157	0.015	4.6	Accept
13076 / 13077	Mormon A	Zinc	0.211	0.23	8.6	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

TABLE J-5.5: Laboratory Split Comparison / SVL Analytical and Analytical Resources Laboratories (ARI)

SDG: SVL Analytical # W3F0207 **DATE VALIDATED: September 5, 2013**
SDG: Analytical Resources Inc. # WT49

			SAMPLE RESULT	DUPLICATE RESULT		
SAMPLE ID	**LOCATION**	**COMPOUND/ ANALYTE**	**SVL (mg/L)**	**ARI (mg/L)**	**RPD (20% Limit)**	**STATUS**
13043 / 13044	TW-55	Ammonia as N	< 0.030	0.119	+/- RL	Accept
13043 / 13044	TW-55	Bicarbonate	651	678	4.1	Accept
13043 / 13044	TW-55	Carbonate	< 1.0	< 1.0	+/- RL	Accept
13043 / 13044	TW-55	Chloride	48.7	52.6	7.7	Accept
13043 / 13044	TW-55	Dissolved Oxygen	6.9	NA	NA	NA
13043 / 13044	TW-55	Fluoride	0.59	0.3	+/- RL	Accept
13043 / 13044	TW-55	Hardness	891	880	1.2	Accept
13043 / 13044	TW-55	Hydroxide	NA	< 1.0	NA	NA
13043 / 13044	TW-55	Nitrate/Nitrite as N	3.96	3.93	0.8	Accept
13043 / 13044	TW-55	Sulfate as SO4	159	157	1.3	Accept
13043 / 13044	TW-55	Total Alkalinity	651	678	4.1	Accept
13043 / 13044	TW-55	Total Diss. Solids	990	3030	101.5	Fail J
13043 / 13044	TW-55	Phosphorus	0.104	0.128	20.7	Fail J
13043 / 13044	TW-55	Cadmium	< 0.70	< 0.002	+/- RL	Accept
13043 / 13044	TW-55	Calcium	175	172	1.7	Accept
13043 / 13044	TW-55	Magnesium	110	109	0.9	Accept
13043 / 13044	TW-55	Manganese	< 0.014	0.003	+/- RL	Accept
13043 / 13044	TW-55	Molybdenum	0.0035	0.005	+/- RL	Accept
13043 / 13044	TW-55	Potassium	9.88	9.4	5.0	Accept
13043 / 13044	TW-55	Selenium	0.02	0.0231	14.4	Accept
13043 / 13044	TW-55	Sodium	37.7	36.5	3.2	Accept
13043 / 13044	TW-55	Vanadium	0.0016	< 0.03	+/- RL	Accept
13043 / 13044	TW-55	Zinc	< 0.0025	< 0.01	+/- RL	Accept

Notes:
NA - Not analyzed; Fail - RPD exceeds 20% for water

ATTACHMENT 1
GLOSSARY OF DATA REPORTING QUALIFIERS

INORGANIC QUALIFIERS

U: The material was analyzed for, but was not detected above the level of the reported sample quantitation limit.

B: The associated value is greater than the instrument detection limit but less than the associated sample quantitation limit.

J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+: The result is an estimated quantity, but the result may be biased high.

J-: The result is an estimated quantity, but the result may be biased low.

R: The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. (Note: The analyte may or may not be present in the sample).

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

ATTACHMENT 2
ANNOTATED LABORATORY REPORTS

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13017
SAMPLE

Lab Sample ID: WT49A
LIMS ID: 13-12434
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 05/31/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	7440-43-9	Cadmium	0.002	0.002	U
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**118**	
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**42.6**	
3010A	06/12/13	6010C	06/14/13	**7439-96-5**	**Manganese**	0.001	**0.005**	
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.037**	
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**2.5**	
200.8	06/12/13	200.8	06/19/13	7782-49-2	Selenium	0.002	0.002	U
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**14.8**	
3010A	06/12/13	6010C	06/14/13	**7440-62-2**	**Vanadium**	0.003	**0.411**	
3010A	06/12/13	6010C	06/14/13	7440-66-6	Zinc	0.01	0.01	U

Calculated Hardness (mg-CaCO3/L): 470

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized MR
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 05/31/13
Date Received: 06/11/13

Client ID: 13017
ARI ID: 13-12434 WT49A

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	420
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	420
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	10.0	497 J
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	0.5	13.8
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	0.2 J
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.050	0.080 J
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.050	2.62
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.160
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	1.0	40.7

RL Analytical reporting limit
U Undetected at reported detection limit

JSL 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13034
SAMPLE

Lab Sample ID: WT49B
LIMS ID: 13-12435
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/03/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	**7440-43-9**	**Cadmium**	0.002	**0.002**	
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**215**	
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**138**	
3010A	06/12/13	6010C	06/14/13	**7439-96-5**	**Manganese**	0.001	**0.013**	J
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.050**	
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**20.1**	
200.8	06/12/13	200.8	06/18/13	**7782-49-2**	**Selenium**	0.002	**0.252**	
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**98.2**	
3010A	06/12/13	6010C	06/14/13	**7440-62-2**	**Vanadium**	0.003	**0.006**	
3010A	06/12/13	6010C	06/14/13	**7440-66-6**	**Zinc**	0.01	**0.09**	

Calculated Hardness (mg-CaCO3/L): 1100

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: NR
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/03/13
Date Received: 06/11/13

Client ID: 13034
ARI ID: 13-12435 WT49B

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	462
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	462
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	20.0	1,580 J+
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	5.0	129
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	1.9 J
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.050	< 0.050 U UJ
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.200	10.2
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.219
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	20.0	611

RL Analytical reporting limit
U Undetected at reported detection limit

JSI 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13038
SAMPLE

Lab Sample ID: WT49C
LIMS ID: 13-12436
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/03/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	7440-43-9	Cadmium	0.002	0.002	U
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**104**	
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**39.8**	
3010A	06/12/13	6010C	06/14/13	**7439-96-5**	**Manganese**	0.001	**0.022**	
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.378**	J
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**6.1**	J
200.8	06/12/13	200.8	06/18/13	**7782-49-2**	**Selenium**	0.0005	**0.0016**	
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**42.1**	J
3010A	06/12/13	6010C	06/14/13	**7440-62-2**	**Vanadium**	0.003	**0.657**	J
3010A	06/12/13	6010C	06/14/13	7440-66-6	Zinc	0.01	0.01	U

Calculated Hardness (mg-CaCO3/L): 420

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized NMB
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/03/13
Date Received: 06/11/13

Client ID: 13038
ARI ID: 13-12436 WT49C

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	401
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	401
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	10.0	602 J
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	1.0	24.8
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	0.3
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.200	7.56
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.100	6.44
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.529
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	2.0	84.1

RL Analytical reporting limit
U Undetected at reported detection limit

JSI 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13044
SAMPLE

Lab Sample ID: WT49D
LIMS ID: 13-12437
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/04/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	7440-43-9	Cadmium	0.002	0.002	U UJ
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**172**	J
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**109**	
3010A	06/12/13	6010C	06/14/13	**7439-96-5**	**Manganese**	0.001	**0.003**	J
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.005**	J
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**9.4**	J
200.8	06/12/13	200.8	06/18/13	**7782-49-2**	**Selenium**	0.0005	**0.0231**	
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**36.5**	J
3010A	06/12/13	6010C	06/14/13	7440-62-2	Vanadium	0.003	0.003	U UJ
3010A	06/12/13	6010C	06/14/13	7440-66-6	Zinc	0.01	0.01	U UJ

Calculated Hardness (mg-CaCO3/L): 880 J

U-Analyte undetected at given RL
RL-Reporting Limit

JS 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MR
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/04/13
Date Received: 06/11/13

Client ID: 13044
ARI ID: 13-12437 WT49D

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	678
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	678
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	40.0	3,030 J
Chloride	06/20/13 062013#1	EPA 300.0	mg/L	2.0	52.6
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	0.3 J
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.100	0.119 J
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.100	3.93
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.128 J
Sulfate	06/20/13 062013#1	EPA 300.0	mg/L	5.0	157

RL Analytical reporting limit
U Undetected at reported detection limit

JSI 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13062
SAMPLE

Lab Sample ID: WT49E
LIMS ID: 13-12438
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/06/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	7440-43-9	Cadmium	0.002	0.002	U
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**109**	
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**45.2**	
3010A	06/12/13	6010C	06/14/13	**7439-96-5**	**Manganese**	0.001	**0.014**	
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.316**	
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**6.1**	
200.8	06/12/13	200.8	06/18/13	**7782-49-2**	**Selenium**	0.0005	**0.0036**	
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**43.1**	
3010A	06/12/13	6010C	06/14/13	**7440-62-2**	**Vanadium**	0.003	**0.246**	
3010A	06/12/13	6010C	06/14/13	7440-66-6	Zinc	0.01	0.01	U

Calculated Hardness (mg-CaCO3/L): 460

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/06/13
Date Received: 06/11/13

Client ID: 13062
ARI ID: 13-12438 WT49E

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	402
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	402
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	10.0	619
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	1.0	29.1
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	0.3
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.100	4.30
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.100	7.56
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.375
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	2.0	90.0

RL Analytical reporting limit
U Undetected at reported detection limit

JSI 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13077
SAMPLE

Lab Sample ID: WT49F
LIMS ID: 13-12439
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/07/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	**7440-43-9**	**Cadmium**	0.002	**0.016**	
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**166**	
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**145**	
3010A	06/12/13	6010C	06/14/13	7439-96-5	Manganese	0.001	0.001	U
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.066**	
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**23.7**	
200.8	06/12/13	200.8	06/20/13	**7782-49-2**	**Selenium**	0.002	**0.294**	
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**94.3**	
3010A	06/12/13	6010C	06/14/13	**7440-62-2**	**Vanadium**	0.003	**0.015**	
3010A	06/12/13	6010C	06/14/13	**7440-66-6**	**Zinc**	0.01	**0.22**	

Calculated Hardness (mg-CaCO3/L): 1000

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: 13077
SAMPLE

Lab Sample ID: WT49I
LIMS ID: 13-12442
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/07/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
6010C	06/12/13	6010C	06/13/13	7440-43-9	Cadmium	0.002	0.016	
6010C	06/12/13	6010C	06/13/13	7440-70-2	Calcium	0.05	165	
6010C	06/12/13	6010C	06/13/13	7439-95-4	Magnesium	0.05	143	
6010C	06/12/13	6010C	06/13/13	7439-96-5	Manganese	0.001	0.002	
6010C	06/12/13	6010C	06/13/13	7439-98-7	Molybdenum	0.005	0.064	
6010C	06/12/13	6010C	06/13/13	7440-09-7	Potassium	0.5	23.2	
200.8	06/12/13	200.8	06/19/13	7782-49-2	Selenium	0.002	0.282	
6010C	06/12/13	6010C	06/13/13	7440-23-5	Sodium	0.5	90.8	
6010C	06/12/13	6010C	06/13/13	7440-62-2	Vanadium	0.003	0.015	
6010C	06/12/13	6010C	06/13/13	7440-66-6	Zinc	0.01	0.23	

Calculated Dissolved Hardness (mg-CaCO3/L): 1000

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/07/13
Date Received: 06/11/13

Client ID: 13077
ARI ID: 13-12439 WT49F

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	541
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	541
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	13.3	1,450
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	5.0	110
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	2.7
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.050	< 0.050 U
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.100	6.90
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.326
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	10.0	452

RL Analytical reporting limit
U Undetected at reported detection limit

jsl 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: 13102
SAMPLE

Lab Sample ID: WT49G
LIMS ID: 13-12440
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/09/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	7440-43-9	Cadmium	0.002	0.002	U
3010A	06/12/13	6010C	06/14/13	**7440-70-2**	**Calcium**	0.05	**91.7**	
3010A	06/12/13	6010C	06/14/13	**7439-95-4**	**Magnesium**	0.05	**80.9**	
3010A	06/12/13	6010C	06/14/13	**7439-96-5**	**Manganese**	0.001	**0.118**	
3010A	06/12/13	6010C	06/14/13	**7439-98-7**	**Molybdenum**	0.005	**0.007**	
3010A	06/12/13	6010C	06/14/13	**7440-09-7**	**Potassium**	0.5	**8.7**	
200.8	06/12/13	200.8	06/20/13	**7782-49-2**	**Selenium**	0.0005	**0.0026**	
3010A	06/12/13	6010C	06/14/13	**7440-23-5**	**Sodium**	0.5	**31.8**	
3010A	06/12/13	6010C	06/14/13	**7440-62-2**	**Vanadium**	0.003	**0.005**	
3010A	06/12/13	6010C	06/14/13	7440-66-6	Zinc	0.01	0.01	U

Calculated Hardness (mg-CaCO3/L): 560

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: 13102
SAMPLE

Lab Sample ID: WT49J
LIMS ID: 13-12443
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/09/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
6010C	06/12/13	6010C	06/13/13	7440-43-9	Cadmium	0.002	0.002	U
6010C	06/12/13	6010C	06/13/13	**7440-70-2**	**Calcium**	0.05	**90.4**	
6010C	06/12/13	6010C	06/13/13	**7439-95-4**	**Magnesium**	0.05	**79.4**	
6010C	06/12/13	6010C	06/13/13	**7439-96-5**	**Manganese**	0.001	**0.111**	
6010C	06/12/13	6010C	06/13/13	**7439-98-7**	**Molybdenum**	0.005	**0.008**	
6010C	06/12/13	6010C	06/13/13	**7440-09-7**	**Potassium**	0.5	**8.5**	
200.8	06/12/13	200.8	06/20/13	**7782-49-2**	**Selenium**	0.0005	**0.0024**	
6010C	06/12/13	6010C	06/13/13	**7440-23-5**	**Sodium**	0.5	**30.9**	
6010C	06/12/13	6010C	06/13/13	**7440-62-2**	**Vanadium**	0.003	**0.004**	
6010C	06/12/13	6010C	06/13/13	7440-66-6	Zinc	0.01	0.01	U

Calculated Dissolved Hardness (mg-CaCO3/L): 550

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: DMB
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/09/13
Date Received: 06/11/13

Client ID: 13102
ARI ID: 13-12440 WT49G

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	541
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	541
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	10.0	648
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	0.5	21.4
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	0.3
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.020	0.033 J
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.010	0.721
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.008	0.103
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	2.0	53.9

RL Analytical reporting limit
U Undetected at reported detection limit

JSI 8/7/2013

TMS 9-5-2013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: 13100
SAMPLE

Lab Sample ID: WT49H
LIMS ID: 13-12441
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WT49-Golder Associates Inc.
Project: Monsanto
913-1101-002
Date Sampled: 06/09/13
Date Received: 06/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	06/12/13	6010C	06/14/13	7440-43-9	Cadmium	0.002	0.003	
3010A	06/12/13	6010C	06/14/13	7440-70-2	Calcium	0.05	56.2	
3010A	06/12/13	6010C	06/14/13	7439-95-4	Magnesium	0.05	191	
3010A	06/12/13	6010C	06/14/13	7439-96-5	Manganese	0.001	0.216	
3010A	06/12/13	6010C	06/14/13	7439-98-7	Molybdenum	0.005	0.009	
3010A	06/12/13	6010C	06/14/13	7440-09-7	Potassium	0.5	12.1	
200.8	06/12/13	200.8	06/19/13	7782-49-2	Selenium	0.0005	0.0007	
3010A	06/12/13	6010C	06/14/13	7440-23-5	Sodium	0.5	31.4	
3010A	06/12/13	6010C	06/14/13	7440-62-2	Vanadium	0.003	0.004	
3010A	06/12/13	6010C	06/14/13	7440-66-6	Zinc	0.01	0.07	

Calculated Hardness (mg-CaCO3/L): 930

U-Analyte undetected at given RL
RL-Reporting Limit

JSI 8/7/2013

FORM-I

SAMPLE RESULTS-CONVENTIONALS
WT49-Golder Associates Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 06/25/13

Project: Monsanto
Event: 913-1101-002
Date Sampled: 06/09/13
Date Received: 06/11/13

Client ID: 13100
ARI ID: 13-12441 WT49H

Analyte	Date Batch	Method	Units	RL	Sample
Alkalinity	06/11/13 061113#1	SM 2320	mg/L CaCO3	1.0	878
Carbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/11/13	SM 2320	mg/L CaCO3	1.0	878
Hydroxide	06/11/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Dissolved Solids	06/11/13 061113#1	EPA 160.1	mg/L	13.3	14,400 J+
Chloride	06/12/13 061213#1	EPA 300.0	mg/L	1.0	30.0
Fluoride	06/11/13 061113#1	EPA 300.0	mg/L	0.1	0.4 J
N-Ammonia	06/17/13 061713#1	EPA 350.1M	mg-N/L	0.010	0.287 J
Nitrate + Nitrite	06/18/13 061813#1	EPA 353.2	mg-N/L	0.010	< 0.010 U
Total Phosphorus	06/12/13 061213#1	EPA 365.2	mg-P/L	0.040	1.98
Sulfate	06/12/13 061213#1	EPA 300.0	mg/L	5.0	105

RL Analytical reporting limit
U Undetected at reported detection limit

TMR 9-5-2013

JSI
8/7/2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0043 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W323146-MS1	13001S	Matrix Spike
W323146-MSD1	13001SD	Matrix Spike Duplicate
W323157-MS	13001S	Matrix Spike
W323157-MSD	13001SD	Matrix Spike Duplicate
W3F0043-01	13001	
W3F0043-02 DUP	13002	
W3F0043-03	13003	
W3F0043-04	13004	
W3F0043-05	13005	
W3F0043-06	13006	
W3F0043-07 BLANK	13007	
W3F0043-08	13008	
W3F0043-09	13009	
W3F0043-10	13010	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 06/25/2013 Title: TECHNICAL DIRECTOR

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-01 **Client ID:** 13001

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	872000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	20.0	ug/L	J	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323146
7440-70-2	Calcium	153000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	119000	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	149	ug/L			P	1.4	Optima A	W323146
7439-98-7	Molybdenum	3.4	ug/L	~~J~~ U		P	1.8	Optima A	W323146
7440-09-7	Potassium	10700	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	26000	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W323146
7440-66-6	Zinc	4.8	ug/L	J		P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-02 **Client ID:** 13002

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	773000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	65.0	ug/L	~~B~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	4.0	ug/L			P	0.70	Optima A	W323146
7440-70-2	Calcium	152000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	95500	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	36.7	ug/L			P	1.8	Optima A	W323146
7440-09-7	Potassium	11900	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	55000	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	5.8	ug/L			P	1.5	Optima A	W323146
7440-66-6	Zinc	67.9	ug/L			P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMG 9-5-13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-03 **Client ID:** 13003

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	772000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	70.0	ug/L			MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	3.9	ug/L			P	0.70	Optima A	W323146
7440-70-2	Calcium	152000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	95400	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	35.3	ug/L			P	1.8	Optima A	W323146
7440-09-7	Potassium	12000	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	55300	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	6.0	ug/L			P	1.5	Optima A	W323146
7440-66-6	Zinc	69.9	ug/L			P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-04 **Client ID:** 13004

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	962000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	301	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323146
7440-70-2	Calcium	138000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	150000	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	41.8	ug/L			P	1.8	Optima A	W323146
7440-09-7	Potassium	12500	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	60800	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	8.0	ug/L			P	1.5	Optima A	W323146
7440-66-6	Zinc	8.0	ug/L	J		P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMJ 9-5-2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-05 **Client ID:** 13005

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	828000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	155	ug/L			MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	24.3	ug/L			P	0.70	Optima A	W323146
7440-70-2	Calcium	144000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	114000	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	791	ug/L			P	1.4	Optima A	W323146
7439-98-7	Molybdenum	251	ug/L			P	1.8	Optima A	W323146
7440-09-7	Potassium	28600	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	48200	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	5.5	ug/L			P	1.5	Optima A	W323146
7440-66-6	Zinc	105	ug/L			P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TM 9-5-13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-06 **Client ID:** 13006

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	538000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	1.6	ug/L	J	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323146
7440-70-2	Calcium	116000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	60400	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	2.8	ug/L	~~J~~ U		P	1.8	Optima A	W323146
7440-09-7	Potassium	4800	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	21200	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	2.9	ug/L	J		P	1.5	Optima A	W323146
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-07 **Client ID:** 13007

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	128	ug/L	U		P	128	Optima A	W323146
7782-49-2	Selenium	0.26	ug/L	U ~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323146
7440-70-2	Calcium	29.2	ug/L	J		P	15.0	Optima A	W323146
7439-95-4	Magnesium	22.0	ug/L	U		P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W323146
7440-09-7	Potassium	140	ug/L	U		P	140	Optima A	W323146
7440-23-5	Sodium	418	ug/L	J		P	110	Optima A	W323146
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W323146
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-08 **Client ID:** 13008

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	598000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	2.7	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323146
7440-70-2	Calcium	126000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	68400	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	12.2	ug/L	J +		P	1.8	Optima A	W323146
7440-09-7	Potassium	5400	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	33700	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	3.1	ug/L	J		P	1.5	Optima A	W323146
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0043 **Method Type:**

Sample ID: W3F0043-09 **Client ID:** 13009

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	853000	ug/L			P	128	Optima A	W323146
7782-49-2	Selenium	126	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-43-9	Cadmium	452	ug/L			P	0.70	Optima A	W323146
7440-70-2	Calcium	162000	ug/L			P	15.0	Optima A	W323146
7439-95-4	Magnesium	109000	ug/L			P	22.0	Optima A	W323146
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323146
7439-98-7	Molybdenum	7.9	ug/L	~~J~~ U		P	1.8	Optima A	W323146
7440-09-7	Potassium	9580	ug/L			P	140	Optima A	W323146
7440-23-5	Sodium	56200	ug/L			P	110	Optima A	W323146
7440-62-2	Vanadium	55.6	ug/L			P	1.5	Optima A	W323146
7440-66-6	Zinc	1650	ug/L			P	2.5	Optima A	W323146

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13001	W3F0043-01	Ground Water	30-May-13 14:30	DH	04-Jun-2013
13002	W3F0043-02	Ground Water	30-May-13 14:55	DH	04-Jun-2013
13003	W3F0043-03	Ground Water	30-May-13 15:10	DH	04-Jun-2013
13004	W3F0043-04	Ground Water	30-May-13 16:00	DH	04-Jun-2013
13005	W3F0043-05	Ground Water	30-May-13 16:40	DH	04-Jun-2013
13006	W3F0043-06	Ground Water	30-May-13 17:40	DH	04-Jun-2013
13007	W3F0043-07	Ground Water	30-May-13 17:50	DH	04-Jun-2013
13008	W3F0043-08	Ground Water	31-May-13 09:25	DH	04-Jun-2013
13009	W3F0043-09	Ground Water	31-May-13 10:00	DH	04-Jun-2013
13010	W3F0043-10	Ground Water	31-May-13 10:30	DH	04-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13001**
SVL Sample ID: **W3F0043-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 14:30
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:47	
EPA 353.2	**Nitrate/Nitrite as N**	0.448	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:09	
SM 2320B/2310B	**Bicarbonate**	626	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 08:52	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 08:52	
SM 2320B/2310B	**Total Alkalinity**	626	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 08:52	
SM 2540 C	**Total Diss. Solids**	1010	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.090	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	43.4	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 12:31	D2,M3
EPA 300.0	**Fluoride**	0.64	mg/L	0.10	0.02		W324304	AEW	06/13/13 12:20	
EPA 300.0	**Sulfate as SO4**	236	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 12:31	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13002**
SVL Sample ID: **W3F0043-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 14:55
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:49	
EPA 353.2	**Nitrate/Nitrite as N**	8.23	mg/L	0.150	0.030	3	W324340	ARP	06/17/13 15:46	D2
SM 2320B/2310B	**Bicarbonate**	393	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:06	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:06	
SM 2320B/2310B	**Total Alkalinity**	393	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:06	
SM 2540 C	**Total Diss. Solids**	1090	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.188	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	90.8	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 14:20	D2
EPA 300.0	**Fluoride**	1.37	mg/L	0.10	0.02		W324304	AEW	06/13/13 14:09	
EPA 300.0	**Sulfate as SO4**	322	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 14:20	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13003**
SVL Sample ID: **W3F0043-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 15:10
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:50	
EPA 353.2	**Nitrate/Nitrite as N**	8.80	mg/L	0.150	0.030	3	W324340	ARP	06/17/13 15:48	D2
SM 2320B/2310B	**Bicarbonate**	395	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:16	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:16	
SM 2320B/2310B	**Total Alkalinity**	395	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:16	
SM 2540 C	**Total Diss. Solids**	1050	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.192	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	92.2	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 14:42	D2
EPA 300.0	**Fluoride**	1.39	mg/L	0.10	0.02		W324304	AEW	06/13/13 14:31	
EPA 300.0	**Sulfate as SO4**	325	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 14:42	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13004**
SVL Sample ID: **W3F0043-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 16:00
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:51	
EPA 353.2	**Nitrate/Nitrite as N**	6.97	mg/L	0.100	0.020	2	W324340	ARP	06/17/13 15:49	D2
SM 2320B/2310B	**Bicarbonate**	765	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:26	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:26	
SM 2320B/2310B	**Total Alkalinity**	765	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:26	
SM 2540 C	**Total Diss. Solids**	1100	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.550	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	65.8	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 15:04	D2
EPA 300.0	**Fluoride**	2.43	mg/L	0.10	0.02		W324304	AEW	06/13/13 14:53	
EPA 300.0	**Sulfate as SO4**	181	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 15:04	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13005**
SVL Sample ID: **W3F0043-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 16:40
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	1.40	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:53	
EPA 353.2	**Nitrate/Nitrite as N**	2.82	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:14	
SM 2320B/2310B	**Bicarbonate**	740	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:40	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:40	
SM 2320B/2310B	**Total Alkalinity**	740	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 09:40	
SM 2540 C	**Total Diss. Solids**	986	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.421	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	31.0	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 15:26	D2
EPA 300.0	**Fluoride**	3.22	mg/L	0.10	0.02		W324304	AEW	06/13/13 15:15	
EPA 300.0	**Sulfate as SO4**	131	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 15:26	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13006**
SVL Sample ID: **W3F0043-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 17:40
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:54	
EPA 353.2	**Nitrate/Nitrite as N**	3.67	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:16	
SM 2320B/2310B	**Bicarbonate**	452	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:01	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:01	
SM 2320B/2310B	**Total Alkalinity**	452	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:01	
SM 2540 C	**Total Diss. Solids**	632	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.098	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	16.8	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 16:09	D2
EPA 300.0	**Fluoride**	0.38	mg/L	0.10	0.02		W324304	AEW	06/13/13 15:58	
EPA 300.0	**Sulfate as SO4**	89.2	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 16:09	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13007**
SVL Sample ID: **W3F0043-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 30-May-13 17:50
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 11:55	
EPA 353.2	**Nitrate/Nitrite as N**	0.059	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:17	
SM 2320B/2310B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:12	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:12	
SM 2320B/2310B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:12	
SM 2540 C	**Total Diss. Solids**	22	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	Phosphorus	< 0.010	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	Chloride	< 0.20	mg/L	0.20	0.06		W324304	AEW	06/13/13 16:20	
EPA 300.0	Fluoride	< 0.10	mg/L	0.10	0.02		W324304	AEW	06/13/13 16:20	
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.07		W324304	AEW	06/13/13 16:20	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13008**
SVL Sample ID: **W3F0043-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 09:25
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:02	
EPA 353.2	**Nitrate/Nitrite as N**	3.71	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:19	
SM 2320B/2310B	**Bicarbonate**	486	mg/L as CaCO3	1.0			W324147	DKS	06/12/13 10:20	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324147	DKS	06/12/13 10:20	
SM 2320B/2310B	**Total Alkalinity**	486	mg/L as CaCO3	1.0			W324147	DKS	06/12/13 10:20	
SM 2540 C	**Total Diss. Solids**	723	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.104	mg/L	0.010	0.005		W325058	SM	06/17/13 15:55	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	24.3	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 16:42	D2
EPA 300.0	**Fluoride**	0.43	mg/L	0.10	0.02		W324304	AEW	06/13/13 16:31	
EPA 300.0	**Sulfate as SO4**	125	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 16:42	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13009**
SVL Sample ID: **W3F0043-09 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 10:00
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:03	
EPA 353.2	**Nitrate/Nitrite as N**	4.33	mg/L	0.100	0.020	2	W324340	ARP	06/17/13 11:55	D2,M3
SM 2320B/2310B	**Bicarbonate**	612	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:17	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:17	
SM 2320B/2310B	**Total Alkalinity**	612	mg/L as CaCO3	1.0			W323177	DKS	06/07/13 10:17	
SM 2540 C	**Total Diss. Solids**	1040	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	2.16	mg/L	0.200	0.094	20	W325058	SM	06/17/13 15:55	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	99.0	mg/L	5.00	1.52	25	W324304	AEW	06/13/13 17:04	D2
EPA 300.0	**Fluoride**	1.92	mg/L	0.10	0.02		W324304	AEW	06/13/13 16:53	
EPA 300.0	**Sulfate as SO4**	179	mg/L	7.50	1.65	25	W324304	AEW	06/13/13 17:04	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0043**
Reported: 26-Jun-13 08:18

Client Sample ID: **13010**
SVL Sample ID: **W3F0043-10 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 10:30
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.190	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:05	
EPA 353.2	**Nitrate/Nitrite as N**	0.261	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:21	
SM 2320B/2310B	**Bicarbonate**	1080	mg/L as CaCO3	1.0			W324155	DKS	06/12/13 12:53	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324155	DKS	06/12/13 12:53	
SM 2320B/2310B	**Total Alkalinity**	1080	mg/L as CaCO3	1.0			W324155	DKS	06/12/13 12:53	
SM 2540 C	**Total Diss. Solids**	1560	mg/L	40			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	1.60	mg/L	0.200	0.094	20	W325058	SM	06/17/13 15:55	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	166	mg/L	10.0	3.05	50	W324304	AEW	06/13/13 17:26	D2
EPA 300.0	**Fluoride**	2.78	mg/L	0.50	0.08	5	W324304	AEW	06/13/13 17:15	D1
EPA 300.0	**Sulfate as SO4**	228	mg/L	1.50	0.33	5	W324304	AEW	06/13/13 17:15	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0045 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W323147-MS1	13011S	Matrix Spike
W323147-MSD1	13011SD	Matrix Spike Duplicate
W323158-MS	13012S	Matrix Spike
W323158-MSD	13012SD	Matrix Spike Duplicate
W3F0045-01	13011	
W3F0045-02	13012	
W3F0045-03	13013	
W3F0045-04	13014	
W3F0045-05	13015	
W3F0045-06	13016	
DUP W3F0045-07	13018	
W3F0045-08	13019	
W3F0045-09	13020	
W3F0045-10	13021	

Were ICP interelement corrections applied? Yes/No Yes

Were ICP background corrections applied? Yes/No Yes

If yes - were raw data generated before applications of background corrections? Yes/No No

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 06/27/2013 Title: TECHNICAL DIRECTOR

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0045 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W3F0045-11	13022	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 06/27/2013 Title: TECHNICAL DIRECTOR

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-01 **Client ID:** 13011

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1410000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	143000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	255000	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	660	ug/L			P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	7.3	ug/L	J		P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	21400	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	1.3	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	81800	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	6.6	ug/L	J		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-02 **Client ID:** 13012

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	744000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	146000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	92100	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	2.3	ug/L	J		P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	6380	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	3.0	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	27900	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	3.3	ug/L	J		P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0045 Method Type:

Sample ID: W3F0045-03 Client ID: 13013

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/4/2013 Level: LOW

% Solids: Total/Dissolved: Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	310000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	94000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	18400	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	2300	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	3.1	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	25200	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	7.7	ug/L			P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-04 **Client ID:** 13014

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	557000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	119000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	63100	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	2.7	ug/L	J		P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	4940	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	1.5	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	22700	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	3.0	ug/L	J		P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-05 **Client ID:** 13015

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	492000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	109000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	53200	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	4430	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	1.7	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	19000	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	3.5	ug/L	J		P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	6.1	ug/L	J		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-06 **Client ID:** 13016

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	433000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	105000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	41400	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	2330	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	3.0	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	8240	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	2.0	ug/L	J		P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-07 **Client ID:** 13018

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	456000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	115000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	41200	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	2.0	ug/L	J		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	32.8	ug/L			P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	2400	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	2.3	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	14300	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	403	ug/L			P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	4.8	ug/L	J		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-08 **Client ID:** 13019

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	460000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	116000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	41600	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	1.8	ug/L	J		P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	33.1	ug/L			P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	2410	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	2.2	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	14500	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	410	ug/L			P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	4.6	ug/L	J		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0045 Method Type:

Sample ID: W3F0045-09 Client ID: 13020

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/4/2013 Level: LOW

% Solids: Total/Dissolved: Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	884000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	137000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	132000	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	592	ug/L			P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	108	ug/L			P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	26500	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	308	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	146000	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	5.2	ug/L			P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0045 **Method Type:**

Sample ID: W3F0045-10 **Client ID:** 13021

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1170000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	4.6	ug/L			P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	161000	ug/L	J		P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	186000	ug/L	J		P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	721	ug/L			P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	26.3	ug/L			P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	18500	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	21.0	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	128000	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	5.3	ug/L			P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	19.6	ug/L			P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0045 Method Type:

Sample ID: W3F0045-11 Client ID: 13022

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/4/2013 Level: LOW

% Solids: Total/Dissolved: Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1420000	ug/L			P	128	Optima A	13168A-W323147
7440-43-9	Cadmium	3070	ug/L			P	0.70	Optima A	13168A-W323147
7440-70-2	Calcium	316000	ug/L J			P	15.0	Optima A	13168A-W323147
7439-95-4	Magnesium	154000	ug/L J			P	22.0	Optima A	13168A-W323147
7439-96-5	Manganese	51.7	ug/L			P	1.4	Optima A	13168A-W323147
7439-98-7	Molybdenum	140	ug/L			P	1.8	Optima A	13168A-W323147
7440-09-7	Potassium	60800	ug/L			P	140	Optima A	13168A-W323147
7782-49-2	Selenium	850	ug/L J			MS	0.26	AGILENT 7700 ICPMS	13F24j00
7440-23-5	Sodium	269000	ug/L			P	110	Optima A	13168A-W323147
7440-62-2	Vanadium	49.3	ug/L			P	1.5	Optima A	13168A-W323147
7440-66-6	Zinc	6020	ug/L			P	2.5	Optima A	13168A-W323147

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13011	W3F0045-01	Ground Water	31-May-13 13:05	DH	04-Jun-2013
13012	W3F0045-02	Ground Water	31-May-13 13:45	DH	04-Jun-2013
13013	W3F0045-03	Ground Water	31-May-13 14:45	DH	04-Jun-2013
13014	W3F0045-04	Ground Water	31-May-13 15:15	DH	04-Jun-2013
13015	W3F0045-05	Ground Water	31-May-13 15:40	DH	04-Jun-2013
13016	W3F0045-06	Ground Water	31-May-13 16:25	DH	04-Jun-2013
13018	W3F0045-07	Ground Water	31-May-13 17:45	DH	04-Jun-2013
13019	W3F0045-08	Ground Water	31-May-13 16:15	DH	04-Jun-2013
13020	W3F0045-09	Ground Water	31-May-13 18:50	DH	04-Jun-2013
13021	W3F0045-10	Ground Water	01-Jun-13 09:45	DH	04-Jun-2013
13022	W3F0045-11	Ground Water	01-Jun-13 16:15	DH	04-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13011**
SVL Sample ID: **W3F0045-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 13:05
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.400	mg/L	0.030	0.014		W324296	RHW	06/19/13 11:53	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	mg/L	0.050	0.010		W324342	ARP	06/17/13 09:52	
SM 2320B/2310B	**Bicarbonate**	1040	mg/L as CaCO3	1.0			W323181	DKS	06/12/13 12:06	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/12/13 12:06	
SM 2320B/2310B	**Total Alkalinity**	1040	mg/L as CaCO3	1.0			W323181	DKS	06/12/13 12:06	
SM 2540 C	**Total Diss. Solids**	1600	mg/L	40			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.789	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	62.0	mg/L	10.0	3.05	50	W325118	AEW	06/18/13 20:47	D2
EPA 300.0	Fluoride	< 0.50	mg/L	0.50	0.08	5	W325118	AEW	06/18/13 20:35	D1
EPA 300.0	**Sulfate as SO4**	429	mg/L	15.0	3.30	50	W325118	AEW	06/18/13 20:47	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13012**
SVL Sample ID: **W3F0045-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 13:45
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 11:54	
EPA 353.2	**Nitrate/Nitrite as N**	3.22	mg/L	0.050	0.010		W324342	ARP	06/17/13 09:54	
SM 2320B/2310B	**Bicarbonate**	623	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:10	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:10	
SM 2320B/2310B	**Total Alkalinity**	623	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:10	
SM 2540 C	**Total Diss. Solids**	807	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.112	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	39.7	mg/L	5.00	1.52	25	W325118	AEW	06/18/13 21:11	D2,M3
EPA 300.0	**Fluoride**	0.15	mg/L	0.10	0.02		W325118	AEW	06/18/13 20:59	M1
EPA 300.0	**Sulfate as SO4**	84.2	mg/L	7.50	1.65	25	W325118	AEW	06/18/13 21:11	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13013**
SVL Sample ID: **W3F0045-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 14:45
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 11:55	
EPA 353.2	**Nitrate/Nitrite as N**	17.1	mg/L	0.250	0.050	5	W324342	ARP	06/17/13 10:18	D2
SM 2320B/2310B	**Bicarbonate**	208	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:25	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:25	
SM 2320B/2310B	**Total Alkalinity**	208	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:25	
SM 2540 C	**Total Diss. Solids**	404	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.087	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	22.1	mg/L	2.00	0.61	10	W325118	AEW	06/18/13 23:11	D2
EPA 300.0	**Fluoride**	0.41	mg/L	0.10	0.02		W325118	AEW	06/18/13 22:59	
EPA 300.0	**Sulfate as SO4**	49.0	mg/L	0.30	0.07		W325118	AEW	06/18/13 22:59	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13014**
SVL Sample ID: **W3F0045-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 15:15
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 11:57	
EPA 353.2	**Nitrate/Nitrite as N**	3.95	mg/L	0.050	0.010		W324342	ARP	06/17/13 09:56	
SM 2320B/2310B	**Bicarbonate**	450	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:32	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:32	
SM 2320B/2310B	**Total Alkalinity**	450	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:32	
SM 2540 C	**Total Diss. Solids**	620	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.073	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	16.5	mg/L	5.00	1.52	25	W325118	AEW	06/18/13 23:35	D2
EPA 300.0	**Fluoride**	0.32	mg/L	0.10	0.02		W325118	AEW	06/18/13 23:23	
EPA 300.0	**Sulfate as SO4**	92.6	mg/L	7.50	1.65	25	W325118	AEW	06/18/13 23:35	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13015**
SVL Sample ID: **W3F0045-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 15:40
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 11:58	
EPA 353.2	**Nitrate/Nitrite as N**	4.78	mg/L	0.050	0.010		W324342	ARP	06/17/13 09:58	
SM 2320B/2310B	**Bicarbonate**	397	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:45	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:45	
SM 2320B/2310B	**Total Alkalinity**	397	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:45	
SM 2540 C	**Total Diss. Solids**	556	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.144	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	15.2	mg/L	5.00	1.52	25	W325118	AEW	06/18/13 23:59	D2
EPA 300.0	**Fluoride**	0.31	mg/L	0.10	0.02		W325118	AEW	06/18/13 23:47	
EPA 300.0	**Sulfate as SO4**	75.8	mg/L	7.50	1.65	25	W325118	AEW	06/18/13 23:59	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13016**
SVL Sample ID: **W3F0045-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 16:25
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 11:59	
EPA 353.2	**Nitrate/Nitrite as N**	1.36	mg/L	0.050	0.010		W324342	ARP	06/17/13 09:59	
SM 2320B/2310B	**Bicarbonate**	380	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:59	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:59	
SM 2320B/2310B	**Total Alkalinity**	380	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 13:59	
SM 2540 C	**Total Diss. Solids**	443	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.032	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	11.1	mg/L	0.20	0.06		W325118	AEW	06/19/13 00:12	
EPA 300.0	**Fluoride**	0.32	mg/L	0.10	0.02		W325118	AEW	06/19/13 00:12	
EPA 300.0	**Sulfate as SO4**	41.4	mg/L	0.30	0.07		W325118	AEW	06/19/13 00:12	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13018**
SVL Sample ID: **W3F0045-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 17:45
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 12:01	
EPA 353.2	**Nitrate/Nitrite as N**	2.48	mg/L	0.050	0.010		W324342	ARP	06/17/13 10:01	
SM 2320B/2310B	**Bicarbonate**	397	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:08	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:08	
SM 2320B/2310B	**Total Alkalinity**	397	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:08	
SM 2540 C	**Total Diss. Solids**	477	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.160	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	14.6	mg/L	5.00	1.52	25	W325118	AEW	06/19/13 01:12	D2
EPA 300.0	**Fluoride**	0.33	mg/L	0.10	0.02		W325118	AEW	06/19/13 01:00	
EPA 300.0	**Sulfate as SO4**	42.1	mg/L	0.30	0.07		W325118	AEW	06/19/13 01:00	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13019**
SVL Sample ID: **W3F0045-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 16:15
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 12:02	
EPA 353.2	**Nitrate/Nitrite as N**	2.67	mg/L	0.050	0.010		W324342	ARP	06/17/13 10:11	
SM 2320B/2310B	**Bicarbonate**	399	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:17	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:17	
SM 2320B/2310B	**Total Alkalinity**	399	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:17	
SM 2540 C	**Total Diss. Solids**	476	mg/L	10			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.786	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	14.9	mg/L	5.00	1.52	25	W325118	AEW	06/19/13 12:42	D2
EPA 300.0	**Fluoride**	0.32	mg/L	0.10	0.02		W325118	AEW	06/19/13 12:30	
EPA 300.0	**Sulfate as SO4**	41.4	mg/L	0.30	0.07		W325118	AEW	06/19/13 12:30	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13020**
SVL Sample ID: **W3F0045-09 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-May-13 18:50
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.580	mg/L	0.030	0.014		W324296	RHW	06/19/13 12:03	
EPA 353.2	**Nitrate/Nitrite as N**	4.23	mg/L	0.100	0.020	2	W324342	ARP	06/17/13 10:12	D2
SM 2320B/2310B	**Bicarbonate**	509	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:28	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:28	
SM 2320B/2310B	**Total Alkalinity**	509	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:28	
SM 2540 C	**Total Diss. Solids**	1340	mg/L	40			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.518	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	234	mg/L	10.0	3.05	50	W325118	AEW	06/19/13 13:06	D2
EPA 300.0	**Fluoride**	1.80	mg/L	0.50	0.08	5	W325118	AEW	06/19/13 12:54	D1
EPA 300.0	**Sulfate as SO4**	351	mg/L	15.0	3.30	50	W325118	AEW	06/19/13 13:06	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13021**
SVL Sample ID: **W3F0045-10 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 01-Jun-13 09:45
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 12:10	
EPA 353.2	**Nitrate/Nitrite as N**	0.683	mg/L	0.050	0.010		W324342	ARP	06/17/13 10:13	
SM 2320B/2310B	**Bicarbonate**	476	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:40	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:40	
SM 2320B/2310B	**Total Alkalinity**	476	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:40	
SM 2540 C	**Total Diss. Solids**	1630	mg/L	40			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	0.603	mg/L	0.010	0.005		W324383	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	239	mg/L	10.0	3.05	50	W325118	AEW	06/19/13 13:30	D2,M3
EPA 300.0	**Fluoride**	1.16	mg/L	0.50	0.08	5	W325118	AEW	06/19/13 13:18	D1
EPA 300.0	**Sulfate as SO4**	590	mg/L	15.0	3.30	50	W325118	AEW	06/19/13 13:30	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0045**
Reported: 27-Jun-13 11:44

Client Sample ID: **13022**
SVL Sample ID: **W3F0045-11 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 01-Jun-13 16:15
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324296	RHW	06/19/13 12:11	
EPA 353.2	**Nitrate/Nitrite as N**	12.2	mg/L	0.250	0.050	5	W324342	ARP	06/17/13 10:15	D2,M3
SM 2320B/2310B	**Bicarbonate**	388	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:52	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:52	
SM 2320B/2310B	**Total Alkalinity**	388	mg/L as CaCO3	1.0			W323181	DKS	06/05/13 14:52	
SM 2540 C	**Total Diss. Solids**	2620	mg/L	40			W323053	JMS	06/05/13 12:52	
SM 4500-P-E	**Phosphorus**	7.93	mg/L	0.200	0.094	20	W324383	SM	06/14/13 14:26	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	458	mg/L	10.0	3.05	50	W325118	AEW	06/19/13 01:36	D2
EPA 300.0	**Fluoride**	4.74	mg/L	0.50	0.08	5	W325118	AEW	06/19/13 01:24	D1
EPA 300.0	**Sulfate as SO4**	958	mg/L	15.0	3.30	50	W325118	AEW	06/19/13 01:36	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0046 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W323148-MS1	13023S	Matrix Spike
W323148-MSD1	13023SD	Matrix Spike Duplicate
W324294-MS	13023S	Matrix Spike
W324294-MSD	13023SD	Matrix Spike Duplicate
W3F0046-01	13023	
W3F0046-02	13024	
W3F0046-03	13025	
W3F0046-04	13026	
W3F0046-05	13027	
W3F0046-06	13028	
W3F0046-07	13029	
W3F0046-08	13030	
W3F0046-09	13031	
W3F0046-10	13032	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 06/26/2013 Title: TECHNICAL DIRECTOR

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-01 **Client ID:** 13023

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1440000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	2200	ug/L			P	0.70	Optima A	W323148
7440-70-2	Calcium	319000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	156000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	7.1	ug/L			P	1.4	Optima A	W323148
7439-98-7	Molybdenum	101	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	52000	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	832	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	292000	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	59.5	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	3120	ug/L			P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JS1 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-02 **Client ID:** 13024

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1190000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323148
7440-70-2	Calcium	237000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	145000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	7.5	ug/L			P	1.4	Optima A	W323148
7439-98-7	Molybdenum	96.1	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	38700	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	164	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	220000	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	4.8	ug/L	J		P	1.5	Optima A	W323148
7440-66-6	Zinc	6.1	ug/L	J		P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-03 **Client ID:** 13025

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	905000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	4.8	ug/L			P	0.70	Optima A	W323148
7440-70-2	Calcium	197000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	100000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323148
7439-98-7	Molybdenum	118	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	35000	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	254	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	153000	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	12.7	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	10.7	ug/L			P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-04 **Client ID:** 13026

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	489000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323148
7440-70-2	Calcium	116000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	48200	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323148
7439-98-7	Molybdenum	39.6	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	3560	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	4.9	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	23200	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	133	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-05 **Client ID:** 13027

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	892000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	7.6	ug/L			P	0.70	Optima A	W323148
7440-70-2	Calcium	175000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	110000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323148
7439-98-7	Molybdenum	41.1	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	16500	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	134	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	73200	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	6.3	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	69.4	ug/L			P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-06 **Client ID:** 13028

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	804000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	270	ug/L			P	0.70	Optima A	W323148
7440-70-2	Calcium	145000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	107000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	266	ug/L			P	1.4	Optima A	W323148
7439-98-7	Molybdenum	228	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	26000	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	266	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	50600	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	79.8	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	2000	ug/L			P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/31/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-07 **Client ID:** 13029

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1450000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323148
7440-70-2	Calcium	54900	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	318000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	101	ug/L			P	1.4	Optima A	W323148
7439-98-7	Molybdenum	2.6	ug/L	J		P	1.8	Optima A	W323148
7440-09-7	Potassium	22200	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	0.36	ug/L	J	E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	50500	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W323148
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-08 **Client ID:** 13030

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1120000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323148
7440-70-2	Calcium	111000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	206000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	487	ug/L			P	1.4	Optima A	W323148
7439-98-7	Molybdenum	5.8	ug/L	J		P	1.8	Optima A	W323148
7440-09-7	Potassium	16400	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	23.0	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	54000	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	1.8	ug/L	J		P	1.5	Optima A	W323148
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JGI 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-09 **Client ID:** 13031

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	955000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323148
7440-70-2	Calcium	171000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	128000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323148
7439-98-7	Molybdenum	57.6	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	20700	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	258	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	82000	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	5.6	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	6.4	ug/L	J		P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JS 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0046 **Method Type:**

Sample ID: W3F0046-10 **Client ID:** 13032

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/4/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	975000	ug/L			P	128	Optima A	W323148
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W323148
7440-70-2	Calcium	180000	ug/L			P	15.0	Optima A	W323148
7439-95-4	Magnesium	127000	ug/L			P	22.0	Optima A	W323148
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W323148
7439-98-7	Molybdenum	53.2	ug/L			P	1.8	Optima A	W323148
7440-09-7	Potassium	19200	ug/L			P	140	Optima A	W323148
7782-49-2	Selenium	234	ug/L		E J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	80700	ug/L			P	110	Optima A	W323148
7440-62-2	Vanadium	5.3	ug/L			P	1.5	Optima A	W323148
7440-66-6	Zinc	8.2	ug/L	J		P	2.5	Optima A	W323148

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13023	W3F0046-01	Ground Water	01-Jun-13 17:00	DH	04-Jun-2013
13024	W3F0046-02	Ground Water	01-Jun-13 18:10	DH	04-Jun-2013
13025	W3F0046-03	Ground Water	01-Jun-13 18:35	DH	04-Jun-2013
13026	W3F0046-04	Ground Water	02-Jun-13 10:05	DH	04-Jun-2013
13027	W3F0046-05	Ground Water	02-Jun-13 12:35	DH	04-Jun-2013
13028	W3F0046-06	Ground Water	02-Jun-13 13:40	DH	04-Jun-2013
13029	W3F0046-07	Ground Water	02-Jun-13 16:45	DH	04-Jun-2013
13030	W3F0046-08	Ground Water	02-Jun-13 17:45	DH	04-Jun-2013
13031	W3F0046-09	Ground Water	03-Jun-13 10:05	DH	04-Jun-2013
13032	W3F0046-10	Ground Water	03-Jun-13 11:15	DH	04-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

45

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13023**
SVL Sample ID: **W3F0046-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 01-Jun-13 17:00
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:06	
EPA 353.2	**Nitrate/Nitrite as N**	10.5	mg/L	0.250	0.050	5	W324340	ARP	06/17/13 11:54	D2
SM 2320B/2310B	**Bicarbonate**	396	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:08	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:08	
SM 2320B/2310B	**Total Alkalinity**	396	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:08	
SM 2540 C	**Total Diss. Solids**	2910	mg/L	40			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	13.1	mg/L	0.200	0.094	20	W324382	SM	06/14/13 14:26	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	501	mg/L	10.0	3.05	50	W325119	AEW	06/18/13 13:52	D2,M3
EPA 300.0	**Fluoride**	4.30 J-	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 13:40	D1,M2
EPA 300.0	**Sulfate as SO4**	1010	mg/L	15.0	3.30	50	W325119	AEW	06/18/13 13:52	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JSI 10/3/2013

46

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13024**
SVL Sample ID: **W3F0046-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 01-Jun-13 18:10
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:07	
EPA 353.2	**Nitrate/Nitrite as N**	5.51	mg/L	0.100	0.020	2	W324340	ARP	06/17/13 11:57	D2
SM 2320B/2310B	**Bicarbonate**	395	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:18	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:18	
SM 2320B/2310B	**Total Alkalinity**	395	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:18	
SM 2540 C	**Total Diss. Solids**	2210	mg/L	40			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	4.29	mg/L	0.200	0.094	20	W324382	SM	06/14/13 14:26	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	297	mg/L	10.0	3.05	50	W325119	AEW	06/18/13 15:51	D2
EPA 300.0	**Fluoride**	2.90	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 15:39	D1
EPA 300.0	**Sulfate as SO4**	864	mg/L	15.0	3.30	50	W325119	AEW	06/18/13 15:51	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JF 10/21/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13025**
SVL Sample ID: **W3F0046-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 01-Jun-13 18:35
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.035	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:09	
EPA 353.2	**Nitrate/Nitrite as N**	6.46	mg/L	0.100	0.020	2	W324340	ARP	06/17/13 11:58	D2
SM 2320B/2310B	**Bicarbonate**	342	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:29	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:29	
SM 2320B/2310B	**Total Alkalinity**	342	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:29	
SM 2540 C	**Total Diss. Solids**	1620	mg/L	40			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	4.80	mg/L	0.050	0.024	5	W324382	SM	06/14/13 14:26	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	209	mg/L	10.0	3.05	50	W325119	AEW	06/18/13 16:17	D2
EPA 300.0	**Fluoride**	3.59	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 16:03	D1
EPA 300.0	**Sulfate as SO4**	592	mg/L	15.0	3.30	50	W325119	AEW	06/18/13 16:17	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JSl 10/3/2013

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

Work order Report Page 4 of 14

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13026**
SVL Sample ID: **W3F0046-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Jun-13 10:05
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:10	
EPA 353.2	**Nitrate/Nitrite as N**	3.05	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:33	
SM 2320B/2310B	**Bicarbonate**	394	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:38	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:38	
SM 2320B/2310B	**Total Alkalinity**	394	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:38	
SM 2540 C	**Total Diss. Solids**	591	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.128	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	38.2	mg/L	5.00	1.52	25	W325119	AEW	06/18/13 16:46	D2
EPA 300.0	**Fluoride**	0.40	mg/L	0.10	0.02		W325119	AEW	06/18/13 16:34	
EPA 300.0	**Sulfate as SO4**	68.4	mg/L	7.50	1.65	25	W325119	AEW	06/18/13 16:46	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JSI 10/3/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13027**
SVL Sample ID: **W3F0046-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Jun-13 12:35
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.033	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:11	
EPA 353.2	**Nitrate/Nitrite as N**	10.5	mg/L	0.150	0.030	3	W324340	ARP	06/17/13 12:17	D2
SM 2320B/2310B	**Bicarbonate**	397	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:51	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:51	
SM 2320B/2310B	**Total Alkalinity**	397	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 12:51	
SM 2540 C	**Total Diss. Solids**	1300	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.184	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	95.6	mg/L	10.0	3.05	50	W325119	AEW	06/18/13 17:10	D2
EPA 300.0	**Fluoride**	2.00	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 16:58	D1
EPA 300.0	**Sulfate as SO4**	439	mg/L	15.0	3.30	50	W325119	AEW	06/18/13 17:10	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

JS 10/3/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13028**
SVL Sample ID: **W3F0046-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Jun-13 13:40
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	1.02	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:13	
EPA 353.2	**Nitrate/Nitrite as N**	4.41	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:36	
SM 2320B/2310B	**Bicarbonate**	717	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:01	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:01	
SM 2320B/2310B	**Total Alkalinity**	717	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:01	
SM 2540 C	**Total Diss. Solids**	1000	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.355	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	36.6	mg/L	5.00	1.52	25	W325119	AEW	06/18/13 17:58	D2
EPA 300.0	**Fluoride**	4.95	mg/L	0.10	0.02		W325119	AEW	06/18/13 17:46	
EPA 300.0	**Sulfate as SO4**	137	mg/L	7.50	1.65	25	W325119	AEW	06/18/13 17:58	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

10/31/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13029**
SVL Sample ID: **W3F0046-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Jun-13 16:45
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.788	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:14	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:37	
SM 2320B/2310B	**Bicarbonate**	1380	mg/L as CaCO3	1.0			W324117	DKS	06/12/13 13:39	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324117	DKS	06/12/13 13:39	
SM 2320B/2310B	**Total Alkalinity**	1380	mg/L as CaCO3	1.0			W324117	DKS	06/12/13 13:39	
SM 2540 C	**Total Diss. Solids**	1420	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.906	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	21.5	mg/L	1.00	0.30	5	W325119	AEW	06/19/13 11:42	D2
EPA 300.0	Fluoride	< 0.50	mg/L	0.50	0.08	5	W325119	AEW	06/19/13 11:42	D1
EPA 300.0	**Sulfate as SO4**	80.5	mg/L	1.50	0.33	5	W325119	AEW	06/19/13 11:42	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

JF 10/31/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

52

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13030**
SVL Sample ID: **W3F0046-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Jun-13 17:45
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.160	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:21	M2
EPA 353.2	**Nitrate/Nitrite as N**	0.079	mg/L	0.050	0.010		W324340	ARP	06/17/13 11:38	
SM 2320B/2310B	**Bicarbonate**	966	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:32	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:32	
SM 2320B/2310B	**Total Alkalinity**	966	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:32	
SM 2540 C	**Total Diss. Solids**	1240	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.192	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	51.1	mg/L	1.00	0.30	5	W325119	AEW	06/18/13 18:35	D2
EPA 300.0	**Fluoride**	1.24	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 18:35	D1
EPA 300.0	**Sulfate as SO4**	157	mg/L	1.50	0.33	5	W325119	AEW	06/18/13 18:35	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JSI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13031**
SVL Sample ID: **W3F0046-09 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Jun-13 10:05
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.093	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:22	
EPA 353.2	**Nitrate/Nitrite as N**	7.35	mg/L	0.250	0.050	5	W324340	ARP	06/17/13 11:40	D2
SM 2320B/2310B	**Bicarbonate**	462	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:52	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:52	
SM 2320B/2310B	**Total Alkalinity**	462	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 13:52	
SM 2540 C	**Total Diss. Solids**	1480	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.201	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	121	mg/L	10.0	3.05	50	W325119	AEW	06/18/13 19:11	D2
EPA 300.0	**Fluoride**	3.27	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 18:59	D1
EPA 300.0	**Sulfate as SO4**	499	mg/L	15.0	3.30	50	W325119	AEW	06/18/13 19:11	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

10/2/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

54

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0046**
Reported: 26-Jun-13 15:06

Client Sample ID: **13032**
SVL Sample ID: **W3F0046-10 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Jun-13 11:15
Received: 04-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.037	mg/L	0.030	0.014		W324295	RHW	06/18/13 12:23	
EPA 353.2	**Nitrate/Nitrite as N**	7.18	mg/L	0.100	0.020	2	W324340	ARP	06/17/13 12:01	D2
SM 2320B/2310B	**Bicarbonate**	469	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 14:04	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 14:04	
SM 2320B/2310B	**Total Alkalinity**	469	mg/L as CaCO3	1.0			W323176	DKS	06/06/13 14:04	
SM 2540 C	**Total Diss. Solids**	1410	mg/L	10			W323052	JDM	06/05/13 11:30	
SM 4500-P-E	**Phosphorus**	0.182	mg/L	0.010	0.005		W324382	SM	06/14/13 14:26	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	101	mg/L	10.0	3.05	50	W325119	AEW	06/18/13 19:35	D2
EPA 300.0	**Fluoride**	3.09	mg/L	0.50	0.08	5	W325119	AEW	06/18/13 19:23	D1
EPA 300.0	**Sulfate as SO4**	433	mg/L	15.0	3.30	50	W325119	AEW	06/18/13 19:35	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JSI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13033	W3F0207-01	Ground Water	03-Jun-13 11:45	DH	11-Jun-2013
13035	W3F0207-02	Ground Water	03-Jun-13 12:35	DH	11-Jun-2013
13036	W3F0207-03	Ground Water	03-Jun-13 12:55	DH	11-Jun-2013
13037	W3F0207-04	Ground Water	03-Jun-13 13:15	DH	11-Jun-2013
13039	W3F0207-05	Ground Water	04-Jun-13 09:30	DH	11-Jun-2013
13040	W3F0207-06	Ground Water	04-Jun-13 12:00	DH	11-Jun-2013
13041	W3F0207-07	Ground Water	04-Jun-13 13:00	DH	11-Jun-2013
13042	W3F0207-08	Ground Water	04-Jun-13 14:40	DH	11-Jun-2013
13043	W3F0207-09	Ground Water	04-Jun-13 16:00	DH	11-Jun-2013
13045	W3F0207-10	Ground Water	04-Jun-13 16:55	DH	11-Jun-2013
13046	W3F0207-11	Ground Water	04-Jun-13 17:50	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C).
The guidelines do not pertain to nitric-preserved metals.

Default Cooler (Received Temperature: 6.2°C)

Labnumber	Container	Client ID	Labnumber	Container	Client ID
W3F0207-01 A	Raw HDPE	13033	W3F0207-01 B	Raw HDPE	13033
W3F0207-01 C	Sulfuric HDPE	13033	W3F0207-01 D	Nitric HDPE	13033
W3F0207-02 A	Raw HDPE	13035	W3F0207-02 B	Raw HDPE	13035
W3F0207-02 C	Sulfuric HDPE	13035	W3F0207-02 D	Nitric HDPE	13035
W3F0207-03 A	Raw HDPE	13036	W3F0207-03 B	Raw HDPE	13036
W3F0207-03 C	Sulfuric HDPE	13036	W3F0207-03 D	Nitric HDPE	13036
W3F0207-04 A	Raw HDPE	13037	W3F0207-04 B	Raw HDPE	13037
W3F0207-04 C	Sulfuric HDPE	13037	W3F0207-04 D	Nitric HDPE	13037
W3F0207-05 A	Raw HDPE	13039	W3F0207-05 B	Raw HDPE	13039
W3F0207-05 C	Sulfuric HDPE	13039	W3F0207-05 D	Nitric HDPE	13039
W3F0207-06 A	Raw HDPE	13040	W3F0207-06 B	Raw HDPE	13040
W3F0207-06 C	Sulfuric HDPE	13040	W3F0207-06 D	Nitric HDPE	13040
W3F0207-07 A	Raw HDPE	13041	W3F0207-07 B	Raw HDPE	13041
W3F0207-07 C	Sulfuric HDPE	13041	W3F0207-07 D	Nitric HDPE	13041
W3F0207-08 A	Raw HDPE	13042	W3F0207-08 B	Raw HDPE	13042
W3F0207-08 C	Sulfuric HDPE	13042	W3F0207-08 D	Nitric HDPE	13042
W3F0207-09 A	Raw HDPE	13043	W3F0207-09 B	Raw HDPE	13043
W3F0207-09 C	Sulfuric HDPE	13043	W3F0207-09 D	Nitric HDPE	13043
W3F0207-10 A	Raw HDPE	13045	W3F0207-10 B	Raw HDPE	13045
W3F0207-10 C	Sulfuric HDPE	13045	W3F0207-10 D	Nitric HDPE	13045
W3F0207-11 A	Raw HDPE	13046	W3F0207-11 B	Raw HDPE	13046
W3F0207-11 C	Sulfuric HDPE	13046	W3F0207-11 D	Nitric HDPE	13046

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13033**
SVL Sample ID: **W3F0207-01 (Ground Water)**

Sampled: 03-Jun-13 11:45
Received: 11-Jun-13
Sampled By: DH

Sample Report Page 1 of 1

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)											
EPA 6010B	**Cadmium**	3.0		µg/L	2.0	0.70		W324153	DT	06/24/13 11:28	
EPA 6010B	**Calcium**	217000		µg/L	40.0	15.0		W324153	DT	06/24/13 11:28	
EPA 6010B	**Magnesium**	136000		µg/L	60.0	22.0		W324153	DT	06/24/13 11:28	
EPA 6010B	**Manganese**	1.7	J	µg/L	4.0	1.4		W324153	DT	06/24/13 11:28	J
EPA 6010B	**Molybdenum**	52.8		µg/L	8.0	1.8		W324153	DT	06/24/13 11:28	
EPA 6010B	**Potassium**	21400		µg/L	500	140		W324153	DT	06/24/13 11:28	
EPA 6010B	**Sodium**	99500		µg/L	500	110		W324153	DT	06/24/13 11:28	
EPA 6010B	**Vanadium**	4.9		µg/L	5.0	1.5		W324153	DT	06/24/13 11:28	J
EPA 6010B	**Zinc**	89.4		µg/L	10.0	2.5		W324153	DT	06/24/13 11:28	
EPA 6020	**Selenium**	270		µg/L	2.0	0.26		W324133	KWH	07/02/13 07:41	
SM 2340B	**Hardness**	1100000		µg/L	350	128		W324153	DT	06/24/13 11:28	
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.630	J	mg/L	0.030	0.014		W325268	RHW	06/25/13 08:53	
EPA 353.2	**Nitrate/Nitrite as N**	10.5		mg/L	0.150	0.030	3	W325256	ARP	06/21/13 13:11	D2
SM 2320B/2310B	**Bicarbonate**	436		mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:41	
SM 2320B/2310B	Carbonate	< 1.0		mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:41	
SM 2320B/2310B	**Total Alkalinity**	436		mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:41	
SM 2540 C	**Total Diss. Solids**	1670	J	mg/L	40			W324069	JMS	06/12/13 11:28	H3
SM 4500-O-G	**Dissolved Oxygen**	7.7	J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.226		mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	123		mg/L	10.0	3.05	50	W326055	AEW	06/24/13 18:45	D2
EPA 300.0	**Fluoride**	2.39	J	mg/L	0.50	0.08	5	W326055	AEW	06/24/13 18:34	D1
EPA 300.0	**Sulfate as SO4**	600		mg/L	15.0	3.30	50	W326055	AEW	06/24/13 18:45	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13035**
SVL Sample ID: **W3F0207-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Jun-13 12:35
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result Q	Units	RL Q	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	< 0.70	µg/L	2.0	0.70		W324153	DT	06/24/13 11:56	U
EPA 6010B	**Calcium**	104000	µg/L	40.0	15.0		W324153	DT	06/24/13 11:56	
EPA 6010B	**Magnesium**	39800	µg/L	60.0	22.0		W324153	DT	06/24/13 11:56	
EPA 6010B	**Manganese**	< 1.4	µg/L	4.0	1.4		W324153	DT	06/24/13 11:56	U
EPA 6010B	**Molybdenum**	~~3.2~~	µg/L	8.0 U	1.8		W324153	DT	06/24/13 11:56	J
EPA 6010B	**Potassium**	9640	µg/L	500	140		W324153	DT	06/24/13 11:56	
EPA 6010B	**Sodium**	57500	µg/L	500	110		W324153	DT	06/24/13 11:56	
EPA 6010B	**Vanadium**	2.1	µg/L	5.0	1.5		W324153	DT	06/24/13 11:56	J
EPA 6010B	**Zinc**	< 2.5	µg/L	10.0	2.5		W324153	DT	06/24/13 11:56	U
EPA 6020	**Selenium**	2.7	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:04	
SM 2340B	**Hardness**	423000	µg/L	350	128		W324153	DT	06/24/13 11:56	
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	6.55	mg/L	0.150	0.070	5	W325268	RHW	06/25/13 09:09	D2
EPA 353.2	**Nitrate/Nitrite as N**	4.43	mg/L	0.050	0.010		W325256	ARP	06/21/13 12:33	
SM 2320B/2310B	**Bicarbonate**	402	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:46	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:46	
SM 2320B/2310B	**Total Alkalinity**	402	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:46	
SM 2540 C	**Total Diss. Solids**	578 J	mg/L	10			W324069	JMS	06/12/13 11:28	H3
SM 4500-O-G	**Dissolved Oxygen**	6.0 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.047	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	29.6	mg/L	5.00	1.52	25	W326055	AEW	06/24/13 19:07	D2,M3
EPA 300.0	**Fluoride**	0.24	mg/L	0.10	0.02		W326055	AEW	06/24/13 18:56	
EPA 300.0	**Sulfate as SO4**	83.0	mg/L	7.50	1.65	25	W326055	AEW	06/24/13 19:07	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

9-10-13

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13036**
SVL Sample ID: **W3F0207-03 (Ground Water)**

Sampled: 03-Jun-13 12:55
Received: 11-Jun-13
Sampled By: DH

Sample Report Page 1 of 1

Method	Analyte	Result	Q	Units	RL	Q	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)												
EPA 6010B	**Cadmium**	< 0.70		µg/L	2.0		0.70		W324153	DT	06/24/13 12:02	U
EPA 6010B	**Calcium**	103000		µg/L	40.0		15.0		W324153	DT	06/24/13 12:02	
EPA 6010B	**Magnesium**	39800		µg/L	60.0		22.0		W324153	DT	06/24/13 12:02	
EPA 6010B	**Manganese**	< 1.4		µg/L	4.0		1.4		W324153	DT	06/24/13 12:02	U
EPA 6010B	**Molybdenum**	~~3.0~~		µg/L	8.0	U	1.8		W324153	DT	06/24/13 12:02	J
EPA 6010B	**Potassium**	9520		µg/L	500		140		W324153	DT	06/24/13 12:02	
EPA 6010B	**Sodium**	56700		µg/L	500		110		W324153	DT	06/24/13 12:02	
EPA 6010B	**Vanadium**	1.9		µg/L	5.0		1.5		W324153	DT	06/24/13 12:02	J
EPA 6010B	**Zinc**	< 2.5		µg/L	10.0		2.5		W324153	DT	06/24/13 12:02	U
EPA 6020	**Selenium**	2.6		µg/L	2.0		0.26		W324133	KWH	07/02/13 08:21	
SM 2340B	**Hardness**	420000		µg/L	350		128		W324153	DT	06/24/13 12:02	
Classical Chemistry Parameters												
EPA 350.1	**Ammonia as N**	6.64		mg/L	0.150		0.070	5	W325268	RHW	06/25/13 09:11	D2
EPA 353.2	**Nitrate/Nitrite as N**	4.42		mg/L	0.050		0.010		W325256	ARP	06/21/13 12:35	
SM 2320B/2310B	**Bicarbonate**	406		mg/L as CaCO3	1.0				W324219	DKS	06/13/13 12:51	
SM 2320B/2310B	Carbonate	< 1.0		mg/L as CaCO3	1.0				W324219	DKS	06/13/13 12:51	
SM 2320B/2310B	**Total Alkalinity**	406		mg/L as CaCO3	1.0				W324219	DKS	06/13/13 12:51	
SM 2540 C	**Total Diss. Solids**	588	J	mg/L	10				W324069	JMS	06/12/13 11:28	H3
SM 4500-O-G	**Dissolved Oxygen**	6.2	J	mg/L					W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.053		mg/L	0.010		0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography												
EPA 300.0	**Chloride**	30.4		mg/L	2.00		0.61	10	W326055	AEW	06/24/13 20:56	D2
EPA 300.0	**Fluoride**	0.25		mg/L	0.10		0.02		W326055	AEW	06/24/13 20:45	
EPA 300.0	**Sulfate as SO4**	84.4		mg/L	3.00		0.66	10	W326055	AEW	06/24/13 20:56	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

9-10-13

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13037**
SVL Sample ID: **W3F0207-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Jun-13 13:15
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	< 0.70	µg/L	2.0	0.70		W324153	DT	06/24/13 12:08	U
EPA 6010B	**Calcium**	107000	µg/L	40.0	15.0		W324153	DT	06/24/13 12:08	
EPA 6010B	**Magnesium**	40700	µg/L	60.0	22.0		W324153	DT	06/24/13 12:08	
EPA 6010B	**Manganese**	22.4	µg/L	4.0	1.4		W324153	DT	06/24/13 12:08	
EPA 6010B	**Molybdenum**	414	µg/L	8.0	1.8		W324153	DT	06/24/13 12:08	
EPA 6010B	**Potassium**	6650	µg/L	500	140		W324153	DT	06/24/13 12:08	
EPA 6010B	**Sodium**	43300	µg/L	500	110		W324153	DT	06/24/13 12:08	
EPA 6010B	**Vanadium**	693	µg/L	5.0	1.5		W324153	DT	06/24/13 12:08	
EPA 6010B	**Zinc**	< 2.5	µg/L	10.0	2.5		W324153	DT	06/24/13 12:08	U
EPA 6020	**Selenium**	1.5	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:26	J
SM 2340B	**Hardness**	434000	µg/L	350	128		W324153	DT	06/24/13 12:08	
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	7.21	mg/L	0.150	0.070	5	W325268	RHW	06/25/13 09:12	D2,M3
EPA 353.2	**Nitrate/Nitrite as N**	6.65	mg/L	0.100	0.020	2	W325256	ARP	06/21/13 13:13	D2
SM 2320B/2310B	**Bicarbonate**	383	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:59	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:59	
SM 2320B/2310B	**Total Alkalinity**	383	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 12:59	
SM 2540 C	**Total Diss. Solids**	572	mg/L	10			W324069	JMS	06/12/13 11:28	H3
SM 4500-O-G	**Dissolved Oxygen**	6.5	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.559	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	24.2	mg/L	2.00	0.61	10	W326055	AEW	06/24/13 21:18	D2
EPA 300.0	**Fluoride**	0.31	mg/L	0.10	0.02		W326055	AEW	06/24/13 21:07	
EPA 300.0	**Sulfate as SO4**	83.1	mg/L	3.00	0.66	10	W326055	AEW	06/24/13 21:18	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13039**
SVL Sample ID: **W3F0207-05 (Ground Water)**

Sampled: 04-Jun-13 09:30
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	3.1	µg/L	2.0	0.70		W324153	DT	06/24/13 12:43	
EPA 6010B	**Calcium**	142000	µg/L	40.0	15.0		W324153	DT	06/24/13 12:43	
EPA 6010B	**Magnesium**	180000	µg/L	60.0	22.0		W324153	DT	06/24/13 12:43	
EPA 6010B	**Manganese**	477	µg/L	4.0	1.4		W324153	DT	06/24/13 12:43	
EPA 6010B	**Molybdenum**	16.1 J+	µg/L	8.0	1.8		W324153	DT	06/24/13 12:43	
EPA 6010B	**Potassium**	19300	µg/L	500	140		W324153	DT	06/24/13 12:43	
EPA 6010B	**Sodium**	49800	µg/L	500	110		W324153	DT	06/24/13 12:43	
EPA 6010B	**Vanadium**	< 1.5	µg/L	5.0	1.5		W324153	DT	06/24/13 12:43	U
EPA 6010B	**Zinc**	35.9	µg/L	10.0	2.5		W324153	DT	06/24/13 12:43	
EPA 6020	**Selenium**	< 0.26	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:30	U
SM 2340B	**Hardness**	1100000	µg/L	350	128		W324153	DT	06/24/13 12:43	
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.730	mg/L	0.030	0.014		W325268	RHW	06/25/13 09:04	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	mg/L	0.050	0.010		W325256	ARP	06/21/13 13:14	
SM 2320B/2310B	**Bicarbonate**	979	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:05	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:05	
SM 2320B/2310B	**Total Alkalinity**	979	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:05	
SM 2540 C	**Total Diss. Solids**	1170	mg/L	10			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	4.3 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.414	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	24.9	mg/L	1.00	0.30	5	W326055	AEW	06/24/13 21:29	D2
EPA 300.0	**Fluoride**	0.92	mg/L	0.50	0.08	5	W326055	AEW	06/24/13 21:29	D1
EPA 300.0	**Sulfate as SO4**	116	mg/L	1.50	0.33	5	W326055	AEW	06/24/13 21:29	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

9-10-13

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13040**
SVL Sample ID: **W3F0207-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Jun-13 12:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	135	µg/L	2.0	0.70		W324153	DT	06/24/13 12:49	
EPA 6010B	**Calcium**	136000	µg/L	40.0	15.0		W324153	DT	06/24/13 12:49	
EPA 6010B	**Magnesium**	128000	µg/L	60.0	22.0		W324153	DT	06/24/13 12:49	
EPA 6010B	**Manganese**	< 1.4	µg/L	4.0	1.4		W324153	DT	06/24/13 12:49	U
EPA 6010B	**Molybdenum**	101	µg/L	8.0	1.8		W324153	DT	06/24/13 12:49	
EPA 6010B	**Potassium**	19600	µg/L	500	140		W324153	DT	06/24/13 12:49	
EPA 6010B	**Sodium**	45500	µg/L	500	110		W324153	DT	06/24/13 12:49	
EPA 6010B	**Vanadium**	10.9	µg/L	5.0	1.5		W324153	DT	06/24/13 12:49	
EPA 6010B	**Zinc**	923	µg/L	10.0	2.5		W324153	DT	06/24/13 12:49	
EPA 6020	**Selenium**	160	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:35	
SM 2340B	**Hardness**	869000	µg/L	350	128		W324153	DT	06/24/13 12:49	
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:27	
EPA 353.2	**Nitrate/Nitrite as N**	3.70	mg/L	0.050	0.010		W325256	ARP	06/21/13 12:45	
SM 2320B/2310B	**Bicarbonate**	818	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:18	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:18	
SM 2320B/2310B	**Total Alkalinity**	818	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:18	
SM 2540 C	**Total Diss. Solids**	1010	mg/L	10			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	6.7 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.193	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	23.0	mg/L	5.00	1.52	25	W326055	AEW	06/24/13 22:01	D2
EPA 300.0	**Fluoride**	3.68	mg/L	0.10	0.02		W326055	AEW	06/24/13 21:50	
EPA 300.0	**Sulfate as SO4**	95.1	mg/L	7.50	1.65	25	W326055	AEW	06/24/13 22:01	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13041**
SVL Sample ID: **W3F0207-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Jun-13 13:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	757	µg/L	2.0	0.70		W324153	DT	06/24/13 12:54	
EPA 6010B	**Calcium**	276000	µg/L	40.0	15.0		W324153	DT	06/24/13 12:54	
EPA 6010B	**Magnesium**	111000	µg/L	60.0	22.0		W324153	DT	06/24/13 12:54	
EPA 6010B	**Manganese**	618	µg/L	4.0	1.4		W324153	DT	06/24/13 12:54	
EPA 6010B	**Molybdenum**	232	µg/L	8.0	1.8		W324153	DT	06/24/13 12:54	
EPA 6010B	**Potassium**	30300	µg/L	500	140		W324153	DT	06/24/13 12:54	
EPA 6010B	**Sodium**	60900	µg/L	500	110		W324153	DT	06/24/13 12:54	
EPA 6010B	**Vanadium**	42.6	µg/L	5.0	1.5		W324153	DT	06/24/13 12:54	
EPA 6010B	**Zinc**	3900	µg/L	10.0	2.5		W324153	DT	06/24/13 12:54	
EPA 6020	**Selenium**	289	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:39	
SM 2340B	**Hardness**	1150000	µg/L	350	128		W324153	DT	06/24/13 12:54	
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.372	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:28	
EPA 353.2	**Nitrate/Nitrite as N**	7.53	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 13:16	D2
SM 2320B/2310B	**Bicarbonate**	362	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:31	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:31	
SM 2320B/2310B	**Total Alkalinity**	362	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:31	
SM 2540 C	**Total Diss. Solids**	1790	mg/L	40			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	7.0 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.768	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	382	mg/L	10.0	3.05	50	W326055	AEW	06/24/13 22:45	D2
EPA 300.0	**Fluoride**	7.70	mg/L	0.50	0.08	5	W326055	AEW	06/24/13 22:34	D2
EPA 300.0	**Sulfate as SO4**	328	mg/L	15.0	3.30	50	W326055	AEW	06/24/13 22:45	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13042**
SVL Sample ID: **W3F0207-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Jun-13 14:40
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	< 0.70	µg/L	2.0	0.70		W324153	DT	06/24/13 13:00	U
EPA 6010B	**Calcium**	114000	µg/L	40.0	15.0		W324153	DT	06/24/13 13:00	
EPA 6010B	**Magnesium**	65100	µg/L	60.0	22.0		W324153	DT	06/24/13 13:00	
EPA 6010B	**Manganese**	13.2	µg/L	4.0	1.4		W324153	DT	06/24/13 13:00	
EPA 6010B	**Molybdenum**	89.7	µg/L	8.0	1.8		W324153	DT	06/24/13 13:00	
EPA 6010B	**Potassium**	7780	µg/L	500	140		W324153	DT	06/24/13 13:00	
EPA 6010B	**Sodium**	33500	µg/L	500	110		W324153	DT	06/24/13 13:00	
EPA 6010B	**Vanadium**	1.9	µg/L	5.0	1.5		W324153	DT	06/24/13 13:00	J
EPA 6010B	**Zinc**	20.9	µg/L	10.0	2.5		W324153	DT	06/24/13 13:00	
EPA 6020	**Selenium**	1.9	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:44	J
SM 2340B	**Hardness**	554000	µg/L	350	128		W324153	DT	06/24/13 13:00	
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:29	
EPA 353.2	**Nitrate/Nitrite as N**	5.87	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 13:17	D2
SM 2320B/2310B	**Bicarbonate**	387	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:38	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:38	
SM 2320B/2310B	**Total Alkalinity**	387	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:38	
SM 2540 C	**Total Diss. Solids**	683	mg/L	10			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	7.3 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.072	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	44.7	mg/L	5.00	1.52	25	W326055	AEW	06/24/13 23:07	D2
EPA 300.0	**Fluoride**	0.33	mg/L	0.10	0.02		W326055	AEW	06/24/13 22:56	
EPA 300.0	**Sulfate as SO4**	126	mg/L	7.50	1.65	25	W326055	AEW	06/24/13 23:07	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13043**
SVL Sample ID: **W3F0207-09 (Ground Water)**

Sampled: 04-Jun-13 16:00
Received: 11-Jun-13
Sampled By: DH

Sample Report Page 1 of 1

Method	Analyte	Result	Q	Units	RL	Q	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)												
EPA 6010B	**Cadmium**	< 0.70		µg/L	2.0		0.70		W324153	DT	06/24/13 13:05	U
EPA 6010B	**Calcium**	175000		µg/L	40.0		15.0		W324153	DT	06/24/13 13:05	
EPA 6010B	**Magnesium**	110000		µg/L	60.0		22.0		W324153	DT	06/24/13 13:05	
EPA 6010B	**Manganese**	< 1.4		µg/L	4.0		1.4		W324153	DT	06/24/13 13:05	U
EPA 6010B	**Molybdenum**	~~3.8~~		µg/L	8.0	U	1.8		W324153	DT	06/24/13 13:05	J
EPA 6010B	**Potassium**	9880		µg/L	500		140		W324153	DT	06/24/13 13:05	
EPA 6010B	**Sodium**	37700		µg/L	500		110		W324153	DT	06/24/13 13:05	
EPA 6010B	**Vanadium**	1.6		µg/L	5.0		1.5		W324153	DT	06/24/13 13:05	J
EPA 6010B	**Zinc**	< 2.5		µg/L	10.0		2.5		W324153	DT	06/24/13 13:05	U
EPA 6020	**Selenium**	20.0		µg/L	2.0		0.26		W324133	KWH	07/02/13 08:48	
SM 2340B	**Hardness**	891000		µg/L	350		128		W324153	DT	06/24/13 13:05	
Classical Chemistry Parameters												
EPA 350.1	Ammonia as N	< 0.030		mg/L	0.030		0.014		W325262	RHW	06/25/13 09:31	
EPA 353.2	**Nitrate/Nitrite as N**	3.96		mg/L	0.050		0.010		W325255	ARP	06/21/13 12:57	
SM 2320B/2310B	**Bicarbonate**	651		mg/L as CaCO3	1.0				W324219	DKS	06/13/13 13:42	
SM 2320B/2310B	Carbonate	< 1.0		mg/L as CaCO3	1.0				W324219	DKS	06/13/13 13:42	
SM 2320B/2310B	**Total Alkalinity**	651		mg/L as CaCO3	1.0				W324219	DKS	06/13/13 13:42	
SM 2540 C	**Total Diss. Solids**	990	J	mg/L	10				W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	6.9	J	mg/L					W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.104	J	mg/L	0.010		0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography												
EPA 300.0	**Chloride**	48.7		mg/L	5.00		1.52	25	W326055	AEW	06/24/13 23:29	D2
EPA 300.0	**Fluoride**	0.59	J	mg/L	0.10		0.02		W326055	AEW	06/24/13 23:18	
EPA 300.0	**Sulfate as SO4**	159		mg/L	7.50		1.65	25	W326055	AEW	06/24/13 23:29	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

9-10-13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13045**
SVL Sample ID: **W3F0207-10 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Jun-13 16:55
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	26.0	µg/L	2.0	0.70		W324153	DT	06/24/13 13:11	
EPA 6010B	**Calcium**	191000	µg/L	40.0	15.0		W324153	DT	06/24/13 13:11	
EPA 6010B	**Magnesium**	159000	µg/L	60.0	22.0		W324153	DT	06/24/13 13:11	
EPA 6010B	**Manganese**	< 1.4	µg/L	4.0	1.4		W324153	DT	06/24/13 13:11	U
EPA 6010B	**Molybdenum**	100	µg/L	8.0	1.8		W324153	DT	06/24/13 13:11	
EPA 6010B	**Potassium**	34500	µg/L	500	140		W324153	DT	06/24/13 13:11	
EPA 6010B	**Sodium**	109000	µg/L	500	110		W324153	DT	06/24/13 13:11	
EPA 6010B	**Vanadium**	15.4	µg/L	5.0	1.5		W324153	DT	06/24/13 13:11	
EPA 6010B	**Zinc**	410	µg/L	10.0	2.5		W324153	DT	06/24/13 13:11	
EPA 6020	**Selenium**	385	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:52	
SM 2340B	**Hardness**	1130000	µg/L	350	128		W324153	DT	06/24/13 13:11	
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:32	
EPA 353.2	**Nitrate/Nitrite as N**	7.23	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 13:24	D2
SM 2320B/2310B	**Bicarbonate**	497	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:48	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:48	
SM 2320B/2310B	**Total Alkalinity**	497	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:48	
SM 2540 C	**Total Diss. Solids**	1610	mg/L	40			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	7.7 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.360	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	131	mg/L	10.0	3.05	50	W326055	AEW	06/24/13 23:50	D2
EPA 300.0	**Fluoride**	4.12	mg/L	0.50	0.08	5	W326055	AEW	06/24/13 23:40	D1
EPA 300.0	**Sulfate as SO4**	569	mg/L	15.0	3.30	50	W326055	AEW	06/24/13 23:50	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0207**
Reported: 16-Aug-13 10:36

Client Sample ID: **13046**
SVL Sample ID: **W3F0207-11 (Ground Water)**

Sampled: 04-Jun-13 17:50
Received: 11-Jun-13
Sampled By: DH

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	**Cadmium**	< 0.70	µg/L	2.0	0.70		W324153	DT	06/24/13 13:16	U
EPA 6010B	**Calcium**	63900	µg/L	40.0	15.0		W324153	DT	06/24/13 13:16	
EPA 6010B	**Magnesium**	284000	µg/L	60.0	22.0		W324153	DT	06/24/13 13:16	
EPA 6010B	**Manganese**	159	µg/L	4.0	1.4		W324153	DT	06/24/13 13:16	
EPA 6010B	**Molybdenum**	~~29~~	µg/L	8.0 U	1.8		W324153	DT	06/24/13 13:16	J
EPA 6010B	**Potassium**	21200	µg/L	500	140		W324153	DT	06/24/13 13:16	
EPA 6010B	**Sodium**	46300	µg/L	500	110		W324153	DT	06/24/13 13:16	
EPA 6010B	**Vanadium**	< 1.5	µg/L	5.0	1.5		W324153	DT	06/24/13 13:16	U
EPA 6010B	**Zinc**	< 2.5	µg/L	10.0	2.5		W324153	DT	06/24/13 13:16	U
EPA 6020	**Selenium**	< 0.26	µg/L	2.0	0.26		W324133	KWH	07/02/13 08:57	U
SM 2340B	**Hardness**	1330000	µg/L	350	128		W324153	DT	06/24/13 13:16	
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.228 J	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:33	
EPA 353.2	Nitrate/Nitrite as N	< 0.050 UJ	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:06	
SM 2320B/2310B	**Bicarbonate**	1170	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:54	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:54	
SM 2320B/2310B	**Total Alkalinity**	1170	mg/L as CaCO3	1.0			W324219	DKS	06/13/13 13:54	
SM 2540 C	**Total Diss. Solids**	1280 J	mg/L	40			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	4.4	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.588	mg/L	0.010	0.005		W325291	SM	06/20/13 16:16	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	29.1	mg/L	1.00	0.30	5	W326055	AEW	06/25/13 00:01	D2,M3
EPA 300.0	Fluoride	< 0.50	mg/L	0.50	0.08	5	W326055	AEW	06/25/13 00:01	D1,M1
EPA 300.0	**Sulfate as SO4**	125	mg/L	1.50	0.33	5	W326055	AEW	06/25/13 00:01	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

9-05-2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0208 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324132-MS	13047S	Matrix Spike
W324132-MSD	13047SD	Matrix Spike Duplicate
W324152-MS1	13047S	Matrix Spike
W324152-MSD1	13047SD	Matrix Spike Duplicate
W3F0208-01	13047	
W3F0208-02	13048	
W3F0208-03	13049	
W3F0208-04	13050	
W3F0208-05	13051	
W3F0208-06	13052	
W3F0208-07	13053	
W3F0208-08	13054	
W3F0208-09	13055	
W3F0208-10	13056	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/05/2013 Title: TECHNICAL DIRECTOR

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0208 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W3F0208-11	13057	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/05/2013 Title: TECHNICAL DIRECTOR

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-01 **Client ID:** 13047

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1260000	ug/L		J	P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	61600	ug/L		J	P	15.0	Optima A	W324152
7439-95-4	Magnesium	269000	ug/L		J	P	22.0	Optima A	W324152
7439-96-5	Manganese	162	ug/L			P	1.4	Optima A	W324152
7439-98-7	Molybdenum	2.9	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	20100	ug/L		J	P	140	Optima A	W324152
7782-49-2	Selenium	0.26	ug/L	U		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	45000	ug/L		J	P	110	Optima A	W324152
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

SDG: W3F0208 – Data for this sample (13047) is a FIELD DUPLIC. of Sample 13046 (SDG W3F0207). The REVISED report for W3F0207 NOW CORROBORATES the agreement of results between the Field Duplicate Pair.

JSI 8/7/2013

This data for this sample is accepted, with qualifications as noted. 8-16-2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-02 **Client ID:** 13048

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	749000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	152000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	89700	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	2.4	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	7250	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	2.6	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	27600	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	2.6	ug/L	J		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-03 **Client ID:** 13049

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	836000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	123000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	129000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W324152
7440-09-7	Potassium	11300	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	0.26	ug/L	U		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	37300	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	6.6	ug/L			P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-04 **Client ID:** 13050

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1110000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	94800	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	212000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	542	ug/L			P	1.4	Optima A	W324152
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W324152
7440-09-7	Potassium	16400	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	0.26	ug/L	U		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	38600	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W324152
7440-66-6	Zinc	16.4	ug/L			P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-05 **Client ID:** 13051

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1160000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	68400	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	241000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	5560	ug/L			P	1.4	Optima A	W324152
7439-98-7	Molybdenum	2.5	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	14700	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	0.26	ug/L	U		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	34500	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W324152
7440-66-6	Zinc	21.6	ug/L			P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-06 **Client ID:** 13052

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	860000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	174000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	103000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	2.8	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	9250	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	68.0	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	46800	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	2.8	ug/L	J		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-07 **Client ID:** 13053

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	626000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	57100	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	117000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	6.8	ug/L			P	1.4	Optima A	W324152
7439-98-7	Molybdenum	4.5	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	12800	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	2.1	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	76400	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W324152
7440-66-6	Zinc	4.7	ug/L	J		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-08 **Client ID:** 13054

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	963000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	188000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	120000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	5.7	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	11100	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	105	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	58900	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	3.4	ug/L	J		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-09 **Client ID:** 13055

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	952000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	186000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	118000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	5.7	ug/L	J		P	1.8	Optima A	W324152
7440-09-7	Potassium	10900	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	103	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	58000	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	3.1	ug/L	J		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.8	ug/L	J		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-10 **Client ID:** 13056

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1100000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	212000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	139000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W324152
7440-09-7	Potassium	10500	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	76.0	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	44800	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	2.8	ug/L	J		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0208 **Method Type:**

Sample ID: W3F0208-11 **Client ID:** 13057

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1100000	ug/L			P	128	Optima A	W324152
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324152
7440-70-2	Calcium	211000	ug/L			P	15.0	Optima A	W324152
7439-95-4	Magnesium	139000	ug/L			P	22.0	Optima A	W324152
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324152
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W324152
7440-09-7	Potassium	10500	ug/L			P	140	Optima A	W324152
7782-49-2	Selenium	75.0	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	44600	ug/L			P	110	Optima A	W324152
7440-62-2	Vanadium	3.0	ug/L	J		P	1.5	Optima A	W324152
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324152

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13047	W3F0208-01	Ground Water	04-Jun-13 18:10	DH	11-Jun-2013
13048	W3F0208-02	Ground Water	05-Jun-13 09:00	DH	11-Jun-2013
13049	W3F0208-03	Ground Water	05-Jun-13 09:50	DH	11-Jun-2013
13050	W3F0208-04	Ground Water	05-Jun-13 11:00	DH	11-Jun-2013
13051	W3F0208-05	Ground Water	05-Jun-13 12:20	DH	11-Jun-2013
13052	W3F0208-06	Ground Water	05-Jun-13 13:40	DH	11-Jun-2013
13053	W3F0208-07	Ground Water	05-Jun-13 16:30	DH	11-Jun-2013
13054	W3F0208-08	Ground Water	05-Jun-13 17:55	DH	11-Jun-2013
13055	W3F0208-09	Ground Water	05-Jun-13 18:05	DH	11-Jun-2013
13056	W3F0208-10	Ground Water	05-Jun-13 18:20	DH	11-Jun-2013
13057	W3F0208-11	Ground Water	05-Jun-13 18:45	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13047**
SVL Sample ID: **W3F0208-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Jun-13 18:10
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.229	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:41	
EPA 353.2	**Nitrate/Nitrite as N**	2.10 J	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:26	
SM 2320B/2310B	**Bicarbonate**	1190	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 09:59	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 09:59	
SM 2320B/2310B	**Total Alkalinity**	1190	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 09:59	
SM 2540 C	**Total Diss. Solids**	1280	mg/L	40			W324123	RS	06/11/13 12:40	
SM 4500-O-G	**Dissolved Oxygen**	4.7 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.556	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	29.6	mg/L	1.00	0.30	5	W326056	AEW	06/24/13 17:39	D2
EPA 300.0	Fluoride	< 0.10	mg/L	0.10	0.02		W326056	AEW	06/26/13 11:17	
EPA 300.0	**Sulfate as SO4**	124	mg/L	1.50	0.33	5	W326056	AEW	06/24/13 17:39	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Kirby Gray
Technical Director

Sample 13047 is a FEILD DUPLICATE of Sample 13046 (SDG W3F0207).

JS 8/1/2013

No Qual. for Fluoride

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13048**
SVL Sample ID: **W3F0208-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 09:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030 ~~UJ~~	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:43	
EPA 353.2	**Nitrate/Nitrite as N**	2.11	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:27	
SM 2320B/2310B	**Bicarbonate**	696	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:07	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:07	
SM 2320B/2310B	**Total Alkalinity**	696	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:07	
SM 2540 C	**Total Diss. Solids**	842	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	6.4 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.162	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	15.7	mg/L	5.00	1.52	25	W326056	AEW	06/24/13 18:16	D2,M3
EPA 300.0	**Fluoride**	0.47 ~~J~~ NO QUAL	mg/L	0.10	0.02		W326056	AEW	06/26/13 11:26	M2
EPA 300.0	**Sulfate as SO4**	78.8	mg/L	7.50	1.65	25	W326056	AEW	06/24/13 18:16	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMG 9-05-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13049**
SVL Sample ID: **W3F0208-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 09:50
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030 ~~U5~~	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:44	
EPA 353.2	**Nitrate/Nitrite as N**	1.36	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:28	
SM 2320B/2310B	**Bicarbonate**	845	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:16	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:16	
SM 2320B/2310B	**Total Alkalinity**	845	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:16	
SM 2540 C	**Total Diss. Solids**	919	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	6.8 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.190	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	12.7	mg/L	5.00	1.52	25	W326056	AEW	06/24/13 20:16	D2
EPA 300.0	**Fluoride**	0.18 ~~J~~ NO QUAL	mg/L	0.10	0.02		W326056	AEW	06/26/13 12:06	
EPA 300.0	**Sulfate as SO4**	54.0	mg/L	7.50	1.65	25	W326056	AEW	06/24/13 20:16	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 9-5-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13050**
SVL Sample ID: **W3F0208-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 11:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.635 J	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:45	
EPA 353.2	**Nitrate/Nitrite as N**	0.090	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:30	
SM 2320B/2310B	**Bicarbonate**	1080	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:24	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:24	
SM 2320B/2310B	**Total Alkalinity**	1080	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:24	
SM 2540 C	**Total Diss. Solids**	1190	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	2.9 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.720	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	22.9	mg/L	1.00	0.30	5	W326056	AEW	06/24/13 20:28	D2
EPA 300.0	**Fluoride**	1.12 J No Qual	mg/L	0.10	0.02		W326056	AEW	06/26/13 12:16	
EPA 300.0	**Sulfate as SO4**	93.0	mg/L	1.50	0.33	5	W326056	AEW	06/24/13 20:28	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-13

JSI 8/7/2013

56

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13051**
SVL Sample ID: **W3F0208-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 12:20
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.440 J	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:47	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:31	
SM 2320B/2310B	**Bicarbonate**	1150	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:39	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:39	
SM 2320B/2310B	**Total Alkalinity**	1150	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:39	
SM 2540 C	**Total Diss. Solids**	1180	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	5.0 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.256 J	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	19.3	mg/L	1.00	0.30	5	W326056	AEW	06/24/13 20:52	D2
EPA 300.0	**Fluoride**	0.18 NO QUAL	mg/L	0.10	0.02		W326056	AEW	06/26/13 12:46	
EPA 300.0	**Sulfate as SO4**	75.3	mg/L	1.50	0.33	5	W326056	AEW	06/24/13 20:52	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-13

JS 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13052**
SVL Sample ID: **W3F0208-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 13:40
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:48	
EPA 353.2	**Nitrate/Nitrite as N**	6.83	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 14:04	D2
SM 2320B/2310B	**Bicarbonate**	610	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:54	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:54	
SM 2320B/2310B	**Total Alkalinity**	610	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 10:54	
SM 2540 C	**Total Diss. Solids**	1110	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	8.0 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.086 J	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	58.2	mg/L	5.00	1.52	25	W326056	AEW	06/24/13 21:28	D2
EPA 300.0	**Fluoride**	0.67 ND QUAL	mg/L	0.10	0.02		W326056	AEW	06/26/13 12:56	
EPA 300.0	**Sulfate as SO4**	220	mg/L	7.50	1.65	25	W326056	AEW	06/24/13 21:28	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMG 9-5-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

58

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13053**
SVL Sample ID: **W3F0208-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 16:30
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:49	
EPA 353.2	**Nitrate/Nitrite as N**	4.88	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:34	
SM 2320B/2310B	**Bicarbonate**	667	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:11	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:11	
SM 2320B/2310B	**Total Alkalinity**	667	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:11	
SM 2540 C	**Total Diss. Solids**	797	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	8.3 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.172 J	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	28.7	mg/L	5.00	1.52	25	W326056	AEW	06/24/13 22:16	D2
EPA 300.0	**Fluoride**	0.90 J NO QUAL	mg/L	0.10	0.02		W326056	AEW	06/24/13 22:04	
EPA 300.0	**Sulfate as SO4**	70.9	mg/L	7.50	1.65	25	W326056	AEW	06/24/13 22:16	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-13

JSI 8/9/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13054**
SVL Sample ID: **W3F0208-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 17:55
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:51	
EPA 353.2	**Nitrate/Nitrite as N**	6.72	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 14:05	D2
SM 2320B/2310B	**Bicarbonate**	640	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:24	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:24	
SM 2320B/2310B	**Total Alkalinity**	640	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:24	
SM 2540 C	**Total Diss. Solids**	1250	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	6.9 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.089	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	73.1	mg/L	10.0	3.05	50	W326056	AEW	06/24/13 22:40	D2
EPA 300.0	**Fluoride**	0.61 NO QUAL.	mg/L	0.50	0.08	5	W326056	AEW	06/24/13 22:28	D1
EPA 300.0	**Sulfate as SO4**	298	mg/L	15.0	3.30	50	W326056	AEW	06/24/13 22:40	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMG 9-5-13

JSI 8/7/2013

60

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13055**
SVL Sample ID: **W3F0208-09 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 18:05
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:52	
EPA 353.2	**Nitrate/Nitrite as N**	6.77	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 14:07	D2
SM 2320B/2310B	**Bicarbonate**	635	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:32	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:32	
SM 2320B/2310B	**Total Alkalinity**	635	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:32	
SM 2540 C	**Total Diss. Solids**	1240	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	7.4 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.098	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	70.8	mg/L	10.0	3.05	50	W326056	AEW	06/24/13 23:04	D2
EPA 300.0	**Fluoride**	0.61	mg/L	0.50	0.08	5	W326056	AEW	06/24/13 22:52	D1
EPA 300.0	**Sulfate as SO4**	293	mg/L	15.0	3.30	50	W326056	AEW	06/24/13 23:04	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TB 9-5-13

JS 8/7/2013

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

61

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13056**
SVL Sample ID: **W3F0208-10 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 18:20
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030 ~~U~~	mg/L	0.030	0.014		W325262	RHW	06/25/13 09:53	
EPA 353.2	**Nitrate/Nitrite as N**	4.35	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:44	
SM 2320B/2310B	**Bicarbonate**	861	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:40	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:40	
SM 2320B/2310B	**Total Alkalinity**	861	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:40	
SM 2540 C	**Total Diss. Solids**	1280	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	7.3 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.116	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	56.0	mg/L	10.0	3.05	50	W326056	AEW	06/24/13 23:28	D2
EPA 300.0	**Fluoride**	0.12 J	mg/L	0.10	0.02		W326056	AEW	06/26/13 13:06	
EPA 300.0	**Sulfate as SO4**	250	mg/L	1.50	0.33	5	W326056	AEW	06/24/13 23:16	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TR 9-5-2013

JS 8/7/2013

62

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0208**
Reported: 05-Jul-13 14:16

Client Sample ID: **13057**
SVL Sample ID: **W3F0208-11 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-13 18:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030 ~~U5~~	mg/L	0.030	0.014		W325262	RHW	06/25/13 10:00	
EPA 353.2	**Nitrate/Nitrite as N**	4.47	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:45	
SM 2320B/2310B	**Bicarbonate**	851	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:53	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:53	
SM 2320B/2310B	**Total Alkalinity**	851	mg/L as CaCO3	1.0			W324218	DKS	06/13/13 11:53	
SM 2540 C	**Total Diss. Solids**	1280	mg/L	10			W324069	JMS	06/12/13 11:28	
SM 4500-O-G	**Dissolved Oxygen**	5.9 J	mg/L				W324178	PJ	06/11/13 17:30	H5
SM 4500-P-E	**Phosphorus**	0.120	mg/L	0.010	0.005		W325318	SM	06/21/13 16:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	57.5	mg/L	10.0	3.05	50	W326056	AEW	06/24/13 23:52	D2,M3
EPA 300.0	**Fluoride**	0.12 J	mg/L	0.10	0.02		W326056	AEW	06/26/13 13:16	M1
EPA 300.0	**Sulfate as SO4**	251	mg/L	1.50	0.33	5	W326056	AEW	06/24/13 23:40	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

JSI 8/7/2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0223 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324194-MS	13060S	Matrix Spike
W324194-MSD	13060SD	Matrix Spike Duplicate
W324227-MS	13064S	Matrix Spike
W324227-MSD	13064SD	Matrix Spike Duplicate
W324270-MS1	13064S	Matrix Spike
W324270-MSD1	13064SD	Matrix Spike Duplicate
W324277-MS1	13060S	Matrix Spike
W324277-MSD1	13060SD	Matrix Spike Duplicate
W3F0223-01	13060	
W3F0223-02	13061	
W3F0223-03	13064	
W3F0223-04	13068	
W3F0223-05	13095	
W3F0223-06	13097	

Were ICP interelement corrections applied? Yes/No Yes

Were ICP background corrections applied? Yes/No Yes

If yes - were raw data generated before applications of background corrections? Yes/No No

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/05/2013 Title: TECHNICAL DIRECTOR

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0223 **Method Type:**

Sample ID: W3F0223-02 **Client ID:** 13061

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	441000	ug/L			P	128	Optima A	W324277
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324277
7440-70-2	Calcium	104000	ug/L			P	15.0	Optima A	W324277
7439-95-4	Magnesium	43600	ug/L			P	22.0	Optima A	W324277
7439-96-5	Manganese	12.0	ug/L			P	1.4	Optima A	W324277
7439-98-7	Molybdenum	315	ug/L			P	1.8	Optima A	W324277
7440-09-7	Potassium	5970	ug/L			P	140	Optima A	W324277
7782-49-2	Selenium	3.4	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	43400	ug/L			P	110	Optima A	W324277
7440-62-2	Vanadium	250	ug/L			P	1.5	Optima A	W324277
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324277

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSl 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0223 **Method Type:**

Sample ID: W3F0223-04 **Client ID:** 13068

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	522000	ug/L			P	128	Optima A	W324277
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324277
7440-70-2	Calcium	82400	ug/L			P	15.0	Optima A	W324277
7439-95-4	Magnesium	76800	ug/L			P	22.0	Optima A	W324277
7439-96-5	Manganese	154	ug/L			P	1.4	Optima A	W324277
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W324277
7440-09-7	Potassium	8510	ug/L			P	140	Optima A	W324277
7782-49-2	Selenium	0.57	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	30200	ug/L			P	110	Optima A	W324277
7440-62-2	Vanadium	2.9	ug/L	J		P	1.5	Optima A	W324277
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324277

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSl 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0223 Method Type:

Sample ID: W3F0223-06 Client ID: 13097

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/11/2013 Level: LOW

% Solids: Total/Dissolved: Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	619000	ug/L			P	128	Optima A	W324277
7440-43-9	Cadmium	14.9	ug/L			P	0.70	Optima A	W324277
7440-70-2	Calcium	135000	ug/L			P	15.0	Optima A	W324277
7439-95-4	Magnesium	68100	ug/L			P	22.0	Optima A	W324277
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324277
7439-98-7	Molybdenum	41.5	ug/L			P	1.8	Optima A	W324277
7440-09-7	Potassium	8790	ug/L			P	140	Optima A	W324277
7782-49-2	Selenium	19.0	ug/L			MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	63700	ug/L			P	110	Optima A	W324277
7440-62-2	Vanadium	20.1	ug/L			P	1.5	Optima A	W324277
7440-66-6	Zinc	20.0	ug/L			P	2.5	Optima A	W324277

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0223 Method Type:

Sample ID: W3F0223-08 Client ID: 13099

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/11/2013 Level: LOW

% Solids: Total/Dissolved: Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	953000	ug/L			P	128	Optima A	W324277
7440-43-9	Cadmium	2.8	ug/L			P	0.70	Optima A	W324277
7440-70-2	Calcium	56600	ug/L			P	15.0	Optima A	W324277
7439-95-4	Magnesium	197000	ug/L			P	22.0	Optima A	W324277
7439-96-5	Manganese	230	ug/L			P	1.4	Optima A	W324277
7439-98-7	Molybdenum	5.4	ug/L	J		P	1.8	Optima A	W324277
7440-09-7	Potassium	12600	ug/L			P	140	Optima A	W324277
7782-49-2	Selenium	0.38	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	33500	ug/L			P	110	Optima A	W324277
7440-62-2	Vanadium	2.6	ug/L	J		P	1.5	Optima A	W324277
7440-66-6	Zinc	68.0	ug/L			P	2.5	Optima A	W324277

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JP 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0223 **Method Type:**

Sample ID: W3F0223-10 **Client ID:** 13103

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	162	ug/L	J		P	128	Optima A	W324277
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324277
7440-70-2	Calcium	43.0	ug/L			P	15.0	Optima A	W324277
7439-95-4	Magnesium	22.0	ug/L	U		P	22.0	Optima A	W324277
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324277
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	W324277
7440-09-7	Potassium	140	ug/L	U		P	140	Optima A	W324277
7782-49-2	Selenium	0.26	ug/L	U		MS	0.26	AGILENT 7700 ICPMS	13G02g00
7440-23-5	Sodium	276	ug/L	J		P	110	Optima A	W324277
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	Optima A	W324277
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324277

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0223 **Method Type:**

Sample ID: W3F0223-03 **Client ID:** 13064

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	1.5	ug/L	J	J	P	0.71	Optima A	13174A-W324270
7440-70-2	Calcium	121000	ug/L			P	15.1	Optima A	13174A-W324270
7439-95-4	Magnesium	136000	ug/L			P	22.2	Optima A	13174A-W324270
7439-96-5	Manganese	14.4	ug/L			P	1.4	Optima A	13174A-W324270
7439-98-7	Molybdenum	12.8	ug/L		J	P	1.8	Optima A	13174A-W324270
7440-09-7	Potassium	12000	ug/L			P	141	Optima A	13174A-W324270
7782-49-2	Selenium	17.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	39700	ug/L			P	111	Optima A	13174A-W324270
7440-62-2	Vanadium	5.1	ug/L			P	1.5	Optima A	13174A-W324270
7440-66-6	Zinc	54.5	ug/L			P	2.5	Optima A	13174A-W324270

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TM 9-5-13

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0223 **Method Type:**

Sample ID: W3F0223-09 **Client ID:** 13101

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	Optima A	13174A-W324270
7440-70-2	Calcium	87200	ug/L			P	15.1	Optima A	13174A-W324270
7439-95-4	Magnesium	74500	ug/L			P	22.2	Optima A	13174A-W324270
7439-96-5	Manganese	118	ug/L			P	1.4	Optima A	13174A-W324270
7439-98-7	Molybdenum	4.2	ug/L	J		P	1.8	Optima A	13174A-W324270
7440-09-7	Potassium	8400	ug/L			P	141	Optima A	13174A-W324270
7782-49-2	Selenium	2.4	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	30100	ug/L			P	111	Optima A	13174A-W324270
7440-62-2	Vanadium	4.8	ug/L	J		P	1.5	Optima A	13174A-W324270
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13174A-W324270

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TAB 9-5-13

JSI 8/7/2013

72

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13060	W3F0223-01	Ground Water	06-Jun-13 13:50	DH	11-Jun-2013
13061	W3F0223-02	Ground Water	06-Jun-13 15:00	DH	11-Jun-2013
13064	W3F0223-03	Surface Water	07-Jun-13 09:25	DH	11-Jun-2013
13068	W3F0223-04	Surface Water	07-Jun-13 11:30	DH	11-Jun-2013
13095	W3F0223-05	Ground Water	08-Jun-13 17:45	DH	11-Jun-2013
13097	W3F0223-06	Ground Water	08-Jun-13 18:30	DH	11-Jun-2013
13098	W3F0223-07	Ground Water	08-Jun-13 18:45	DH	11-Jun-2013
13099	W3F0223-08	Ground Water	09-Jun-13 10:00	DH	11-Jun-2013
13101	W3F0223-09	Surface Water	09-Jun-13 14:15	DH	11-Jun-2013
13103	W3F0223-10	Ground Water	09-Jun-13 15:00	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13060**
SVL Sample ID: **W3F0223-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 06-Jun-13 13:50
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.142 J	mg/L	0.030	0.014		W325262	RHW	06/25/13 10:01	M2
EPA 353.2	**Nitrate/Nitrite as N**	1.92	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:47	
SM 2320B/2310B	**Bicarbonate**	382	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:38	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:38	
SM 2320B/2310B	**Total Alkalinity**	382	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:38	
SM 2540 C	**Total Diss. Solids**	440	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	7.9 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.013	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	13.7	mg/L	2.00	0.61	10	W326057	AEW	06/24/13 12:40	D2
EPA 300.0	**Fluoride**	0.38 J	mg/L	0.10	0.02		W326057	AEW	06/24/13 12:29	
EPA 300.0	**Sulfate as SO4**	40.3	mg/L	0.30	0.07		W326057	AEW	06/24/13 12:29	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 9-5-13

JSI 8/7/2013

74

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13061**
SVL Sample ID: **W3F0223-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 06-Jun-13 15:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	3.89	mg/L	0.090	0.042	3	W325262	RHW	06/25/13 10:24	D2
EPA 353.2	**Nitrate/Nitrite as N**	7.65	mg/L	0.100	0.020	2	W325255	ARP	06/21/13 14:08	D2
SM 2320B/2310B	**Bicarbonate**	385	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:43	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:43	
SM 2320B/2310B	**Total Alkalinity**	385	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:43	
SM 2540 C	**Total Diss. Solids**	581	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	7.0 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.379	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	28.4	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 13:13	D2,M3
EPA 300.0	**Fluoride**	0.41	mg/L	0.10	0.02		W326057	AEW	06/24/13 13:02	M2
EPA 300.0	**Sulfate as SO4**	90.5	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 13:13	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMB 9-5-2013

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13064**
SVL Sample ID: **W3F0223-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 09:25
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.074 J	mg/L	0.030	0.014		W325262	RHW	06/25/13 10:23	
EPA 353.2	**Nitrate/Nitrite as N**	1.87	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:50	
SM 2320B/2310B	**Bicarbonate**	867	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:49	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:49	
SM 2320B/2310B	**Total Alkalinity**	867	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:49	
SM 2540 C	**Total Diss. Solids**	927	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.1 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.187 J	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	15.2	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 15:02	D2
EPA 300.0	**Fluoride**	0.98 J	mg/L	0.10	0.02		W326057	AEW	06/24/13 14:51	
EPA 300.0	**Sulfate as SO4**	59.6	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 15:02	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-2013

JSI
8/7/2013

76

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13068**
SVL Sample ID: **W3F0223-04 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 11:30
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.094 B	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:10	
EPA 353.2	**Nitrate/Nitrite as N**	0.525	mg/L	0.050	0.010		W325255	ARP	06/21/13 13:51	
SM 2320B/2310B	**Bicarbonate**	503	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:57	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:57	
SM 2320B/2310B	**Total Alkalinity**	503	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 15:57	
SM 2540 C	**Total Diss. Solids**	589	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.9 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.099	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	23.8	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 15:24	D2
EPA 300.0	**Fluoride**	0.34 J	mg/L	0.10	0.02		W326057	AEW	06/24/13 15:13	
EPA 300.0	**Sulfate as SO4**	47.7	mg/L	0.30	0.07		W326057	AEW	06/24/13 15:13	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMB 9-05-2013

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13095**
SVL Sample ID: **W3F0223-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 17:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.032 ~~J~~	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:11	
EPA 353.2	**Nitrate/Nitrite as N**	7.11	mg/L	0.100	0.020	2	W325254	ARP	06/21/13 14:36	D2
SM 2320B/2310B	**Bicarbonate**	431	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:07	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:07	
SM 2320B/2310B	**Total Alkalinity**	431	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:07	
SM 2540 C	**Total Diss. Solids**	719	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.6 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.106	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	42.1	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 15:46	D2
EPA 300.0	**Fluoride**	0.43 ~~J~~	mg/L	0.10	0.02		W326057	AEW	06/24/13 15:35	
EPA 300.0	**Sulfate as SO4**	145	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 15:46	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-13

JSL 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13097**
SVL Sample ID: **W3F0223-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 18:30
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:13	
EPA 353.2	**Nitrate/Nitrite as N**	4.47	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:14	
SM 2320B/2310B	**Bicarbonate**	457	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:27	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:27	
SM 2320B/2310B	**Total Alkalinity**	457	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:27	
SM 2540 C	**Total Diss. Solids**	824	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	7.8 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.589	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	63.4	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 16:34	D2
EPA 300.0	**Fluoride**	0.62	mg/L	0.10	0.02		W326057	AEW	06/24/13 16:23	
EPA 300.0	**Sulfate as SO4**	184	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 16:34	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13098**
SVL Sample ID: **W3F0223-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 18:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:14	
EPA 353.2	**Nitrate/Nitrite as N**	4.63	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:15	
SM 2320B/2310B	**Bicarbonate**	480	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:36	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:36	
SM 2320B/2310B	**Total Alkalinity**	480	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:36	
SM 2540 C	**Total Diss. Solids**	1020	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.4 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	1.21	mg/L	0.020	0.009	2	W326031	SVL\a	06/25/13 12:49	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	89.3	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 16:56	D2
EPA 300.0	**Fluoride**	0.95 J	mg/L	0.10	0.02		W326057	AEW	06/24/13 16:45	
EPA 300.0	**Sulfate as SO4**	269	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 16:56	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMG 9-5-2013

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13099**
SVL Sample ID: **W3F0223-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 09-Jun-13 10:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.338 J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:15	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:17	
SM 2320B/2310B	**Bicarbonate**	854	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:43	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:43	
SM 2320B/2310B	**Total Alkalinity**	854	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:43	
SM 2540 C	**Total Diss. Solids**	954 J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.0 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	2.21 J	mg/L	0.040	0.019	4	W326031	SVL\a	06/25/13 12:49	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	29.4	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 17:17	D2
EPA 300.0	**Fluoride**	0.73 J	mg/L	0.10	0.02		W326057	AEW	06/24/13 17:06	
EPA 300.0	**Sulfate as SO4**	109	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 17:17	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-2013

JS 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13101**
SVL Sample ID: **W3F0223-09 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 09-Jun-13 14:15
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.068 J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:17	
EPA 353.2	**Nitrate/Nitrite as N**	0.736	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:24	
SM 2320B/2310B	**Bicarbonate**	526	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:54	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:54	
SM 2320B/2310B	**Total Alkalinity**	526	mg/L as CaCO3	1.0			W324237	DKS	06/13/13 16:54	
SM 2540 C	**Total Diss. Solids**	610	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.4 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.105	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	20.7	mg/L	5.00	1.52	25	W326057	AEW	06/24/13 17:39	D2
EPA 300.0	**Fluoride**	0.34 J	mg/L	0.10	0.02		W326057	AEW	06/24/13 17:28	
EPA 300.0	**Sulfate as SO4**	53.5	mg/L	7.50	1.65	25	W326057	AEW	06/24/13 17:39	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMB 9-5-2013

JSI 8/7/2013

82

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0223**
Reported: 08-Jul-13 09:05

Client Sample ID: **13103**
SVL Sample ID: **W3F0223-10 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 09-Jun-13 15:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:23	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:25	
SM 2320B/2310B	Bicarbonate	< 1.0 UJ	mg/L as CaCO3	1.0			W325215	DKS	06/24/13 15:55	H7
SM 2320B/2310B	Carbonate	< 1.0 UJ	mg/L as CaCO3	1.0			W325215	DKS	06/24/13 15:55	H7
SM 2320B/2310B	Total Alkalinity	< 1.0 UJ	mg/L as CaCO3	1.0			W325215	DKS	06/24/13 15:55	H7
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.1 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	Phosphorus	< 0.010	mg/L	0.010	0.005		W326033	SVL\a	06/24/13 14:00	
Anions by Ion Chromatography										
EPA 300.0	Chloride	< 0.20	mg/L	0.20	0.06		W326057	AEW	06/24/13 12:51	
EPA 300.0	Fluoride	< 0.10 ~~UJ~~	mg/L	0.10	0.02		W326057	AEW	06/24/13 12:51	
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.07		W326057	AEW	06/24/13 12:51	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 9-5-2013

JSL 8/7/2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0227 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324193-MS	13063S	Matrix Spike
W324193-MSD	13063SD	Matrix Spike Duplicate
W324201-MS	13063DS	Matrix Spike
W324201-MSD	13063DSD	Matrix Spike Duplicate
W324269-MS1	13063DS	Matrix Spike
W324269-MSD1	13063DSD	Matrix Spike Duplicate
W324276-MS1	13063S	Matrix Spike
W324276-MSD1	13063SD	Matrix Spike Duplicate
W3F0227-01	13063	
W3F0227-02	13066	
W3F0227-03	13067	
W3F0227-04	13076	
W3F0227-05	13078	
W3F0227-06	13079	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/01/2013 Title: TECHNICAL DIRECTOR

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0227 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W3F0227-07	13081	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/01/2013 Title: TECHNICAL DIRECTOR

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-01 **Client ID:** 13063

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	550000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	8.9	ug/L			P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	122000	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	59600	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	38.8	ug/L			P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	7620	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	17.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	77800	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	49.9	ug/L			P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	27.6	ug/L			P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-01 **Client ID:** 13063

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	8.4	ug/L			P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	119000	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	58700	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	39.7	ug/L			P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	7190	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	17.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	69600	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	49.4	ug/L			P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	21.4	ug/L			P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-02 **Client ID:** 13066

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	924000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	0.73	ug/L	J		P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	141000	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	139000	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	749	ug/L			P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	3.7	ug/L	J		P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	14200	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	0.26	ug/L	U	iJ E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	34700	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	3.4	ug/L	J		P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	10.2	ug/L			P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/8/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-02 **Client ID:** 13066

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	148000	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	137000	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	919	ug/L			P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	2.5	ug/L	J		P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	14100	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	0.26	ug/L	U	UJ E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	33300	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI
8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-03 **Client ID:** 13067

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	509000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	79900	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	75200	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	154	ug/L			P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	2.5	ug/L	J		P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	8400	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	0.26	ug/L	J J	E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	22500	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-03 **Client ID:** 13067

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	78700	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	73900	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	122	ug/L			P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	5.6	ug/L	J		P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	8310	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	0.26	ug/L	U	UJ E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	21800	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-04 **Client ID:** 13076

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	961000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	16.2	ug/L			P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	158000	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	138000	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	67.0	ug/L			P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	24300	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	273	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	89300	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	14.5	ug/L			P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	219	ug/L			P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-04 **Client ID:** 13076

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	15.3	ug/L			P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	156000	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	134000	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	67.2	ug/L			P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	22600	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	265	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	86500	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	15.7	ug/L			P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	211	ug/L			P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/18/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-05 **Client ID:** 13078

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	838000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	124000	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	128000	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	25.2	ug/L			P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	15100	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	173	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	113000	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	6.0	ug/L			P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JST 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0227 Method Type:

Sample ID: W3F0227-05 Client ID: 13078

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/11/2013 Level: LOW

% Solids: Total/Dissolved: Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	125000	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	128000	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	27.6	ug/L			P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	14400	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	167	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	112000	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	6.9	ug/L			P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI
8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-06 **Client ID:** 13079

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	841000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	145000	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	116000	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	26.4	ug/L			P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	20200	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	192	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	69900	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	6.4	ug/L			P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI
8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-06 **Client ID:** 13079

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	146000	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	115000	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	28.6	ug/L			P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	19600	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	186	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	70300	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	7.6	ug/L			P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JS 8/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-07 **Client ID:** 13081

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	877000	ug/L			P	128	OPT8	13174A-W324276
7440-43-9	Cadmium	6.7	ug/L			P	0.70	OPT8	13174A-W324276
7440-70-2	Calcium	124000	ug/L			P	15.0	OPT8	13174A-W324276
7439-95-4	Magnesium	138000	ug/L			P	22.0	OPT8	13174A-W324276
7439-96-5	Manganese	38.9	ug/L			P	1.4	OPT8	13174A-W324276
7439-98-7	Molybdenum	16.4	ug/L			P	1.8	OPT8	13174A-W324276
7440-09-7	Potassium	12600	ug/L			P	140	OPT8	13174A-W324276
7782-49-2	Selenium	22.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	41400	ug/L			P	110	OPT8	13174A-W324276
7440-62-2	Vanadium	5.3	ug/L			P	1.5	OPT8	13174A-W324276
7440-66-6	Zinc	69.9	ug/L			P	2.5	OPT8	13174A-W324276

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JS 8/8/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0227 **Method Type:**

Sample ID: W3F0227-07 **Client ID:** 13081

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324269
7440-70-2	Calcium	115000	ug/L			P	15.1	OPT6	13174A-W324269
7439-95-4	Magnesium	131000	ug/L			P	22.2	OPT6	13174A-W324269
7439-96-5	Manganese	16.9	ug/L			P	1.4	OPT6	13174A-W324269
7439-98-7	Molybdenum	18.7	ug/L			P	1.8	OPT6	13174A-W324269
7440-09-7	Potassium	11500	ug/L			P	141	OPT6	13174A-W324269
7782-49-2	Selenium	20.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	38000	ug/L			P	111	OPT6	13174A-W324269
7440-62-2	Vanadium	5.0	ug/L	J		P	1.5	OPT6	13174A-W324269
7440-66-6	Zinc	32.4	ug/L			P	2.5	OPT6	13174A-W324269

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSl 8/8/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13063	W3F0227-01	Surface Water	07-Jun-13 08:50	DH	11-Jun-2013
13066	W3F0227-02	Surface Water	07-Jun-13 10:05	DH	11-Jun-2013
13067	W3F0227-03	Surface Water	07-Jun-13 10:40	DH	11-Jun-2013
13076	W3F0227-04	Surface Water	07-Jun-13 17:00	DH	11-Jun-2013
13078	W3F0227-05	Surface Water	07-Jun-13 17:30	DH	11-Jun-2013
13079	W3F0227-06	Surface Water	07-Jun-13 17:45	DH	11-Jun-2013
13081	W3F0227-07	Surface Water	08-Jun-13 09:00	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

88

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13063**
SVL Sample ID: **W3F0227-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 08:50
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)											
SM 2340B	**Hardness (as CaCO3)**	539		mg/L	0.347	0.198		N/A		06/23/13 12:24	
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.037	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:25	
EPA 353.2	**Nitrate/Nitrite as N**	3.99	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:27	
SM 2320B/2310B	**Bicarbonate**	460	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 16:55	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 16:55	
SM 2320B/2310B	**Total Alkalinity**	460	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 16:55	
SM 2540 C	**Total Diss. Solids**	800	J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.4	J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.639	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	62.7	J	mg/L	5.00	1.52	25	W326058	AEW	06/24/13 16:39	D2
EPA 300.0	**Fluoride**	0.67	J	mg/L	0.10	0.02		W326058	AEW	06/24/13 12:01	
EPA 300.0	**Sulfate as SO4**	150	J	mg/L	7.50	1.65	25	W326058	AEW	06/24/13 16:39	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TR 10-4-2013

JS 8/8/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13066**
SVL Sample ID: **W3F0227-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 10:05
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.229	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:26	M1
EPA 353.2	**Nitrate/Nitrite as N**	0.060	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:28	
SM 2320B/2310B	**Bicarbonate**	949	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:04	
SM 2320B/2310B	Carbonate	< 1.0	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:04	
SM 2320B/2310B	**Total Alkalinity**	949	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:04	
SM 2540 C	**Total Diss. Solids**	981	J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	5.1	J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	2.38	J	mg/L	0.040	0.019	4	W326031	SVL\a	06/25/13 12:49	D2
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	13.6	J	mg/L	5.00	1.52	25	W326058	AEW	06/24/13 12:25	D2,M3
EPA 300.0	**Fluoride**	0.96	J	mg/L	0.10	0.02		W326058	AEW	06/24/13 12:13	
EPA 300.0	**Sulfate as SO4**	33.9	J	mg/L	0.30	0.07		W326058	AEW	06/24/13 12:13	M1

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMJ 10-4-2013

JSI 8/8/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13067**
SVL Sample ID: **W3F0227-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 10:40
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.078	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:27	
EPA 353.2	**Nitrate/Nitrite as N**	0.473	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:29	
SM 2320B/2310B	**Bicarbonate**	511	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:12	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:12	
SM 2320B/2310B	**Total Alkalinity**	511	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:12	
SM 2540 C	**Total Diss. Solids**	554	J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.9	J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.106	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	11.0	J	mg/L	0.20	0.06		W326058	AEW	06/24/13 14:13	
EPA 300.0	**Fluoride**	0.41	J	mg/L	0.10	0.02		W326058	AEW	06/24/13 14:13	
EPA 300.0	**Sulfate as SO4**	43.8	J	mg/L	0.30	0.07		W326058	AEW	06/24/13 14:13	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 10-4-2013

JS 8/8/2013

91

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13076**
SVL Sample ID: **W3F0227-04 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 17:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.038	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:29	
EPA 353.2	**Nitrate/Nitrite as N**	6.93	J	mg/L	0.100	0.020	2	W325254	ARP	06/21/13 14:55	D2
SM 2320B/2310B	**Bicarbonate**	526	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:28	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:28	
SM 2320B/2310B	**Total Alkalinity**	526	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:28	
SM 2540 C	**Total Diss. Solids**	1420	J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.0	J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.355	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	109	J	mg/L	5.00	1.52	25	W326058	AEW	06/24/13 14:49	D2
EPA 300.0	**Fluoride**	3.24	J	mg/L	0.10	0.02		W326058	AEW	06/24/13 14:37	
EPA 300.0	**Sulfate as SO4**	446	J	mg/L	7.50	1.65	25	W326058	AEW	06/24/13 14:49	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMK 10-4-2013

JSI
8/8/2013

92

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13078**
SVL Sample ID: **W3F0227-05 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 17:30
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	Ammonia as N	< 0.030	UJ	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:30	
EPA 353.2	**Nitrate/Nitrite as N**	5.75	J	mg/L	0.100	0.020	2	W325254	ARP	06/21/13 14:56	D2
SM 2320B/2310B	**Bicarbonate**	630	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:35	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:35	
SM 2320B/2310B	**Total Alkalinity**	630	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:35	
SM 2540 C	**Total Diss. Solids**	1240	J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.0	J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.566	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	133	J	mg/L	5.00	1.52	25	W326058	AEW	06/24/13 15:14	D2
EPA 300.0	**Fluoride**	1.82	J	mg/L	0.10	0.02		W326058	AEW	06/24/13 15:02	
EPA 300.0	**Sulfate as SO4**	263	J	mg/L	7.50	1.65	25	W326058	AEW	06/24/13 15:14	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-4-2013

8/8/2013

93

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13079**
SVL Sample ID: **W3F0227-06 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 17:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030 UJ	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:31	
EPA 353.2	**Nitrate/Nitrite as N**	8.01 J	mg/L	0.100	0.020	2	W325254	ARP	06/21/13 15:03	D2
SM 2320B/2310B	**Bicarbonate**	475 J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:47	
SM 2320B/2310B	Carbonate	< 1.0 UJ	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:47	
SM 2320B/2310B	**Total Alkalinity**	475 J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:47	
SM 2540 C	**Total Diss. Solids**	1230 J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.3 J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.366 J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	92.2 J	mg/L	5.00	1.52	25	W326058	AEW	06/24/13 15:38	D2
EPA 300.0	**Fluoride**	2.11 J	mg/L	0.10	0.02		W326058	AEW	06/24/13 15:26	
EPA 300.0	**Sulfate as SO4**	389 J	mg/L	7.50	1.65	25	W326058	AEW	06/24/13 15:38	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-4-2013

8/8/2013

94

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0227**
Reported: 02-Jul-13 11:21

Client Sample ID: **13081**
SVL Sample ID: **W3F0227-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 09:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.073	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:33	
EPA 353.2	**Nitrate/Nitrite as N**	1.78	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:35	
SM 2320B/2310B	**Bicarbonate**	874	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:56	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:56	
SM 2320B/2310B	**Total Alkalinity**	874	J	mg/L as CaCO3	1.0			W324305	DKS	06/19/13 17:56	
SM 2540 C	**Total Diss. Solids**	942	J	mg/L	10			W324210	JMS	06/12/13 14:16	
SM 4500-O-G	**Dissolved Oxygen**	8.6	J	mg/L				W324184	PJ	06/11/13 17:55	H5
SM 4500-P-E	**Phosphorus**	0.412	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	16.0	J	mg/L	5.00	1.52	25	W326058	AEW	06/24/13 16:27	D2
EPA 300.0	**Fluoride**	0.80	J	mg/L	0.10	0.02		W326058	AEW	06/24/13 16:15	
EPA 300.0	**Sulfate as SO4**	59.2	J	mg/L	7.50	1.65	25	W326058	AEW	06/24/13 16:27	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TM 10-4-2013

JS 8/8/2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0228 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324190-MS	13083S	Matrix Spike
W324190-MSD	13083SD	Matrix Spike Duplicate
W324200-MS	13083DS	Matrix Spike
W324200-MSD	13083DSD	Matrix Spike Duplicate
W324267-MS1	13083DS	Matrix Spike
W324267-MSD1	13083DSD	Matrix Spike Duplicate
W324275-MS1	13083S	Matrix Spike
W324275-MSD1	13083SD	Matrix Spike Duplicate
W3F0228-01	13083	
W3F0228-02	13084	
W3F0228-03	13085	
W3F0228-04	13086	
W3F0228-05	13087	
W3F0228-06	13089	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/08/2013 Title: TECHNICAL DIRECTOR

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0228 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W3F0228-07	13091	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/08/2013 Title: TECHNICAL DIRECTOR

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-01 **Client ID:** 13083

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	837000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	7.0	ug/L			P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	132000	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	123000	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	13.7	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	42.7	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	18700	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	196	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	130000	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	10.9	ug/L			P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	105	ug/L			P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

10/8/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-01 **Client ID:** 13083

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	2.2	ug/L			P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	131000	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	124000	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	7.2	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	39.7	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	18900	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	196	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	130000	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	9.9	ug/L			P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	73.3	ug/L			P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-02 **Client ID:** 13084

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	844000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	3.4	ug/L			P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	126000	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	129000	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	112	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	18.9	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	13600	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	44.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	55300	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	5.3	ug/L			P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	41.9	ug/L			P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-02 **Client ID:** 13084

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.83	ug/L	J		P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	127000	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	132000	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	102	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	19.9	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	14200	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	44.0	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	56400	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	3.6	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	20.6	ug/L			P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-03 **Client ID:** 13085

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	727000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	116000	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	107000	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	3.2	ug/L	J		P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	6600	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	39.0	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	37500	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	4.6	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-03 **Client ID:** 13085

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	109000	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	103000	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	2.8	ug/L	J		P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	6390	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	39.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	34800	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	4.6	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-04 **Client ID:** 13086

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	617000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	137000	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	66700	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	76.3	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	144	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	7600	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	3.1	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	42000	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	2.2	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-04 **Client ID:** 13086

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	132000	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	64500	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	73.2	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	136	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	7250	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	3.1	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	39600	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	2.4	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JS 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-05 **Client ID:** 13087

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	425000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	97700	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	43900	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	278	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	6110	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	3.3	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	45400	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	5.7	ug/L			P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JS 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES SDG No.: W3F0228 Method Type:

Sample ID: W3F0228-05 Client ID: 13087

Contract: Lab Code: SVL Case No.: SAS No.:

Matrix: WATER Date Received: 6/11/2013 Level: LOW

% Solids: Total/Dissolved: Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	98400	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	44300	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	274	ug/L			P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	6070	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	3.4	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	45400	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	5.8	ug/L			P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/31/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-06 **Client ID:** 13089

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	687000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	0.86	ug/L	J		P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	130000	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	88000	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	150	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	5.3	ug/L	J		P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	10700	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	2.0	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	33700	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	3.7	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSl 10/3/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-06 **Client ID:** 13089

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.74	ug/L	J		P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	131000	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	89000	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	147	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	5.4	ug/L	J		P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	10700	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	2.1	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	33800	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	2.9	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-07 **Client ID:** 13091

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	664000	ug/L			P	128	OPT8	13174A-W324275
7440-43-9	Cadmium	0.89	ug/L	J		P	0.70	OPT8	13174A-W324275
7440-70-2	Calcium	124000	ug/L			P	15.0	OPT8	13174A-W324275
7439-95-4	Magnesium	86000	ug/L			P	22.0	OPT8	13174A-W324275
7439-96-5	Manganese	136	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	5.3	ug/L	J		P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	10500	ug/L			P	140	OPT8	13174A-W324275
7782-49-2	Selenium	2.0	ug/L		J E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	31800	ug/L			P	110	OPT8	13174A-W324275
7440-62-2	Vanadium	4.3	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JS 1/13/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0228 **Method Type:**

Sample ID: W3F0228-07 **Client ID:** 13091

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.80	ug/L	J		P	0.71	OPT8	13174A-W324275
7440-70-2	Calcium	121000	ug/L			P	15.1	OPT8	13174A-W324275
7439-95-4	Magnesium	83100	ug/L			P	22.2	OPT8	13174A-W324275
7439-96-5	Manganese	127	ug/L			P	1.4	OPT8	13174A-W324275
7439-98-7	Molybdenum	4.2	ug/L	J		P	1.8	OPT8	13174A-W324275
7440-09-7	Potassium	10100	ug/L			P	141	OPT8	13174A-W324275
7782-49-2	Selenium	2.1	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	30900	ug/L			P	111	OPT8	13174A-W324275
7440-62-2	Vanadium	3.1	ug/L	J		P	1.5	OPT8	13174A-W324275
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13174A-W324275

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JS 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13083	W3F0228-01	Surface Water	08-Jun-13 10:00	DH	11-Jun-2013
13084	W3F0228-02	Surface Water	08-Jun-13 11:00	DH	11-Jun-2013
13085	W3F0228-03	Surface Water	08-Jun-13 12:00	DH	11-Jun-2013
13086	W3F0228-04	Surface Water	08-Jun-13 13:10	DH	11-Jun-2013
13087	W3F0228-05	Surface Water	08-Jun-13 13:55	DH	11-Jun-2013
13089	W3F0228-06	Surface Water	08-Jun-13 14:45	DH	11-Jun-2013
13091	W3F0228-07	Surface Water	08-Jun-13 16:00	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C).
The guidelines do not pertain to nitric-preserved metals.

Default Cooler (Received Temperature: 7.4°C)

Labnumber	Container	Client ID	Labnumber	Container	Client ID
W3F0228-01 A	Raw HDPE	13083	W3F0228-01 B	Sulfuric HDPE	13083
W3F0228-01 C	Filtered nitric HDPE	13083	W3F0228-01 D	Nitric HDPE	13083
W3F0228-01 E	Raw HDPE	13083	W3F0228-02 A	Raw HDPE	13084
W3F0228-02 B	Sulfuric HDPE	13084	W3F0228-02 C	Filtered nitric HDPE	13084
W3F0228-02 D	Nitric HDPE	13084	W3F0228-02 E	Raw HDPE	13084
W3F0228-03 A	Raw HDPE	13085	W3F0228-03 B	Sulfuric HDPE	13085
W3F0228-03 C	Filtered nitric HDPE	13085	W3F0228-03 D	Nitric HDPE	13085
W3F0228-03 E	Raw HDPE	13085	W3F0228-04 A	Raw HDPE	13086
W3F0228-04 B	Sulfuric HDPE	13086	W3F0228-04 C	Filtered nitric HDPE	13086
W3F0228-04 D	Nitric HDPE	13086	W3F0228-04 E	Raw HDPE	13086
W3F0228-05 A	Raw HDPE	13087	W3F0228-05 B	Sulfuric HDPE	13087
W3F0228-05 C	Filtered nitric HDPE	13087	W3F0228-05 D	Nitric HDPE	13087
W3F0228-05 E	Raw HDPE	13087	W3F0228-06 A	Raw HDPE	13089
W3F0228-06 B	Sulfuric HDPE	13089	W3F0228-06 C	Filtered nitric HDPE	13089
W3F0228-06 D	Nitric HDPE	13089	W3F0228-06 E	Raw HDPE	13089
W3F0228-07 A	Raw HDPE	13091	W3F0228-07 B	Sulfuric HDPE	13091
W3F0228-07 C	Filtered nitric HDPE	13091	W3F0228-07 D	Nitric HDPE	13091
W3F0228-07 E	Raw HDPE	13091			

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13083**
SVL Sample ID: **W3F0228-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 10:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.039	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:34	
EPA 353.2	**Nitrate/Nitrite as N**	4.49	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:45	
SM 2320B/2310B	**Bicarbonate**	583	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:27	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:27	
SM 2320B/2310B	**Total Alkalinity**	583	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:27	
SM 2540 C	**Total Diss. Solids**	1380	J	mg/L	40			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.5	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.369	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	161	J	mg/L	10.0	3.05	50	W326174	AEW	06/26/13 11:47	D2
EPA 300.0	**Fluoride**	2.47	J	mg/L	0.50	0.08	5	W326174	AEW	06/26/13 11:36	D1
EPA 300.0	**Sulfate as SO4**	332	J	mg/L	15.0	3.30	50	W326174	AEW	06/26/13 11:47	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-7-2013

JS 10/3/13

68

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13084**
SVL Sample ID: **W3F0228-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 11:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.112	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:35	
EPA 353.2	**Nitrate/Nitrite as N**	1.61		mg/L	0.050	0.010		W325254	ARP	06/21/13 14:46	
SM 2320B/2310B	**Bicarbonate**	822		mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:36	
SM 2320B/2310B	Carbonate	< 1.0	U J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:36	
SM 2320B/2310B	**Total Alkalinity**	822	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:36	
SM 2540 C	**Total Diss. Solids**	1020	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.5	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.357	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	41.5	J	mg/L	5.00	1.52	25	W326174	AEW	06/26/13 12:09	D2,M3
EPA 300.0	**Fluoride**	0.94	J	mg/L	0.10	0.02		W326174	AEW	06/26/13 11:58	M2
EPA 300.0	**Sulfate as SO4**	104	J	mg/L	7.50	1.65	25	W326174	AEW	06/26/13 12:09	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 10-4-2013

JS 10/3/13

SVL holds the following certifications:
AZ:0538, **CA**:2080, **FL(NELAC)**:E87993, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **WA**:C573

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13085**
SVL Sample ID: **W3F0228-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 12:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.037	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:42	
EPA 353.2	**Nitrate/Nitrite as N**	11.8	mg/L	0.150	0.030	3	W325254	ARP	06/21/13 15:13	D2
SM 2320B/2310B	**Bicarbonate**	578	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:43	
SM 2320B/2310B	Carbonate	< 1.0	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:43	
SM 2320B/2310B	**Total Alkalinity**	578	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:43	
SM 2540 C	**Total Diss. Solids**	920	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.4	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.288	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	40.5	mg/L	5.00	1.52	25	W326174	AEW	06/26/13 13:58	D2
EPA 300.0	**Fluoride**	0.50	mg/L	0.10	0.02		W326174	AEW	06/26/13 13:47	
EPA 300.0	**Sulfate as SO4**	154	mg/L	7.50	1.65	25	W326174	AEW	06/26/13 13:58	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

10-4-2013

JSI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13086**
SVL Sample ID: **W3F0228-04 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 13:10
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.949	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:43	
EPA 353.2	**Nitrate/Nitrite as N**	4.23	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:49	
SM 2320B/2310B	**Bicarbonate**	552	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:59	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:59	
SM 2320B/2310B	**Total Alkalinity**	552	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 15:59	
SM 2540 C	**Total Diss. Solids**	773	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	7.8	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.132	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	43.9	J	mg/L	5.00	1.52	25	W326174	AEW	06/26/13 14:20	D2
EPA 300.0	**Fluoride**	0.62		mg/L	0.10	0.02		W326174	AEW	06/26/13 14:09	
EPA 300.0	**Sulfate as SO4**	96.3		mg/L	7.50	1.65	25	W326174	AEW	06/26/13 14:20	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TB 10-4-2013

JS 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13087**
SVL Sample ID: **W3F0228-05 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 13:55
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	2.96	J	mg/L	0.090	0.042	3	W325261	RHW	06/27/13 11:45	D2,M3
EPA 353.2	**Nitrate/Nitrite as N**	6.62		mg/L	0.100	0.020	2	W325254	ARP	06/21/13 15:06	D2
SM 2320B/2310B	**Bicarbonate**	403		mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:09	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:09	
SM 2320B/2310B	**Total Alkalinity**	403	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:09	
SM 2540 C	**Total Diss. Solids**	602	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	7.8	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.090	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	31.9	J	mg/L	2.00	0.61	10	W326174	AEW	06/26/13 14:42	D2
EPA 300.0	**Fluoride**	0.33		mg/L	0.10	0.02		W326174	AEW	06/26/13 14:31	
EPA 300.0	**Sulfate as SO4**	89.2		mg/L	3.00	0.66	10	W326174	AEW	06/26/13 14:42	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

10-4-2013

JS 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13089**
SVL Sample ID: **W3F0228-06 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 14:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.047	J	mg/L	0.030	0.014		W325261	RHW	06/27/13 11:46	
EPA 353.2	**Nitrate/Nitrite as N**	0.501	↓	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:52	
SM 2320B/2310B	**Bicarbonate**	608	↓	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:19	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:19	
SM 2320B/2310B	**Total Alkalinity**	608	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:19	
SM 2540 C	**Total Diss. Solids**	820	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	9.1	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.068	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	28.0	J	mg/L	5.00	1.52	25	W326174	AEW	06/26/13 15:25	D2
EPA 300.0	**Fluoride**	0.41	↓	mg/L	0.10	0.02		W326174	AEW	06/26/13 15:14	
EPA 300.0	**Sulfate as SO4**	143	↓	mg/L	7.50	1.65	25	W326174	AEW	06/26/13 15:25	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

TR 10-4-2013

JSI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0228**
Reported: 09-Jul-13 11:46

Client Sample ID: **13091**
SVL Sample ID: **W3F0228-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 16:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.041	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:17	
EPA 353.2	**Nitrate/Nitrite as N**	0.489	J	mg/L	0.050	0.010		W325254	ARP	06/21/13 14:53	
SM 2320B/2310B	**Bicarbonate**	586	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:31	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:31	
SM 2320B/2310B	**Total Alkalinity**	586	J	mg/L as CaCO3	1.0			W324306	DKS	06/17/13 16:31	
SM 2540 C	**Total Diss. Solids**	773	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.7	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.087	J	mg/L	0.010	0.005		W326031	SVL\a	06/25/13 12:49	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	23.9	J	mg/L	5.00	1.52	25	W326174	AEW	06/26/13 15:47	D2
EPA 300.0	**Fluoride**	0.39		mg/L	0.10	0.02		W326174	AEW	06/26/13 15:36	
EPA 300.0	**Sulfate as SO4**	130	↓	mg/L	7.50	1.65	25	W326174	AEW	06/26/13 15:47	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-4-2013

JSI 12/13/13

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0231 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324192-MS	13070S	Matrix Spike
W324192-MSD	13070SD	Matrix Spike Duplicate
W324199-MS	13070DS	Matrix Spike
W324199-MSD	13070DSD	Matrix Spike Duplicate
W324266-MS1	13070DS	Matrix Spike
W324266-MSD1	13070DSD	Matrix Spike Duplicate
W324274-MS1	13070S	Matrix Spike
W324274-MSD1	13070SD	Matrix Spike Duplicate
W3F0231-01	13070	
W3F0231-02	13072	
W3F0231-03	13074	
W3F0231-04	13088	
W3F0231-05	13090	
W3F0231-06	13092	

Were ICP interelement corrections applied? Yes/No Yes

Were ICP background corrections applied? Yes/No Yes

If yes - were raw data generated before applications of background corrections? Yes/No No

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/09/2013 Title: TECHNICAL DIRECTOR

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0231 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W3F0231-07	13093	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/09/2013 Title: TECHNICAL DIRECTOR

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-01 **Client ID:** 13070

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	591000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	5.4	ug/L			P	0.70	Optima A	W324274
7440-70-2	Calcium	129000	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	65100	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324274
7439-98-7	Molybdenum	35.5	ug/L			P	1.8	Optima A	W324274
7440-09-7	Potassium	7370	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	16.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	324000	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	55.3	ug/L			P	1.5	Optima A	W324274
7440-66-6	Zinc	18.3	ug/L			P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-01 **Client ID:** 13070

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	3.8	ug/L			P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	128000	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	63600	ug/L	J	~~N~~	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	34.2	ug/L			P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	7410	ug/L	J	~~N~~	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	15.0	ug/L	J	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	318000	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	49.3	ug/L			P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	14.4	ug/L			P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TRJ 10-3-2013

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-02 **Client ID:** 13072

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	582000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	5.4	ug/L			P	0.70	Optima A	W324274
7440-70-2	Calcium	128000	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	64100	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324274
7439-98-7	Molybdenum	34.3	ug/L			P	1.8	Optima A	W324274
7440-09-7	Potassium	7320	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	17.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	322000	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	53.7	ug/L			P	1.5	Optima A	W324274
7440-66-6	Zinc	17.5	ug/L			P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JS 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-02 **Client ID:** 13072

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	3.7	ug/L			P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	129000	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	64300	ug/L	X	N	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	36.2	ug/L			P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	7460	ug/L	X	N*	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	15.0	ug/L	X	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	321000	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	48.9	ug/L			P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	13.8	ug/L			P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

10-3-2013

5/8/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-03 **Client ID:** 13074

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	834000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	3.3	ug/L			P	0.70	Optima A	W324274
7440-70-2	Calcium	125000	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	127000	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	108	ug/L			P	1.4	Optima A	W324274
7439-98-7	Molybdenum	13.3	ug/L			P	1.8	Optima A	W324274
7440-09-7	Potassium	13700	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	40.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	54900	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	7.3	ug/L			P	1.5	Optima A	W324274
7440-66-6	Zinc	40.6	ug/L			P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-03 **Client ID:** 13074

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	117000	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	124000	ug/L	J	N	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	71.4	ug/L			P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	15.4	ug/L			P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	13600	ug/L	J	N*	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	37.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	51700	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	4.3	ug/L	J		P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	6.3	ug/L	J		P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

10-3-2013

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-04 **Client ID:** 13088

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	526000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324274
7440-70-2	Calcium	85800	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	75600	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	124	ug/L			P	1.4	Optima A	W324274
7439-98-7	Molybdenum	3.6	ug/L	J		P	1.8	Optima A	W324274
7440-09-7	Potassium	8570	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	2.5	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	43000	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	5.8	ug/L			P	1.5	Optima A	W324274
7440-66-6	Zinc	2.7	ug/L	J		P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-04 **Client ID:** 13088

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	J		P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	90400	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	80800	ug/L	~~J~~	N	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	102	ug/L			P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	4.9	ug/L	J		P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	9180	ug/L	~~J~~	N*	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	2.4	ug/L	~~J~~	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	44900	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	4.4	ug/L	J		P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

10-3-13

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-05 **Client ID:** 13090

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	708000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324274
7440-70-2	Calcium	134000	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	91000	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	167	ug/L			P	1.4	Optima A	W324274
7439-98-7	Molybdenum	3.1	ug/L	J		P	1.8	Optima A	W324274
7440-09-7	Potassium	10900	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	2.1	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	34200	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	4.8	ug/L	J		P	1.5	Optima A	W324274
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/12/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-05 **Client ID:** 13090

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	135000	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	92600	ug/L	~~J~~	N	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	155	ug/L			P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	4.6	ug/L	J		P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	10900	ug/L	~~J~~	N*	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	2.2	ug/L	~~J~~	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	34300	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	3.2	ug/L	J		P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

TMS 10-3-2013

JS 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-06 **Client ID:** 13092

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	882000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	2.6	ug/L			P	0.70	Optima A	W324274
7440-70-2	Calcium	132000	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	134000	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	109	ug/L			P	1.4	Optima A	W324274
7439-98-7	Molybdenum	15.7	ug/L			P	1.8	Optima A	W324274
7440-09-7	Potassium	14000	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	44.0	ug/L	J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	57200	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	7.6	ug/L			P	1.5	Optima A	W324274
7440-66-6	Zinc	36.1	ug/L			P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-06 **Client ID:** 13092

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	136000	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	140000	ug/L	~~J~~	N	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	83.7	ug/L			P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	17.6	ug/L			P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	14700	ug/L	~~J~~	N*	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	41.0	ug/L	~~J~~	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	58300	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	4.2	ug/L	J		P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	9.2	ug/L	J		P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

10-3-2013

8/27/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-07 **Client ID:** 13093

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	344000	ug/L			P	128	Optima A	W324274
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	W324274
7440-70-2	Calcium	67400	ug/L			P	15.0	Optima A	W324274
7439-95-4	Magnesium	42600	ug/L			P	22.0	Optima A	W324274
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	W324274
7439-98-7	Molybdenum	58.4	ug/L			P	1.8	Optima A	W324274
7440-09-7	Potassium	2420	ug/L			P	140	Optima A	W324274
7782-49-2	Selenium	0.96	ug/L	J J	E	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	15300	ug/L			P	110	Optima A	W324274
7440-62-2	Vanadium	16.4	ug/L			P	1.5	Optima A	W324274
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	W324274

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

JSL 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0231 **Method Type:**

Sample ID: W3F0231-07 **Client ID:** 13093

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT8	13176C-W324266
7440-70-2	Calcium	66100	ug/L			P	15.1	OPT8	13176C-W324266
7439-95-4	Magnesium	42500	ug/L	~~J~~	N	P	22.2	OPT8	13176C-W324266
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT8	13176C-W324266
7439-98-7	Molybdenum	59.4	ug/L			P	1.8	OPT8	13176C-W324266
7440-09-7	Potassium	2280	ug/L	~~J~~	N*	P	141	OPT8	13176C-W324266
7782-49-2	Selenium	0.90	ug/L	J ~~J~~	E	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	15200	ug/L			P	111	OPT8	13176C-W324266
7440-62-2	Vanadium	16.2	ug/L			P	1.5	OPT8	13176C-W324266
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT8	13176C-W324266

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

10-3-2013

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13070	W3F0231-01	Surface Water	07-Jun-13 12:00	DH	11-Jun-2013
13072	W3F0231-02	Surface Water	07-Jun-13 12:00	DH	11-Jun-2013
13074	W3F0231-03	Surface Water	07-Jun-13 14:10	DH	11-Jun-2013
13088	W3F0231-04	Surface Water	08-Jun-13 14:10	DH	11-Jun-2013
13090	W3F0231-05	Surface Water	08-Jun-13 15:05	DH	11-Jun-2013
13092	W3F0231-06	Surface Water	08-Jun-13 16:15	DH	11-Jun-2013
13093	W3F0231-07	Surface Water	08-Jun-13 16:45	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C).
The guidelines do not pertain to nitric-preserved metals.

Default Cooler (Received Temperature: 7.8°C)

Labnumber	Container	Client ID	Labnumber	Container	Client ID
W3F0231-01 A	Raw HDPE	13070	W3F0231-01 B	Raw HDPE	13070
W3F0231-01 C	Sulfuric HDPE	13070	W3F0231-01 D	Filtered nitric HDPE	13070
W3F0231-01 E	Nitric HDPE	13070	W3F0231-02 A	Raw HDPE	13072
W3F0231-02 B	Raw HDPE	13072	W3F0231-02 C	Sulfuric HDPE	13072
W3F0231-02 D	Filtered nitric HDPE	13072	W3F0231-02 E	Nitric HDPE	13072
W3F0231-03 A	Raw HDPE	13074	W3F0231-03 B	Raw HDPE	13074
W3F0231-03 C	Sulfuric HDPE	13074	W3F0231-03 D	Filtered nitric HDPE	13074
W3F0231-03 E	Nitric HDPE	13074	W3F0231-04 A	Raw HDPE	13088
W3F0231-04 B	Raw HDPE	13088	W3F0231-04 C	Sulfuric HDPE	13088
W3F0231-04 D	Filtered nitric HDPE	13088	W3F0231-04 E	Nitric HDPE	13088
W3F0231-05 A	Raw HDPE	13090	W3F0231-05 B	Raw HDPE	13090
W3F0231-05 C	Sulfuric HDPE	13090	W3F0231-05 D	Filtered nitric HDPE	13090
W3F0231-05 E	Nitric HDPE	13090	W3F0231-06 A	Raw HDPE	13092
W3F0231-06 B	Raw HDPE	13092	W3F0231-06 C	Sulfuric HDPE	13092
W3F0231-06 D	Filtered nitric HDPE	13092	W3F0231-06 E	Nitric HDPE	13092
W3F0231-07 A	Raw HDPE	13093	W3F0231-07 B	Raw HDPE	13093
W3F0231-07 C	Sulfuric HDPE	13093	W3F0231-07 D	Filtered nitric HDPE	13093
W3F0231-07 E	Nitric HDPE	13093			

80

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13070**
SVL Sample ID: **W3F0231-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 12:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.043	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:18	
EPA 353.2	**Nitrate/Nitrite as N**	3.59		mg/L	0.050	0.010		W325250	NCS	06/25/13 09:51	
SM 2320B/2310B	**Bicarbonate**	429		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:02	
SM 2320B/2310B	**Carbonate**	31.4		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:02	
SM 2320B/2310B	**Total Alkalinity**	460		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:02	
SM 2540 C	**Total Diss. Solids**	1460		mg/L	40			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.2	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.476	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	512	J	mg/L	10.0	3.05	50	W326175	AEW	06/26/13 12:02	D2
EPA 300.0	**Fluoride**	0.92	J	mg/L	0.50	0.08	5	W326175	AEW	06/26/13 11:50	D1
EPA 300.0	**Sulfate as SO4**	142	J	mg/L	1.50	0.33	5	W326175	AEW	06/26/13 11:50	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

8/7/2013

81

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13072**
SVL Sample ID: **W3F0231-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 12:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.045 J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:19	
EPA 353.2	**Nitrate/Nitrite as N**	3.58	mg/L	0.050	0.010		W325250	NCS	06/25/13 09:52	
SM 2320B/2310B	**Bicarbonate**	428	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:13	
SM 2320B/2310B	**Carbonate**	32.6	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:13	
SM 2320B/2310B	**Total Alkalinity**	461	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:13	
SM 2540 C	**Total Diss. Solids**	1480	mg/L	40			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.3 J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.480 J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	512 J	mg/L	10.0	3.05	50	W326175	AEW	06/26/13 12:26	D2,M3
EPA 300.0	**Fluoride**	0.89 J	mg/L	0.50	0.08	5	W326175	AEW	06/26/13 12:14	D1,M2
EPA 300.0	**Sulfate as SO4**	141 J	mg/L	1.50	0.33	5	W326175	AEW	06/26/13 12:14	D2,M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 10-3--2013

JSI 8/7/2013

82

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13074**
SVL Sample ID: **W3F0231-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 14:10
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.049	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:21	
EPA 353.2	**Nitrate/Nitrite as N**	1.49		mg/L	0.050	0.010		W325250	NCS	06/25/13 09:54	
SM 2320B/2310B	**Bicarbonate**	747		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:53	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:53	
SM 2320B/2310B	**Total Alkalinity**	747	J	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 13:53	
SM 2540 C	**Total Diss. Solids**	972	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.0	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.326	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	41.5	J	mg/L	5.00	1.52	25	W326175	AEW	06/26/13 14:27	D2
EPA 300.0	**Fluoride**	0.87	J	mg/L	0.10	0.02		W326175	AEW	06/26/13 14:15	
EPA 300.0	**Sulfate as SO4**	100	J	mg/L	7.50	1.65	25	W326175	AEW	06/26/13 14:27	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

JSI 8/7/2013

83

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13088**
SVL Sample ID: **W3F0231-04 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 14:10
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.063 J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:29	
EPA 353.2	**Nitrate/Nitrite as N**	0.620	mg/L	0.050	0.010		W325250	NCS	06/25/13 09:55	
SM 2320B/2310B	**Bicarbonate**	520	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:01	
SM 2320B/2310B	Carbonate	< 1.0 UJ	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:01	
SM 2320B/2310B	**Total Alkalinity**	520	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:01	
SM 2540 C	**Total Diss. Solids**	652	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.5 J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.129 J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	40.5 J	mg/L	5.00	1.52	25	W326175	AEW	06/26/13 14:51	D2
EPA 300.0	**Fluoride**	0.44 J	mg/L	0.10	0.02		W326175	AEW	06/26/13 14:39	
EPA 300.0	**Sulfate as SO4**	54.4 J	mg/L	7.50	1.65	25	W326175	AEW	06/26/13 14:51	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TNJ 10-3-2013

JSI 8/27/2013

84

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13090**
SVL Sample ID: **W3F0231-05 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 15:05
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	Ammonia as N	< 0.030	UJ	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:30	
EPA 353.2	**Nitrate/Nitrite as N**	0.495	J	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:02	
SM 2320B/2310B	**Bicarbonate**	598	J	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:11	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:11	
SM 2320B/2310B	**Total Alkalinity**	598	J	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:11	
SM 2540 C	**Total Diss. Solids**	804	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	9.6	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.068	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	26.2	J	mg/L	5.00	1.52	25	W326175	AEW	06/26/13 15:15	D2
EPA 300.0	**Fluoride**	0.52	J	mg/L	0.10	0.02		W326175	AEW	06/26/13 15:03	
EPA 300.0	**Sulfate as SO4**	138	J	mg/L	7.50	1.65	25	W326175	AEW	06/26/13 15:15	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMB 10-3-2013

JSI 8/7/2013

85

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13092**
SVL Sample ID: **W3F0231-06 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 16:15
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.038 J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:31	R2B
EPA 353.2	**Nitrate/Nitrite as N**	1.51	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:03	
SM 2320B/2310B	**Bicarbonate**	792	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:16	
SM 2320B/2310B	**Carbonate**	11.0	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:16	
SM 2320B/2310B	**Total Alkalinity**	803	mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:16	
SM 2540 C	**Total Diss. Solids**	991	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.2 J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	**Phosphorus**	0.280 J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	41.2 J	mg/L	5.00	1.52	25	W326175	AEW	06/26/13 16:04	D2
EPA 300.0	**Fluoride**	0.94 J	mg/L	0.10	0.02		W326175	AEW	06/26/13 15:52	
EPA 300.0	**Sulfate as SO4**	105 J	mg/L	7.50	1.65	25	W326175	AEW	06/26/13 16:04	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

JSI 8/9/2013

86

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0231**
Reported: 10-Jul-13 11:13

Client Sample ID: **13093**
SVL Sample ID: **W3F0231-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 16:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.047	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:34	
EPA 353.2	**Nitrate/Nitrite as N**	0.280		mg/L	0.050	0.010		W325250	NCS	06/25/13 10:05	
SM 2320B/2310B	**Bicarbonate**	300		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:45	
SM 2320B/2310B	**Carbonate**	21.2		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:45	
SM 2320B/2310B	**Total Alkalinity**	321		mg/L as CaCO3	1.0			W324362	DKS	06/17/13 14:45	
SM 2540 C	**Total Diss. Solids**	374		mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.4	J	mg/L				W324185	PJ	06/11/13 18:07	H5
SM 4500-P-E	Phosphorus	< 0.010	UJ	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	10.1	J	mg/L	0.20	0.06		W326175	AEW	06/26/13 16:16	
EPA 300.0	**Fluoride**	0.31	J	mg/L	0.10	0.02		W326175	AEW	06/26/13 16:16	
EPA 300.0	**Sulfate as SO4**	41.2	J	mg/L	0.30	0.07		W326175	AEW	06/26/13 16:16	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

JSI 8/7/2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0233 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324191-MS	13065S	Matrix Spike
W324191-MSD	13065SD	Matrix Spike Duplicate
W324198-MS	13065DS	Matrix Spike
W324198-MSD	13065DSD	Matrix Spike Duplicate
W324265-MS1	13065DS	Matrix Spike
W324265-MSD1	13065DSD	Matrix Spike Duplicate
W324273-MS1	13065S	Matrix Spike
W324273-MSD1	13065SD	Matrix Spike Duplicate
W3F0233-01	13065	
W3F0233-02	13069	
W3F0233-03	13071	
W3F0233-04	13073	
W3F0233-05	13075	
W3F0233-06	13082	

Were ICP interelement corrections applied? Yes/No Yes

Were ICP background corrections applied? Yes/No Yes

If yes - were raw data generated before applications of background corrections? Yes/No No

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/09/2013 Title: TECHNICAL DIRECTOR

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0233 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W3F0233-07	13094	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 07/09/2013 Title: TECHNICAL DIRECTOR

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-01 **Client ID:** 13065

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	859000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	4.3	ug/L			P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	118000	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	137000	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	16.1	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	19.8	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	12100	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	18.0	ug/L		J	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	40300	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	5.2	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	57.2	ug/L			P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-13 : "J" Qual for Se due to Serial Dilution outlier.

JS 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-01 **Client ID:** 13065

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	1.7	ug/L	~~J~~	J	P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	117000	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	133000	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	13.8	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	19.2	ug/L		J	P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	11500	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	17.0	ug/L	J	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	38900	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	5.0	ug/L	J		P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	53.2	ug/L			P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

9-5-2013 ; "J" Qualif. for Se due to Serial Dilution outlier.

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-02 **Client ID:** 13069

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	701000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	104000	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	107000	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	452	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	6.1	ug/L	J		P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	12500	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	0.40	ug/L	J	~~J~~ ~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	30800	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	7.6	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	5.7	ug/L	J		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-13

JSL 8/27/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-02 **Client ID:** 13069

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	102000	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	102000	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	310	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	7.9	ug/L	J		P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	11400	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	0.26	ug/L	U	~~J~~ ~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	29100	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	1.5	ug/L	U		P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-13

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-03 **Client ID:** 13071

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	593000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	5.4	ug/L			P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	131000	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	64700	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	39.4	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	7450	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	21.0	ug/L	~~J~~	~~ED~~	MS	1.3	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	325000	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	51.5	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	15.3	ug/L			P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-2013

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-03 **Client ID:** 13071

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	3.5	ug/L			P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	130000	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	63900	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	39.2	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	7310	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	15.0	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	322000	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	50.4	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	12.5	ug/L			P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-13

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-04 **Client ID:** 13073

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	489000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	79000	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	70700	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	115	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	7.6	ug/L	J		P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	8010	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	1.9	ug/L	J	X	ED	MS	1.3	AGILENT 7700 ICPMS 13F30f00
7440-23-5	Sodium	41400	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	5.4	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-2013

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-04 **Client ID:** 13073

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	81700	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	71300	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	103	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	7.3	ug/L	J		P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	8050	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	1.3	ug/L	J	~~J~~ ~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	41200	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	4.9	ug/L	J		P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMS 9-5-13

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-05 **Client ID:** 13075

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	517000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	84500	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	74400	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	112	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	7.3	ug/L	J		P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	8450	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	2.6	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	34700	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	5.5	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-2013

JSL 8/19/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-05 **Client ID:** 13075

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	85700	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	73300	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	98.1	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	7.9	ug/L	J		P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	8360	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	2.5	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	32500	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	5.0	ug/L	J		P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-13

JSI 8/7/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-06 **Client ID:** 13082

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	872000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	6.5	ug/L			P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	121000	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	138000	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	89.6	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	17.0	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	12900	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	20.0	ug/L	~~B~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	41400	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	5.7	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	60.4	ug/L			P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-2013

JSI 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-06 **Client ID:** 13082

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	117000	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	133000	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	64.7	ug/L			P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	16.6	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	12000	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	18.0	ug/L	~~J~~	~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	39600	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	4.1	ug/L	J		P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	27.8	ug/L			P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:** YES

Comments: ARTIFACTS: SEDIMENT IN UNFILTERED FRACTION.

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-13

JSI 8/19/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-07 **Client ID:** 13094

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	311000	ug/L			P	128	OPT6	13174A-W324273
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	OPT6	13174A-W324273
7440-70-2	Calcium	58000	ug/L			P	15.0	OPT6	13174A-W324273
7439-95-4	Magnesium	40200	ug/L			P	22.0	OPT6	13174A-W324273
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	61.5	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	2420	ug/L			P	140	OPT6	13174A-W324273
7782-49-2	Selenium	1.0	ug/L	J		MS	0.26	AGILENT 7700 ICPMS	13F30f00
7440-23-5	Sodium	14900	ug/L			P	110	OPT6	13174A-W324273
7440-62-2	Vanadium	19.9	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

TMB 9-5-13

JSL 8/7/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0233 **Method Type:**

Sample ID: W3F0233-07 **Client ID:** 13094

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Dissolved

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
7440-43-9	Cadmium	0.71	ug/L	U		P	0.71	OPT6	13174A-W324273
7440-70-2	Calcium	58300	ug/L			P	15.1	OPT6	13174A-W324273
7439-95-4	Magnesium	40700	ug/L			P	22.2	OPT6	13174A-W324273
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	OPT6	13174A-W324273
7439-98-7	Molybdenum	63.7	ug/L			P	1.8	OPT6	13174A-W324273
7440-09-7	Potassium	2450	ug/L			P	141	OPT6	13174A-W324273
7782-49-2	Selenium	1.1	ug/L	J	~~J~~ ~~E~~	MS	0.26	AGILENT 7700 ICPMS	13G01f01
7440-23-5	Sodium	15200	ug/L			P	111	OPT6	13174A-W324273
7440-62-2	Vanadium	19.9	ug/L			P	1.5	OPT6	13174A-W324273
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	OPT6	13174A-W324273

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments:

ICPMS METALS BY COLLISION/REACTION CELL.

TMG 9-5-13

JSI 8/9/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13065	W3F0233-01	Surface Water	07-Jun-13 09:40	DH	11-Jun-2013
13069	W3F0233-02	Surface Water	07-Jun-13 11:45	DH	11-Jun-2013
13071	W3F0233-03	Surface Water	07-Jun-13 12:00	DH	11-Jun-2013
13073	W3F0233-04	Surface Water	07-Jun-13 13:25	DH	11-Jun-2013
13075	W3F0233-05	Surface Water	07-Jun-13 14:50	DH	11-Jun-2013
13082	W3F0233-06	Surface Water	08-Jun-13 09:30	DH	11-Jun-2013
13094	W3F0233-07	Surface Water	08-Jun-13 17:00	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C).
The guidelines do not pertain to nitric-preserved metals.

Default Cooler (Received Temperature: 8.2°C)

Labnumber	Container	Client ID
W3F0233-01 A	Raw HDPE	13065
W3F0233-01 C	Sulfuric HDPE	13065
W3F0233-01 E	Nitric HDPE	13065
W3F0233-02 B	Raw HDPE	13069
W3F0233-02 D	Filtered nitric HDPE	13069
W3F0233-03 A	Raw HDPE	13071
W3F0233-03 C	Sulfuric HDPE	13071
W3F0233-03 E	Nitric HDPE	13071
W3F0233-04 B	Raw HDPE	13073
W3F0233-04 D	Filtered nitric HDPE	13073
W3F0233-05 A	Raw HDPE	13075
W3F0233-05 C	Sulfuric HDPE	13075
W3F0233-05 E	Nitric HDPE	13075
W3F0233-06 B	Raw HDPE	13082
W3F0233-06 D	Filtered nitric HDPE	13082
W3F0233-07 A	Raw HDPE	13094
W3F0233-07 C	Sulfuric HDPE	13094
W3F0233-07 E	Nitric HDPE	13094

Labnumber	Container	Client ID
W3F0233-01 B	Raw HDPE	13065
W3F0233-01 D	Filtered nitric HDPE	13065
W3F0233-02 A	Raw HDPE	13069
W3F0233-02 C	Sulfuric HDPE	13069
W3F0233-02 E	Nitric HDPE	13069
W3F0233-03 B	Raw HDPE	13071
W3F0233-03 D	Filtered nitric HDPE	13071
W3F0233-04 A	Raw HDPE	13073
W3F0233-04 C	Sulfuric HDPE	13073
W3F0233-04 E	Nitric HDPE	13073
W3F0233-05 B	Raw HDPE	13075
W3F0233-05 D	Filtered nitric HDPE	13075
W3F0233-06 A	Raw HDPE	13082
W3F0233-06 C	Sulfuric HDPE	13082
W3F0233-06 E	Nitric HDPE	13082
W3F0233-07 B	Raw HDPE	13094
W3F0233-07 D	Filtered nitric HDPE	13094

68

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13065**
SVL Sample ID: **W3F0233-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 09:40
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.057	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:35	
EPA 353.2	**Nitrate/Nitrite as N**	1.92		mg/L	0.050	0.010		W325250	NCS	06/25/13 10:08	
SM 2320B/2310B	**Bicarbonate**	898		mg/L as CaCO3	1.0			W324363	DKS	06/14/13 13:49	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 13:49	
SM 2320B/2310B	**Total Alkalinity**	898	J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 13:49	
SM 2540 C	**Total Diss. Solids**	934		mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	7.7	J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	**Phosphorus**	0.230		mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	15.4	J	mg/L	5.00	1.52	25	W326250	AEW	06/27/13 12:22	D2
EPA 300.0	**Fluoride**	1.06	J	mg/L	0.10	0.02		W326250	AEW	06/27/13 12:10	
EPA 300.0	**Sulfate as SO4**	59.5	J	mg/L	7.50	1.65	25	W326250	AEW	06/27/13 12:22	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMP 9-5-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

69

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13069**
SVL Sample ID: **W3F0233-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 11:45
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.319 J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:37	
EPA 353.2	**Nitrate/Nitrite as N**	0.089 J	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:09	
SM 2320B/2310B	**Bicarbonate**	727 J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 13:55	
SM 2320B/2310B	Carbonate	< 1.0 UJ	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 13:55	
SM 2320B/2310B	**Total Alkalinity**	727 J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 13:55	
SM 2540 C	**Total Diss. Solids**	775	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	3.5 J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	**Phosphorus**	4.94	mg/L	0.100	0.047	10	W326031	SVL\a	06/25/13 12:49	D2
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	14.2 J	mg/L	5.00	1.52	25	W326250	AEW	06/27/13 12:46	D2
EPA 300.0	**Fluoride**	0.63 J	mg/L	0.10	0.02		W326250	AEW	06/27/13 12:34	
EPA 300.0	**Sulfate as SO4**	51.9 J	mg/L	7.50	1.65	25	W326250	AEW	06/27/13 12:46	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TM 9-5-13

JB 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13071**
SVL Sample ID: **W3F0233-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 12:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.055	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:38	
EPA 353.2	**Nitrate/Nitrite as N**	3.58		mg/L	0.050	0.010		W325250	NCS	06/25/13 10:11	
SM 2320B/2310B	**Bicarbonate**	421		mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:01	
SM 2320B/2310B	**Carbonate**	44.2		mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:01	
SM 2320B/2310B	**Total Alkalinity**	466		mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:01	
SM 2540 C	**Total Diss. Solids**	1490		mg/L	40			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.0	J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	**Phosphorus**	0.507	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	528	J	mg/L	10.0	3.05	50	W326250	AEW	06/27/13 13:10	D2
EPA 300.0	**Fluoride**	0.93	J	mg/L	0.50	0.08	5	W326250	AEW	06/27/13 12:58	D1
EPA 300.0	**Sulfate as SO4**	146	J	mg/L	1.50	0.33	5	W326250	AEW	06/27/13 12:58	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 9-5-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13073**
SVL Sample ID: **W3F0233-04 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 13:25
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.081	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:39	
EPA 353.2	**Nitrate/Nitrite as N**	0.745	J	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:12	
SM 2320B/2310B	**Bicarbonate**	511	J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:06	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:06	
SM 2320B/2310B	**Total Alkalinity**	511	J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:06	
SM 2540 C	**Total Diss. Solids**	609	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.6	J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	**Phosphorus**	0.096	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	41.2	J	mg/L	5.00	1.52	25	W326250	AEW	06/27/13 13:58	D2
EPA 300.0	**Fluoride**	0.43	J	mg/L	0.10	0.02		W326250	AEW	06/27/13 13:46	
EPA 300.0	**Sulfate as SO4**	50.2	J	mg/L	7.50	1.65	25	W326250	AEW	06/27/13 13:58	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMJ 9-5-13

JSI 8/7/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13075**
SVL Sample ID: **W3F0233-05 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 07-Jun-13 14:50
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.070	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:46	
EPA 353.2	**Nitrate/Nitrite as N**	0.790		mg/L	0.050	0.010		W325250	NCS	06/25/13 10:13	
SM 2320B/2310B	**Bicarbonate**	526		mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:11	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:11	
SM 2320B/2310B	**Total Alkalinity**	526	J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:11	
SM 2540 C	**Total Diss. Solids**	627	J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.4	J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	**Phosphorus**	0.111	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	27.8	J	mg/L	5.00	1.52	25	W326250	AEW	06/27/13 14:22	D2
EPA 300.0	**Fluoride**	0.44	J	mg/L	0.10	0.02		W326250	AEW	06/27/13 14:10	
EPA 300.0	**Sulfate as SO4**	55.1	J	mg/L	7.50	1.65	25	W326250	AEW	06/27/13 14:22	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

9-5-2013

JSI 8/9/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13082**
SVL Sample ID: **W3F0233-06 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 09:30
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.097 J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:47	
EPA 353.2	**Nitrate/Nitrite as N**	1.58	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:15	
SM 2320B/2310B	**Bicarbonate**	879	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:15	
SM 2320B/2310B	Carbonate	< 1.0 UJ	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:15	
SM 2320B/2310B	**Total Alkalinity**	879 J	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:15	
SM 2540 C	**Total Diss. Solids**	932 J	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.0 J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	**Phosphorus**	0.286 J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	17.6 J	mg/L	5.00	1.52	25	W326250	AEW	06/27/13 14:46	D2
EPA 300.0	**Fluoride**	0.84 J	mg/L	0.10	0.02		W326250	AEW	06/27/13 14:34	
EPA 300.0	**Sulfate as SO4**	60.9 J	mg/L	7.50	1.65	25	W326250	AEW	06/27/13 14:46	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMG 9-5-2013

JSI 8/7/2013

74

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0233**
Reported: 10-Jul-13 12:38

Client Sample ID: **13094**
SVL Sample ID: **W3F0233-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 17:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030 UJ	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:49	
EPA 353.2	**Nitrate/Nitrite as N**	0.441 J	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:22	
SM 2320B/2310B	**Bicarbonate**	284	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:21	
SM 2320B/2310B	**Carbonate**	23.1	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:21	
SM 2320B/2310B	**Total Alkalinity**	307	mg/L as CaCO3	1.0			W324363	DKS	06/14/13 14:21	
SM 2540 C	**Total Diss. Solids**	353	mg/L	10			W324211	JMS	06/12/13 14:44	
SM 4500-O-G	**Dissolved Oxygen**	8.2 J	mg/L				W324186	PJ	06/11/13 18:17	H5
SM 4500-P-E	Phosphorus	< 0.010 UJ	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	10.5 J	mg/L	0.20	0.06		W326250	AEW	06/27/13 14:58	M2
EPA 300.0	**Fluoride**	0.32 J	mg/L	0.10	0.02		W326250	AEW	06/27/13 14:58	
EPA 300.0	**Sulfate as SO4**	42.4 J	mg/L	0.30	0.07		W326250	AEW	06/27/13 14:58	M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMJ 9-5-2013

JS 8/7/2013

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES

SDG No.: W3F0235 Method Type: SOW No.:

Contract: Lab Code: SVL Case No.: SAS No.:

Lab Sample ID	Client Sample ID	QC Description
W324272-MS1	13058S	Matrix Spike
W324272-MSD1	13058SD	Matrix Spike Duplicate
W324282-MS	13058S	Matrix Spike
W324282-MSD	13058SD	Matrix Spike Duplicate
W3F0235-01	13058	
W3F0235-02	13059	
W3F0235-03	13096	
W3F0235-04	TS-1-2	
W3F0235-05	TE-1-2	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments: MONSANTO

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Kirby L. Gray Name: KIRBY L. GRAY

Date: 06/26/2013 Title: TECHNICAL DIRECTOR

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0235 **Method Type:**

Sample ID: W3F0235-01 **Client ID:** 13058

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	1040000	ug/L			P	128	Optima A	13174B-W324272
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13174B-W324272
7440-70-2	Calcium	155000	ug/L			P	15.0	Optima A	13174B-W324272
7439-95-4	Magnesium	160000	ug/L			P	22.0	Optima A	13174B-W324272
7439-96-5	Manganese	49.6	ug/L			P	1.4	Optima A	13174B-W324272
7439-98-7	Molybdenum	4.5	ug/L	J		P	1.8	Optima A	13174B-W324272
7440-09-7	Potassium	11600	ug/L			P	140	Optima A	13174B-W324272
7782-49-2	Selenium	27.0	ug/L		~~E~~ J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	31300	ug/L			P	110	Optima A	13174B-W324272
7440-62-2	Vanadium	2.4	ug/L	J		P	1.5	Optima A	13174B-W324272
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13174B-W324272

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMB 10/3/13

JSI 10/31/2013

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0235 **Method Type:**

Sample ID: W3F0235-02 **Client ID:** 13059

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	908000	ug/L			P	128	Optima A	13174B-W324272
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13174B-W324272
7440-70-2	Calcium	187000	ug/L			P	15.0	Optima A	13174B-W324272
7439-95-4	Magnesium	107000	ug/L			P	22.0	Optima A	13174B-W324272
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13174B-W324272
7439-98-7	Molybdenum	2.6	ug/L	J		P	1.8	Optima A	13174B-W324272
7440-09-7	Potassium	8840	ug/L			P	140	Optima A	13174B-W324272
7782-49-2	Selenium	73.0	ug/L		~~E~~ ~~J~~	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	39500	ug/L			P	110	Optima A	13174B-W324272
7440-62-2	Vanadium	3.5	ug/L	J		P	1.5	Optima A	13174B-W324272
7440-66-6	Zinc	2.5	ug/L	U		P	2.5	Optima A	13174B-W324272

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

10-3-13

JSI 10/3/13

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0235 **Method Type:**

Sample ID: W3F0235-03 **Client ID:** 13096

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	546000	ug/L			P	128	Optima A	13174B-W324272
7440-43-9	Cadmium	3.6	ug/L			P	0.70	Optima A	13174B-W324272
7440-70-2	Calcium	123000	ug/L			P	15.0	Optima A	13174B-W324272
7439-95-4	Magnesium	58000	ug/L			P	22.0	Optima A	13174B-W324272
7439-96-5	Manganese	1.4	ug/L	U		P	1.4	Optima A	13174B-W324272
7439-98-7	Molybdenum	36.6	ug/L			P	1.8	Optima A	13174B-W324272
7440-09-7	Potassium	6510	ug/L			P	140	Optima A	13174B-W324272
7782-49-2	Selenium	12.0	ug/L		~~E~~ J	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	50900	ug/L			P	110	Optima A	13174B-W324272
7440-62-2	Vanadium	63.8	ug/L			P	1.5	Optima A	13174B-W324272
7440-66-6	Zinc	11.4	ug/L			P	2.5	Optima A	13174B-W324272

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMS 10-3-2013

JSI 10/3/2013

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0235 **Method Type:**

Sample ID: W3F0235-05 **Client ID:** TE-1-2

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	619000	ug/L			P	128	Optima A	13174B-W324272
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13174B-W324272
7440-70-2	Calcium	111000	ug/L			P	15.0	Optima A	13174B-W324272
7439-95-4	Magnesium	83300	ug/L			P	22.0	Optima A	13174B-W324272
7439-96-5	Manganese	872	ug/L			P	1.4	Optima A	13174B-W324272
7439-98-7	Molybdenum	3.6	ug/L	J		P	1.8	Optima A	13174B-W324272
7440-09-7	Potassium	4630	ug/L			P	140	Optima A	13174B-W324272
7782-49-2	Selenium	0.40	ug/L	J	~~J~~ ~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	35200	ug/L			P	110	Optima A	13174B-W324272
7440-62-2	Vanadium	2.6	ug/L	J		P	1.5	Optima A	13174B-W324272
7440-66-6	Zinc	16.5	ug/L			P	2.5	Optima A	13174B-W324272

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMB 10-3-13

JSI 10/3/13

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: GOLDER ASSOCIATES **SDG No.:** W3F0235 **Method Type:**

Sample ID: W3F0235-04 **Client ID:** TS-1-2

Contract: **Lab Code:** SVL **Case No.:** **SAS No.:**

Matrix: WATER **Date Received:** 6/11/2013 **Level:** LOW

% Solids: **Total/Dissolved:** Total Recoverable

CAS No.	Analyte	Concentration	Units	C	Qual	M	DL	Instrument ID	Analytical Run
E-11778	Hardness	721000	ug/L			P	128	Optima A	13174B-W324272
7440-43-9	Cadmium	0.70	ug/L	U		P	0.70	Optima A	13174B-W324272
7440-70-2	Calcium	125000	ug/L			P	15.0	Optima A	13174B-W324272
7439-95-4	Magnesium	99500	ug/L			P	22.0	Optima A	13174B-W324272
7439-96-5	Manganese	1790	ug/L			P	1.4	Optima A	13174B-W324272
7439-98-7	Molybdenum	1.8	ug/L	U		P	1.8	Optima A	13174B-W324272
7440-09-7	Potassium	4010	ug/L			P	140	Optima A	13174B-W324272
7782-49-2	Selenium	0.26	ug/L	U	~~UJ~~ ~~E~~	MS	0.26	AGILENT 7700 ICPMS	13F25h00
7440-23-5	Sodium	48100	ug/L			P	110	Optima A	13174B-W324272
7440-62-2	Vanadium	1.8	ug/L	J		P	1.5	Optima A	13174B-W324272
7440-66-6	Zinc	3.3	ug/L	J		P	2.5	Optima A	13174B-W324272

Color Before: COLORLESS **Clarity Before:** CLEAR **Texture:**

Color After: COLORLESS **Clarity After:** CLEAR **Artifacts:**

Comments: ICPMS METALS BY COLLISION/REACTION CELL.

TMB 10-3-2013

JSI 10/3/2013

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0235**
Reported: 09-Jul-13 11:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
13058	W3F0235-01	Ground Water	06-Jun-13 10:00	DH	11-Jun-2013
13059	W3F0235-02	Ground Water	06-Jun-13 11:40	DH	11-Jun-2013
13096	W3F0235-03	Ground Water	08-Jun-13 18:10	DH	11-Jun-2013
TS-1-2	W3F0235-04	Ground Water	09-Jun-13 00:00	DH	11-Jun-2013
TE-1-2	W3F0235-05	Ground Water	09-Jun-13 00:00	DH	11-Jun-2013

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested. Non-Detects are reported at the MDL.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C).
The guidelines do not pertain to nitric-preserved metals.

Default Cooler (Received Temperature: 8.4°C)

Labnumber	Container	Client ID	Labnumber	Container	Client ID
W3F0235-01 A	Raw HDPE	13058	W3F0235-01 B	Raw HDPE	13058
W3F0235-01 C	Sulfuric HDPE	13058	W3F0235-01 D	Nitric HDPE	13058
W3F0235-02 A	Raw HDPE	13059	W3F0235-02 B	Raw HDPE	13059
W3F0235-02 C	Sulfuric HDPE	13059	W3F0235-02 D	Nitric HDPE	13059
W3F0235-03 A	Raw HDPE	13096	W3F0235-03 B	Raw HDPE	13096
W3F0235-03 C	Sulfuric HDPE	13096	W3F0235-03 D	Nitric HDPE	13096
W3F0235-04 A	Raw HDPE	TS-1-2	W3F0235-04 C	Sulfuric HDPE	TS-1-2
W3F0235-04 D	Nitric HDPE	TS-1-2	W3F0235-05 A	Raw HDPE	TE-1-2
W3F0235-05 C	Sulfuric HDPE	TE-1-2	W3F0235-05 D	Nitric HDPE	TE-1-2

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0235**
Reported: 09-Jul-13 11:51

Client Sample ID: **13058**
SVL Sample ID: **W3F0235-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 06-Jun-13 10:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	Ammonia as N	< 0.030	UJ	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:50	
EPA 353.2	**Nitrate/Nitrite as N**	1.98	J	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:23	
SM 2320B/2310B	**Bicarbonate**	914	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 12:51	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 12:51	
SM 2320B/2310B	**Total Alkalinity**	914	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 12:51	
SM 2540 C	**Total Diss. Solids**	1180	J	mg/L	10			W324286	RS	06/13/13 09:15	
SM 4500-O-G	**Dissolved Oxygen**	7.0	J	mg/L				W324187	PJ	06/11/13 18:20	H5
SM 4500-P-E	**Phosphorus**	0.071	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	39.7	J	mg/L	5.00	1.52	25	W326251	AEW	06/27/13 11:23	D2
EPA 300.0	**Fluoride**	0.83		mg/L	0.10	0.02		W326251	AEW	06/27/13 11:13	
EPA 300.0	**Sulfate as SO4**	151		mg/L	7.50	1.65	25	W326251	AEW	06/27/13 11:23	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray
Technical Director

10-3-2013

JSI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0235**
Reported: 09-Jul-13 11:51

Client Sample ID: **13059**
SVL Sample ID: **W3F0235-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 06-Jun-13 11:40
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	Ammonia as N	< 0.030	UJ	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:51	
EPA 353.2	**Nitrate/Nitrite as N**	7.29	J	mg/L	0.150	0.030	3	W325250	NCS	06/25/13 10:25	D2,M3
SM 2320B/2310B	**Bicarbonate**	694	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 12:57	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 12:57	
SM 2320B/2310B	**Total Alkalinity**	694	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 12:57	
SM 2540 C	**Total Diss. Solids**	1140	J	mg/L	10			W324286	RS	06/13/13 09:15	
SM 4500-O-G	**Dissolved Oxygen**	7.1	J	mg/L				W324187	PJ	06/11/13 18:20	H5
SM 4500-P-E	**Phosphorus**	0.267	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	51.6	J	mg/L	5.00	1.52	25	W326251	AEW	06/27/13 11:43	D2
EPA 300.0	**Fluoride**	0.11	J	mg/L	0.10	0.02		W326251	AEW	06/27/13 11:33	
EPA 300.0	**Sulfate as SO4**	207	J	mg/L	7.50	1.65	25	W326251	AEW	06/27/13 11:43	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

JCI 10/3/13

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0235**
Reported: 09-Jul-13 11:51

Client Sample ID: **13096**
SVL Sample ID: **W3F0235-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jun-13 18:10
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	Ammonia as N	< 0.030	UJ	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:53	
EPA 353.2	**Nitrate/Nitrite as N**	3.74	J	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:26	
SM 2320B/2310B	**Bicarbonate**	439	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:03	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:03	
SM 2320B/2310B	**Total Alkalinity**	439	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:03	
SM 2540 C	**Total Diss. Solids**	753	J	mg/L	10			W324286	RS	06/13/13 09:15	
SM 4500-O-G	**Dissolved Oxygen**	7.9	J	mg/L				W324187	PJ	06/11/13 18:20	H5
SM 4500-P-E	**Phosphorus**	0.375	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	56.5	J	mg/L	5.00	1.52	25	W326251	AEW	06/27/13 12:03	D2
EPA 300.0	**Fluoride**	0.46	↓	mg/L	0.10	0.02		W326251	AEW	06/27/13 11:53	
EPA 300.0	**Sulfate as SO4**	129	↓	mg/L	7.50	1.65	25	W326251	AEW	06/27/13 12:03	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

JSI 10/3/13

45

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0235**
Reported: 09-Jul-13 11:51

Client Sample ID: **TS-1-2**
SVL Sample ID: **W3F0235-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 09-Jun-13 00:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.150	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:54	
EPA 353.2	Nitrate/Nitrite as N	< 0.050	UJ	mg/L	0.050	0.010		W325250	NCS	06/25/13 10:28	
SM 2320B/2310B	**Bicarbonate**	691	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:08	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:08	
SM 2320B/2310B	**Total Alkalinity**	691	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:08	
SM 2540 C	**Total Diss. Solids**	853	J	mg/L	10			W324286	RS	06/13/13 09:15	
SM 4500-P-E	**Phosphorus**	0.138	J	mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	1.36	J	mg/L	0.20	0.06		W326251	AEW	06/27/13 12:33	
EPA 300.0	**Fluoride**	0.54	↓	mg/L	0.10	0.02		W326251	AEW	06/27/13 12:33	
EPA 300.0	**Sulfate as SO4**	4.41		mg/L	0.30	0.07		W326251	AEW	06/27/13 12:33	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

10-3-2013

JSI 10/3/13

46

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Golder Associates (WA)
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052-3333

Project Name: Monsanto Level 3 / 913-1101-002
Work Order: **W3F0235**
Reported: 09-Jul-13 11:51

Client Sample ID: **TE-1-2**
SVL Sample ID: **W3F0235-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 09-Jun-13 00:00
Received: 11-Jun-13
Sampled By: DH

Method	Analyte	Result	Q	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	**Ammonia as N**	0.077	J	mg/L	0.030	0.014		W325259	RHW	06/27/13 10:55	
EPA 353.2	**Nitrate/Nitrite as N**	0.544		mg/L	0.050	0.010		W325250	NCS	06/25/13 10:29	
SM 2320B/2310B	**Bicarbonate**	527		mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:13	
SM 2320B/2310B	Carbonate	< 1.0	UJ	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:13	
SM 2320B/2310B	**Total Alkalinity**	527	J	mg/L as CaCO3	1.0			W324361	DKS	06/14/13 13:13	
SM 2540 C	**Total Diss. Solids**	738		mg/L	10			W324286	RS	06/13/13 09:15	
SM 4500-P-E	**Phosphorus**	0.163		mg/L	0.010	0.005		W326028	SVL\a	06/24/13 15:12	
Anions by Ion Chromatography											
EPA 300.0	**Chloride**	79.3	J	mg/L	5.00	1.52	25	W326251	AEW	06/27/13 13:02	D2,M3
EPA 300.0	**Fluoride**	0.54		mg/L	0.10	0.02		W326251	AEW	06/27/13 12:52	
EPA 300.0	**Sulfate as SO4**	46.7		mg/L	0.30	0.07		W326251	AEW	06/27/13 12:52	M3

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Kirby Gray

Kirby Gray
Technical Director

TMS 10-3-2013

JSI 10/3/2013

ATTACHMENT 3
LABORATORY NARRATIVE AND CHAIN-OF-CUSTODY DOCUMENTATION

Chain of Custody Record

W3F0043

Golder Associates

Project No.	Site/Location
913-1101-002	MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRESERVED				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13001	5/30/13	1430	GRAB	GW		3	1	1	1				13278		1.8°C MONSANTO ANNUAL SAMPLING LIST
13002		1455													
13003		1510													
13004		1600													
13005		1640													
13006		1740													
13007		1750													
13008	5/31/13	0925													
13009		1000													
13010		1030													

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/3/13 1500	Flores, SVL 6/4/13 11:50			

Remarks (attachments if necessary)
* TIME ON SAMPLE ID READS 17:45 CF 6/4/13

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C FLORES		Log-in Date 6/4/2013
Received By (Signature) C Flores /ces		356
Case Number N/A	Sample Delivery Group No. W3F0043	NRAS Number N/A

Remarks:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos. N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists Present/Absent*
4. Airbill Airbill/Sticker Present/Absent*
5. Airbill No. 795786348187
6. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain of Custody Record
7. Sample Condition Intact/Broken*/Leaking
8. Cooler Temperature Indicator Bottle Present/Absent*
9. Cooler Temperature 1.8°C
10. Does information on Chain of Custody Records and sample tags agree? Yes/No*
11. Date Received at Lab 6/4/2013
12. Time Received 11:50

EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
13001	N/A	N/A	13001	INTACT
13002	N/A	N/A	13002	INTACT
13003	N/A	N/A	13003	INTACT
13004	N/A	N/A	13004	INTACT
13005	N/A	N/A	13005	INTACT
13006	N/A	N/A	13006	INTACT
13007	N/A	N/A	13007	INTACT
13008	N/A	N/A	13008	INTACT
13009	N/A	N/A	13009	INTACT
13010	N/A	N/A	13010	INTACT
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Sample Transfer

Fraction	N/A	Fraction	N/A
Area #	N/A	Area #	N/A
By	N/A	By	N/A
On	N/A	On	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No.	N/A
Date 06/10/2013	N/A	Logbook Page No.	N/A

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

358

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/4/13 By: [illegible]

SVL Work No: W3F0043

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				
2	Date and time of receipt at lab	✓				6/4/13 11:50
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	✓				Temp. 1.8 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13001**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$265.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1) **13001**	7) **13007**		
2) **13002**	8) **13008**		
3) **13003**	9) **13009**		
4) **13004**	10) **13010**		
5) **13005**			
6) **13006**			

13001	**13010**
First Sample in SDG	Last Sample in SDG
06/04/2013	**06/04/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CRSeery Date 06/04/2013

Chain of Custody Record

361

W3F0045

Golder Associates

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (Signature) [signature] DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRESERVED				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials) 2.6°C
13011	5/31/13	1305	GRAB	GW		3	✓	✓	✓				~~13276~~		MONSANTO ANNUAL SAMPLING LIST
13012	↓	1345	↓	↓			↓	↓	↓				13277		
13013		1445													
13014		1515													
13015		1540													
13016		1625													
~~13017~~															
13018		1745													
13019		1615													
13020	↓	1850													
13021	6/1/13	0945													
← 13022	↓	1615	↓	↓			↓	↓	↓						

Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)
[signature] /GOLDER	6/3/13 1500	[signature] Flores, SVL 6/4/13 11:30			
Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)
Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Date/Time	Remarks (attachments if necessary)	
				* TIME ON SAMPLE ID READS 1610 OF 6/4/13	

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C FLORES		Log-in Date 6/4/2013
Received By (Signature) C Flores/CFS		362
Case Number N/A	Sample Delivery Group No. W3F0045	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13011	N/A	N/A	13011	INTACT
2. Custody Seal Nos.	N/A	13012	N/A	N/A	13012	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13013	N/A	N/A	13013	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13014	N/A	N/A	13014	INTACT
5. Airbill No.	795786348198	13015	N/A	N/A	13015	INTACT
6. Sample Tags	Present/Absent*	13016	N/A	N/A	13016	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13017	N/A	N/A	13017	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	13018	N/A	N/A	13018	INTACT
8. Cooler Temperature Indicator Bottle	Present/Absent*	13019	N/A	N/A	13019	INTACT
9. Cooler Temperature	2.6°C	13020	N/A	N/A	13020	INTACT
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	13021	N/A	N/A	13021	INTACT
11. Date Received at Lab	6/4/2013	13022	N/A	N/A	13022	INTACT
12. Time Received	11:30	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No.	N/A
Date 06/10/2013	N/A	Logbook Page No.	N/A

FORM DC-1

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13011**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$265.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1)	**13011**	7)	**13018**		
2)	**13012**	8)	**13019**		
3)	**13013**	9)	**13020**		
4)	**13014**	10)	**13021**		
5)	**13015**	11)	**13022**		
6)	**13016**				

13011	**13022**
First Sample in SDG	Last Sample in SDG
06/04/2013	**06/04/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CP Seery Date 06/04/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

364

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/4/13 By: CR Levy

SVL Work No: W3F0045

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				MONSANTO –
2	Date and time of receipt at lab	✓				6/4/13 11:30
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	✓				Temp. 2.6 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Chain of Custody Record

W3F0046

Golder Associates

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative: HNO3	Amount/Preservative: H2SO4	Amount/Preservative: UNPRESERVED				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials) 2.2°C
13023	6/1/13	1700	GRAB	GW		3	1	1	1				13279		MONSANTO ANNUAL SAMPLING LIST
13024	↓	1810	↓	↓		↓	↓	↓	↓						
13025	↓	1835													
13026	6/2/13	1005													
13027	↓	1235													
13028		1340													
13029		1645													
13030	↓	1745													
13031	6/3/13	1005													
13032	↓	1115	↓	↓		↓	↓	↓	↓						

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/3/13 1500	6/4/13 11:40			
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)	

IP3 1211/73200

Lab Name SVL ANALYTICAL						Page 1 of 1
Received By (Print Name) C FLORES						Log-in Date 6/4/2013
Received By (Signature) C Flores / CRS						315
Case Number N/A		Sample Delivery Group No. W3F0046				NRAS Number N/A
Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13023	N/A	N/A	13023	INTACT
2. Custody Seal Nos.	N/A	13024	N/A	N/A	13024	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13025	N/A	N/A	13025	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13026	N/A	N/A	13026	INTACT
5. Airbill No.	800706096635	13027	N/A	N/A	13027	INTACT
6. Sample Tags	Present/Absent*	13028	N/A	N/A	13028	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13029	N/A	N/A	13029	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	13030	N/A	N/A	13030	INTACT
8. Cooler Temperature Indicator Bottle	Present/Absent*	13031	N/A	N/A	13031	INTACT
9. Cooler Temperature	2.2°C	13032	N/A	N/A	13032	INTACT
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/4/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	11:40	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By [signature]	N/A	Logbook No.	N/A
Date 06/10/2013	N/A	Logbook Page No.	N/A

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

317

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/4/13 By: [signature]

SVL Work No: W3F0046

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				
2	Date and time of receipt at lab	✓				6/4/13 11:40
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	✓				Temp. 2.2 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13023**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$265.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1)	**13023**	7)	**13029**		
2)	**13024**	8)	**13030**		
3)	**13025**	9)	**13031**		
4)	**13026**	10)	**13032**		
5)	**13027**				
6)	**13028**				

13023	**13032**
First Sample in SDG	Last Sample in SDG
06/04/2013	**06/04/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CRSeery Date 06/04/2013

Chain of Custody Record

W3F0207

Golder Associates

6.2°C

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (Signature) DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	Amount/Preservative H2SO4	Amount/Preservative UNPRESERVED				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13033	6/3/13	1145	GRAB	GW		3	1	1	1				13282		MONSANTO ANNUAL SAMPLING LIST
13035		1235													
13036		1255													
13037		1315													
13039	6/4/13	0930													
13040		1200													
13041		1300													
13042		1440													
13043		1600													
13045		1655													
13046		1750													

Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)
GOLDER	6/6/13 1400	Brenda Bonn GOLDER ASSOC.	Brenda Bonn GOLDER ASSOC.	6/10/13 1500	Flores, SVL 6/11/13 10:40
Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)
Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Date/Time	Remarks (attachments if necessary) COC SEAL BROKEN, SAMPLES RE-ICED BY B. BORER. NO NEW COC SEAL AFFIXED.	

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C Flores/CFS		452
Case Number N/A	Sample Delivery Group No. 3F0207	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13033	N/A	N/A	13033	INTACT
2. Custody Seal Nos.	N/A	13035	N/A	N/A	13035	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13036	N/A	N/A	13036	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13037	N/A	N/A	13037	INTACT
5. Airbill No.	795788414438	13039	N/A	N/A	13039	INTACT
6. Sample Tags	Present/Absent*	13040	N/A	N/A	13040	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13041	N/A	N/A	13041	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	13042	N/A	N/A	13042	INTACT
8. Cooler Temperature Indicator Bottle	Present/Absent*	13043	N/A	N/A	13043	INTACT
9. Cooler Temperature	6.2°C	13045	N/A	N/A	13045	INTACT
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	13046	N/A	N/A	13046	INTACT
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	10:40	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No. N/A
Date 06/14/2013	N/A	Logbook Page No. N/A

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13033**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$265.63 / $8.00** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1)	**13033**	7)	**13041**		
2)	**13035**	8)	**13042**		
3)	**13036**	9)	**13043**		
4)	**13037**	10)	**13045**		
5)	**13039**	11)	**13046**		
6)	**13040**				

13033	**13046**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CR Seery Date 06/11/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

454

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: CR Berry

SVL Work No: W2F0207

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 10:40
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	Q6				Temp. 6.2°C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES - SEAL BRKN - SEE COC
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments:

Chain of Custody Record

W3F0208

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (*Signature*) DEREK HOZOM

Golder Associates

5.4°C

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRESERVED				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13047	6/4/13	1810	GRAB	GW		3	1	1	1				13283		MONSANTO ANNUAL SAMPLING LIST
13048	6/5/13	0900													
13049		0950													
13056		1100													
13051		1220													
13052		1340													
13053		1630													
13054		1755													
13055		1805													
13056		1820													
13057		1845													

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/6/13 1400	GOLDER ASSOC	GOLDER ASSOC.	6/10/13 1500	6/11/13 10:50
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary) COC SEAL BROKEN, SAMPLES RE-ICED, RE-PACKAGED & SENT W/OUT NEW COC SEAL AFFIXED.	

IP3 1211/73200

SAMPLE LOG-IN SHEET

Lab Name SVL ANALYTICAL		Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C Flores / CPS		448
Case Number N/A	Sample Delivery Group No. 3F0208	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13047	N/A	N/A	13047	INTACT
2. Custody Seal Nos.	N/A	13048	N/A	N/A	13048	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13049	N/A	N/A	13049	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13050	N/A	N/A	13050	INTACT
5. Airbill No.	801523241112	13051	N/A	N/A	13051	INTACT
6. Sample Tags	Present/Absent*	13052	N/A	N/A	13052	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13053	N/A	N/A	13053	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	13054	N/A	N/A	13054	INTACT
8. Cooler Temperature Indicator Bottle	Present/Absent*	13055	N/A	N/A	13055	INTACT
9. Cooler Temperature	5.4°C	13056	N/A	N/A	13056	INTACT
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	13057	N/A	N/A	13057	INTACT
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	10:50	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirka Geary	N/A	Logbook No.	N/A
Date 06/14/2013	N/A	Logbook Page No.	N/A

FORM DC-1

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13047**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1)	**13047**	7)	**13053**		
2)	**13048**	8)	**13054**		
3)	**13049**	9)	**13055**		
4)	**13050**	10)	**13056**		
5)	**13051**	11)	**13057**		
6)	**13052**				

13047	**13057**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CP Sewy Date 06/11/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

450

Date of acceptance: 6/11/13 By: CR Sevy

SVL Work No: L03F0208

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 10:50
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	✓				Temp. 5.4 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES. SEAL BRKN - SEE COC
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Chain of Custody Record

W3F0223

Golder Associates

5.4°C

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H-504	Unpres.				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13060	6/6/13	1150	GRAB	GW		3	1	1	1				13255		MONSANTO ANNUAL SAMPLING LIST
13061	↓	1500	↓	↓		↓	1	1	1						
13064	6/7/13	0925		SW		4	2	1	1						
13068	↓	1130		↓		↓	2	1	1						
13095	6/8/13	1745		GW		3	1	1	1						
13097	↓	1830		↓		↓	1	1	1						
13098	↓	1845		↓		↓	1	1	1						
13099	6/9/13	1000		↓		↓	1	1	1						
13101	↓	1415		SW		4	2	1	1						
13103	↓	1500	↓	GW		3	1	1	1						

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GWDK	6/10/13 1000	Flores, SVL 6/11/13 13:30			
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)	

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C Flores / GPS		563
Case Number N/A	Sample Delivery Group No. 3F0223	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13060	N/A	N/A	13060	INTACT
2. Custody Seal Nos.	N/A	13061	N/A	N/A	13061	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13064	N/A	N/A	13064	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13068	N/A	N/A	13068	INTACT
5. Airbill No.	841017614548	13095	N/A	N/A	13095	INTACT
6. Sample Tags	Present/Absent*	13097	N/A	N/A	13097	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13098	N/A	N/A	13098	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	13099	N/A	N/A	13099	INTACT
8. Cooler Temperature Indicator Bottle	Present/Absent*	13101	N/A	N/A	13101	INTACT
9. Cooler Temperature	5.4°C	13103	N/A	N/A	13103	INTACT
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	13:30	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No. N/A	
Date 06/14/2013	N/A	Logbook Page No. N/A	

564

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13060**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63 / $255.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1)	**13060**	7)	**13098**		
2)	**13061**	8)	**13099**		
3)	**13064**	9)	**13101**		
4)	**13068**	10)	**13103**		
5)	**13095**				
6)	**13097**				

13060	**13103**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CR Seery Date 06/11/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

565

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: [illegible]

SVL Work No: W3F0223

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 13:30
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	✓				Temp. 5.4 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Chain of Custody Record

W3F0227

Golder Associates

7.8°C

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRES.				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13063	6/7/13	0850	GRAB	SW		4	2	1	1				13258		MONSANTO ANNUAL SAMPLING LIST
13066		1005													
13067		1040													
13076		1700													
13078		1730													
13079		1745													
13081	6/8/13	0900													

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/10/13 1000	6/11/13 13:10			

Remarks (attachments if necessary)

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C Flores/CFS		6/18
Case Number N/A	Sample Delivery Group No. 3F0227	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13063	N/A	N/A	13063	INTACT
2. Custody Seal Nos.	N/A	13066	N/A	N/A	13066	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13067	N/A	N/A	13067	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13076	N/A	N/A	13076	INTACT
5. Airbill No.	858843146213	13078	N/A	N/A	13078	INTACT
6. Sample Tags	Present/Absent*	13079	N/A	N/A	13079	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13081	N/A	N/A	13081	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	N/A	N/A	N/A	N/A	N/A
8. Cooler Temperature Indicator Bottle	Present/Absent*	N/A	N/A	N/A	N/A	N/A
9. Cooler Temperature	7.8°C	N/A	N/A	N/A	N/A	N/A
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	13:10	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No. N/A
Date 06/19/2013	N/A	Logbook Page No. N/A

~~618~~
619
TAB
07/03/2013

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13063**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63 / $255.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1) **13063**	7) **13081**		
2) **13066**			
3) **13067**			
4) **13076**			
5) **13078**			
6) **13079**			

13063	**13081**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CRSchw Date 06/11/13

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

mab 06/03/2013
~~619~~
620

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: [signature]

SVL Work No: W3F0227

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 1310
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	Qlo				Temp. 7.8 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Chain of Custody Record

W3F0228

450

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Golder Associates

7.4°C

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRESERVED				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13083	4/8/13	1000	GRAB	SW		4	2	1	1				13254		MONSANTO ANNUAL SAMPLE LIST
13084	↓	1100	↓	↓		↓	↓	↓	↓						
13085		1200													
13086		1310													
13087		1355													
13089		1445													
13091	↓	1600	↓	↓		↓	↓	↓	↓						

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/10/13 1000	Felares 6/11/13 14:00 SVL			

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C Flores / CFS		451
Case Number N/A	Sample Delivery Group No. 3F0228	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13083	N/A	N/A	13083	INTACT
2. Custody Seal Nos.	N/A	13084	N/A	N/A	13084	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13085	N/A	N/A	13085	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13086	N/A	N/A	13086	INTACT
5. Airbill No.	858843146246	13087	N/A	N/A	13087	INTACT
6. Sample Tags	Present/Absent*	13089	N/A	N/A	13089	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13091	N/A	N/A	13091	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	N/A	N/A	N/A	N/A	N/A
8. Cooler Temperature Indicator Bottle	Present/Absent*	N/A	N/A	N/A	N/A	N/A
9. Cooler Temperature	7.4°C	N/A	N/A	N/A	N/A	N/A
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	14:00	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No. N/A
Date 06/14/2013	N/A	Logbook Page No. N/A

452

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13083**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63 / $255.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1) **13083**	7) **13091**		
2) **13084**			
3) **13085**			
4) **13086**			
5) **13087**			
6) **13089**			

13083	**13091**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CR Seery Date 06/11/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

453

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: CRSerry

SVL Work No: W3F0228

Item	Description	V	VC	NV	NA	Comments
1	Client or project name					GOLDER
2	Date and time of receipt at lab					6/11/13 14:00
3	Received by					C. FLORES
4	Temperature blank or cooler temperature	Q6				Temp. 7.4 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments:

Chain of Custody Record

1.8 W3F0231

Golder Associates

Project No.	Site/Location
913-1101-002	MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRES.				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13070	6/7/13	1200	GRAB	SW		4	2	1	1				13256		MONSANTO ANNUAL SAMPLING LIST
13072		1200													
13074		1410													
13088	6/8/13	1410													
13090		1505													
* 13092		1615													
13093		1645													

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/10/13 1000	Flores, SVL 6/11/13 14:20			
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)	
				* RAW CONTAINER SAMPLE ID READS 13093 SAMPLE CONTAINERS FOR THIS SAMPLE RELIN'D IN ONE BAG. TIME & DATE ON RAW CONTAINER MATCHES TIME & DATE FOR SAMPLE ID 13092. LF 6/11/13		

IP3 1211/73200

Lab Name SVL ANALYTICAL	SAMPLE LOG-IN SHEET	Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C Flores/CAS		505
Case Number N/A	Sample Delivery Group No. 3F0231	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13070	N/A	N/A	13070	INTACT
2. Custody Seal Nos.	N/A	13072	N/A	N/A	13072	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13074	N/A	N/A	13074	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13088	N/A	N/A	13088	INTACT
5. Airbill No.	858843146235	13090	N/A	N/A	13090	INTACT
6. Sample Tags	Present/Absent*	13092	N/A	N/A	13092	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13093	N/A	N/A	13093	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	N/A	N/A	N/A	N/A	N/A
8. Cooler Temperature Indicator Bottle	Present/Absent*	N/A	N/A	N/A	N/A	N/A
9. Cooler Temperature	7.8°C	N/A	N/A	N/A	N/A	N/A
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	14:20	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kelly Guay	N/A	Logbook No. N/A
Date 06/14/2013	N/A	Logbook Page No. N/A

506

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13070**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63 / $255.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1) **13070**	7) **13093**		
2) **13072**			
3) **13074**			
4) **13088**			
5) **13090**			
6) **13092**			

13070	**13093**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CRSew4 Date 06/11/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

507

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: CRSerry

SVL Work No: W3F0231

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 14:20
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	D6				Temp. 7.8 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓			NP	YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments:

Chain of Custody Record

45

W3F0233
(CF 6/11/13) ~~W3F0223~~

8.2°

Golder Associates

Project No.	Site/Location
913-1101-002	MONSANTO

Samplers: (*Signature*) DEREK HOLCOM

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRES.				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13065	6/7/13	0940	GRAB	SW		4	2	1	1				15257		MONSANTO ANNUAL SAMPLING GST
13069	↓	1145	↓	↓		↓	↓	↓	↓						
13071	↓	1200	↓	↓		↓	↓	↓	↓						
13073	↓	1325	↓	↓		↓	↓	↓	↓						
13075	↓	1450	↓	↓		↓	↓	↓	↓						
13082	6/8/13	0930	↓	↓		↓	↓	↓	↓						
13094	↓	1700	↓	↓		↓	↓	↓	↓						

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/10/13 1000	6/11/13 14:35 Flores SVL			
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)	

IP3 1211/73200

SAMPLE LOG-IN SHEET

Lab Name	SVL ANALYTICAL
Received By (Print Name)	C. FLORES
Log-in Date	6/11/2013
Received By (Signature)	C Flores/CFS
	438
Case Number	N/A
Sample Delivery Group No.	3F0233
NRAS Number	N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13065	N/A	N/A	13065	INTACT
2. Custody Seal Nos.	N/A	13069	N/A	N/A	13069	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13071	N/A	N/A	13071	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	13073	N/A	N/A	13073	INTACT
5. Airbill No.	858843146257	13075	N/A	N/A	13075	INTACT
6. Sample Tags	Present/Absent*	13082	N/A	N/A	13082	INTACT
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	13094	N/A	N/A	13094	INTACT
7. Sample Condition	Intact/Broken*/ Leaking	N/A	N/A	N/A	N/A	N/A
8. Cooler Temperature Indicator Bottle	Present/Absent*	N/A	N/A	N/A	N/A	N/A
9. Cooler Temperature	8.2°C	N/A	N/A	N/A	N/A	N/A
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	14:35	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A

Sample Transfer			
Fraction	N/A	Fraction	N/A
Area #	N/A	Area #	N/A
By	N/A	By	N/A
On	N/A	On	N/A

* Contact SMO and attach record of resolution

Reviewed By	Kirby Gray	N/A	Logbook No. N/A
Date	06/14/2013	N/A	Logbook Page No. N/A

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13065**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63 / $255.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1) **13065**	7) **13094**		
2) **13069**			
3) **13071**			
4) **13073**			
5) **13075**			
6) **13082**			

13065	**13094**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CR Seery Date 06/11/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: CR Seely

CF 6/11/13 SVL Work No: ~~W3F0223~~ W3F0233

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 14:35
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	Q6				Temp. 8.2°C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

Chain of Custody Record

W3F0235 8.4°

Project No. 913-1101-002

Site/Location MONSANTO

Samplers: (*Signature*) DEREK HOLOM

Golder Associates

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	UNPRES.				Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13058	6/6/13	1000	GMAB	GW		3	1	1	1				13260		
13059	6/6/13	1140					1	1	1						MONSANTO ANNUAL SAMPLING LIST
13096	6/8/13	1810					1	1	1						
TS-1	6/9/13					1			1						
TS-2						1			1						HOLD ANALYSIS
TE-1						1			1						
TE-2						1			1						

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
GOLDER	6/10/13 1000	GVL 6/11/13 14:45			
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)	

IP3 1211/73200

297

Crystal Sevy

From: Chris Meyer [chris@svl.net]
Sent: Wednesday, June 12, 2013 2:32 PM
To: 'Crystal Sevy'
Subject: FW: Overnight shipment - Golder/Monsanto

See the emails below!

From: Holom, Derek [mailto:Derek_Holom@golder.com]
Sent: Wednesday, June 12, 2013 2:22 PM
To: Chris Meyer
Cc: Klisch, Michael; Holom, Derek
Subject: Re: Overnight shipment

Sorry, there are 2 bottles for each well (TS and TE), 4 bottles total.

Sent from my iPhone

On Jun 12, 2013, at 1:57 PM, "Chris Meyer" <chris@svl.net> wrote:

> Michael.....
> I didn't hear back from Derek, but we need to confirm if there are 4 samples or just 2 samples for the TE and TS bottles. It sounds like there are 2 bottles for each sample = 2 samples. I just need to make sure. Thanks! .....Chris
>
> **From:** Klisch, Michael [mailto:MKlisch@golder.com]
> **Sent:** Tuesday, June 11, 2013 1:45 PM
> **To:** Chris Meyer
> **Cc:** Holom, Derek
> **Subject:** RE: Overnight shipment
>
> Chris-
>
> Please proceed with the analysis of these two samples for our standard suite of parameters (without DO).
>
> In regards to you other email, there should be four 500 mL bottles from two sample locations - two bottles designated "TE" and two bottles designated "TS". Derek – Can you confirm this is the case?
>
> Also, please note that when the wells were sampled, the sampling team observed a petroleum-like odor in the two wells and had PID readings in the range of 2.5 to 5 ppm (that is why TPH was written on the bottles). Is there any sort of screening that can be done for VOC on these samples?
>
> Derek is the best person to answer any questions on the samples – he can be reached at 206.941.4973.
>
> Thanks
>
> **From:** Chris Meyer [mailto:chris@svl.net]

298

Sent: Tuesday, June 11, 2013 1:28 PM
To: Klisch, Michael
Subject: RE: Overnight shipment

Michael..... We have the limited volume samples (TS – 1/2 and TE – 1/2). We may have to reduce some of our aliquots, but I'm fairly confident we can get the standard set of analyses completed. Having said that, we won't be able to do Dissolved Oxygen (DO) on these particular samples. We are analyzing DO on all the others, per my conversation with Derek last week. Also, just as a side note, the bottle labels for TS – 1/2 and TE – 1/2, have TPH written on them. Should we just ignore that? Let me know. Thanks! .....Chris

From: Klisch, Michael [mailto:MKlisch@golder.com]
Sent: Tuesday, June 11, 2013 11:55 AM
To: Chris Meyer
Subject: RE: Overnight shipment

Chris-

In one of the coolers we have two samples with two 500 mL bottles each that are labeled TS-1/2 and TE-1/2. They are unpreserved. Is there enough sample volume to run our standard set of analyses on these?

Thanks

Michael

From: Chris Meyer [mailto:chris@svl.net]
Sent: Tuesday, June 11, 2013 9:59 AM
To: Holom, Derek
Cc: Banton, David; Klisch, Michael; Gerst, Jonathan; Borer, Brenda
Subject: RE: Overnight shipment

Derek..... We are expecting samples today so I will keep you posted on the delivery. We will contact you with any issues. Thanks! .....Chris

From: Holom, Derek [mailto:Derek_Holom@golder.com]
Sent: Friday, June 07, 2013 9:18 PM
To: Borer, Brenda
Cc: Banton, David; Klisch, Michael; Gerst, Jonathan; Chris Meyer (Chris@svl.net)
Subject: FW: Overnight shipment
Importance: High

Brenda,

Thank you again for being available to intercept the coolers on their way back to Spokane. I was told by FedEx that the coolers will arrive and be held at the Spokane facility early Saturday morning. The tracking number is: 800706096624

I am supposed to receive a follow-up call from FedEx tomorrow when the station that the coolers are supposed to be held is open. The customer service agent couldn't give me an address, but when I find out I will contact you.

I need the samples to be kept at <4C until you repackage them. A couple of bags of ice per cooler

299

should suffice while you refreeze the blue ice packets. Please sign each chain-of-custody (COC) as "received by" and also "sent by" and please circle the "seal number" and initial next to it to acknowledge that the original custody seal was broken; keep the yellow copy for our records.

On Monday, please ship the coolers FedEx Priority Overnight to:

SVL Analytical
One Government Gulch
Kellogg, ID 83837
ATTN: Chris Meyer
(800) 597-7144

Golder's FedEx Account Number: 1016-45800
Charge time and expenses to: 913-1101-002.002.2E (this is also the internal billing reference for the FedEx bill).

Thanks again for helping us out in a pinch. I hope this hasn't troubled your weekend plans or inconvenienced you too much. I really appreciate your help.

Sincerely,
Derek

From: Chris Meyer [mailto:chris@svl.net]
Sent: Friday, June 07, 2013 4:42 PM
To: Holom, Derek
Subject: RE: Overnight shipment
Importance: High

Hey Derek.....
We tracked the 2 coolers you shipped yesterday and learned that they went all the way back to Memphis, TN. They are currently en route back to Idaho but I'm not sure they will even show up on Monday. The estimated delivery date just says "NA". I'm not sure what that means. You should call Fed Ex and get your money back. I will let you know when (if) they arrive on Monday. Sorry for the bad news. ....Chris

Christine Meyer
Client Services/Projects Manager
SVL Analytical - Celebrating 40 years of service
One Government Gulch
PO Box 929
Kellogg, ID 83837
208/784-1258

This message and any of the attached documents contain information from SVL Analytical that may be confidential and/or privileged. If you are not the intended recipient, you may not read, copy, distribute, or use this information, and no privilege has been waived by your inadvertent receipt. If you have received this transmission in error, please notify the sender by reply e-mail and then delete this message. Thank you.

SAMPLE LOG-IN SHEET

Lab Name SVL ANALYTICAL		Page 1 of 1
Received By (Print Name) C. FLORES		Log-in Date 6/11/2013
Received By (Signature) C. Flores ICPS		300
Case Number N/A	Sample Delivery Group No. 3F0235	NRAS Number N/A

Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1. Custody Seal(s)	Present/Absent* Intact/Broken	13058	N/A	N/A	13058	INTACT
2. Custody Seal Nos.	N/A	13059	N/A	N/A	13059	INTACT
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*	13096	N/A	N/A	13096	INTACT
4. Airbill	Airbill/Sticker Present/Absent*	TS-1-2	N/A	N/A	TS-1-2	INTACT
5. Airbill No.	858843146224	TE-1-2	N/A	N/A	TE-1-2	INTACT
6. Sample Tags	Present/Absent*	N/A	N/A	N/A	N/A	N/A
Sample Tag Numbers	Listed/Not Listed on Chain of Custody Record	N/A	N/A	N/A	N/A	N/A
7. Sample Condition	Intact/Broken*/ Leaking	N/A	N/A	N/A	N/A	N/A
8. Cooler Temperature Indicator Bottle	Present/Absent*	N/A	N/A	N/A	N/A	N/A
9. Cooler Temperature	8.4°C	N/A	N/A	N/A	N/A	N/A
10. Does information on Chain of Custody Records and sample tags agree?	Yes/No*	N/A	N/A	N/A	N/A	N/A
11. Date Received at Lab	6/11/2013	N/A	N/A	N/A	N/A	N/A
12. Time Received	14:45	N/A	N/A	N/A	N/A	N/A
Sample Transfer		N/A	N/A	N/A	N/A	N/A
Fraction N/A	Fraction N/A	N/A	N/A	N/A	N/A	N/A
Area # N/A	Area # N/A	N/A	N/A	N/A	N/A	N/A
By N/A	By N/A	N/A	N/A	N/A	N/A	N/A
On N/A	On N/A	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By Kirby Gray	N/A	Logbook No.	N/A
Date 06/14/2013	N/A	Logbook Page No.	N/A

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **13058**

☐ ICP-AES Analysis ☐ ICP-MS Analysis

Laboratory Name: **SVL Analytical, Inc.** Laboratory Code: **SVL**

Analysis Price: **$8.00 / $265.63** SDG Turnaround: _____

Modified Analysis (if applicable):

Modification Reference No.: _____

Sample Numbers in SDG (Listed in Numerical Order)

1) **13058**			
2) **13059**			
3) **13096**			
4) **TE-1-2**			
5) **TS-1-2**			

13058	**TS-1-2**
First Sample in SDG	Last Sample in SDG
06/11/2013	**06/11/2013**
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach the TR/COC Reports to this form in alphanumeric order (the order listed above on this form).*

Signature: CRSeery Date 06/12/2013

SAMPLE RECEIPT/CHAIN-OF -CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 6/11/13 By: CRSerry

302

SVL Work No: W3F0235

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				GOLDER
2	Date and time of receipt at lab	✓				6/11/13 14:45
3	Received by	✓				C. FLORES
4	Temperature blank or cooler temperature	✓	Q6			Temp. 8.4 °C.
5	Were the sample(s) received on ice	✓				YES
6	Custody tape/bottle seals	✓				YES
7	Condition of samples upon receipt (leaking; bubbles in VOA vials	✓				GOOD
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				
12	Did an SVL employee preserve sample(s) upon receipt				✓	NO
13	Type of container for each sample / volume received	✓				
14	Analysis requested for each sample	✓				
15	Sample matrix description	✓				
16	COC properly completed & legible	✓				
17	Corrections properly made (initials & date)				✓	
18	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)				✓	
19	Shipper's air bill	✓				

V- Verified VC- Verified Corrections Made NV-Not Verified NA- Not Applicable

Additional Comments: _____

ANALYTICAL RESOURCE INC. # WT-49

~~ANA~~

Chain of Custody Record

Golder Associates

Project No.	Site/Location
913-1101-002	MONSANTO

Samplers: (*Signature*) DEREK HOLOM [signature]

Station Number	Date	Time	Sample Type	Media	Sample Identification	Number of Containers	Amount/Preservative HNO3	H2SO4	CAPRES			Seal Number	Seal Intact? (Yes or No)	Remarks (with initials)
13017	5/31/13	1745	GRAB	GW		4	1	1	2			13259		MONSANTO ANNUAL SAMPLING DS
13034	6/3/13	1200					1	1	2					
13038		1315					1	1	2					
13044	6/4/13	1600					1	1	2					
13062	6/6/13	1500					1	1	2					
13077	6/7/13	1700	GRAB	SW		5	2	1	2					
13102	6/9/13	1415		SW		5	2	1	2					
13100	6/9/13	1000		GW		4	1	1	2					

Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
[signature] GOLDER	6-11-13 6/10/13 715 1000	[signature]			
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)
Relinquished by: (*Signature/Firm*)	Date/Time	Received by: (*Signature/Firm*)	Date/Time	Remarks (attachments if necessary)	

IP3 1211/73200

20000 : 5h1ft

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Golder

Project Name: Mon Santo

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other _____

Assigned ARI Job No: WT49

Tracking No: 8410 1761 4559 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	5.1	

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 908 77952

Cooler Accepted by: TS Date: 6-11-13 Time: 715

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

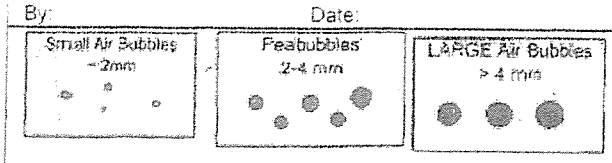
Samples Logged by: TS Date: 6-11-13 Time: 740

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ATTACHMENT 4
SUPPORTING DATA VALIDATION REVIEW FORMS

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto.
LABORATORY: ARI	SDG: WT49
SAMPLES COLLECTED 5/31, 6/3,4,6,7,9/2013	MATRIX
13017, 13034, 13038, 13044, 13062, 13077, 13102, 13100	SW+GW
Total Recoverable ONLY	
Field Splits: 13017/13018, 13033/13034, 13037/13038, 13043/13044, 13061/13062, 13076/13077, 13101/13102, 13099/13100	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness	Anions 300.0, SM2320, 160.1, 350.1M, 353.2, 365.2	OTHER
1. Data Completeness		O		O	O	O
2. Holding Times		O		O	O	X ①
3. Calibration		NA		NA	NA	NA
4. Lab Blanks, Field Blanks		O		O	O	O
5. Lab Duplicate, Field Duplicate RPD		X ②		X ②	X ②	X ②
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		O		O	O	O
8. GFAA, MSA, Serial Dil.		NA		NA	NA	NA
9. Detection Limits, Other QC		O		O	O	O
10. Data Verification, Overall Summary		O		O	O	X ③

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

① TDS analyzed out of hold for 13017, 13034, 13038, 13044. [Qual J/UJ]
② Field Splits %RPD >20%, for >5XCRDL: [Qual J/UJ] for analytes on following pairs:
13017/13018: Fl, NH_3 13033/13034: Fl, NH_3, Mn ~~13037/13038: Mo, K, Na, V~~
13043/13044: ~~Ca, Cd~~, Fl, ~~Hardness, Mn, Mo, NH_3, K, Na~~, TDS, PO4, ~~V, Zn~~ * Major differences - Possible matrix or lab contam.
13099/13100: Fl, TDS *, NH_3 13101/13102: NH_3
③ Lab contamination, biased high results for TDS on 13044 and 13100. [Qual J+]
(supersedes above qual's)

Validated by: Jill Laulle Date: 8/7/2013
Reviewed by: Date: 9-05-2013

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
o ICV/CCV Results
✓ Blank Results
o ICP Interference Check Results

✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
o Standard Addition Results
o ICP Serial Dilution
✓ Instrument Det. Limits
o ICP Correction Factor

o ICP Linear Ranges
o Preparation Logs
o Analysis Run Logs
o ICP Raw Data
o GFAA Raw Data
o Hg Raw Data
o Cyanide Raw Data

__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: Cooler Temp: 5.1°C
Bottle preservations ok.

2. Holding Times (Check all that apply)..... Yes (No)

✓ ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

Comments/Qualified Results:
TDS out of hold for 13017, 13034, 13038, 13044 [Qual J/UJ] ✓

3. Calibrations (Check all that apply)..... Yes No (N/A)

__ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted

__CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:
Raw data not provided.

4. Lab Blanks, Field Blanks (Check all that apply)..... (Yes) No

__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Field Blank ID: _____

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:
No detects

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__Field Duplicate ID_____

Comments/Qualified Results

Field Splits: out of control (>20% RPD + >5XCRDL)

13017/13018 : Fl, NH_3 ✓ TMS
13033/13034 : Fl, NH_3, Mn ✓ TMS
13037/13038 : ~~Mo, K, Na, V~~ NO QUAL. ✓ TMS
13043/13044 : Cd, Ca, Fl, ~~Hardness, Mn, Mo, NH_3, K, Na~~, TDS, PO_4, ~~V, Zn~~ * TMS
13061/13062 : ok
13076/13077 : ok ✓ TMS
13099/13100 : Fl, TDS * ✓ TMS + NH_3 ✓
13101/13102 : NH_3 ✓ TMS

~~* Major differences - Possible lab contamination or bottle mix ups.~~ Lab Revision identifies the correct Samples.

Qual J/UJ on sample sets

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... Yes No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results _____

8. Spike Recovery (Check all that apply)..... Yes No

✓ Spike %R with 75-125%: ACCEPTED	__ MS >125% and PDS <125%, detects > MDL est. (J)
__MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results:

MS for diss Ca + Mg, sodium were out of control for parent sample 13077. LCS ok.
↳ No action, underspiked (spike is <4x sample amt.

Ms for total Ca, Mg out of control for parent sample 13017. LCS ok.
↳ No action, underspiked (

9. GFAA Performance, MSA, or Serial Dilutions..... Yes No (N/A)

__GFAA Duplicate injection RSD <20%: ACCEPTED	__SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__SD % Diff < 10%
__Analytical spike %R 85-115%	__SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results:

Raw data not provided

10. Detection Limits, Other QC..... (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... Yes (No)

Comments/Qualified Results:

Case Narrative states that values for anions +/or TDS for samples 13044 and 13100 were inconsistent w/ previous sampling events + their split samples in SVL lab data. Lab could not find any errors in the data, but conductivity was tested, showing that TDS values were incorrect. Sample results were biased high due to lab contamination. [Qual results J+] for 13044 and 13100 for TDS

this overrides ~~the~~ split qual's.

12. Interference Checks (Check all that apply)..... Yes No (N/A)

__ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

Raw data Not provided.

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
FIELD SPLIT WITH ARI											RPD		
13-12435-WT49B	13034	6/3/2013	6/18/2013	E200.8-Total	252	Selenium	E200.8-Tot	ug/L			6.9		
W3F0207-01	13033	6/3/2013	7/2/2013	E200.8-Total	270	Selenium	Total Recov	ug/L	2			1	
13-12435-WT49B	13034	6/3/2013	6/12/2013	EPA 300.0	129.0	Chloride	EPA 300.0	mg/L			4.8		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 300.0	123	Chloride		mg/L	10	D		50	D2
13-12435-WT49B	13034	6/3/2013	6/11/2013	EPA 300.0	1.900	Fluoride	EPA 300.0	mg/L		J	22.8		J
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 300.0	2.39	Fluoride		mg/L	0.5	~~D~~ J		5	~~D2~~ J
13-12435-WT49B	13034	6/3/2013	6/12/2013	EPA 300.0	611.0	Sulfate as SO4	EPA 300.0	mg/L			1.8		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 300.0	600	Sulfate as SO4		mg/L	15	D		50	D2
13-12435-WT49B	13034	6/3/2013	6/17/2013	EPA 350.1	0.050	Ammonia as N	EPA 350.1N	mg-N/L		~~U~~ UJ	170.6		UJ
W3F0207-01	13033	6/3/2013	6/25/2013	EPA 350.1	0.63	Ammonia as N		mg/L	0.03	J		1	J
13-12435-WT49B	13034	6/3/2013	6/18/2013	EPA 353.2	10.2	Nitrate/Nitrite as N	EPA 353.2	mg-N/L			2.9		
W3F0207-01	13033	6/3/2013	6/21/2013	EPA 353.2	10.5	Nitrate/Nitrite as N		mg/L	0.15	D		3	D2
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	2.0	Cadmium	SW6010C-T	ug/L			+/- RL		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	3	Cadmium	Total Recov	ug/L	2			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	215000	Calcium	SW6010C-T	ug/L			0.9		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	217000	Calcium	Total Recov	ug/L	40			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	138000	Magnesium	SW6010C-T	ug/L			1.5		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	136000	Magnesium	Total Recov	ug/L	60			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	13.0	Manganese	SW6010C-T	ug/L		J	153.7		J
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	1.7	Manganese	Total Recov	ug/L	4	~~J~~ J		1	~~J~~ J
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	50.000	Molybdenum	SW6010C-T	ug/L			5.4		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	52.8	Molybdenum	Total Recov	ug/L	8			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	20100.0	Potassium	SW6010C-T	ug/L			6.3		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	21400	Potassium	Total Recov	ug/L	500			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	98200.0	Sodium	SW6010C-T	ug/L			1.3		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	99500	Sodium	Total Recov	ug/L	500			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	6.000	Vanadium	SW6010C-T	ug/L			+/- RL		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	4.9	Vanadium	Total Recov	ug/L	5	J		1	J
13-12435-WT49B	13034	6/3/2013	6/14/2013	EPA 6010B	90.000	Zinc	SW6010C-T	ug/L			0.7		
W3F0207-01	13033	6/3/2013	6/24/2013	EPA 6010B	89.4	Zinc	Total Recov	ug/L	10			1	
13-12435-WT49B	13034	6/3/2013	6/11/2013	SM 2320	1.0	Hydroxide	SM 2320	mg/L CaCO3		U			
13-12435-WT49B	13034	6/3/2013	6/11/2013	SM 2320B/2310B	462.0	Bicarbonate	SM 2320	mg/L CaCO3			5.8		
W3F0207-01	13033	6/3/2013	6/13/2013	SM 2320B/2310B	436	Bicarbonate		mg/L as (	1			1	
13-12435-WT49B	13034	6/3/2013	6/11/2013	SM 2320B/2310B	1.0	Carbonate	SM 2320	mg/L CaCO3		U	+/- RL		
W3F0207-01	13033	6/3/2013	6/13/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U		1	
13-12435-WT49B	13034	6/3/2013	6/11/2013	SM 2320B/2310B	462.0	Total Alkalinity	SM 2320	mg/L CaCO3			5.8		
W3F0207-01	13033	6/3/2013	6/13/2013	SM 2320B/2310B	436	Total Alkalinity		mg/L as (	1			1	
13-12435-WT49B	13034	6/3/2013	6/14/2013	SM 2340B	1100000	Hardness	SW6010	ug/L			0.0		
W3F0207-01	13033	6/3/2013	6/24/2013	SM 2340B	1100000	Hardness		ug/L	350			1	

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
13-12435-WT49B	13034	6/3/2013	6/11/2013	SM 2540 C	1580.0	Total Diss. Solids	EPA 160.1	mg/L			5.5		
W3F0207-01	13033	6/3/2013	6/12/2013	SM 2540 C	1670	Total Diss. Solids		mg/L	40			1	H3
W3F0207-01	13033	6/3/2013	6/11/2013	SM 4500-O-G	7.7	Dissolved Oxygen		mg/L				1	H5
13-12435-WT49B	13034	6/3/2013	6/12/2013	SM 4500-P-E	0.219	Total Phosphorus	EPA 365.2	mg-P/L			3.1		
W3F0207-01	13033	6/3/2013	6/20/2013	SM 4500-P-E	0.226	Total Phosphorus	Total	mg/L	0.01			1	

FIELD DUPLICATES:

											RPD		
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 300.0	29.6	Chloride		mg/L	5	D	2.7	25	D2, M3
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 300.0	30.4	Chloride		mg/L	2	D		10	D2
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 300.0	0.24	Fluoride		mg/L	0.1		4.1	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 300.0	0.25	Fluoride		mg/L	0.1			1	
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 300.0	83	Sulfate as SO4		mg/L	7.5	D	1.7	25	D2, M3
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 300.0	84.4	Sulfate as SO4		mg/L	3	D		10	D2
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 350.1	6.55	Ammonia as N		mg/L	0.15	D	1.4	5	D2
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 350.1	6.64	Ammonia as N		mg/L	0.15	D		5	D2
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 353.2	4.43	Nitrate/Nitrite as N		mg/L	0.05		0.2	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 353.2	4.42	Nitrate/Nitrite as N		mg/L	0.05			1	
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	-0.7	Cadmium	Total Recov	ug/L	2	U	0.0	1	U
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	-0.7	Cadmium	Total Recov	ug/L	2	U		1	U
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	104000	Calcium	Total Recov	ug/L	40		1.0	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	103000	Calcium	Total Recov	ug/L	40			1	
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	39800	Magnesium	Total Recov	ug/L	60		0.0	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	39800	Magnesium	Total Recov	ug/L	60			1	
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	-1.4	Manganese	Total Recov	ug/L	4	U	0.0	1	U
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	-1.4	Manganese	Total Recov	ug/L	4	U		1	U
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	3.2	Molybdenum	Total Recov	ug/L	8	J	6.5	1	J
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	3	Molybdenum	Total Recov	ug/L	8	J		1	J
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	9640	Potassium	Total Recov	ug/L	500		1.3	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	9520	Potassium	Total Recov	ug/L	500			1	
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	57500	Sodium	Total Recov	ug/L	500		1.4	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	56700	Sodium	Total Recov	ug/L	500			1	
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	2.1	Vanadium	Total Recov	ug/L	5	J	10.0	1	J
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	1.9	Vanadium	Total Recov	ug/L	5	J		1	J
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6010B	-2.5	Zinc	Total Recov	ug/L	10	U	0.0	1	U
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6010B	-2.5	Zinc	Total Recov	ug/L	10	U		1	U
W3F0207-02	13035	6/3/2013	6/11/2013	EPA 6020	2.7	Selenium	Total Recov	ug/L	2		3.8	1	
W3F0207-03	13036	6/3/2013	6/11/2013	EPA 6020	2.6	Selenium	Total Recov	ug/L	2			1	
W3F0207-02	13035	6/3/2013	6/11/2013	SM 2320B/2310B	402	Bicarbonate		mg/L as (	1		1.0	1	
W3F0207-03	13036	6/3/2013	6/11/2013	SM 2320B/2310B	406	Bicarbonate		mg/L as (	1			1	
W3F0207-02	13035	6/3/2013	6/11/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U	0.0	1	

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
W3F0207-03	13036	6/3/2013	6/11/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U		1	
W3F0207-02	13035	6/3/2013	6/11/2013	SM 2320B/2310B	402	Total Alkalinity		mg/L as (	1		1.0	1	
W3F0207-03	13036	6/3/2013	6/11/2013	SM 2320B/2310B	406	Total Alkalinity		mg/L as (	1			1	
W3F0207-02	13035	6/3/2013	6/11/2013	SM 2340B	423000	Hardness		ug/L	350		0.7	1	
W3F0207-03	13036	6/3/2013	6/11/2013	SM 2340B	420000	Hardness		ug/L	350			1	
W3F0207-02	13035	6/3/2013	6/11/2013	SM 2540 C	578	Total Diss. Solids		mg/L	10		1.7	1	H3
W3F0207-03	13036	6/3/2013	6/11/2013	SM 2540 C	588	Total Diss. Solids		mg/L	10			1	H3
W3F0207-02	13035	6/3/2013	6/11/2013	SM 4500-O-G	6	Dissolved Oxygen		mg/L			3.3	1	H5
W3F0207-03	13036	6/3/2013	6/11/2013	SM 4500-O-G	6.2	Dissolved Oxygen		mg/L				1	H5
W3F0207-02	13035	6/3/2013	6/11/2013	SM 4500-P-E	0.047	Phosphorus	Total	mg/L	0.01		12.0	1	
W3F0207-03	13036	6/3/2013	6/11/2013	SM 4500-P-E	0.053	Phosphorus	Total	mg/L	0.01			1	
FIELD SPLIT WITH ARI													
W3F0223-08	13099	6/9/2013	6/11/2013	E200.8-Total	0.38	Selenium	Total Recov	ug/L	2	J	+/- RL	1	J
13-12441-WT49H	13100	6/9/2013	6/19/2013	E200.8-Total	0.7	Selenium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 300.0	29.4	Chloride		mg/L	5	D	2.0	25	D2
13-12441-WT49H	13100	6/9/2013	6/12/2013	EPA 300.0	30	Chloride		mg/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 300.0	0.73	Fluoride		mg/L	0.1	J	58.4	1	J
13-12441-WT49H	13100	6/9/2013	6/11/2013	EPA 300.0	0.4	Fluoride		mg/L		J			J
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 300.0	109	Sulfate as SO4		mg/L	7.5	D	3.7	25	D2
13-12441-WT49H	13100	6/9/2013	6/12/2013	EPA 300.0	105	Sulfate as SO4		mg/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 350.1	0.338	Ammonia as N		mg/L	0.03		16.3	1	
13-12441-WT49H	13100	6/9/2013	6/17/2013	EPA 350.1	0.287	Ammonia as N		mg-N/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 353.2	-0.05	Nitrate/Nitrite as N		mg/L	0.05	U	+/- RL	1	
13-12441-WT49H	13100	6/9/2013	6/18/2013	EPA 353.2	0.01	Nitrate/Nitrite as N		mg-N/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	2.8	Cadmium	Total Recov	ug/L	2		6.9	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	3	Cadmium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	56600	Calcium	Total Recov	ug/L	40		0.7	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	56200	Calcium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	197000	Magnesium	Total Recov	ug/L	60		3.1	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	191000	Magnesium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	230	Manganese	Total Recov	ug/L	4		6.3	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	216	Manganese		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	5.4	Molybdenum	Total Recov	ug/L	8	J	+/- RL	1	J
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	9	Molybdenum		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	12600	Potassium	Total Recov	ug/L	500		4.0	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	12100	Potassium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	33500	Sodium	Total Recov	ug/L	500		6.5	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	31400	Sodium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	2.6	Vanadium	Total Recov	ug/L	5	J	+/- RL	1	J

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	4	Vanadium		ug/L					
W3F0223-08	13099	6/9/2013	6/11/2013	EPA 6010B	68	Zinc	Total Recov	ug/L	10		2.9	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	EPA 6010B	70	Zinc		ug/L					
13-12441-WT49H	13100	6/9/2013	6/11/2013	SM 2320	1	Hydroxide		mg/L CaCO3					
W3F0223-08	13099	6/9/2013	6/11/2013	SM 2320B/2310B	854	Bicarbonate		mg/L as (	1		2.8	1	
13-12441-WT49H	13100	6/9/2013	6/11/2013	SM 2320B/2310B	878	Bicarbonate		mg/L CaCO3					
W3F0223-08	13099	6/9/2013	6/11/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U	+/- RL	1	
13-12441-WT49H	13100	6/9/2013	6/11/2013	SM 2320B/2310B	1	Carbonate		mg/L CaCO3					
W3F0223-08	13099	6/9/2013	6/11/2013	SM 2320B/2310B	854	Total Alkalinity		mg/L as (	1		2.8	1	
13-12441-WT49H	13100	6/9/2013	6/11/2013	SM 2320B/2310B	878	Total Alkalinity		mg/L CaCO3					
W3F0223-08	13099	6/9/2013	6/11/2013	SM 2340B	953000	Hardness		ug/L	350		2.4	1	
13-12441-WT49H	13100	6/9/2013	6/14/2013	SM 2340B	930000	Hardness		mg/L					
W3F0223-08	13099	6/9/2013	6/11/2013	SM 2540 C	954	Total Diss. Solids		mg/L	10	J	175.1	1	J
13-12441-WT49H	13100	6/9/2013	6/11/2013	SM 2540 C	14400	Total Diss. Solids		mg/L		J			J
W3F0223-08	13099	6/9/2013	6/11/2013	SM 4500-O-G	8	Dissolved Oxygen		mg/L				1	H5
W3F0223-08	13099	6/9/2013	6/11/2013	SM 4500-P-E	2.21	Total Phosphorus	Total	mg/L	0.04	D	11.0	4	D2
13-12441-WT49H	13100	6/9/2013	6/12/2013	SM 4500-P-E	1.98	Total Phosphorus		mg-P/L					

FIELD SPLIT WITH ARI

W3F0207-09	13043	6/4/2013	6/11/2013	E200.8-Total	20	Selenium	Total Recov	ug/L	2		14.4	1	
13-12437-WT49D	13044	06/04/13	06/18/13	E200.8-Total	23.1	Selenium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 300.0	48.7	Chloride		mg/L	5	D	7.7	25	D2
13-12437-WT49D	13044	06/04/13	06/20/13	EPA 300.0	52.6	Chloride		mg/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 300.0	0.59	Fluoride		mg/L	0.1	J	65.2	1	J
13-12437-WT49D	13044	06/04/13	06/11/13	EPA 300.0	0.3	Fluoride		mg/L		J			J
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 300.0	159	Sulfate as SO4		mg/L	7.5	D	1.3	25	D2
13-12437-WT49D	13044	06/04/13	06/20/13	EPA 300.0	157	Sulfate as SO4		mg/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 350.1	-0.03	Ammonia as N		mg/L	0.03	U	+/- RL	1	
13-12437-WT49D	13044	06/04/13	06/17/13	EPA 350.1	0.119	Ammonia as N		mg-N/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 353.2	3.96	Nitrate/Nitrite as N		mg/L	0.05		0.8	1	
13-12437-WT49D	13044	06/04/13	06/18/13	EPA 353.2	3.93	Nitrate/Nitrite as N		mg-N/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	-0.7	Cadmium	Total Recov	ug/L	2	U	+/- RL	1	U
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	2	Cadmium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	175000	Calcium	Total Recov	ug/L	40		1.7	1	
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	172000	Calcium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	110000	Magnesium	Total Recov	ug/L	60		0.9	1	
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	109000	Magnesium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	-1.4	Manganese	Total Recov	ug/L	4	U	+/- RL	1	U
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	3	Manganese		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	3.5	Molybdenum	Total Recov	ug/L	8	J	+/- RL	1	J

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	5	Molybdenum		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	9880	Potassium	Total Recov	ug/L	500		5.0	1	
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	9400	Potassium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	37700	Sodium	Total Recov	ug/L	500		3.2	1	
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	36500	Sodium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	1.6	Vanadium	Total Recov	ug/L	5	J	+/- RL	1	J
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	3	Vanadium		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	EPA 6010B	-2.5	Zinc	Total Recov	ug/L	10	U	+/- RL	1	U
13-12437-WT49D	13044	06/04/13	06/14/13	EPA 6010B	10	Zinc		ug/L					
13-12437-WT49D	13044	06/04/13	06/11/13	SM 2320	1	Hydroxide		mg/L CaCO3					
W3F0207-09	13043	6/4/2013	6/11/2013	SM 2320B/2310B	651	Bicarbonate		mg/L as (	1		4.1	1	
13-12437-WT49D	13044	06/04/13	06/11/13	SM 2320B/2310B	678	Bicarbonate		mg/L CaCO3					
W3F0207-09	13043	6/4/2013	6/11/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U	+/- RL	1	
13-12437-WT49D	13044	06/04/13	06/11/13	SM 2320B/2310B	1	Carbonate		mg/L CaCO3					
W3F0207-09	13043	6/4/2013	6/11/2013	SM 2320B/2310B	651	Total Alkalinity		mg/L as (	1		4.1	1	
13-12437-WT49D	13044	06/04/13	06/11/13	SM 2320B/2310B	678	Total Alkalinity		mg/L CaCO3					
W3F0207-09	13043	6/4/2013	6/11/2013	SM 2340B	891000	Hardness		ug/L	350		1.2	1	
13-12437-WT49D	13044	06/04/13	06/14/13	SW6010	880000	Hardness		ug/L					
W3F0207-09	13043	6/4/2013	6/11/2013	SM 2540 C	990	Total Diss. Solids		mg/L	10	J	101.5	1	J
13-12437-WT49D	13044	06/04/13	06/11/13	SM 2540 C	3030	Total Diss. Solids		mg/L		J+			J+
W3F0207-09	13043	6/4/2013	6/11/2013	SM 4500-O-G	6.9	Dissolved Oxygen		mg/L				1	H5
W3F0207-09	13043	6/4/2013	6/11/2013	SM 4500-P-E	0.104	Total Phosphorus	Total	mg/L	0.01	J	20.7	1	J
13-12437-WT49D	13044	06/04/13	06/12/13	SM 4500-P-E	0.128	Total Phosphorus		ug/L		J			J

FIELD SPLIT WITH ARI

W3F0207-04	13037	6/3/2013	7/2/2013	E200.8-Total	1.5	Selenium	Total Recov	ug/L	2	J	6.5	1	J
13-12436-WT49C	13038	6/3/2013	6/18/2013	E200.8-Total	1.6	Selenium		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 300.0	24.2	Chloride		mg/L	2	D	2.4	10	D2
13-12436-WT49C	13038	6/3/2013	6/12/2013	EPA 300.0	24.8	Chloride		mg/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 300.0	0.31	Fluoride		mg/L	0.1		3.3	1	
13-12436-WT49C	13038	6/3/2013	6/11/2013	EPA 300.0	0.3	Fluoride		mg/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 300.0	83.1	Sulfate as SO4		mg/L	3	D	1.2	10	D2
13-12436-WT49C	13038	6/3/2013	6/12/2013	EPA 300.0	84.1	Sulfate as SO4		mg/L					
W3F0207-04	13037	6/3/2013	6/25/2013	EPA 350.1	7.21	Ammonia as N		mg/L	0.15	D	4.7	5	D2, M3
13-12436-WT49C	13038	6/3/2013	6/17/2013	EPA 350.1	7.56	Ammonia as N		mg-N/L					
W3F0207-04	13037	6/3/2013	6/21/2013	EPA 353.2	6.65	Nitrate/Nitrite as N		mg/L	0.1	D	3.2	2	D2
13-12436-WT49C	13038	6/3/2013	6/18/2013	EPA 353.2	6.44	Nitrate/Nitrite as N		mg-N/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	-0.7	Cadmium	Total Recov	ug/L	2	U	+/- RL	1	U
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	2	Cadmium		ug/L		U			U
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	107000	Calcium	Total Recov	ug/L	40		2.8	1	

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	104000	Calcium		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	40700	Magnesium	Total Recov	ug/L	60		2.2	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	39800	Magnesium		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	22.4	Manganese	Total Recov	ug/L	4		1.8	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	22	Manganese		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	414	Molybdenum	Total Recov	ug/L	8		9.1	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	378	Molybdenum		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	6650	Potassium	Total Recov	ug/L	500		8.6	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	6100	Potassium		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	43300	Sodium	Total Recov	ug/L	500		2.8	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	42100	Sodium		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	693	Vanadium	Total Recov	ug/L	5		5.3	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	657	Vanadium		ug/L					
W3F0207-04	13037	6/3/2013	6/24/2013	EPA 6010B	-2.5	Zinc	Total Recov	ug/L	10	U	+/- RL	1	U
13-12436-WT49C	13038	6/3/2013	6/14/2013	EPA 6010B	10	Zinc		ug/L		U			U
13-12436-WT49C	13038	6/3/2013	6/11/2013	SM 2320	1	Hydroxide		mg/L CaCO3		U			U
W3F0207-04	13037	6/3/2013	6/13/2013	SM 2320B/2310B	383	Bicarbonate		mg/L as (	1		4.6	1	
13-12436-WT49C	13038	6/3/2013	6/11/2013	SM 2320B/2310B	401	Bicarbonate		mg/L CaCO3					
W3F0207-04	13037	6/3/2013	6/13/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U	+/- RL	1	
13-12436-WT49C	13038	6/3/2013	6/11/2013	SM 2320B/2310B	1	Carbonate		mg/L CaCO3		U			U
W3F0207-04	13037	6/3/2013	6/13/2013	SM 2320B/2310B	383	Total Alkalinity		mg/L as (	1		4.6	1	
13-12436-WT49C	13038	6/3/2013	6/11/2013	SM 2320B/2310B	401	Total Alkalinity		mg/L CaCO3					
W3F0207-04	13037	6/3/2013	6/24/2013	SM 2340B	434000	Hardness		ug/L	350		3.3	1	
13-12436-WT49C	13038	6/3/2013	6/14/2013	SM 2340B	420000	Hardness		ug/L					
W3F0207-04	13037	6/3/2013	6/12/2013	SM 2540 C	572	Total Diss. Solids		mg/L	10		5.1	1	H3
13-12436-WT49C	13038	6/3/2013	6/11/2013	SM 2540 C	602	Total Diss. Solids		mg/L					
W3F0207-04	13037	6/3/2013	6/11/2013	SM 4500-O-G	6.5	Dissolved Oxygen		mg/L				1	H5
W3F0207-04	13037	6/3/2013	6/20/2013	SM 4500-P-E	0.559	Total Phosphorus	Total	mg/L	0.01		5.5	1	
13-12436-WT49C	13038	6/3/2013	6/12/2013	SM 4500-P-E	0.529	Total Phosphorus		mg-P/L					

FIELD SPLIT WITH ARI

W3F0223-09	13101	6/9/2013	6/24/2013	EPA 300.0	20.7	Chloride		mg/L	5	D	3.3	25	D2
13-12440-WT49G	13102	6/9/2013	6/12/2013	EPA 300.0	21.4	Chloride		mg/L					
W3F0223-09	13101	6/9/2013	6/24/2013	EPA 300.0	0.34	Fluoride		mg/L	0.1		12.5	1	
13-12440-WT49G	13102	6/9/2013	6/11/2013	EPA 300.0	0.3	Fluoride		mg/L					
W3F0223-09	13101	6/9/2013	6/24/2013	EPA 300.0	53.5	Sulfate as SO4		mg/L	7.5	D	0.7	25	D2
13-12440-WT49G	13102	6/9/2013	6/12/2013	EPA 300.0	53.9	Sulfate as SO4		mg/L					
W3F0223-09	13101	6/9/2013	6/27/2013	EPA 350.1	0.068	Ammonia as N		mg/L	0.03	J	69.3	1	J
13-12440-WT49G	13102	6/9/2013	6/17/2013	EPA 350.1M	0.033	Ammonia as N		mg-N/L		J			J

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
W3F0223-09	13101	6/9/2013	6/21/2013	EPA 353.2	0.736	Nitrate/Nitrite as N		mg/L	0.05		2.1	1	
13-12440-WT49G	13102	6/9/2013	6/18/2013	EPA 353.2	0.721	Nitrate/Nitrite as N		mg-N/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	-0.71	Cadmium	Dissolved	ug/L	2	U	+/- RL	1	U
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	2	Cadmium	Dissolved	ug/L		U			
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	-0.7	Cadmium	Total Recov	ug/L	2	U	+/- RL	1	U
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	2	Cadmium	Total Recov	ug/L		U			
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	87200	Calcium	Dissolved	ug/L	40.4		3.6	1	
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	90400	Calcium	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	89400	Calcium	Total Recov	ug/L	40		2.5	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	91700	Calcium	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	74500	Magnesium	Dissolved	ug/L	60.6		6.4	1	
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	79400	Magnesium	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	77800	Magnesium	Total Recov	ug/L	60		3.9	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	80900	Magnesium	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	118	Manganese	Dissolved	ug/L	4		6.1	1	
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	111	Manganese	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	126	Manganese	Total Recov	ug/L	4		6.6	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	118	Manganese	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	4.2	Molybdenum	Dissolved	ug/L	8.1	J	+/- RL	1	J
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	8	Molybdenum	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	4	Molybdenum	Total Recov	ug/L	8	J	+/- RL	1	J
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	7	Molybdenum	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	8400	Potassium	Dissolved	ug/L	505		1.2	1	
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	8500	Potassium	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	8660	Potassium	Total Recov	ug/L	500		0.5	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	8700	Potassium	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	30100	Sodium	Dissolved	ug/L	505		2.6	1	
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	30900	Sodium	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	31900	Sodium	Total Recov	ug/L	500		0.3	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	31800	Sodium	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	4.8	Vanadium	Dissolved	ug/L	5.1	J	18.2	1	J
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	4	Vanadium	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	5.4	Vanadium	Total Recov	ug/L	5		7.7	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	5	Vanadium	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/23/2013	EPA 6010B	-2.5	Zinc	Dissolved	ug/L	10.1	U	+/- RL	1	U
13-12443-WT49J	13102	6/9/2013	6/13/2013	EPA 6010B	10	Zinc	Dissolved	ug/L		U			
W3F0223-09	13101	6/9/2013	6/25/2013	EPA 6010B	-2.5	Zinc	Total Recov	ug/L	10	U	+/- RL	1	U
13-12440-WT49G	13102	6/9/2013	6/14/2013	EPA 6010B	10	Zinc	Total Recov	ug/L		U			
W3F0223-09	13101	6/9/2013	7/1/2013	EPA 6020	2.4	Selenium	Dissolved	ug/L	2		0.0	1	E
13-12443-WT49J	13102	6/9/2013	6/20/2013	EPA 6020	2.4	Selenium	Dissolved	ug/L					

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
W3F0223-09	13101	6/9/2013	7/2/2013	EPA 6020	2.4	Selenium	Total Recov	ug/L	2		8.0	1	
13-12440-WT49G	13102	6/9/2013	6/20/2013	EPA 6020	2.6	Selenium	Total Recov	ug/L					
13-12440-WT49G	13102	6/9/2013	6/11/2013	SM 2320	1	Hydroxide		mg/L CaCO3		U			
W3F0223-09	13101	6/9/2013	6/13/2013	SM 2320B/2310B	526	Bicarbonate		mg/L as (	1		2.8	1	
13-12440-WT49G	13102	6/9/2013	6/11/2013	SM 2320B/2310B	541	Bicarbonate		mg/L CaCO3					
W3F0223-09	13101	6/9/2013	6/13/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U	+/- RL	1	
13-12440-WT49G	13102	6/9/2013	6/11/2013	SM 2320B/2310B	1	Carbonate		mg/L CaCO3		U			
W3F0223-09	13101	6/9/2013	6/13/2013	SM 2320B/2310B	526	Total Alkalinity		mg/L as (	1		2.8	1	
13-12440-WT49G	13102	6/9/2013	6/11/2013	SM 2320B/2310B	541	Total Alkalinity		mg/L CaCO3					
13-12443-WT49J	13102	6/9/2013	6/13/2013	SM 2340B	550000	Dissolved Hardness	Dissolved	ug/L					
W3F0223-09	13101	6/9/2013	6/25/2013	SM 2340B	544000	Hardness	Total Recov	ug/L	350		2.9	1	
13-12440-WT49G	13102	6/9/2013	6/14/2013	SM 2340B	560000	Hardness	Total Recov	ug/L					
W3F0223-09	13101	6/9/2013	6/12/2013	SM 2540 C	610	Total Diss. Solids		mg/L	10		6.0	1	
13-12440-WT49G	13102	6/9/2013	6/11/2013	SM 2540 C	648	Total Diss. Solids		mg/L					
W3F0223-09	13101	6/9/2013	6/11/2013	SM 4500-O-G	8.4	Dissolved Oxygen		mg/L				1	H5
W3F0223-09	13101	6/9/2013	6/24/2013	SM 4500-P-E	0.105	Total Phosphorus	Total	mg/L	0.01		1.9	1	
13-12440-WT49G	13102	6/9/2013	6/12/2013	SM 4500-P-E	0.103	Total Phosphorus	Total	mg-P/L					

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag		Dilution	Qual
13-12434-WT49A	13017	5/31/2013	6/12/2013	EPA 300.0	13.8	Chloride		mg/L			5.6		
W3F0045-07	13018	5/31/2013	6/19/2013	EPA 300.0	14.6	Chloride		mg/L	5	D		25	D2
13-12434-WT49A	13017	5/31/2013	6/11/2013	EPA 300.0	0.2	Fluoride		mg/L			+/- RL		
W3F0045-07	13018	5/31/2013	6/19/2013	EPA 300.0	0.33	Fluoride		mg/L	0.1			1	
13-12434-WT49A	13017	5/31/2013	6/12/2013	EPA 300.0	40.7	Sulfate		mg/L			3.4		
W3F0045-07	13018	5/31/2013	6/19/2013	EPA 300.0	42.1	Sulfate as SO4		mg/L	0.3			1	
13-12434-WT49A	13017	5/31/2013	6/17/2013	EPA 350.1	0.08	N-Ammonia		mg-N/L		J	90.9		J
W3F0045-07	13018	5/31/2013	6/19/2013	EPA 350.1	0.03	N-Ammonia		mg/L	0.03	~~U~~ UJ		1	UJ
13-12434-WT49A	13017	5/31/2013	6/18/2013	EPA 353.2	2.62	Nitrate/Nitrite as N		mg-N/L			5.5		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 353.2	2.48	Nitrate/Nitrite as N		mg/L	0.05			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	2	Cadmium	Total	ug/L		U	+/- RL		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	-0.7	Cadmium	Total Recov	ug/L	2	U		1	U
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	118000	Calcium	Total	ug/L			2.6		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	115000	Calcium	Total Recov	ug/L	40			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	470000	Hardness		ug/L			3.0		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	456000	Hardness		ug/L	350			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	42600	Magnesium	Total	ug/L			3.3		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	41200	Magnesium	Total Recov	ug/L	60			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	5	Manganese	Total	ug/L			+/- RL		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	2	Manganese	Total Recov	ug/L	4	J		1	J
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	37	Molybdenum	Total	ug/L			12.0		

LabSampleNo	ClientId	SampDate	ResultDate	Method	Result	Analyte	Fraction	Units	PQL	ConcFlag	RPD	Dilution	Qual
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	32.8	Molybdenum	Total Recov	ug/L	8			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	2500	Potassium	Total	ug/L			4.1		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	2400	Potassium	Total Recov	ug/L	500			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	14800	Sodium	Total	ug/L			3.4		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	14300	Sodium	Total Recov	ug/L	500			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	411	Vanadium	Total	ug/L			2.0		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	403	Vanadium	Total Recov	ug/L	5			1	
13-12434-WT49A	13017	5/31/2013	6/14/2013	EPA 6010B	10	Zinc	Total	ug/L		U	+/- RL		
W3F0045-07	13018	5/31/2013	6/17/2013	EPA 6010B	4.8	Zinc	Total Recov	ug/L	10	J		1	J
W3F0045-07	13018	5/31/2013	6/24/2013	EPA 6020	2.3	Selenium	Total Recov	ug/L	2		14.0	1	
13-12434-WT49A	13017	5/31/2013	6/19/2013	EPA 6020	2	Selenium		ug/L		U			
13-12434-WT49A	13017	5/31/2013	6/11/2013	SM 2320	1	Hydroxide		mg/L CaCO3		U			
13-12434-WT49A	13017	5/31/2013	6/11/2013	SM 2320B/2310B	420	Bicarbonate		mg/L CaCO3			5.6		
W3F0045-07	13018	5/31/2013	6/5/2013	SM 2320B/2310B	397	Bicarbonate		mg/L as (	1			1	
13-12434-WT49A	13017	5/31/2013	6/11/2013	SM 2320B/2310B	1	Carbonate		mg/L CaCO3		U	+/- RL		
W3F0045-07	13018	5/31/2013	6/5/2013	SM 2320B/2310B	-1	Carbonate		mg/L as (	1	U		1	
13-12434-WT49A	13017	5/31/2013	6/11/2013	SM 2320B/2310B	420	Total Alkalinity		mg/L CaCO3			5.6		
W3F0045-07	13018	5/31/2013	6/5/2013	SM 2320B/2310B	397	Total Alkalinity		mg/L as (	1			1	
13-12434-WT49A	13017	5/31/2013	6/11/2013	SM 2540 C	497	Total Diss. Solids		mg/L			4.1		
W3F0045-07	13018	5/31/2013	6/5/2013	SM 2540 C	477	Total Diss. Solids		mg/L	10			1	
13-12434-WT49A	13017	5/31/2013	6/12/2013	SM 4500-P-E	0.16	Total Phosphorus	Total	mg-P/L			0.0		
W3F0045-07	13018	5/31/2013	6/14/2013	SM 4500-P-E	0.16	Total Phosphorus	Total	mg/L	0.01			1	

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101.605	SITE: MONSANTO
LABORATORY:	SDG: W3F0043

SAMPLES		COLLECTED		MATRIX
13001 THRU 13010	(10 Samples)	6/4/13	Total Recoverable	WATER

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness	Anions	OTHER DO, CLASSICAL CHEM
1. Data Completeness		O		O	O	O
2. Holding Times		O		O	O	O
3. Calibration	CSU	O		O	O	O
4. Lab Blanks, Field Blanks	X	X		O	O	O
5. Lab Duplicate, Field Duplicate RPD		O		O	O	O
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		O		O	O	O
8. GFAA, MSA, Serial Dil.		X		O	O	O
9. Detection Limits, Other QC		X O		O	O	O
10. Data Verification, Overall Summary		X		O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results: 1) J- flagged all Se results qualified Molybdenum in 13001 (now U) 13006 (U) 13008 (J+), 13009 (U) due to lab hits in field blank

2) J- flag Se results due to SD results

Validated by: [signature] Date: 7/29/13
Reviewed by: [signature] Date: 9-5-2013

Acceptable: YES NO

W3F0043

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

1. Date Package Completeness (Check if present)..... ACCEPT ✓

X Case narrative
X Chain of Custody
X Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results
✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
__ Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor
✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
X ICP Raw Data
o GFAA Raw Data
o Hg Raw Data
o Cyanide Raw Data
__ Other_____
✓ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: Serial dilution results included for SC
Temp. & Preservation requirements met.
TMJ

2. Holding Times (Check all that apply)..... ACCEPT ✓

✓ ICP/GFAA metals completed in <6 months from collection
o Mercury analyzed in <28 days from collection
o Cyanide completed in 14 days from collection

Comments/Qualified Results: General Chem: Alk <14 Day ✓
TDS < 7 Day ✓
Anions < 28 Day ✓

3. Calibrations (Check all that apply)..... ACCEPT ✓

✓ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
o ICV/CCV %R 80-120% for Hg, results accepted
__ CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
o ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
o ICV/CCV %R 85-115% for Cyanide, results acceptable
__ ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply).....

X Detects reported in ICB/CCB list:
✓ Detects in preparation blanks, list:
__ Detects in field blanks, list

Field Blank ID: 13007

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: J - flag molybdenum ICB/CCB - 3.056 ug/L
J - flag Ca in 13007 (FB) - 29.2 ug/L
J - flag Na in FB - 418 ug/L
CHANGES:
MOLT: 13001 → U, 13006 → U, 13008 → J+, 13009 → U

Acceptable: YES NO

W3F0043

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

5. Lab Duplicates, Field Duplicates (Check all that apply).....

\ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__ Field Duplicate ID 13002/13003 ✓

Comments/Qualified Results dups within acceptable range.

7. Laboratory Control Samples, Blank Spikes (Check all that apply)...

\ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__ LCS %R >150% and all results rejected (R)
__ LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__ LCS %R Ag, Sb, <20% and all results rejected
__ LCS %R 40-69% and results <MDL: estimated (UJ)	__ LCS %R Ag, Sb, >170% and all results rejected
__ LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results ~~MS and MSD~~ LCS all between 70-130%

8. Spike Recovery (Check all that apply).....

/ Spike %R with 75-125%: ACCEPTED	__ MS >125% and PDS <125%, detects > MDL est. (J)
__ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__ MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__ MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__ Field blanks used for spike analysis ? NO
__ MS and PDS %R >125%, detects > MDL est. (J+)	__ Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results: MS/MSD all between 70-130%

W3F0043

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... (X) QUALIF.

\ GFAA Duplicate injection RSD <20%: ACCEPTED	\ SD Analytes >50X MDL ?
__ GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__ SD % Diff < 10%
\ Analytical spike %R 85-115%	\ SD % Diff > 10%: J results >MDL, UJ for Non-detects
__ Analytical spike %R 40-85%, results > IDL estimated (J)	
__ Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__ Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: SD for selenium 26% diff
MDL = 0.26
INITIAL = 19.68
SERIAL = 24.74
(X) ∴ J- flag all Se results ✓ TMG

10. Detection Limits, Other QC.....

Comments/Qualified Results: OK

11. Data Verification and Overall Assessment.....

Comments/Qualified Results: see page 7

12. Interference Checks (Check all that apply).....

\ ICS A/B Recoveries Acceptable	X ICS %R 50-79%, results >IDL estimated (J)
X Al, Ca, Fe, Mg sample concentrations > ICS concentrations	X ICS %R 50-79%, results <IDL estimated (UJ)
X ICS %R > 120%, results >IDL estimated (J)	X ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results: recoveries acceptable, [sample] < LCS

W3F0045

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 9131101.605		SITE: Monsanto, Soda Springs, ID
LABORATORY:		SDG: W3F0045
SAMPLES	COLLECTED	MATRIX
13011 thru 13021 (10 SAMPLES)	5-31-13	water
13011S, 13011SD, 13012S, 13012SD (MS/MSD samples)	5-31-13	water
		Total Recoverable ONLY

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness	Anions	OTHER DO, CLASSIC CHEM
1. Data Completeness	O			O	O	O
2. Holding Times (1)	O			O	O	X
3. Calibration	O			O	O	O
4. Lab Blanks, Field Blanks	O			O	O	O
5. Lab Duplicate, Field Duplicate RPD (2)	~~X~~			O	O	O
6. LCS, Blank Spike, MFS	O			O	O	O
7. Matrix Spike, MSD (3)	~~O~~			N/A	O	O
8. GFAA, MSA, Serial Dil. (4)	X			N/A	NA	NA
9. Detection Limits, Other QC	O			O	O	O
10. Data Verification, Overall Summary	O			O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results: (3) MS %R were slightly high in Ca and Mg, however this did not result in qualifications.

(4) ~~2)~~ Dilution of Se resulted in a %Diff of 584, so ~~all~~ selenium results are estimated and biased high. J-FLAGGED for Sample 13012 ONLY. TMG

(1) ~~2)~~ DO OUT of HOLD - J/UJ

(2) F. Duplicates 13018 & 13019 >20% RPD for Phosphorus. "J" Qualif. applied.

Validated by: [signature] Date: 7/30/13
Reviewed by: [signature] Date: 9-05-2013

W3F0045

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

1. Date Package Completeness (Check if present)..... ☒ ☐

- \ Case narrative
- \ Chain of Custody
- \ Sample Results
- \ ICV/CCV Results
- \ Blank Results
- \ ICP Interference Check Results
- \ Spike Recovery Results
- \ Duplicate Results
- \ LCS Results
- \ Standard Addition Results
- \ ICP Serial Dilution
- \ Instrument Det. Limits
- \ ICP Correction Factor
- / ICP Linear Ranges
- / Preparation Logs
- / Analysis Run Logs
- / ICP Raw Data
- O GFAA Raw Data
- O Hg Raw Data
- O Cyanide Raw Data
- __Other_____
- / Acceptable
- x Absent
- o Not required for data package requested.

Comments/Qualified Results: _____

2. Holding Times (Check all that apply)..... ☒ (X)

- \ ICP/GFAA metals completed in <6 months from collection
- __Mercury analyzed in <28 days from collection
- __Cyanide completed in 14 days from collection

Comments/Qualified Results: (X) D.O. results tested >15 min limit. All assoc. results Qualif. "J/UJ"

3. Calibrations (Check all that apply)..... ☒ ☐

- \ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
- __ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- __ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- __ICV/CCV %R 80-120% for Hg, results accepted
- __CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
- __ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- __ICV/CCV %R 85-115% for Cyanide, results acceptable
- __ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- __ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: _____

4. Lab Blanks, Field Blanks (Check all that apply)..... ☒ ☐

- \ Detects reported in ICB/CCB list: J - Mo, Mg
- \ Detects in preparation blanks, list: J - Mg
- O Detects in field blanks, list

Field Blank ID: N/A

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: detects are within acceptable range

W3F0045

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

5. Lab Duplicates, Field Duplicates (Check all that apply)..... ☒ ⊗

__Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__Field Duplicate ID 13018/13019

Comments/Qualified Results both lab & field dups ok, with the exception of phosphorus @ 132% RPD.
⊗ Assoc. results Qualif. "J".

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... ☐ ☐

__LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results _____

8. Spike Recovery (Check all that apply)..... ☑ ☐

__Spike %R with 75-125%: ACCEPTED	__MS >125% and ~~PDS <125%, detects > MDL est. (J)~~ N/A
__MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results: MSD %R all acceptable. NO PDS
MS: Ca %R = 142
Mg %R = 150
J-flagged Ca: 13011, 13012, 13013, 13014, 13015, 13016, 13018, 13019, 13020, 13021, 13022
Mg: 13011, 13012, 13013, 13014, 13015, 13016, 13018, 13019, 13020, 13021, 13022

HOWEVER sample results were <4X spike added, so these results will not be flagged. (per pg 22 of EPA guidelines)

W3F0045

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... ☐ ☒

__GFAA Duplicate injection RSD <20%: ACCEPTED	__SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__SD % Diff < 10%
__Analytical spike %R 85-115%	\ SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: Se % Diff = 58.4%

ONLY J-flagged: 13012, ~~13013, 13016, 13018, 13019, 13020, 13021~~

UJ - flagged: none

(X) Sample 13012 Qualif. ONLY in accordance with dissimalar matrices. MJ

10. Detection Limits, Other QC..... ☒ ☐

Comments/Qualified Results: detection limits included

11. Data Verification and Overall Assessment..... ☐ ☐

Comments/Qualified Results: Se, Ca, & Mg results may be skewed

12. Interference Checks (Check all that apply)..... ☒ ☐

\ ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
\ Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

W3F0046

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 9131101.605	SITE: Monsanto, Soda Springs, ID
LABORATORY: SVL	SDG: W3F0046

SAMPLES	COLLECTED	MATRIX
13023, 13024, 13025, 13026, 13027, 13028, 13029, 13030, 13031, 13032		Water.
	Total Recoverable ONLY	
* No field dups/splits in this SDG.		

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	~~Hex-Cr~~ 350.1, 353.2, 2320B/ 2310B, 2540C, 4500P-E	~~Hardness~~	Anions 300.0	OTHER
1. Data Completeness		O	O		O	
2. Holding Times		O	O		O	
3. Calibration		O	O		O	
4. Lab Blanks, Field Blanks		O	O		O	
5. Lab Duplicate, Field Duplicate RPD		O	O		O	
6. LCS, Blank Spike, MFS		O	O		O	
7. Matrix Spike, MSD		Θ	Θ		~~X ②~~ O	NO QUAL
8. GFAA, MSA, Serial Dil.		X ①	NA		N/A	
9. Detection Limits, Other QC		X ①	O		O	
10. Data Verification, Overall Summary		O	O		O	

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

① Qual J/UJ Se results for ~~all~~ target samples due to interference, Serial Dilution >10%D for results >50X MDL.

~~② Qual J for Fc result 13023 for MS/MSD out of control low.~~ NO QUAL
Fluoride

Validated by: [signature] Date: 10/3/2013
Reviewed by: [signature] Date: 10-3-2013

W3F0046

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results

✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
o Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor

✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
o GFAA Raw Data
o Hg Raw Data
o Cyanide Raw Data

__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results:
Temp: 2.2°C ✓

2. Holding Times (Check all that apply)..... Yes No

✓ ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

✓ IC + Chemical Parameters w/ HTS.

Comments/Qualified Results:
- All ok.
- preservations ok

3. Calibrations (Check all that apply)..... Yes No

✓ __ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted

__CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... Yes No

__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Field Blank ID: N/a

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:

W3FC046

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL
__ Field Duplicate ID_____

Comments/Qualified Results
Lab dup on 13023 – ok.

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... (Yes) No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__ LCS %R >150% and all results rejected (R)
__ LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__ LCS %R Ag, Sb, <20% and all results rejected
__ LCS %R 40-69% and results <MDL: estimated (UJ)	__ LCS %R Ag, Sb, >170% and all results rejected
__ LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results
All LCS in control

8. Spike Recovery (Check all that apply)..... (Yes) ~~No~~ TMS

FUNCTIONAL QL.

✓ Spike %R with 75-125%: ACCEPTED	__ MS >125% and PDS <125%, detects > MDL est. (J)
__ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__ MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__ MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__ Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__ Post digest spk rqrd when %R <75, >125%, excpt Ag

SPIKED SAMPLE: 13023

Comments/Qualified Results:
MS/MSD on 13023: • MS/MSD %Rs out of control for Ca, Se, Na. No action. Spike amt < 4X sample amt. ✓
Post Digest spike performed for Se – still underspiked. No action.
• MS/MSD %R out of control for NO_3, Cl, SO_4. No action. Spike amt < 4X sample amt.
• MS/MSD %R out of control low for NH_3 batch W324295, and Fl batch W325119. LCS is ok. ~~Qual J-/UJ~~ ~~parent sample only~~ ~~13023~~ for samples in batch. (Just sample 13023 for Fl) NO QUAL.
Default recovery per Functional Guidelines 75-125% – TMS

W3F0046

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes (No)

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__ SD % Diff < 10%
__Analytical spike %R 85-115%	✓SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: 15% Diff MDL Sample -001 (13023)
Serial Dilution for Se 710% D w/results 750X MDL. Qual Results J/UJ.
(X) ONLY Target sample Qualified in accordance w/ dissimilar matrices for assoc. Samples. MS

10. Detection Limits, Other QC..... (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... Yes (No)

Comments/Qualified Results:
Selenium Results for 13023, 13024, 13025, 13026, 13027, 13028, 13029, 13030, 13031, 13032 - Equal'd by Lab - 'Estimated due to interferences'. Qual J/UJ
Ok for all other results.

12. Interference Checks (Check all that apply)..... (Yes) No

✓ICS A/B Recoveries Acceptable
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:
Internal Stds - ok.

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto.
LABORATORY: SVL	SDG: W3F0207
SAMPLES COLLECTED 6/3, 6/4/2013	MATRIX GW
13033, 13035, 13036, 13037, 13039, 13040, 13041, 13042, 13043, 13045, 13046 (11 samples) Total Recoverable ONLY	
Field Dup: 13033/13034, 13035/13036, 13037/13038, 13043/13044, (SPLIT) (F. DUPLIC) (SPLIT) (SPLIT)	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness 2320B	Anions 300.0, 350.1, 4500-O-G, 4500-PLE, 353.2, 2540C.	OTHER
1. Data Completeness		Θ ①		Θ ①	Θ ①	Θ ①
2. Holding Times		O		O	O	X ②
3. Calibration		O		O	O	O
4. Lab Blanks, Field Blanks		O		O	O	O
5. Lab Duplicate, Field Duplicate RPD		③ M		M ③	O	X ④
6. LCS, Blank Spike, MFS		X ⑧		O	O	O
7. Matrix Spike, MSD		Θ		O	X ⑤	X ⑥
8. GFAA, MSA, Serial Dil.		~~X ⑦~~		~~Θ~~	~~Θ~~	~~Θ~~
9. Detection Limits, Other QC		O		O	O	O
10. Data Verification, Overall Summary		O		O	O	O

js 8/6/13

O = Data had no problems Θ = Problems, but do not affect data

X = Data qualified due to minor problems [typically estimated data (J or UJ)].

M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).

Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results: ⑧ Selected results for Mo Qual U/J+ due to CCB contam.

① Cooler Temp: 6.2°C - No action taken.

② TDS out of hold for 13035, 13036, 13037, 13033 [Qual J/UJ]. "Do" out of hold for all samples. [Qual J/UJ]

④, ③ Field ~~Dup~~ split 13033/13034: Mn, NH3, Fl >20%, >5XCRDL [Qual J/UJ].

~~Field Dup 13035/13036: Cd, Ca, Mg, Mo, K, Na, V, Zn, Hardness x Possible Bottle Mix Up [Qual J/UJ]~~

~~Field Dup split 13037/13038: Mo, K, Na, V [Qual J/UJ]~~

⑤ ⑥ MS %R out of control low for NH3 [Qual J/UJ]

MS %R out of control high for Fl [Qual J]

~~⑦ Serial Dilution for Sc @10% and >50xMDL [Qual J/UJ]~~ NO QUAL.

Field Split 13043/13044: ~~Cd, Ca~~, Fl, ~~Hardness, Mn, Mo, NH3, K, Na~~, TDS, PO4, ~~V, Zn xx Possible Bottle Mix Up~~ [Qual J/UJ]

Validated by: Jill Lambeth Date: 8/6/2013

Reviewed by: [signature] Date: 9-05-2013

WJFO207

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results
✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
✗ Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor
✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
✓ GFAA Raw Data
✓ Hg Raw Data
✓ Cyanide Raw Data
__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: Cooler temp 6.2°C - No action other than to note
metals pH<2
NH_3 pH<2
NO_2/NO_3 pH<2

✓ 2. Holding Times (Check all that apply)..... Yes (No)

__ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

Comments/Qualified Results:
HT exceeded for TDS on samples 13035, 13036, 13037, 13033 [Qual J/UJ] ✓
HT exceeded for DO ~~on all~~ samples [Qual J/UJ] 13033, 13035, 13036, 13037, 13039 — 13043, 13045, 13046.

3. Calibrations (Check all that apply)..... (Yes) No

✓ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
✓ CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl) CRI
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results: Metals 6/24 Ca, Cr, Mg, Mn, Mo, K, Na, V, Zn ICV ✓, CCV ✓: 1704-1850
7/2 Se ICV ✓, CCV ✓ 0648-0906 CRI Mn 6/24 ✓, Se 7/02 ✓, LIST 1715 ✓, 1846 ✓.

✓ 4. Lab Blanks, Field Blanks (Check all that apply)..... ~~(Yes)~~ (No)

__Detects reported in ICB/CCB list: J on CCB 1, 2, 3 for Mo; CCB 3 for Mg
__Detects in preparation blanks, list:
__Detects in field blanks, list
Field Blank ID: _____ 9-10-13

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results: Metals ICB CCB Mn 6/24 ✓, Se 7/02 ✓, LIST 6/24 ⊗ Mo <RL ~~No Detects~~ @ 1730, 1823, 1853 and Mg ⊗ <RL @ 1853. NO QUAL.
Mo results Qual. "U" @ RL (8.0 ug/L) for 13035, 13036, 13043, & 13046.
Mo " " J+ @ reported value (16.1 ug/L) for 13039.
CHEM — ALL ND ✓ ANIONS - ND ✓
PREP BLANK ALL ND ✓.

W3F0207

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

✓ **5. Lab Duplicates, Field Duplicates** (Check all that apply).....

__Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__Field Duplicate ID 13035 (TW-11) 13036 (")

Comments/Qualified Results

SPLIT: 13033/13034: No results for 13034 - split w/ ARI - Mn, NH3, 720% + 75X CRDL - Fl, [qual J/UJ] ✓
DUPLIC. 13035/13036: 720% RPD and 75X CRDL: ~~Cd, Ca, Hardness, Mg, Mo, K, Na, V, Zn~~
~~** Looks like sample mix up ** for metals~~ NO QUAL ~~[qual UJ/J]~~ TMG
SPLIT: 13037/13038: 7% 20% RPD and 75X CRDL: ~~Mo, K, Na, V,~~ ~~[qual J/UJ]~~ NO QUAL.
SPLIT: 13043/13044: 720% RPD and 75X CRDL: ~~Cd, Ca,~~ Fl, ~~Hardness, Mn, Mo, NH3, K, Na,~~ TDS, Phosphorous, ~~V, Zn.~~ ~~** Looks like sample mix up? **~~ [qual J/UJ] ✓
NA TMG

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... Yes NO

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results Metals batch W324153 original SDG, and in 8-16-13 Delivery ✓.

CHEM NH_3-N ✓, NO_3-N ✓, Tot. Alk ✓, Phos ✓, Anions ✓
6/25 6/21 6/13 6/20 6/24

8. Spike Recovery (Check all that apply)..... yes NO

✓ Spike %R with 75-125%: ACCEPTED	✓ MS >125% and PDS <125%, detects > MDL est. (J)
✓ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results:

MS %R for Se low, but underspiked., PDS out of control Low too and underspiked ~~[Qual J-/UJ]~~ 8/6/13 No action. ✓ TMG
MS %R for NH3, Cl, SO4, but underspiked. No PDS. No action.
MS %R for NH3 out of control low. [Qual J/UJ] 70% Sampl# 13046
MS %R for Fl out of control high. [Qual J/~~UJ~~] detects

W3F0207

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes ~~No~~

TMO 9-10-13

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓ SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__ SD % Diff < 10%
__Analytical spike %R 85-115%	✓ SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results:

SD for Se @ 10% and 750X MDL. ~~No action. Qual J/UJ~~ results

NO QUALIF. for Se. ✓ TMO

10. Detection Limits, Other QC..... Yes No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... Yes No

Comments/Qualified Results:

12. Interference Checks (Check all that apply)..... Yes No

✓ ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results: Mn 6/24 ✓, Se 7/02 ✓, Cd, Zn 6/24 ✓

Stapp, Tom TMS 12-13-2013

From: Kirby Gray <Kirbyg@svl.net>
Sent: Thursday, August 15, 2013 6:14 PM
To: 'Chris Meyer'; Stapp, Tom
Cc: Klisch, Michael; 'Dave Waisman'
Subject: RE: 2103 Monsanto Data Question

Tom,

I was able to discover a mix-up in the second ICP analytical run. Samples W3F02107-02 through W3F0207-09 were mislabeled and samples W3F0207-10 and W3F0207-11 were not analyzed. Fortunately, the first analytical run did not have any problems with it and I am able to report all ICP metals for all samples from it. Samples W3F0207-02 and W3F0207-03 now look like duplicates and sample W3F0207-07 results for cadmium and molybdenum look more like last year's results. I have created a report with all new forms and will have Melba send that to you tomorrow.

Regards,
Kirby

Kirby Gray
Technical Director
SVL Analytical, Inc. ..... *Celebrating SVL's 40th Anniversary.....*
Ph:(208)784-1258
Fax:(208)783-0891

This message and any of the attached documents contain information from SVL Analytical that may be confidential and/or privileged. If you are not the intended recipient, you may not read, copy, distribute, or use this information, and no privilege has been waived by your inadvertent receipt. If you have received this transmission in error, please notify the sender by reply e-mail and then delete this message. Thank you.

From: Chris Meyer [mailto:chris@svl.net]
Sent: Thursday, August 15, 2013 11:48
To: 'Stapp, Tom'
Cc: 'Klisch, Michael'; 'Kirby Gray'; 'Dave Waisman'
Subject: RE: 2103 Monsanto Data Question

Tom..... I am forwarding this information to Kirby Gray. He is taking care of things for you. Thanks! .....Chris

---

From: Stapp, Tom [mailto:TStapp@golder.com]
Sent: Thursday, August 15, 2013 11:38 AM
To: dave@svl.net; chris@svl.net
Cc: Klisch, Michael
Subject: FW: 2103 Monsanto Data Question
Importance: High

Dave, Chris,

We have some large variance in selected samples from SDG W3F0207.

Per the Aug. 2, 2013 email below, Michael would like reanalysis of the samples listed for Cd & Mo. Hope there is not a volume issue with any of these. If there is, please call me immediately.

Please also include reanalysis of samples W3F0207-02 and -03 for all of the metals. The samples are in fact Field duplicates, and the agreement of data is suspect: Interestingly, the Se tested OK, owing to the different method. And we have good agreement with all of the General chem parameters (not listed).

LabSampleN	ClientI	SampD	RecvDat	ResultDa	Method	Result	MDL	Analyte	F
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	21.2	0.7	Cadmium	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	0.87	0.7	Cadmium	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	211000	15	Calcium	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	42200	15	Calcium	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	SM 2340B	1090000	128	Hardness	
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	SM 2340B	214000	128	Hardness	
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	136000	22	Magnesium	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	26400	22	Magnesium	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	-1.4	1.4	Manganese	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	-1.4	1.4	Manganese	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	123	1.8	Molybdenum	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	10.1	1.8	Molybdenum	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	23100	140	Potassium	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	3750	140	Potassium	T
W3F0207-02	13035	6/3/2013	6/11/2013	7/2/2013	EPA 6020	2.7	0.26	Selenium	T
W3F0207-03	13036	6/3/2013	6/11/2013	7/2/2013	EPA 6020	2.6	0.26	Selenium	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	102000	110	Sodium	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	19400	110	Sodium	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	60.1	1.5	Vanadium	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	-1.5	1.5	Vanadium	T
W3F0207-02	13035	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	173	2.5	Zinc	T
W3F0207-03	13036	6/3/2013	6/11/2013	6/24/2013	EPA 6010B	17	2.5	Zinc	T

There is also variance between Labs for samples 13037 for Mo and V. Please re-run those analytes and we will likely check with the Split lab as well.

Mo	SVL: 2.5 ug/l	Split: 378 ug/L
V	SVL: 2.6 ug/L	Split: 657 ug/L

Since the additional testing is to confirm a suspected mix-up in reported data, we would not expect to be invoiced. But if there is good confirmation with the Bottles / Labels / Digest Logs / Analytical run logs / and most importantly the data you originally reported, then there will be some more thinking to do.

As always, I am available to help chase this down and resolve. So call me if you have questions.
Regards, TMS

From: Klisch, Michael
Sent: Wednesday, August 14, 2013 12:44 PM
To: Stapp, Tom
Subject: FW: 2103 Monsanto Data Question

Tom-

Can you follow up with SVL again on the cadmium/moly issue and see if they would re-run the samples for us. I never heard back from them on the message I sent below. We need to get to the bottom of this as we prepare our annual report.

Thanks.

From: Klisch, Michael
Sent: Friday, August 02, 2013 1:40 PM
To: Chris Meyer
Subject: 2103 Monsanto Data Question

Chris-

I have been reviewing the recent data you sent for our annual sampling at the Monsanto Plant. Looking at the data it appears that we have a discrepancy in cadmium and molybdenum values from 5 samples – the 2013 data do not compare at all with historic data. For example, last year at one location cadmium was 0.626 mg/L; molybdenum was 0.232 mg/L. This year the results are 0.0027 mg/L and 0.014 mg/L, respectively. We also see the opposite – locations where we saw historic low to ND concentrations were significantly higher this year.

I looked at results for a few other constituents (F, Mn, NO3, Se, CL, and SO4) from the five samples and they all seemed to be reasonable based on our historic results.

The 5 samples were all collected on the same day, one after another – here are the details:

SVL ID	Golder ID	Sample Date	Sample Time
W3F0207-06	13040	6/4/2013	12:00
W3F0207-07	13041	6/4/2013	13:00
W3F0207-08	13042	6/4/2013	14:40
W3F0207-09	13043	6/4/2013	16:00
W3F0207-10	13045	6/4/2013	16:55

Can you double check the results from these samples again and determine if there was somehow a mix-up in the lab with reporting? Tom Stapp looked at the raw data and did not see anything.

Thanks, let me know what you think.

Michael

Michael Klisch, L.Hg., R.G. | Senior Project Hydrogeologist | **Golder Associates Inc.**
18300 NE Union Hill Road, Suite 200, Redmond, Washington, USA 98052
T: +1 (425) 883-0777 | **D:** +1 (206) 316-5558 | **F:** +1 (425) 882-5498 | **C:** +1 206 419-4366 | **E:** MKlisch@golder.com | **www.golder.com**

Work Safe, Home Safe

This email transmission is confidential and may contain proprietary information for the exclusive use of the intended recipient. Any use, distribution or copying of

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto
LABORATORY: SVL	SDG: ~~W~~ W3F0208
SAMPLES COLLECTED 6/4-5/2013	MATRIX
13047 - 13057 (11 samples)	Groundwater
	TOTAL RECOVERABLE ONLY
13047 - field dup w/ 13046 ✓	
13054 - field dup w/ 13055	
13056 - field dup w/ 13057	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness 2320B	Anions 300.0, 350.1, 4500-O-G 4500-P-E, 353.2, 2540C	OTHER
1. Data Completeness		O		O	O	O
2. Holding Times		O		O	O	X ①
3. Calibration		O		O	O	O
4. Lab Blanks, Field Blanks		O		O	O	O
5. Lab Duplicate, Field Duplicate RPD		O		O	X ②	O
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		O		O	X ②	O
8. GFAA, MSA, Serial Dil.		O		O	O	O
9. Detection Limits, Other QC		O		O	O	O
10. Data Verification, Overall Summary		O		O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

① DO analyzed out of hold. Qualify J/UJ all results for DO
② MS/MSD out of control for ~~NH4~~, Fl. Qualify J/UJ ~~all~~ SPIKED results for ~~NH4~~, Fl
③ Field dup >20% for NO_2/NO_3-N on 13047, 13046. Qual these two samples for NO_2/NO_3-N as J/UJ. dsD for Ca, Mg, Hardness, K, Na.

Validated by: Jill Rennie Date: 8/2/2013
Reviewed by: Sam Stapp Date: 9-05-2013

W3F0208

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results

✓ Spike Recovery Results
__ Duplicate Results
✓ LCS Results
__ Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor

✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
O GFAA Raw Data
O Hg Raw Data
O Cyanide Raw Data

__ Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results:
metals bottle PH < 2. Cooler Temp: 5.4°C - ok
NH_3 < 2
NO_2/NO_3 < 2

2. Holding Times (Check all that apply)..... Yes No

✓ ICP/GFAA metals completed in <6 months from collection
__ Mercury analyzed in <28 days from collection
__ Cyanide completed in 14 days from collection

Comments/Qualified Results:
All w/in Hold Time except for DO - should be field analyzed. Qual J/UJ.

3. Calibrations (Check all that apply)..... Yes No

✓ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ ICV/CCV %R 80-120% for Hg, results accepted

✓ CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ ICV/CCV %R 85-115% for Cyanide, results acceptable
__ ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... Yes No

✓ Detects reported in ICB/CCB list: J flag for Mo on CCB 1, 2, 3, 4, 5 Field Blank ID: none
__ Detects in preparation blanks, list:
__ Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:
No detects.

W3F0208

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

JS 8/13/13

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

✓ Field Duplicate ID see page 1

Comments/Qualified Results

(X) 13047/13046*: Field dups all <20% or <5XCRDL except Nitrate/Nitrite as N. Equal J/UJ
13054/13055: all <20% RPD.
13056/13057: all <20% RPD except for DO, but already qual'd due to hold time issues

(X) *SDG # W3F0207 Sampl. 13046 NO_2/NO_3-N result <0.05 mg/L > ±RL
" W3F0208 " 13047 " " 2.10 "
*and Ca, Mg, Hardness, K, Na, Equal/J/UJ on these samples

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... Yes No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__ LCS %R >150% and all results rejected (R)
__ LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__ LCS %R Ag, Sb, <20% and all results rejected
__ LCS %R 40-69% and results <MDL: estimated (UJ)	__ LCS %R Ag, Sb, >170% and all results rejected
__ LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results

8. Spike Recovery (Check all that apply)..... JS 8/13/13 Yes No

✓ Spike %R with 75-125%: ACCEPTED	__ MS >125% and PDS <125%, detects > MDL est. (J)
✓ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__ MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__ MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__ Field blanks used for spike analysis ?
✓ MS and PDS %R >125%, detects > MDL est. (J+)	__ Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results:

MS/MSD for Cl + SO4 out of control, but qual'd by lab as R74S - undispiked. No action.
MS/MSD for NH_4 + Fl out of control low. LCS in control. No PDS. qual results ~~as J/UJ. Parent sample is 13047~~ NO QUAL for NH_3. TMS
(X) MS/MSD for Fl out of control high. LCS in control. No PDS. qual results as J/UJ. Parent sample is 13047. ONLY parent sample is qualified in accordance with historic treatment of dissimilar samples. TMS
13056 0.12 J mg/L

W3F0208

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes No

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓ SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__ SD % Diff < 10%
✓ Analytical spike %R 85-115%	✓ SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results:

No Serial Dilution Prepared.

10. Detection Limits, Other QC..... Yes No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... Yes No

Comments/Qualified Results:

12. Interference Checks (Check all that apply)..... Yes No

✓ __ICS A/B Recoveries Acceptable
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto
LABORATORY: SVL	SDG: W3F0223

SAMPLES	COLLECTED	MATRIX
13060, 13061, 13064, 13068, 13095, 13097, 13098, 13099, 13101, 13103		
~~Total Recoverable~~ + "Selected" Dissolv.		
Field Dups: 13061/13062, 13064/13065, 13099/13100, 13101/13102		
Grundfos Blank: 13103		

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness 2320B	Anions 300.0, 350.1, 4500-O-G 4500-P-E, 353.2, 2540C	OTHER
1. Data Completeness		O		O	O	O
2. Holding Times		O		O	O	X (1)
3. Calibration		O		O	O	O
4. Lab Blanks, Field Blanks		Θ (2)		Θ (2)	O	O
5. Lab Duplicate, Field Duplicate RPD		O		O	X (3)	X (3)
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		O		O	X (4)	X (4)
8. GFAA, MSA, Serial Dil.		X (5)		O	O	O
9. Detection Limits, Other QC		O		O	O	O
10. Data Verification, Overall Summary		O		O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

✓ (1) Do out of hold - Qual all J/UJ (all samples)
✓ Bicarb, Carb, Alk out of hold on 13103. Qual ~~J/UJ~~ J sample.
✓ (2) Grundfos Blank 13103 contains Ca, and Hardness + Na are >MDL but <RL (J flagged). No action taken other than to note.
✓ (3) Field Dup 13064/13065: Phosphorus RPD >20% and >5XCRDL. Qual J/UJ samples
✓ Field Split 13099/13100: Fl and TDS >20% RPD, and >5X CRDL. Qual J/UJ samples
✓ Field Split 13101/13102: NH_3 >20% RPD and >5X CRDL. Qual J/UJ samples
(4) MS%R for NH_3 out of control low - Qual J/UJ, and out of control high - Qual J/UJ affected samples
~~MS%R for Fl out of control low - Qual J/UJ affected samples~~ NO QUAL.
✓ (5) Serial Dilution %D > 10% for Se and >50xMDL - Qual J/UJ affected samples.

Validated by: Jill Perry Date: 8/6/2013
Reviewed by: CM Date: 9-05-2013

W3F0223

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results
✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
X Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor
✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
o GFAA Raw Data
o Hg Raw Data
o Cyanide Raw Data
__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: Cooler Temp 5.4°C ok
Metals bottle pH<2
NH_3 pH<2
NO_2/NO_3 pH<2

2. Holding Times (Check all that apply)..... Yes (No)

__ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

Comments/Qualified Results:

(X) ✓ DO ~~Analyzed~~ out of hold. [Qual J/UJ] all samples
(X) ✓ Bicarb, Carb, Alk re-analyzed out of hold. [Qual J/UJ] sample 13103
6/09 — 6/24 = 15 DAY

3. Calibrations (Check all that apply)..... (Yes) No

✓ __ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
✓ __CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... (Yes) No

✓ Detects reported in ICB/CCB list: J for Mo on CCB 1,2,3 Field Blank ID: _____
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:
No Detects

Grundfos Blank 13103: Detect of Ca @ 43 µg/L. No action other than to Note - No action on ~~the~~ field blanks.
: Hardness + Na J flagged.
: all other parameters ND

W3F0223

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

5. Lab Duplicates, Field Duplicates (Check all that apply)..... 6/8/7/13

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__Field Duplicate ID_____

Comments/Qualified Results

13064/13065: Phosphorus %RPD = 21% and 75X CRDL. Qual J/UJ ✓
13099/13100: Fl %RPD = 58% and 75X CRDL - Qual J/UJ ✓
(Field Split w/ ARI lab), Also TDS + NH_3
13101/13102: NH_3 %RPD = 69% and 75X CRDL - Qual J/UJ ✓
(Field Split w/ ARI lab)
13061/13062: OK

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... Yes NO

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results

8. Spike Recovery (Check all that apply)..... Yes No

✓ Spike %R with 75-125%: ACCEPTED	✓ MS >125% and PDS <125%, detects > MDL est. (J)
✓ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

Spike Samples 13060

Comments/Qualified Results:

NH_3 MS% R out of control low - qual J/UJ associated samples *
MS% R out of control high - qual J associated samples
MS% R out of control but underspiked - No action
~~Fl MS% R out of control low - qual J/UJ associated samples~~ NO QUAL.
Cl MS% R out of control - but underspiked. No action

W3F0223

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes (No)

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓ SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	✓ SD % Diff < 10%
✓ Analytical spike %R 85-115%	✓ SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results:

✓ SD = 11% D for Se, but results are <50XMDL. No action. ~~Lab qual~~ 'd ~~affected samples 'E' -interferences~~

SD = 21% for Se, results >50XMDL [Qual J/UJ] affected samples. Lab qual'd 'E' -interferences Sample '13064' qualifie

(X) Associated Samples not Qualified in accordance w/ dissimilar matrix.

10. Detection Limits, Other QC..... TMS (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... (Yes) No

Comments/Qualified Results:

12. Interference Checks (Check all that apply)..... (Yes) No

__✓ ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto
LABORATORY: SVL.	SDG: WBF0227
SAMPLES COLLECTED 6/7,8/2013	MATRIX
13063, 13066, 13067, 13076, 13078, 13079, 13081 (7 samples)	GW.
DISSOLVED + Total Recoverable	
SPLIT	
Field ~~dups~~: 13076/13077,	
TMS	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness 2320B	Anions 300.0, 350.1, 4500-O-G, 4500-P-E, 353.2, 2540C	OTHER
1. Data Completeness		Θ ①		X ①	X ①	X ①
2. Holding Times		O		O	O	X ②
3. Calibration		O		O	O	O
4. Lab Blanks, Field Blanks		O		O	O	O
5. Lab Duplicate, Field Duplicate RPD		O		O	O	O
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		O		O	O	X ③
8. GFAA, MSA, Serial Dil.		X ④		O	O	O
9. Detection Limits, Other QC		O		O	O	O
10. Data Verification, Overall Summary		O		O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

✓① Cooler Temp 7.8°C. ~~No action taken~~ Assoc. Gen Chem results Qualif. "J/UJ".
✓② DO out of hold. [Qual J/UJ].
③ MS% out of control for SO_4 + NH_3 (high) [Qual J]
✓④ Serial Dilution for Se %D > 10% and > 50x MDL. [Qual J/UJ]

Validated by: Jill Lerr Date: 8/6/2013
Reviewed by: CM Date: 9-05-2013

W3F0227

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: ~~YES~~ NO X

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results
✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
X Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor
✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
O GFAA Raw Data
O Hg Raw Data
O Cyanide Raw Data
__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results: X Cooler Temp 7.8°C – Qualifies assoc results "J/UJ"
Metals pH<2
NH_3 pH<2
NO_2-NO_3 pH<2

2. Holding Times (Check all that apply)..... Yes (No)

__ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

Comments/Qualified Results:
X DO analyzed out of hold - [Qual J/UJ] ✓

3. Calibrations (Check all that apply)..... (Yes) No

✓ __ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
✓ __CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... (Yes) No

__Detects reported in ICB/CCB list: J for Mo on CCB's 2,-7
Field Blank ID: _____
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:
No detects

W3F0227

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

Field Duplicate ID 13076/13077
Sample MORMON A

Comments/Qualified Results
✓ Field Dup/Split 13076/13077 = all < 20% RPD or <5XCRDL.
Total Recoverable Gen Chem ✓
Metals ✓
Dissolved Frac Metals ✓

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... (Yes) No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	LCS %R >150% and all results rejected (R)
LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	LCS %R Ag, Sb, <20% and all results rejected
LCS %R 40-69% and results <MDL: estimated (UJ)	LCS %R Ag, Sb, >170% and all results rejected
LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results

8. Spike Recovery (Check all that apply)..... (Yes) ~~No~~

✓ Spike %R with 75-125%: ACCEPTED	✓ MS >125% and PDS <125%, detects > MDL est. (J)
MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	Field blanks used for spike analysis ?
MS and PDS %R >125%, detects > MDL est. (J+)	Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results:
✓ MS %R out of control high for SO_4 and NH_3. [Qual J] Meets 75-125% NO QUAL.
✓ MS %R out of control for Cl and NH_3 - No action, undersplked (R > 45)

✓ MS/MSD for Dissolv. Fraction Sample 13063.
✓ " " " Tot. Recov. " " "

WS FO 227

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes (No)

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__SD % Diff < 10%
✓Analytical spike %R 85-115%	✓SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: Sample 13063 DISSOLV. 21% Total Rec. 20%

Se Serial Dilution %D = 21% (20%) w/ results > 50X MDL. [Qual J/UJ]

lab qual'd results w/ 'E' - interferences present.

10. Detection Limits, Other QC..... (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... (Yes) No

Comments/Qualified Results:

12. Interference Checks (Check all that apply)..... (Yes) No

✓ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 9131101.605	SITE: Monsanto, Soda Springs, ID
LABORATORY: SVL	SDG: W3F0228

SAMPLES COLLECTED	MATRIX
13083, 13084, 13085, 13086, 13087, 13089, 13091	Water
	DISSOLVED + Total Recoverable
* 13089 - dup w/ 13090* - (SDG# W3F0231)	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	~~Hex-Cr~~ 350.1, 353.2, 23208/ 2310B, 2540C, 4500P-E	~~Hardness~~	Anions 300.0	OTHER
1. Data Completeness		O	O		O	O
2. Holding Times		O	O		O	(1) X
3. Calibration		O	O		O	O
4. Lab Blanks, Field Blanks		O	O		O	O
5. Lab Duplicate, Field Duplicate RPD		O	O		O	O
6. LCS, Blank Spike, MFS		O	O		O	O
7. Matrix Spike, MSD		Θ	X (4)		X (4)	Θ
8. GFAA, MSA, Serial Dil.		X (2)	NA		NA	NA
9. Detection Limits, Other QC		X (2)	O		O	O
10. Data Verification, Overall Summary		O	O		O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

(1) Qual J/UJ/ DO for 13083, 13084, 13085, 13086, 13087, 13089, 13091 - out of hold
(2) Qual J/UJ Se results for ~~all samples~~ Smpl 13083 due to interferences. Also SD >10% for results <50xMDL.
(3) Cooler Temp 7.4°C. - All assoc. Gen Chem results Qualif. "J/UJ".
~~(4) Qual J+/ NH3 results in batch due to MS/MSD out of control high. (No samples)~~ NO QUAL.
~~Qual J-/UJ Cl- results in batch due to MS/MSD out of control low. 13085 only~~ NO QUAL.
TAD

Validated by: [signature] Date: 10/3/2013
Reviewed by: [signature] Date: 10-4-2013

W3F0228

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: ~~YES~~ ~~NO~~ X

1. Date Package Completeness (Check if present).....

- ✓ Case narrative
- ✓ Chain of Custody
- ✓ Sample Results
- ✓ ICV/CCV Results
- ✓ Blank Results
- ✓ ICP Interference Check Results
- ✓ Spike Recovery Results
- ✓ Duplicate Results
- ✓ LCS Results
- 0 Standard Addition Results
- ✓ ICP Serial Dilution
- ✓ Instrument Det. Limits
- ✓ ICP Correction Factor
- ✓ ICP Linear Ranges
- ✓ Preparation Logs
- ✓ Analysis Run Logs
- ✓ ICP Raw Data
- 0 GFAA Raw Data
- 0 Hg Raw Data
- 0 Cyanide Raw Data
- __Other_____
- / Acceptable
- x Absent
- o Not required for data package requested.

Comments/Qualified Results:

X Cooler Temp: 7.4°C. > 6°C. ~~No action other than to note.~~ QUAL. APPLIED.
Preservations ok.

2. Holding Times (Check all that apply)..... Yes No

- ✓ __ICP/GFAA metals completed in <6 months from collection
- __Mercury analyzed in <28 days from collection
- __Cyanide completed in 14 days from collection

✓ Chemistry + Anons

Comments/Qualified Results:

HT for DO out of 15 min HT (should be field analysed).
[Qual all samples UJ/J

3. Calibrations (Check all that apply)..... Yes No

- ✓ __ICV/CCV %R for ICP/AA, 90%-110%, acceptable
- __ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- __ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- __ICV/CCV %R 80-120% for Hg, results accepted
- __CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
- __ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- __ICV/CCV %R 85-115% for Cyanide, results acceptable
- __ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- __ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... Yes No

- __Detects reported in ICB/CCB list:
- __Detects in preparation blanks, list:
- __Detects in field blanks, list

Field Blank ID: _____

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:

ok

W3F0228

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

SC-11
__Field Duplicate ID 13089/13090*

Comments/Qualified Results
13089/13090: all <20% RPD or <5XCRDL w/except. of 13089 Fluoride (23%) and Molybdenum (52%) - TOTAL RECOVERABLE
Lab Dup on 13083: RPD>20% for NH3. No action <5XCRDL

* SDG # W3F0231

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... Yes (No)

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results

8. Spike Recovery (Check all that apply)..... (Yes) (No)

✓ Spike %R with 75-125%: ACCEPTED *	__ MS >125% and PDS <125%, detects > MDL est. (J)
__MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

* Functional Guideline limits applied.

Comments/Qualified Results:
MS/MSD on 13083: for Metals - ok except for MS for Se - no action taken. Spiked amt < 4X sample amt. PDS ok. ✓
: out of control for NH3, Cl : no action, underspiked. ✓
NO QUAL. ~~: out of control high for NH3 : qual J+ results in batch (MS)~~
LCS ok for both. NO Qual ~~: out of control low for Fl : qual J-/UJ results in batch (MS)~~

W3F0228

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes (No)

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__SD % Diff < 10%
__Analytical spike %R 85-115%	✓SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: Sample 13083 (X) Dissolv. (X) Tot. Recov.

(X) Serial Dilutions for Se: %D >10% for results >50xMDL.

Qual J/UJ. Assoc. samples NOT QUALIFied in accordance w/ Dissimilar Matrix.

TMG

10. Detection Limits, Other QC..... (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... Yes (No)

Comments/Qualified Results:

Se: All results qual'd E by lab: estimated due to interferences. Qual J/UJ results for Se

12. Interference Checks (Check all that apply)..... (Yes) No

✓ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

Internal Stds - ok

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto.
LABORATORY: SVL	SDG: WBF0231
SAMPLES COLLECTED 6/7-6/8/2013	MATRIX
13070, 13072, 13074, 13088, 13090, 13092, 13093 (7 samples)	Groundwater. DISSOLVED + Total Recoverable
Field dups 13089*/13090 (*SDG# WBF0228)	

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness 2320B	Anions 300.0, 350.1, 4500-O-G, 4500-P-E, 353.2, 2540C	OTHER
1. Data Completeness		Θ ①		X ①	X ①	X ①
2. Holding Times		O		O	O	X ②
3. Calibration		O		O	O	O
4. Lab Blanks, Field Blanks		O		O	O	O
5. Lab Duplicate, Field Duplicate RPD		X ③		O	O	O
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		X ④		O	~~X ⑤~~ O	O
8. GFAA, MSA, Serial Dil.		X ⑥		O	O	O
9. Detection Limits, Other QC		O		O	O	O
10. Data Verification, Overall Summary		O		O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

✓ ① Cooler temp 7.8°C. ~~No action taken~~ Gen Chem results (ALL) Qualif. "J/UJ".
✓ ② DO analyzed out of hold. [Qualify J/UJ] all results for DO.
✓ ③ Lab duplicate out of control for diss ~~Fluoride~~ [Qual J/UJ] ~~all~~ results for 13090. ~~Potassium~~
✓ ④ MSD for diss Mg, K out of control high [Qual J] detects for Mg, K
~~② MSD for SO4 out of control high [Qual J] detects for Mg, K SO4~~ NO QUAL. TMJ
✓ ⑥ Serial Dilution >10% and >50x MDL. ~~Q~~ for Se. [Qualify J/UJ] results for Se.

Validated by: [signature] Date: 8/6/2013
Reviewed by: [signature] Date: 10-3-2013

W3F0231

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES ~~NO~~

1. Date Package Completeness (Check if present).....

- ✓ Case narrative
- ✓ Chain of Custody
- ✓ Sample Results
- ✓ ICV/CCV Results
- ✓ Blank Results
- ✓ ICP Interference Check Results
- ✓ Spike Recovery Results
- ✓ Duplicate Results
- ✓ LCS Results
- __ Standard Addition Results
- ✓ ICP Serial Dilution
- ✓ Instrument Det. Limits
- ✓ ICP Correction Factor
- ✓ ICP Linear Ranges
- __ Preparation Logs
- ✓ Analysis Run Logs
- ✓ ICP Raw Data
- O GFAA Raw Data
- O Hg Raw Data
- O Cyanide Raw Data
- __ Other_____
- / Acceptable
- x Absent
- o Not required for data package requested.

Comments/Qualified Results: (X) Cooler Temp: 7.8°C; Assoc Gen Chem Qual "J/UJ".
Metals bottle pH<2
NH_3 <2 Bottle for 13092 labelled 13093 but had 13092
NO_2+NO_3 <2 time. Lab defaulted to 13092.

2. Holding Times (Check all that apply)..... Yes NO

__ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

Comments/Qualified Results:
(X) DO analyzed out of hold. Qual J/UJ should be field analyzed. ✓

3. Calibrations (Check all that apply)..... Yes NO

- ✓ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
- __ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
- __ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
- __ICV/CCV %R 80-120% for Hg, results accepted
- ✓ CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
- __ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
- __ICV/CCV %R 85-115% for Cyanide, results acceptable
- __ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
- __ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... Yes No

✓ Detects reported in ICB/CCB list: J on Mg in ICB, Mo on CCB 1,2,3, Field Blank ID: _____
__Detects in preparation blanks, list:
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:
No detects.

W3F0231

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

SJ 8/6/13

5. Lab Duplicates, Field Duplicates (Check all that apply)……..

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__Field Duplicate ID_____

Comments/Qualified Results Sample SC-11 (TR).

13089/13090: all <20% RPD or <5xCRDL

Fluoride. ~~K~~ Dup RPD 23% and >5xCRDL. Qual J/UJ ~~(dissolved only)~~ TR ONLY

NH4 Dup RPD 24% but is <5xCRDL. No action.

Mo RPD 52% QUAL "J" TR ONLY.

7. Laboratory Control Samples, Blank Spikes (Check all that apply)… Yes No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results _____

8. Spike Recovery (Check all that apply)…… Yes No

✓ Spike %R with 75-125%: ACCEPTED	X MS >125% and PDS <125%, detects > MDL est. (J)
__MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results: _____

MS/MSD for Na, Ca out of control high → underspiked, no action.

X MSD for diss Mg, K out of control high↑ Parent sample is 13070. Qual J/UJ detected results. ✓

MS/MSD for NO_2/NO_3-N, Cl out of control → underspiked, no action.

MSD for SO4 ~~out of control~~ ~~qual J/UJ~~ ~~for detects~~ only. Sample 13072 NO QUAL.

W3F0231

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes (No)

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓ SD Analytes >50X MDL ?
✓ GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__SD % Diff < 10%
✓ Analytical spike %R 85-115%	✓ SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: (X) Samples: 13070 - Dissolved fraction
13070 - Total Recoverable ".
SD % D =19% =21% and >50x MDL. Qual J/UJ associated results for Se.
Lab qual'd E due to presence of interference.
Samples cited are Qualified ONLY. Assoc Samples NOT qualified due to Dissimilar matrices.

10. Detection Limits, Other QC..... (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... (Yes) No

Comments/Qualified Results:

12. Interference Checks (Check all that apply)..... (Yes) No.

✓ ICS A/B Recoveries Acceptable
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 913-1101-002.002.2I	SITE: Monsanto
LABORATORY: SVL	SDG: W3F0233
SAMPLES COLLECTED 6/7 and 6/8/2013	MATRIX
13065, 13069, 13071, 13073, 13075, 13082, 13094 (fieldDup)	DISSOLVED + Total RECOVERABLE

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	Hex-Cr	Hardness 2320B	Anions 300.0, 350.1, 4500-O-G, 4500-P-E, 353.2, 2540C	OTHER
1. Data Completeness		Θ (4)		M ~~Θ~~ (4)	M ~~Θ~~ (4)	M ~~Θ~~ (4)
2. Holding Times		O		O	O	X (1)
3. Calibration		O		O	O	O
4. Lab Blanks, Field Blanks		O		O	O	O
5. Lab Duplicate, Field Duplicate RPD (6)		~~X~~ TMB		O	O	~~Θ~~
6. LCS, Blank Spike, MFS		O		O	O	O
7. Matrix Spike, MSD		~~Θ~~		O	X (2)	O
8. GFAA, MSA, Serial Dil.		X (3)		O	O	O
9. Detection Limits, Other QC		~~Θ~~ (6)		O	O	O
10. Data Verification, Overall Summary		O		O	O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

(1) DO analyte out of hold. Qualify J/UJ all results for DO
(2) MS/MSD out of control low for Cl. Qualify J/UJ ~~all results~~ Cl Qual. for Sampl. 13094
(3) Serial Dilution >10% and 750xRL/MDL. Qualify J/UJ ~~all results for~~ Se Qual. 13065.
(4) Cooler Temps 8.2°C. ~~No action taken other than to note.~~ Assoc. Gen Chem Qualif. "J/UJ".
(5) Internal Std ~~Ga 71~~ 45 out of control for 13071 and 13073. No action taken other than to note.
(6) FIELD DUP results for Cd, Mo Qualif. "J". RPD > 20%.

Validated by: Jill Fuller Date: 8/21/2013
Reviewed by: Tom [illegible] Date: 9-5-2013

W3F0233

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: ~~YES~~ NO

1. Date Package Completeness (Check if present).....

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results
✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
X Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor
✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
o GFAA Raw Data
o Hg Raw Data
O Cyanide Raw Data
__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

9-5-13

Comments/Qualified Results: NO_2+NO_3-N
metals bottle pH<2, 350.1, NH_3 bottle pH<2.
Cooler Temps: 8.2°C - high-ok for metals. ~~No action taken other than to note.~~
*Associated results for Anions, NH_3, Alkalin, DO & TDS Qualified "J/UJ".

2. Holding Times (Check all that apply)..... Yes No

✓ ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

JS 8/21/13

Comments/Qualified Results: SM 2320B<14days

Metals: Analyzed on 6/23 and 7/1 DO: out of hold - should be field analyzed [Qual J/UJ]
Prepped on 6/20, 23, 25 4500P-E: <28 days
300.0: <28 days. 353.2: <28 days
Ammonia 350.1: <28 days TDS: <7 days

3. Calibrations (Check all that apply)..... Yes No

✓ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
✓ CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply)..... Yes No

__Detects reported in ICB/CCB list: J for Mo on CCB1, 2, 3, 4, 5 Field Blank ID: none in this batch.
__Detects in preparation blanks, list: None
__Detects in field blanks, list

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:
All ND.

W3F0233

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
✓ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__Field Duplicate ID # 13064, 13065*

Comments/Qualified Results * SDG # W30F0233
" W3F0223

Mo %D = 24% ~~but~~ results > 5X CRDL. ~~No action~~ Qual. Applied (J). TMG

Cd ~~dMo~~ %D = 79% ~~but~~ results > 5X CRDL. ~~No action~~. QUAL APPLIED (J).

~~Nitr %D = 24.3%, but results < 5X CRDL. No action~~ TMG

Phosphorus %D = 21% and > 5X CRDL for field dup. ~~Qual J/UJ~~ ~~Field dups results for Phosphorus~~ NO QUAL. (See Table A.5-2 FIELD DUPLICATES.)

TMG

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... Yes No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__LCS %R >150% and all results rejected (R)
__LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__LCS %R Ag, Sb, <20% and all results rejected
__LCS %R 40-69% and results <MDL: estimated (UJ)	__LCS %R Ag, Sb, >170% and all results rejected
__LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results

8. Spike Recovery (Check all that apply)..... JSI 8/3/13 Yes No

✓ Spike %R with 75-125%: ACCEPTED	__ MS >125% and PDS <125%, detects > MDL est. (J)
✓ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results:

MSD for Ca (W324273-MSD1) %R 69%. No action taken since spiked amount is < 4X sample amount.

MS/MSD for NO_2/NO_3-N, qual'd by lab as R>4S - underspiked. No action taken.

MS/MSD for SO_4, qual'd by lab as R>4S - underspiked. No action taken

MS/MSD for Cl out of control low @74%. LCS was in control. ~~Qual~~ No PDS. qual results as J/UJ Parent sample is ~~13065~~ 13094. Assoc. results are not qualified in accordance w/ dis-similar sample matrix rule. TMG

W3F0233

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes No

JS 8/5/13

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__ SD % Diff < 10%
✓Analytical spike %R 85-115%	✓SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results:

SD % Diff = 26%. Qual [J/UJ] associated results for Se. Lab qual'd 'E' due to presence of interference.

10. Detection Limits, Other QC..... Yes No

Comments/Qualified Results:

Internal standard ~~Ga 71~~ SC-45 out of control on samples 13071 and 13073. ~~No action taken other than to note~~ Tune Step 2 acceptable for IS recovery NO QUAL APPLIED.

TMJ 9-5-13

11. Data Verification and Overall Assessment..... Yes No

Comments/Qualified Results:

12. Interference Checks (Check all that apply)..... Yes No

✓ICS A/B Recoveries Acceptable
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations
__ICS %R > 120%, results >IDL estimated (J)
__ICS %R 50-79%, results >IDL estimated (J)
__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

Comments/Qualified Results:

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

GOLDER PROJECT #: 9131101.605	SITE: Monsanto, Soda Springs, ID.
LABORATORY: SVL	SDG: W3F0235

SAMPLES	COLLECTED	MATRIX
13058, 13059, 13096, TS-1-2, TE-1-2		Water
	Total Recoverable	
* No field dups or splits in this SDG		

DATA ASSESSMENT SUMMARY

REVIEW ITEM	ICP/ AES EPA200.7	ICP/ MS EPA200.8	~~Hex-Cr~~ 350.1, 353.2, 2320B/ 2310B, 2540C, 4500P-E	~~Hardness~~	Anions 300.0	OTHER DO 4500-O-G
1. Data Completeness (3)		O	O		~~O~~	~~O~~
2. Holding Times		O	O		O	X (2)
3. Calibration		O	O		O	O
4. Lab Blanks, Field Blanks		O	O		O	NA
5. Lab Duplicate, Field Duplicate RPD		O	~~O~~		O	O
6. LCS, Blank Spike, MFS		O	O		O	NA
7. Matrix Spike, MSD		O	~~O~~		~~O~~	O
8. GFAA, MSA, Serial Dil.		X (1)	NA		NA	NA
9. Detection Limits, Other QC		X (1)	O		O	O
10. Data Verification, Overall Summary		O	O		O	O

O = Data had no problems Θ = Problems, but do not affect data
X = Data qualified due to minor problems [typically estimated data (J or UJ)].
M = Data qualified due to major problems [typically more than 50% qualified (J/UJ).
Z = Data unacceptable [typically data rejected (R).

Comments/Qualified Results:

(1) Qual J/UJ Se results for all samples due to interferences. Serial Dilution 710% D for 750XMDL.
(2) Qual J/UJ DO for 13058, 13059, 13096 - HT is 15 min

(3) Cooler Temp: 8.4°C. ~~No action other than to note~~ Qualif APPLIED (J/UJ) for all Gen. Chem results.

Validated by: [signature] Date: 10/3/2013
Reviewed by: [signature] Date: 10-03-2013

W3F0235

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: YES NO

1. Date Package Completeness (Check if present)

✓ Case narrative
✓ Chain of Custody
✓ Sample Results
✓ ICV/CCV Results
✓ Blank Results
✓ ICP Interference Check Results
✓ Spike Recovery Results
✓ Duplicate Results
✓ LCS Results
o Standard Addition Results
✓ ICP Serial Dilution
✓ Instrument Det. Limits
✓ ICP Correction Factor
✓ ICP Linear Ranges
✓ Preparation Logs
✓ Analysis Run Logs
✓ ICP Raw Data
o GFAA Raw Data
o Hg Raw Data
o Cyanide Raw Data
__Other_____
/ Acceptable
x Absent
o Not required for data package requested.

Comments/Qualified Results:
preservations - ok
(X) Cooler Temp 8.4°C - should be <6°C. (X) Assess. Gen Chem Qual "J/UJ"

2. Holding Times (Check all that apply) Yes (No)

__ICP/GFAA metals completed in <6 months from collection
__Mercury analyzed in <28 days from collection
__Cyanide completed in 14 days from collection

Comments/Qualified Results:
DO out of hold for 13058, 13059, 13096. Should be field analyzed.
Qual J/UJ ✓

3. Calibrations (Check all that apply) (Yes) No

✓ ICV/CCV %R for ICP/AA, 90%-110%, acceptable
__ICV/CCV %R for ICP/AA, 75%-89% or 111%-125%, results estimated (J/UJ)
__ICV/CCV %R for ICP/AA, <75% or >125%, reject positive results (R)
__ICV/CCV %R 80-120% for Hg, results accepted
__CRDL Check Stnd %R 70 – 130, (50-150 SbPbTl)
__ICV/CCV %R for Hg, 65%-79% or 121%-135%, results estimated (J/UJ)
__ICV/CCV %R 85-115% for Cyanide, results acceptable
__ICV/CCV %R 70-84% or 116-130%, results estimated (J/UJ)
__ICV/CCV %R <70% or >130%, reject pos results (R)

Comments/Qualified Results:

4. Lab Blanks, Field Blanks (Check all that apply) (Yes) No

__Detects reported in ICB/CCB list:
__Detects in preparation blanks, list:
__Detects in field blanks, list

Field Blank ID: N/A

Qualified as undetected (U) all sample concentrations ≤10X any associated blank concentrations and less than the PQL, or J+ for samples greater than the PQL.

Comments/Qualified Results:

W3F0235

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

Acceptable: (YES) NO

5. Lab Duplicates, Field Duplicates (Check all that apply).....

✓ Duplicate RPD ≤20% for waters (≤35% for soils) for results >5X CRDL
__ Duplicate range is within ±CRDL (± 2X CRDL for soils) for results <5X CRDL

__ Field Duplicate ID_____

Comments/Qualified Results

Dup on 13058 RPD 72% for NH3 but results < 5XRL. No action.

7. Laboratory Control Samples, Blank Spikes (Check all that apply)... (Yes) No

✓ LCS %R 70-130%, [50-150% for Ag, Sb]: ACCEPTED	__ LCS %R >150% and all results rejected (R)
__ LCS %R 40-69% or >130%, results >MDL: estimated (J-/J+)	__ LCS %R Ag, Sb, <20% and all results rejected
__ LCS %R 40-69% and results <MDL: estimated (UJ)	__ LCS %R Ag, Sb, >170% and all results rejected
__ LCS %R <40% and all results rejected (R/UR)	

Comments/Qualified Results

~~Dup on 13058 RPD 72% for NH3 (J)~~ TMB

8. Spike Recovery (Check all that apply)..... (Yes) No

✓ Spike %R with 75-125%: ACCEPTED	__ MS >125% and PDS <125%, detects > MDL est. (J)
__ MS and PDS %R 30-74%, results > MDL est. (J-), ND=(UJ)	__ MS and PDS %R <30% and <75%: results >MDL (J-) ND=(UR)
__ MS <75% and PDS >75%, results > MDL est. (J), ND=(UJ)	__ Field blanks used for spike analysis ?
__ MS and PDS %R >125%, detects > MDL est. (J+)	__ Post digest spk rqrd when %R <75, >125%, excpt Ag

Comments/Qualified Results:

MS/MSD on 13058 - in control for metals ✓
- out of control for NO_3, Cl, SO_4 but spike amt is < 4X sample amt. No action.

TMB

See Post Digest 89% ✓.

W3F0235

METALS & INORGANIC / Tier I & II Data Validation Summary Checklist

9. GFAA Performance, MSA, or Serial Dilutions..... Yes (No)

__GFAA Duplicate injection RSD <20%: ACCEPTED	✓ SD Analytes >50X MDL ?
__GFAA Duplicate injection RSD >20%, results > CRDL estimated (J)	__SD % Diff < 10%
__Analytical spike %R 85-115%	(X) SD % Diff > 10%: J results >MDL, UJ for Non-detects
__Analytical spike %R 40-85%, results > IDL estimated (J)	
__Analytical spike %R 10-40%, results <IDL estimated (UJ)	
__Analytical spike %R <10%, results <IDL rejected (R)	

Comments/Qualified Results: (X) Outlier @ 29%;
Serial Dilution for Se: >10% D for results >50XMDL. Qual J/UJ
Sample 13058 QUALIF "J" in accordance w/ dis-
similar matrices assoc. samples are NOT Qualified

10. Detection Limits, Other QC..... (Yes) No

Comments/Qualified Results:

11. Data Verification and Overall Assessment..... Yes (No)

Comments/Qualified Results:
Se results for 13058, 13059, 13096, TE-1-2, TS-1-2: Qualified 'E' by lab: 'estimated due to interferences. Qual J/UJ results for Se

12. Interference Checks (Check all that apply)..... (Yes) No

✓ ICS A/B Recoveries Acceptable	__ICS %R 50-79%, results >IDL estimated (J)
__Al, Ca, Fe, Mg sample concentrations > ICS concentrations	__ICS %R 50-79%, results <IDL estimated (UJ)
__ICS %R > 120%, results >IDL estimated (J)	__ICS %R <50%, results >IDL and <IDL rejected (R/UR)

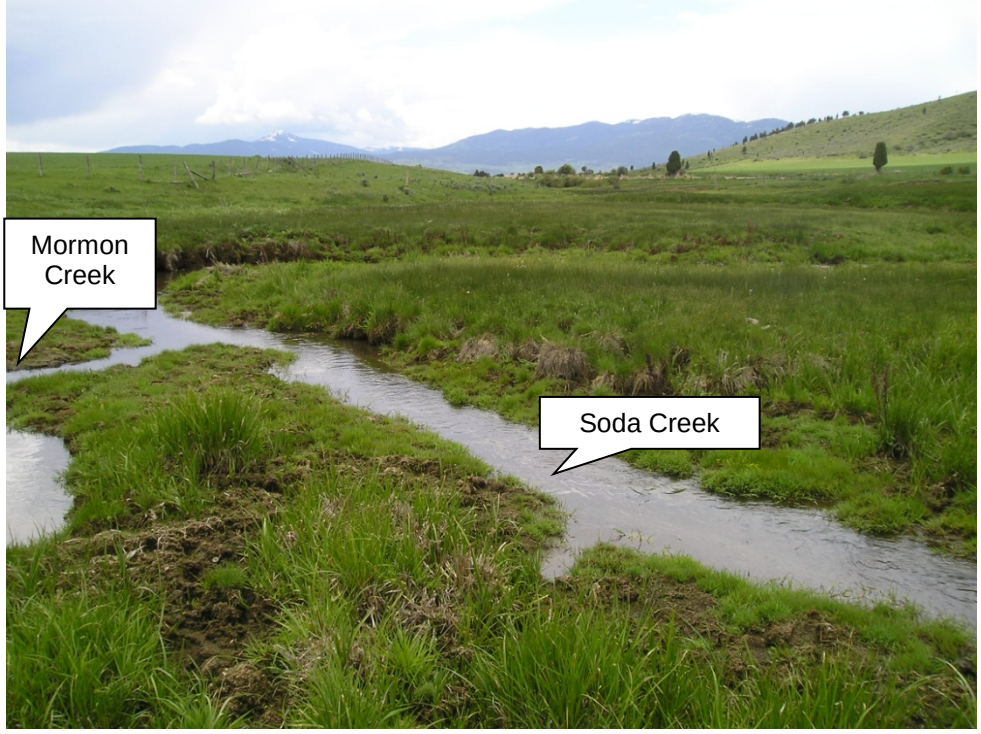
Comments/Qualified Results:
Internal Stds – ok. ✓

APPENDIX K
SURFACE WATER SAMPLING LOCATIONS

MC-1 MORMON MOUTH

SC-1 SODA CREEK UPSTREAM

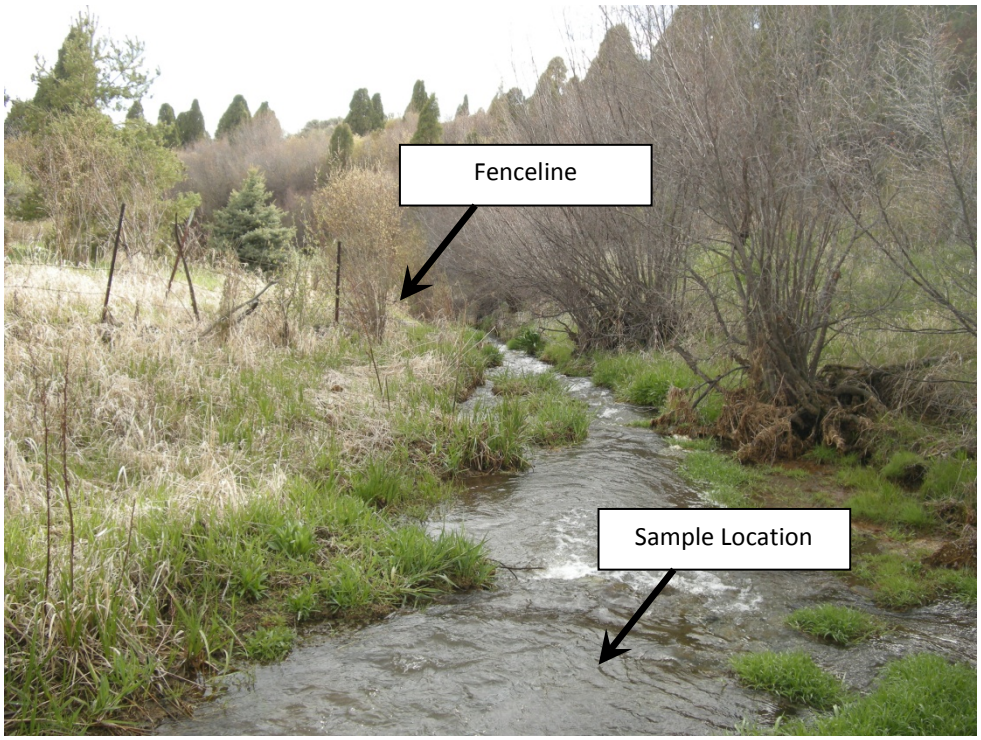
SC-2 SODA CREEK AT IRRIGATION WEIR



SC-3 SODA CREEK MID (ABOVE MORMON CREEK CONFLUENCE)

SC-4 SODA CREEK DOWNSTREAM

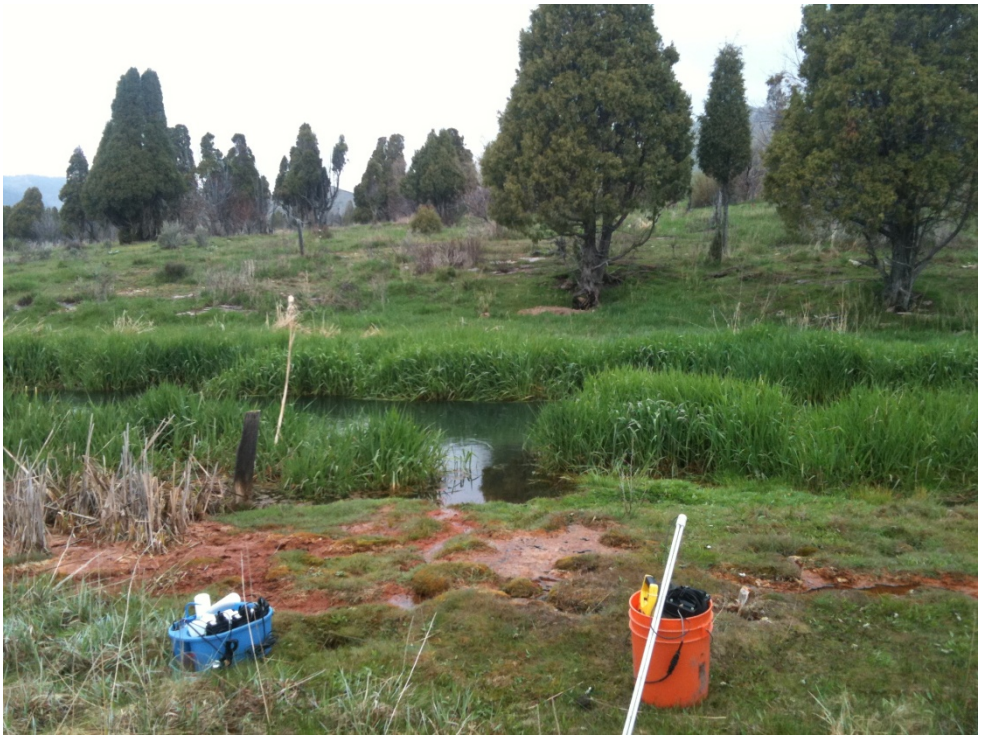
SC-5 SODA CREEK DOWNSTREAM OF DIVERSION WEIR



SC-6 SODA CREEK AT PROPERTY LINE

SC-7 SODA CREEK UPSTREAM OF POWER RETURN

SC-8 SODA CREEK AT OCTAGON PARK



SC-9 SODA CREEK AT IRRIGATION DIVERSION

SC-10 SODA CREEK ABOVE RAILROAD BRIDGE

SC-11 SODA CREEK AT HIGHWAY 30

PR-1 POWER CANAL

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

solutions@golder.com
www.golder.com

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, WA 98052 USA
Tel: (425) 883-0777
Fax: (425) 882-5498

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation