Appendix 7-3

Kern Water Bank Study Area Surface and Groundwater Quality Technical Report

Prepared for:

State of California
California Natural Resources Agency
Department of Water Resources

Prepared by:

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Sacramento, CA 95814

With Technical Assistance from:

RMC Water and Environment

Fugro Consultants

The Sandberg Group

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ACRONYMS AND OTHER ABBREVIATIONS

AF	acre-feet
AFY	acre-feet per year
Amec	Amec Foster Wheeler
As	arsenic
AFO-BC	Analysis of Future Operations—Buildout Conditions
AFO-EC	Analysis of Future Operations—Existing Conditions
APO	Analysis of Past Operations
bgs	below ground surface
cfs	cubic feet per second
COC	constituent of concern
DBCP	Dibromochloropropane
DEIR	draft environmental impact report
DWR or Department	California Department of Water Resources
EC	electrical conductivity
EDB	ethylene dibromide
EIR	environmental impact report
KCWA	Kern County Water Agency
KFE	Kern Fan Element
KFMC	Kern Fan Monitoring Committee
KWB	Kern Water Bank
KWBA	Kern Water Bank Authority
MCL	maximum contaminant level
Monterey Plus	Monterey Amendment to the State Water Project Contracts (Including Kern Water Bank Transfer) and Associated Actions as Part of a Settlement Agreement
Monterey Plus EIR	Environmental Impact Report for the Monterey Amendment to the State Water Project Contracts (including Kern Water Bank Transfer) and Associated Actions as Part of a Settlement Agreement
Monterey Plus Revised EIR	REIR
NO_3	nitrate
SWP	State Water Project
SWRCB	State Water Resources Control Board
TCP	1,2,3-Trichloropropane
TDS	total dissolved solids
EPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
WQO	water quality objective
WSD	water storage district

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7.3 INTRODUCTION

7.3.1 INTRODUCTION

This appendix presents technical information in support of Section 7.2, Surface and Groundwater Water Quality, of the Revised Environmental Impact Report (REIR). Specifically, this appendix presents reference well data, time-concentration graphs and hydrographs from selected wells, tables summarizing the number of constituents of concern or wells exceeding maximum contaminant levels (MCLs), and results of particle tracking evaluations using the California Department of Water Resources (Department or DWR) Kern Water Bank Model (DWR KWB Model) to assess potential groundwater (and indirectly potential constituents of concern [COC]) movement from the KWB boundaries under three modeling scenarios:

1. Analysis of Past Operations (APO): Simulation of groundwater system response based on past (1995–2014) KWB activities under historic land use conditions.

2. Analysis of Future Operations—Existing Conditions (AFO-EC): Simulation of groundwater system response based on projected future KWB activities under existing (2015) levels of development.

3. Analysis of Future Operations—Buildout Conditions (AFO-BC): Simulation of groundwater system response based on projected future KWB activities under buildout (2030) levels of development.

MCLs are established by the U.S. Environmental Protection Agency (EPA) to protect the publilc against consumption of drinking water contaminants that present a risk to human health. An MCL is the maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.

7.3.2 REFERENCE WELL LIST DATA

A subset of the wells in the Kern County Water Agency (KCWA) database was selected for data evaluations. This subset of wells is the “reference list” for Section 7.2, Surface and Groundwater Water Quality, in the REIR. Reference list wells were selected to represent the quality of groundwater across the Kern Fan Element (KFE) property (refered to as “KWB Lands” after 1995) and from which historical sample results had been previously analyzed statistically in Kern Fan Monitoring Committee (KFMC) reports (KFMC 2013).[1] Descriptive information on reference wells is presented in Table 7.3-1. As cited in other appendix sections, additional sets of wells were used to evaluate water level changes (hydrogrographs) and time-concentration trends.

7.3.3 GROUNDWATER QUALITY SAMPLE COMPARISONS

KCWA and Kern Water Bank Authority (KWBA) database information was compiled to compare and evaluate the most recent (2012 through 2015) groundwater sample data against MCLs. Table 7.3-2 presents data on wells with constituents that exceeded California or U.S. MCLs in samples collected during 2012 through 2015 (shaded rows are recovery wells). In addition, KFMC data base information

[1] Kern Fan Monitoring Committee (KFMC). 2013. *Amended 2005–2006 Kern Fan Area Operations and Monitoring Report.* Bakersfield, CA.

was used to compare the same criteria set against KWB production well samples exceeding specific criteria to evaluate major COCs detected by year from 2001 to 2014. This is discussed in Section 7.2 and summarized in the following tables:

- Table 7.3-3A & B,Total Number of Production Wells Exceeding MCLs (2001 – 2014)
- Table 7.3-4, Concentration Range of Constituents of Concern in KWB Production Well Samples (2001 – 2014)

7.3.4 WELLS USED FOR IMPACT EVALUATION

A select set of wells (well clusters) distributed within and along the perimeter of KWB Lands were used to evaluate water level and water quality trends for select constituents of concern (arsenic, nitrate as NO_3, total dissolved solids [TDS]), alpha, and uranium in shallow, middle, and deep zone wells. This is discussed in text and summarized in the following figures:

- Figure 7.3-1, Select Wells Used for Impact Evaluations (time-concentration graphs)
- Figures 7.3-2-1 to 7.3-2-14, Hydrogrographs from Well Clusters
- Figures 7.3-3A to 3D, Arsenic in Shallow and Deep Monitoring Wells
- Figures 7.3-4A to 4C, Nitrate as $N0_3$ in Shallow, Middle, and Deep Monitoring Wells
- Figures 7.3-5A to 5C, Total Dissolved Solids in Shallow, Middle, and Deep Monitoring Wells

These figures are followed by time-concentration graphs for alpha and uranium from wells that were sampled for those COCs. They are placed in order by township and range rather than having figure numbers. The wells with alpha and uranium results can be indexed from Figure 7.3-1.

7.3.5 IMPACT EVALUATION – PARTICLE TRACKING

To assess potential groundwater movement and potential COC movement from the outer boundary of the KWB, a particle tracking evaluation was completed using the DWR KWB Model for the various project scenarios (APO, AFO-EC, and AFO-BC with and without KWB recharge and recovery). The results of this evaluation are included in Section 7.2 of the REIR. The following figures were developed (for all model layers combined) to show the maximum extent a molecule of groundwater could travel under each modeling scenario:

- Figure 7.3-6, APO Particle Tracking Results (1995 – 2014) – Maximum Travel Distance with and without KWB Recharge and Recovery;
- Figure 7.3-7, AFO-EC Particle Tracking Results (2015 - 2035) – Maximum Travel Distance with and without KWB Recharge and Recovery; and
- Figure 7.3-8, AFO-BC Particle Tracking Results (2015 - 2035) – Maximum Travel Distance with and without KWB Recharge and Recovery.

7.3.6 GROUNDWATER QUALITY IMPACTS - HAZARDOUS MATERIAL SITES

Groundwater quality impacts associated with hazardous material sites (Impact Section 7.2.3.2) were evaluated by assessing the potential for mobilization of impacted soil contaminants or the migration of impacted groundwater as a result of high water level fluctuations. The minimum depth to water was simulated at two observation points for the APO, AFO-EC, and AFO-BC modeling scenarios. The depth to water was determined by subtracting the ground surface elevation at the observation point from the model simulated groundwater elevation. Frequency and duration of high water levels were then evaluated with the depth of residual soil and/or groundwater contamination. Hydrographs for each

observation point under the APO, AFO-EC, and AFO-BC modeling scenarios are presented in Figures 7.3-9 to Figure 7.3-11.

7.3.7 GROUNDWATER QUALITY IMPACTS ASSOCIATED WITH SALT ACCUMULATION

For the salt balance analysis (Impact 7.2.3.6 in Section 7.2 of the REIR), calculations by the KFMC from 1995 to 2006 were used and new calculations for 2007 to 2014 were performed. TDS for salt loading from KWB recharge operations for 2007 to 2014 was calculated on a monthly basis (from milligrams/liter [mg/L] to tons/acre-foot) and then summed on an annual basis for each water recharge source (State Water Project [SWP], the Kern River, and the Friant-Kern Canal). Updated salt loading calculations were performed using average monthly TDS values for the SWP at the Check 29 location. TDS values for the Kern River and Friant-Kern Canal were obtained using quarterly sampling data collected from the Henry C. Garnett Water Purification Plant. Monthly TDS concentrations for the Kern River and Friant-Kern Canal were extrapolated by using the average concentration between quarterly sampling events.

TDS for salt extraction from KWB recovery operations for 2007 to 2014 was calculated on an annual basis for each KWB production well. Updated TDS values for each well were obtained by calculating the average Total Filterable Residue concentration from laboratory data available for 2007-2014 provided by KCWA. Where updated laboratory data were unavailable, the TDS value from KCWA's December 2014 Blending Model or the same value reported for 2001-2006 calculations was used.

The equations used in the salt balance calculations (Tables 7.2-10 and -11 in Section 7.2.3.6 of the REIR) are:

$$Solids/Salts\ Load\ (Tons) = \frac{Gross\ Recharge\ (AF) x\ 43{,}560\ (ft^3)\ x\ 8.3451\ (lb/gal)\ x\ TDS\ (mg/L)}{2{,}000\ (lb/ton)\ x\ 1{,}000{,}000\ (mg/L)}$$

$$Total\ Dissolved\ Solids\ Concentration\ (\frac{Tons}{AF}) = \frac{Solids/Salts\ Load\ (tons)}{Volume\ (Recharge/Recovery\ in\ AF)}$$

7.3.8 AREAS OF GROUNDWATER QUALITY CONCERN (PRIOR TO 1995)

KFMC previously delineated areas of elevated levels of TDS, fluoride, arsenic, ethylene dibromide (EDB), nitrate as NO_3, uranium, and dibromochloropropane (DBCP) on maps using historical data from approximately 1995 (Figure 7.2-3).[1]

7.3.8.1 Total Dissolved Solids

TDS is made up of inorganic salts as well as a small amount of organic matter. Common inorganic salts that can be found in water include cations (calcium, magnesium, potassium, and sodium) and anions (carbonates, nitrates, bicarbonates, chlorides, fluoride, and sulfates).

KCWA sampling data from 1990 to 1995 identified three wells on the KFE property located outside of the delineated TDS area with concentrations exceeding the 500 mg/L MCL and the SWP water quality objective (WQO) criterion of 440 mg/L:

- Well 30/25-12C01 is located approximately 0.25 mile southwest of an area with extremely high TDS concentrations exceeding 5,000 mg/L in the upper aquifer and 800 mg/L in the deeper

aquifer. The elevated concentration of TDS in well 30/25-12C01 is thought to be a result of past brine disposal in the Strand Oil Field.

- Multi-completion well cluster (a cluster of wells screened at different aquifer zone depths) 30/25-4J is located northwest of historic brine disposal activities in the Strand and Canal oil fields that disposed of approximately 120,000 tons of salt prior to 1970. Water quality data from this well cluster suggest that water quality is stratified in this area. High concentrations of TDS are limited to the shallow zone in well 30/25-04J02 (screened from 190-250 feet below ground surface [bgs]), while concentrations in the middle zone well 30/25-04J03 (screened at 345-455 feet bgs) had TDS concentrations ranging from 58 to 353 mg/L. Well 30/25-04J04 (screened at 565-625 ft) in the deep zone had TDS concentrations ranging from 109 to 242 mg/L from 1990 to 1995.
- Sampling data from well 30/24-13D indicated that groundwater quality is stratified in the vicinity of the well at depths and that only shallow well 30/24-13D01 (screened 150-250 ft) appeared to have elevated concentrations of TDS; while, wells zoned in the middle zone, well 30/24-13D02 (screened at 320-360 ft), and deep zone, well 30/24D03 (screened at 520-650 ft), had relatively lower concentrations of TDS ranging from 223 to 366 mg/L and from 254 to 345 mg/L, respectively, between 1990 and 1995.
- Another area where TDS in groundwater exceeds 500 mg/L is located to the northwest of the KFE property and north of the Kern River between Enos Lane and Highway 99 (Figure 7.2-3).

7.3.8.2 Chloride, Sulfate, Fluoride, and Nitrate

Chloride, sulfate, and fluoride are elements of concern when concentrations exeed 250 mg/L, 250 mg/L, and 2 mg/L, respectively. Six wells (30/25-10C01, 30/25-12C01, 30/25-04J02, 30/25-04J03, 30/25-36D01, and 30/25-20C01) exceeded the SWP WQO of 110 mg/L for chloride. Five wells (30/24-13D01, 30/24-13D02, 30/24-13D03, 30/24-24A01, and 30/25-18P01) exceeded the SWP WQO of 110 mg/L for sulfate.

While areas of nitrate in groundwater existed on the KFE property prior to 1995, all concentrations of nitrate were below the MCL of 45 mg/L. Additional sampling data from KCWA indicated that nitrate concentrations across the KFE property generally ranged from less than 0.1 mg/L to 44 mg/L between 1990 and 1995. Wells with concentrations of nitrate (above 20 mg/L) located outside of the area previously delineated by DWR include 30/25-04J02 (4.6 to 44 mg/L), 30/25-04J03 (3.8 to 21 mg/L), 30/25-04J04 (0.02 to 20 mg/L), 30/25-09A01 (22.2 mg/L), 30/25-09J01 (32.3 mg/L), and 30/25-04L01 (26.5 mg/L).

7.3.8.3 Metals

Arsenic

Arsenic is an element of concern when concentrations exceed the MCL of 10 µg/L There were two main areas of elevated arsenic in the vicinity of the KFE property identified by the Kern Fan Monitoring Committee that exceeded the 50 µg/L MCL in 1995 (see Figure 7.2-1 in Section 7.2 in the REIR). The previously delineated areas of elevated arsenic include the southeast portion of the KFE property and a small area spanning across the Kern River below the Second Point of diversion (measurement location for City of Bakersfield downstream of the southern end of the 2,800-Acre Recharge Facility), west of Enos Land and south of the KWB Canal.

Additional KCWA water quality sampling data collected between 1990 and 1995 indicate that groundwater concentrations of arsenic across the KFE property ranged from less than 1 µg/L to 40 µg/L. A total of nine wells exceeded the MCL of 10 µg/L in 1995: 30/25-16L02, 30/25-16L03, 30/25-04J04, 30/25-15C01, 30/26-20N02, 30/25-09L01, 30S/25E-05K01, and 30S/25E-06K01. The majority

of these wells are screened within the deep zone of the aquifer; however, 30/25-04J04 is a very shallow well (screened from 45 to 65 ft).

Boron

Boron is an element of concern for irrigated agriculture when concentrations exceed 0.2 mg/L. The SWP WQO for boron is 0.6 mg/L. There is no MCL for boron. KCWA water quality sampling data collected between 1990 and 1995 identified approximately 30 wells on the KFE property that exceeded concentrations of 0.2 mg/L; however, all were below the SWP WQO of 0.6 mg/L except for three well locations. The three wells were comprised of multicompletion wells 30/24-13D, 30/25-04J, and 30/25-16L. A single monitoring well (30S/24E-24A01) had high concentrations of boron ranging from 100 to 400 mg/L.

Barium

Barium is an element of concern when concentrations exeed 1 mg/L. Groundwater investigations on the KFE property indicated that one monitoring well (30/25-12B) in the shallow zone exceeded the MCL for barium of 1 mg/L. The well contained high levels of TDS and is situated within a delineated area of TDS concern.

Cadmium

Cadmium is an element of concern when concentrations exceed 5 µg/L. Groundwater investigations on the KFE property indicated that six monitoring wells exceeded the MCL of 5µg/L for cadmium. The exceedances were isolated to two multi-completion monitoring wells, 30/24-13D and 30/25-04J. At 30/25-04J, cadmium concentrations ranging from 8 to 12 µg/L were relatively consistent through the shallow well 30S/26E-04J04 (screened at 45-65 ft), middle zone well 30S/26E-04J02 (screened at 223 to 375 ft), and the deep zone well 30S/26E-04J03 (screened at 560-650 ft). At 30/24-13D, concentrations in the shallow and deep aquifers were about twice as high as concentrations in the middle aquifer. Concentrations in the middle zone well 30S/24E-13D02 (screened at 320-360 ft) were approximately 6 µg/L; whereas, concentrations in the shallow well 30S/24E-13D01 (screened at 150-250 ft) and the deep well, 30S/24E-13D03 (screened at 520-650 ft) were approximately 12 to 13 µg/L between 1990 and 1995.

Iron and Manganese

Iron and Manganese are elements of concern when concentrations exeed approximately 300 and 50 µg/L respectively. During previous groundwater investigations, limited iron and manganese sampling was performed. Additional KCWA water quality sampling data collected between 1990 and 1995 indicate that groundwater concentrations of iron and manganese across the KFE property range from 0.08 µg/L to 1,715 µg/L and 0.1 µg/L to 78 µg/L, respectively.

A total of eleven wells on the KFE property exceeded the secondary MCL for iron of 300 µg/L and the SWP WQO for iron and manganese together of 300 µg/L. These wells are 30S/25E-04L01, 30S/25E-07G01, 30S/25E-07P01, 30S/25E-08F01, 30S/25E-09L01, 30S/25E-10C01, 30S/25E-16F01, 30S/25E-16R01, 30S/25E-20L01, 30S/26E-19M01, and 30S/26E-20L01.

Two wells on the KFE property (30S/25E-06K01 and 30S/25E-07P01) with respective manganese concentrations of 66 µg/L and 78 µg/L exceed the secondary MCL of 50 µg/L. (A secondary MCL is not enforced by EPA but is established only as a guideline to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor; secondary MCLs are not considered to present a risk to human health.)

7.3.8.4 Radiological Constituents

Limited groundwater sampling for radiological constituents was performed on the KFE property prior to 1995.

Uranium

Investigations by DWR in 1987 identified two areas that contained uranium in groundwater at concentrations that slightly exceed the 20 picocurie per liter (pCi/L) MCL on the KFE property; however, the location of these areas was not specified nor delineated at the time. KCWA water quality sampling data collected between 1990 and 1995 for 11 wells indicate that uranium concentrations on the KFE property ranged from less than 0.69 pCi/L to 72.7 pCi/lL A total of three wells had concentrations exceeding the MCL: 30S/24E-13D01 (7.27 pCi/L), 30S/24E-24A01 (26.2 pCi/L), and 30S/25E-04J02 (21.8 pCi/L).

Alpha Activity

KCWA water quality sampling data collected between 1990 and 1995 for 21 wells indicate that total alpha concentrations on the KFE property ranged from less than 0.91 pCi/L to 53.2 pCi/L. Total alpha activity consists of all alpha emitting radionuclides, including uranium, radon, and radium 226 and 228.

A total of three wells had concentrations exceeding the MCL: 30S/24E-13D01 (7.27 pCi/L), 30S/24E-24A01 (26.2 pCi/L), and 30S/25E-04J02 (21.8 pCi/L). The elevated alpha activity in the vicinity of the KFE property is generally considered to be attributed to uranium. There is no MCL for total alpha; however, the MCL for gross alpha is 15 pCi/L. Gross alpha is comprised of all alpha activity except radon and uranium.

Pesticides

Ethylene dibromide (EDB)

EDB, a common nematcide used to control nematodes on crops, was used on fairly large areas of the KFE property prior to it being banned in 1983. Areas of elevated concentration of EDB are located outside of and northeast of the KFE property to the north along Enos Lane and to the north of the Rosedale Highway (Figure 7.2-3). Additional KCWA water quality sampling data collected between 1990 and 1995 indicate that EDB was detected within five wells on the KFE property, four of which were found to have concentrations that exceed the MCL of 0.05 µg/L. These wells were: 30S/25E-03L01 (0.6 µg/L), 30S/25E-03Q01 (0.32 µg/L), 30S/25E-10C01 (0.13 µg/L), and 30S/25E-11C01 (0.37 µg/L).

1,2-dibromo-3-chloropropane (DBCP)

DBCP is a soil fumigant used in agriculture in the early 1970s. An area of DBCP (at or in excess of 0.2 µg/L in groundwater) was identified to the northeast of KWB Lands. Limited sampling for DBCP was performed during groundwater investigations between 1990 and 1995. Available water quality sampling data collected during 1990 to 1995 indicate that of the nine sampled wells located on KWB Lands; none contained concentrations above the MCL of 0.2 µg/L. As such, DBCP is not expected to be an issue for KWB operations.

Other Pesticides

Groundwater investigations by DWR and KWCA between 1990 and 1995 indicated low detections of toxaphene, EPTC, 1,2,3-trichloropropane (TCP), and 1,2-Dichloropropane in groundwater wells on the KFE property. Toxaphene, with an MCL of 3 µg/L, was detected in two wells: 30/25-19K1 and 30/24-12R01 at concentrations of 9 and 2 mg/L, respectively.

Diuron was present with a concentration of 0.26 µg/L in shallow well 30/26-19B; currently, there is no MCL for Diuron.

Eptam (EPTC) has been identified in samples from well 30/25/8P01 at a concentration of 170 µg/L in 1989. In 1991, the concentration was 5.6 µg/L. In 1993, EPTC concentrations were reported to be below detection limits in this well. No other sampling data for EPTC were available.

7.3.9 HYDROGRAPHS FROM KERN FAN MONITORING COMMITTEE

In order to evaluate changes in water quality with respect to water level fluctuations, hydrographs from a select set of wells (normally used for KWB water level monitoring activities) was generated that provide coverage within and adjacent to the KWB. The wells used for the hydrographs are included on Figure 7.3-12 Hydrographs from wells with multiple years of water level monitoring data are included as Figures 7.3-13 to 7.3-40. Many of the hydrographs include cluster wells and show the response and relationship of water levels (or potentiometric surfaces) from multiple depth-specific aquifer zones (i.e., well screen depths). For the most part cluster well hydrographs indicate the same pattern of fluctuation suggesting good verticle hydraulic connection. Depending on the location these wells the hydrographs show pronounced or dampened response to KWB recharge and recovery periods. Wells outside of the KWB may also show response to outside water banking activities or to the Kern River.

7.3.10 TIME/CONCENTRATION GRAPHS (COC SAMPLES FROM 1995 TO 2015)

Section 7.2 includes a series of Figures (7.2-5 through 7.2-9) that respectively show wells that were sampled for TDS, arsenic, NO3, alpha, and uranium from 1995 to 2015. Each figure indicates wells in which one or more samples were found to have a detection of the specific COC above the MCL (noted with a red dot) as a means of indicating a general COC distribution pattern as summarized in Section 7.2. The figures represent a broad overview of the 1995 to 2015 time period and were used in conjunction with other data, such as tables summarizing data sets and individual time/concentration graphs, to evaluate concentration patterns and the number of times a COC exceeded an MCL. This was used with the maps showing COC concentration distributions to add a time element (changing COC concentrations over time) to the maps. Accordingly, a set of time/concentration graphs was developed and included in this appendix.

The first set of time/concentration graphs include TDS, arsenic, and NO_3 results per well when one or more of these COCs was found to exceed its respective MCL. The second set of time/concentration graphs include alpha and uranium results per well when one or more of these COCs was found to exceed its respective MCL. Each set of time/concentration graphs is set in order of township/range (i.e., 29S/25E, 29S/26E, 30S/24E, 30S/25E, and 30S/26E) with further breakdown in the section order (1-36) so the wells may be easily found using the respective figure as an index. For example, on Figure 7.2-5 well 30S/24E-13D01 was indicated as having an exeedence of the TDS secondary MCL of 500 mg/L. That well can be found in the 30S/24E section of the appendix (leafing down to 13D01). That graph indicates that shallow well 13D01 was found to exceed its MCL in every sample with a rising concentration pattern of TDS until 2005 and a declining concentration pattern after 2005 with more recent samples coming within range of the MCL. That time/concentration graph also indicates that the MCL for arsenic and NO_3 was never exceeded in any sample. The time/concentration/graph also shows

a similar rise and fall pattern between NO3 and TDS. In contrast, well 30S/25E-11CO1 shows that sample data is limited (only 2 samples for NO3 and TDS) but only TDS just barely exceeded the MCL. As such, the time/concentration graphs display the concentration history of any given well that had an MCL exceedance in order to evaluate its overall significance respective to COC water quality.

7.3 TABLES

TABLE 7.3-1

REFERENCE WELL INFORMATION

Well ID	Depth Interval of Screen/ Perforations (ft)	Well Depth Zone	Well Type
29S/23E-24H (DMW-08)	374–404	Middle	Monitoring
29S/24E-08L02	525–625	Deep	Monitoring
29S/24E-08L03	360–440	Middle	Monitoring
29S/24E-34N01 (DMW 11A & 11B)	370–470	Middle	Monitoring
29S/24E-34N02 (DMW 11A & 11B)	560–660	Deep	Monitoring
29S/25E-14C01	117–195	Shallow	Production
29S/25E-20J01	312-762	Multple	Production
29S/25E-25M01	600–700	Deep	Monitoring
29S/25E-25M02	260–350	Shallow	Monitoring
29S/25E-27N01	610–700	Deep	Monitoring
29S/25E-27N02	210–310	Shallow	Monitoring
29S/26E-31H01	560–630	Deep	Monitoring
29S/26E-31H02	360–430	Middle	Monitoring
29S/26E-35H01	300–500	Middle	Production
29S/26E-35H03	590–680	Deep	Monitoring
29S/26E-35H04	310–410	Middle	Monitoring
29S/27E-31J01	220–650	Multiple	Production
29S/28E-19J02	152–284	Shallow	Production
30S/24E-02C01 (BV-D04)	50–351	Shallow	Production
30S/24E-06B02 (10A & 10B)	550–650	Deep	Monitoring
30S/24E-06B03 (10A & 10B)	370–450	Middle	Monitoring
30S/24E-12H01	182–555	Multiple	Production
30S/24E-12R01	208–700	Multiple	Production
30S/24E-13C01	227–587	Middle	Production
30S/24E-13D01	150–250	Shallow	Monitoring
30S/24E-13D02	320–360	Middle	Monitoring
30S/24E-13D03	520–650	Deep	Monitoring
30S/24E-13D04	65–120	Shallow	Monitoring
30S/24E-13H01	150–666	Multiple	Production
30S/24E-14M02 (DMW 12A & 12B)	600–700	Deep	Monitoring
30S/24E-14M03 (DMW 12A & 12B)	355–455	Middle	Monitoring
30S/24E-24A01	167–815	Multiple	Production
30S/25E-03L01_KWB	119–701	Multiple	Production
30S/25E-03R01	170–850	Multiple	Production
30S/25E-04J02	190–250	Shallow	Monitoring
30S/25E-04J03	345–455	Middle	Monitoring
30S/25E-04J04	565–625	Deep	Monitoring
30S/25E-04J05	140–150	Shallow	Monitoring
30S/25E-06K01	301–701	Multiple	Production
30S/25E-07A02	220–290	Shallow	Monitoring
30S/25E-07A03	420–470	Middle	Monitoring
30S/25E-07A04	530–620	Deep	Monitoring
30S/25E-07P01	290–668	Multiple	Production
30S/25E-08F01	119–701	Multiple	Production
30S/25E-08J02	180–840	Multiple	Production
30S/25E-09L01	119–701	Multiple	Production (Idle)
30S/25E-09L02	118–701	Multiple	Production
30S/25E-11C02	180–1,000	Multiple	Production
30S/25E-11E01	170–850	Multiple	Production
30S/25E-11P01	150–210	Shallow	Monitoring
30S/25E-11P02	330–470	Middle	Monitoring
30S/25E-11P03	520–570	Deep	Monitoring
30S/25E-11P04	80–130	Shallow	Monitoring
30S/25E-14N01	170–710	Multiple	Production
30s/25E-16L01	285–345	Middle	Monitoring

TABLE 7.3-1

REFERENCE WELL INFORMATION

Well ID	Depth Interval of Screen/ Perforations (ft)	Well Depth Zone	Well Type
30s/25E-16L02	515–555	Deep	Monitoring
30s/25E-16L03	645–690	Deep	Monitoring
30s/25E-16L04	100–130	Shallow	Monitoring
30S/25E-17F01	250–727	Multiple	Production
30S/25E-17M01	190–905	Multiple	Production
30S/25E-18A01	119–700	Multiple	Production (Idle)
30S/25E-18A02	250–960	Multiple	Production
30S/25E-18C01	119–702	Multiple	Production
30S/25E-18K01	170–900	Multiple	Production
30S/25E-18P01	202–609	Multiple	Production
30S/25E-18R01	198–600	Multiple	Production
30S/25E-20L01	180–825	Multiple	Production
30S/25E-21G01	250–700	Multiple	Production
30s/25E-21G02	590–660	Deep	Monitoring
30s/25E-21G03	420–480	Middle	Monitoring
30S/25E-21L	180–690	Multiple	Monitoring
30S/25E-21R	225–255	Shallow	Monitoring
30S/25E-22K	330–350	Middle	Monitoring
30s/25E-22R01	80–125	Shallow	Monitoring
30S/25E-22R02	235–300	Shallow	Monitoring
30S/25E-22R03	380–460	Middle	Monitoring
30S/25E-23H01	160–890	Multiple	Production
30S/25E-23M	250–280	Shallow	Monitoring
30S/25E-28C02 (WKWD-1)	115–250	Shallow	Production
30S/25E-35J01	288–438	Middle	Production (Idle)
30S/25E-36D01	247–658	Multiple	Production
30s/25E-36R01	600–640	Deep	Monitoring
30s/25E-36R02	410–500	Middle	Monitoring
30S/26E-02M01	150–250	Shallow	Monitoring
30S/26E-02M02	85–110	Shallow	Monitoring
30S/26E-04D03 (KCWA-31 Transducer)	260–500	Middle	Production
30S/26E-04J01	100–150	Shallow	Monitoring
30S/26E-04J02	223–375	Middle	Monitoring
30S/26E-04J03	560–650	Deep	Monitoring
30S/26E-04J04	45–65	Shallow	Monitoring
30S/26E-06L01	210–270	Shallow	Monitoring
30S/26E-06L02	360–536	Middle	Monitoring
30S/26E-06L03	585–620	Deep	Monitoring
30S/26E-06L04	125–150	Shallow	Monitoring
30S/26E-08P01	150–250	Shallow	Monitoring
30S/26E-08P02	80–100	Shallow	Monitoring
30S/26E-08P03	30–40	Shallow	Monitoring
30S/26E-08P04	600–800	Deep	Monitoring
30S/26E-09M01	150-250	Shallow	Monitoring
30S/26E-12N01	250–700	Multiple	Production
30S/26E-16B01	140–250	Shallow	Monitoring
30S/26E-16B02	300–390	Middle	Monitoring
30S/26E-16B03	533–660	Deep	Monitoring
30S/26E-16B04	35–50	Shallow	Monitoring
30S/26E-18N01	150–250	Shallow	Monitoring
30S/26E-18N02	70–90	Shallow	Monitoring
30S/26E-19B01	120–220	Shallow	Monitoring
30S/26E-19B02	300–390	Middle	Monitoring
30S/26E-19B03	500–590	Deep	Monitoring

TABLE 7.3-1

REFERENCE WELL INFORMATION

Well ID	Depth Interval of Screen/ Perforations (ft)	Well Depth Zone	Well Type
30S/26E-19B04	35–45	Shallow	Monitoring
30S/26E-22P01	330–420	Middle	Monitoring
30S/26E-22P02	420–590	Middle	Monitoring
30S/26E-22P03	610–794	Deep	Monitoring
30S/26E-25A02	590–690	Deep	Monitoring
30S/26E-25A03	290–390	Middle	Monitoring
30S/26E-28J01	120–220	Shallow	Monitoring
30S/26E-28J02	280–330	Middle	Monitoring
30S/26E-28J03	540–615	Deep	Monitoring
30S/26E-28J04	75–95	Shallow	Monitoring
30S/26E-32N01	210–330	Shallow	Monitoring
30S/26E-32N02	390–440	Middle	Monitoring
30S/26E-32N03	570–610	Deep	Monitoring

Notes: BVWSD = Buena Vista Water Storage District; ft = feet; ID = identification number; MCL = maximum contaminant level

Source: Kern Fan Monitoring Committee (KFMC). 2013. *Amended 2005–2006 Kern Fan Area Operations and Monitoring Report*

TABLE 7.3-2

WELLS WITH CONSTITUENTS THAT EXCEEDED CALIFORNIA OR U.S. MAXIMUM CONTAMINANT LEVELS IN SAMPLES COLLECTED DURING 2012 THROUGH 2015

Well ID	Sample Date	Value*	Constituent	Units
29S/24E-05Q61	7/15/14	3,260	Specific Electrical Conductance	µmhos/cm
29S/24E-27P61	7/15/14	1,820	Specific Electrical Conductance	µmhos/cm
29S/24E-34N01	8/8/12	1,230	Specific Electrical Conductance	µmhos/cm
29S/24E-34N01	7/29/14	900	Total Filterable Residue (analysis)	mg/L
29S/25E-34J61	3/4/12	610	Total Filterable Residue (analysis)	mg/L
30/26-07Q01	12/30/14	8.9	pH (H3=past HT not compliant)	Units
30S/24E-06B03	8/8/12	64	Dissolved Manganese	µg/L
30S/24E-06B03	8/8/12	440	Sulfate (SO_4)	mg/L
30S/24E-06B03	8/8/12	1,250	Specific Electrical Conductance	µmhos/cm
30S/24E-06B03	8/8/12	900	Total Filterable Residue (analysis)	mg/L
30S/24E-13C01	1/19/15	530	Total Dissolved Solids (TDS)	mg/L
30S/24E-13C01	1/19/15	26	Uranium by ICPMS as pCi/L	pCi/L
30S/24E-13D01	7/26/12	908	Specific Electrical Conductance	µmhos/cm
30S/24E-13D01	3/20/13	82.8	Total Alpha	pCi/L
30S/24E-13D01	7/31/13	650	Total Filterable Residue (analysis)	mg/L
30S/24E-13D02	7/31/13	270	Sulfate (SO_4)	mg/L
30S/24E-13D02	7/26/12	600	Total Filterable Residue (analysis)	mg/L
30S/24E-13H01	1/19/15	39	Gross Alpha + Adjusted Error	pCi/L
30S/24E-13H01	1/19/15	550	Total Dissolved Solids (TDS)	mg/L
30S/24E-14M02	8/10/12	140	Dissolved Manganese	µg/L
30S/24E-14M02	8/10/12	8,470	Specific Electrical Conductance	µmhos/cm
30S/24E-14M02	7/29/14	2,600	Total Filterable Residue (analysis)	mg/L
30S/24E-14M02	7/24/13	3,100	Chloride (Cl)	mg/L
30S/24E-14M03	8/10/12	380	Sulfate (SO_4)	mg/l
30S/24E-14M03	8/10/12	1,240	Specific Electrical Conductance	µmhos/cm
30S/24E-14M03	8/10/12	860	Total Filterable Residue (analysis)	mg/L
30S/24E-24A01	1/12/12	33	Uranium (Natural, Total)	pCi/L
30S/24E-24A01	1/19/15	53	Gross Alpha + Adjusted Error	pCi/L
30S/24E-24C01	8/22/12	1,900	Dissolved Manganese	µg/L
30S/24E-24C01	8/22/12	11,000	Dissolved Iron	µg/L
30S/24E-24C01	8/22/12	9.4	Turbidity	NTU
30S/24E-24C02	8/22/12	4	Odor Threshold @60 C	ton
30S/24E-24C02	8/22/12	1,300	Specific Electrical Conductance	µmhos/cm
30S/24E-24C02	8/22/12	820	Total Filterable Residue (analysis)	mg/L
30S/24E-24C03	8/22/12	40	Odor Threshold @60 C	ton
30S/24E-24C03	8/22/12	3,800	Specific Electrical Conductance	µmhos/cm
30S/24E-24C03	8/22/12	2,600	Total Filterable Residue (analysis)	mg/L
30S/24E-24C03	8/22/12	1,300	Chloride (Cl)	mg/L
30S/25E-01Q55	12/22/14	9	pH (H3=past HT not compliant)	Units
30S/25E-03L01	1/16/12	17	Total Alpha	pCi/L
30S/25E-03Q01	2/2/15	21	Uranium Dissolved ICAP/MS	pCi/L
30S/25E-03Q02	1/6/15	8.6	pH (H3=past HT not compliant)	Units
30S/25E-03R01	1/16/12	21	Total Alpha	pCi/L
30S/25E-03R01	1/16/12	24	Uranium (Natural, Total)	pCi/L
30S/25E-04L01	2/4/15	8	Odor at 60 C (ton)	ton
30S/25E-07P01	1/13/15	18	Gross Alpha + Adjusted Error	pCi/L
30S/25E-07P01	1/13/15	25	Uranium Dissolved ICAP/MS	pCi/L
30S/25E-07P01	1/13/15	30	Uranium ICAP/MS	pCi/L
30S/25E-08F01	1/5/15	8.7	pH (H3=past HT not compliant)	Units
30S/25E-08J02	2/8/12	11	Turbidity	NTU
30S/25E-08J02	12/17/14	9	pH (H3=past HT not compliant)	Units
30S/25E-09A01	1/25/12	5.6	Radium 226	pCi/L
30S/25E-09A01	1/12/15	19	Alpha, Gross	pCi/L
30S/25E-09A01	1/12/15	23	Gross Alpha + Adjusted Error	pCi/L

TABLE 7.3-2

WELLS WITH CONSTITUENTS THAT EXCEEDED CALIFORNIA OR U.S. MAXIMUM CONTAMINANT LEVELS IN SAMPLES COLLECTED DURING 2012 THROUGH 2015

Well ID	Sample Date	Value*	Constituent	Units
30S/25E-09A01	1/12/15	21	Uranium ICAP/MS	pCi/L
30S/25E-09E01	8/6/14	13	Arsenic	µg/L
30S/25E-09J01	1/16/12	4	Odor Threshold @60 C	Ton
30S/25E-10K01	1/16/12	20	Total Alpha	pCi/L
30S/25E-11C02	1/18/12	570	Total Filterable Residue (analysis)	mg/L
30S/25E-11C02	1/12/15	16	Gross Alpha + Adjusted Error	pCi/L
30S/25E-11C02	1/12/15	25	Uranium Dissolved ICAP/MS	pCi/L
30S/25E-11C02	1/12/15	26	Uranium ICAP/MS	pCi/L
30S/25E-11E01	1/16/12	22	Total Alpha	pCi/L
30S/25E-11L02	9/3/15	8.7	pH (H3=past HT not compliant)	Units
30S/25E-11N01	1/18/12	4	Odor Threshold @60 C	Ton
30S/25E-11N01	12/22/14	8.6	pH (H3=past HT not compliant)	Units
30S/25E-11Q01	2/8/12	400	Iron	µg/L
30S/25E-12B02	7/27/12	956	Specific Electrical Conductance	µmhos/cm
30S/25E-12B02	7/14/14	720	Total Filterable Residue (analysis)	mg/L
30S/25E-13F01	12/30/14	9	pH (H3=past HT not compliant)	Units
30S/25E-13J01	1/25/12	14	Turbidity	NTU
30S/25E-13J01	12/22/14	9.3	pH (H3=past HT not compliant)	Units
30S/25E-14K01	12/22/14	16	Gross Alpha + Adjusted Error	pCi/L
30S/25E-14K01	12/22/14	8.6	pH (H3=past HT not compliant)	Units
30S/25E-15B01	1/5/15	8.9	pH (H3=past HT not compliant)	Units
30S/25E-15C01	1/30/12	4	Odor Threshold @60 C	Ton
30S/25E-15C01	1/5/15	8.7	pH (H3=past HT not compliant)	Units
30S/25E-15L01	12/22/14	9.1	pH (H3=past HT not compliant)	Units
30S/25E-15N01	1/11/12	4	Odor Threshold @60 C	Ton
30S/25E-15N01	1/11/12	610	Iron	µg/L
30S/25E-15N01	12/30/14	9.1	pH (H3=past HT not compliant)	Units
30S/25E-16D01	1/5/15	8.9	pH (H3=past HT not compliant)	Units
30S/25E-16J01	12/30/14	8.8	pH (H3=past HT not compliant)	Units
30S/25E-17J01	1/9/12	18	Total Alpha	pCi/L
30S/25E-17M01	2/3/15	23	Uranium Dissolved ICAP/MS	pCi/L
30S/25E-17M03	9/12/12	18	Total Alpha	pCi/L
30S/25E-18K01	1/26/15	530	Total Dissolved Solids (TDS)	mg/L
30S/25E-18K01	1/26/15	21	Uranium Dissolved ICAP/MS	pCi/L
30S/25E-13J01	9/9/15	40	Arsenic Total ICAP/MS	µg/L
30S/25E-14K01	9/9/15	89	Arsenic Total ICAP/MS	µg/L
30S/25E-15L01	9/9/15	41	Arsenic Total ICAP/MS	µg/L
30S/25E-23H01	9/9/15	78	Arsenic Total ICAP/MS	µg/L
30S/25E-19N02	8/7/13	210	Dissolved Manganese	µg/L
30S/25E-19N03	8/7/13	945	Specific Electrical Conductance	µmhos/cm
30S/25E-19N03	7/24/14	2,600	Total Filterable Residue (analysis)	mg/L
30S/25E-19N04	8/7/13	1,850	Specific Electrical Conductance	µmhos/cm
30S/25E-19N04	8/7/13	1,300	Total Filterable Residue (analysis)	mg/L
30S/25E-19N04	8/7/13	450	Chloride (Cl)	mg/L
30S/25E-19R01	8/2/12	1,490	Specific Electrical Conductance	µmhos/cm
30S/25E-19R01	7/24/14	980	Total Filterable Residue (analysis)	mg/L
30S/25E-19R01	8/8/13	380	Chloride (Cl)	mg/L
30S/25E-19R02	8/8/13	270	Sulfate (SO_4)	mg/L
30S/25E-19R02	8/8/13	903	Specific Electrical Conductance	µmhos/cm
30S/25E-19R02	8/8/13	670	Total Filterable Residue (analysis)	mg/L
30S/25E-20C01	1/26/15	510	Total Dissolved Solids (TDS)	mg/L
30S/25E-20L01	2/2/15	17	Alpha, Gross	pCi/L
30S/25E-21G01	1/11/12	23	Total Alpha	pCi/L
30S/25E-21G01	1/11/12	23	Uranium (Natural, Total)	pCi/L

TABLE 7.3-2

WELLS WITH CONSTITUENTS THAT EXCEEDED CALIFORNIA OR U.S. MAXIMUM CONTAMINANT LEVELS IN SAMPLES COLLECTED DURING 2012 THROUGH 2015

Well ID	Sample Date	Value*	Constituent	Units
30S/25E-23H01	12/22/14	270	Chloride	mg/L
30S/25E-23H01	12/22/14	8.8	pH (H3=past HT not compliant)	Units
30S/25E-23H01	12/22/14	1,300	Specific Conductance, 25 C	µmhos/cm
30S/25E-23H01	12/22/14	700	Total Dissolved Solids (TDS)	mg/L
30S/26E-06N01	1/30/12	20	Total Alpha	pCi/L
30S/26E-07C01	1/5/15	8.7	pH (H3=past HT not compliant)	Units
30S/26E-07R01	12/22/14	8.6	pH (H3=past HT not compliant)	Units
30S/26E-08M01	12/30/14	9.2	pH (H3=past HT not compliant)	Units
30S/26E-16R01	7/24/14	13	Arsenic	µg/L
30S/26E-19G01	2/6/12	440	Iron	µg/L
30S/26E-20N02	1/13/15	8.6	pH (H3=past HT not compliant)	Units
30S/26E-32N03	7/30/12	2.1	Fluoride (total)	mg/L
31S/24E-13J65	7/15/14	3,670	Specific Electrical Conductance	µmhos/cm
31S/24E-13K61	7/15/14	14,500	Specific Electrical Conductance	µmhos/cm
31S/24E-13P62	7/15/14	15,960	Specific Electrical Conductance	µmhos/cm
31S/24E-13P64	7/24/12	16,810	Specific Electrical Conductance	µmhos/cm
31S/24E-25M61	7/24/12	7,990	Specific Electrical Conductance	µmhos/cm
31S/26E-19N61	7/18/13	2,180	Specific Electrical Conductance	µmhos/cm

Notes:

µg/L = micrograms per liter; µmhos/cm = micromhos per centimeter; mg/L = milligrams per liter; NTU = nephelometric turbidity units; pCi/L = picocuries per liter; Ph = potential hydrogen; Hc = Phospohstone; HT = height; ICPMS = inductively coupled plasma spectrometry; C = Celsius; ICAP/MS = Inductively Coupled Plasma Mass Spectroscopy.

* Values are from the analysis of the most recent sample collected at each well.

Highlighted text = production/recovery wells

Source: Kern Fan Monitoring Committee (KFMC). 2013. *Amended 2005–2006 Kern Fan Area Operations and Monitoring Report*

TABLE 7.3-3A

TOTAL NUMBER OF PRODUCTION WELLS EXCEEDING CRITERIA

Consituent of Concern	MCL	Unit	2001		2002		2003		2004		2005		2006		2007	
			Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded
TDS	500	mg/L	32	2	--	--	61	2	18	1	33	1	27	0	16	1
Chloride	250	mg/L	32	0	--	--	60	2	17	0	32	0	26	0	16	0
Nitrate (NO_3)	45	mg/L	32	0	--	--	20	0	50	0	51	0	26	0	78	0
Arsenic (Total and Dissolved)	10	µg/L	30	1	--	--	61	2	18	1	34	2	27	2	16	0
Bromide (Br)	NA	--	21	0	50	0	60	0	16	0	32	0	26	0	13	0
Sulfate (SO_4)	250	mg/L	32	0	--	--	60	2	17	0	32	0	26	0	16	1
Chromium (Cr)	50	µg/L	32	0	--	--	60	0	17	0	32	0	26	0	16	0
Hexavalent Chromium (Cr6+)	10	µg/L	--	--	--	--	60	0	17	0	29	0	26	0	15	0
Alpha (Total and Gross)	15	pCi/L	72	16	27	6	30	1	51	11	35	5	34	2	15	4
Uranium	20	pCi/L	60	10	30	4	24	3	38	12	10	1	22	2	10	4
Fluoride	2	mg/L	31	0	--	--	60	0	17	0	32	0	26	0	16	0
Total Number of Wells Operating			54		48		60		61		0		0		78	
Total Number of Wells Sampled			72		65		66		52		60		35		78	

Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

TABLE 7.3-3B

TOTAL NUMBER OF PRODUCTION WELLS EXCEEDING CRITERIA

Constituent of Concern	MCL	Unit	2008		2009		2010		2011		2012		2013		2014	
			Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded
TDS	500	mg/L	20	2	68	6	1	0	24	3	61	2	1	0	17	1
Chloride	250	mg/L	19	0	67	0	0	0	23	0	60	0	--	--	17	1
Nitrate (NO_3)	45	mg/L	18	0	65	0	0	0	23	0	61	0	--	--	17	0
Arsenic (Total and Dissolved)	10	µg/L	21	2	81	18	1	0	24	2	61	3	1	0	84	24
Bromide (Br)	NA	--	16	0	62	0	0	0	23	0	61	0	--	--	17	0
Sulfate (SO_4)	250	mg/L	20	0	66	1	0	0	23	0	61	0	--	--	17	0
Chromium (Cr)	50	µg/L	20	0	67	0	0	0	23	0	61	0	--	--	17	0
Hexavalent Chromium (Cr6+)	10	µg/L	18	1	59	0	1	0	23	0	61	0	--	--	17	0
Alpha (Total and Gross)	15	pCi/L	17	4	63	6	1	1	19	12	59	8	--	--	16	0
Uranium	20	pCi/L	5	4	59	9	1	1	23	11	37	4	--	--	17	0
Fluoride	2	mg/L	20	0	67	1	0	0	23	0	61	0	--	--	17	0
Total Number of Wells Operating			79		85		80		0		83		82		84	
Number of Wells Sampled			21		81		2		24		61		1		84	

Notes:

1 Local agencies currently use 2 piC/L as a benchmark concentration for uranium for blending operations.

Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

TABLE 7.3-3B

TOTAL NUMBER OF PRODUCTION WELLS EXCEEDING CRITERIA

Constituent of Concern	MCL	Unit	2008		2009		2010		2011		2012		2013		2014	
			Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded	Number of Wells Sampled	Number of Wells Exceeded
TDS	500	mg/L	20	2	68	6	1	0	24	3	61	2	1	0	17	1
Chloride	250	mg/L	19	0	67	0	0	0	23	0	60	0	--	--	17	1
Nitrate (NO_3)	45	mg/L	18	0	65	0	0	0	23	0	61	0	--	--	17	0
Arsenic (Total and Dissolved)	10	µg/L	21	2	81	18	1	0	24	2	61	3	1	0	84	24
Bromide (Br)	NA	--	16	0	62	0	0	0	23	0	61	0	--	--	17	0
Sulfate (SO_4)	250	mg/L	20	0	66	1	0	0	23	0	61	0	--	--	17	0
Chromium (Cr)	50	µg/L	20	0	67	0	0	0	23	0	61	0	--	--	17	0
Hexavalent Chromium (Cr6+)	10	µg/L	18	1	59	0	1	0	23	0	61	0	--	--	17	0
Alpha (Total and Gross)	15	pCi/L	17	4	63	6	1	1	19	12	59	8	--	--	16	0
Uranium	20	pCi/L	5	4	59	9	1	1	23	11	37	4	--	--	17	0
Fluoride	2	mg/L	20	0	67	1	0	0	23	0	61	0	--	--	17	0
Total Number of Wells Operating			79		85		80		0		83		82		84	
Number of Wells Sampled			21		81		2		24		61		1		84	

Notes:

1 Local agencies currently use 2 piC/L as a benchmark concentration for uranium for blending operations.

Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

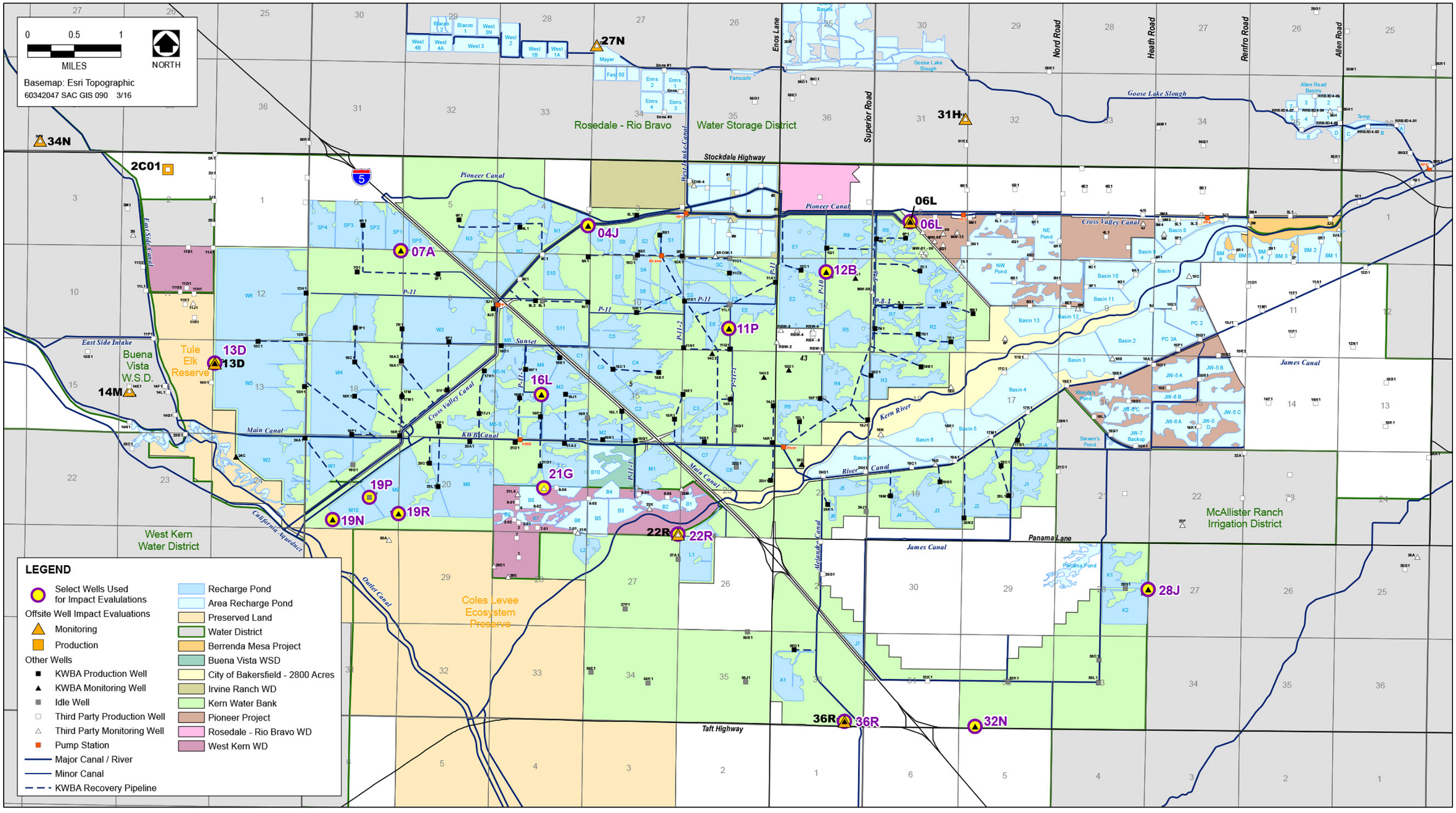
TABLE 7.3-4

CONCENTRATION RANGE OF CONSTITUENTS OF CONCERN IN KWB PRODUCTION WELL SAMPLES

Consituent of Concern	Units	Concentration Range for KWB Production Wells							Concentration Range for KWB Production Wells						
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TDS	mg/L	120 - 620	-	120 - 1900	160 - 520	130 - 740	140 - 444	166 - 934	138 - 634	122 - 750	210	130 - 560	140 - 570	260 - 260	150 - 700
Chloride	mg/L	7.4 - 215	-	12 - 820	13 - 170	<1 - 250	16 - 190	6.8 - 100	22 - 149	13 - 160	-	11 - 85	19 - 120	-	16 - 270
Nitrate (NO_3)	mg/L	0.44 - 26	-	1.3 - 19	0.44 - 29	1.1 - 30	2.4 - 22	<0.88 - 28	5 - 21	1.3 - 18	-	1.7 - 24	1.4 - 31	-	<0.22 - 6.2
Arsenic (Total and Dissolved)	µg/L	<1 - 40	-	<1 - 55	<1 - 11	<1 - 33	<1 - 20	<1 - 5.1	<1 - 15	<1 - 99	1.9	<1 - 15	<1 - 26	<9.2	<1 - 74
Bromide (Br)	mg/L	0.044 - 0.52	0.04 - 0.91	0.051 - 4.3	<0.005 - 1	0.033 - 1.7	0.046 - 1	0.07 - 0.53	<0.2 - 0.9	0.051 - 32	-	0.036 - 0.31	<0.005 - 72	-	0.058 - 1.4
Sulfate (SO_4)	mg/L	12 - 100	-	16 - 500	19 - 100	0 - 120	16 - 68	15.2 - 410	30 - 234	15 - 260	-	17 - 180	17 - 170	-	15 - 100
Chromium (Cr)	µg/L	<2 - 4.1	-	<2 - 3.5	<2 - 3.9	<2 - 4.2	<2 - 6.4	<1 - 21	<1 - 6.5	<1 - 6.9	-	<1 - 2.3	<1 - 3.4	-	<1 - 2.4
Hexavalent Chromium (Cr6+)	µg/L	-	-	0.3 - 3.7	0 - 2.3	0.3 - 3.8	0.46 - 3	0.48 - 2.9	0.61 - 84	0 - 3.2	0.27	0.26 - 2.3	0.17 - 2.5	-	0.34 - 2.4
Alpha (Total and Gross)	pCi/L	<0.61 - 44	0.82 - 28	<2 - 27	<2 - 75.6	<3 - 23	<3 - 22	<3 - 56	<3 - 37	<3 - 45	26	<3 - 41	<3 - 23	-	<3 - 13
Uranium	pCi/L	0.68 - 40	1.1 - 30	2.3 - 29	0.78 - 91.5	1.6 - 24	4.1 - 27	6.2 - 38	13 - 42	0.87 - 63	36 - 54	0 - 72	4 - 33	-	1 - 12
Fluoride	mg/L	<0.05 - 0.48	-	<0.05 - 0.5	0.06 - 0.24	<0.05 - 0.52	<0.05 - 0.24	<0.05- 0.15	<0.05 - 0.23	<0.05 - 19	-	<0.05 - 0.32	<0.05 - 0.31	-	0.17 - 0.56

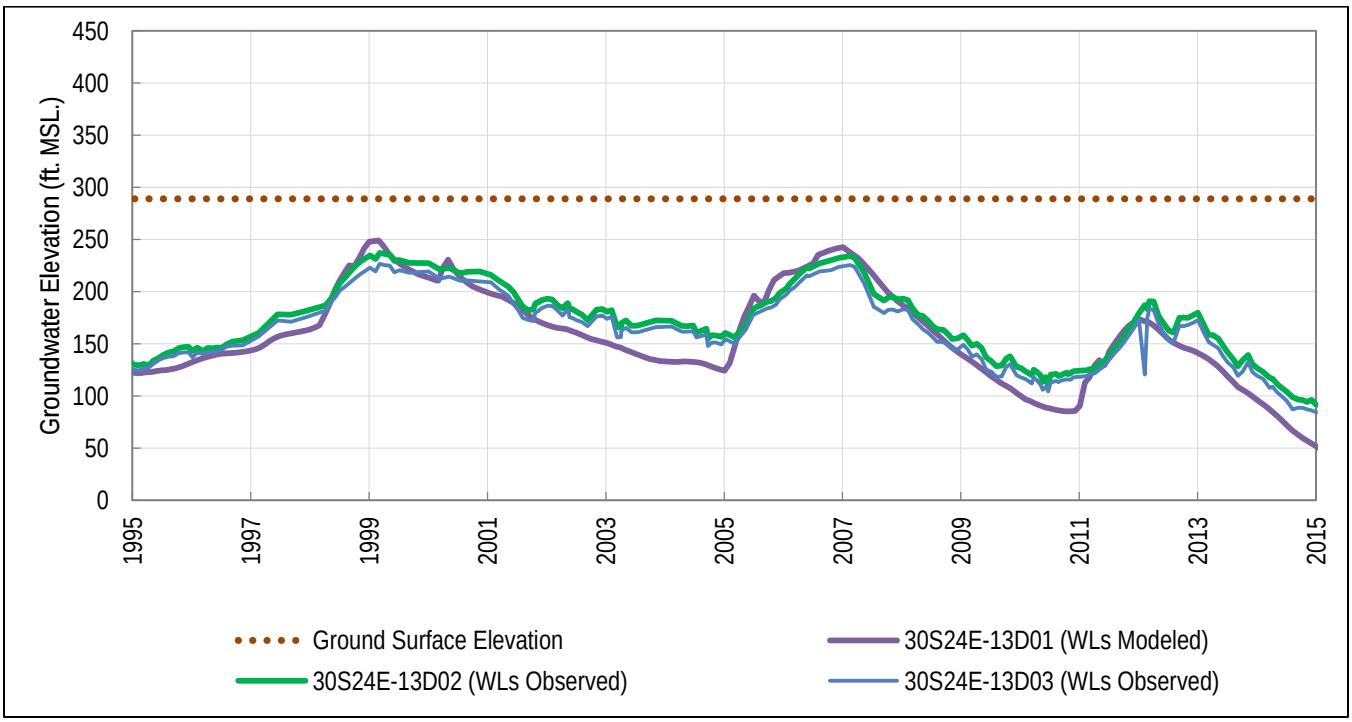
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

7.3 FIGURES



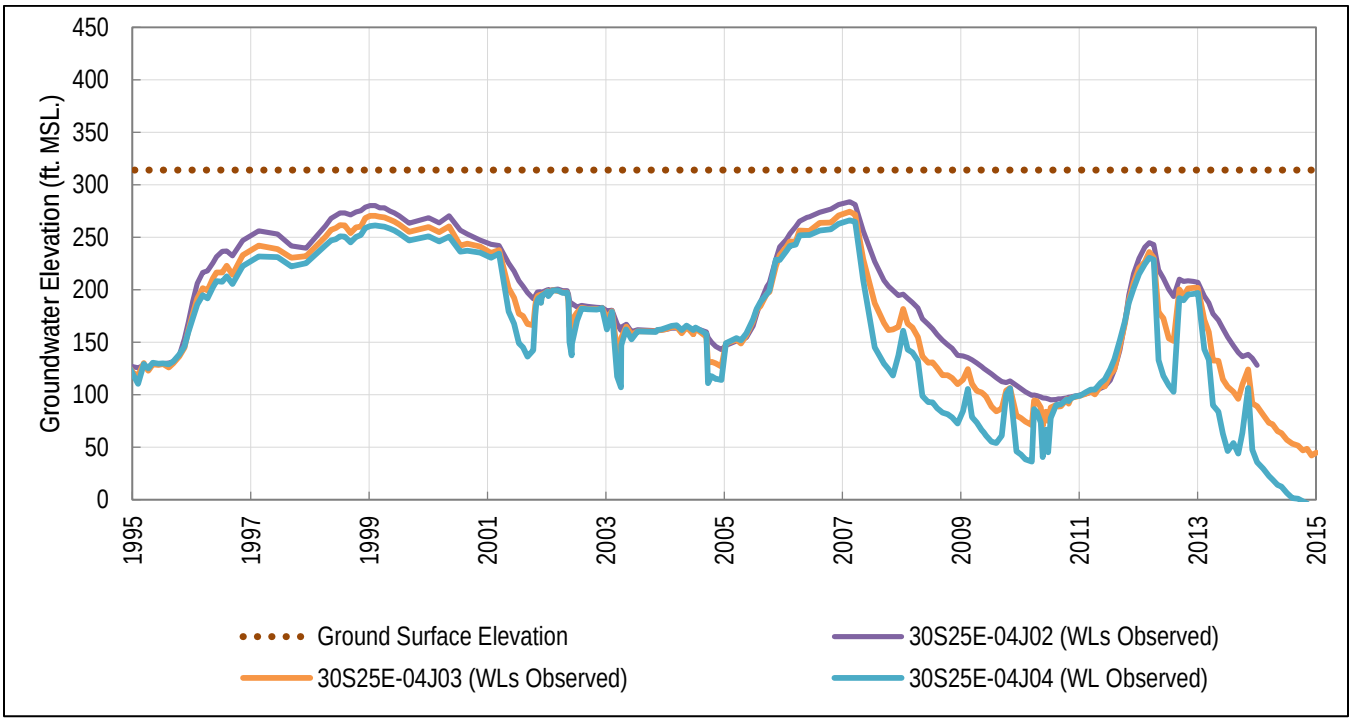
Sources: KWB Board Map

FIGURE 7.3-1. Select Wells used for Impact Evaluations (Time Concentrations and Hydrographs)



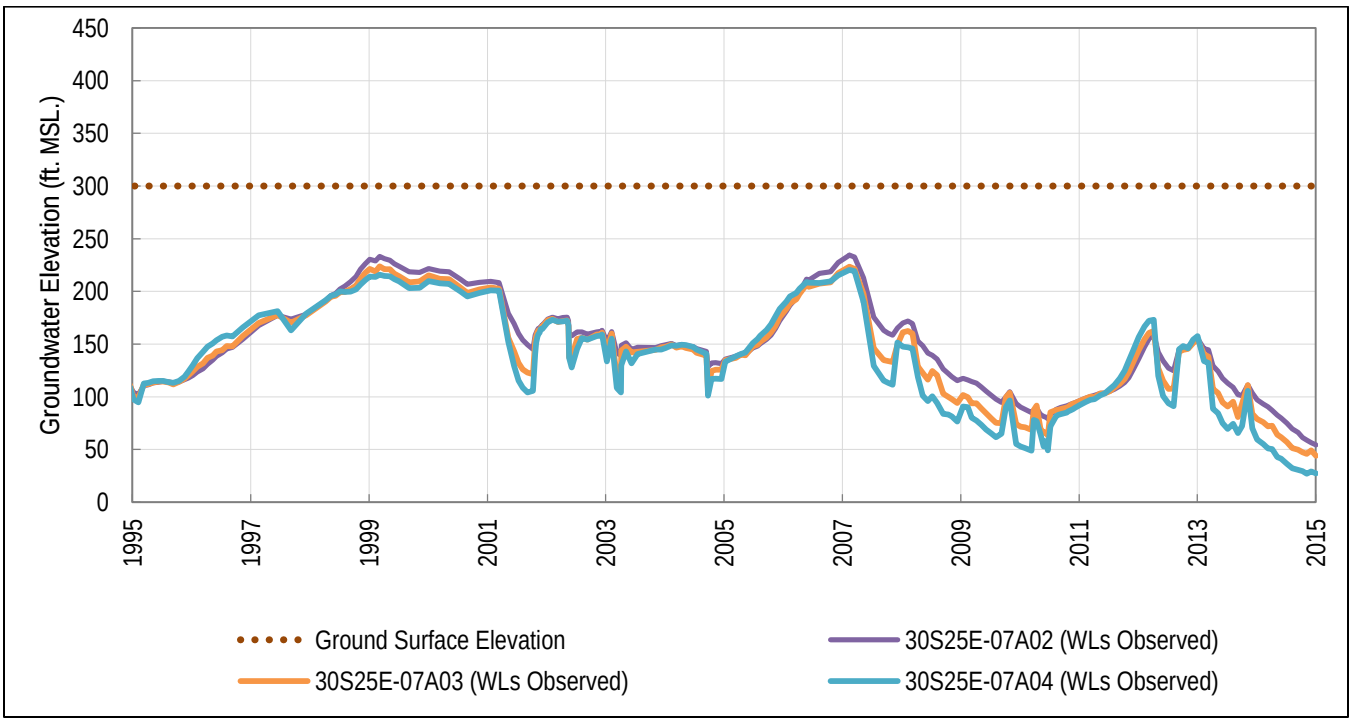
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-1. Well 30S24E-13D Cluster



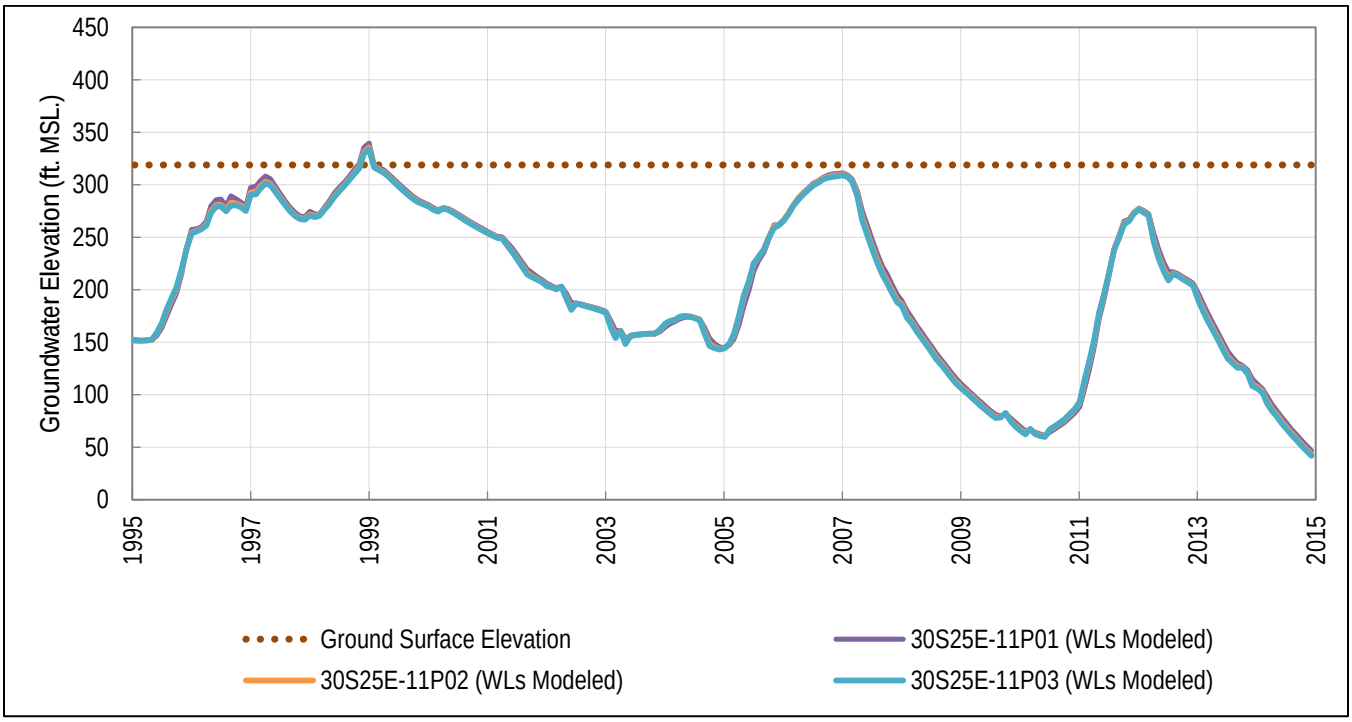
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-2. Well 30S25E-04J Cluster



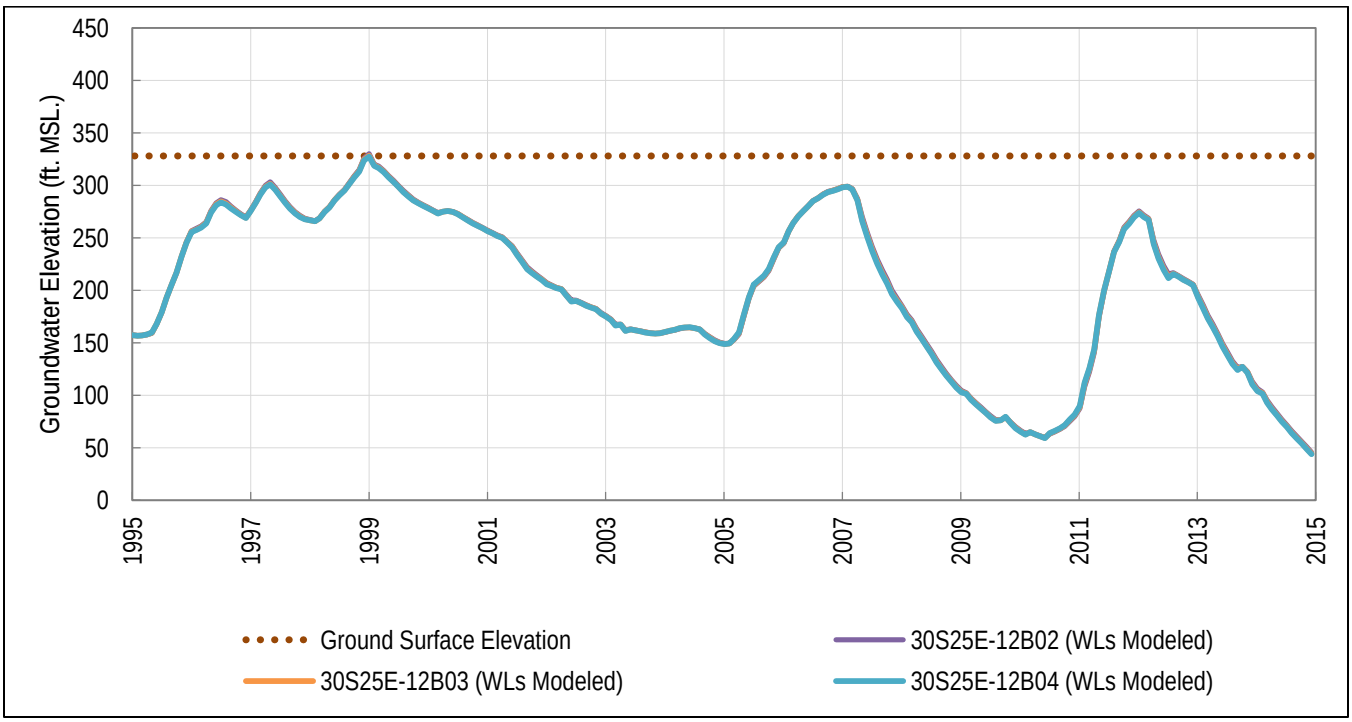
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-3. Well 30S25E-07A Cluster



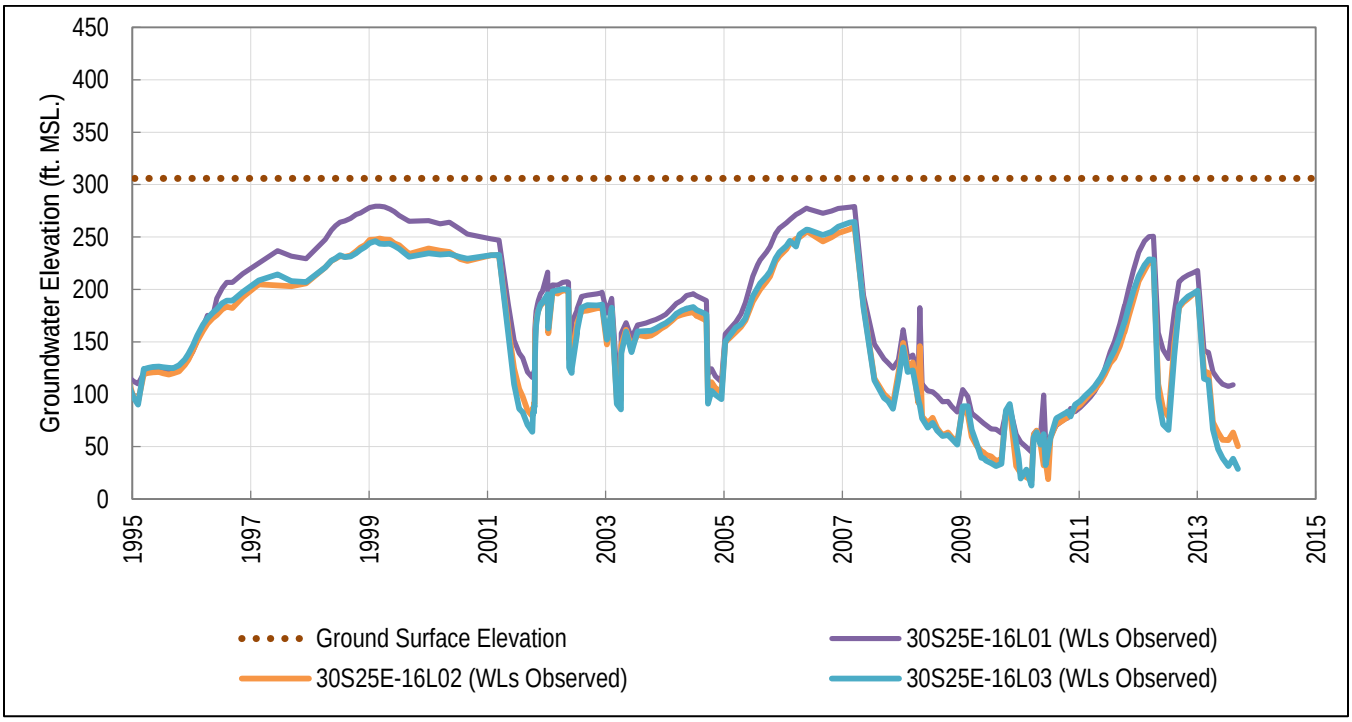
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-4. Well 30S25E-11P Cluster



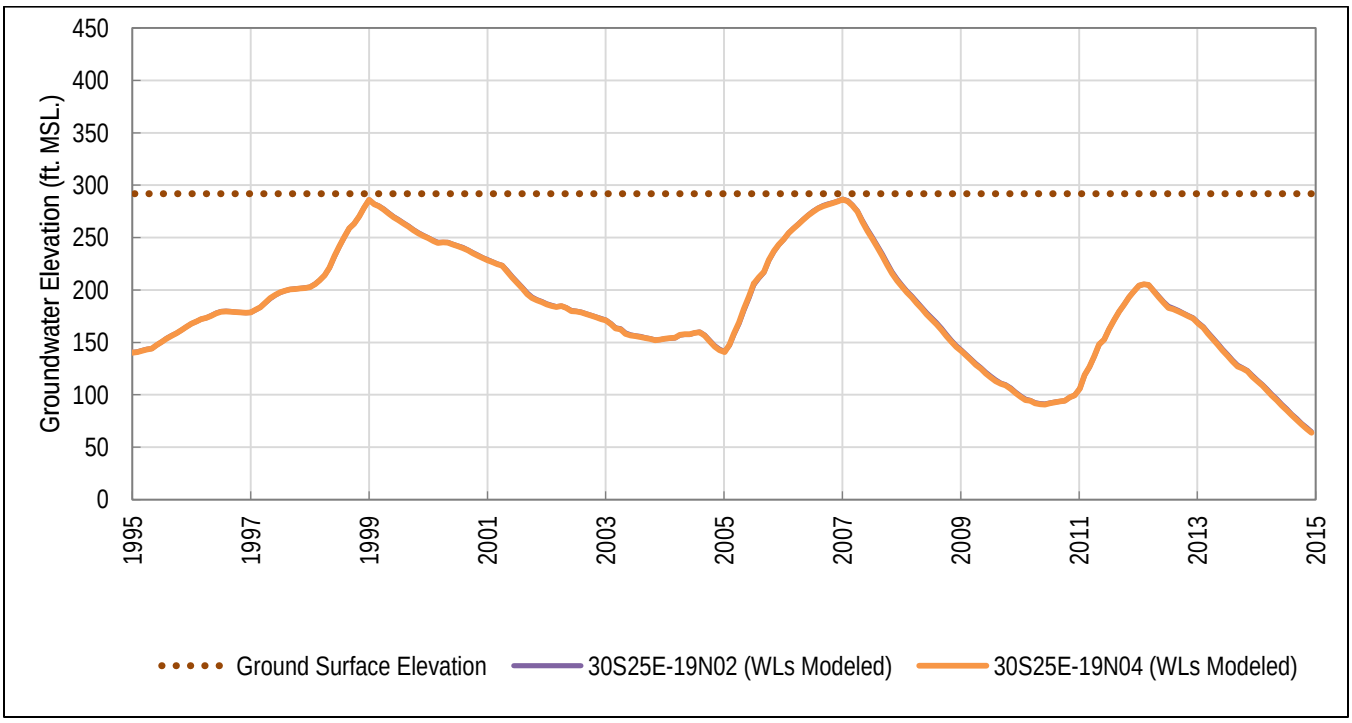
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-5. Well 30S25E-12B Cluster



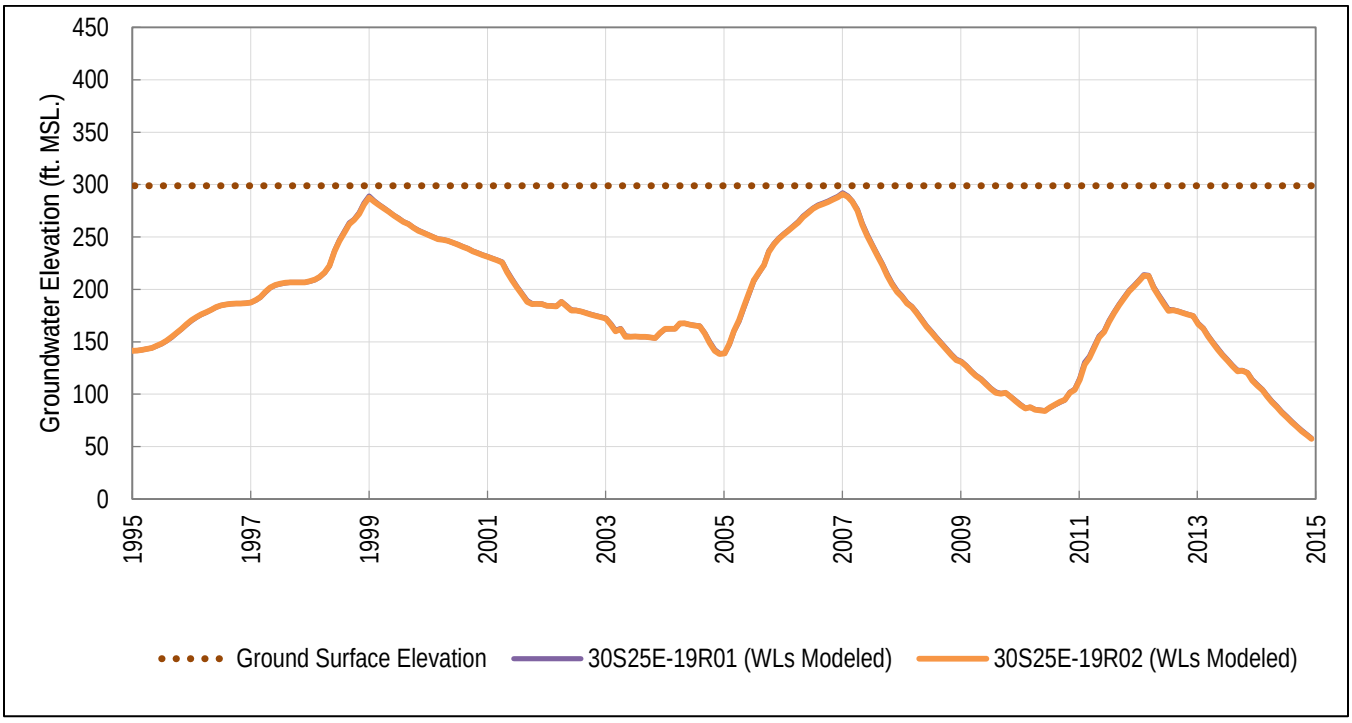
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-6. Well 30S25E-16L Cluster



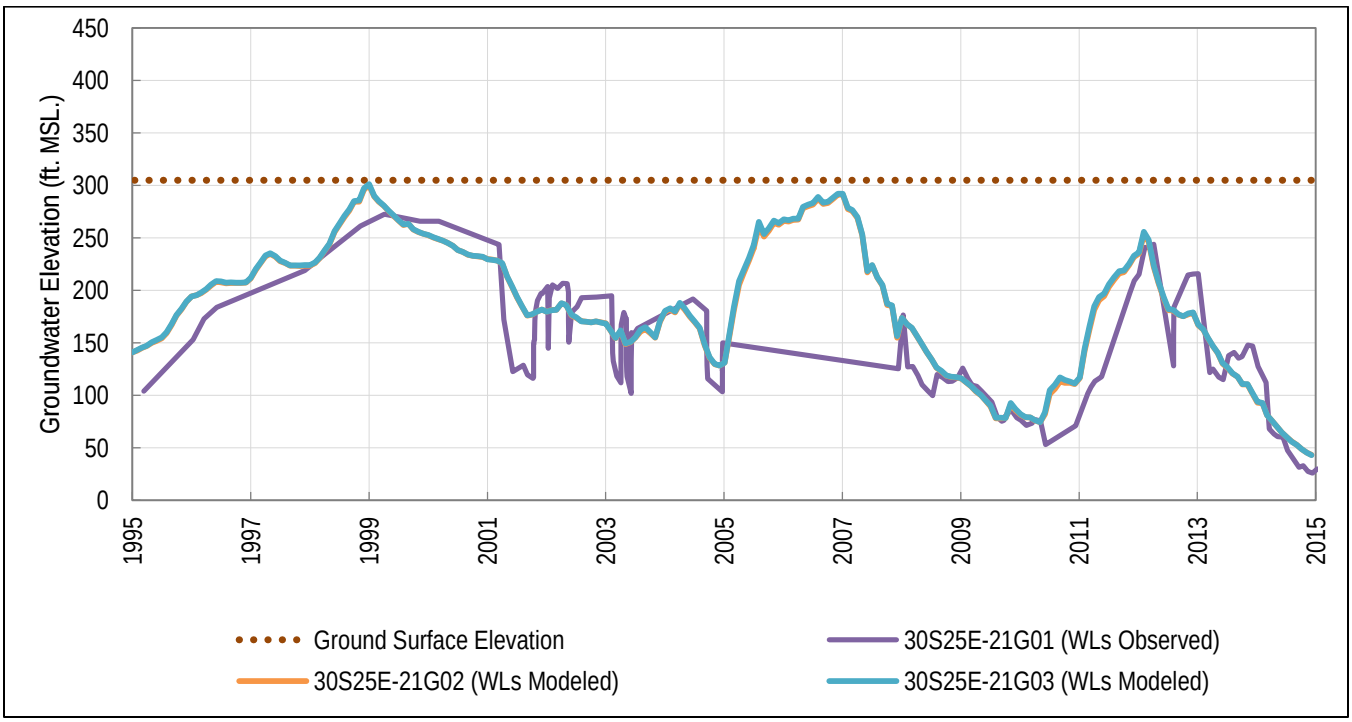
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-7. Well 30S25E-19N Cluster



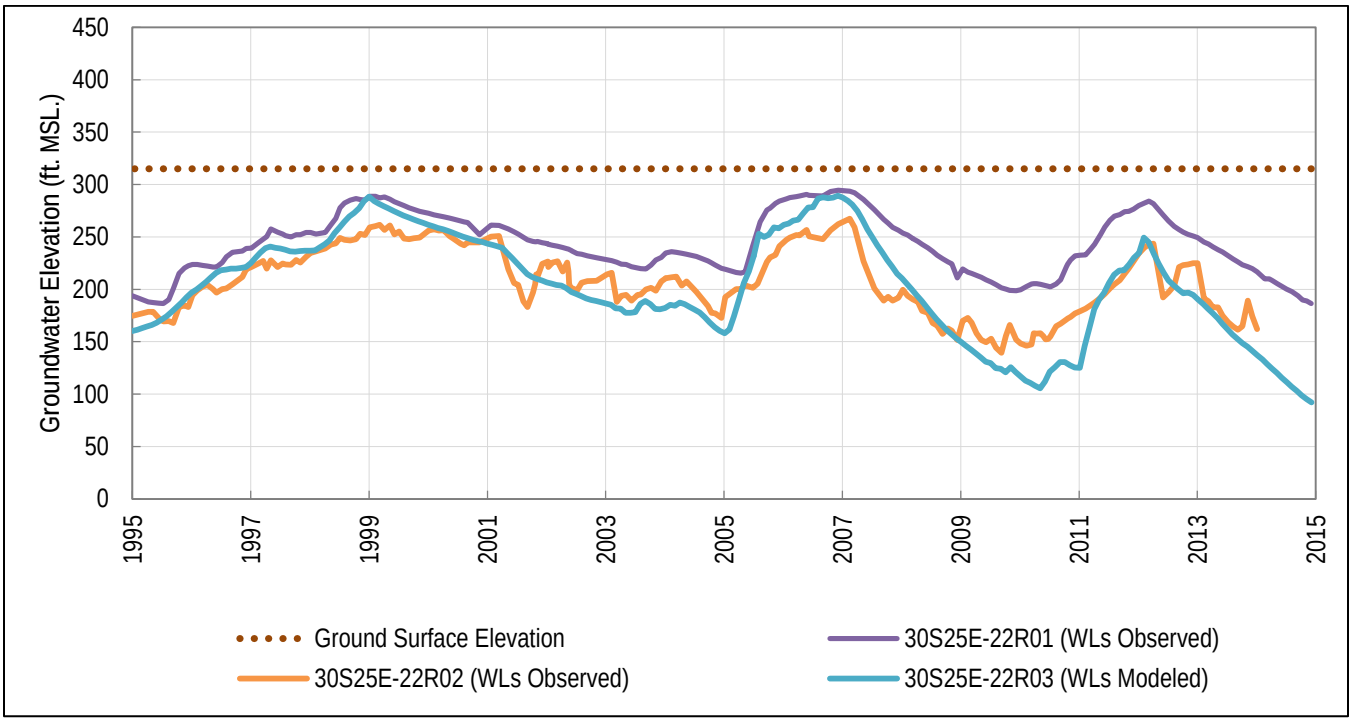
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-8. Well 30S25E-19R Cluster



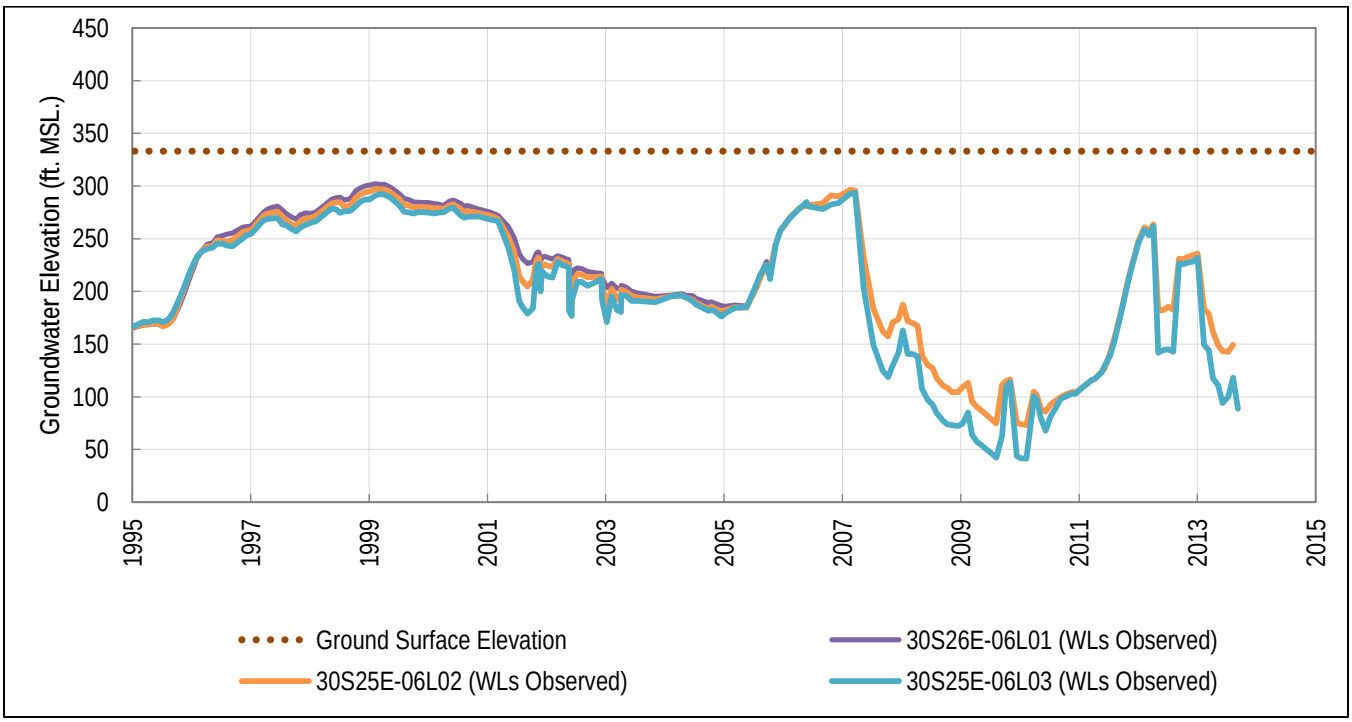
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-9. Well 30S25E-21G Cluster



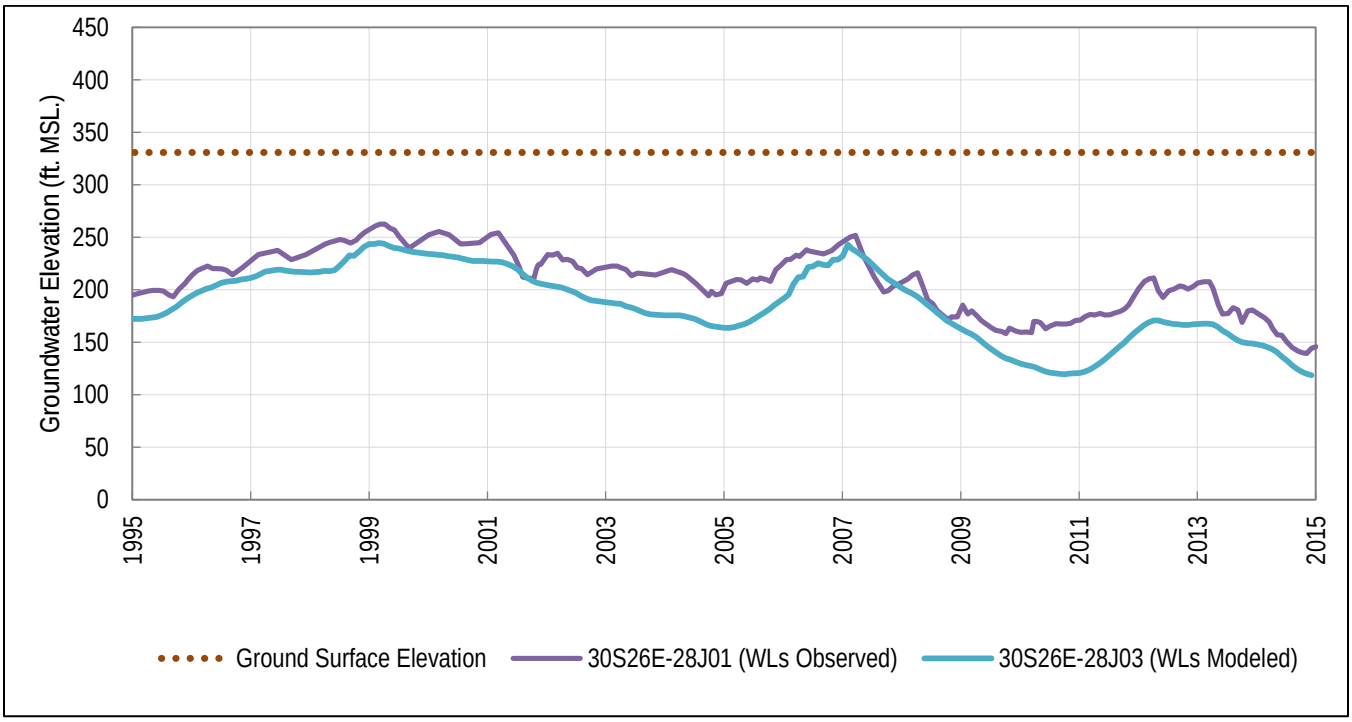
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-10. Well 30S25E-22R Cluster



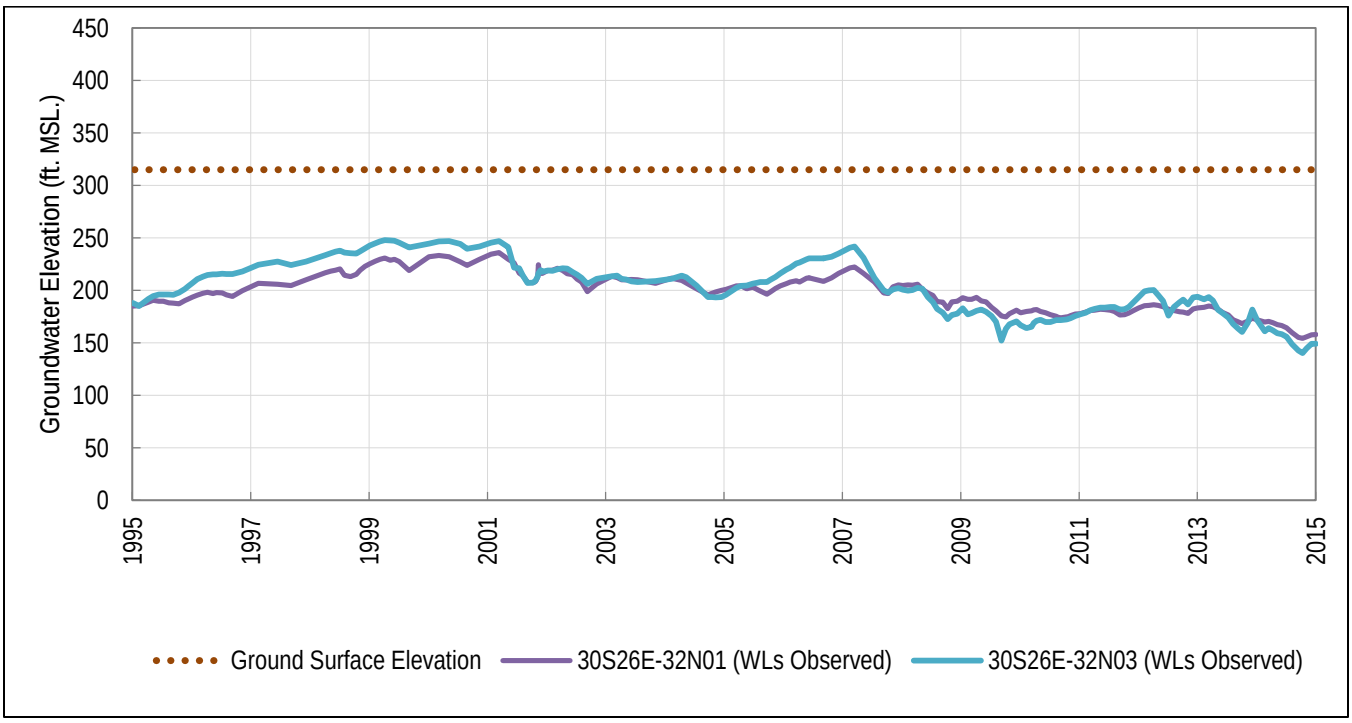
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-11. 30S26E-06L Cluster



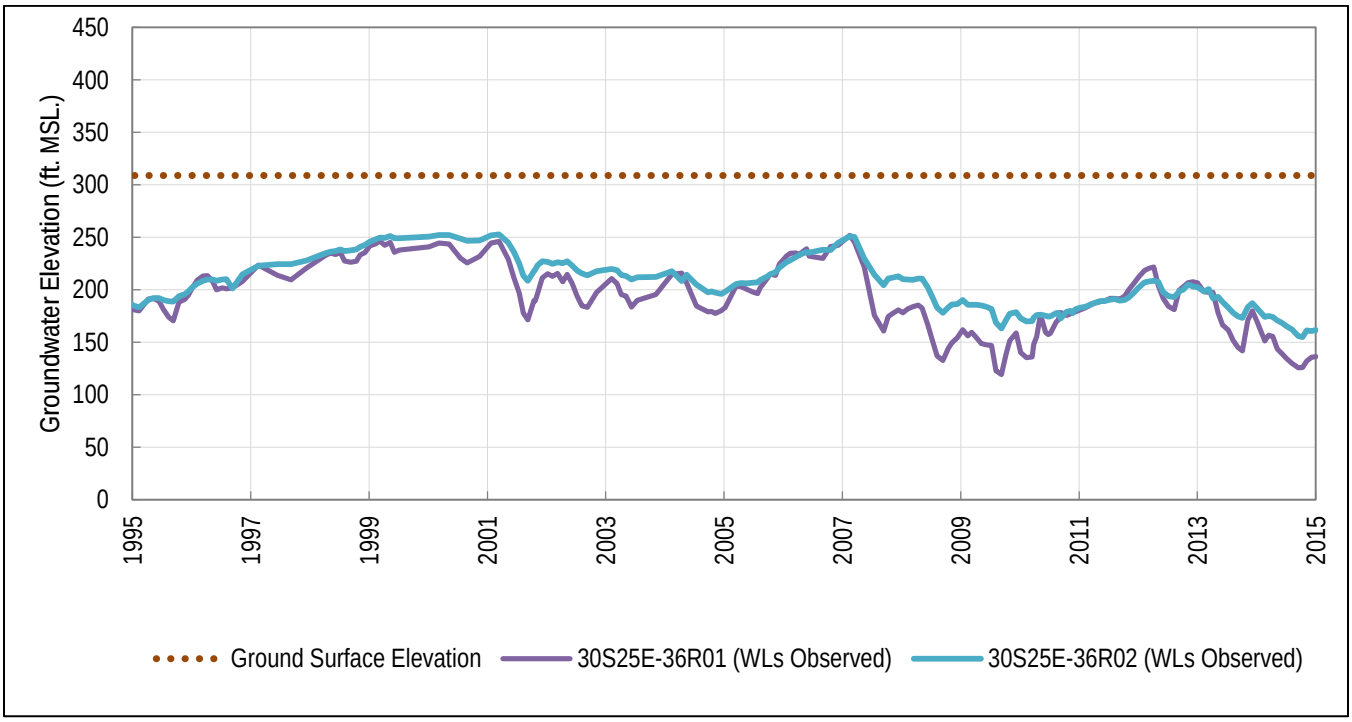
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-12. Well 30S26E-28J Cluster



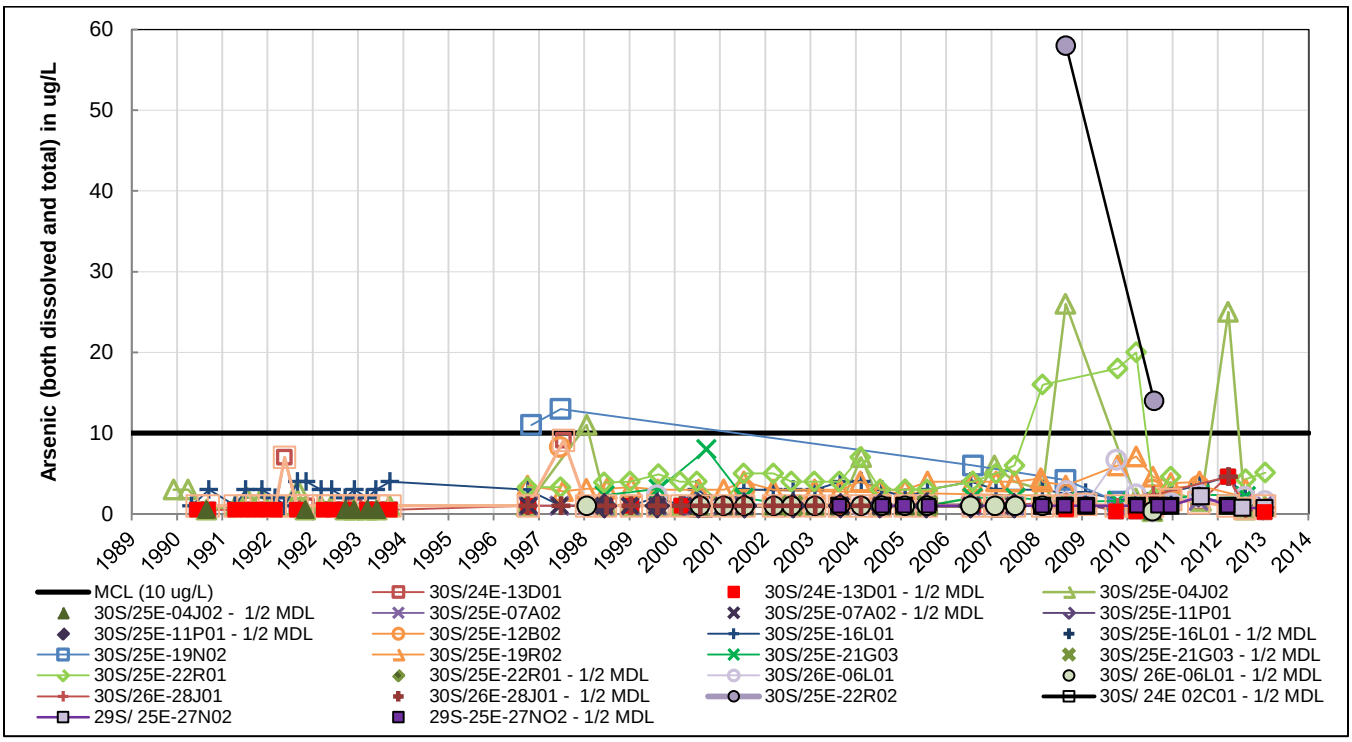
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-13. Well 30S26E-32N Cluster



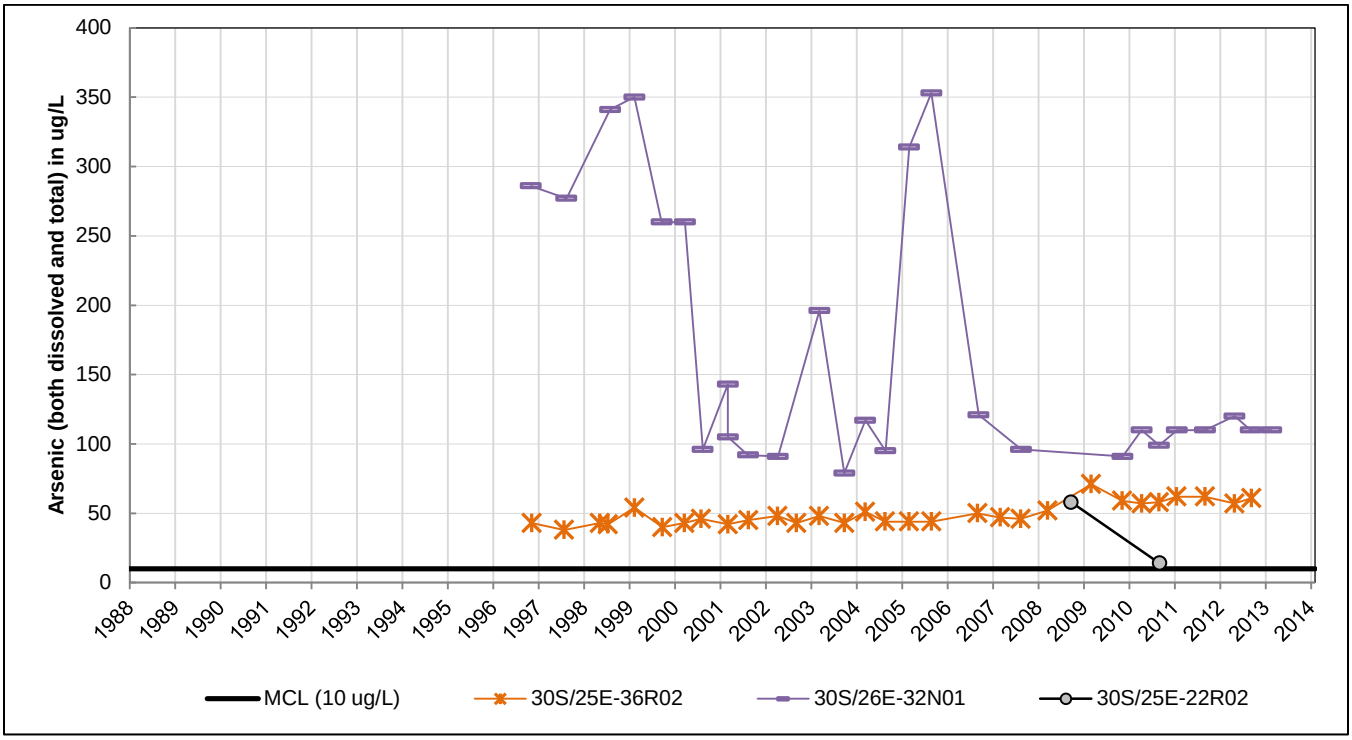
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-2-14. Well 30S25E-36R Cluster



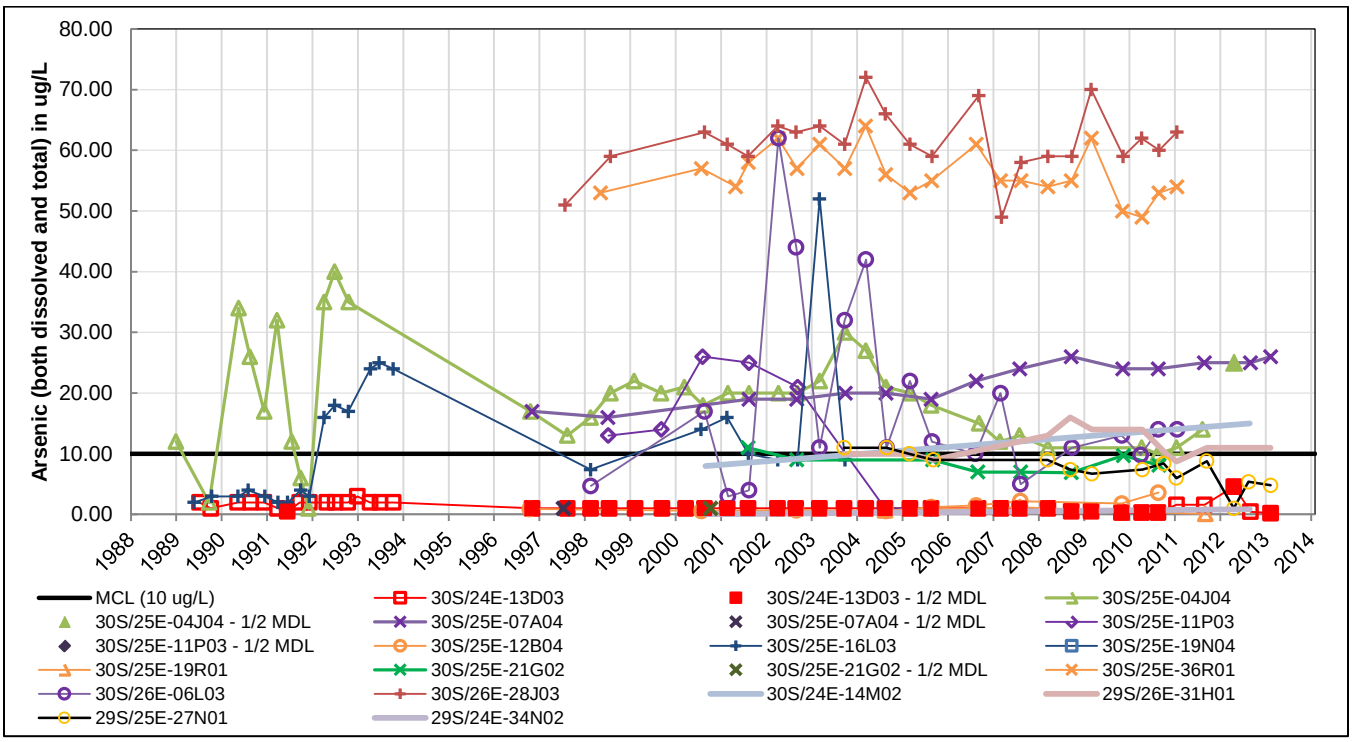
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-3A. Arsenic (from 0-50 µg/L) in Shallow Monitoring Wells - KWBA



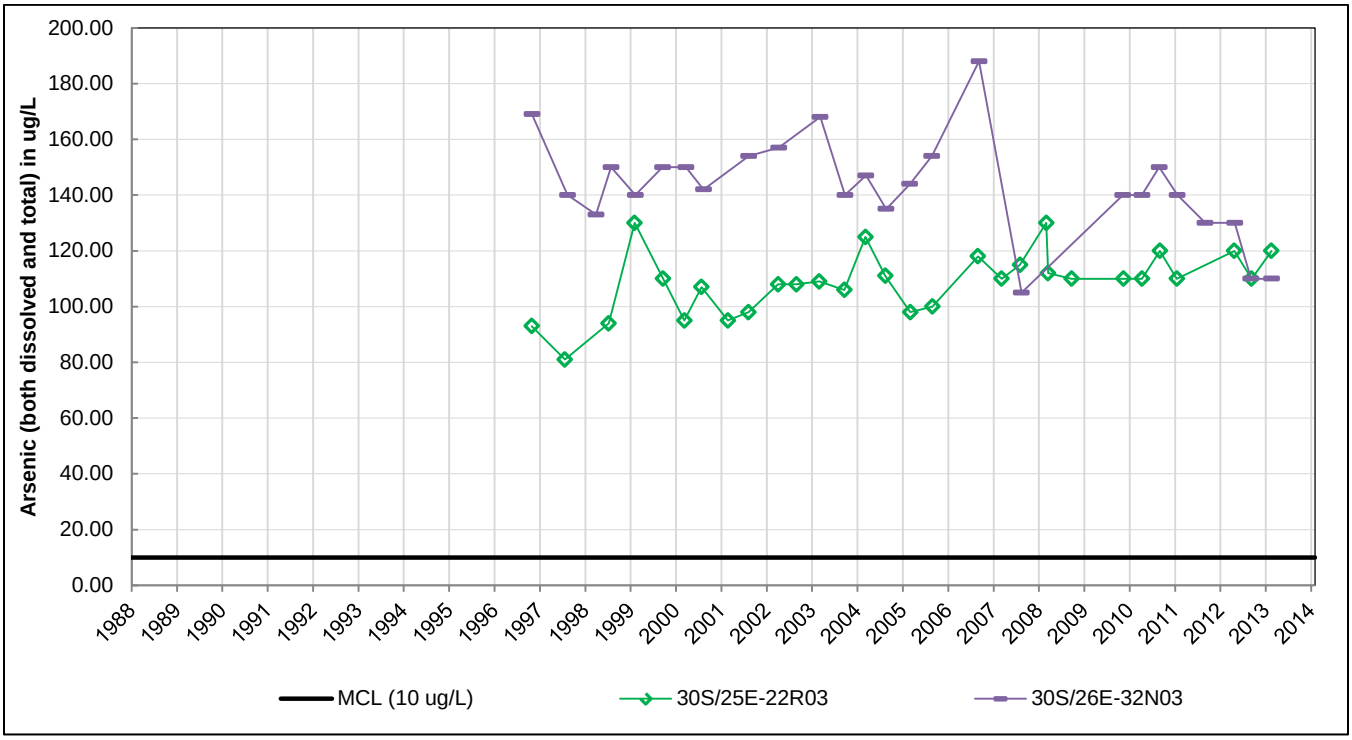
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-3B. Arsenic (50 - 400 µg/L) in Shallow Monitoring Wells - KWBA



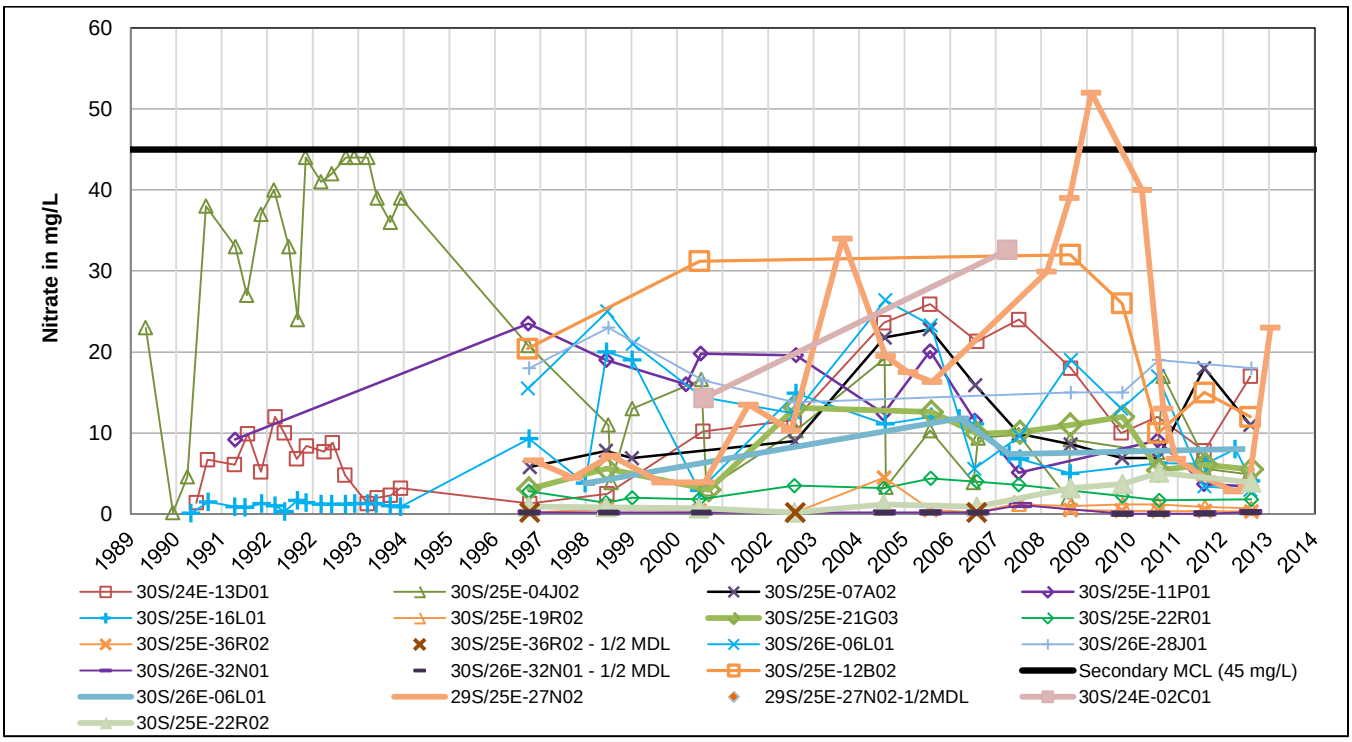
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-3C. Arsenic (from 0-80 µg/L) in Deep Monitoring Wells - KWBA



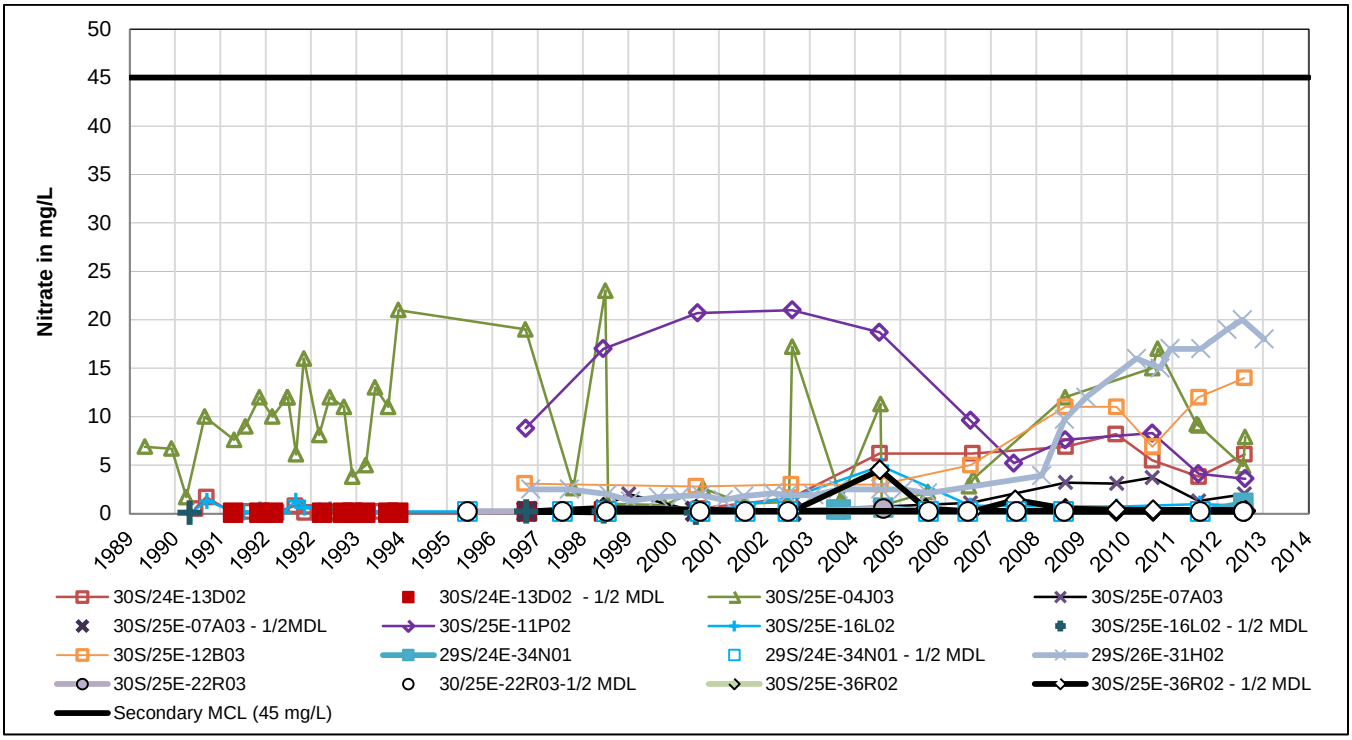
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-3D. Arsenic (from 80-200 µg/L) in Deep Monitoring Wells - KWBA



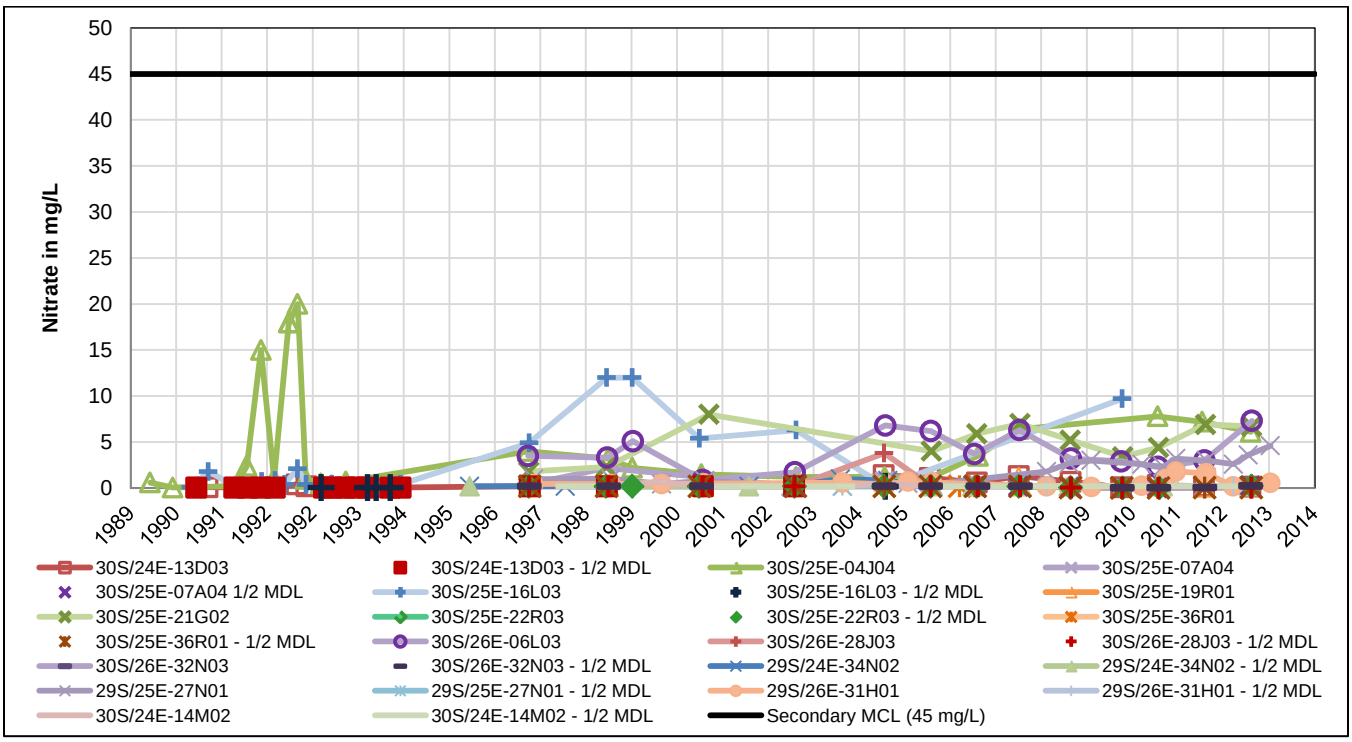
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-4A. Nitrate in Shallow Monitoring Wells – KWBA with 30S/25E - 12B02



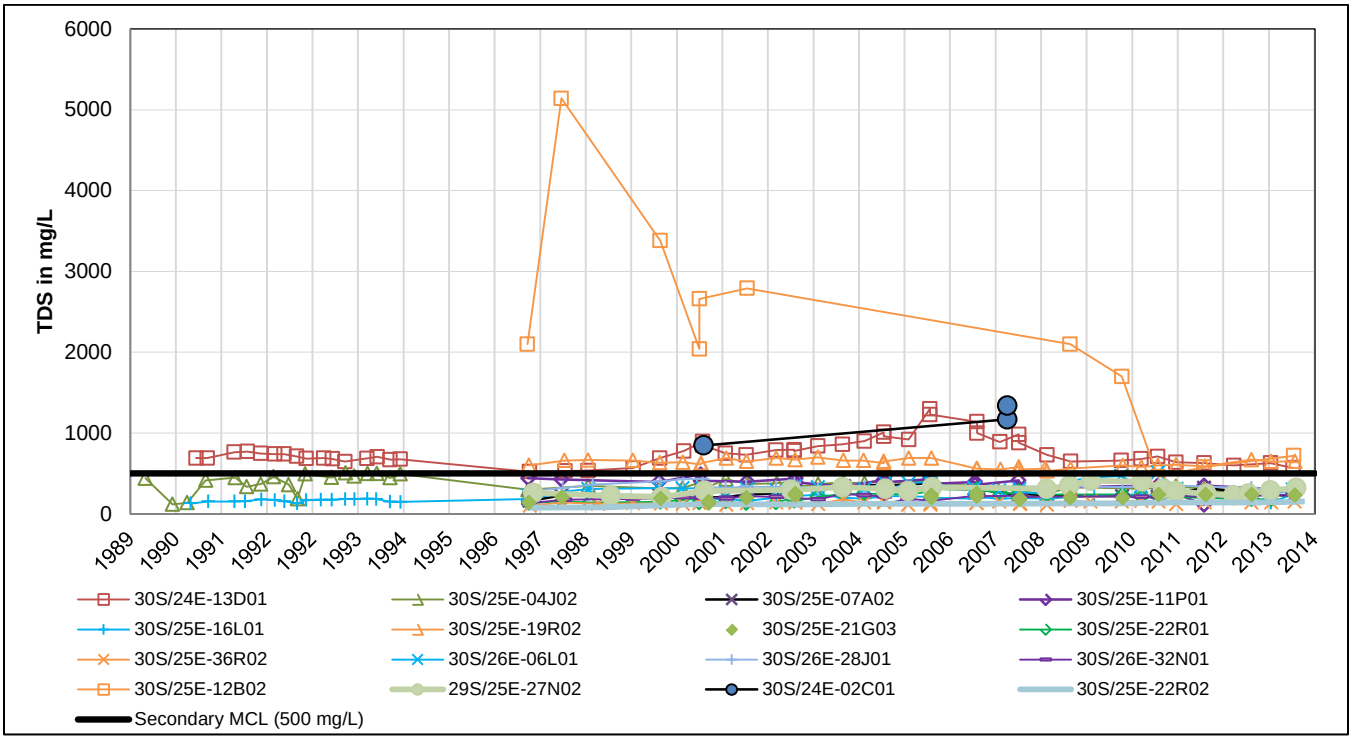
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-4B. Nitrate in Middle Monitoring Wells – KWBA with 30S/25E - 12B03



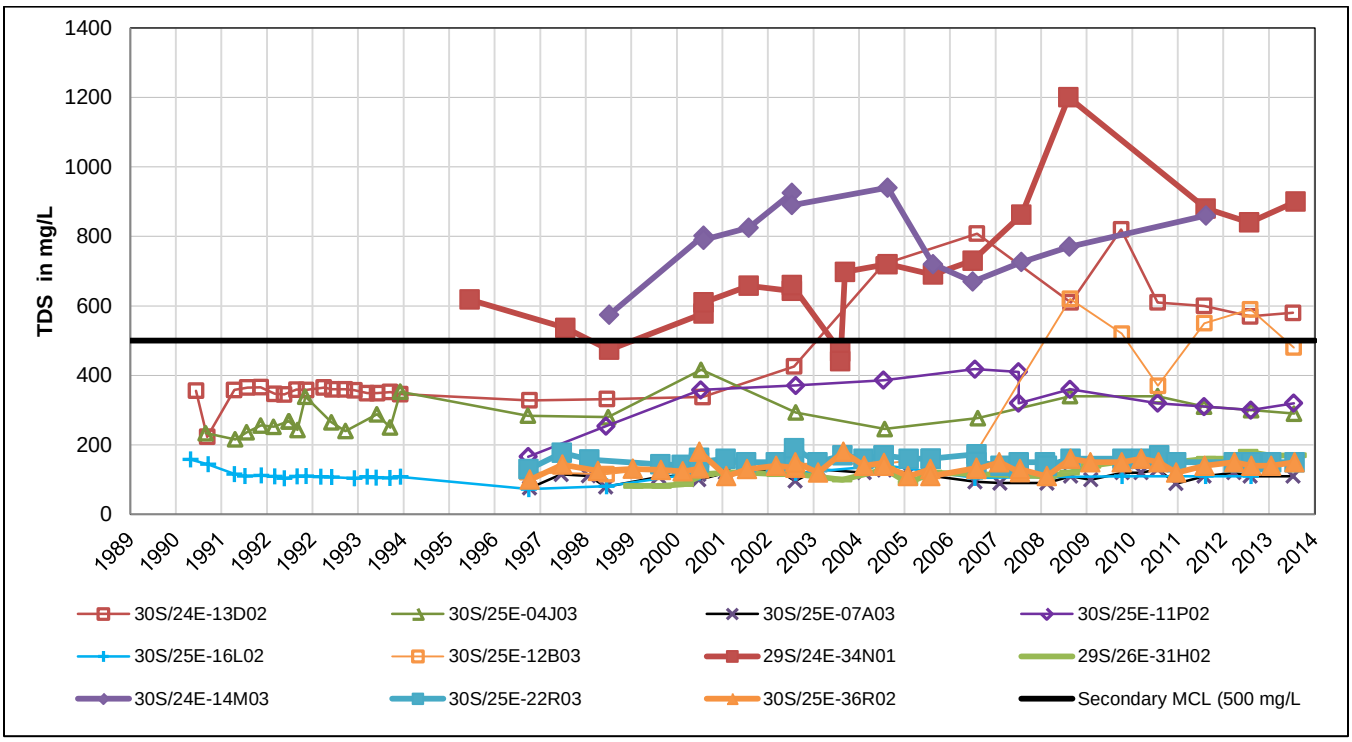
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-4C. Nitrate in Deep Monitoring Wells - KWBA



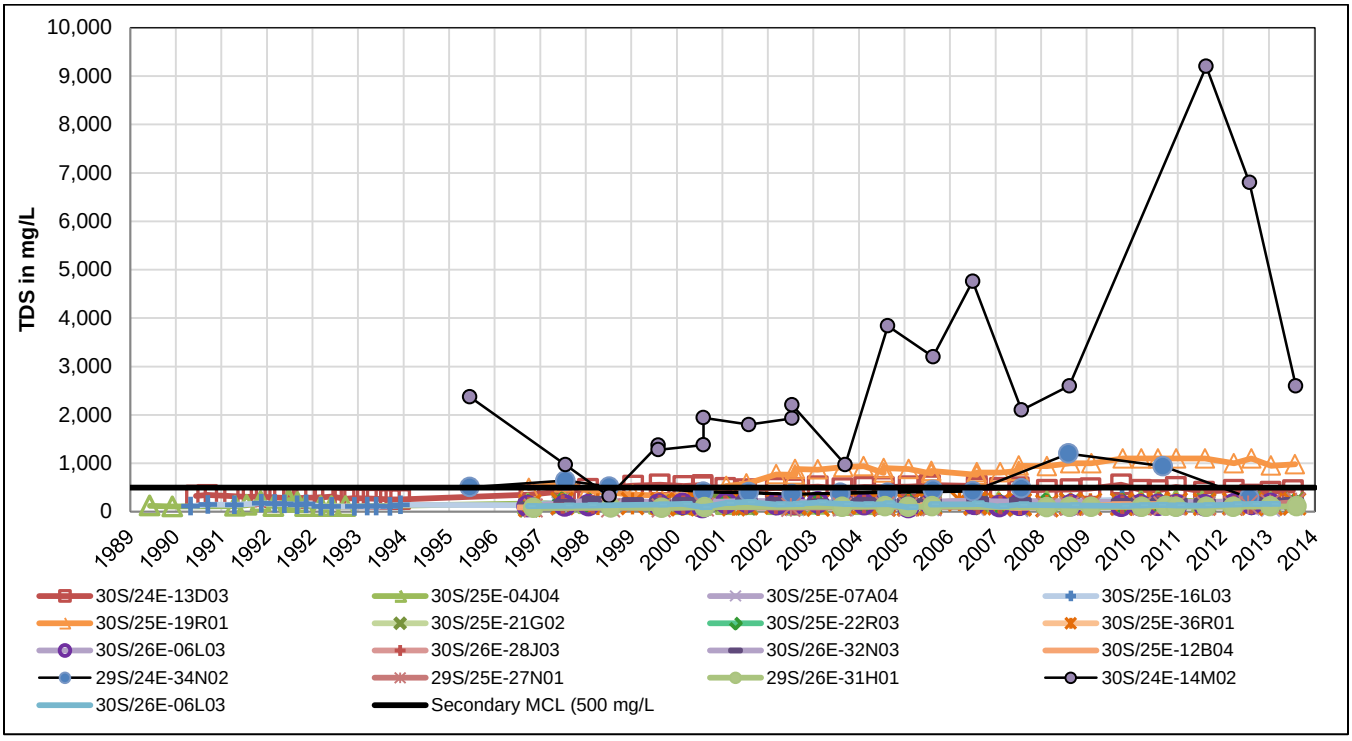
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-5A. Total Dissolved Solids in Shallow Monitoring Wells – KWBA with 30S/25E - 12B02



Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-5B. Total Dissolved Solids in Middle Monitoring Wells – KWBA with 30S/25E - 12B03

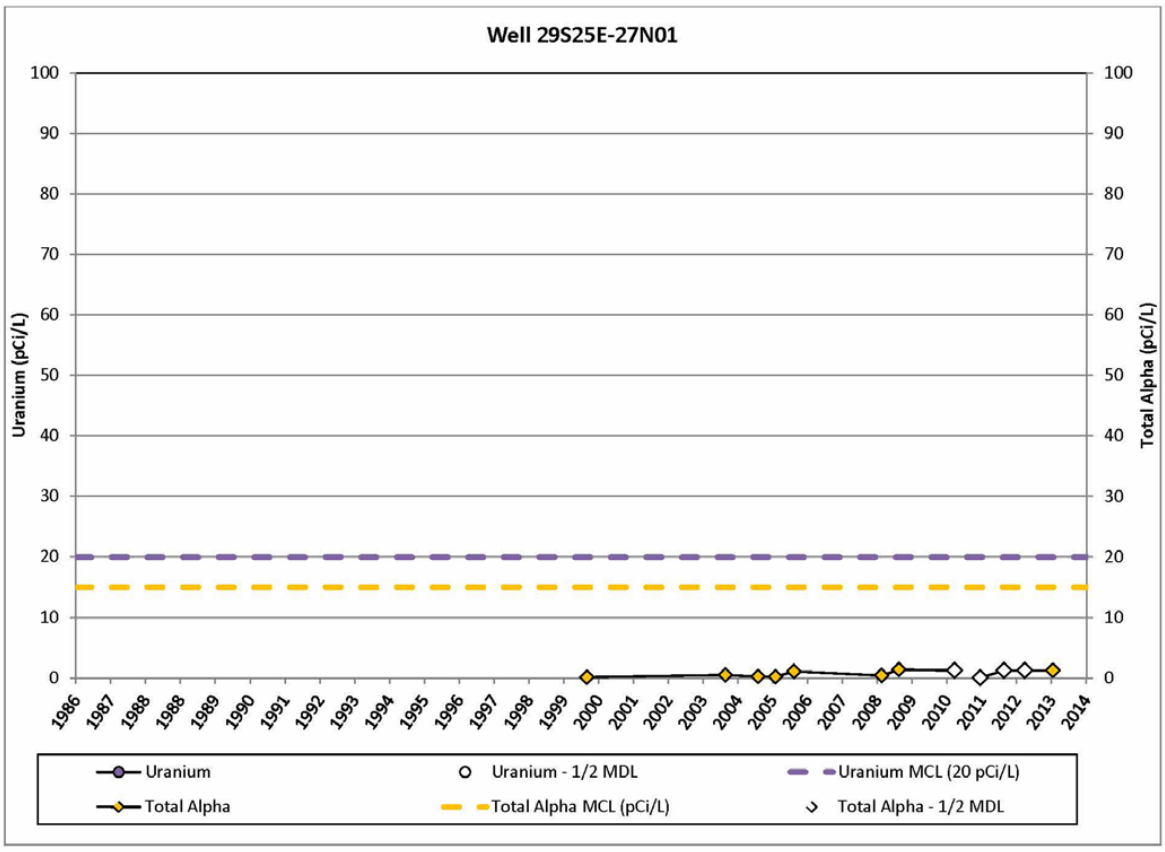


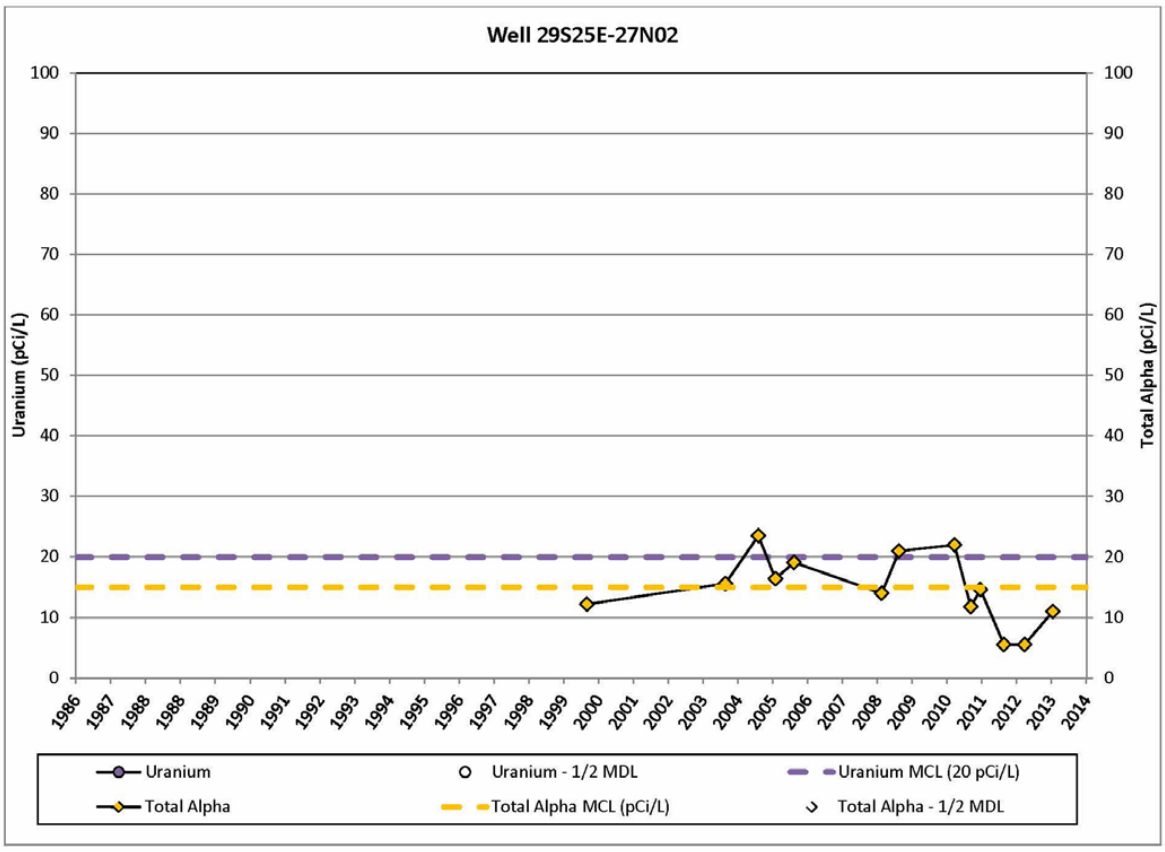
Source: Data from KCWA 2015 and KWBA 2015 compiled by AECOM in 2015

FIGURE 7.3-5C. Total Dissolved Solids in Deep Monitoring Wells with 30S/25E-12B04- KWBA

Township 29S

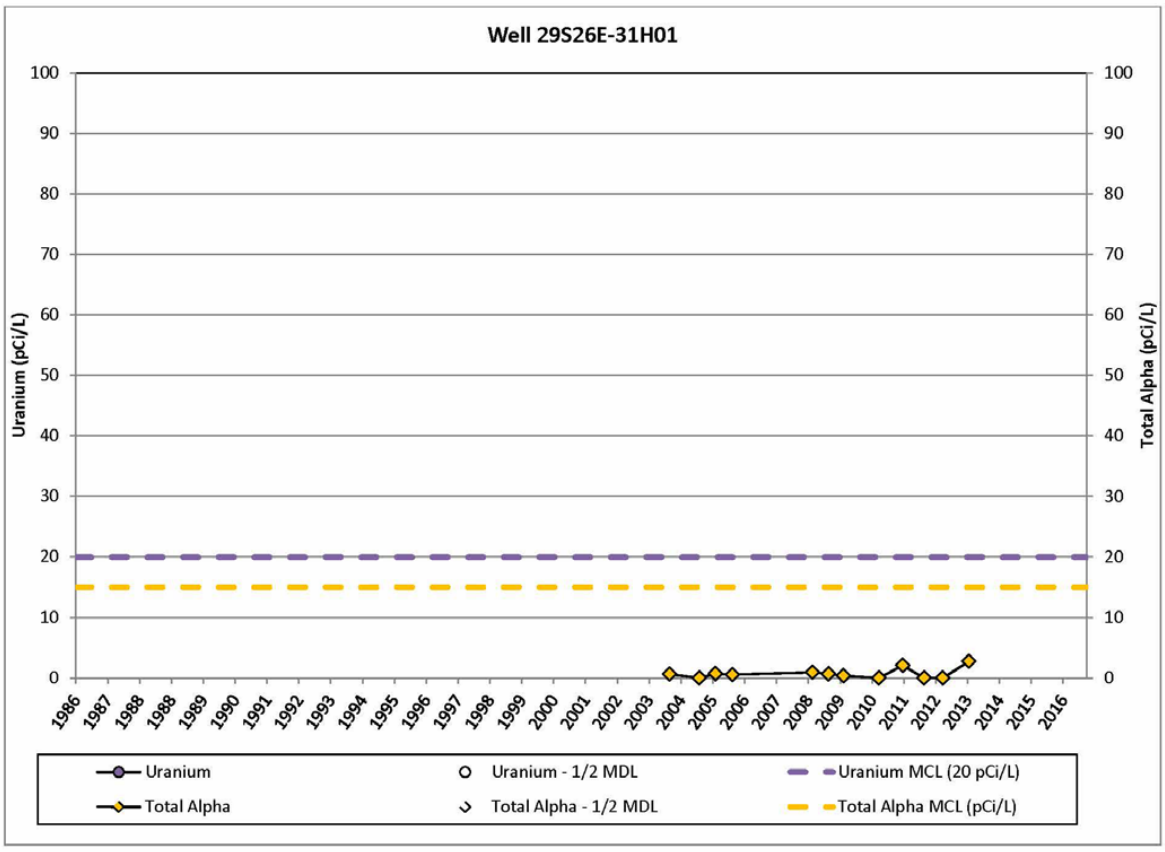
Section 25E

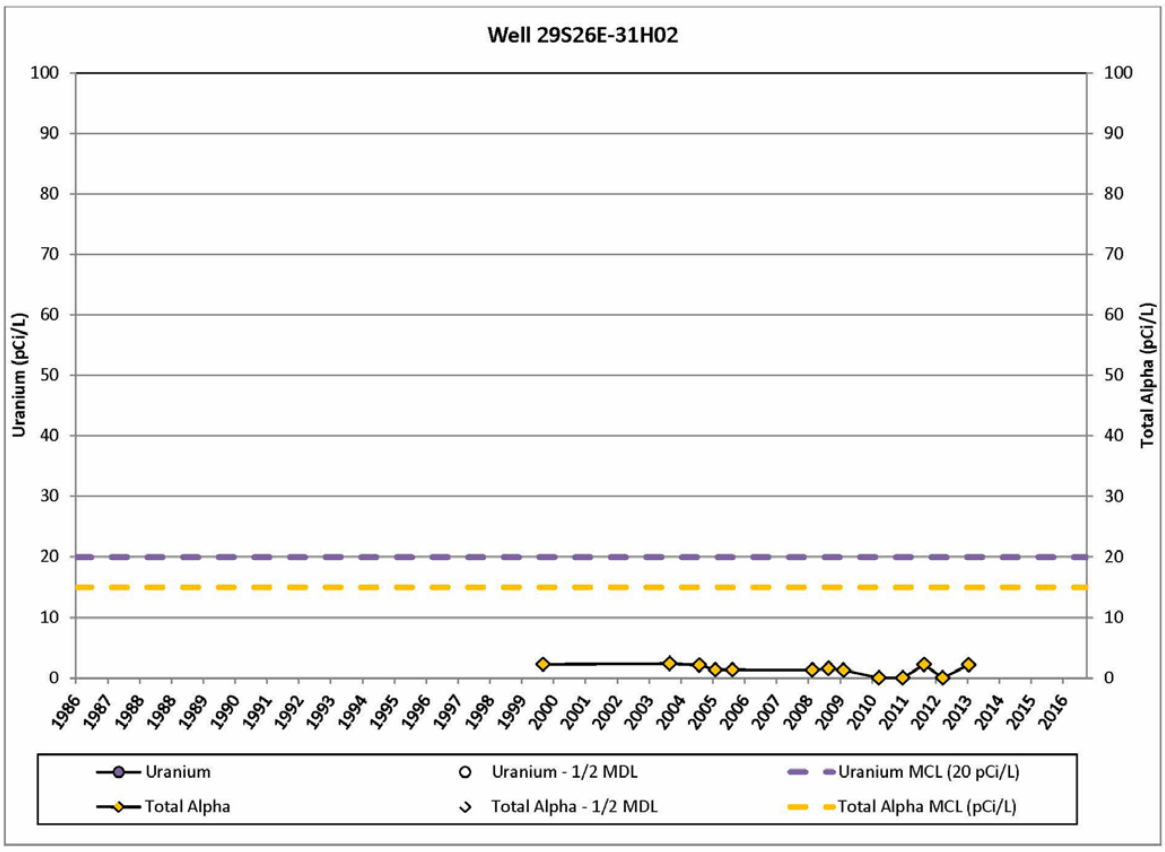

Well 29S25E-27N01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha MCL (pCi/L)
Total Alpha - 1/2 MDL


Well 29S25E-27N02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha MCL (pCi/L)
Total Alpha - 1/2 MDL

Township 29S

Section 26E


Well 29S26E-31H01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 29S26E-31H02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)

Township 30S

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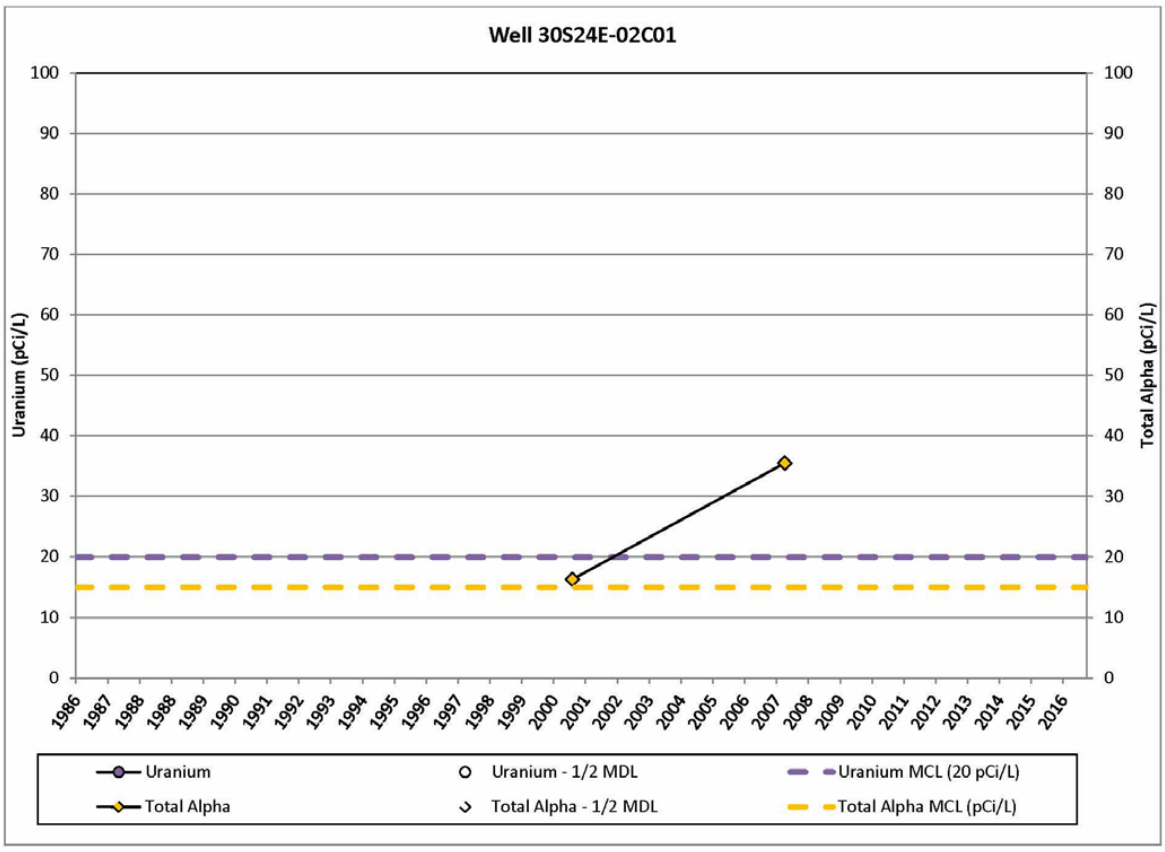
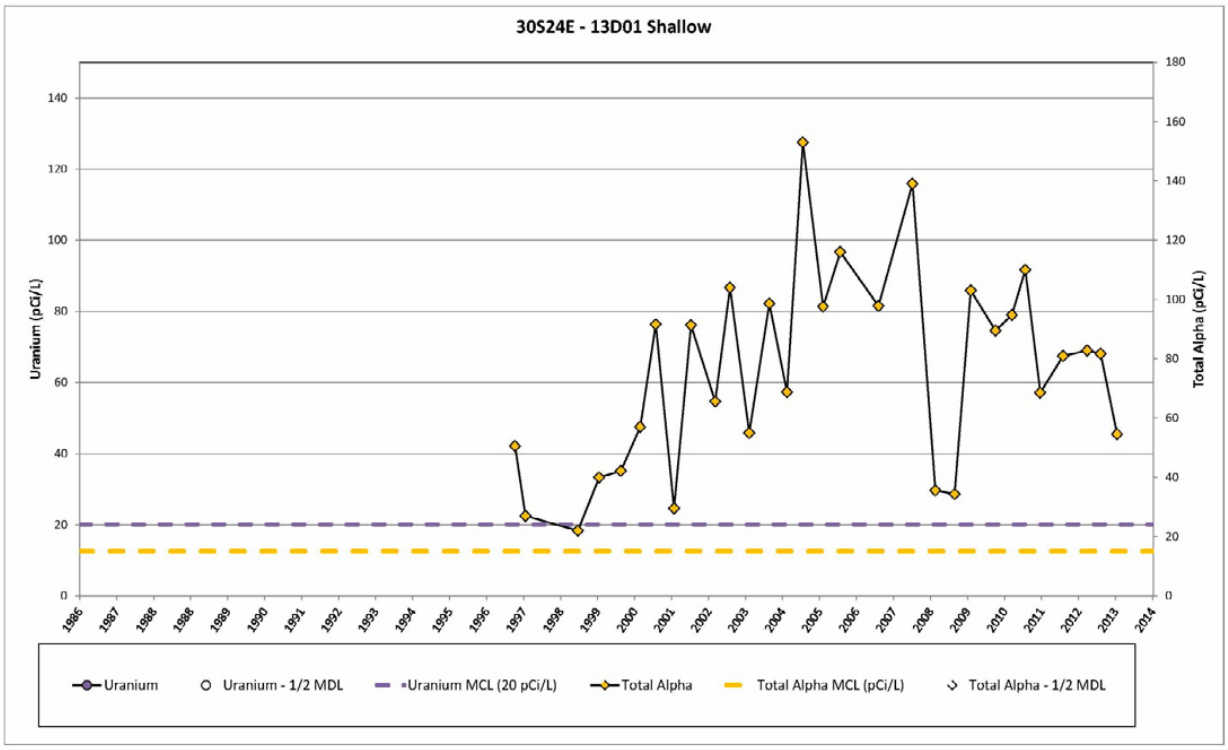

Well 30S24E-02C01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


30S24E - 13D01 Shallow
Uranium (pCi/L)
Total Alpha (pCi/L)
0
20
40
60
80
100
120
140
160
180
1986
1987
1988
1989
1990
1991
1992
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1994
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2002
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2004
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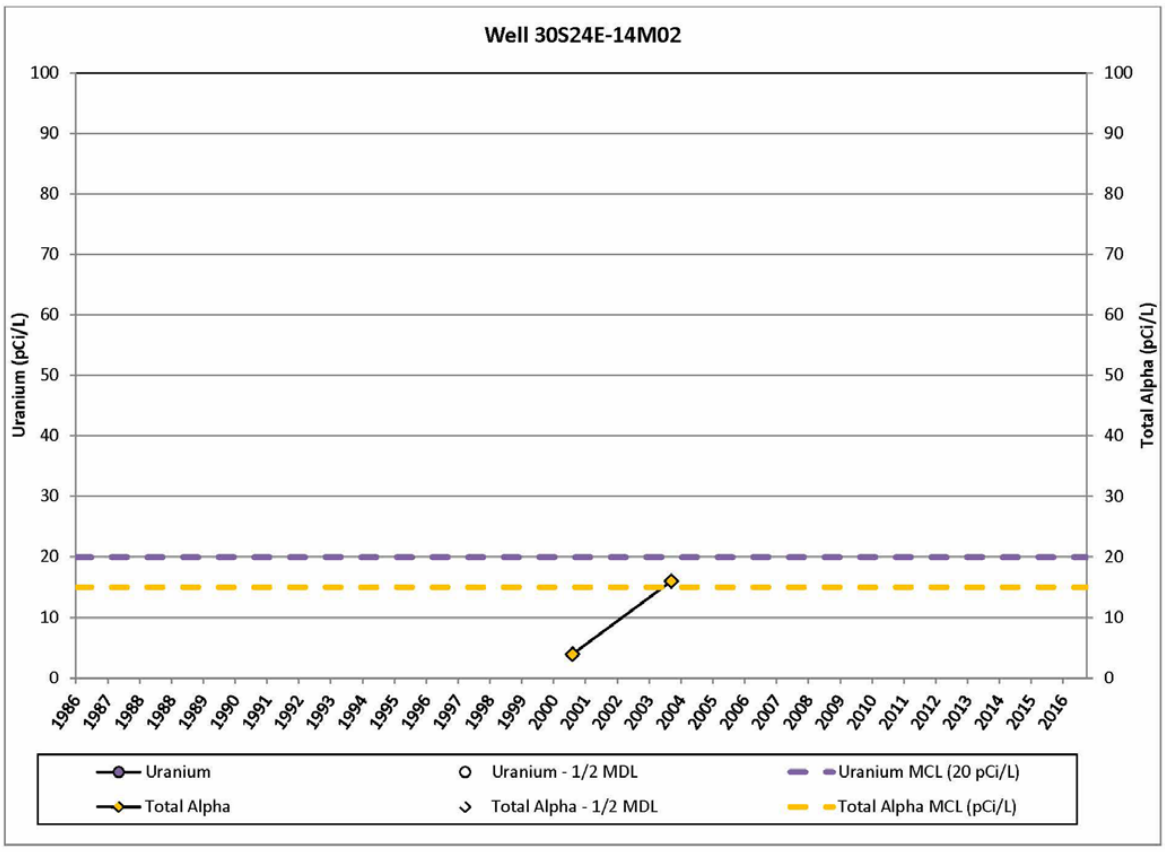
2006
2007
2008
2009
2010
2011
2012
2013
2014
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha MCL (pCi/L)
Total Alpha - 1/2 MDL


Well 30S24E-14M02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
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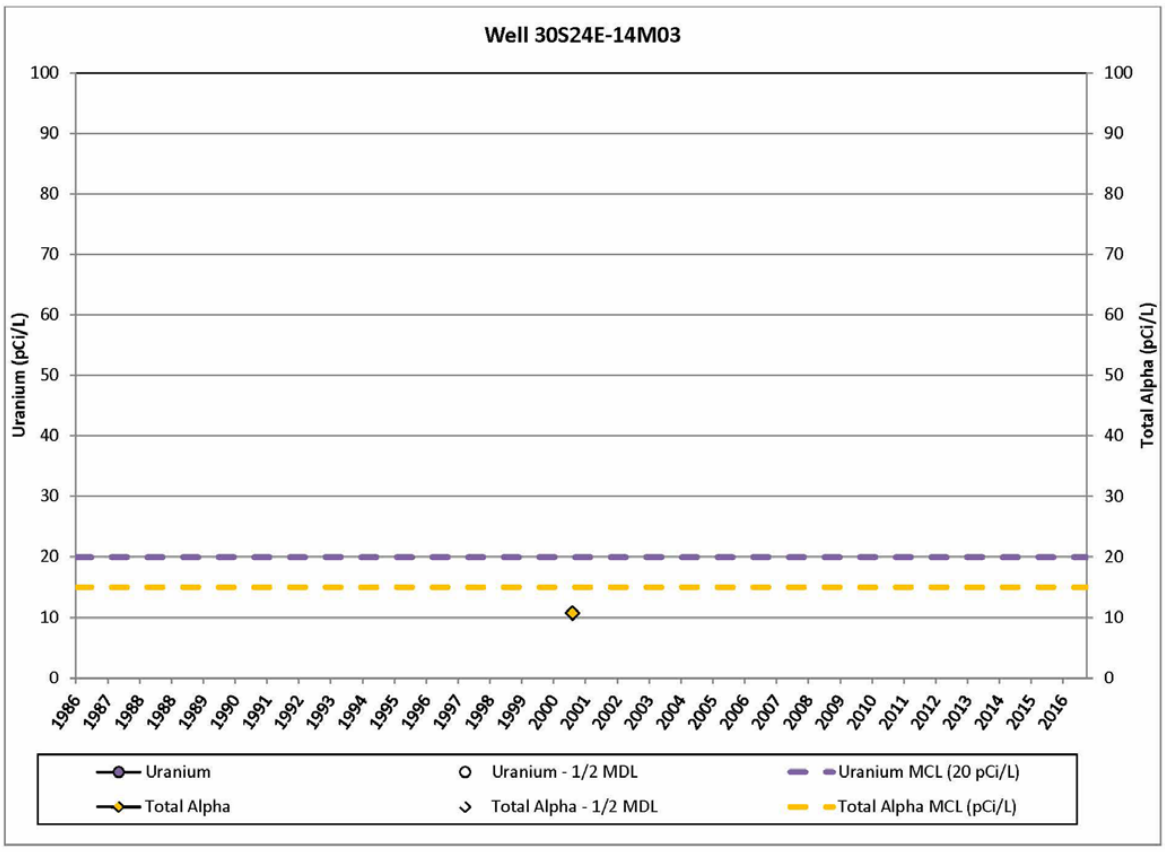
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-14M03
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
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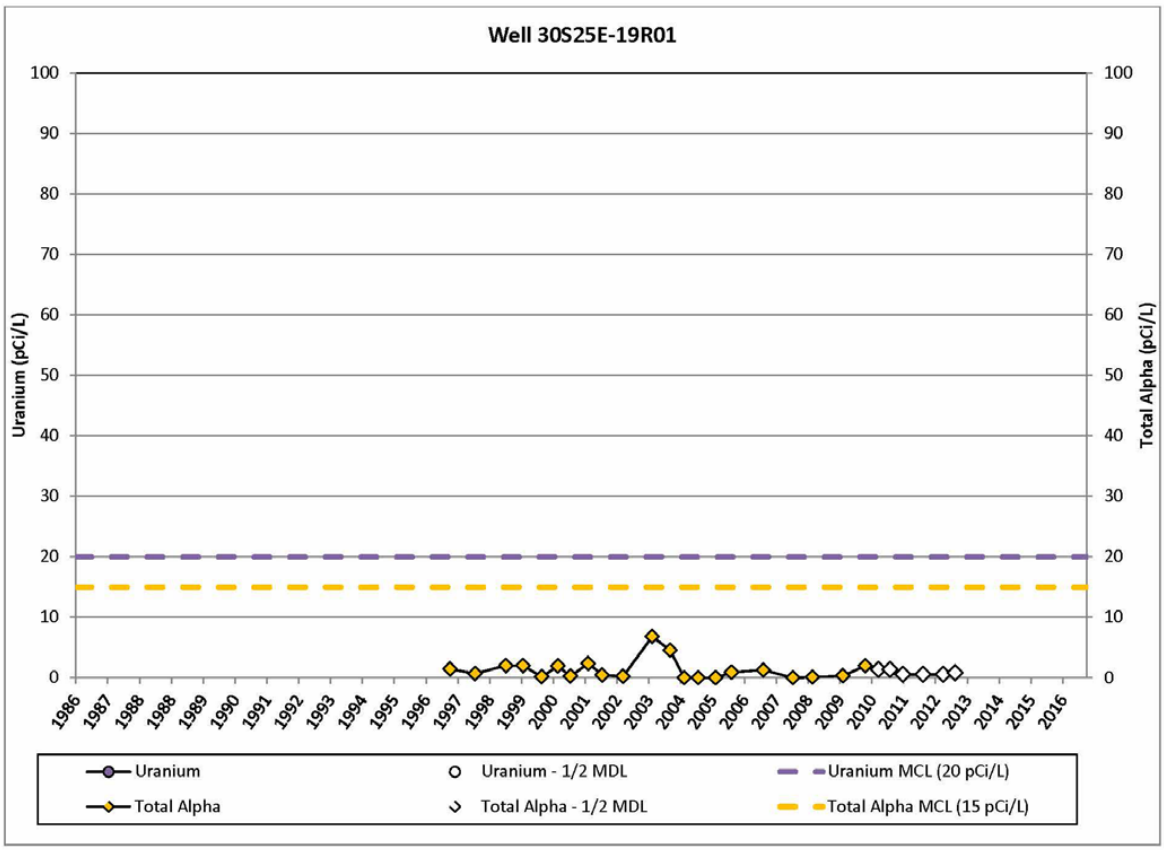
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)

Township 30S

Section 25E


Well 30S25E-19R01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
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0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
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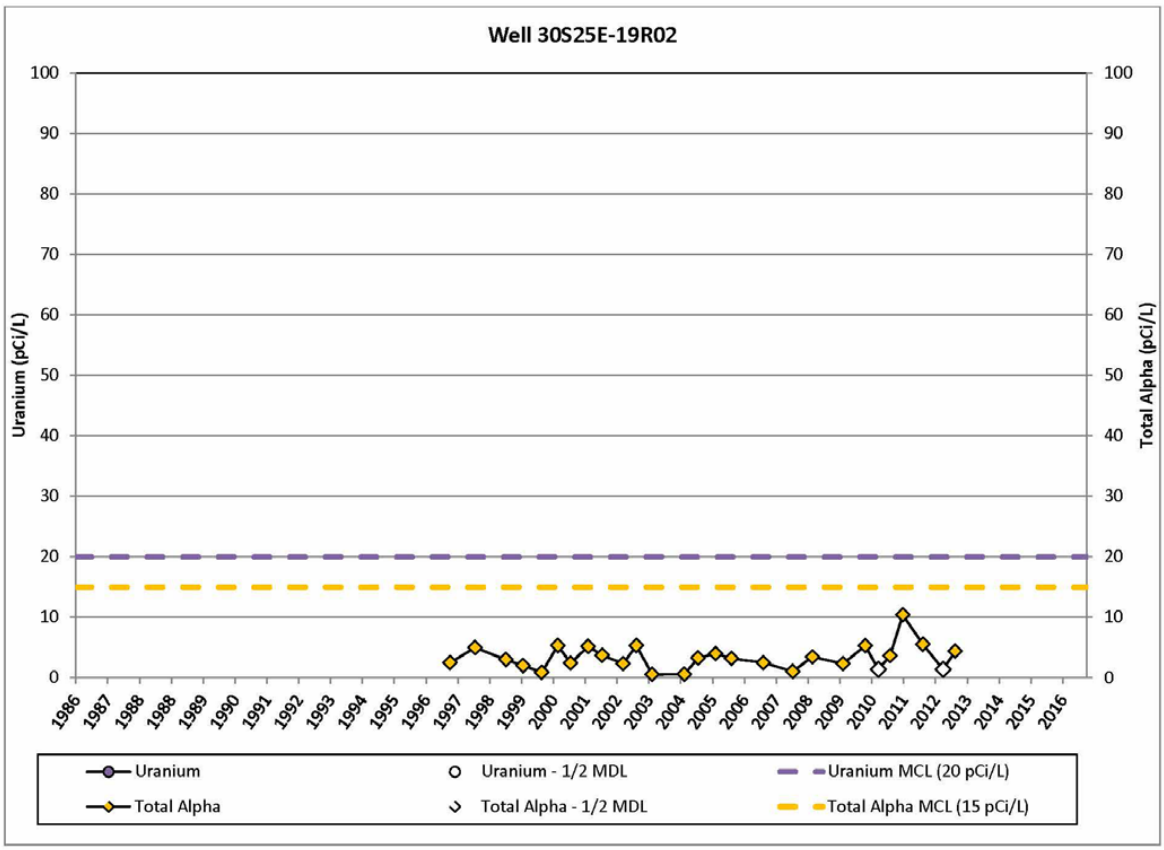
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)


Well 30S25E-19R02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
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0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
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1999
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2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)

Township 30S

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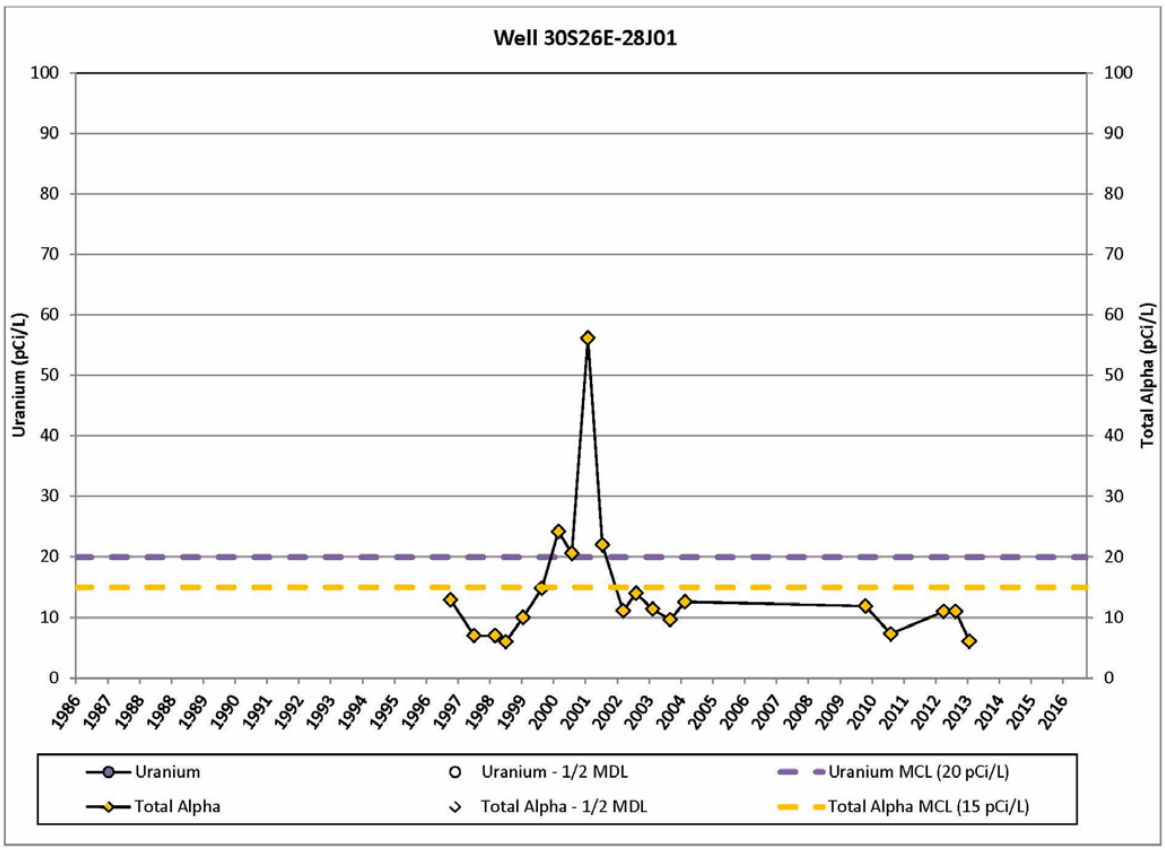
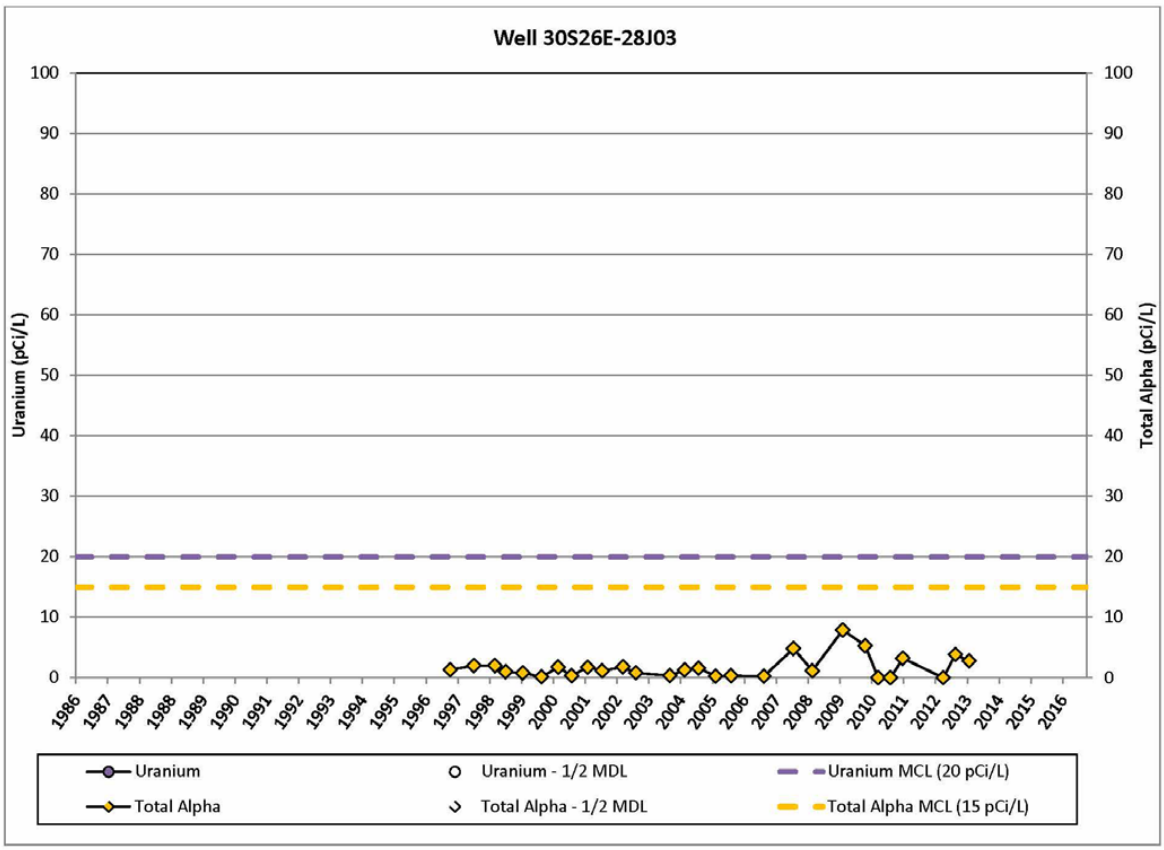

Well 30S26E-28J01
Uranium (pCi/L)
Total Alpha (pCi/L)
0
10
20
30
40
50
60
70
80
90
100
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)


Well 30S26E-28J03
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
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10
0
1986
1987
1988
1988
1989
1990
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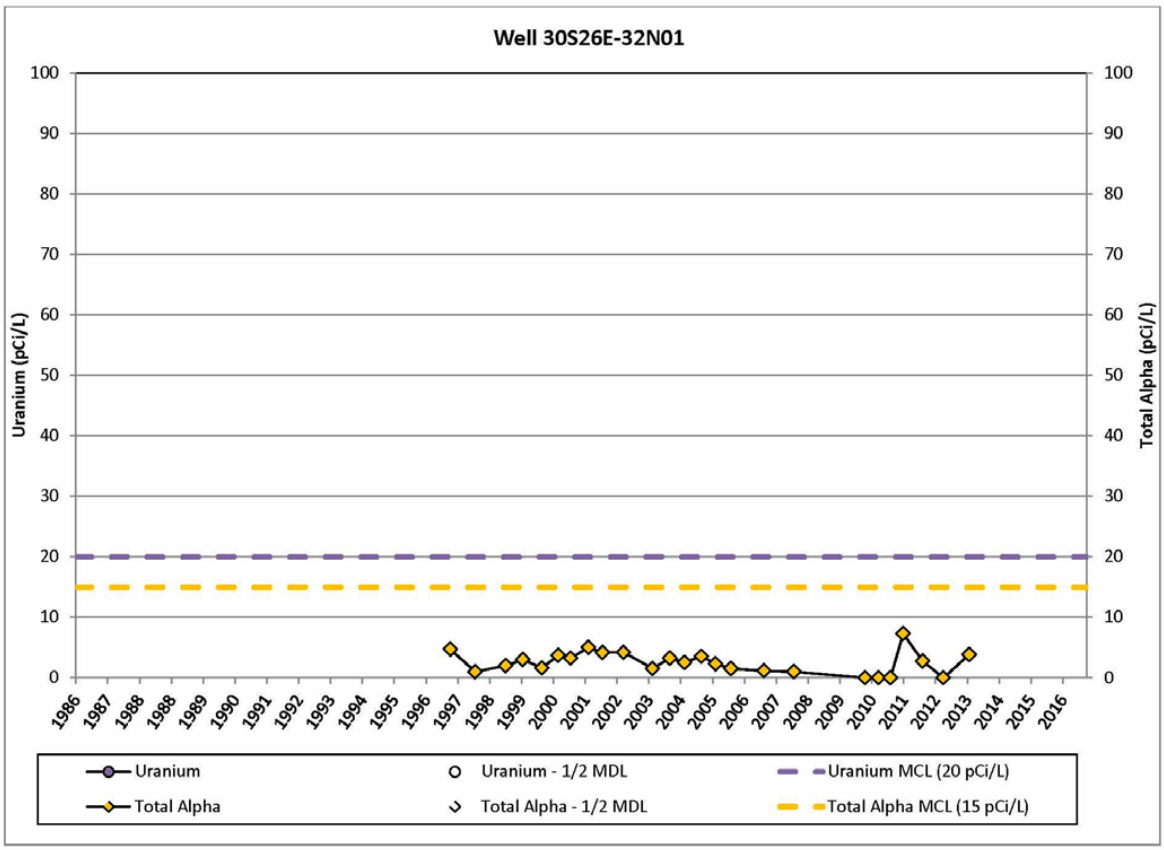
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)


Well 30S26E-32N01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
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2004
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2006
2007
2008
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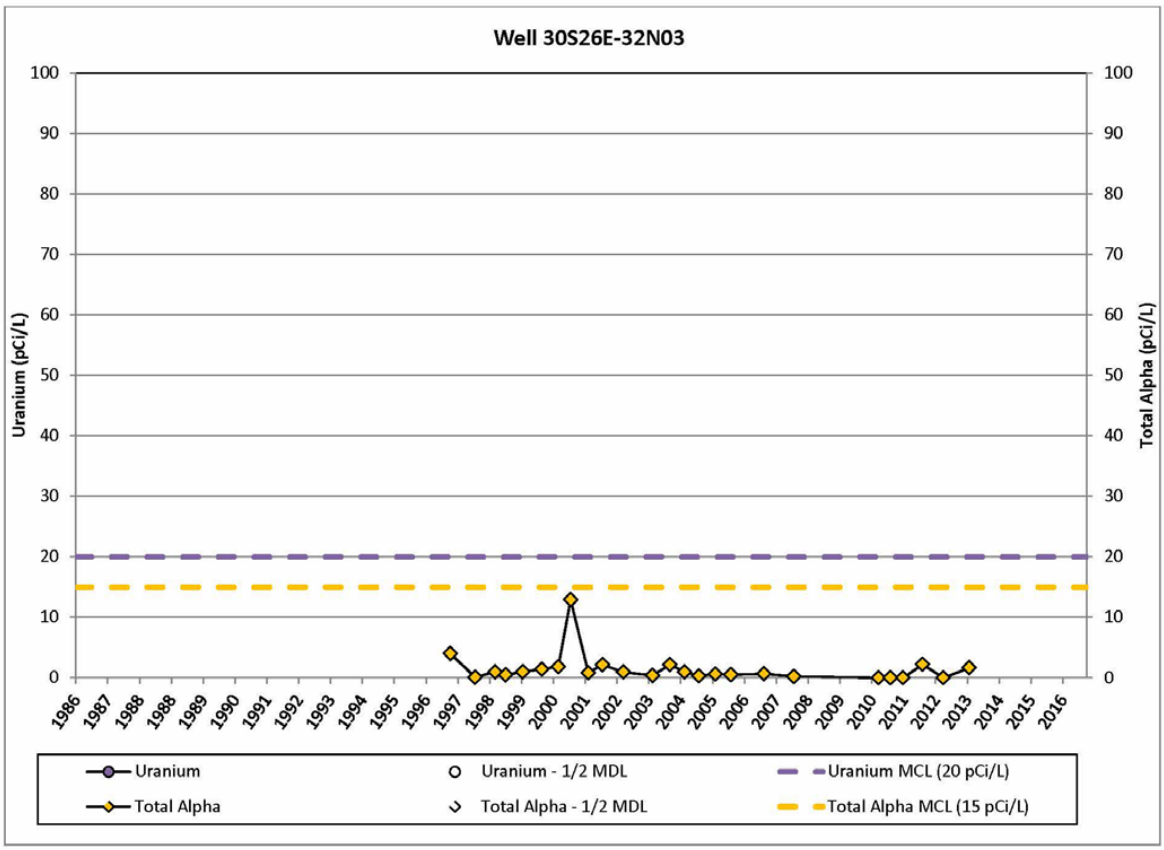
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)


Well 30S26E-32N03
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
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10
0
1986
1987
1988
1988
1989
1990
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2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)

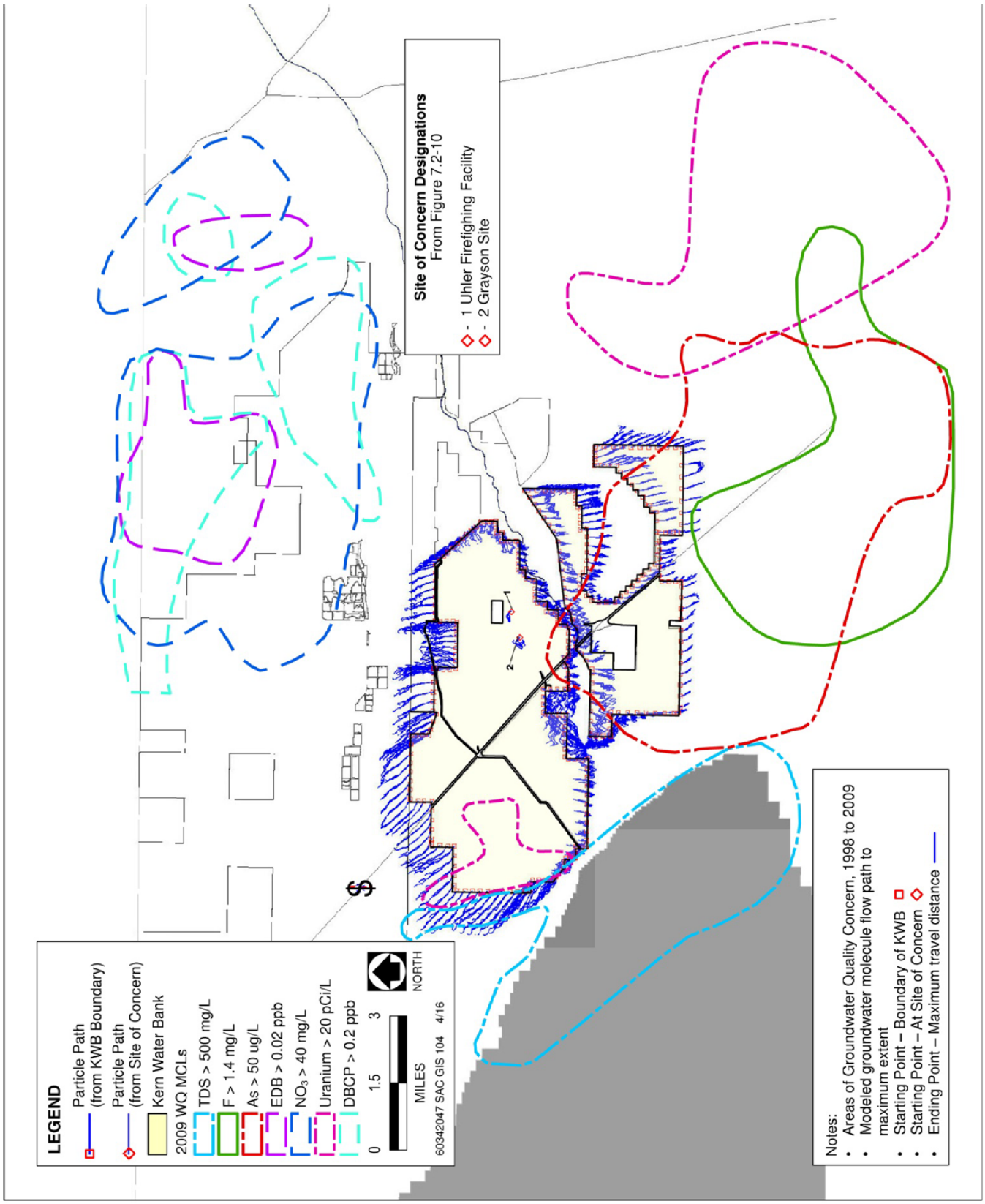


FIGURE 7.3-6a. APO Particle Tracking Results (1995 – 2014) – Maximum Travel Distance with KWB Recharge and Recovery

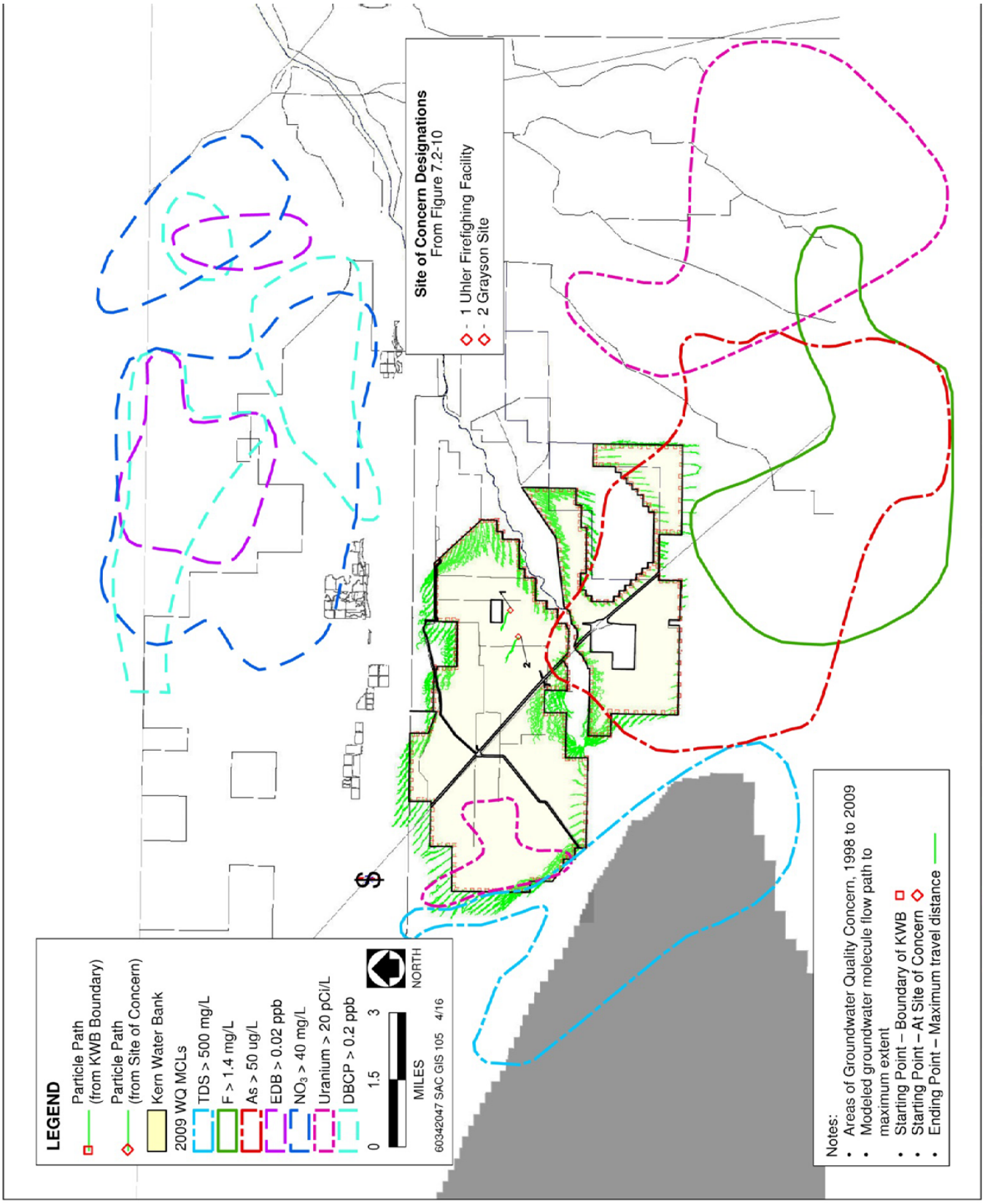


FIGURE 7.3-6b. APO Particle Tracking Results (1995 – 2014) – Maximum Travel Distance without KWB Recharge and Recovery

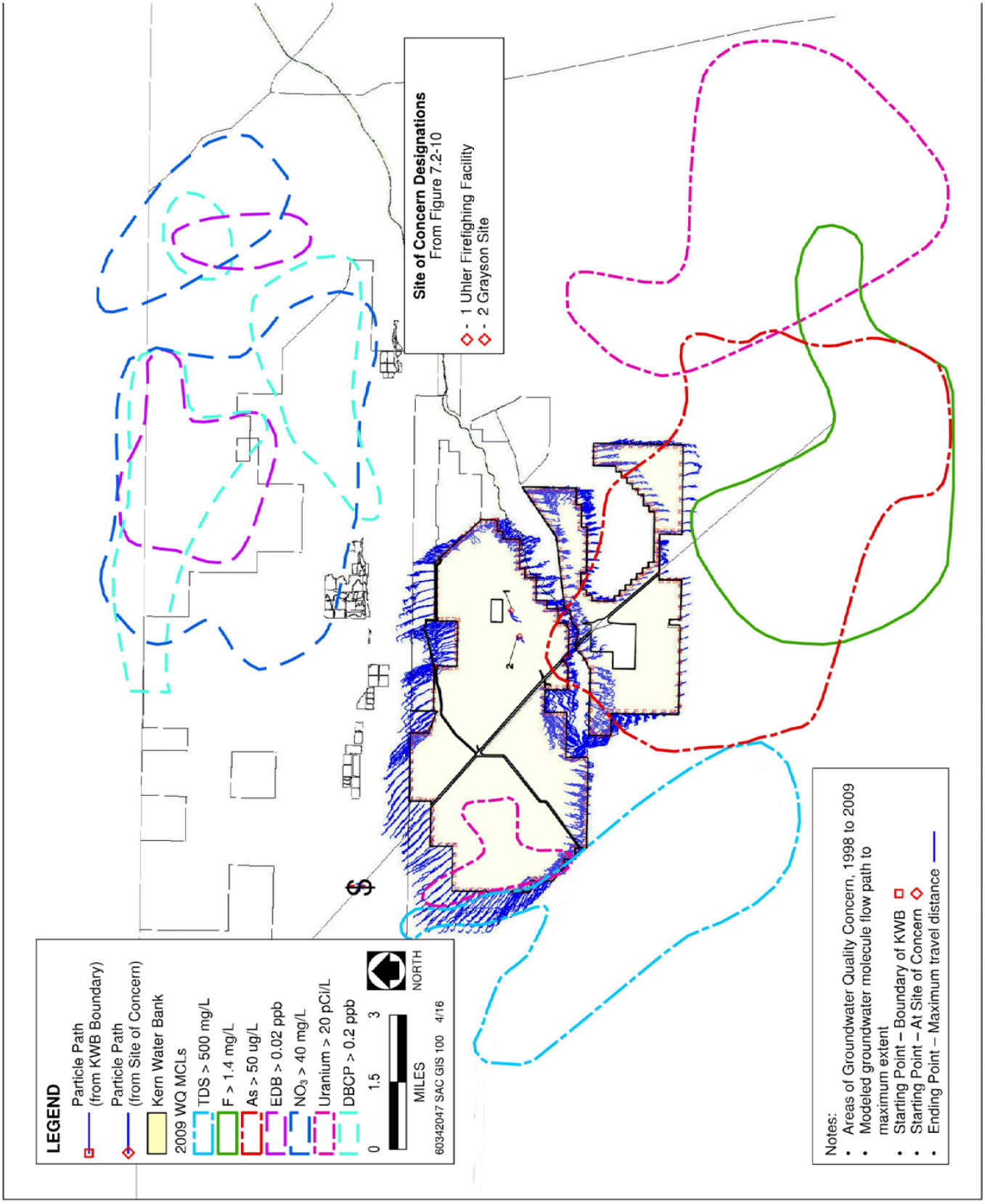


FIGURE 7.3-7a. AFO-EC Particle Tracking Results (2015 - 2035) – Maximum Travel Distance with KWB Recharge and Recovery

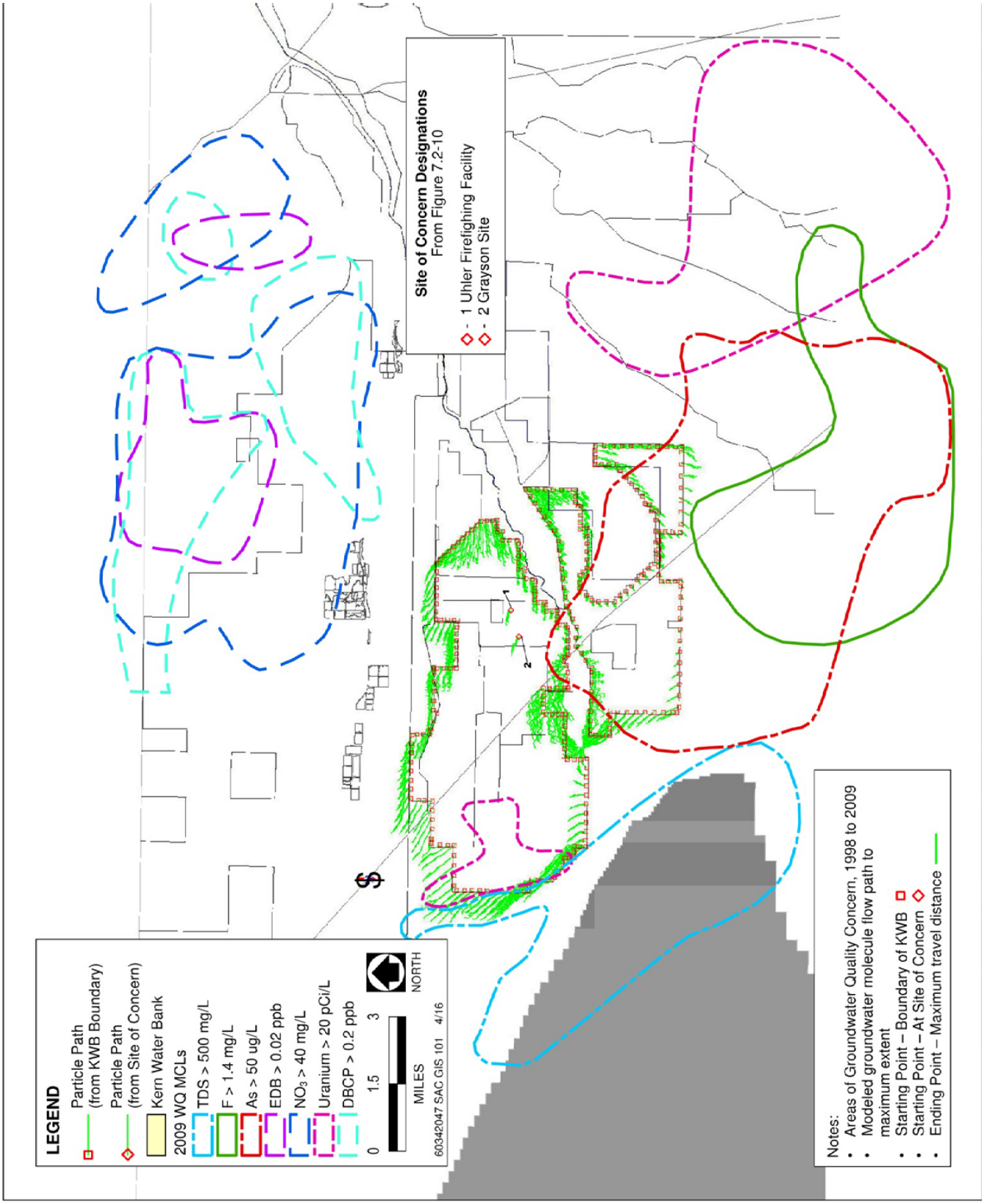


FIGURE 7.3-7b. AFO-EC Particle Tracking Results (2015 - 2035) – Maximum Travel Distance with KWB Recharge and Recovery

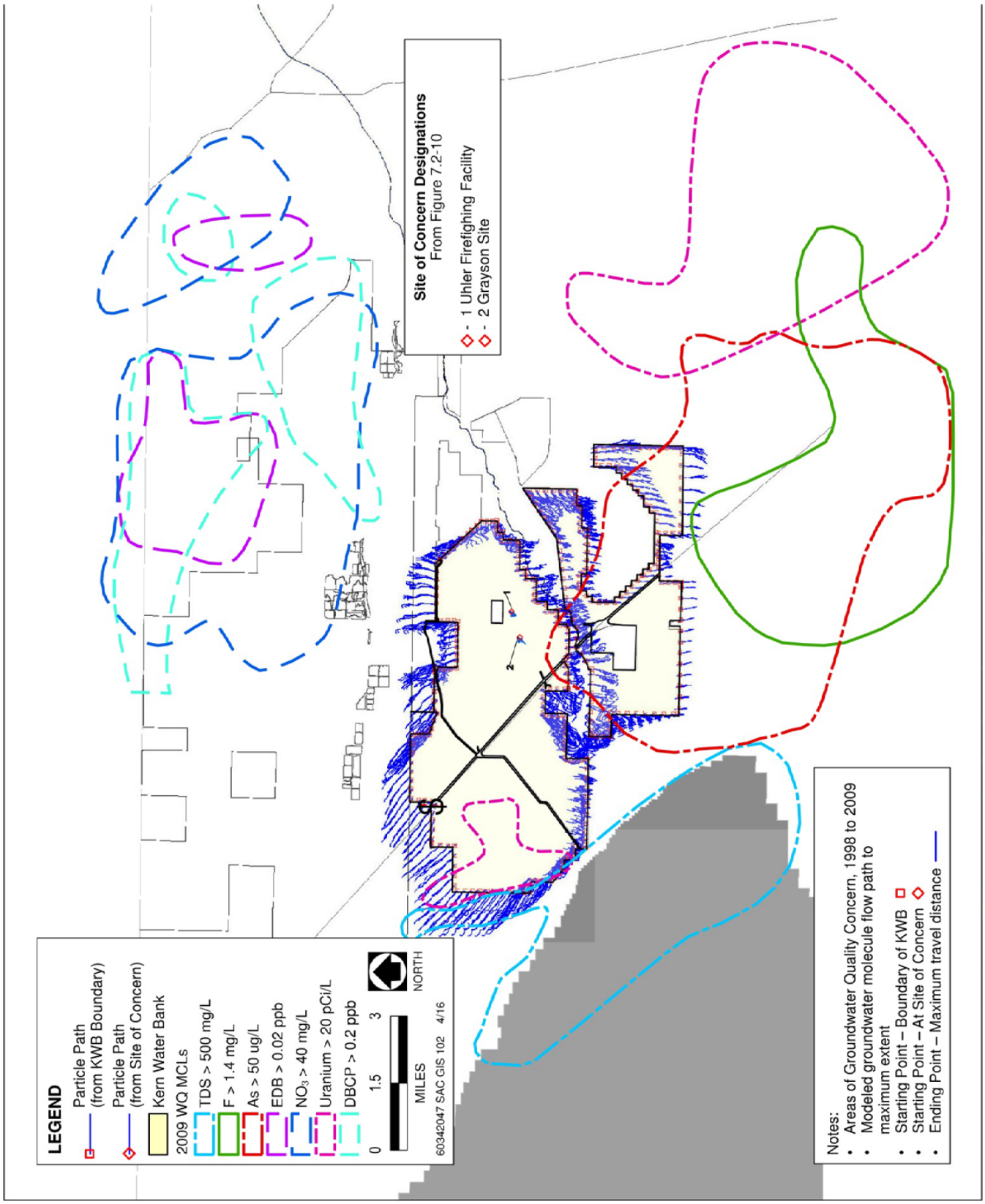


FIGURE 7.3-8a. APO-BC Particle Tracking Results (2015 - 2035) – Maximum Travel Distance with KWB Recharge and Recovery

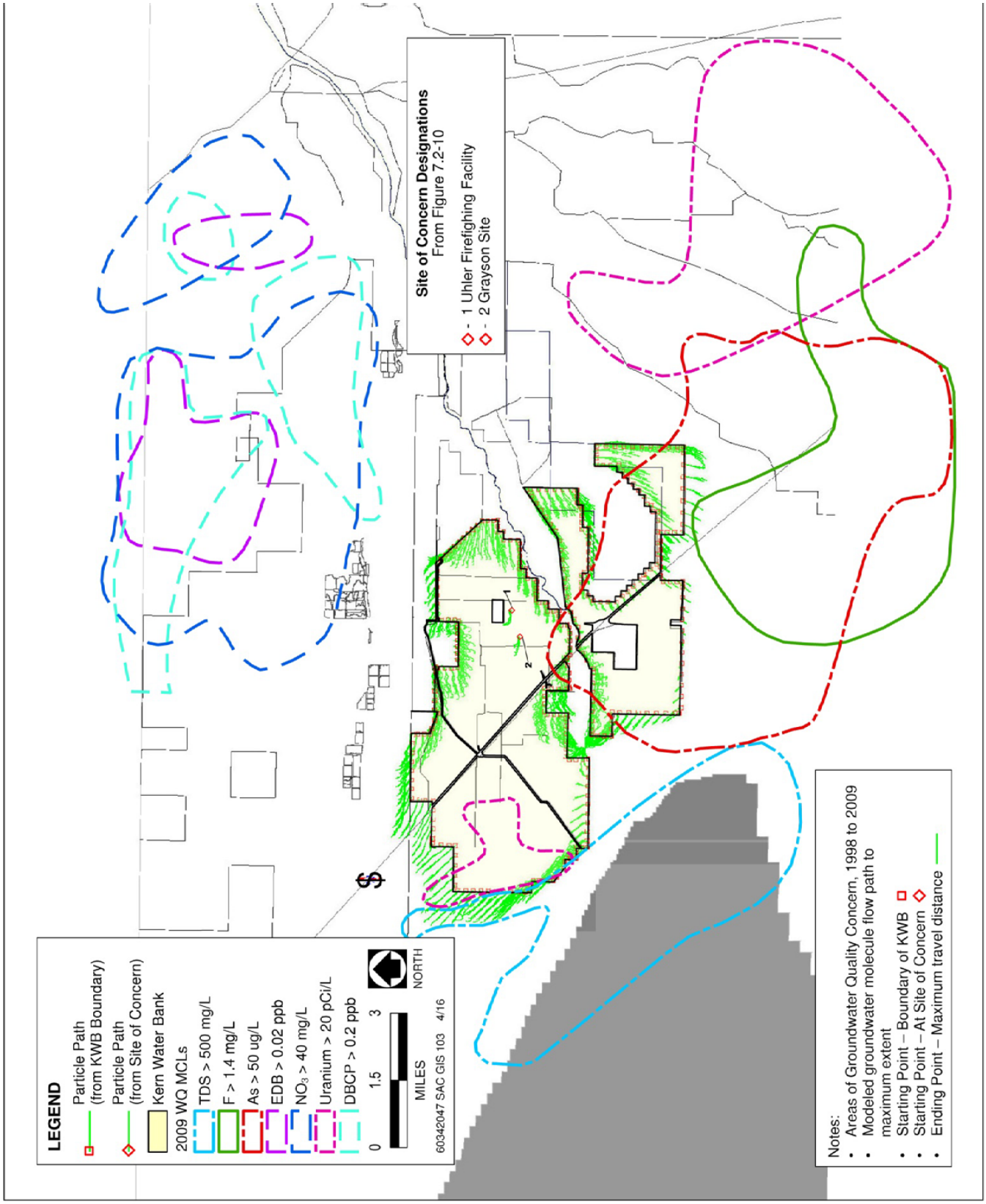
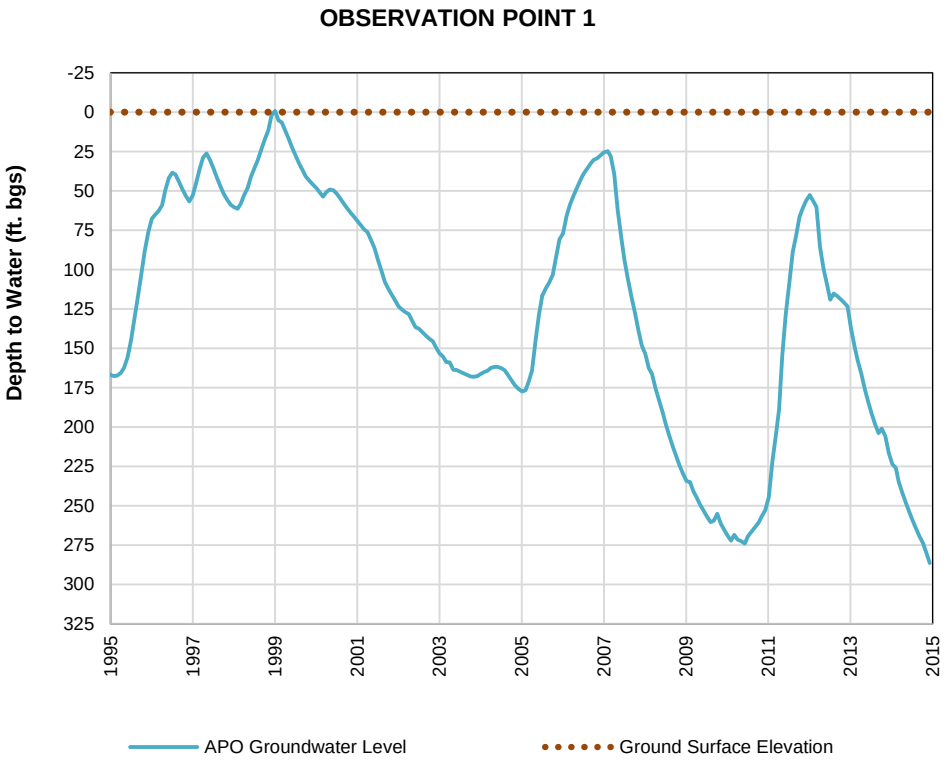
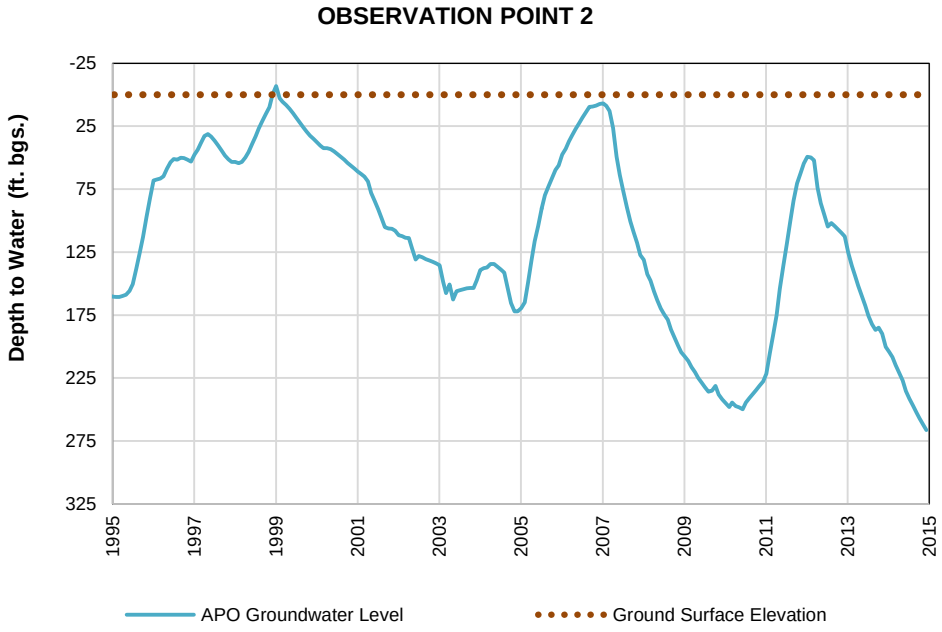


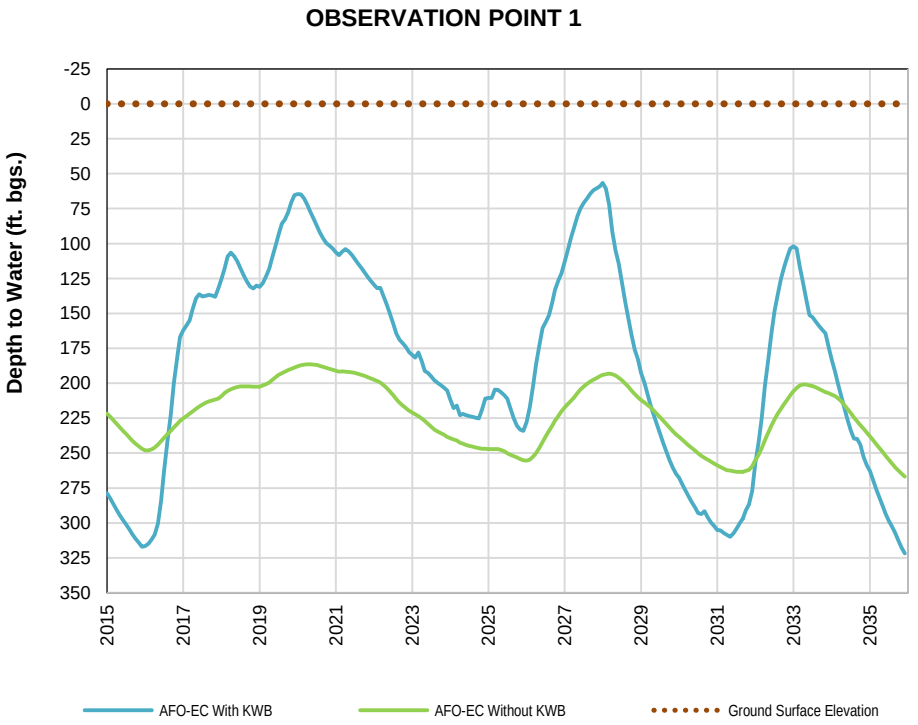
FIGURE 7.3-8b. APO-BC Particle Tracking Results (2015 - 2035) – Maximum Travel Distance without KWB Recharge and Recovery

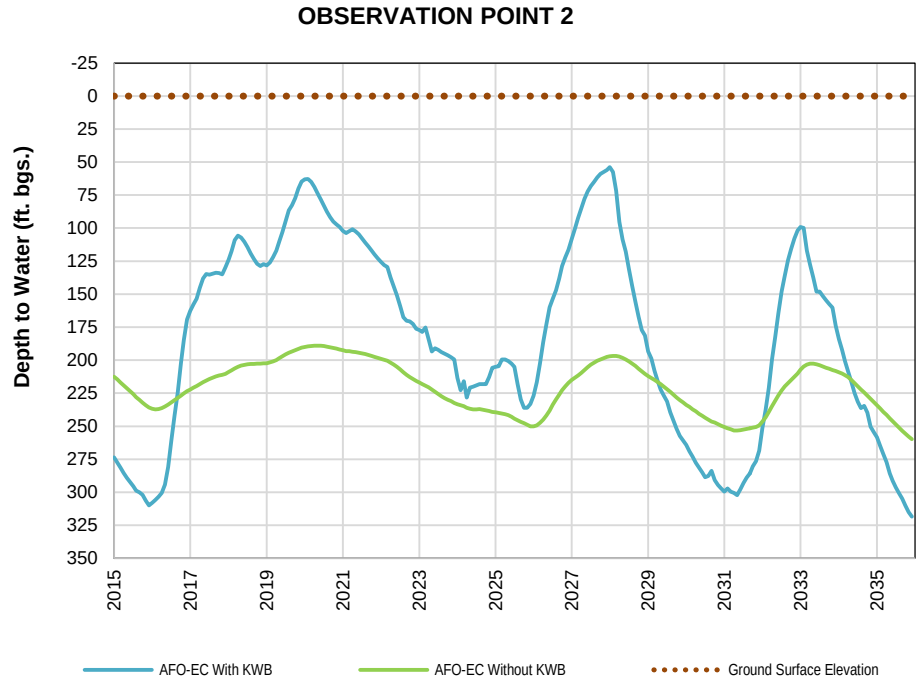




Source: RMC 2015

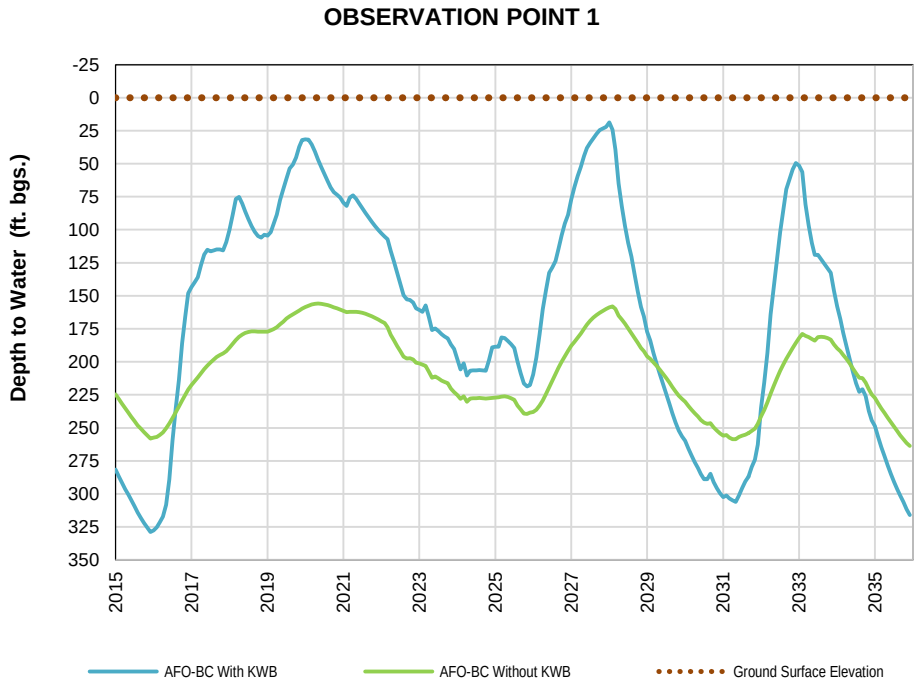
FIGURE 7.3-9. Model Simulated Hydrographs at Observation Points for APO

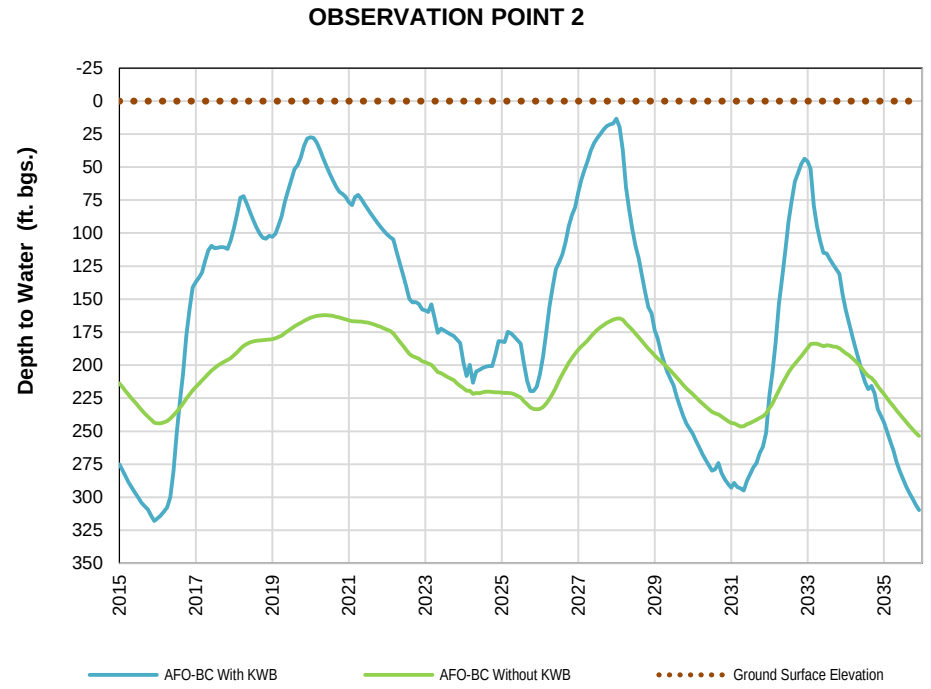




Source: RMC 2015

FIGURE 7.3-10. Model Simulated Hydrographs at Observation Points for AFO-EC





Source: RMC 2015

FIGURE 7.3-11. Model Simulated Hydrographs at Observation Points for AFO-BC

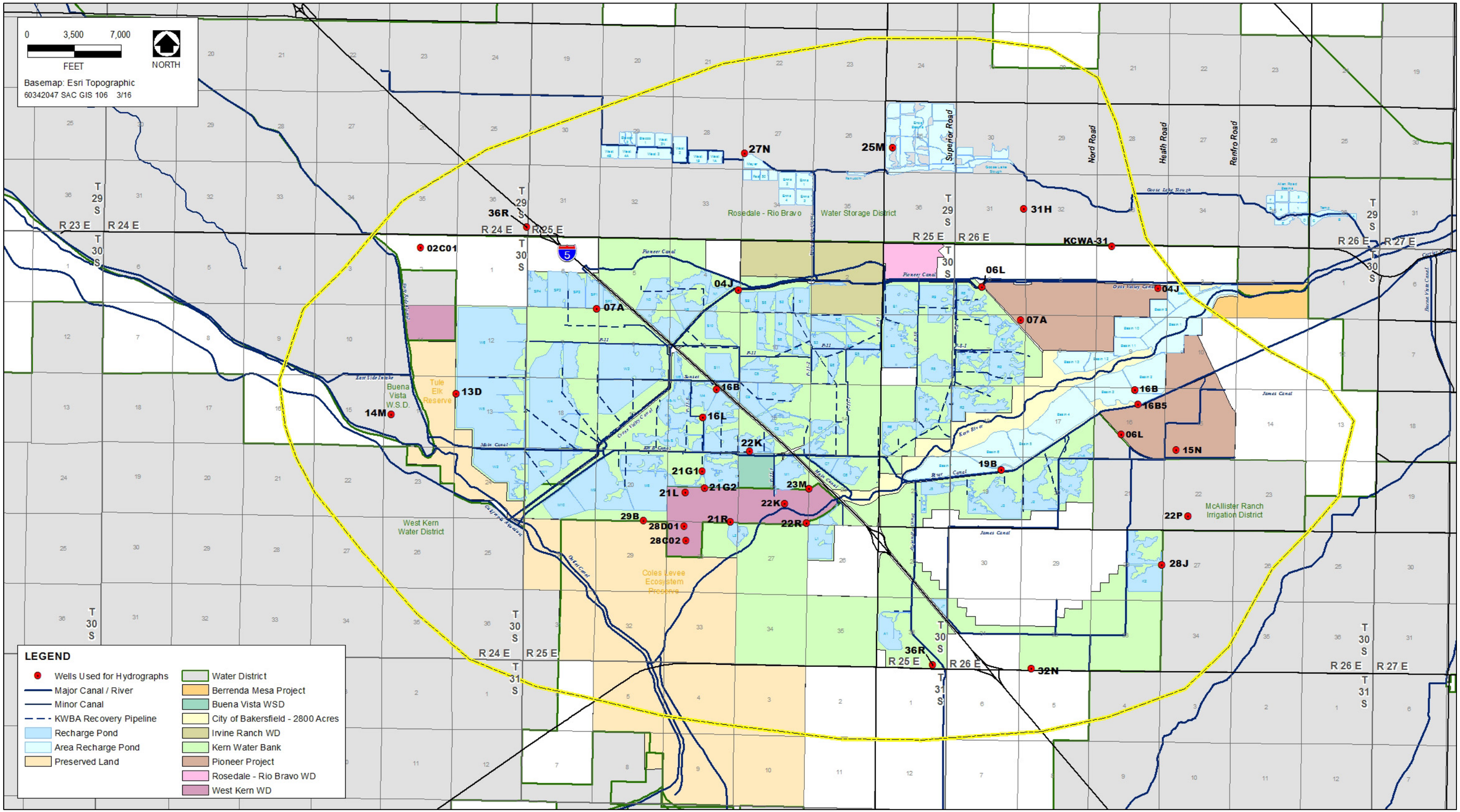
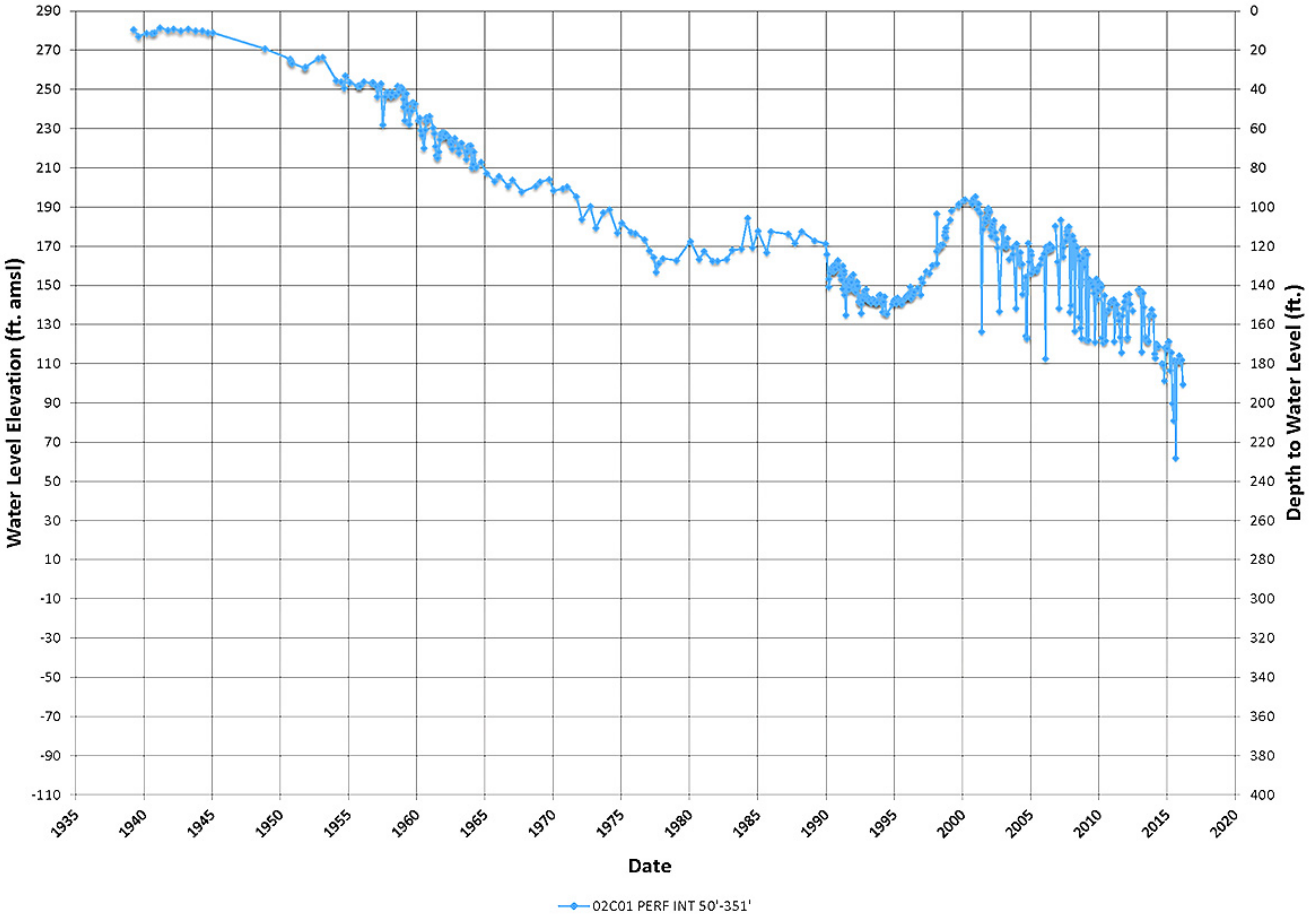
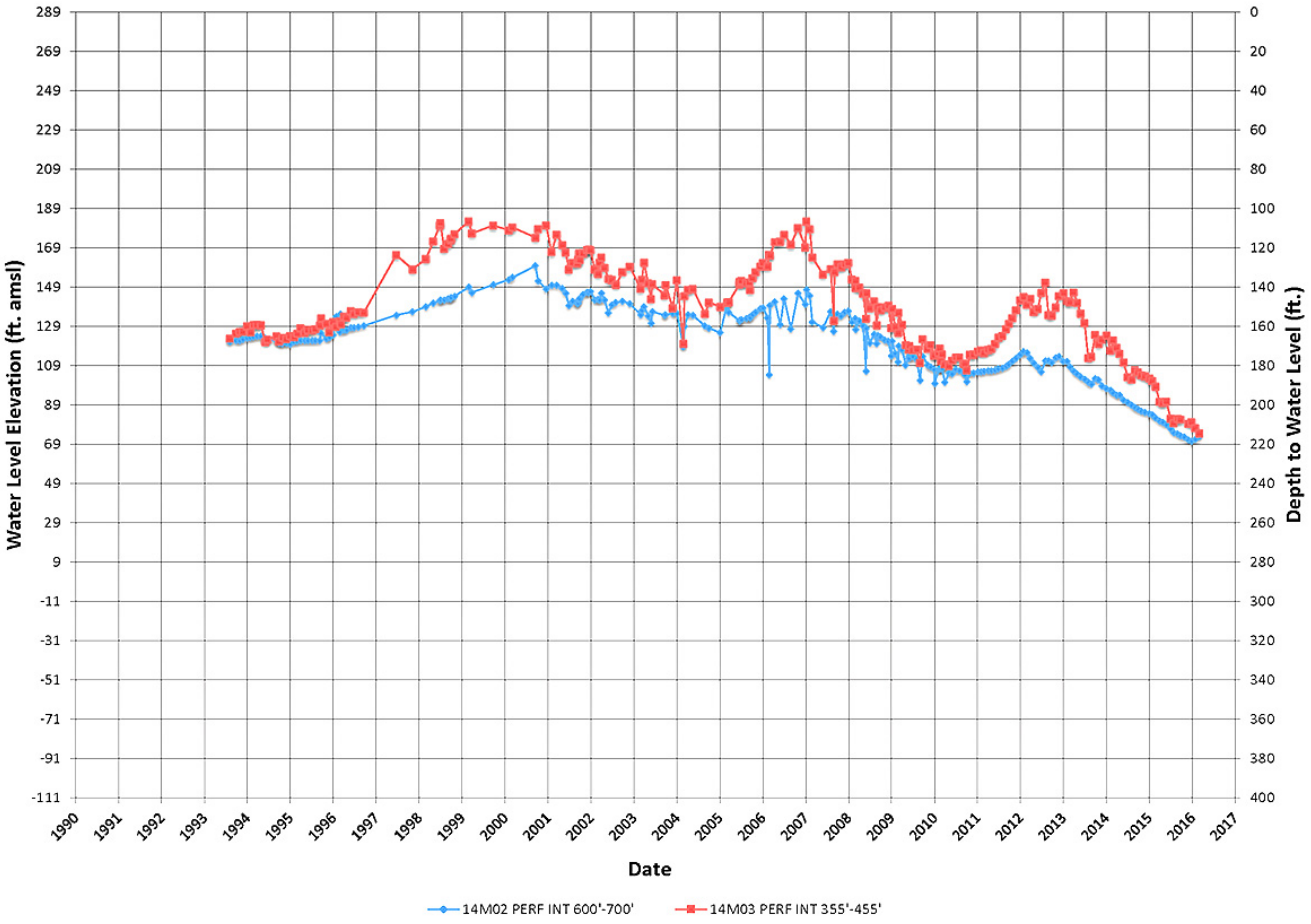


FIGURE 7.3-12. Wells used for Hydrographs



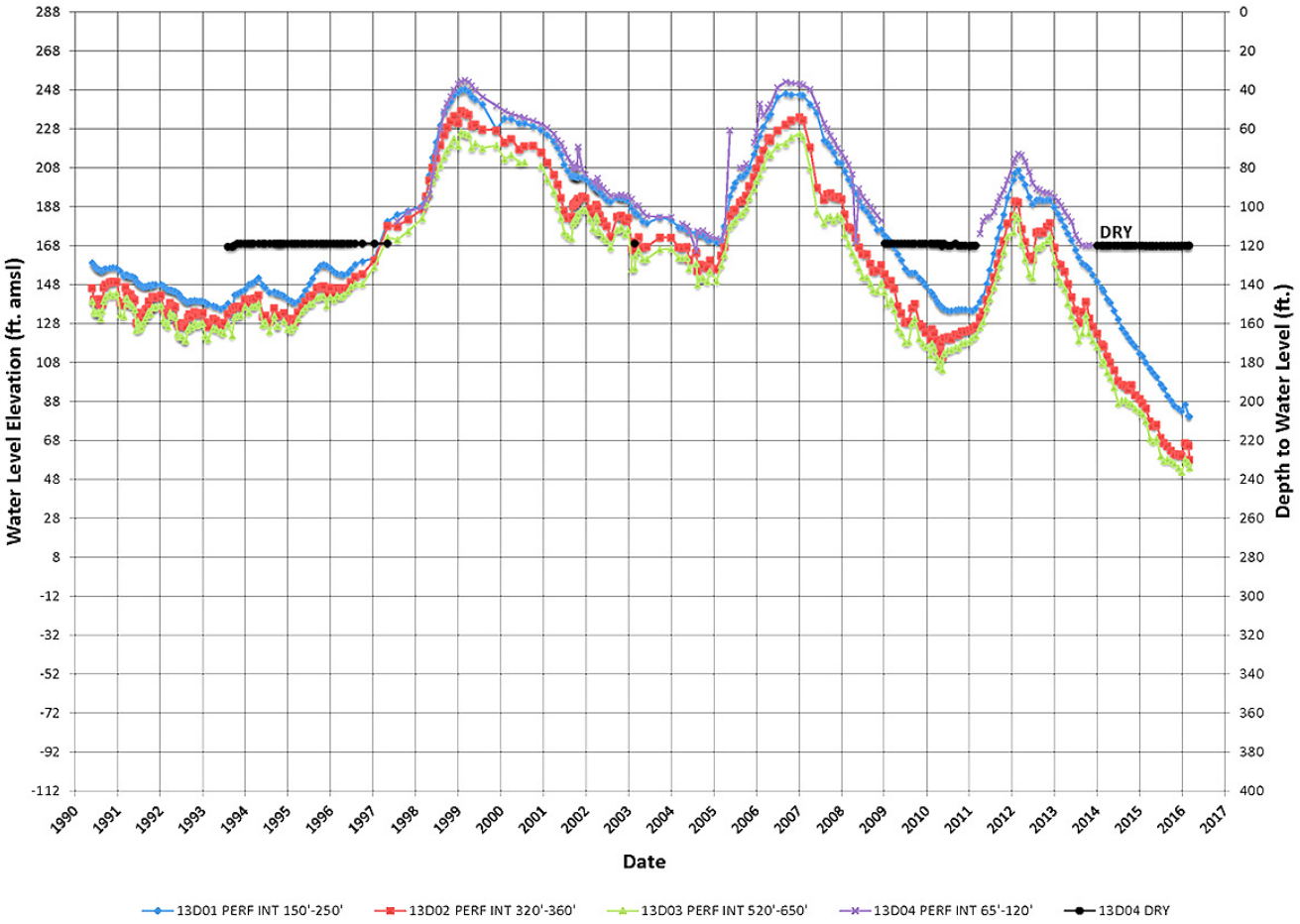
Source: KCWA Groundwater Data Base

FIGURE 7.3-13. 30S/24E-02C01



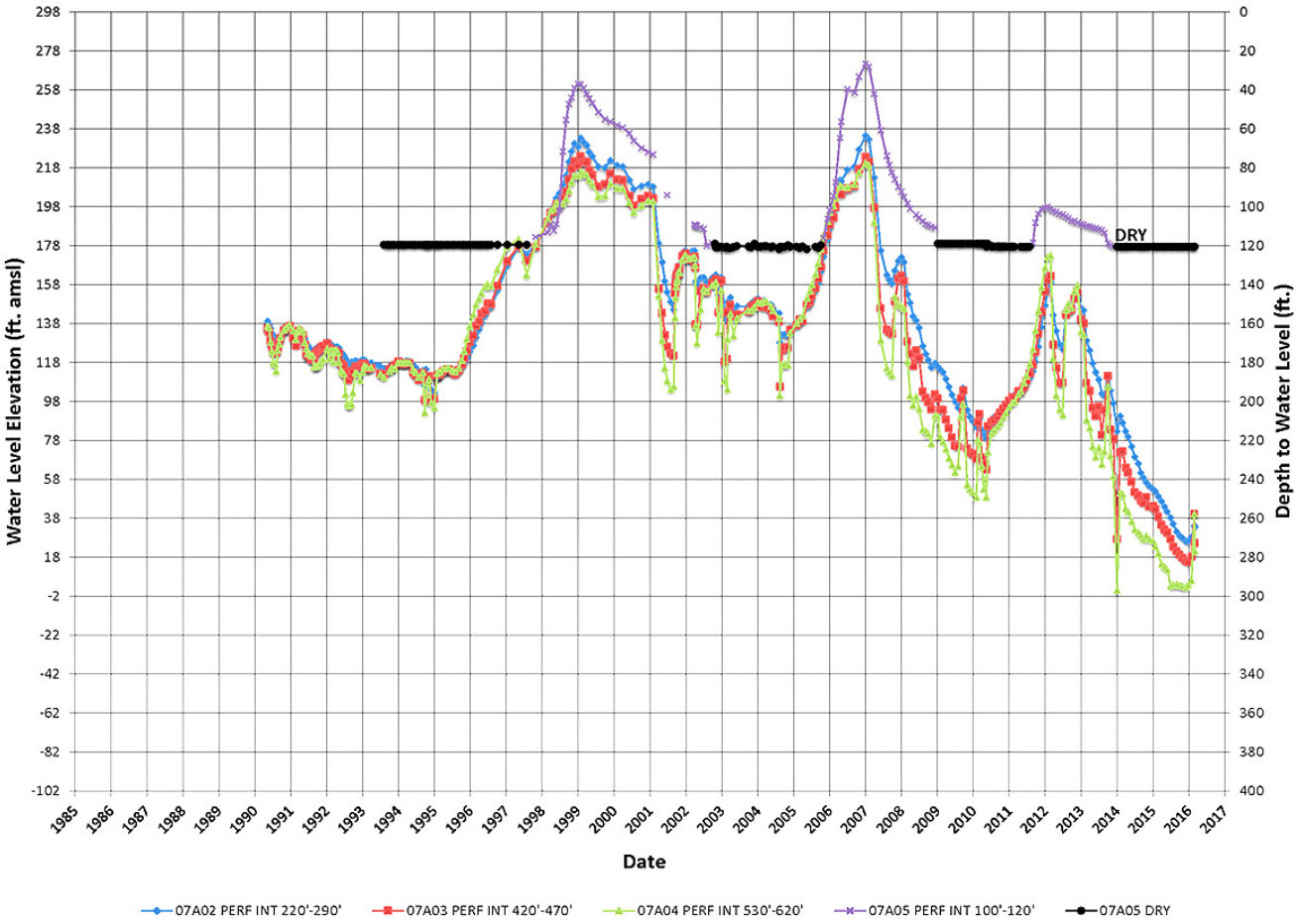
Source: KCWA Groundwater Data Base

FIGURE 7.3-14.. 30S/24E-14M



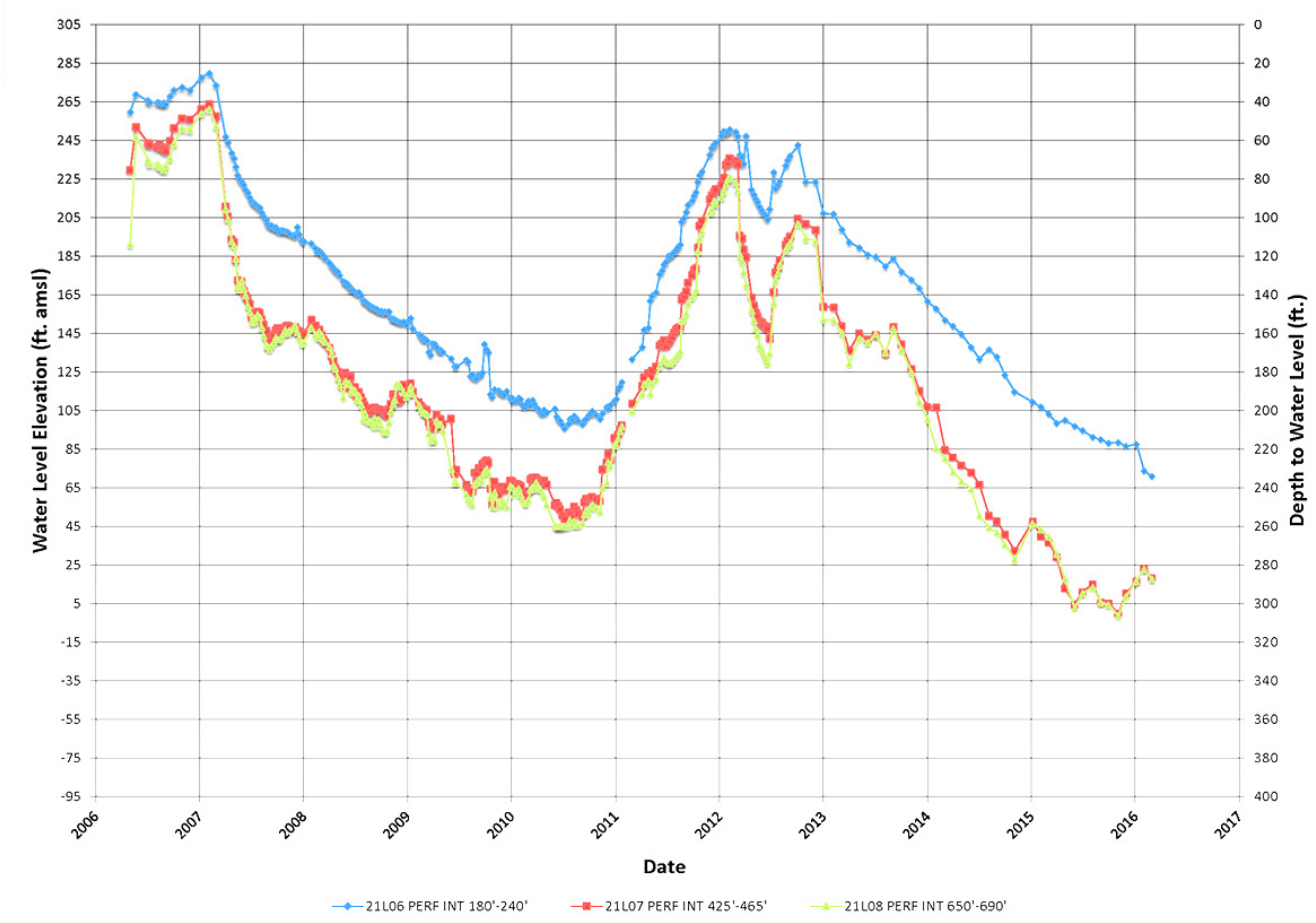
Source: KCWA Groundwater Data Base

FIGURE 7.3-15. 30S/24E-13D



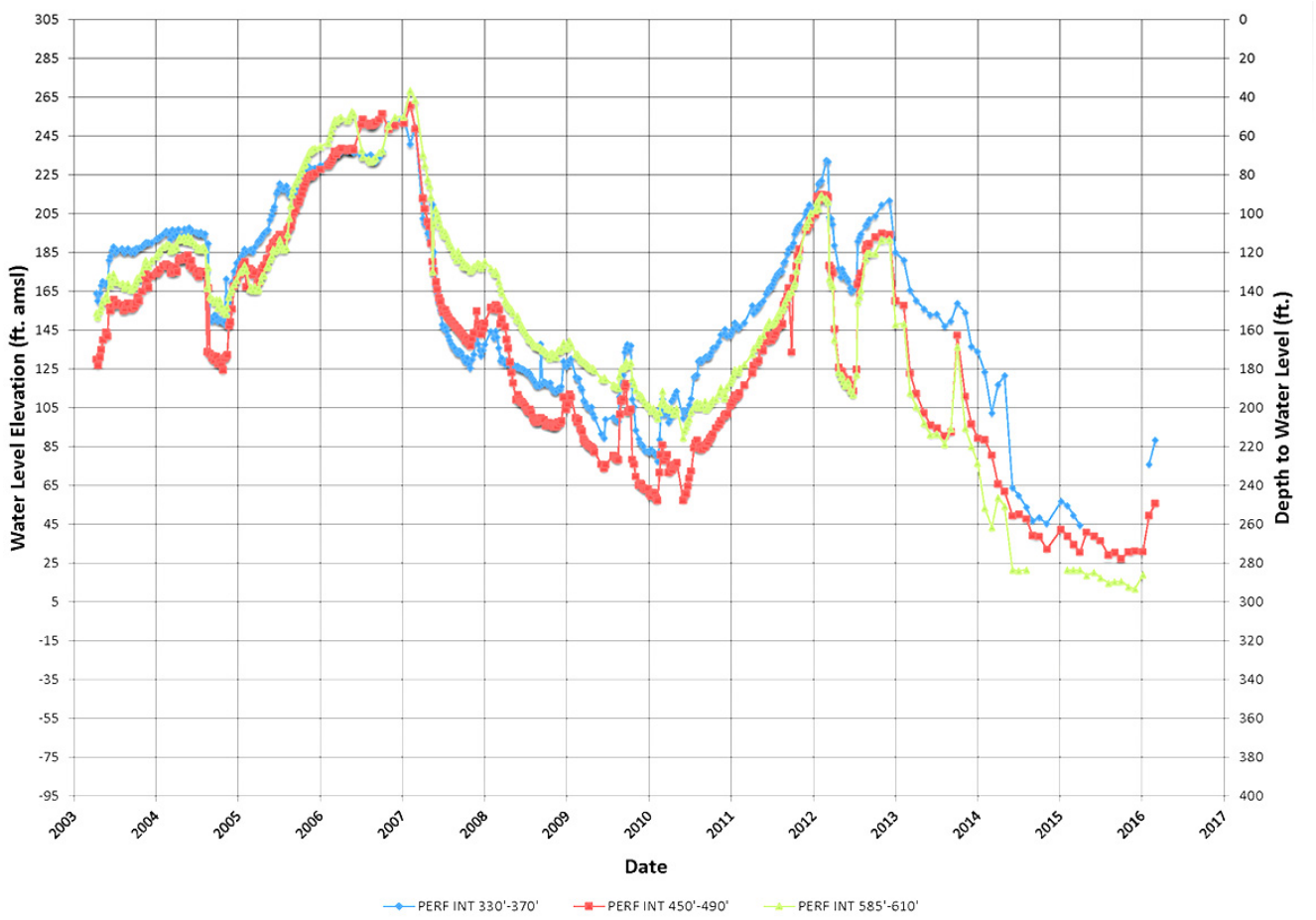
Source: KCWA Groundwater Data Base

FIGURE 7.3-16. 30S/25E-07A



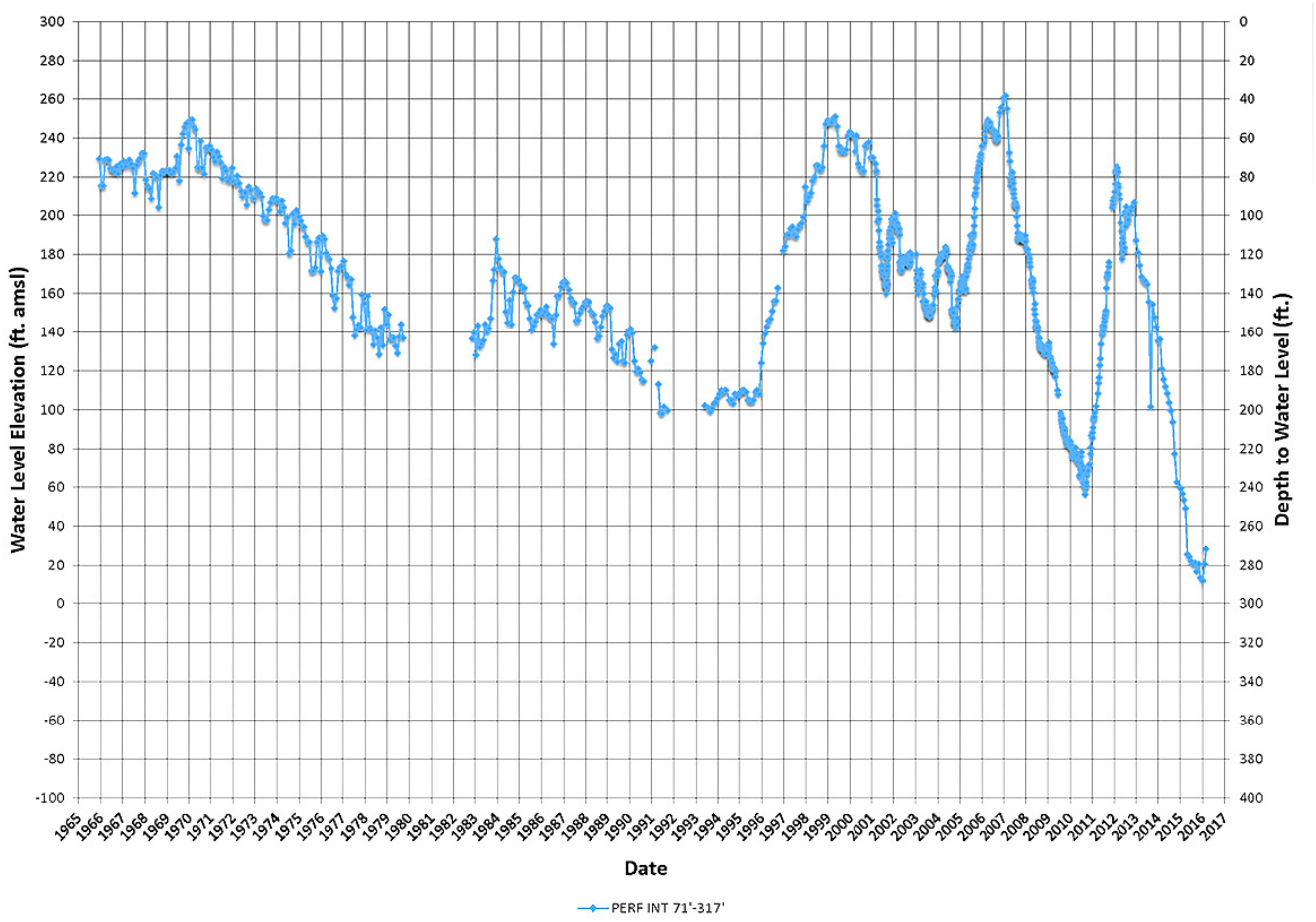
Source: KCWA Groundwater Data Base

FIGURE 7.3-17. 30S/25E-21L



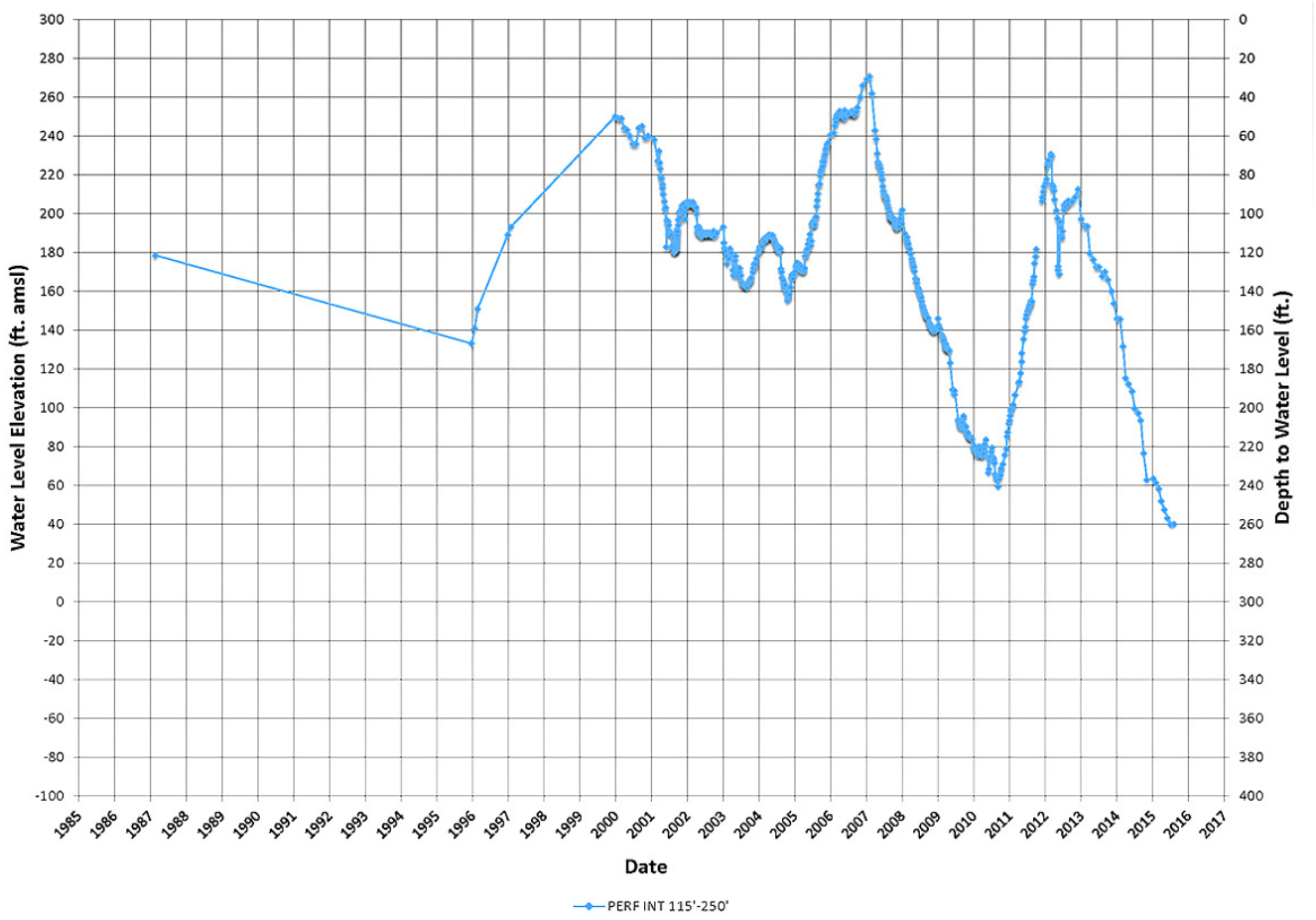
Source: KCWA Groundwater Data Base

FIGURE 7.3-18. 30S/25E-29B



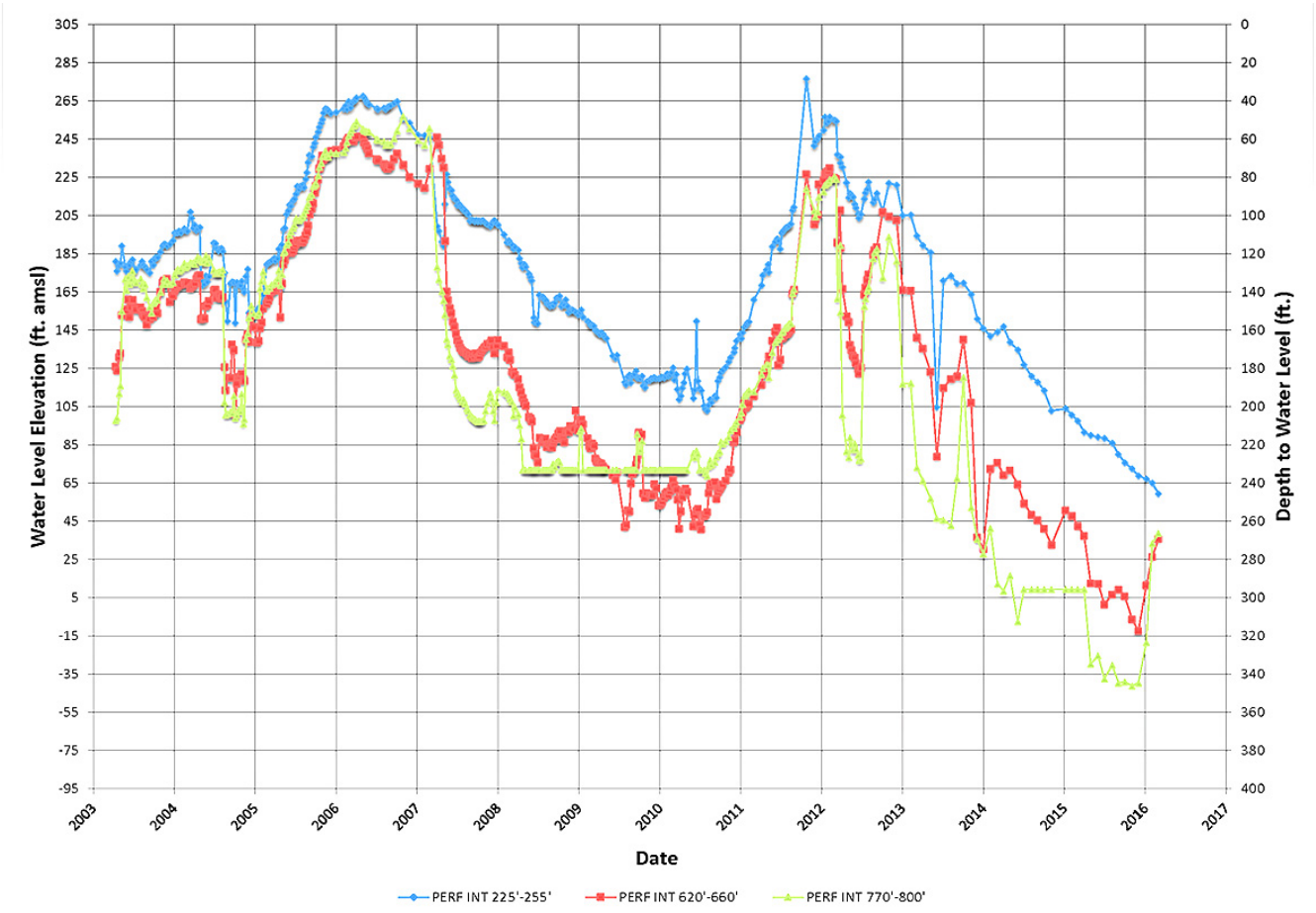
Source: KCWA Groundwater Data Base

FIGURE 7.3-19. 30S/25E-28D01



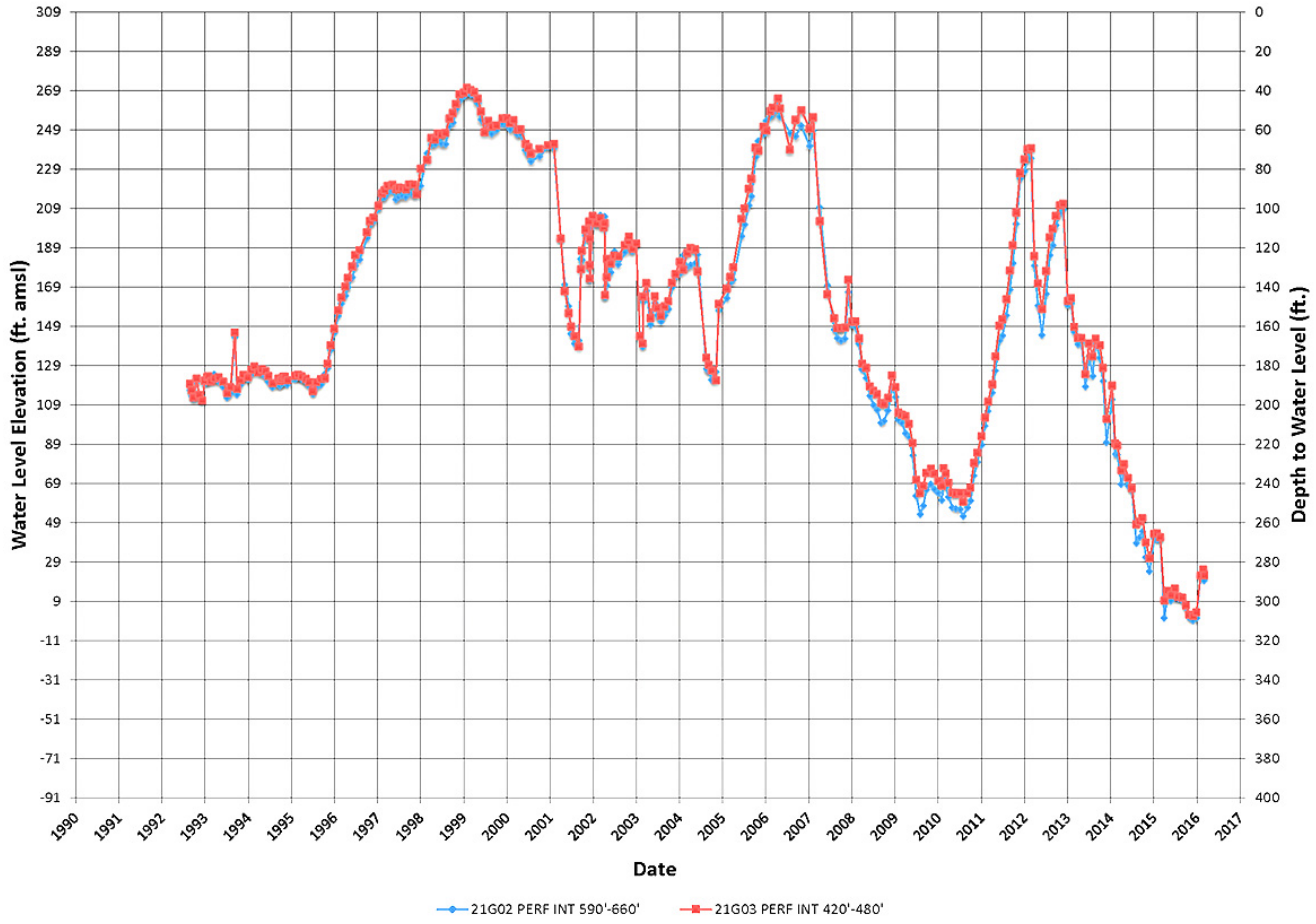
Source: KCWA Groundwater Data Base

FIGURE 7.3-20. 30S/25E-28C02



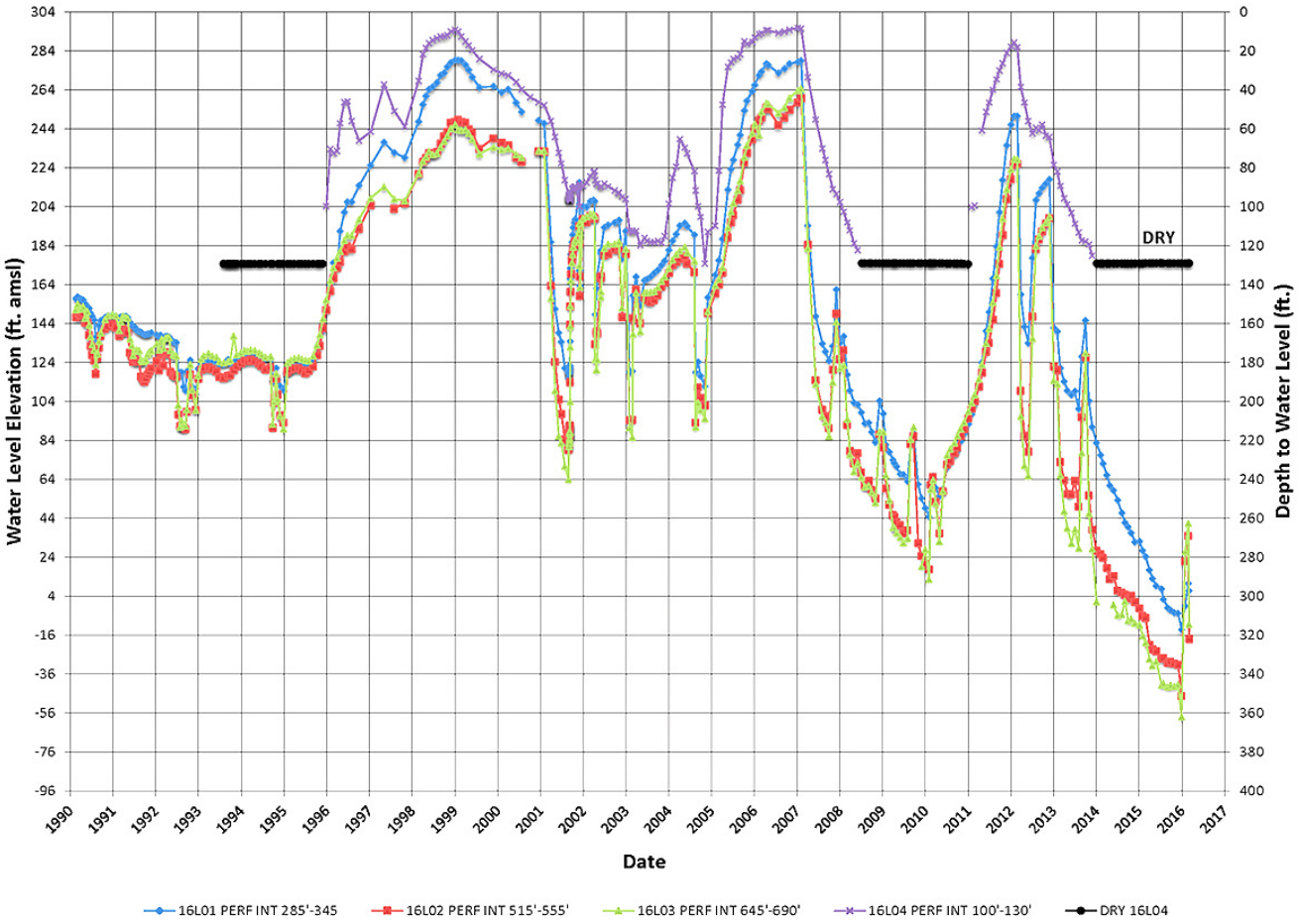
Source: KCWA Groundwater Data Base

FIGURE 7.3-21. 30S/25E-21R



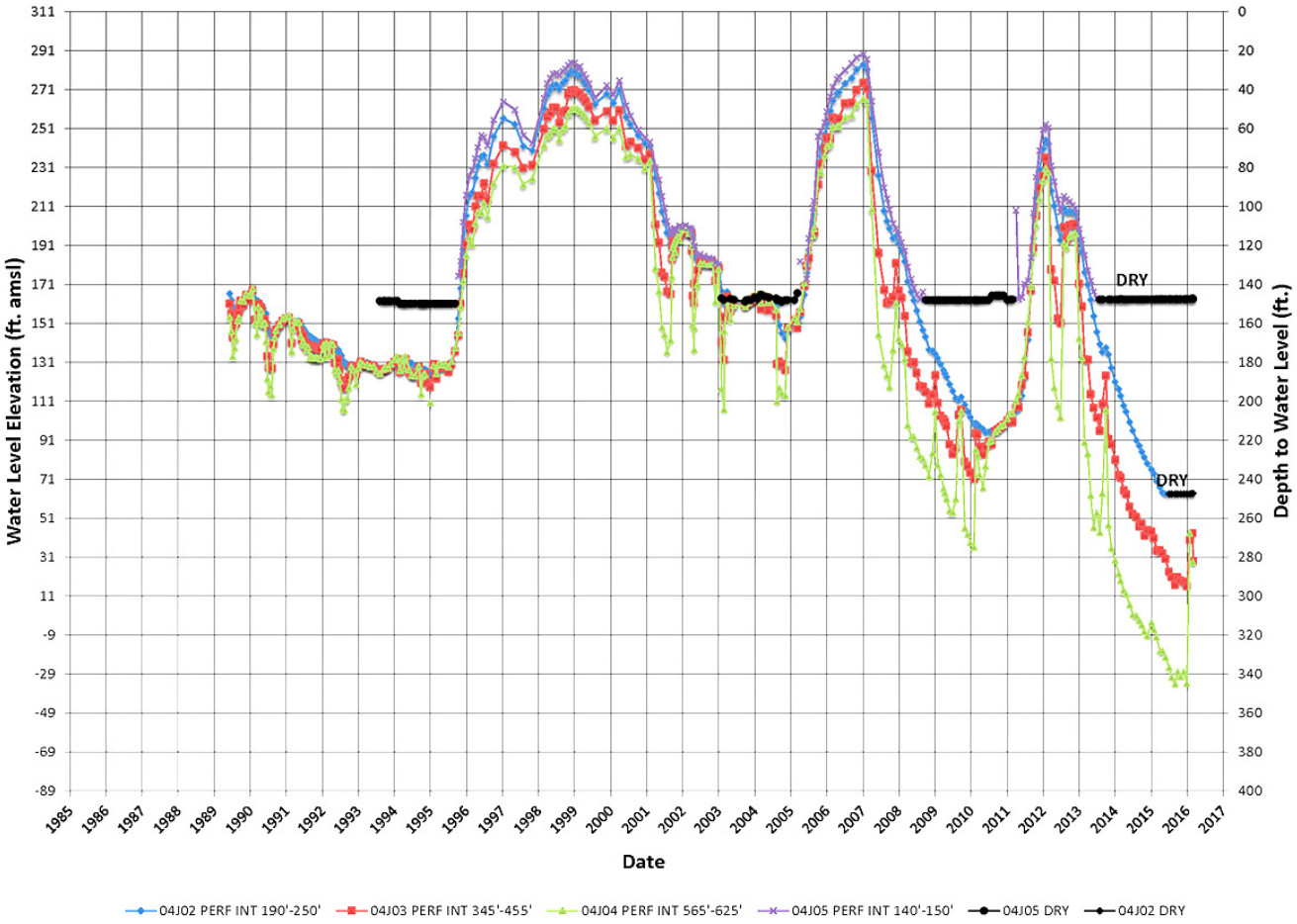
Source: KCWA Groundwater Data Base

FIGURE 7.3-22. 30S/25E-21G



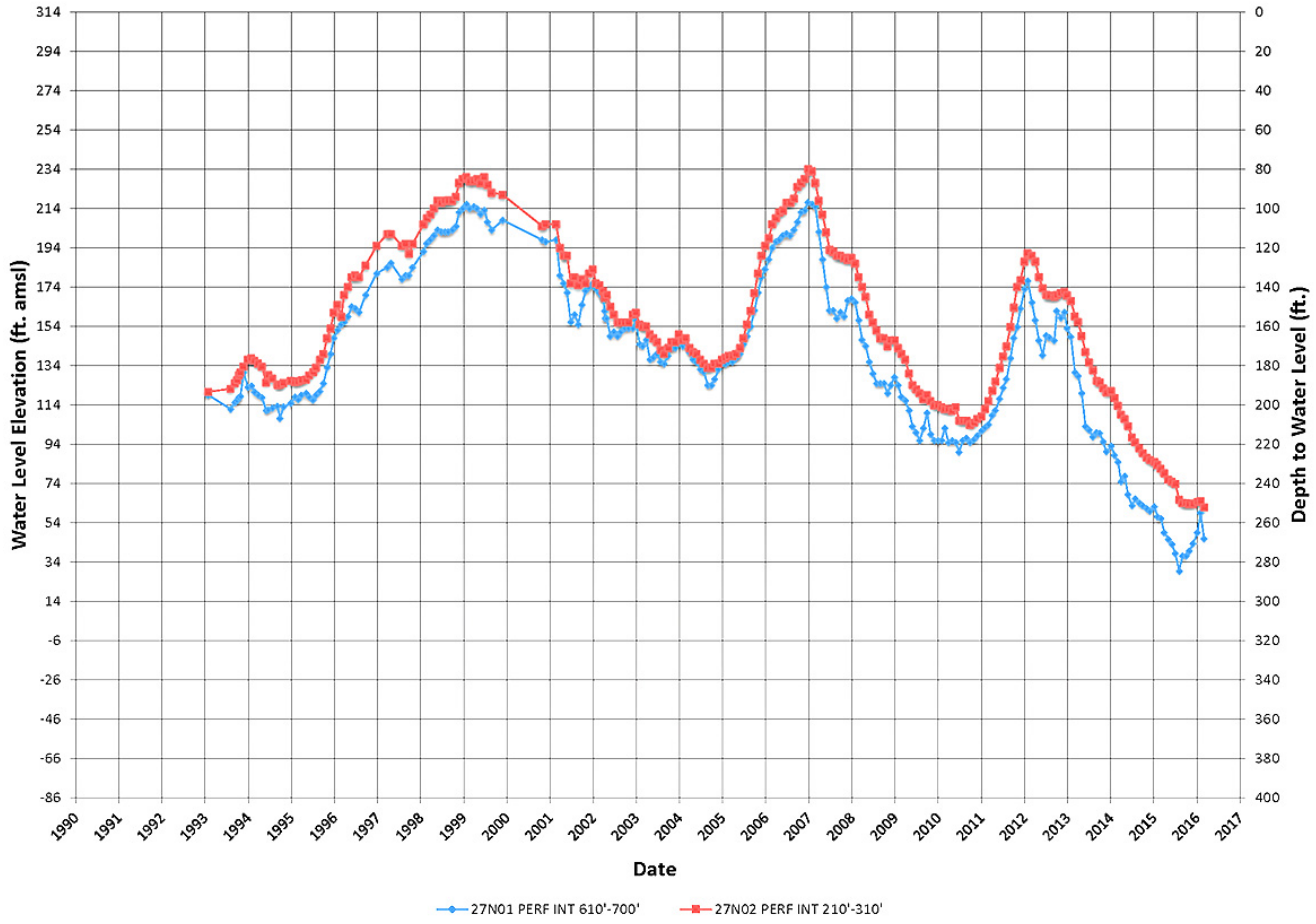
Source: KCWA Groundwater Data Base

FIGURE 7.3-23. 30S/25E-16L



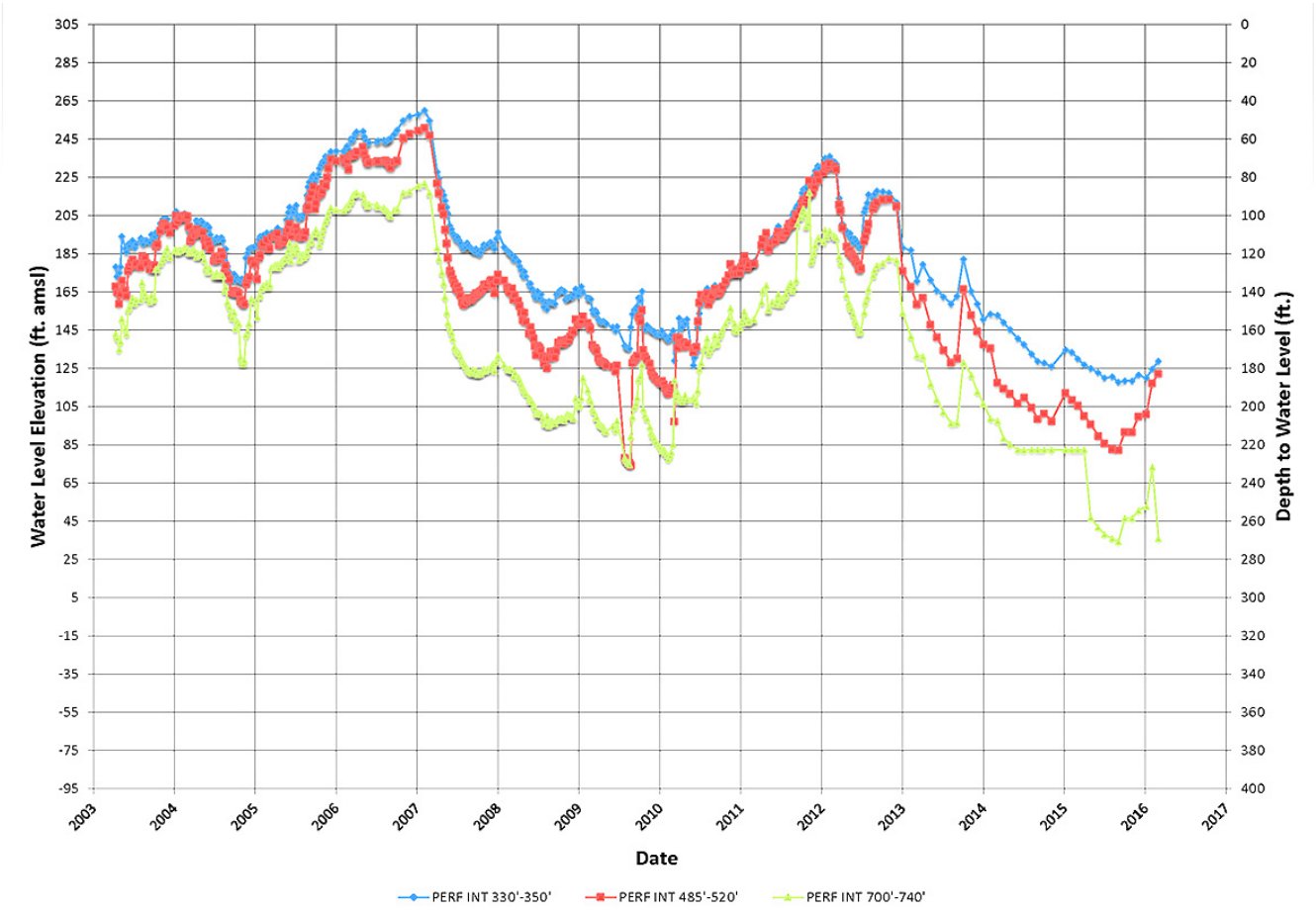
Source: KCWA Groundwater Data Base

FIGURE 7.3-24. 30S/25E-04J



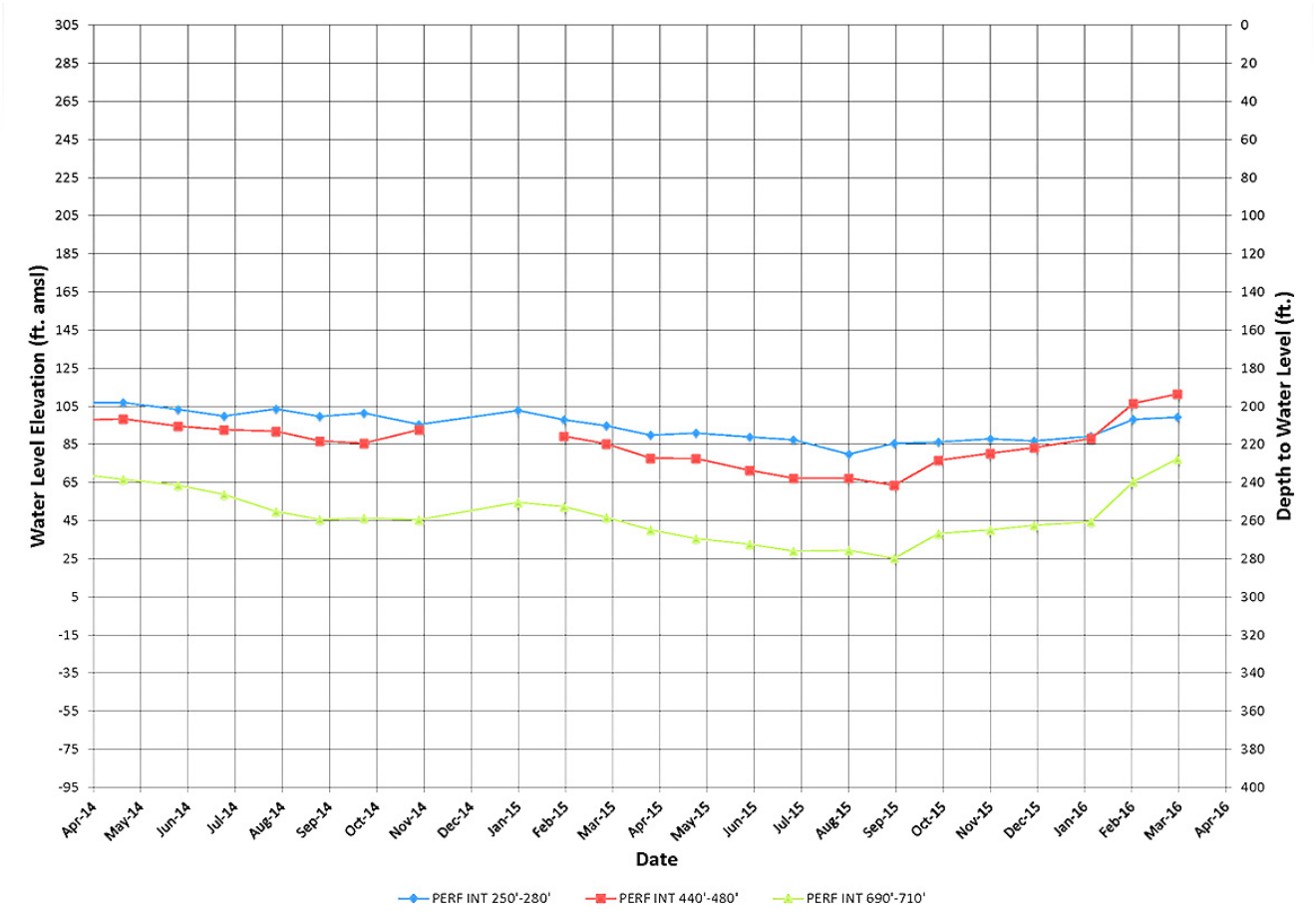
Source: KCWA Groundwater Data Base

FIGURE 7.3-25. 29S/25E-27N



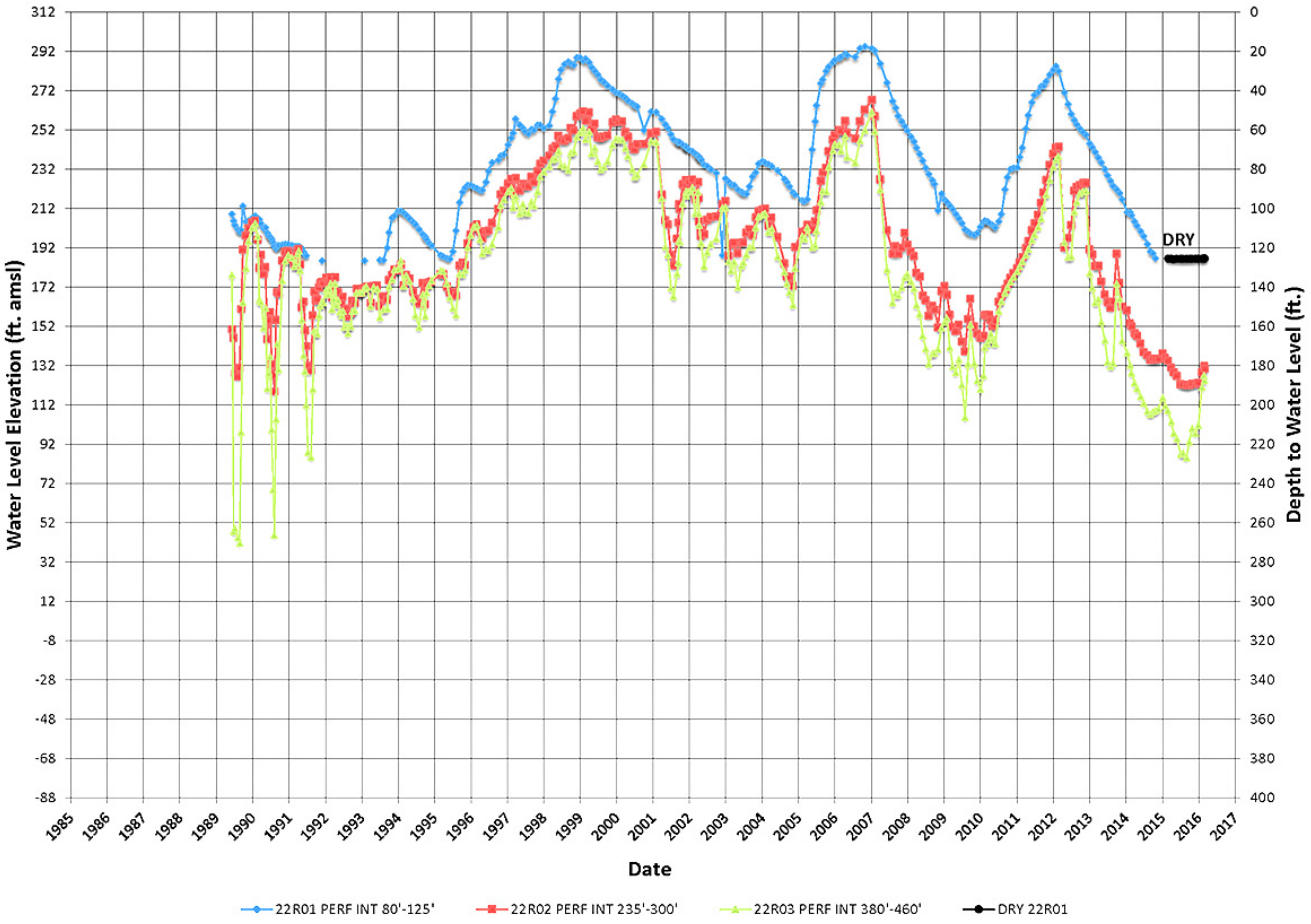
Source: KCWA Groundwater Data Base

FIGURE 7.3-26. 30S/25E-22K



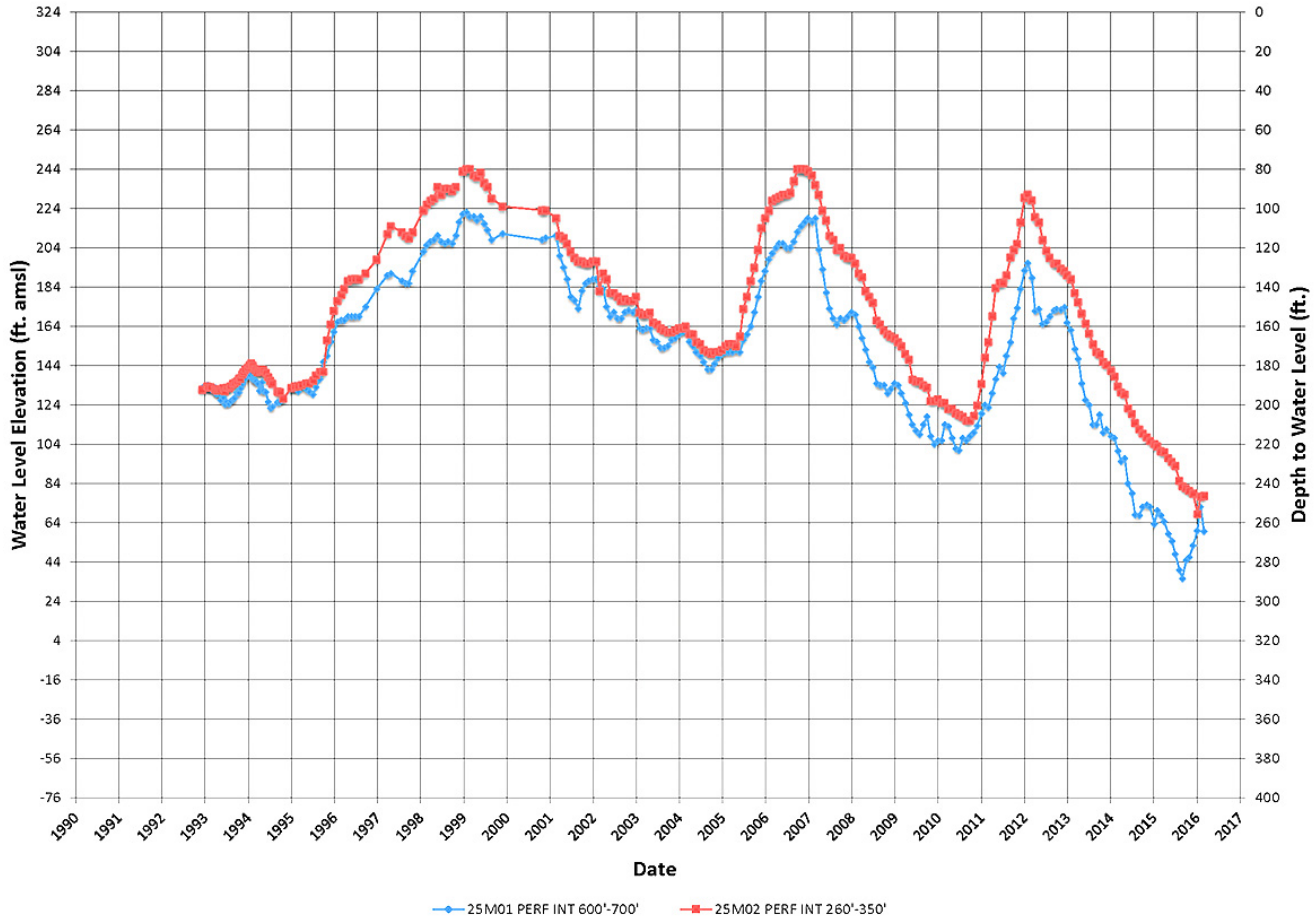
Source: KCWA Groundwater Data Base

FIGURE 7.3-27. 30S/25E-23M



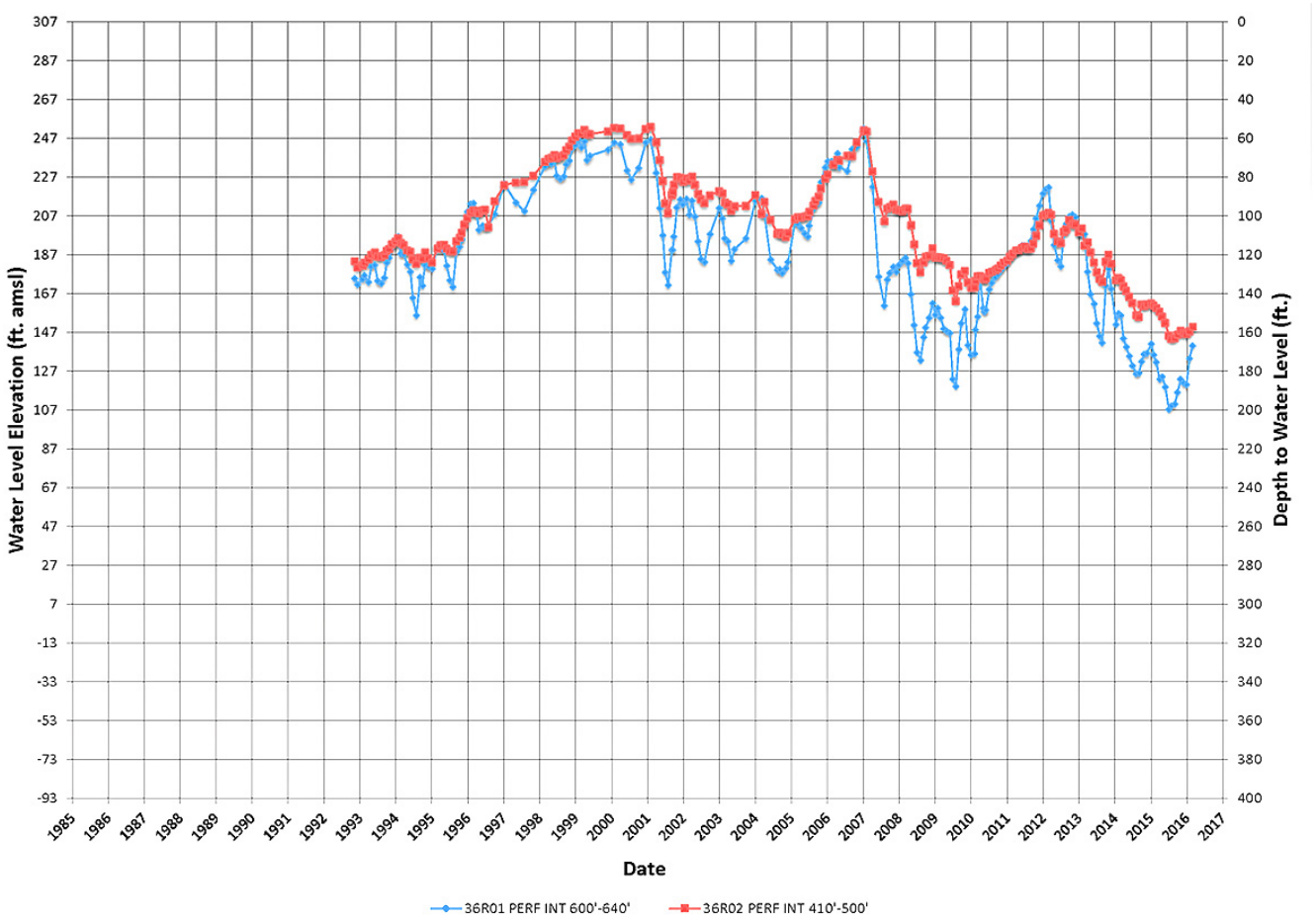
Source: KCWA Groundwater Data Base

FIGURE 7.3-28. 30S/25E-22R



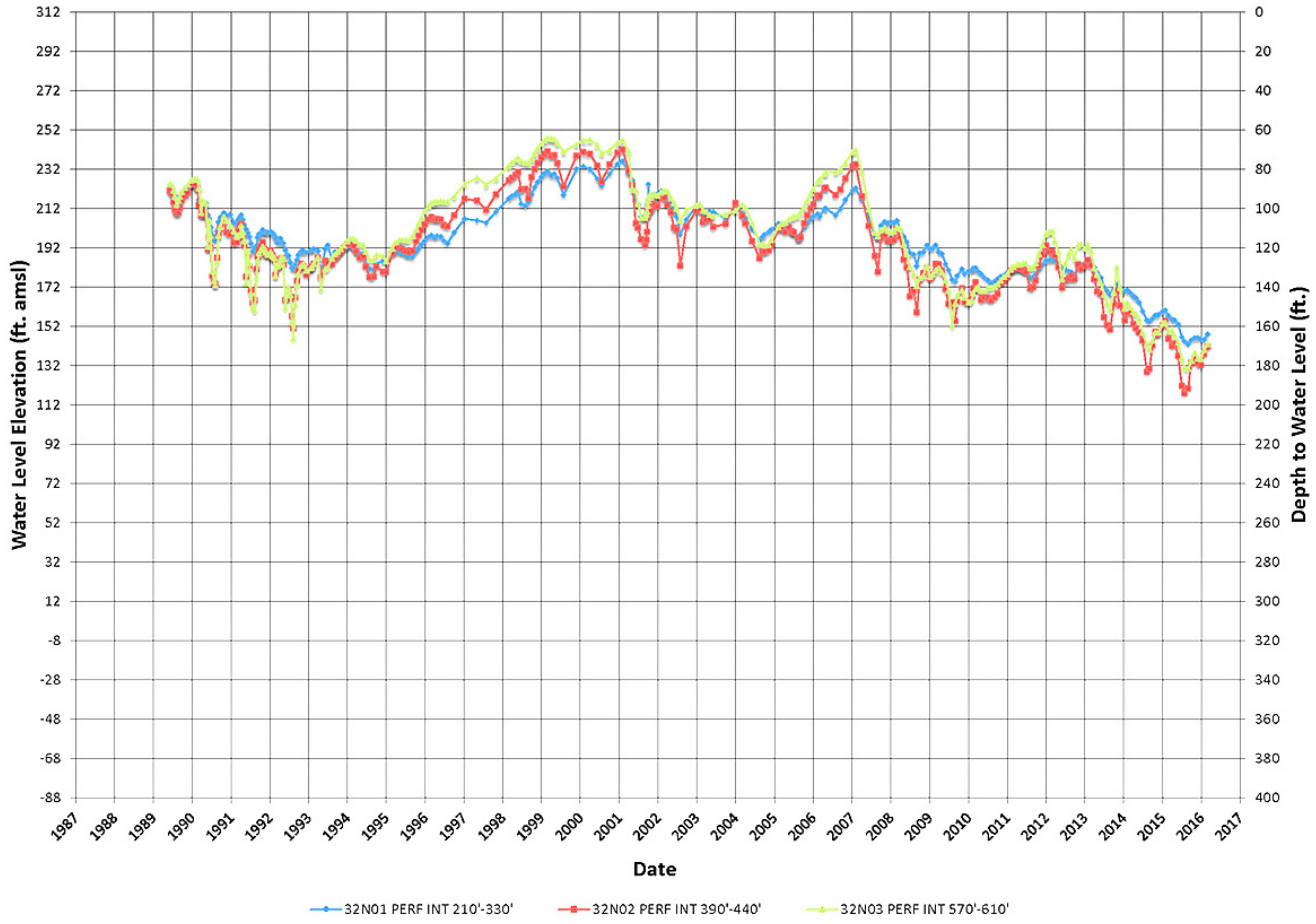
Source: KCWA Groundwater Data Base

FIGURE 7.3-29. 29S/25E-25M



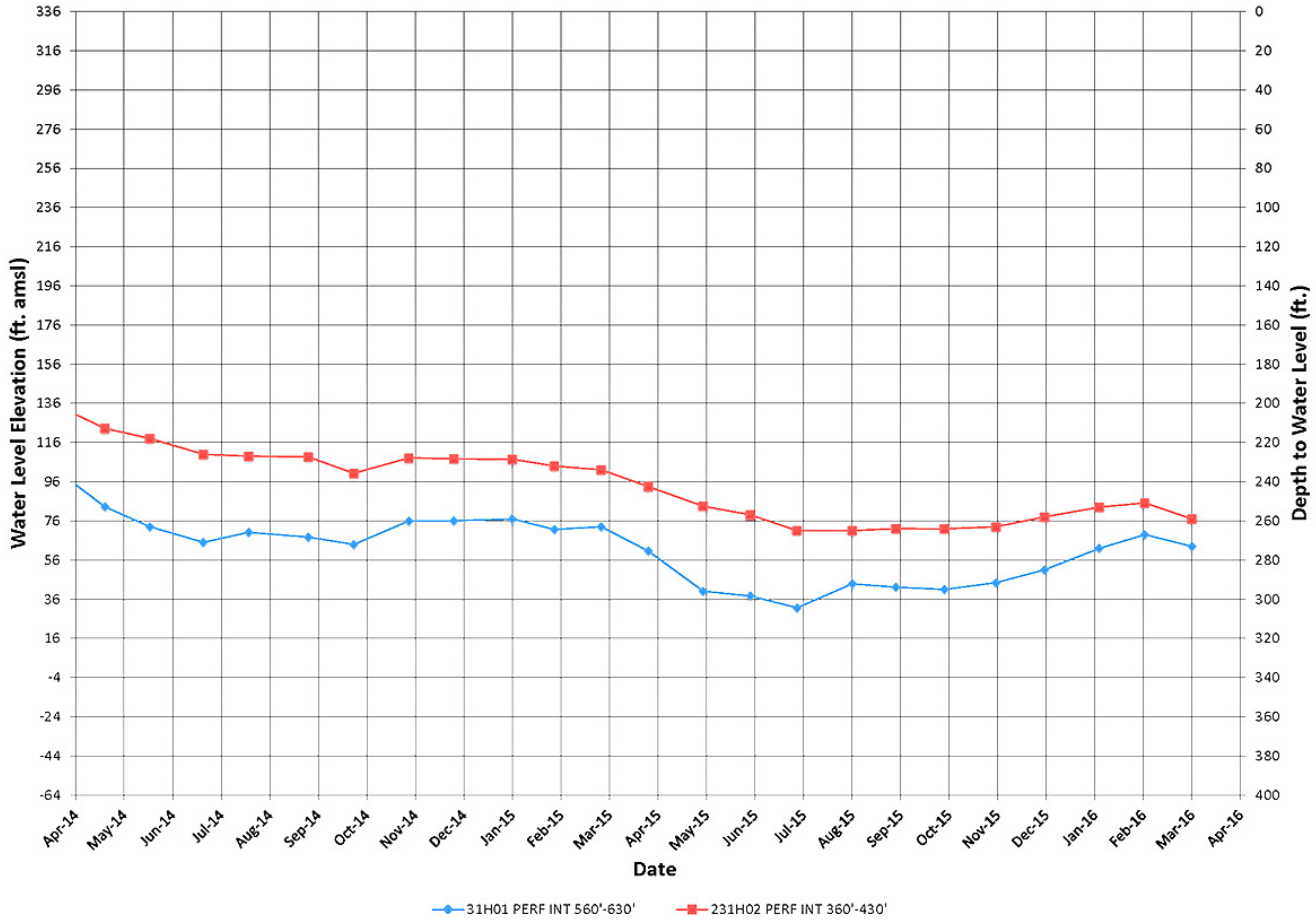
Source: KCWA Groundwater Data Base

FIGURE 7.3-30. 30S/25E-36R



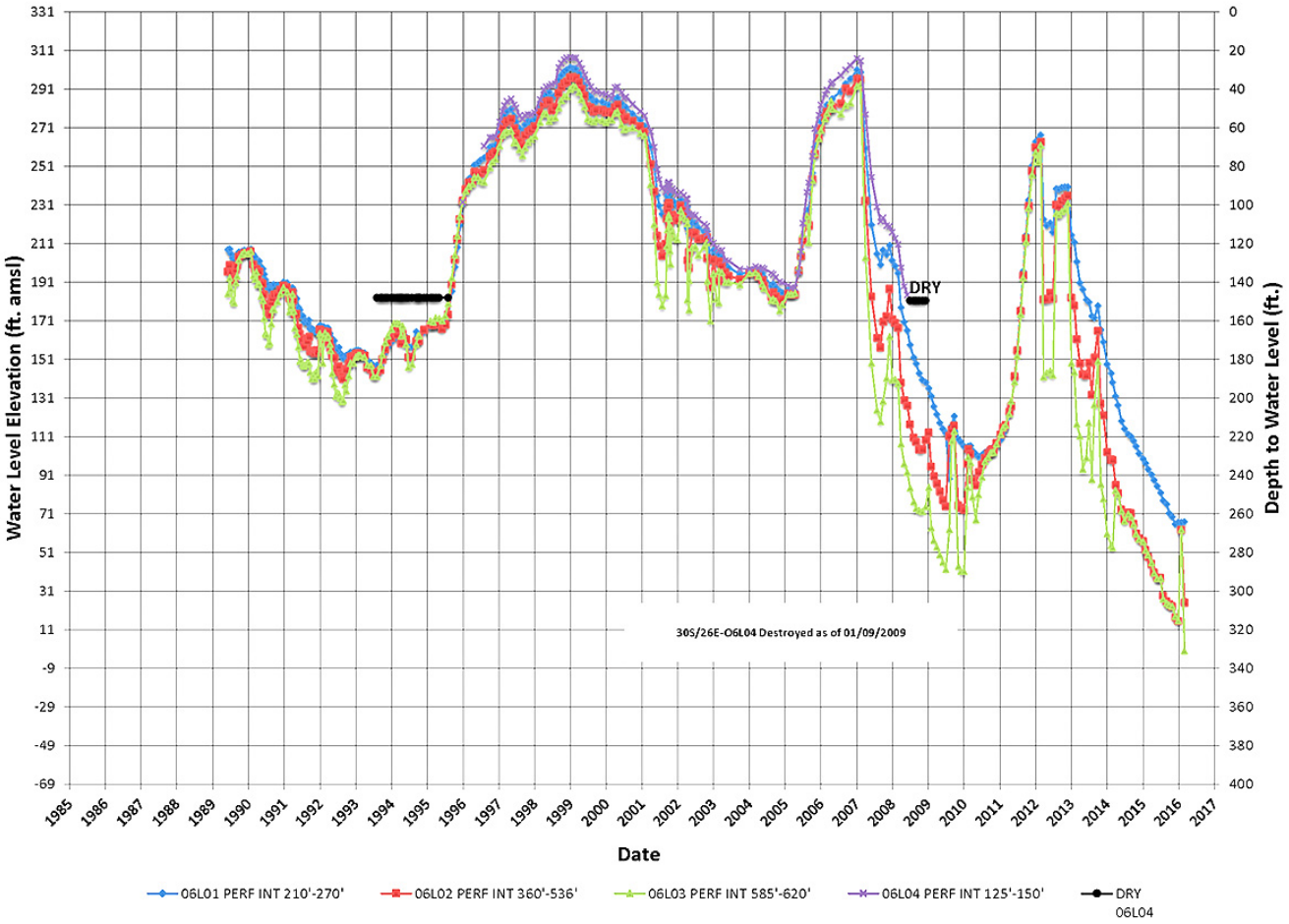
Source: KCWA Groundwater Data Base

FIGURE 7.3-31. 30S/26E-32N



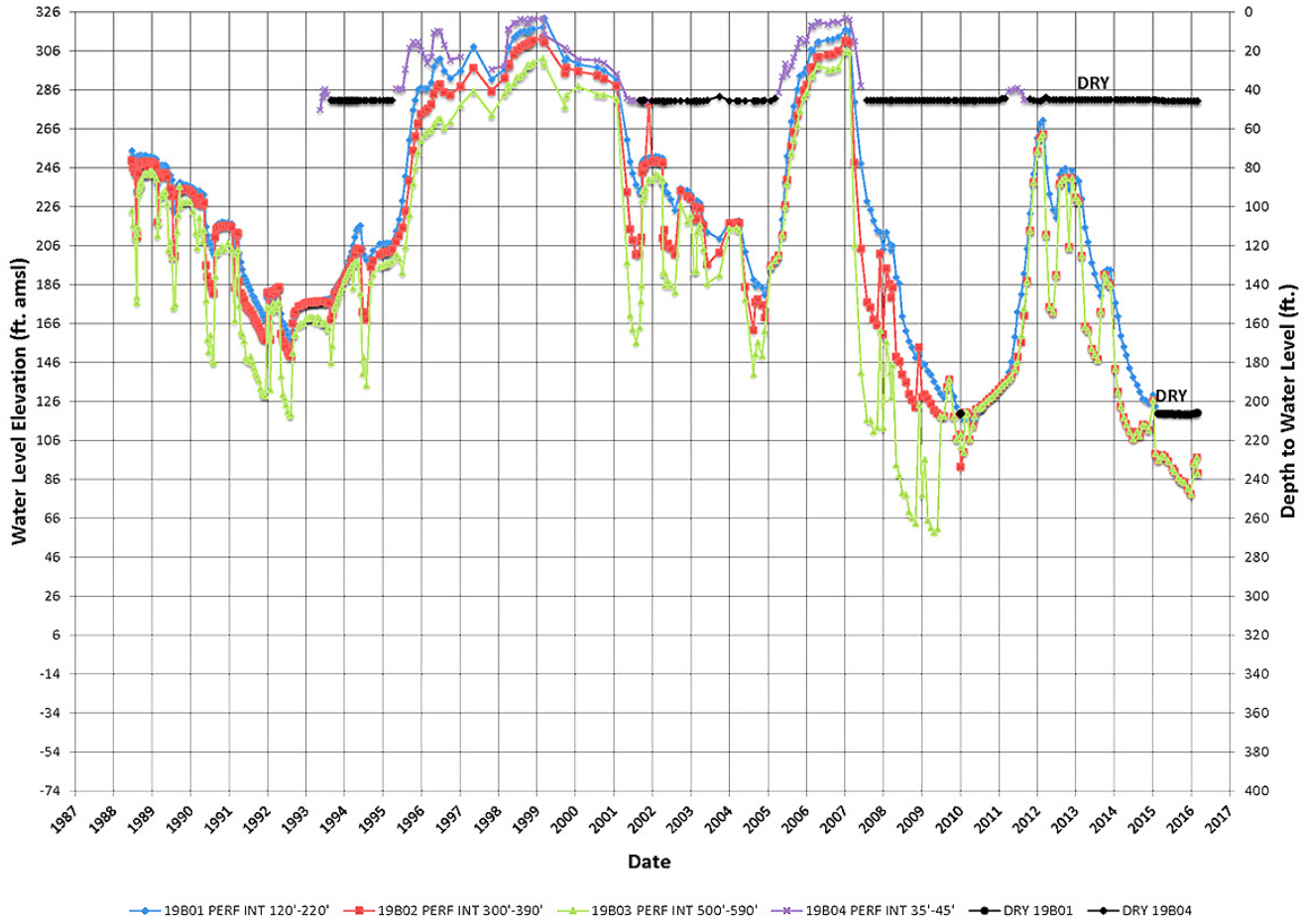
Source: KCWA Groundwater Data Base

FIGURE 7.3-32. 29S/26E-31H



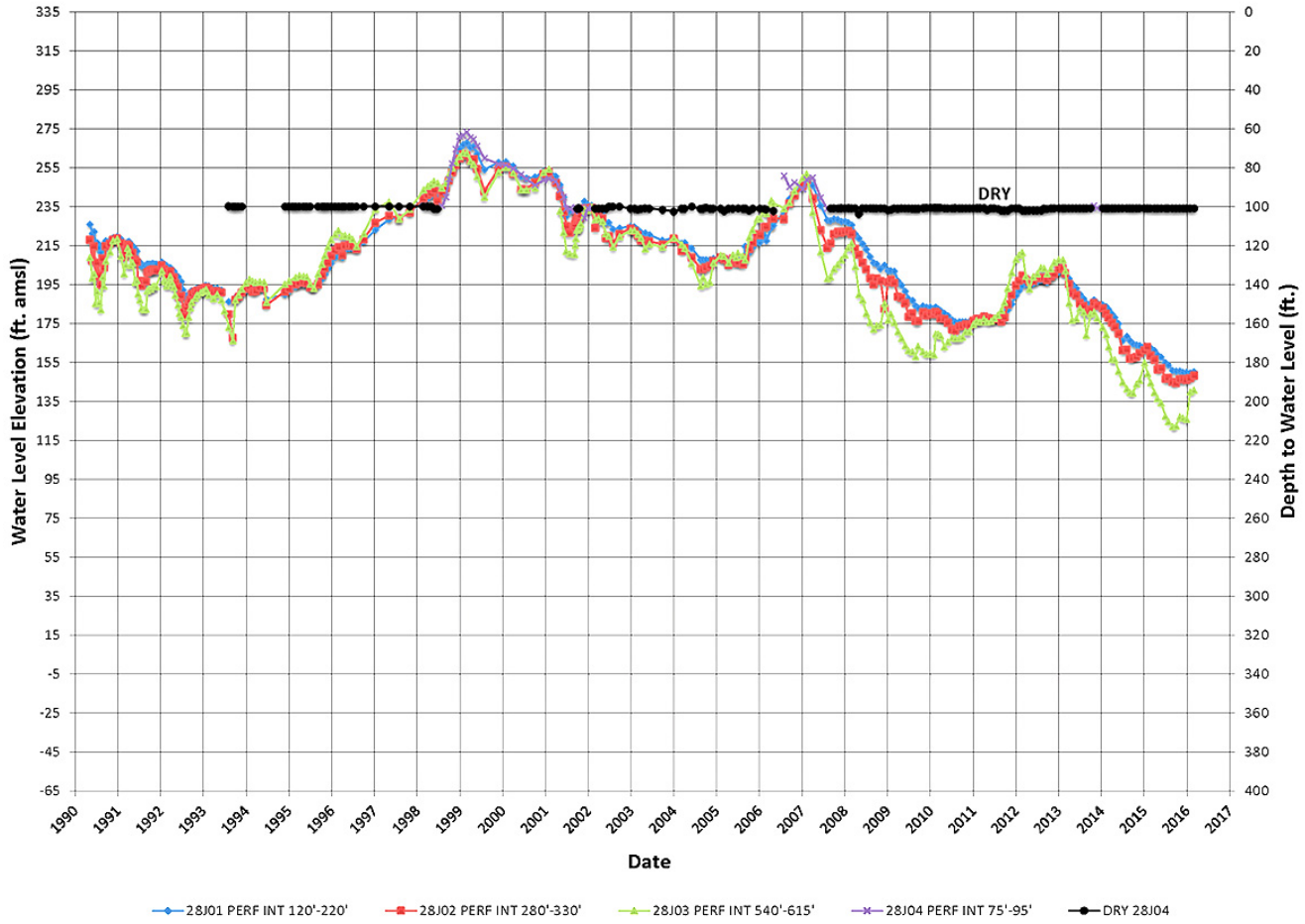
Source: KCWA Groundwater Data Base

FIGURE 7.3-33. 30S/26E-06L



Source: KCWA Groundwater Data Base

FIGURE 7.3-34. 30S/26E-19B

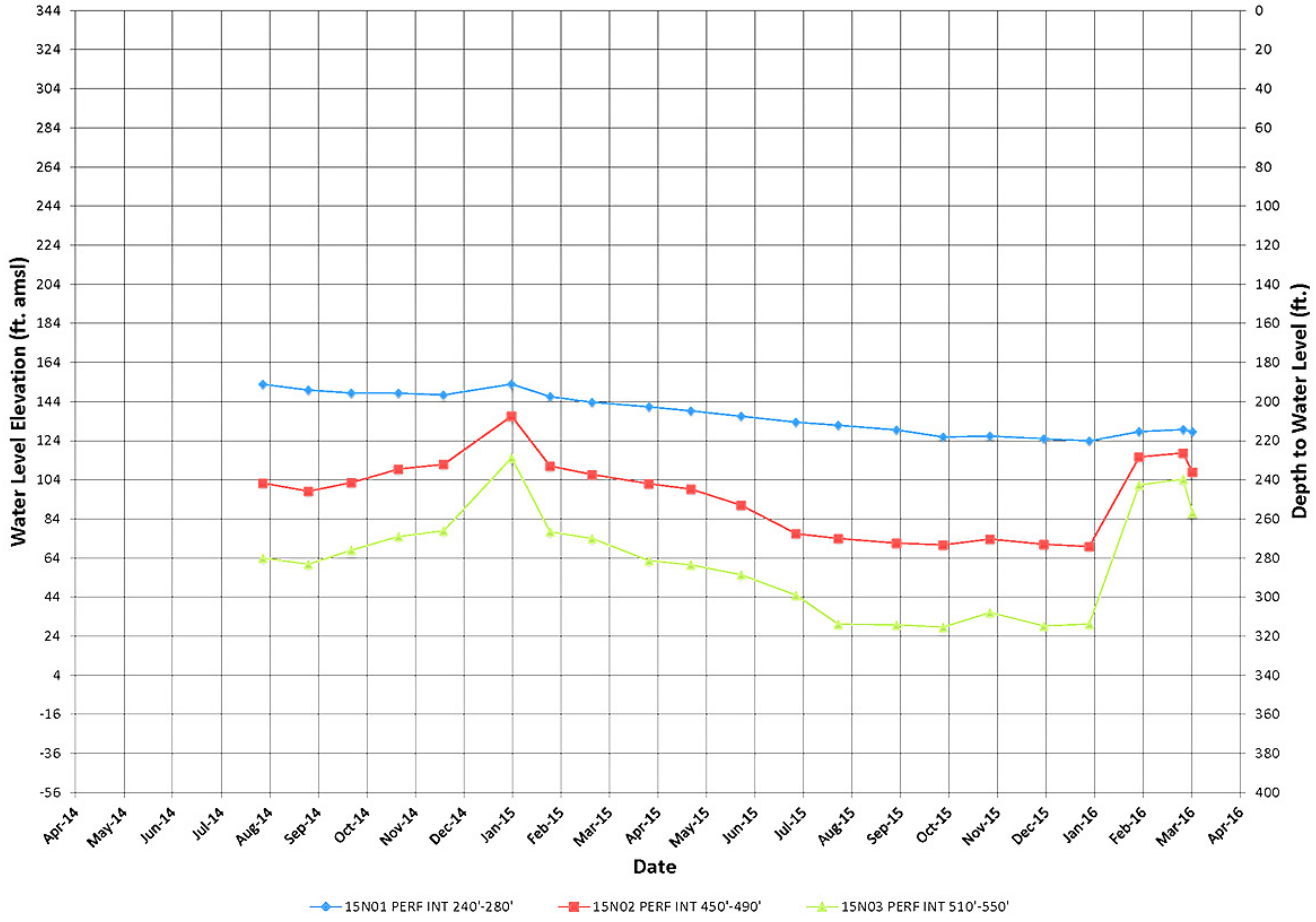


Source: KCWA Groundwater Data Base

FIGURE 7.3-35. 30S/26E-28J

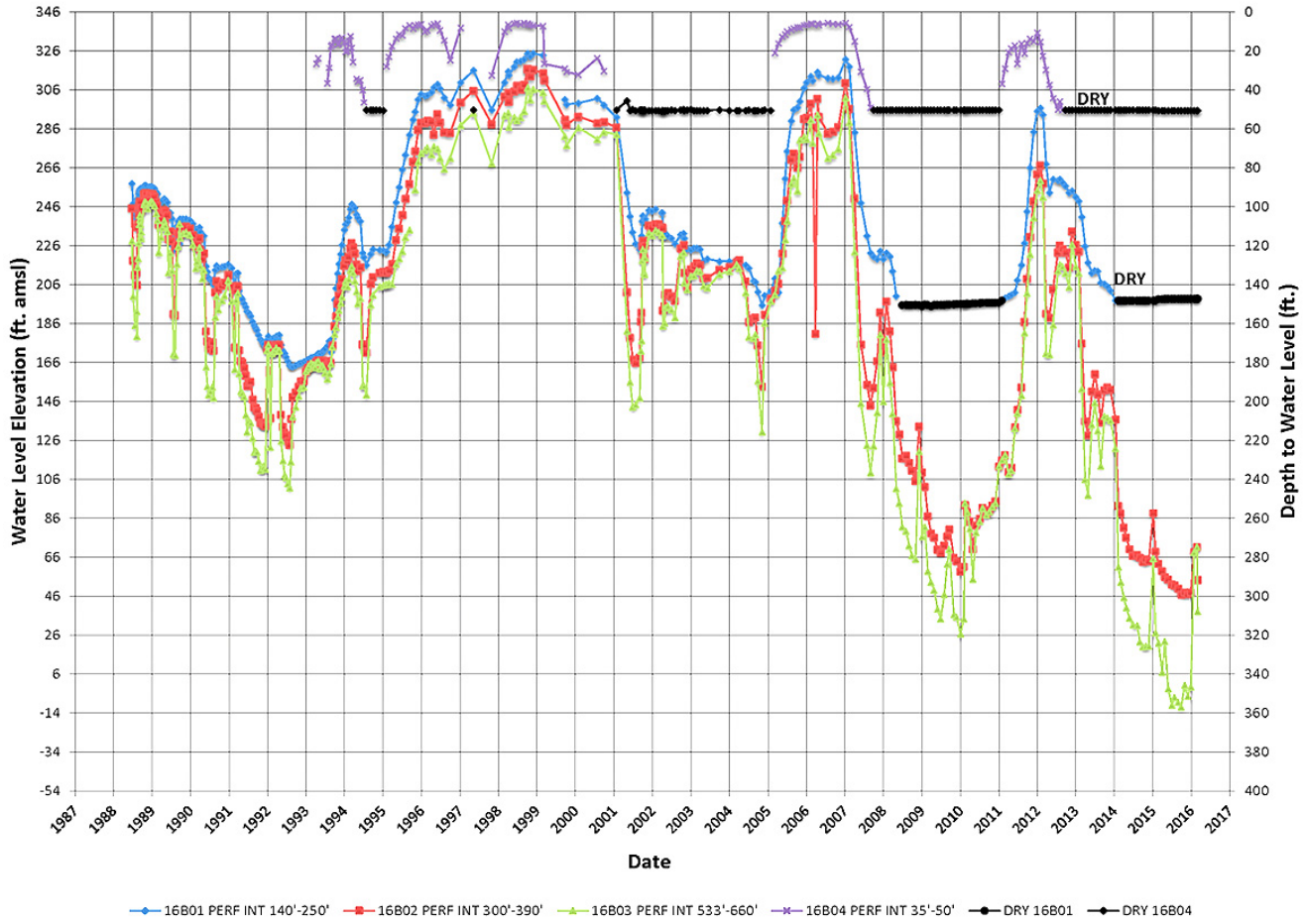
Source: KCWA Groundwater Data Base

FIGURE 7.3-36. 30S/26E-22P



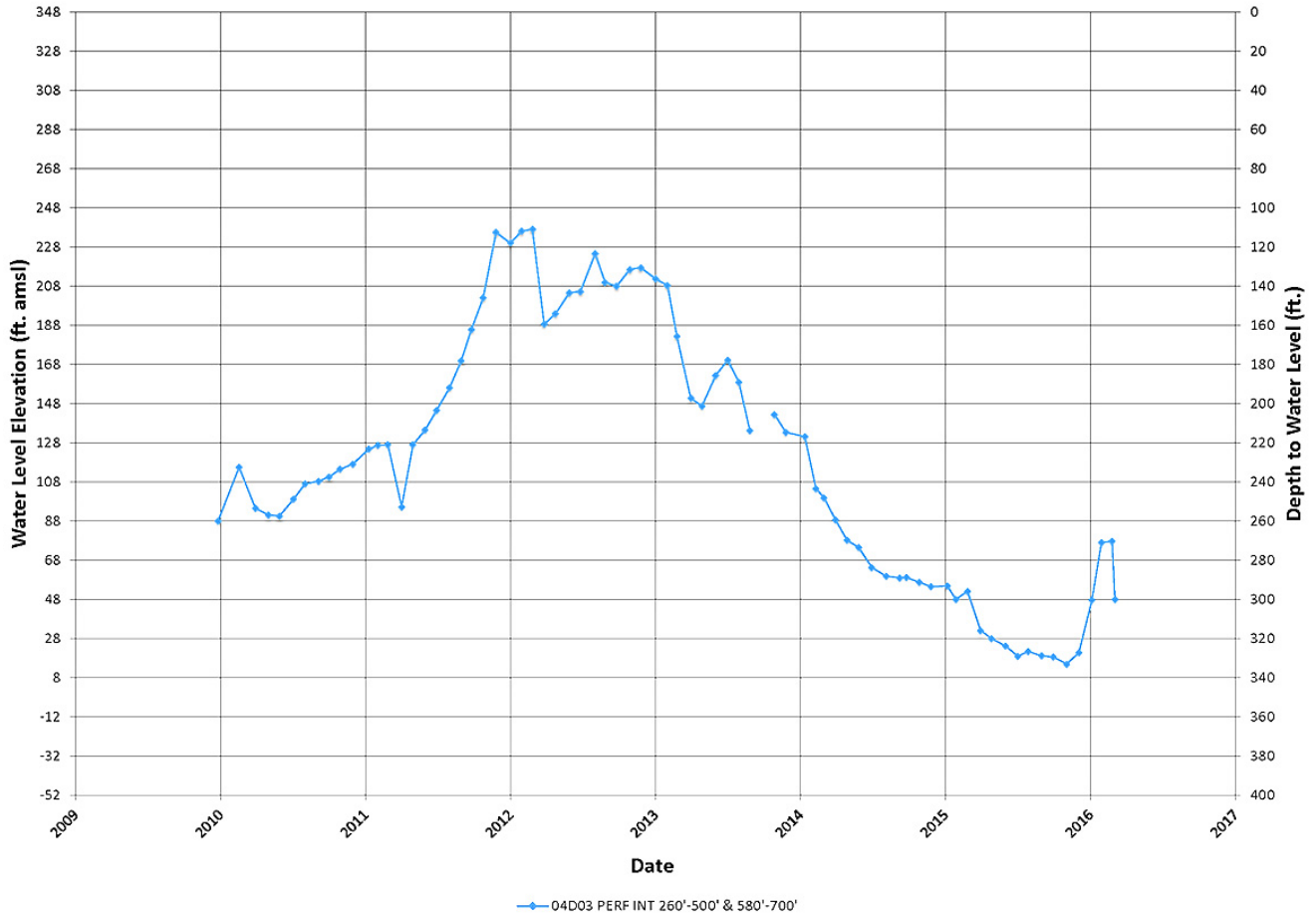
Source: KCWA Groundwater Data Base

FIGURE 7.3-37. 30S/26E-15N



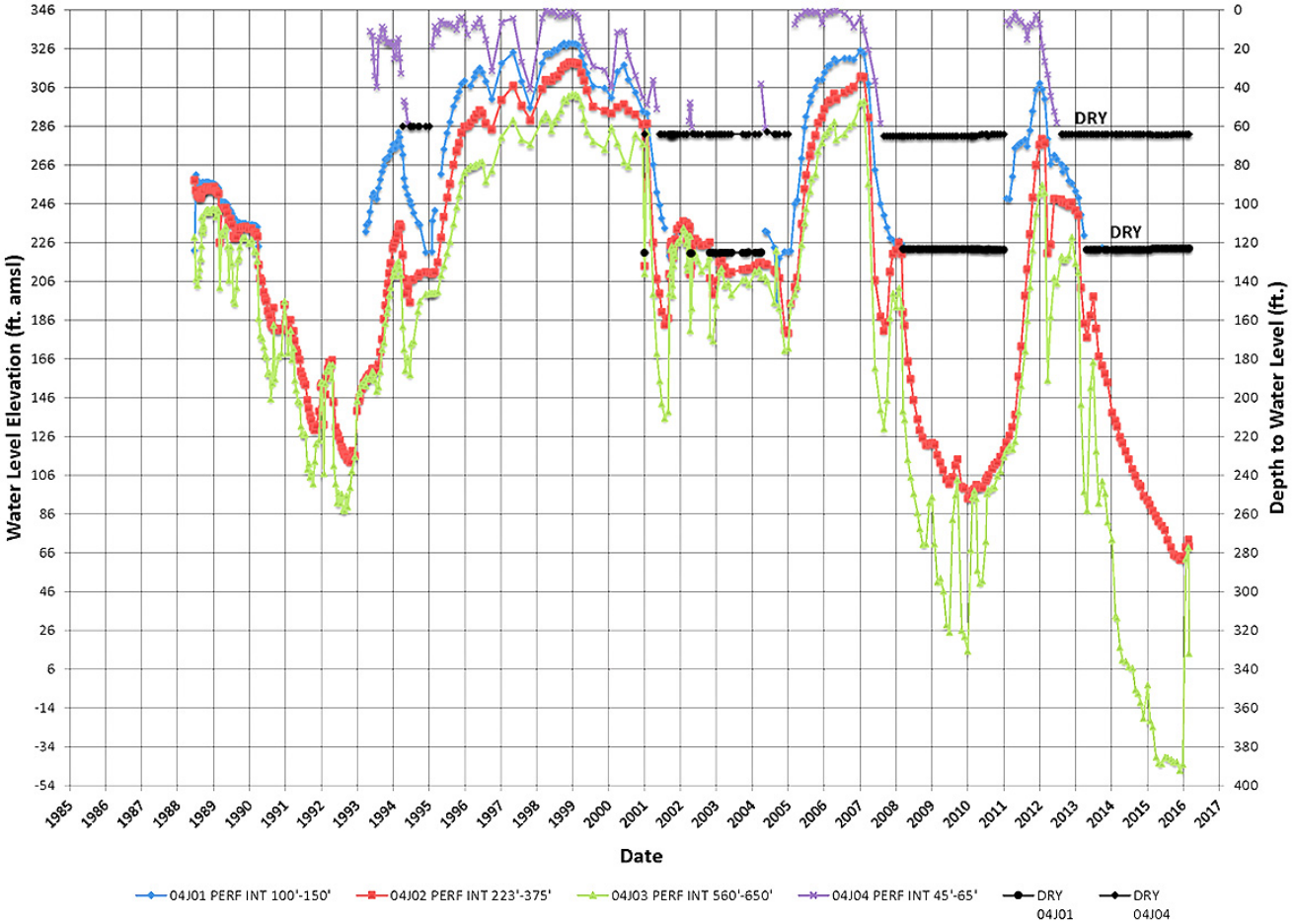
Source: KCWA Groundwater Data Base

FIGURE 7.3-38. 30S/26E-16B



Source: KCWA Groundwater Data Base

FIGURE 7.3-39. 30S/26E-04D03 - KCWB-31

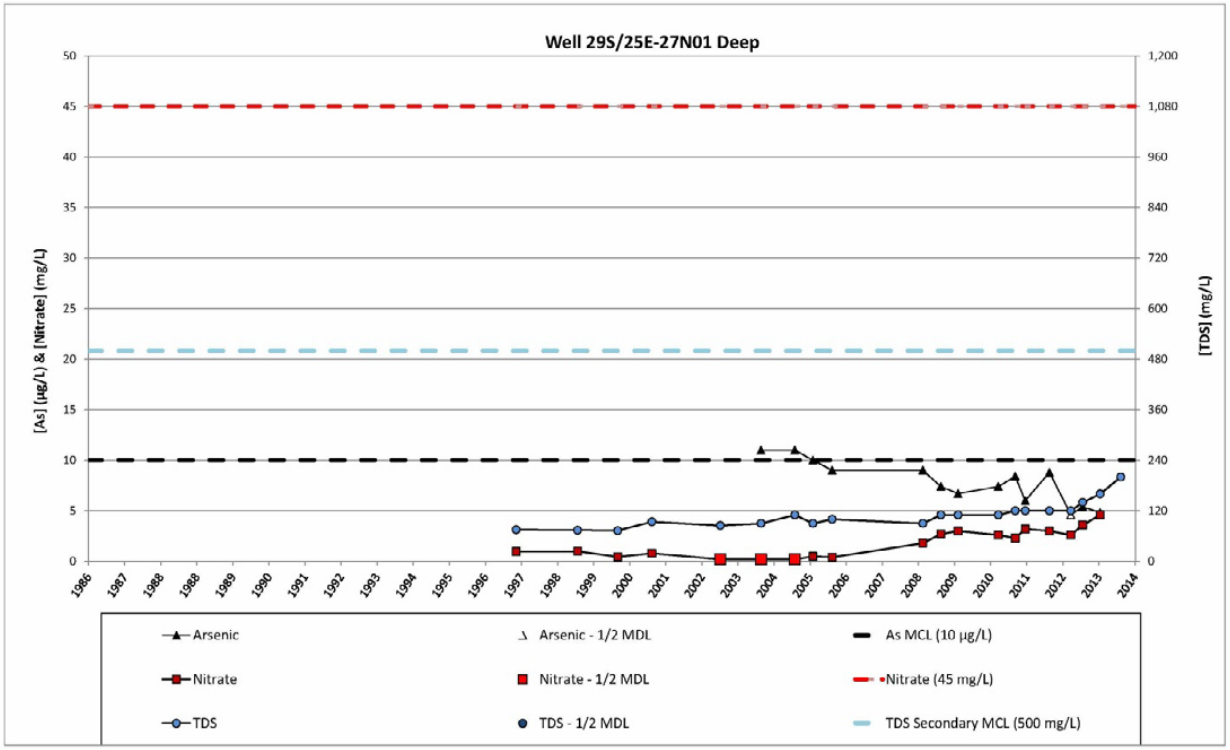


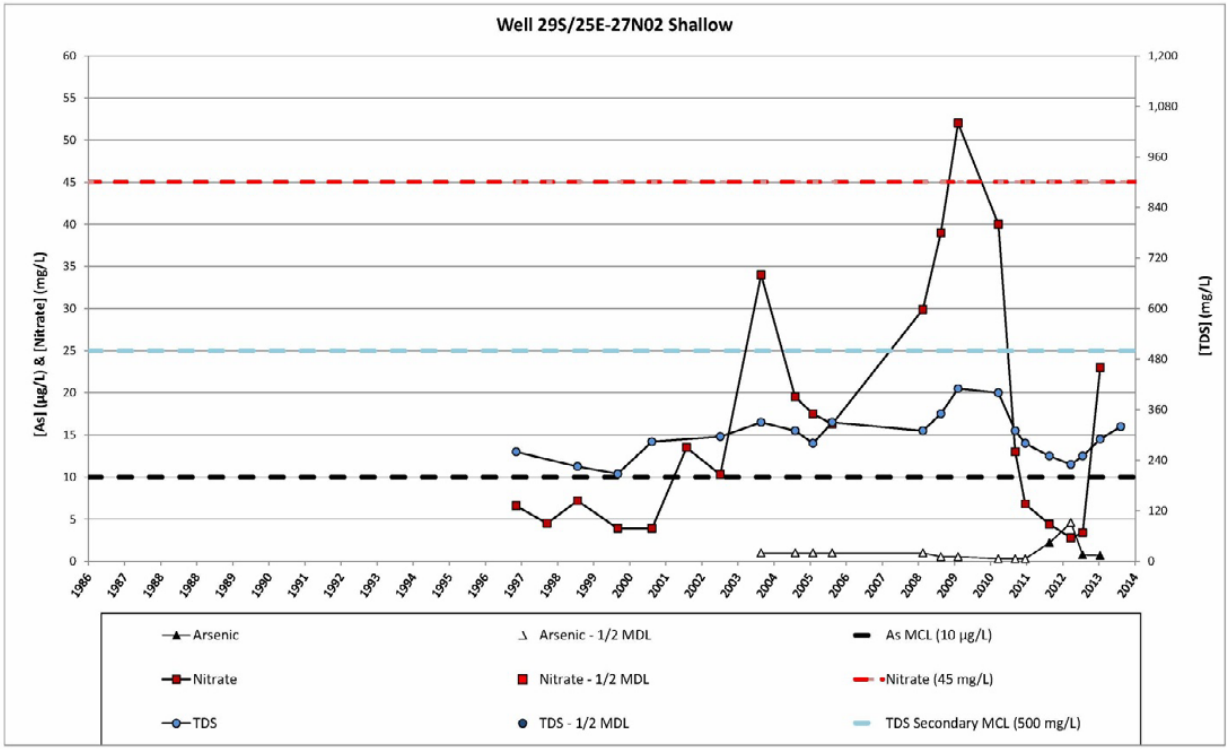
Source: KCWA Groundwater Data Base

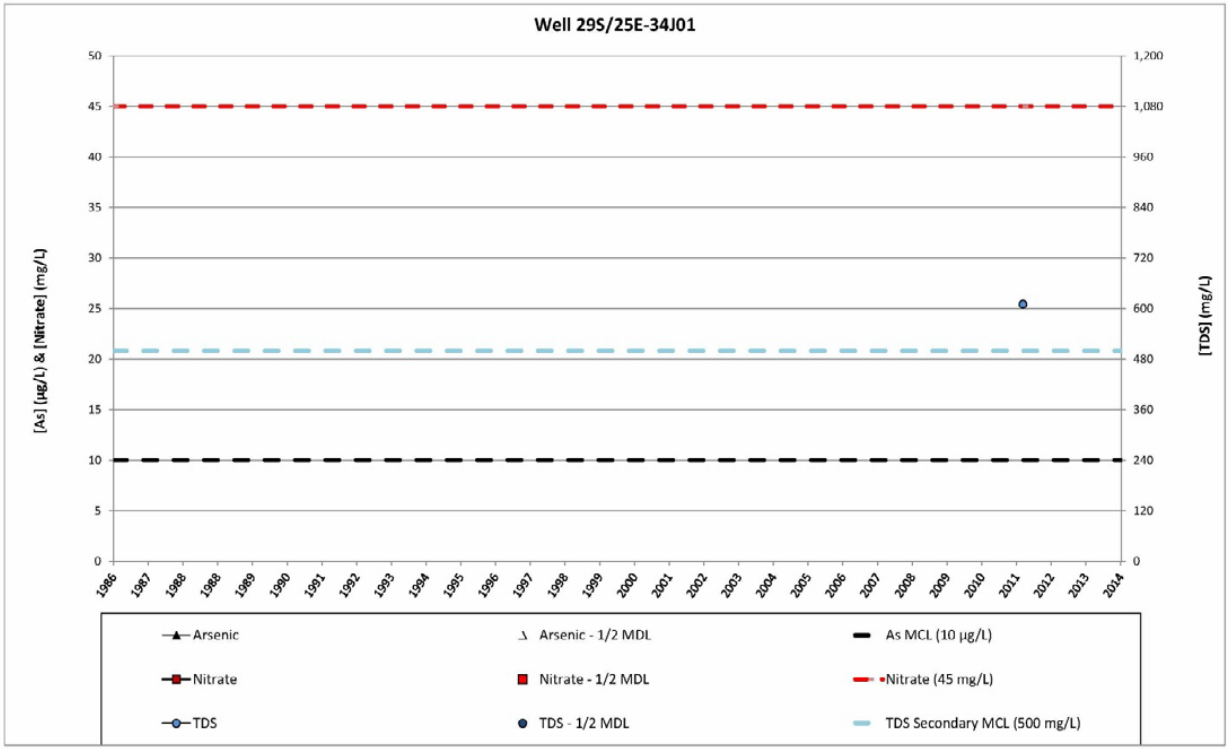
FIGURE 7.3-40. 30S/26E-04J

Township: 29 S

Section: 25 E

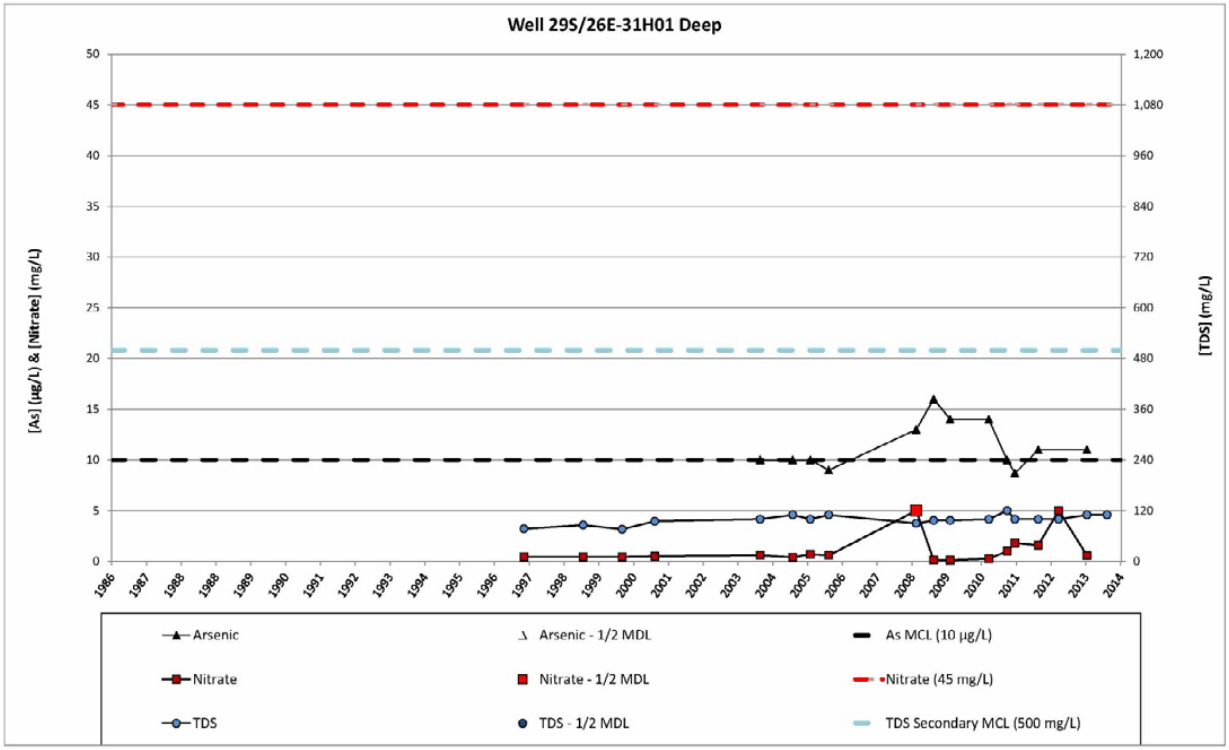

Well 29S/25E-27N01 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 29S/25E-27N02 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 29S/25E-34J01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
50
45
40
35
30
25
20
15
10
5
0
1,200
1,080
960
840
720
600
480
360
240
120
0
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

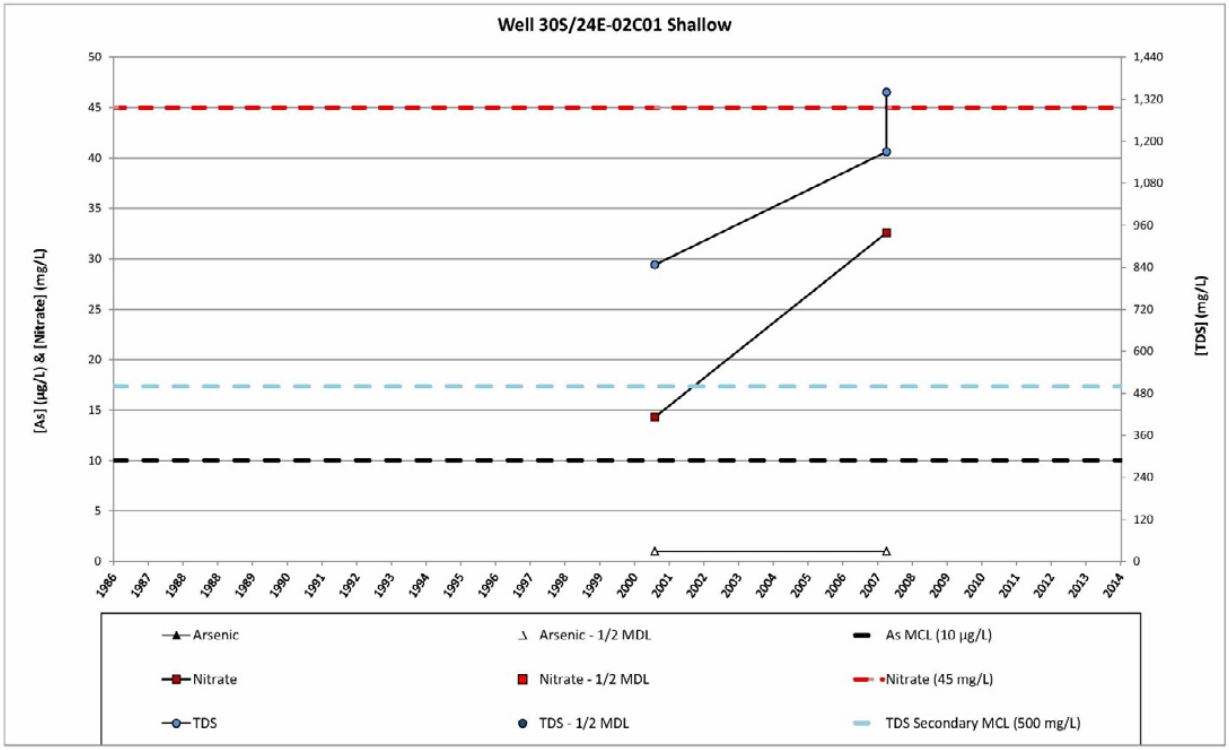
Township: 29 S

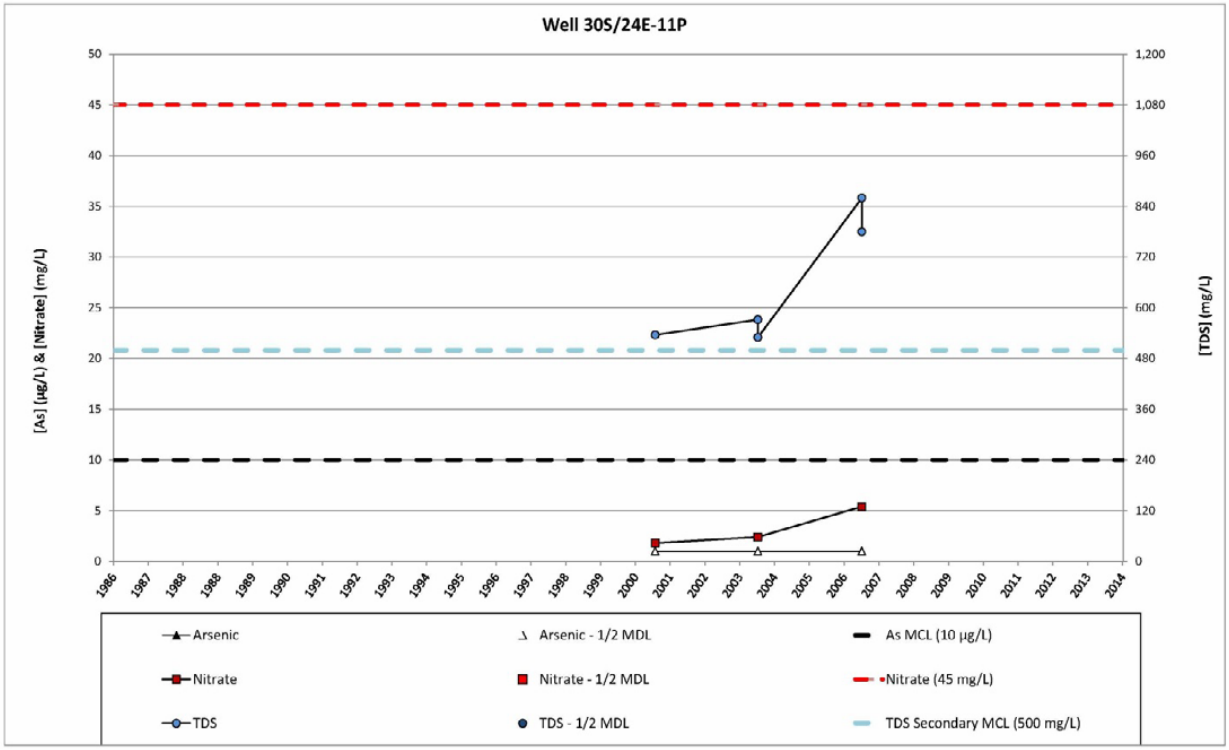
Section: 26 E

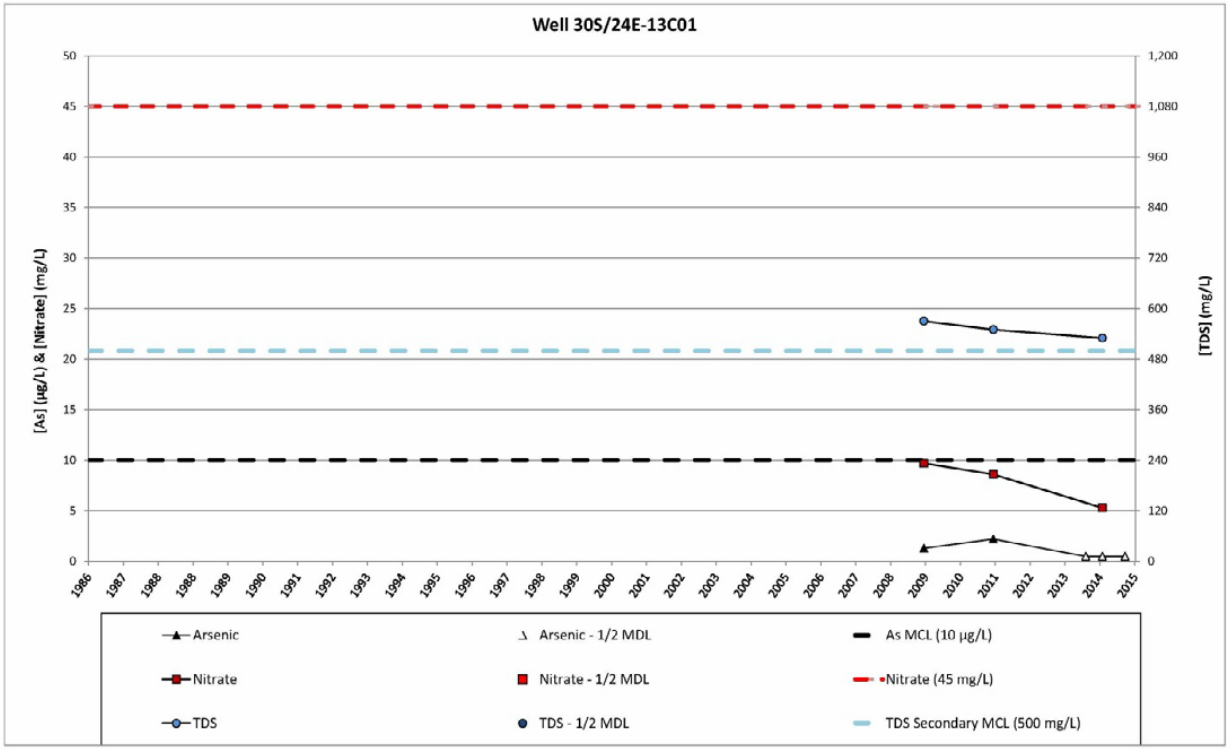

Well 29S/26E-31H01 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
50
45
40
35
30
25
20
15
10
5
0
1,200
1,080
960
840
720
600
480
360
240
120
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

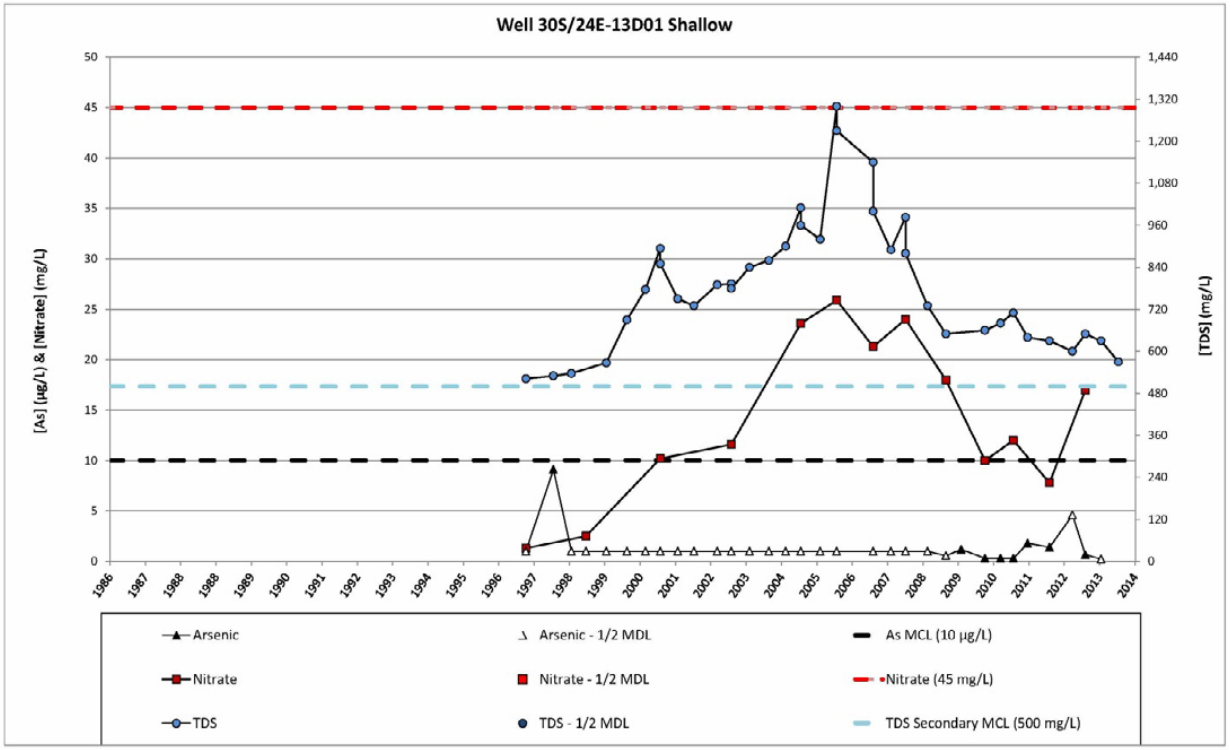
Township: 30 S

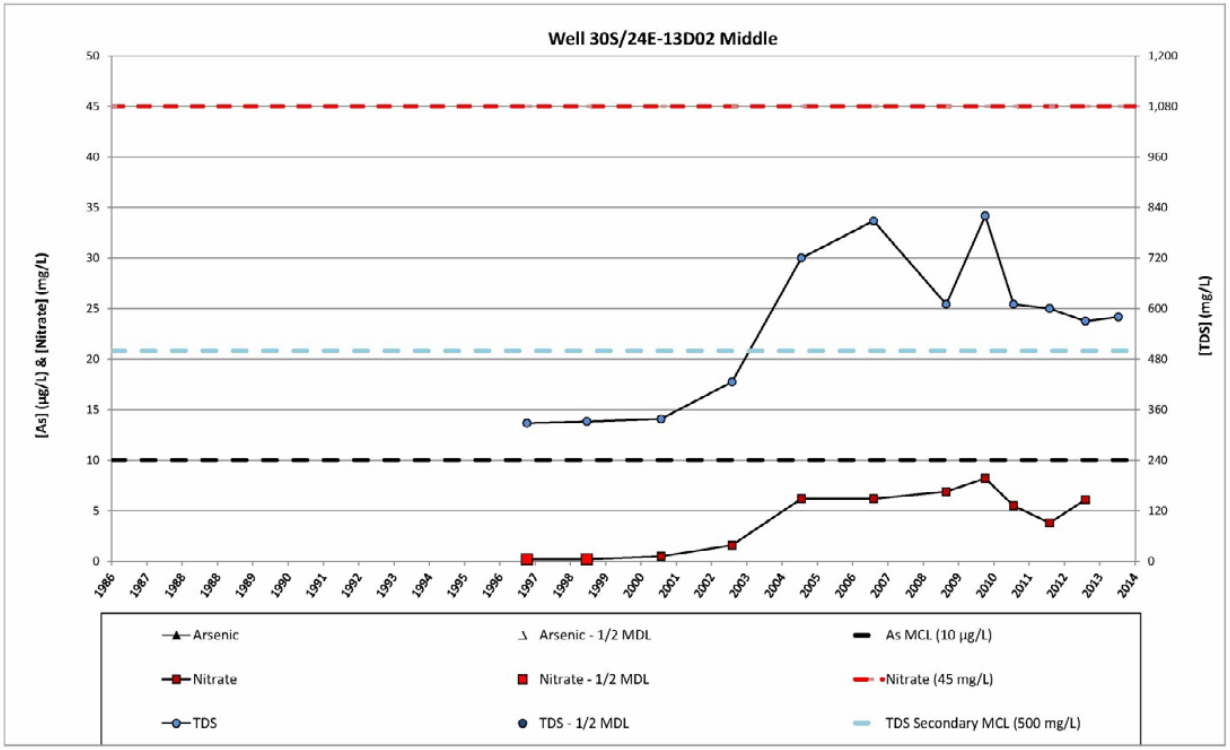
Section: 24 E

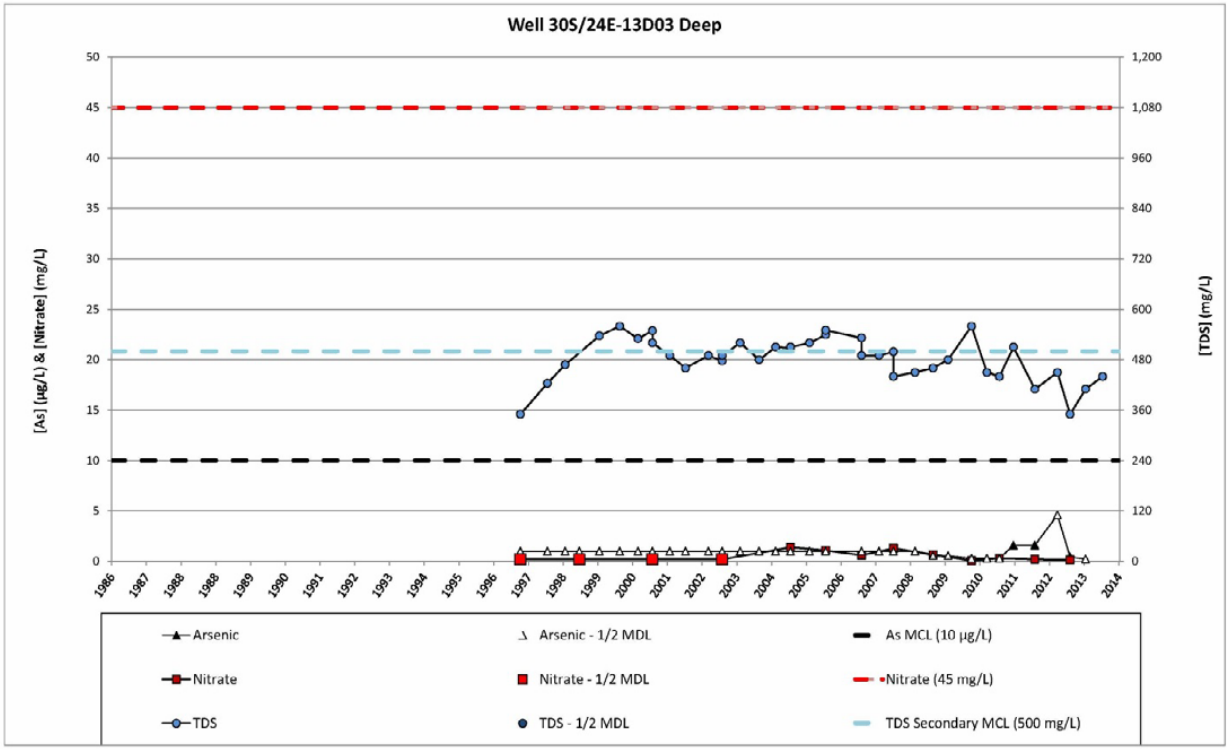

Well 30S/24E-02C01 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

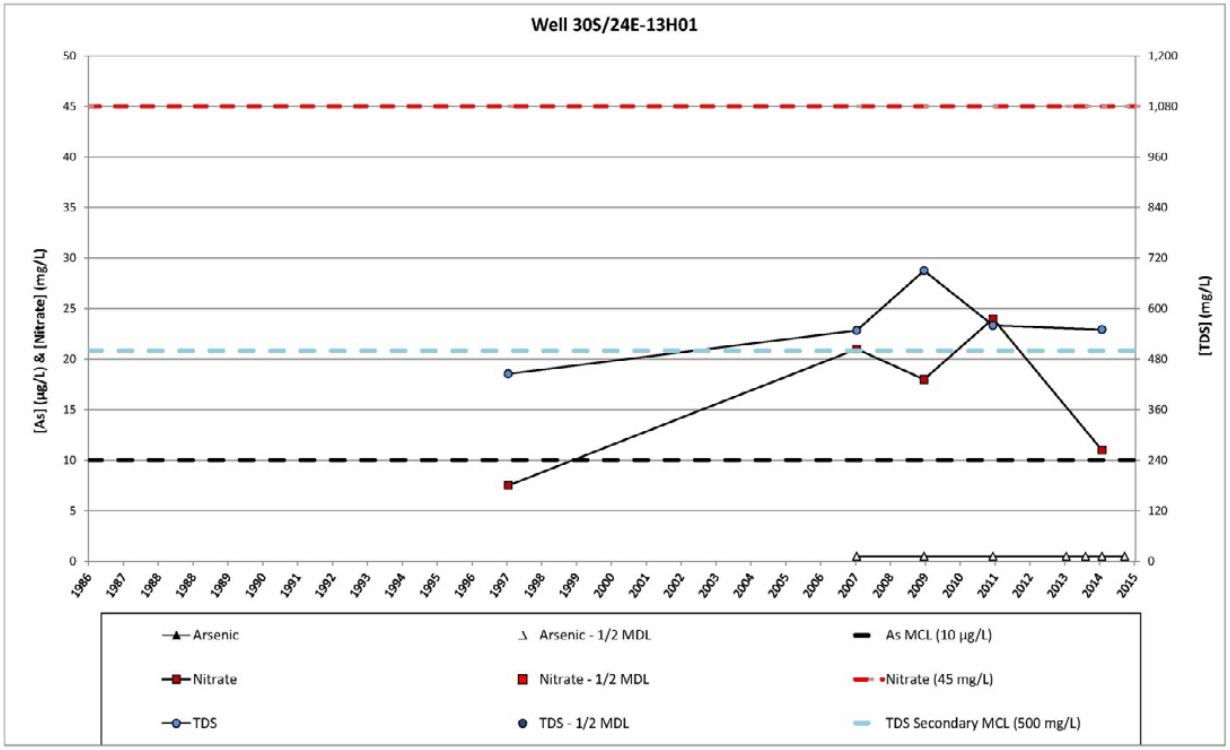

Well 30S/24E-11P
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

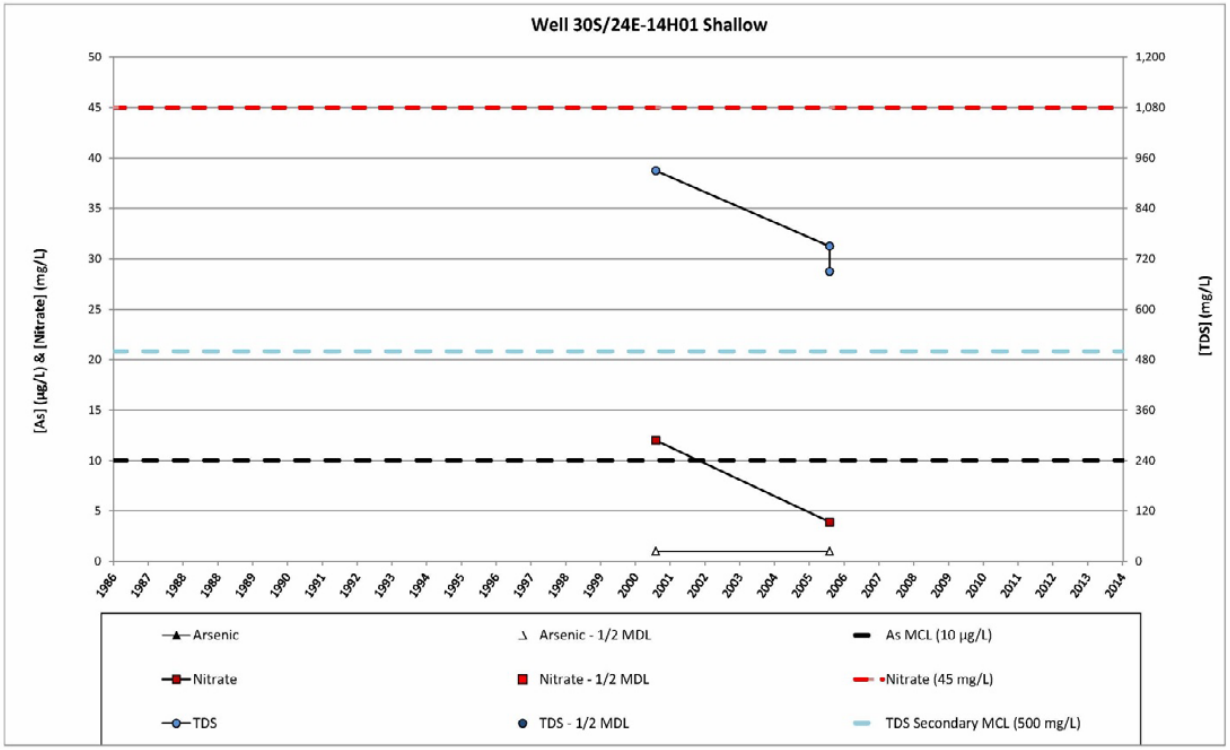

Well 30S/24E-13C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

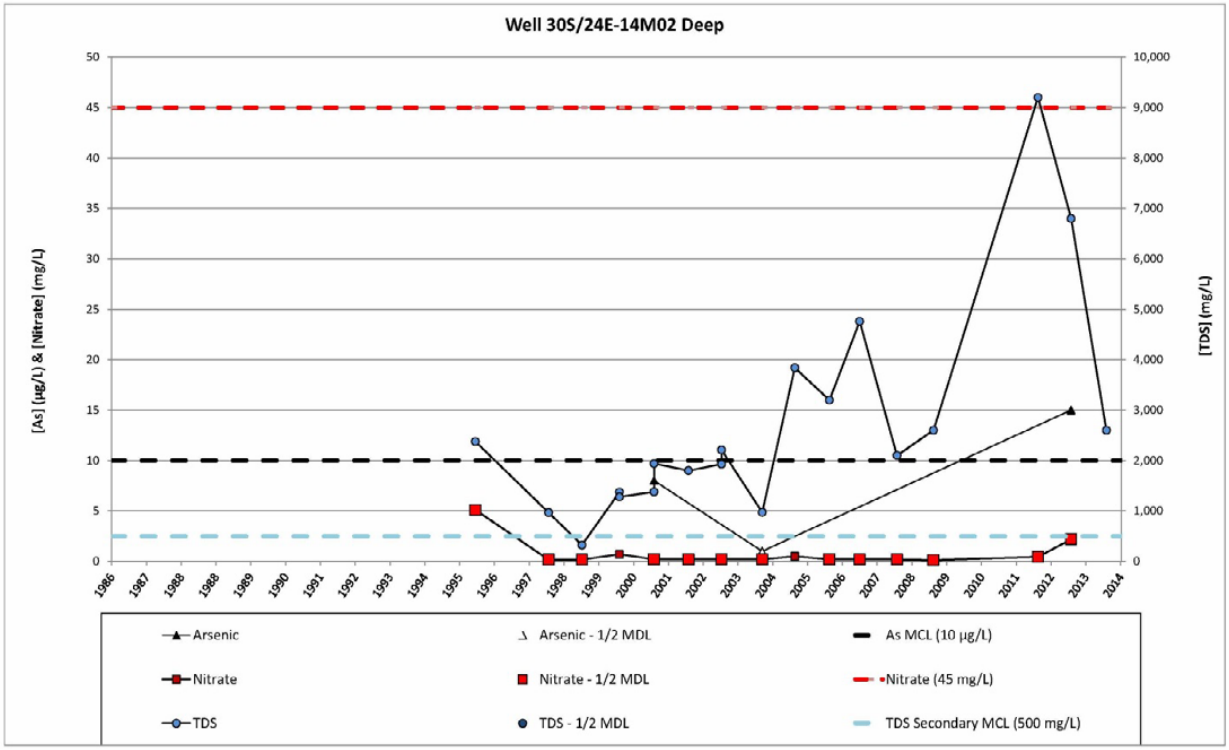

Well 30S/24E-13D01 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

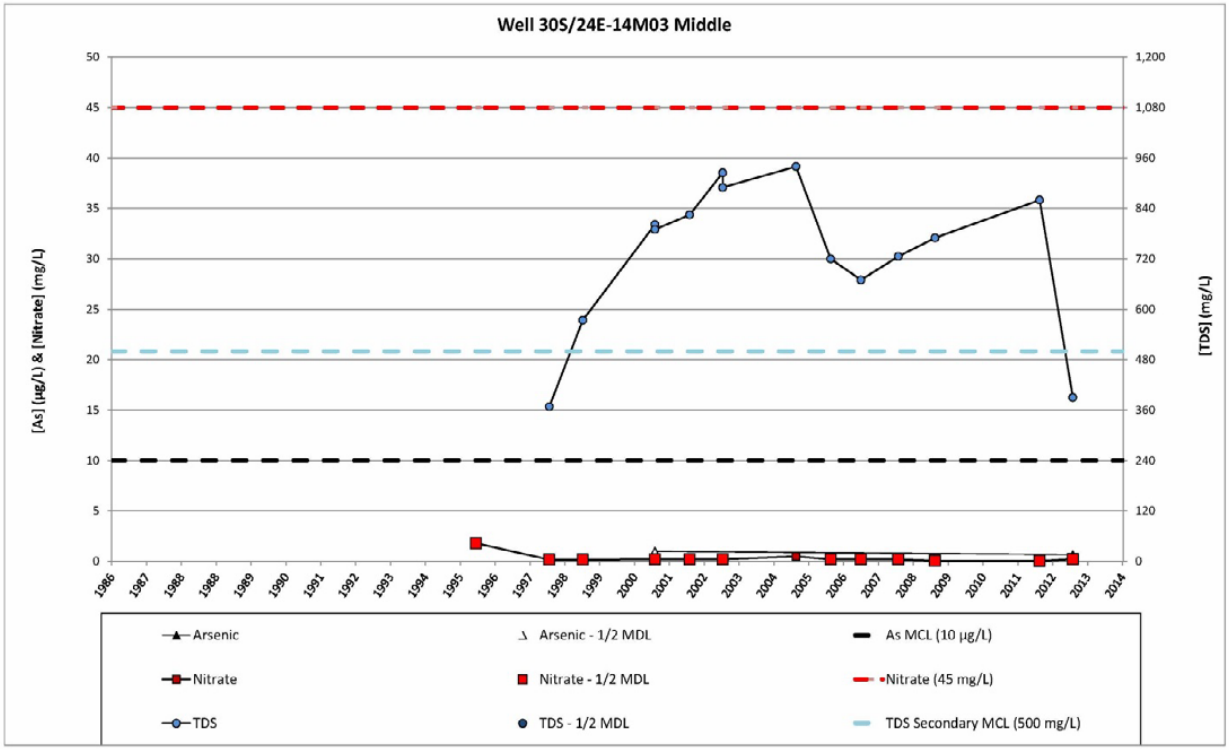

Well 30S/24E-13D02 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

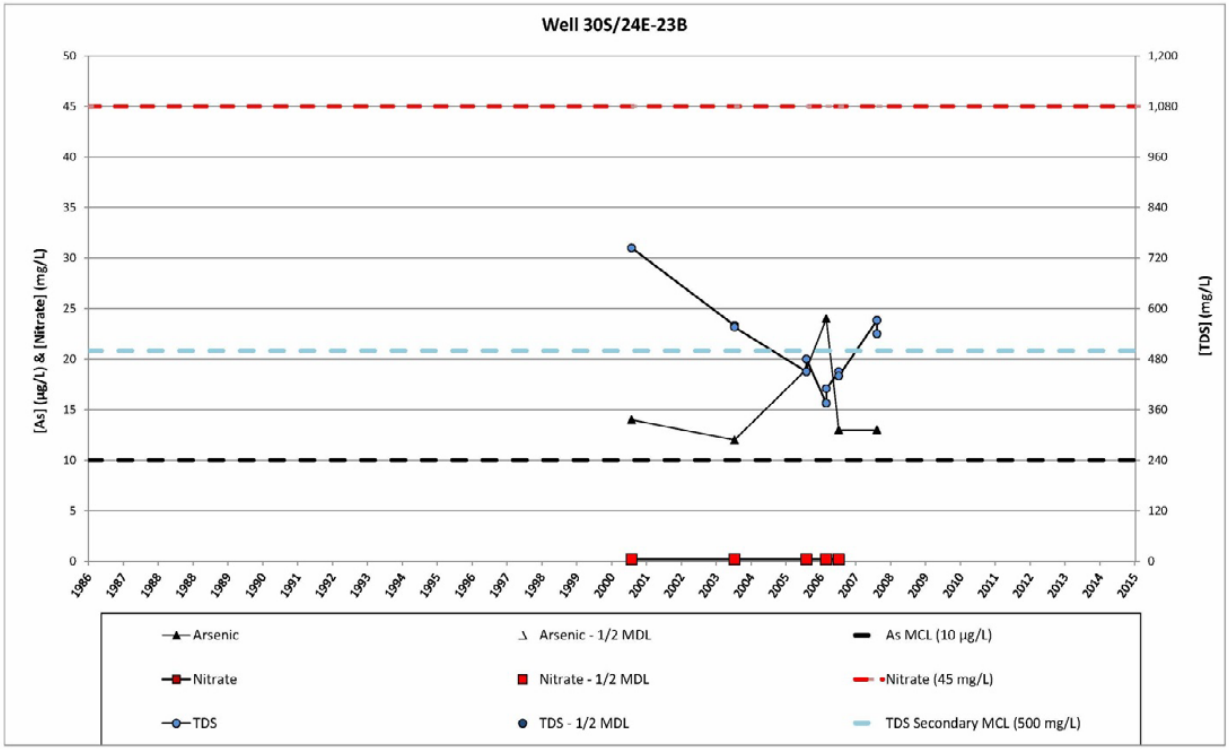

Well 30S/24E-13D03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

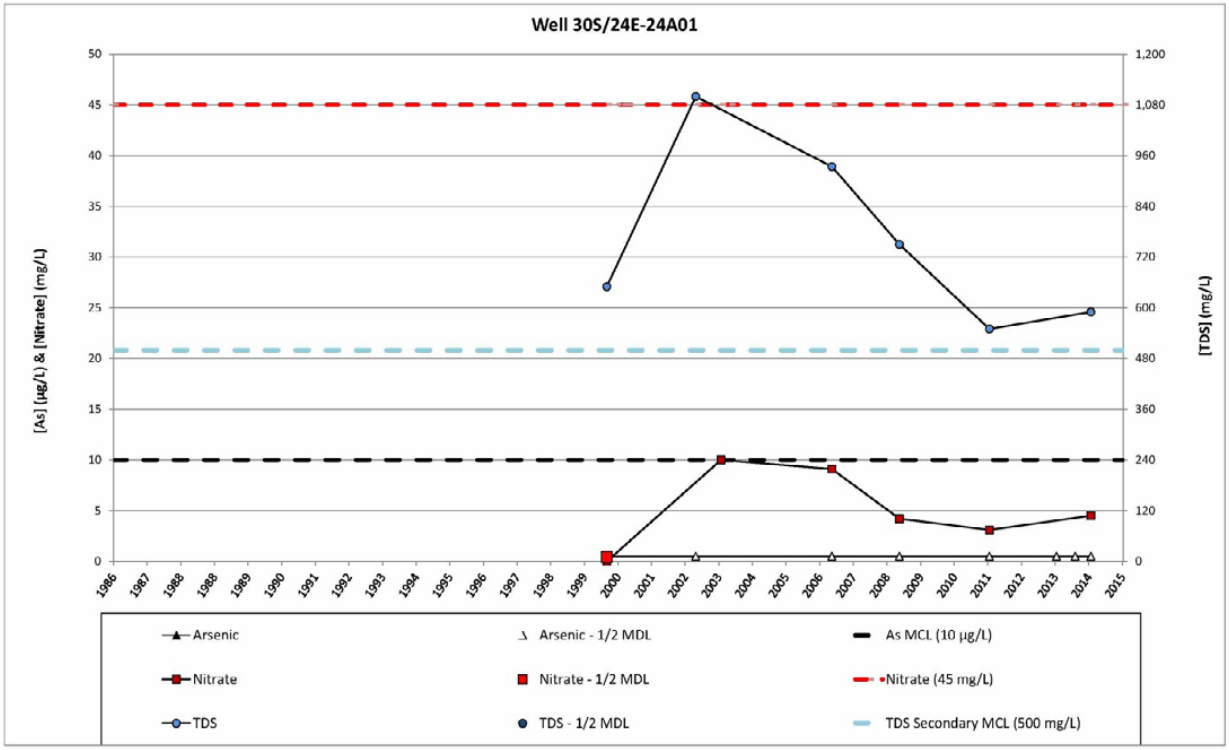

Well 30S/24E-13H01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

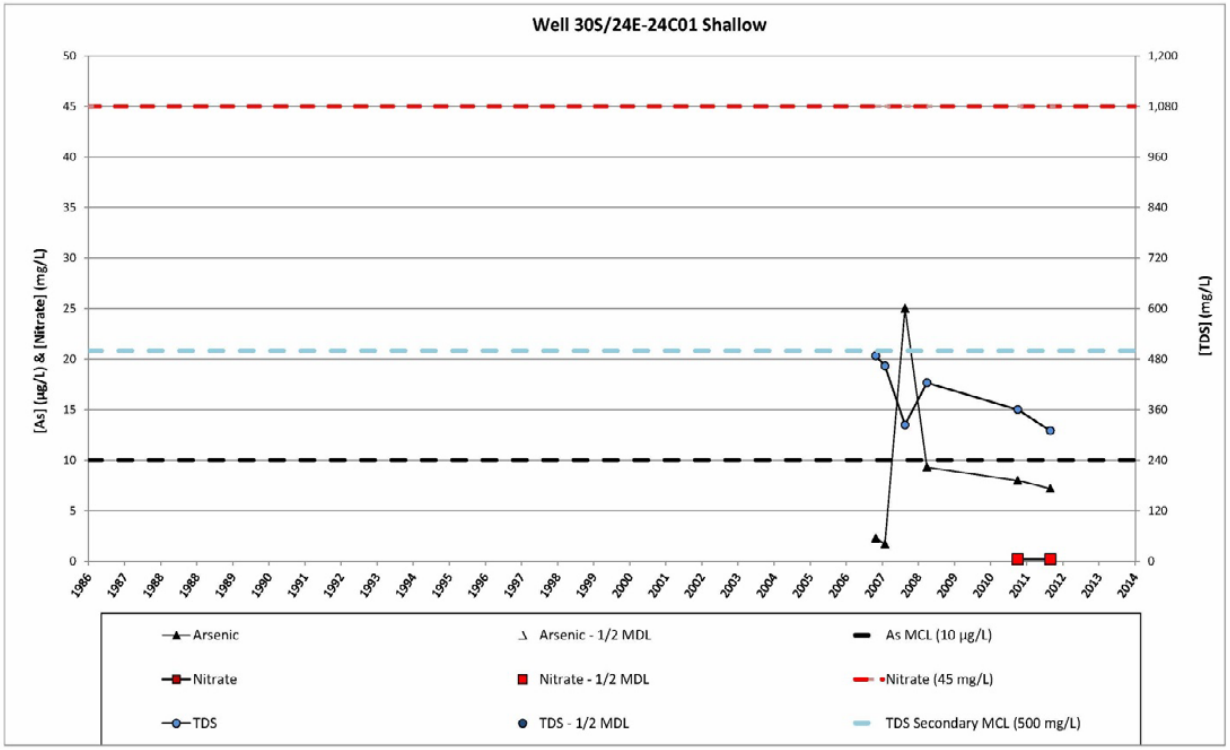

Well 30S/24E-14H01 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

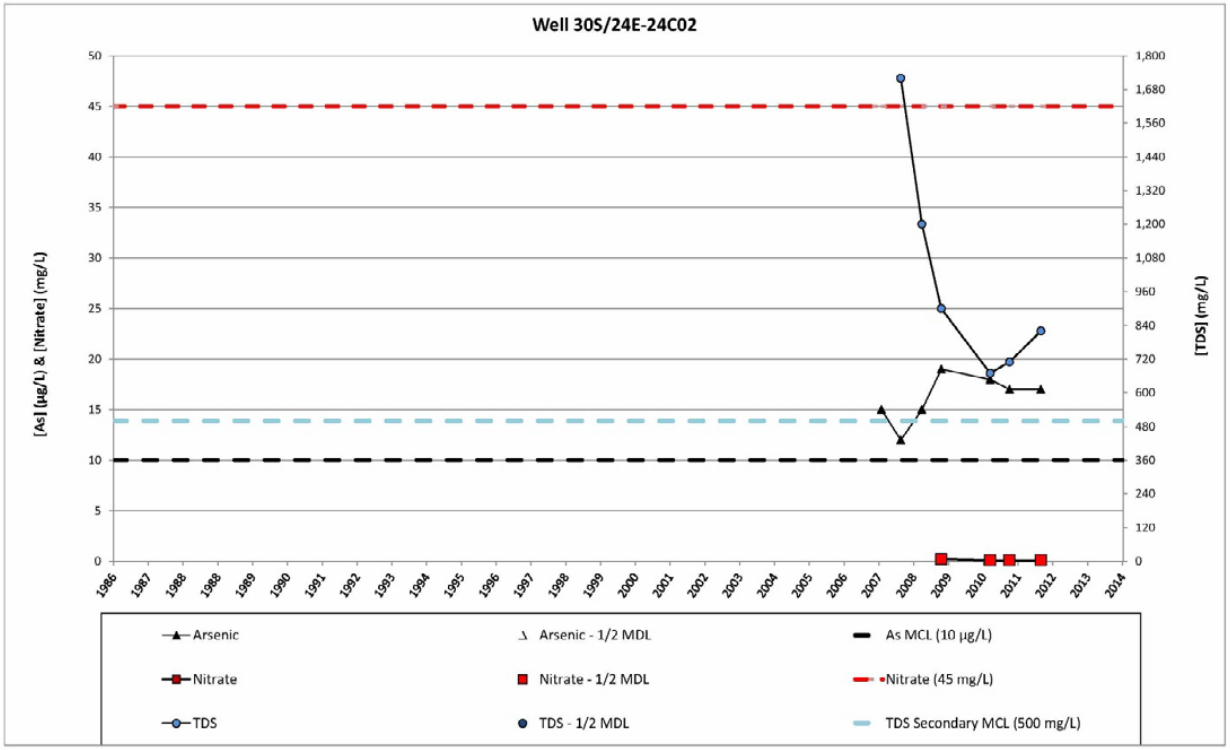

Well 30S/24E-14M02 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

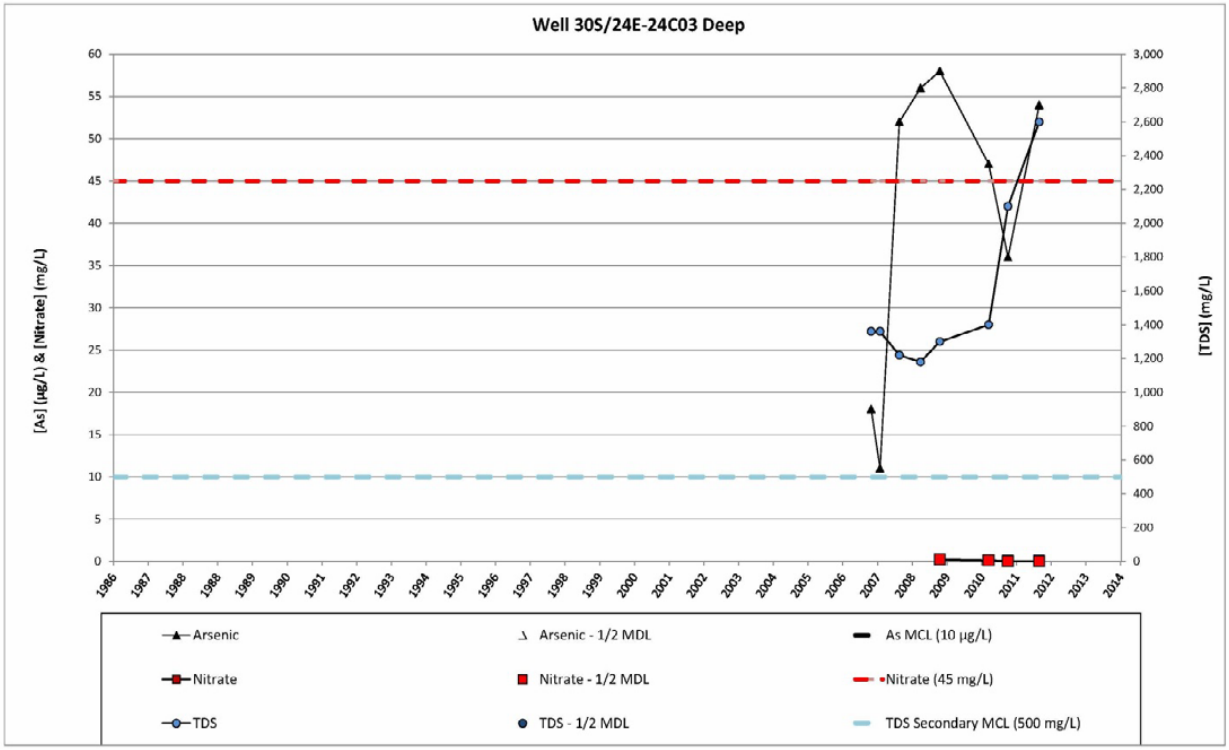

Well 30S/24E-14M03 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/24E-23B
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/24E-24A01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

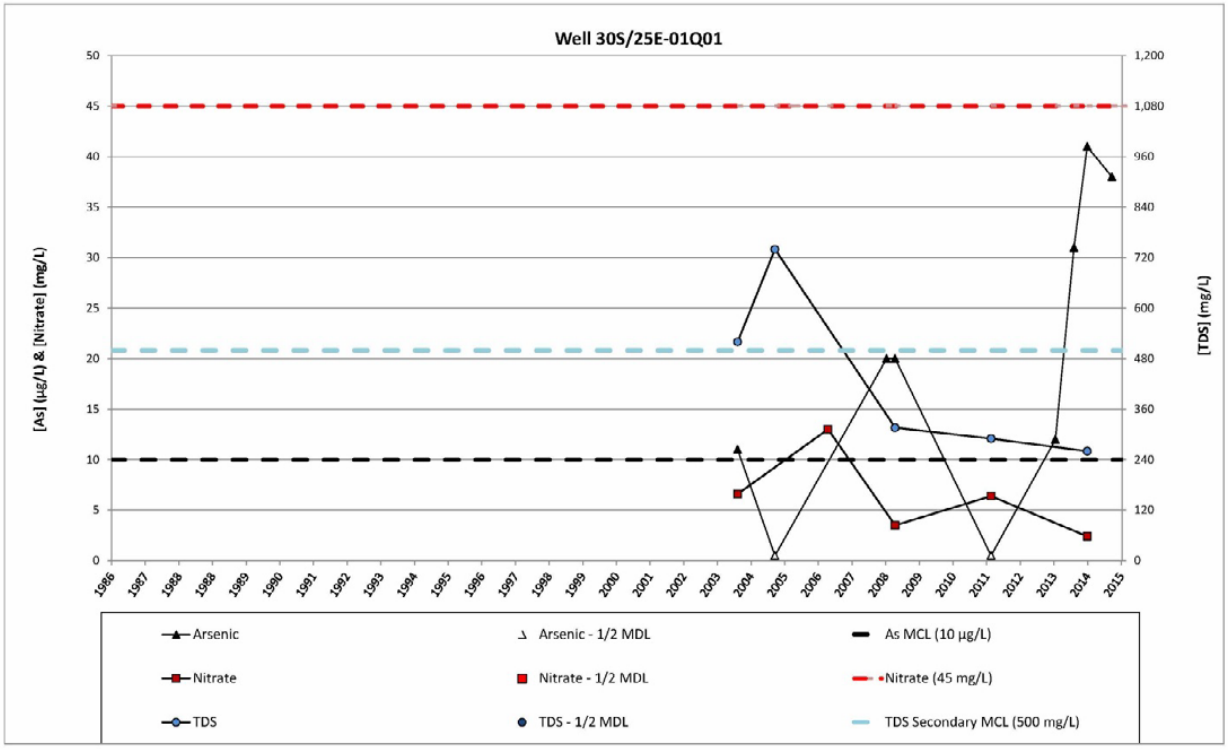

Well 30S/24E-24C01 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

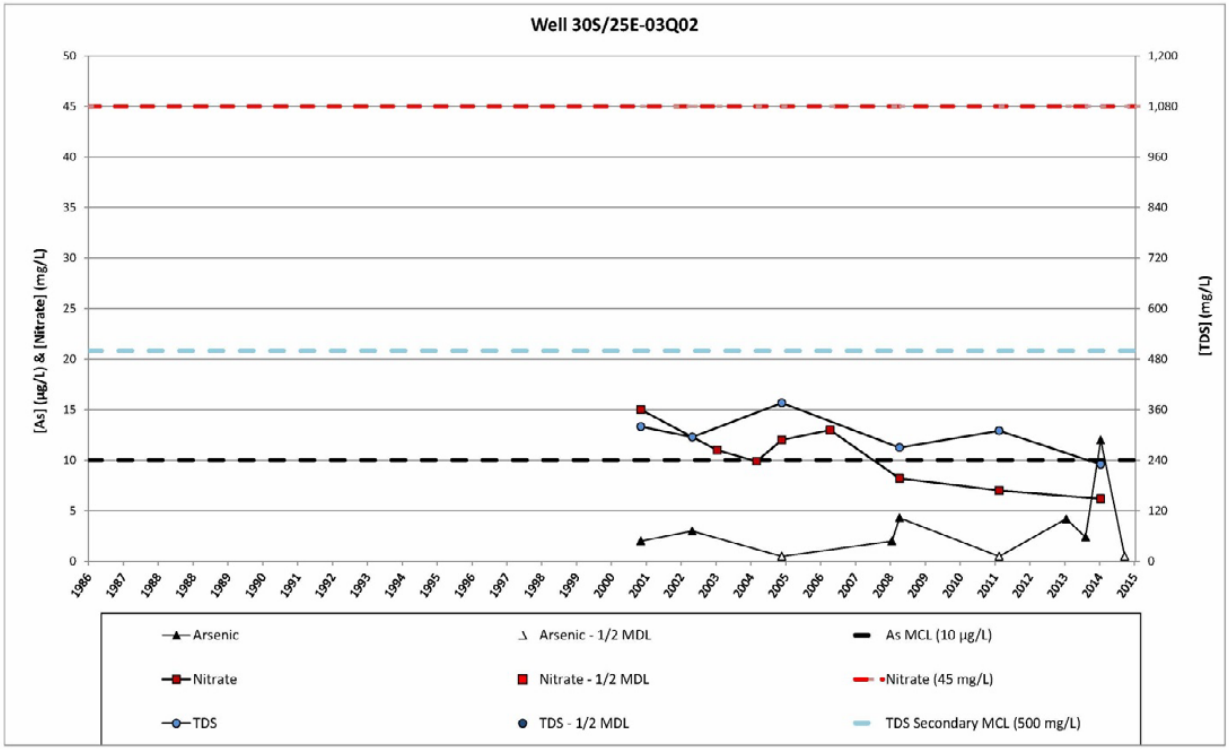

Well 30S/24E-24C02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

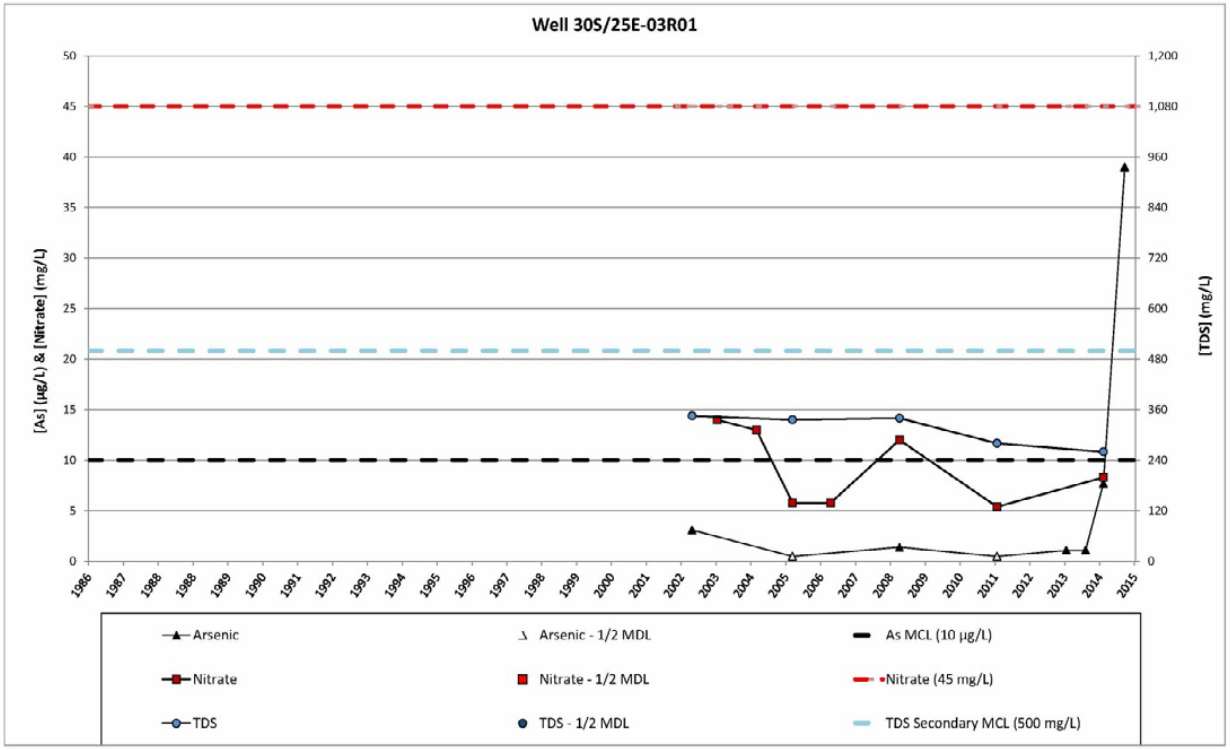

Well 30S/24E-24C03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

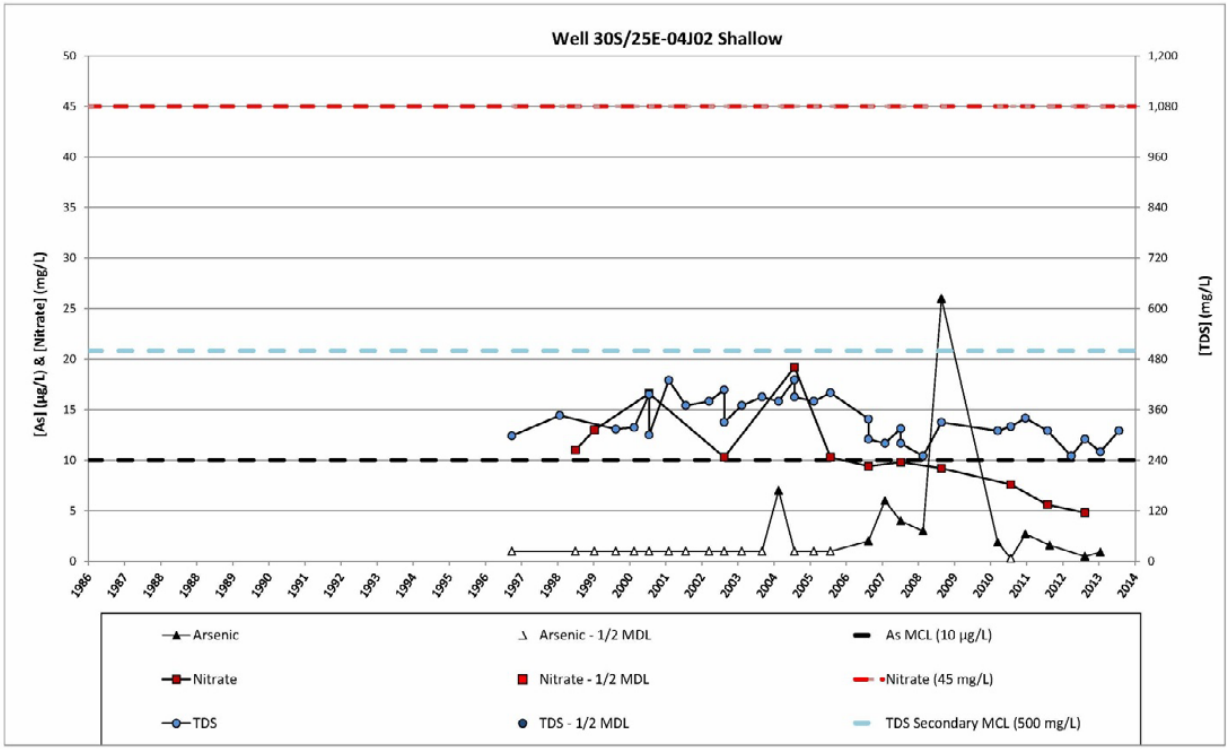
Township: 30 S

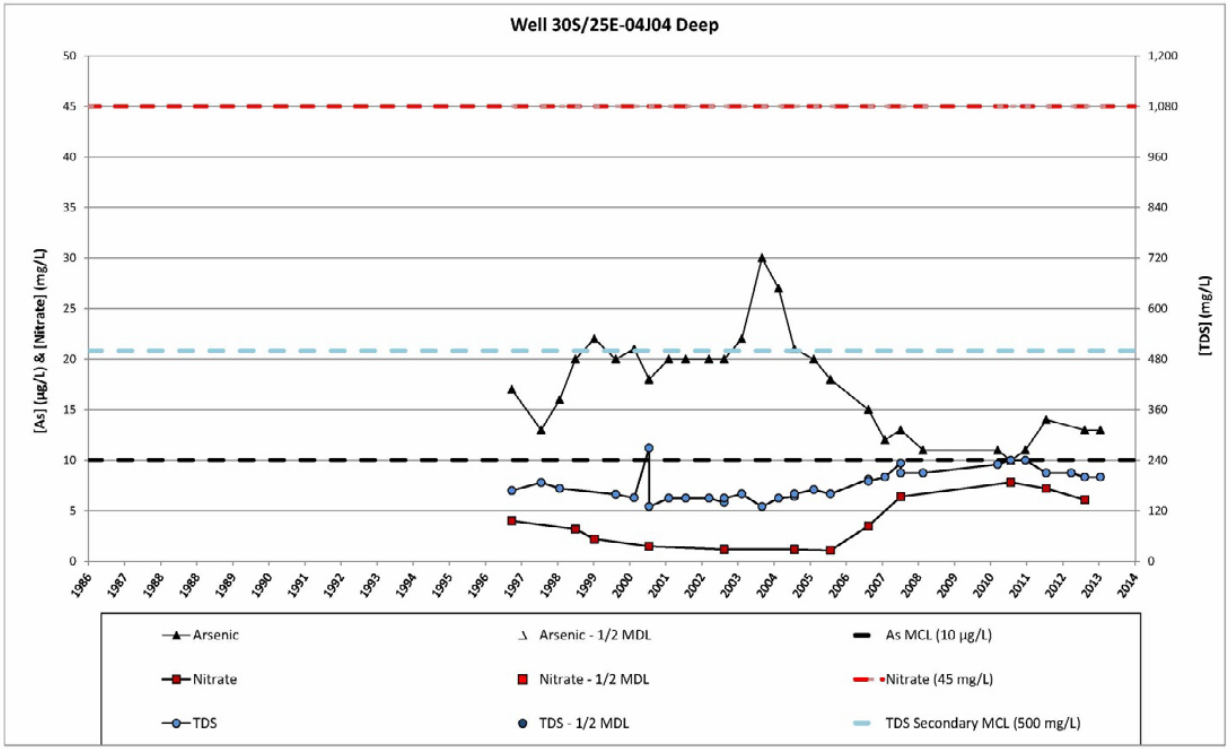
Section: 25 E

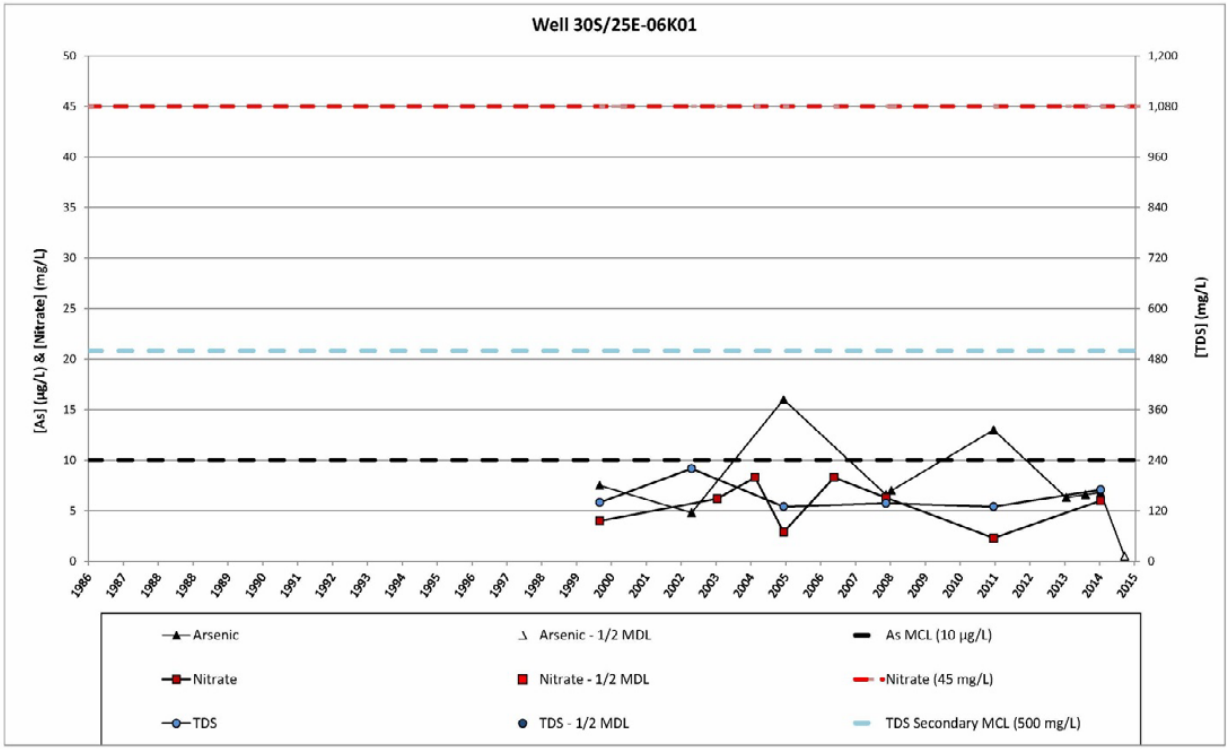

Well 30S/25E-01Q01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

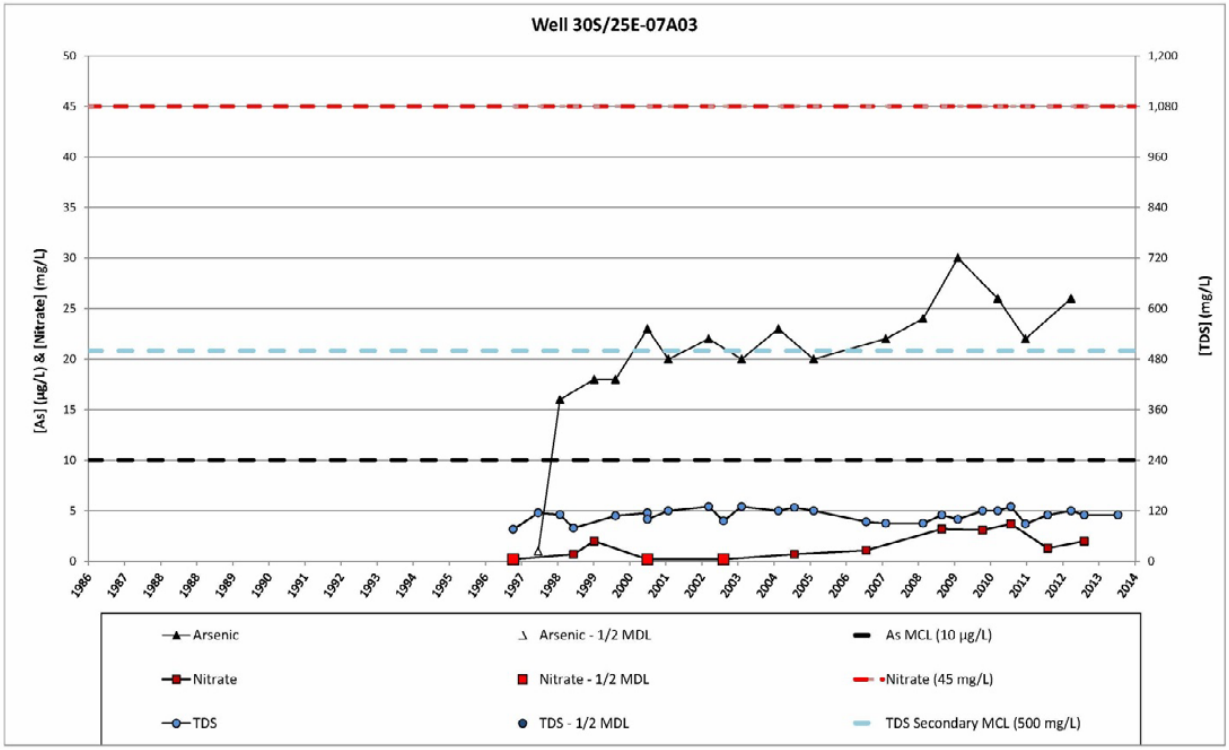

Well 30S/25E-03Q02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

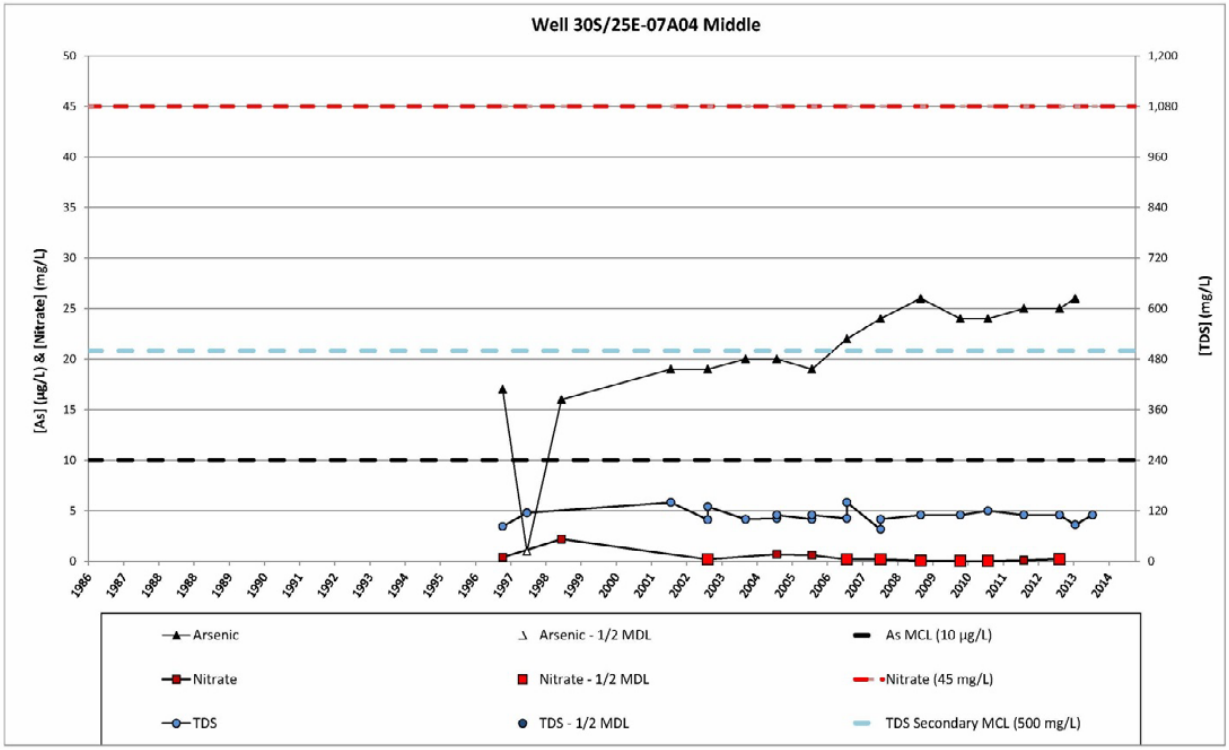

Well 30S/25E-03R01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

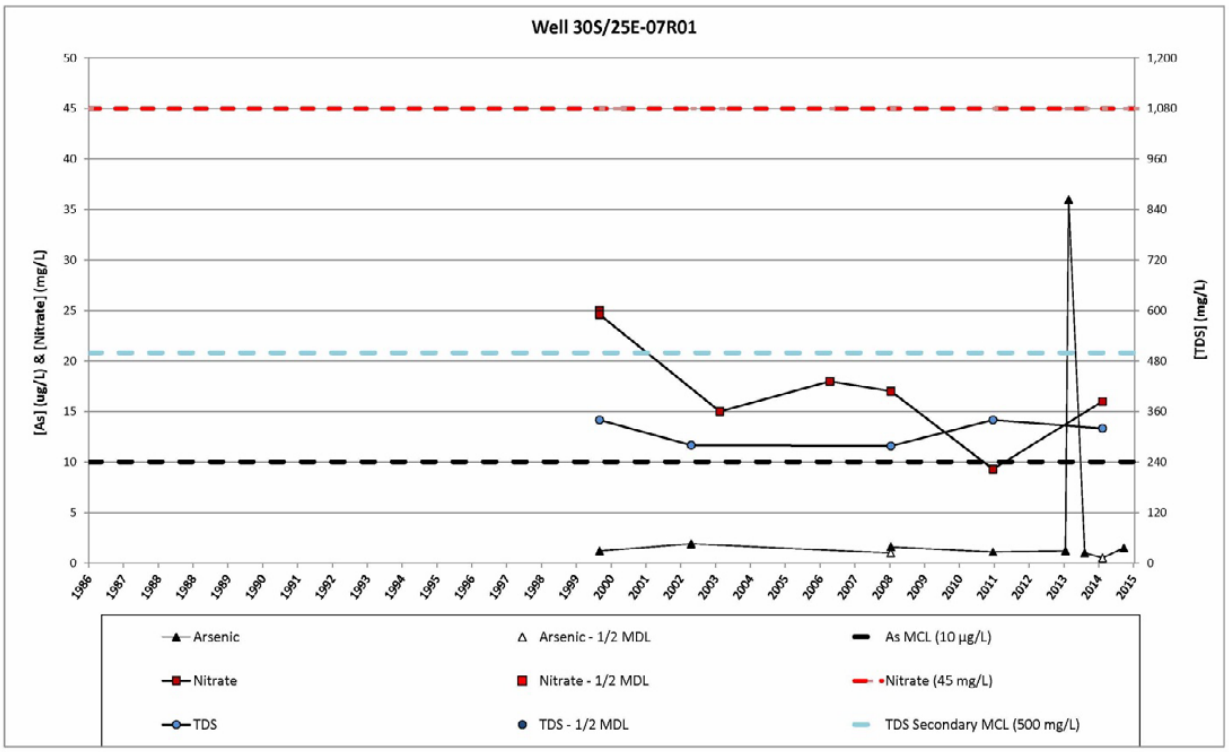

Well 30S/25E-04J02 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

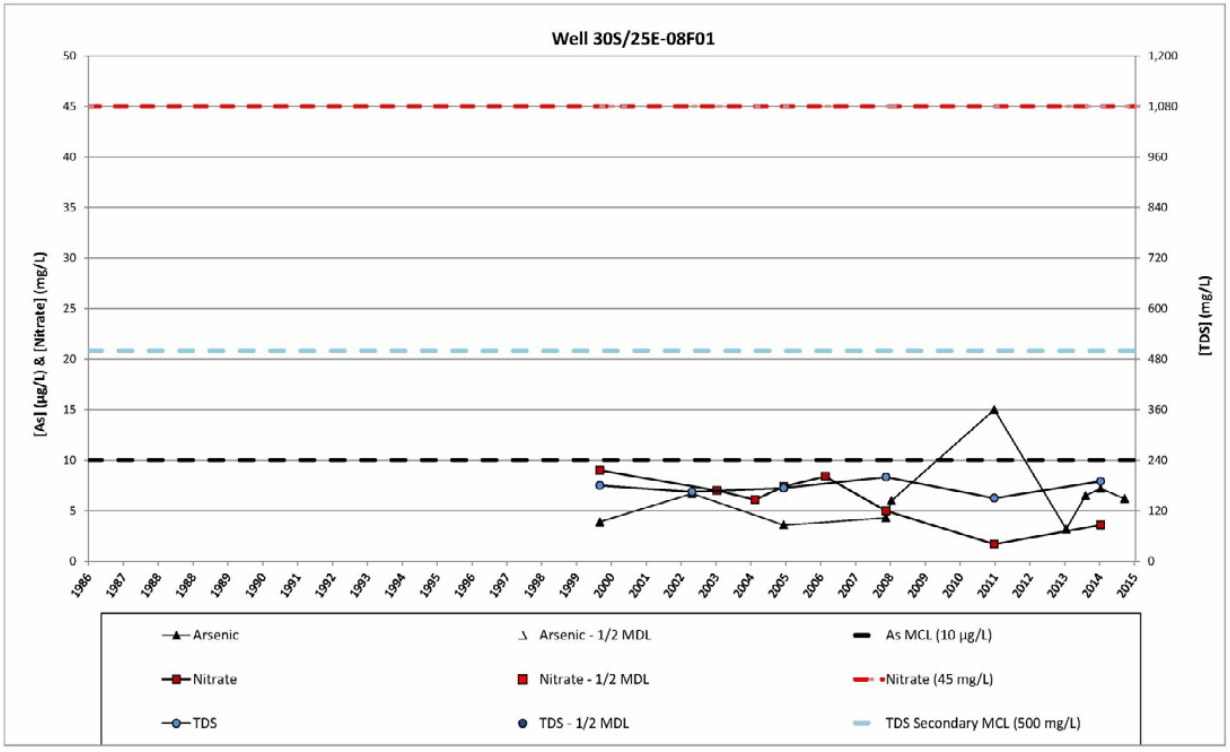

Well 30S/25E-04J04 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

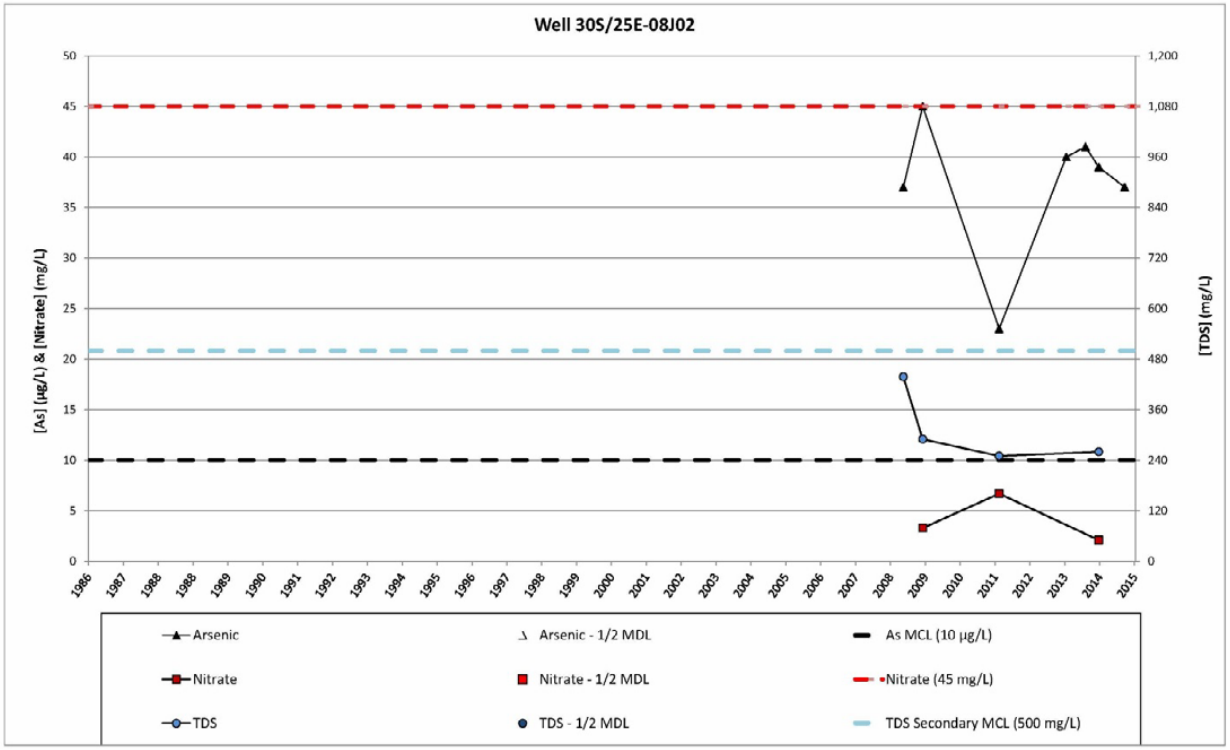

Well 30S/25E-06K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

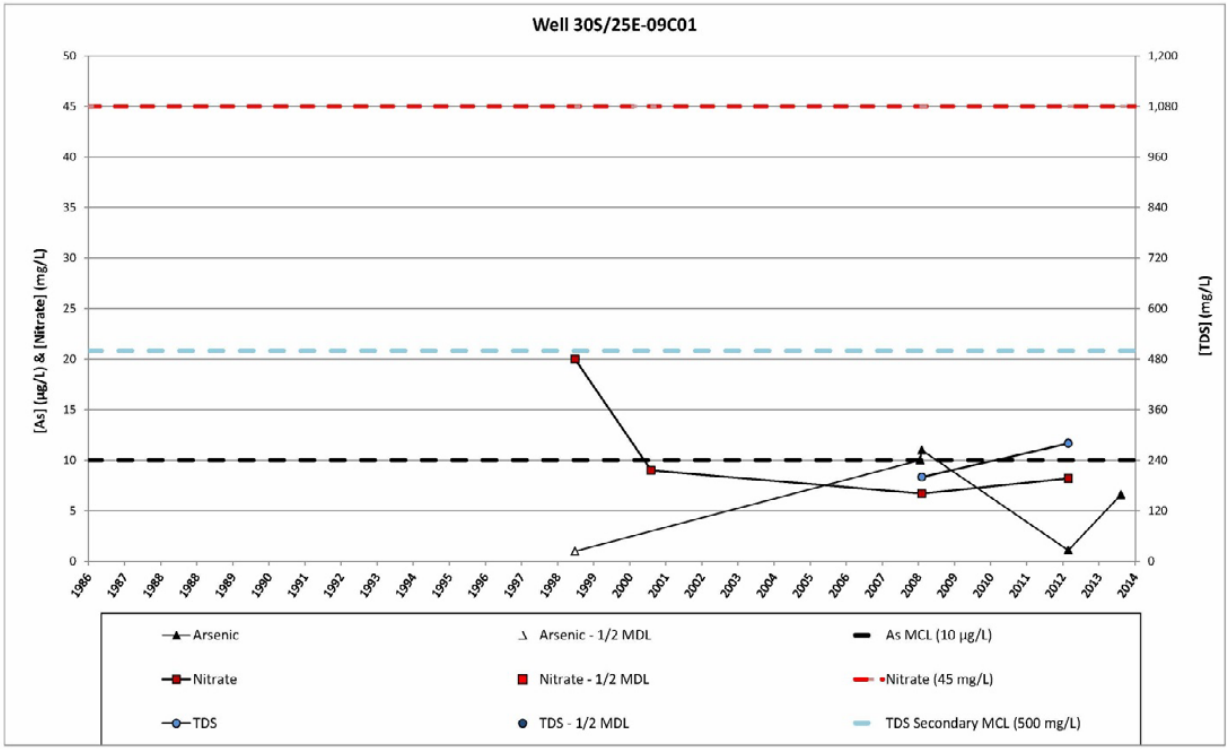

Well 30S/25E-07A03
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

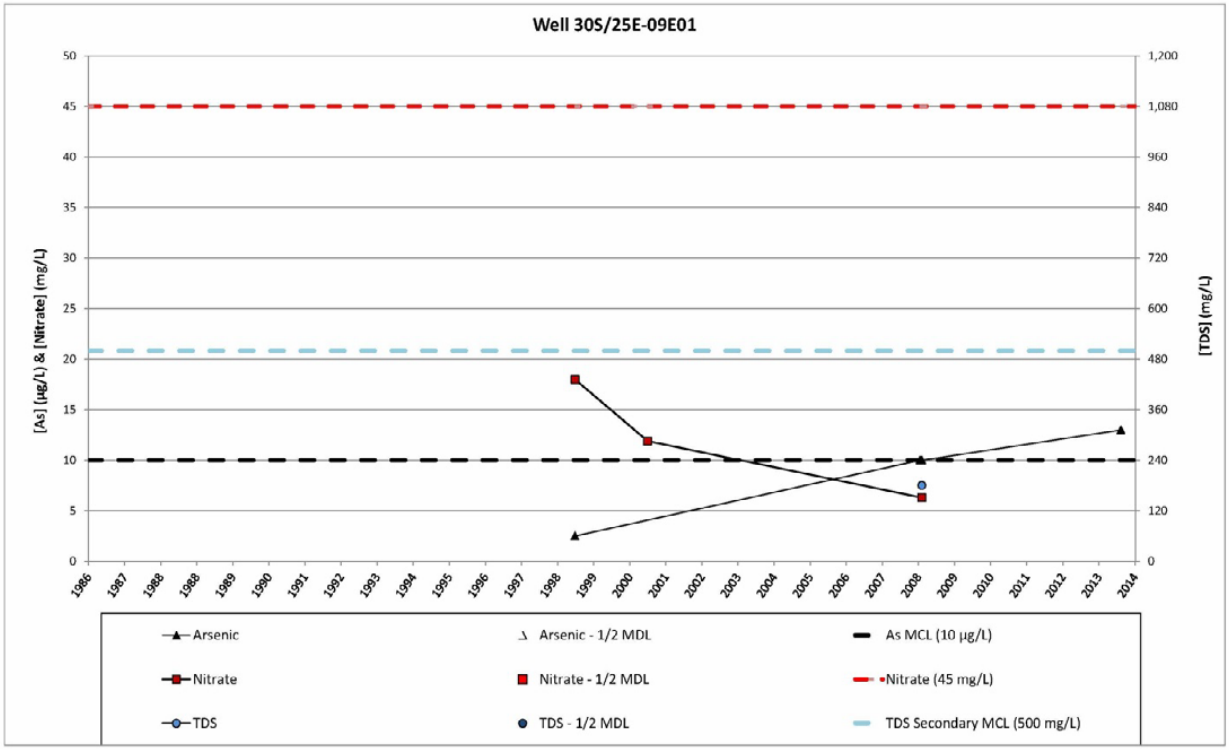

Well 30S/25E-07A04 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

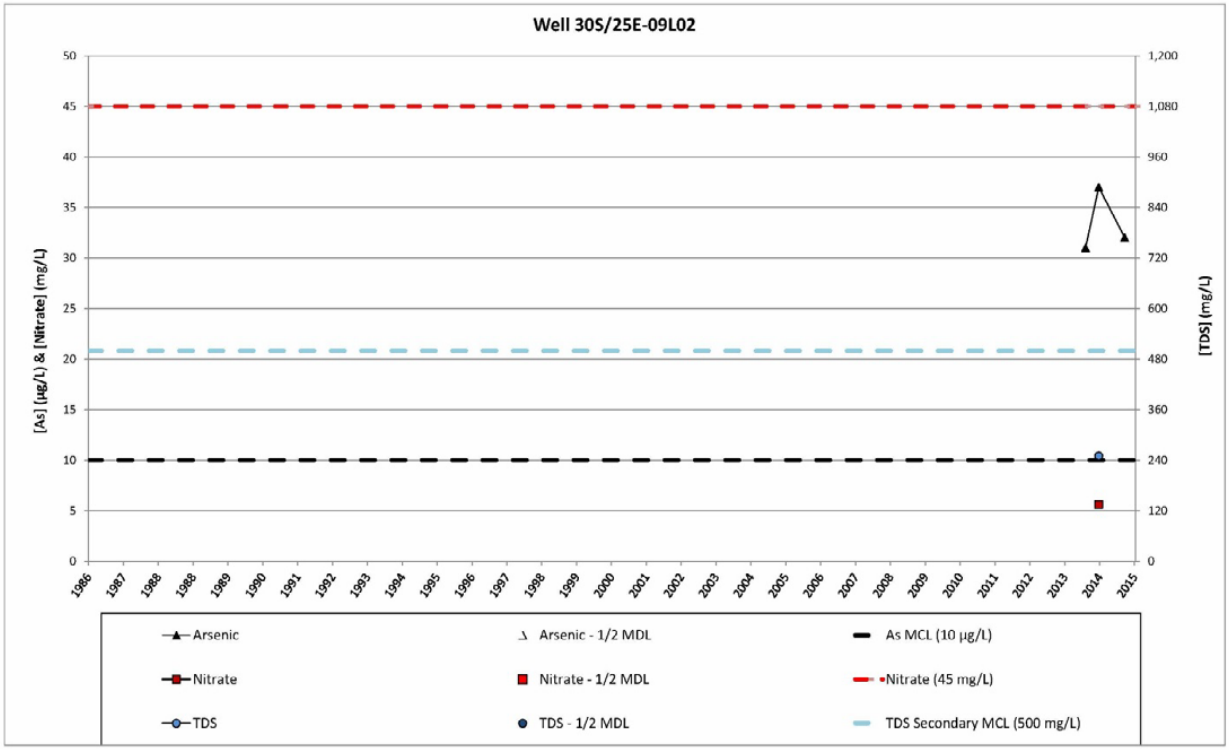

Well 30S/25E-07R01
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

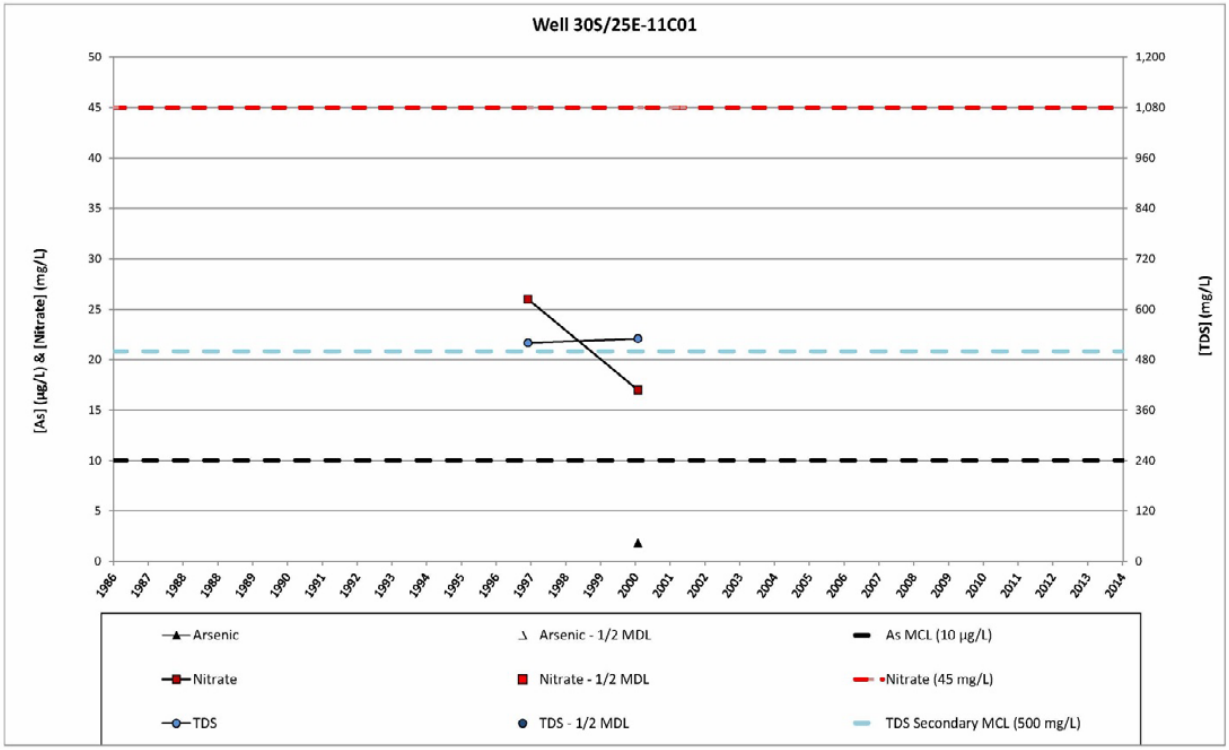

Well 30S/25E-08F01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

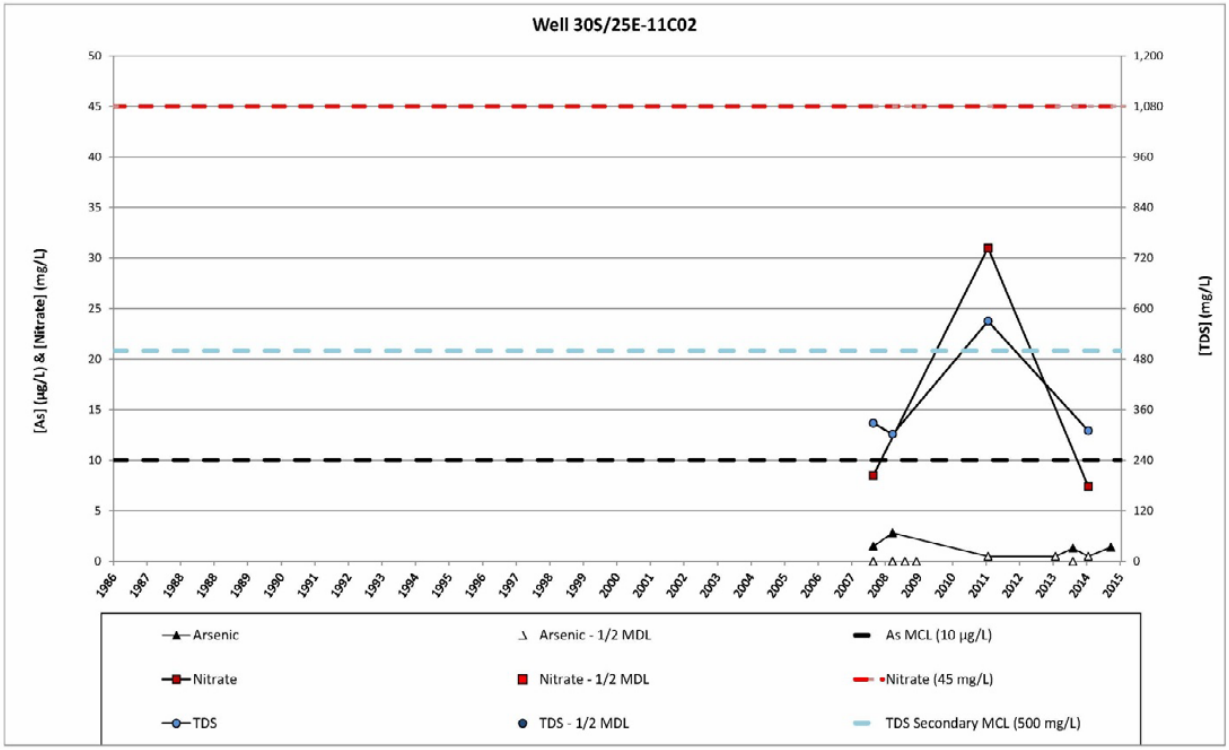

Well 30S/25E-08J02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

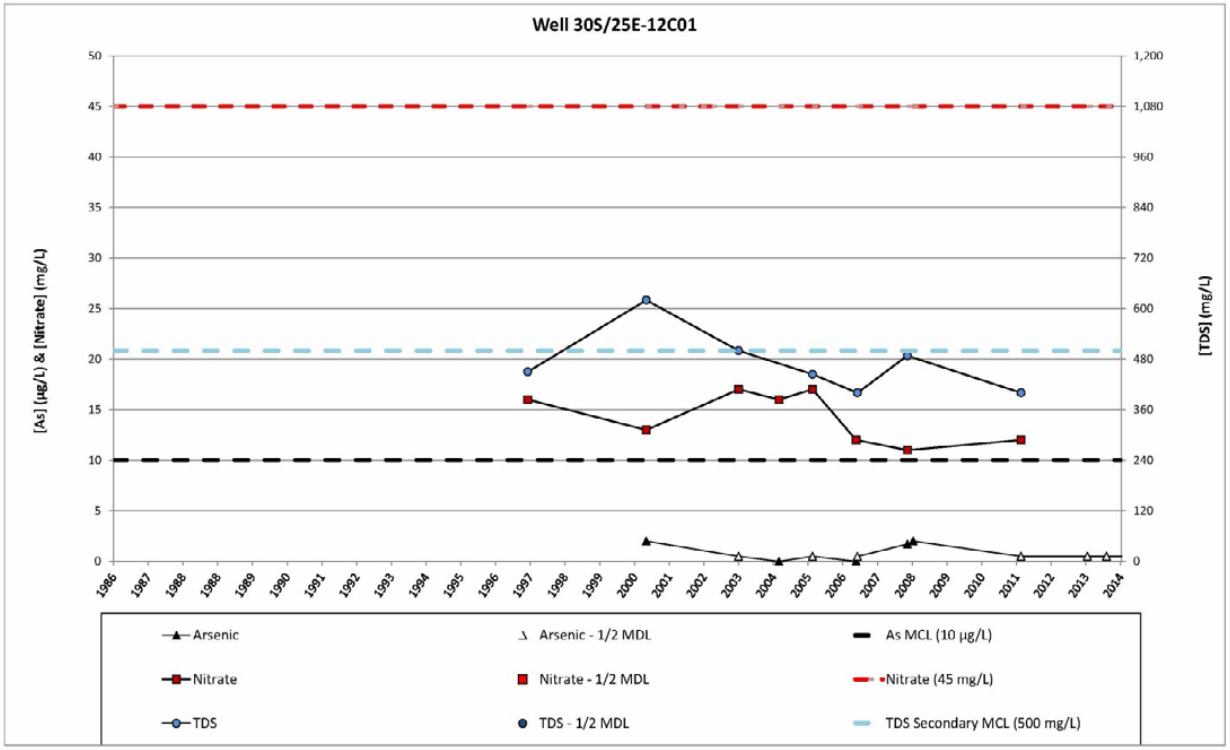

Well 30S/25E-09C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

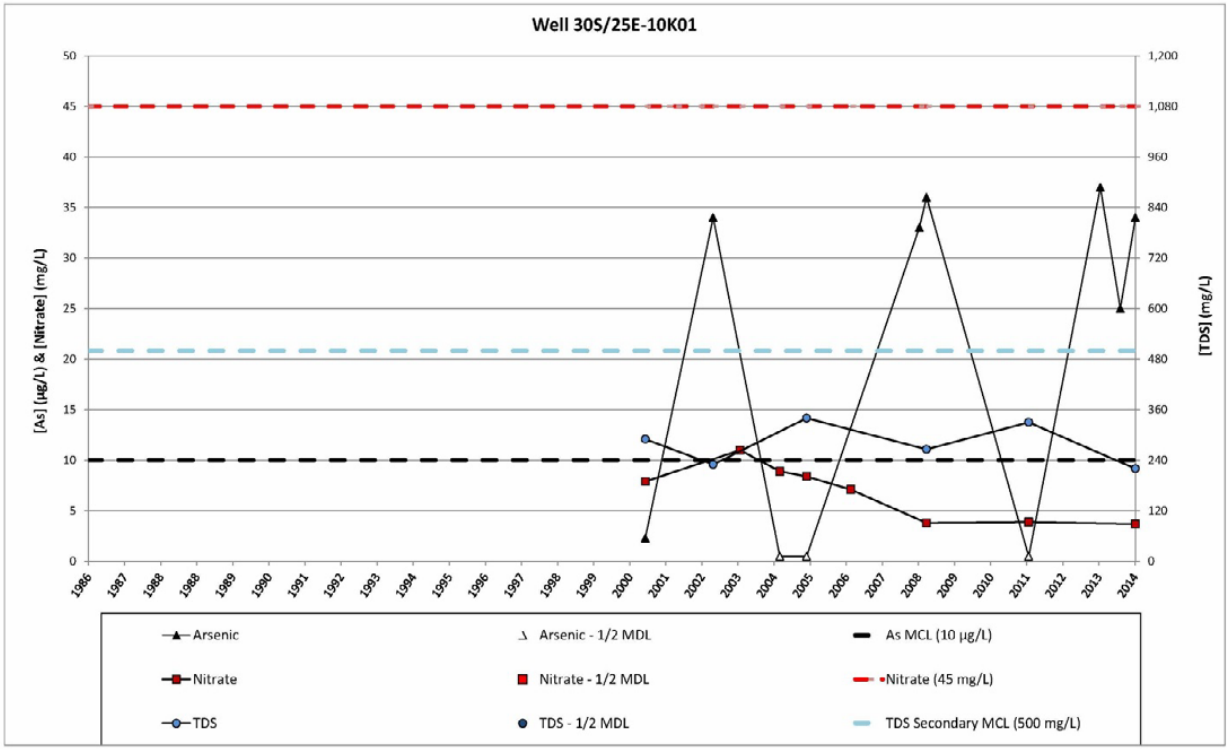

Well 30S/25E-09E01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

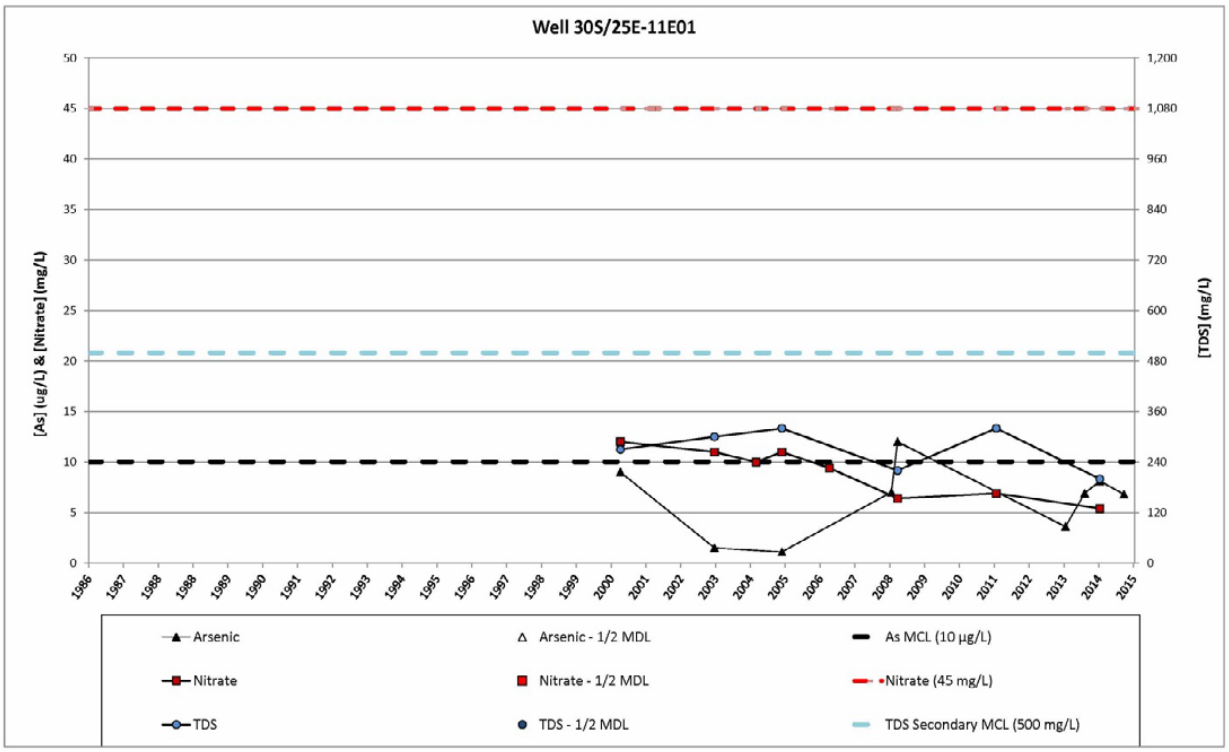

Well 30S/25E-09L02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

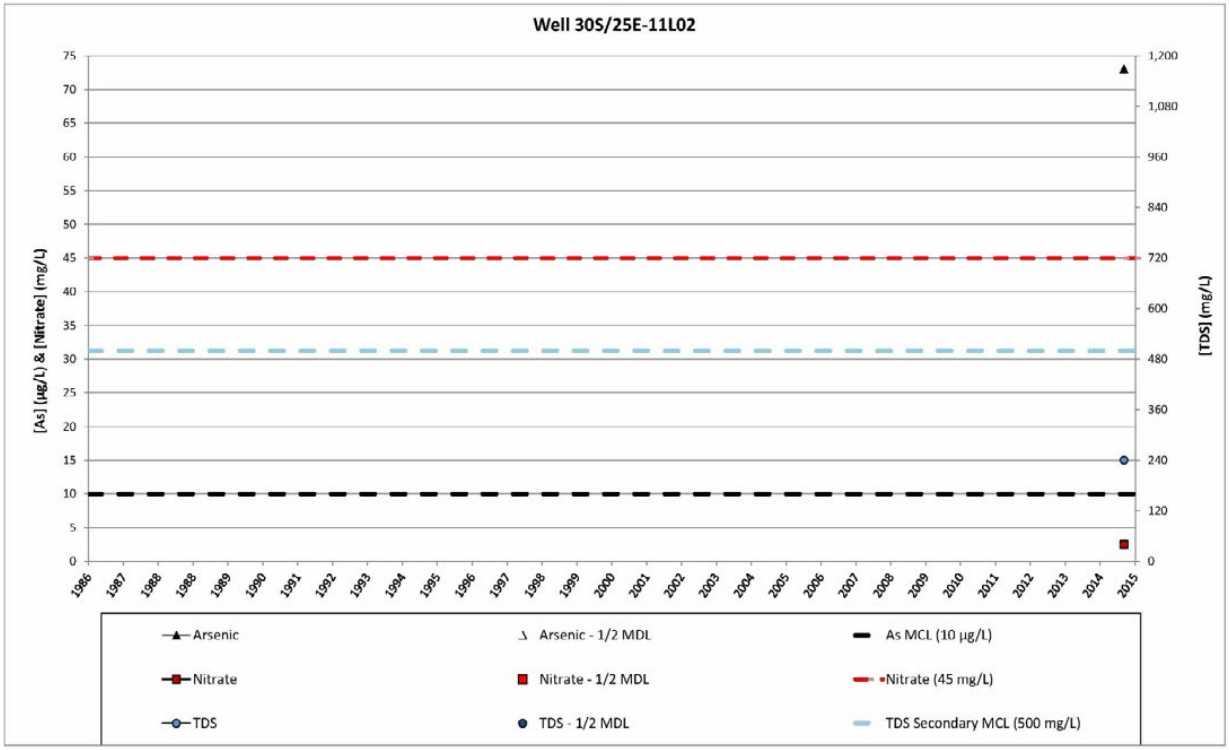

Well 30S/25E-11C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

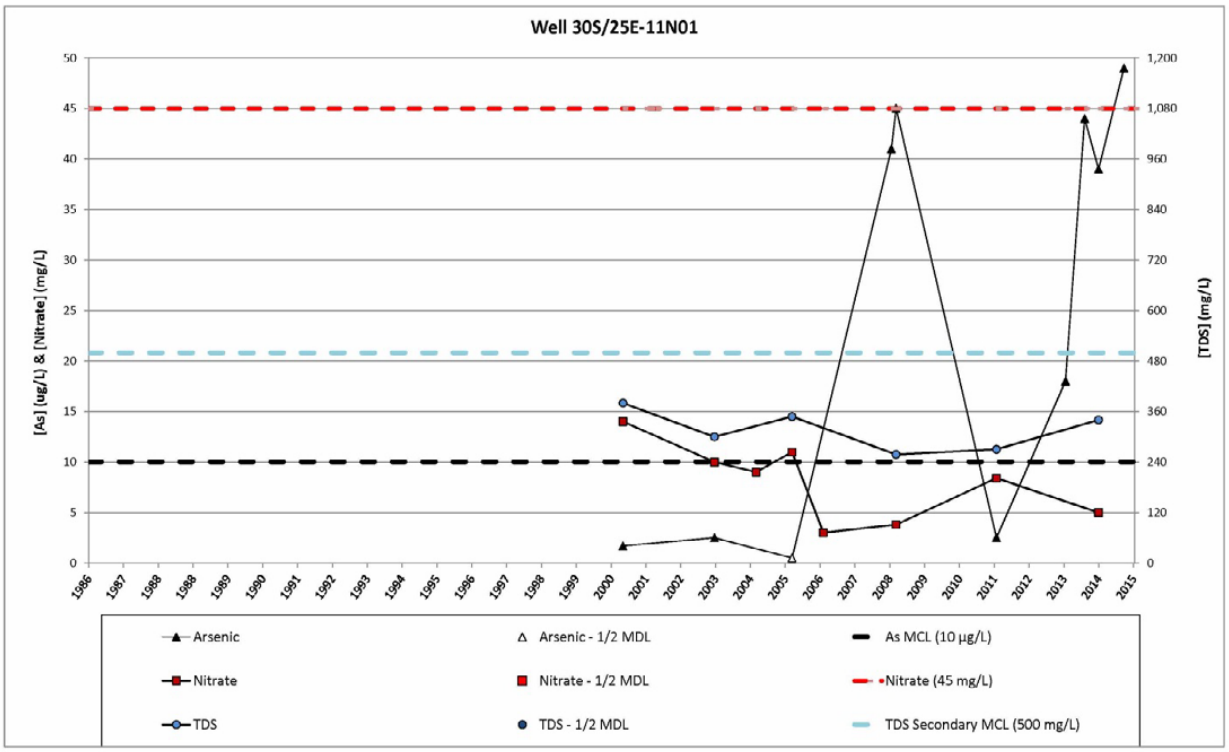

Well 30S/25E-11C02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

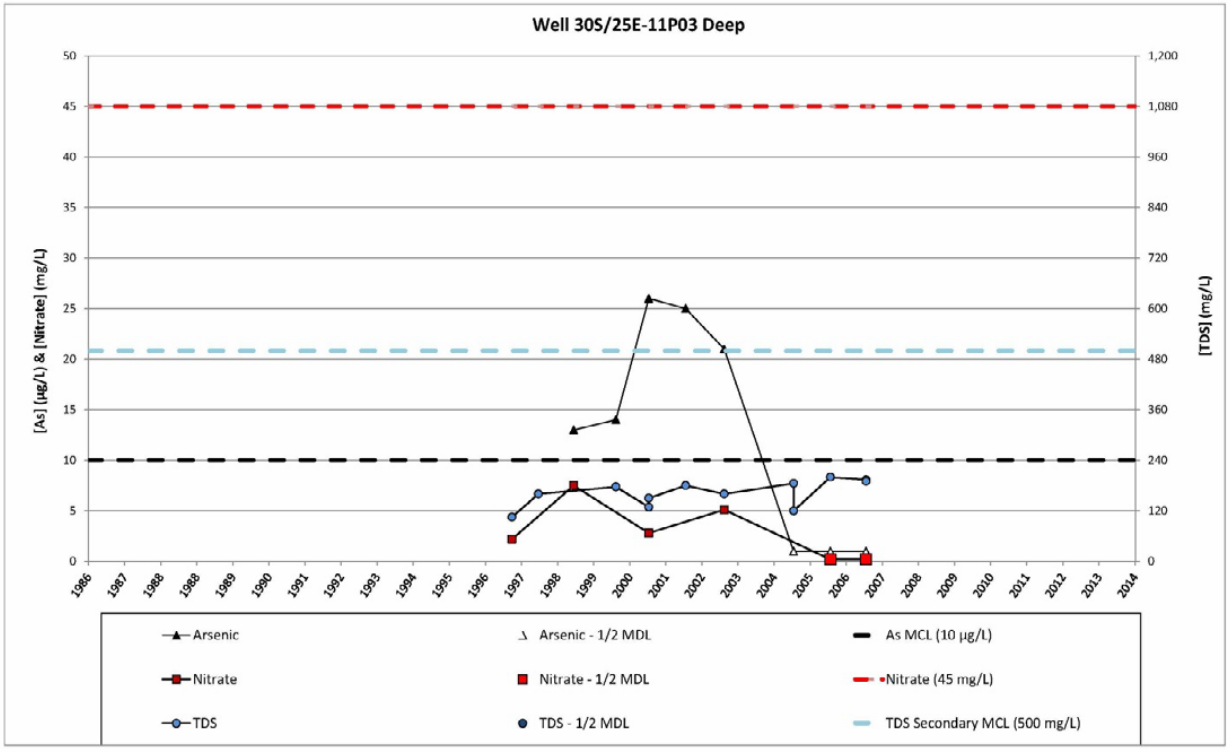

Well 30S/25E-12C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

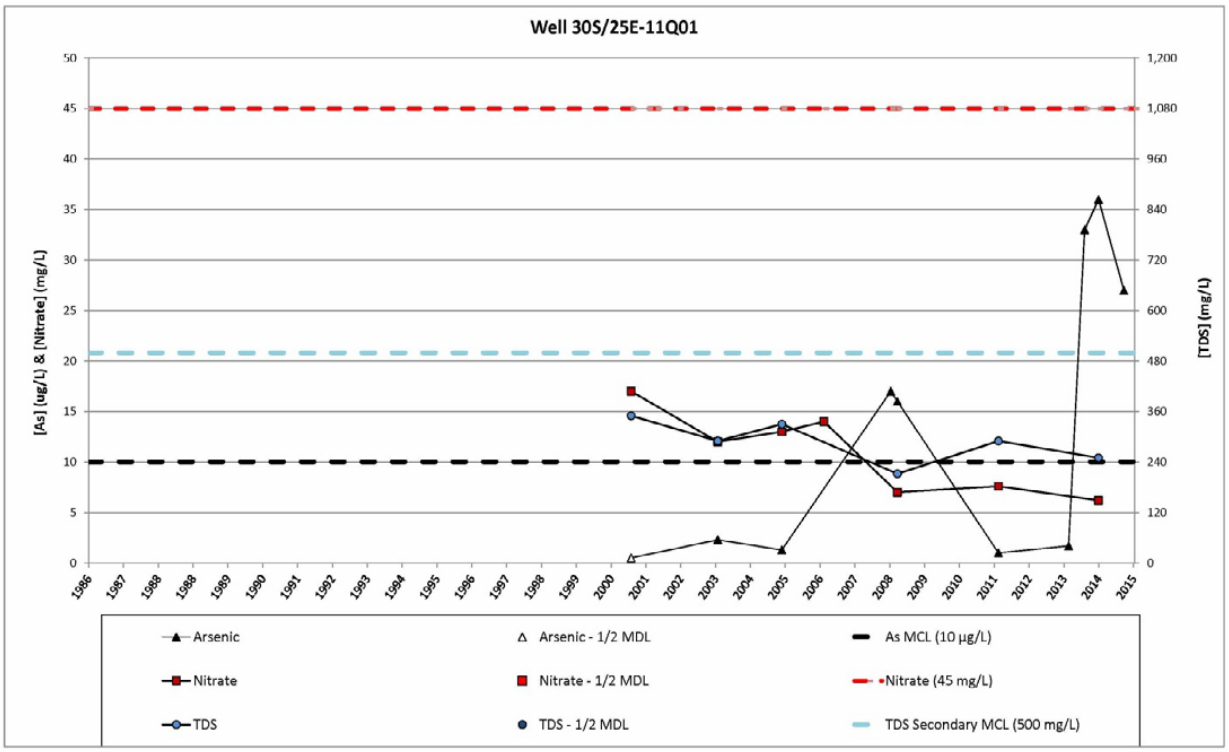

Well 30S/25E-10K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

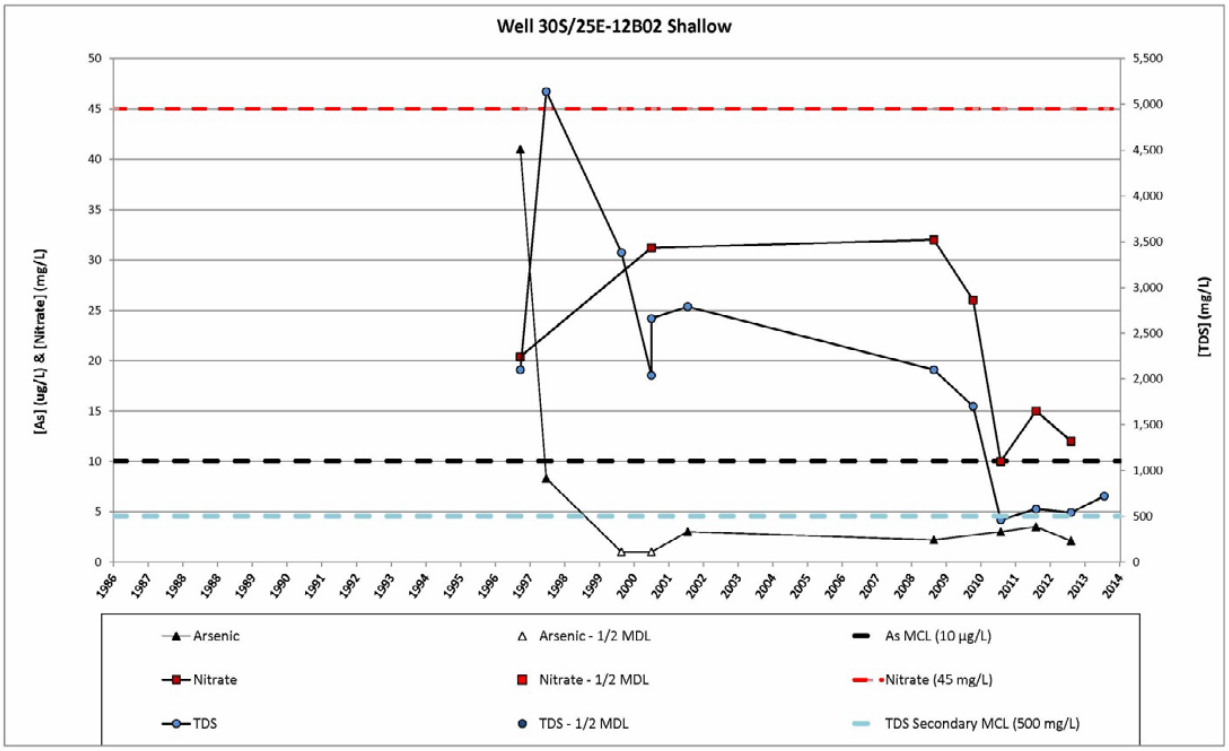

Well 30S/25E-11E01
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

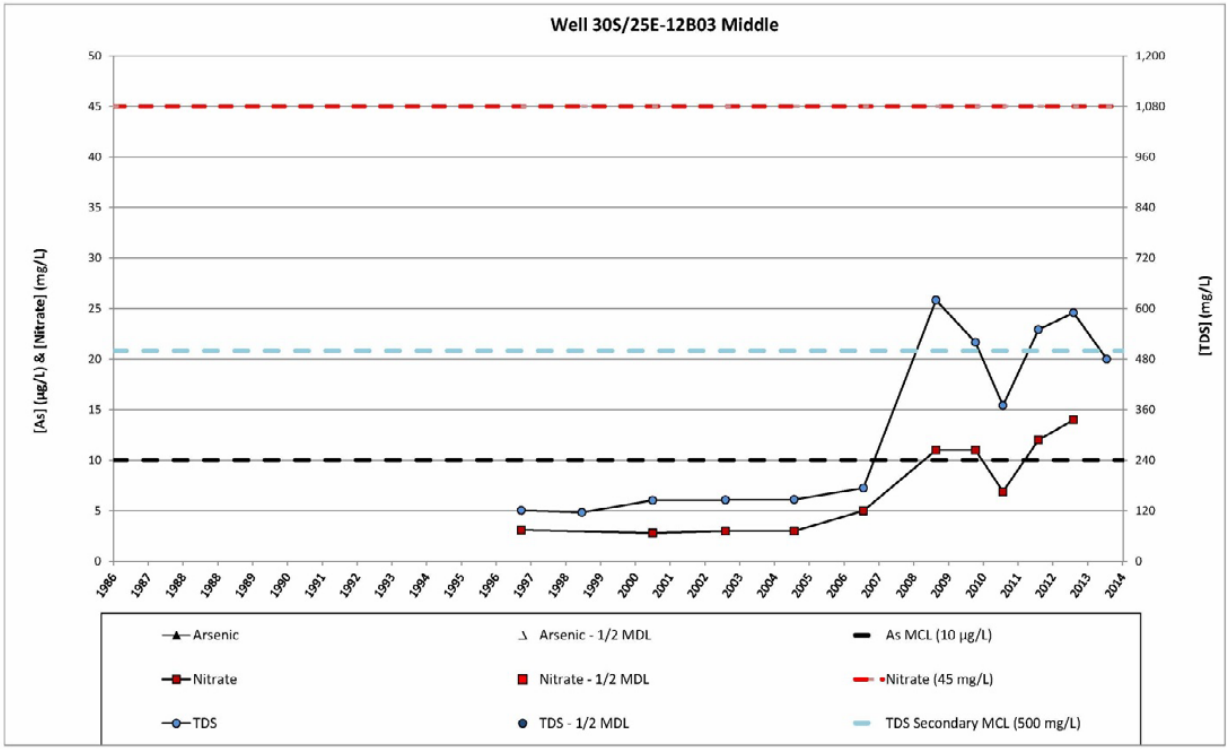

Well 30S/25E-11L02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

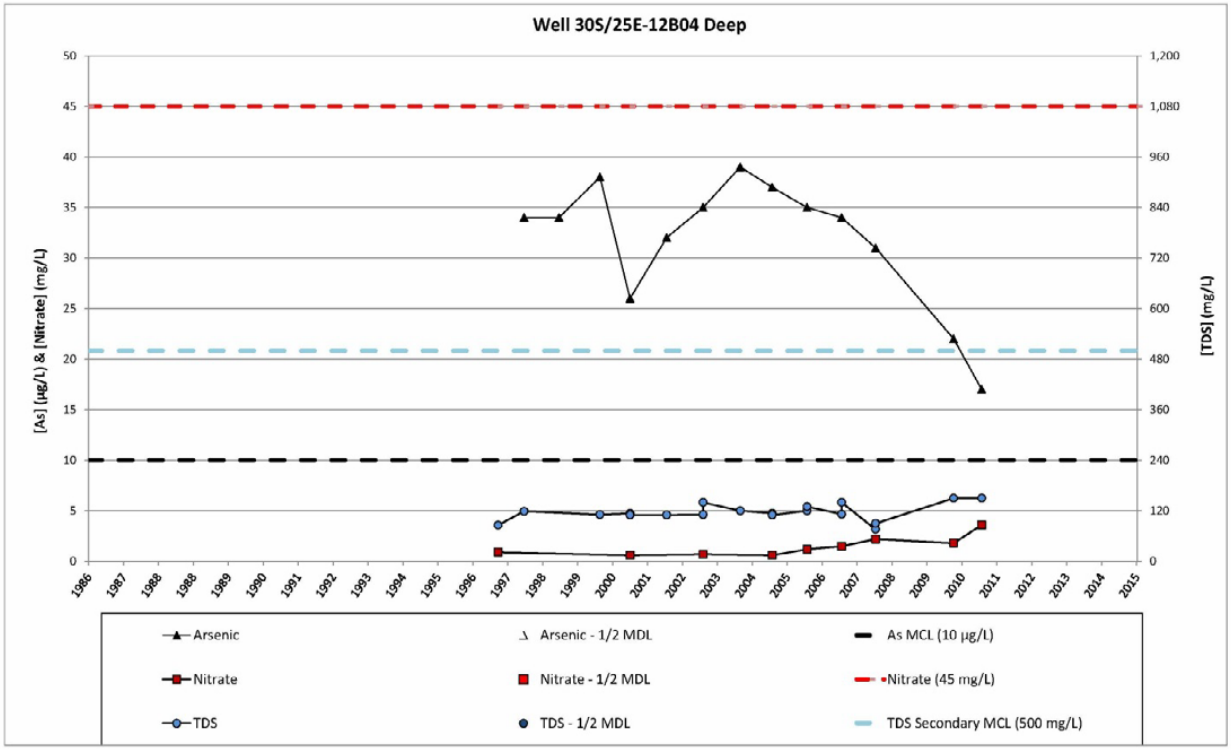

Well 30S/25E-11N01
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

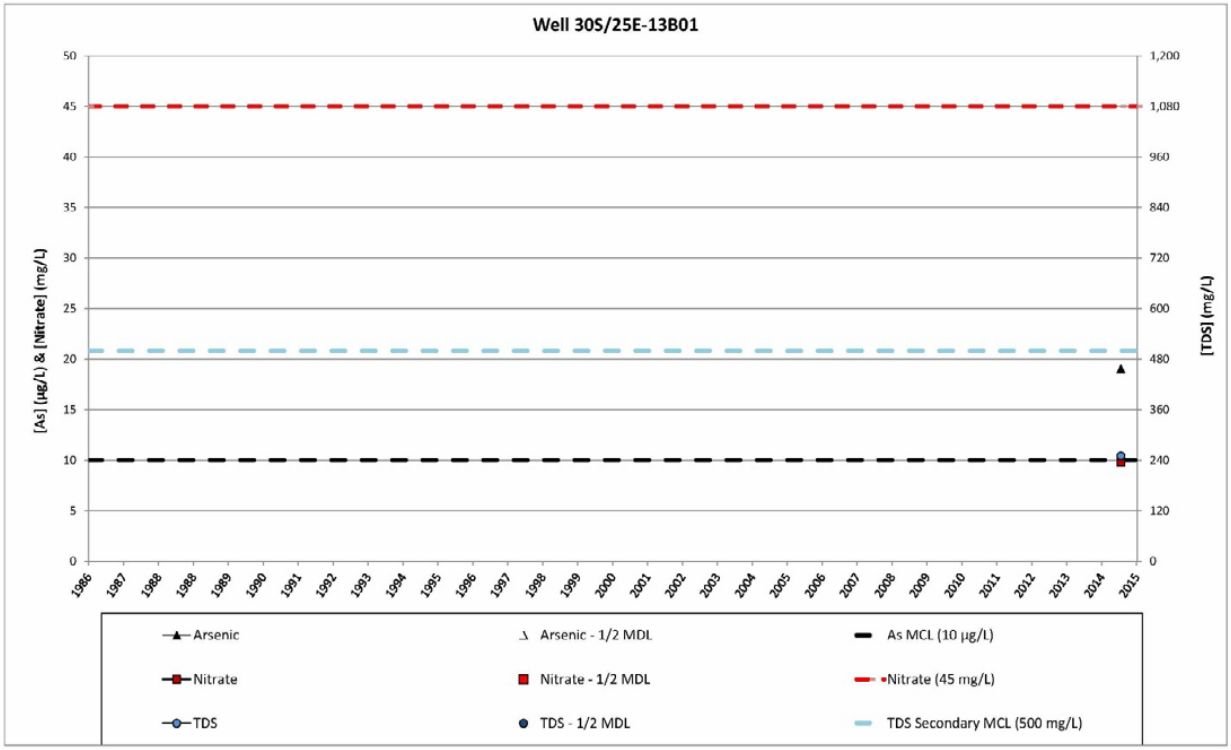

Well 30S/25E-11P03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

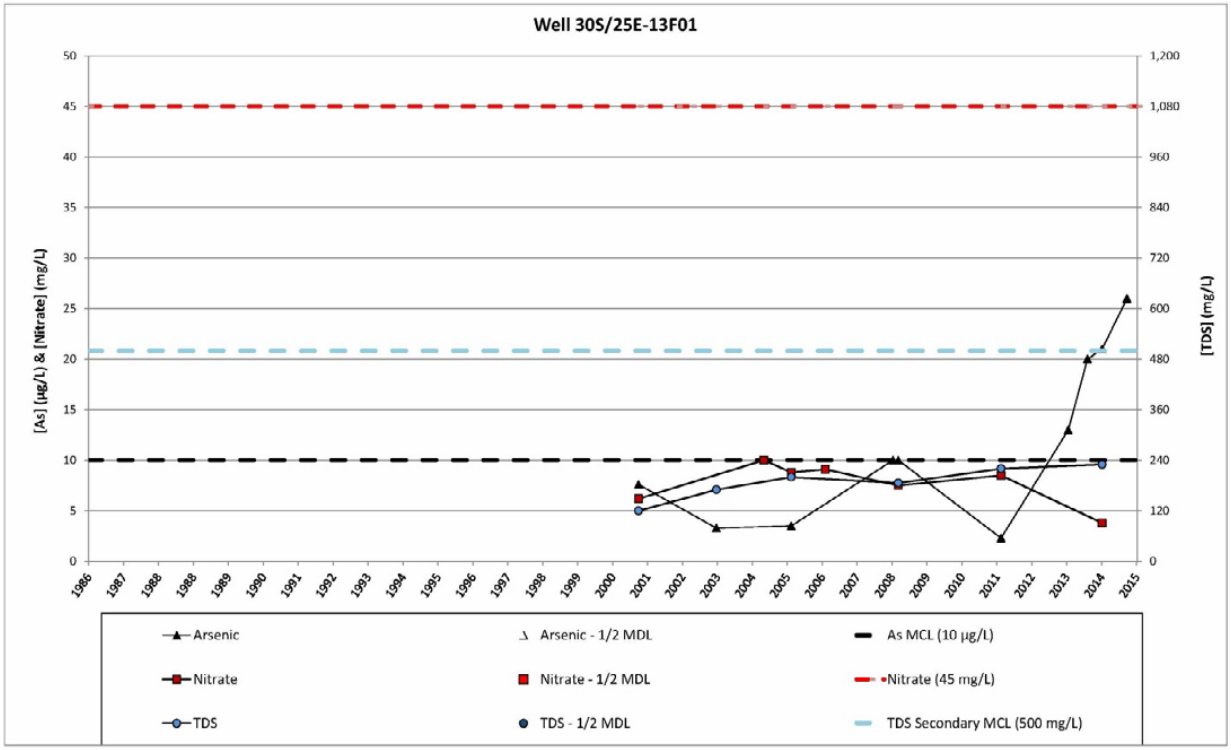

Well 30S/25E-11Q01
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

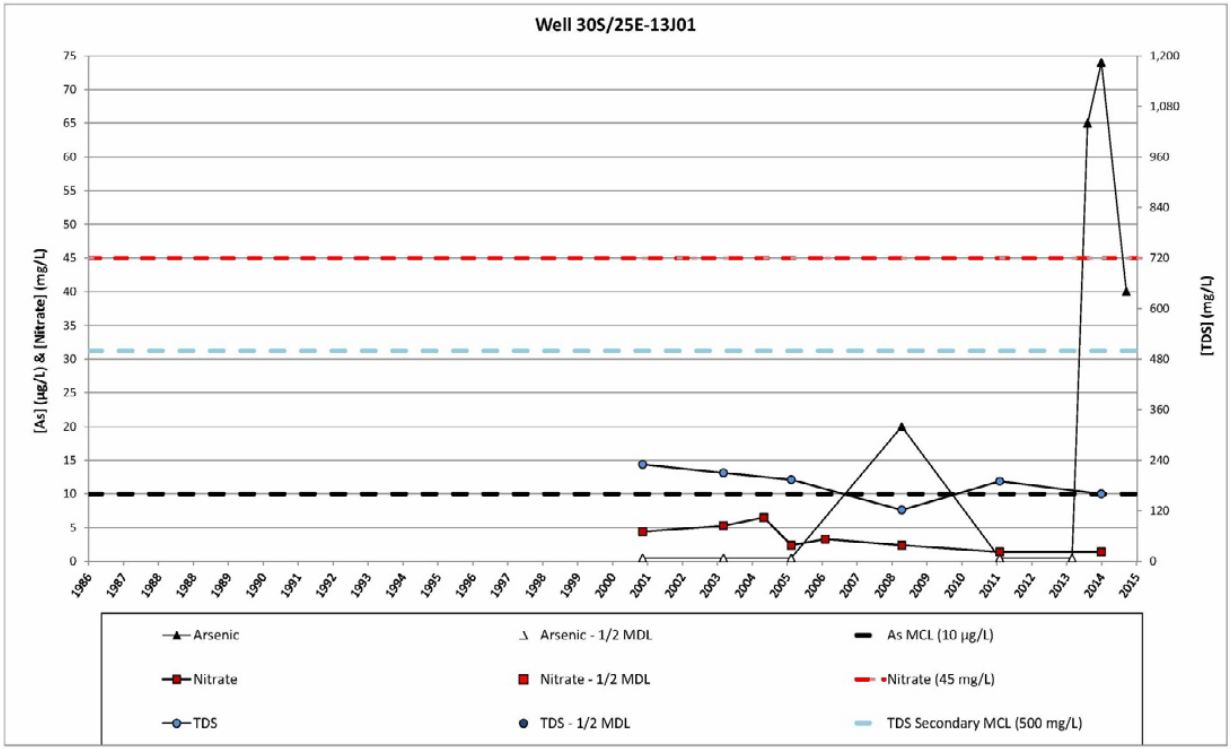

Well 30S/25E-12B02 Shallow
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

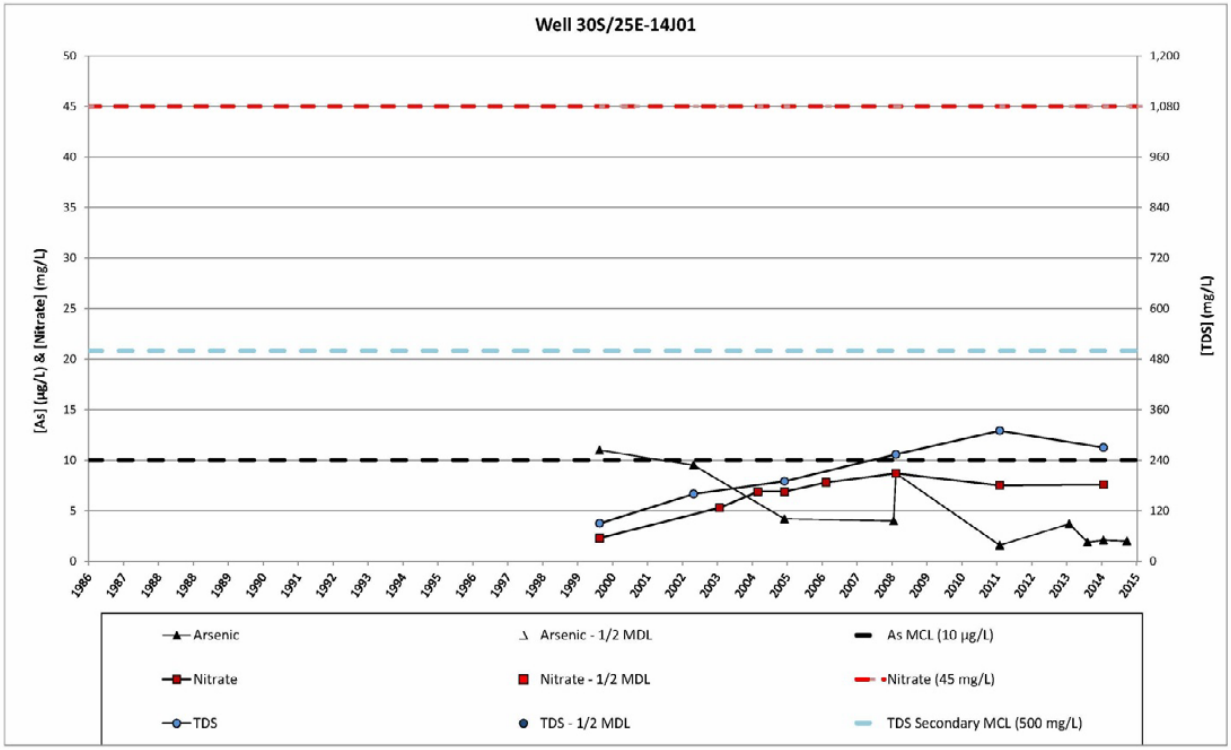

Well 30S/25E-12B03 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

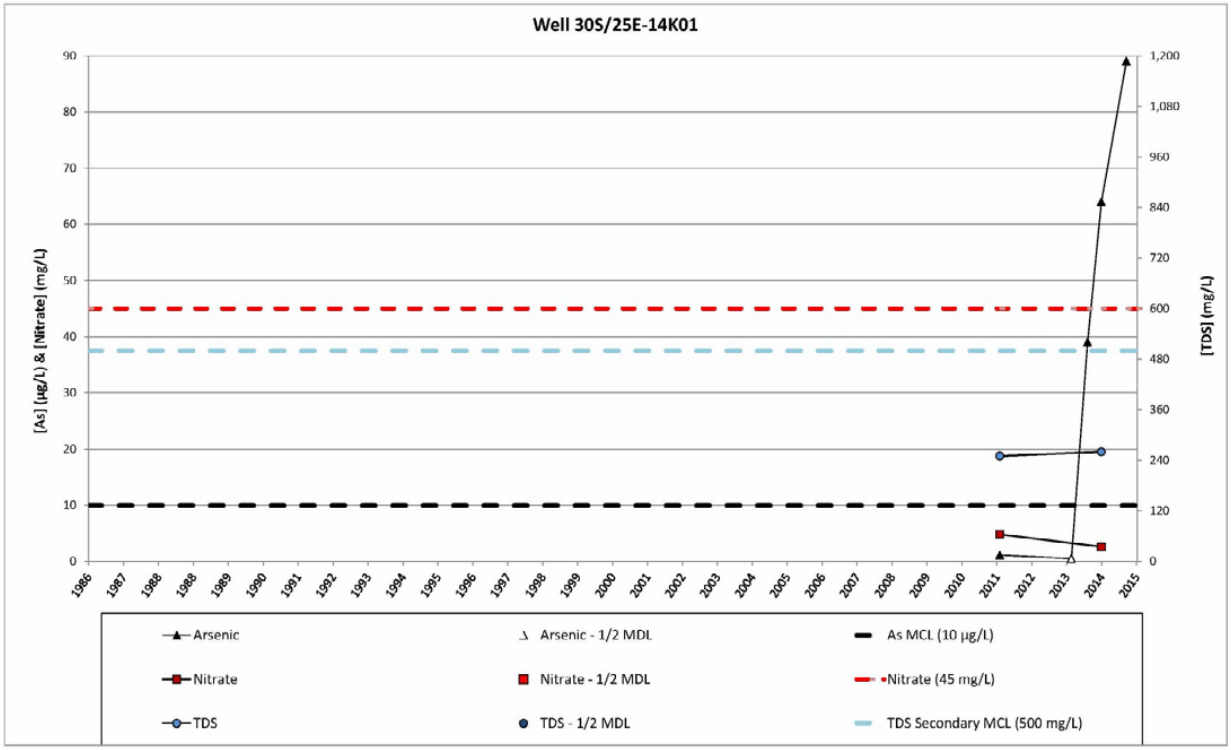

Well 30S/25E-12B04 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

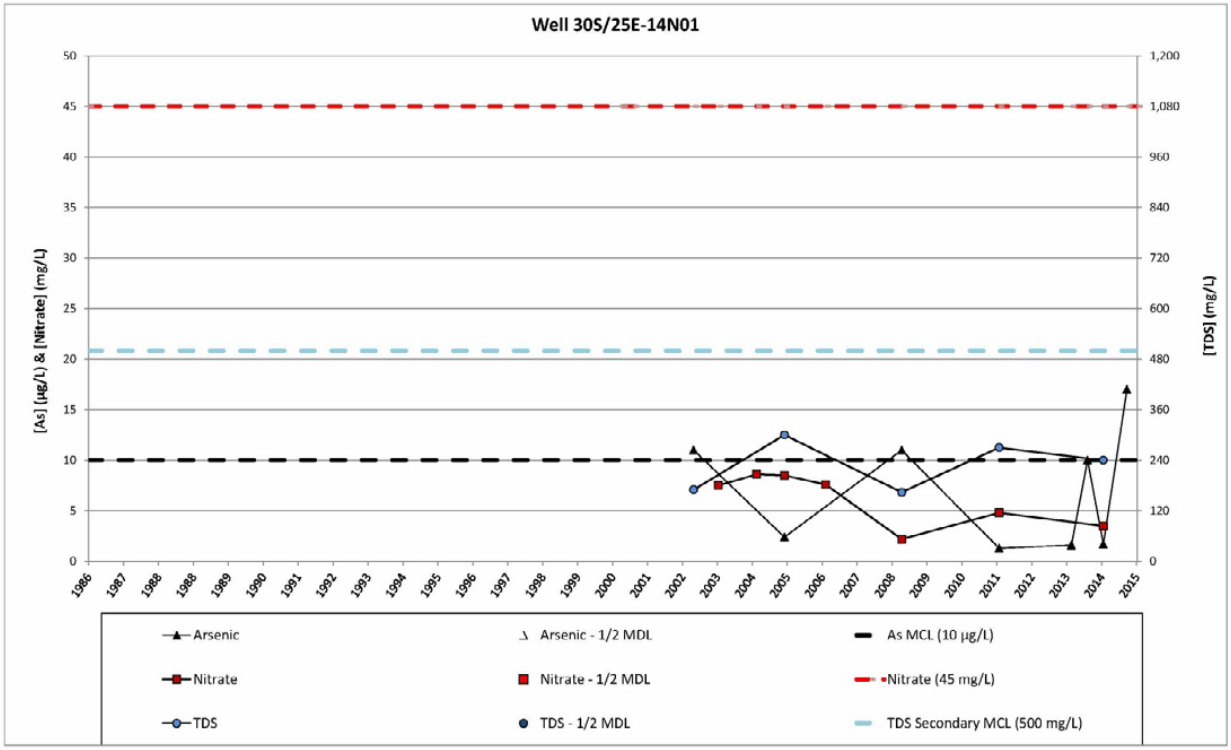

Well 30S/25E-13B01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

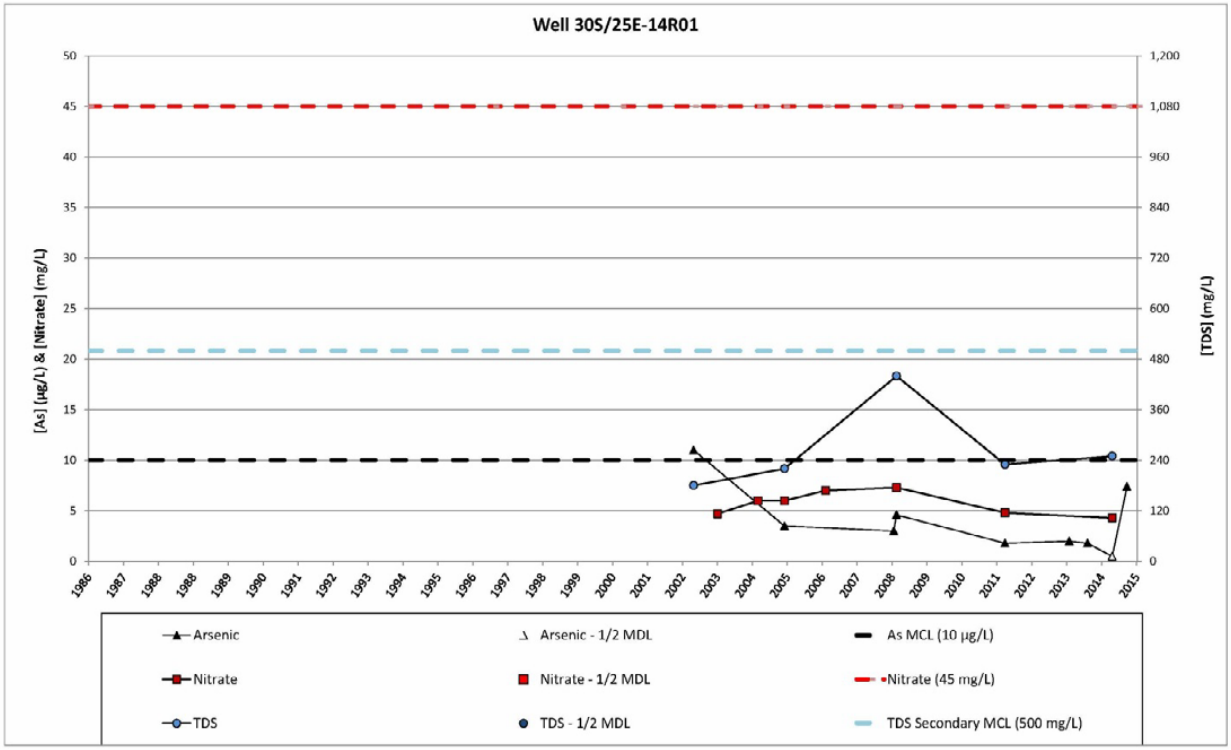

Well 30S/25E-13F01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

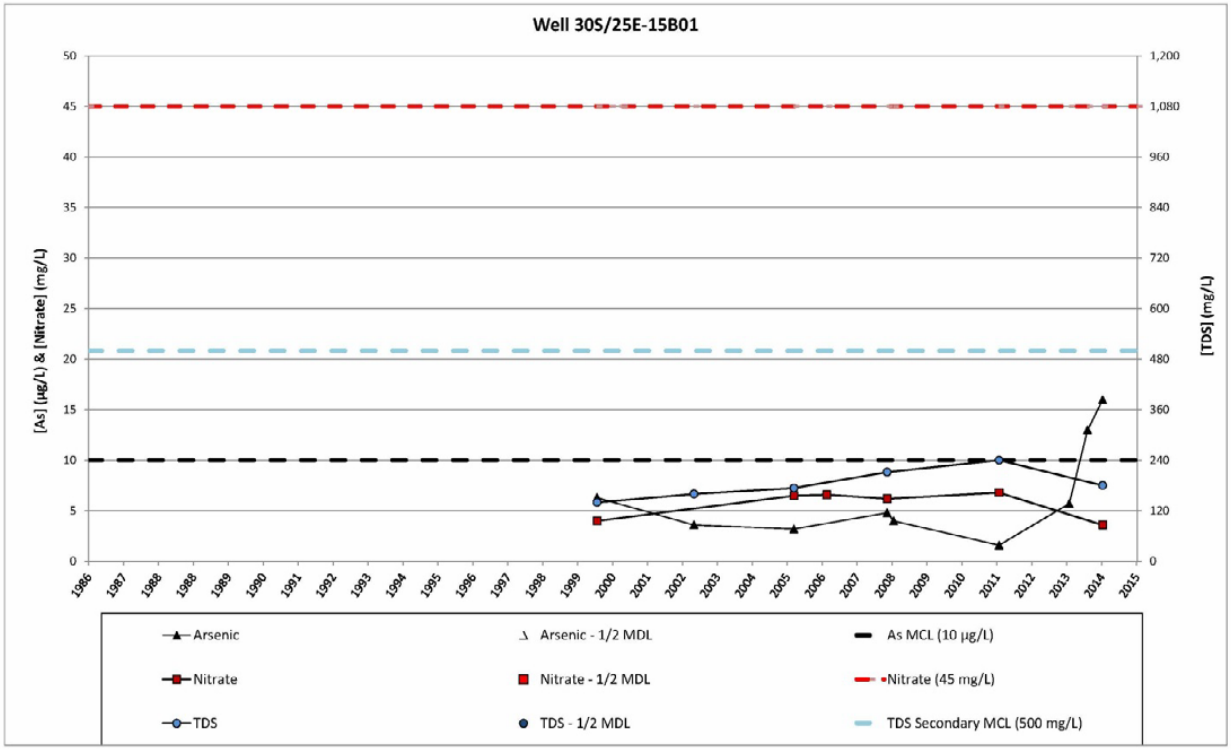

Well 30S/25E-13J01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

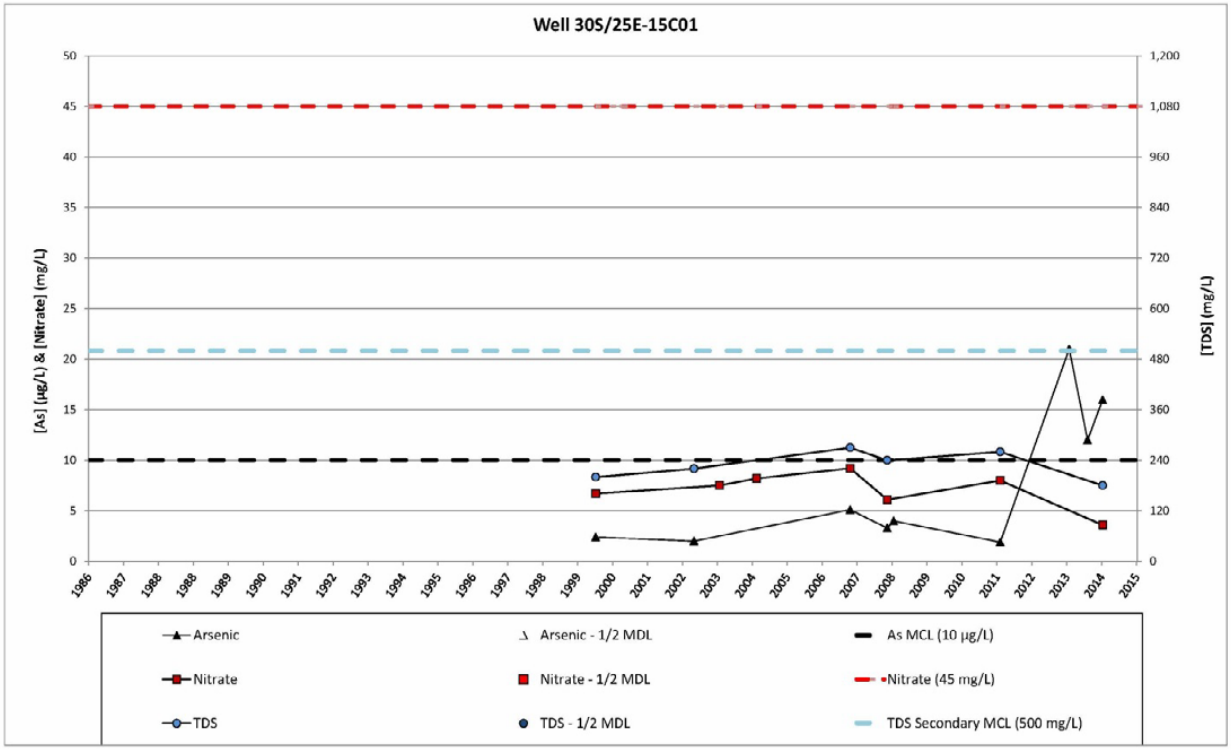

Well 30S/25E-14J01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

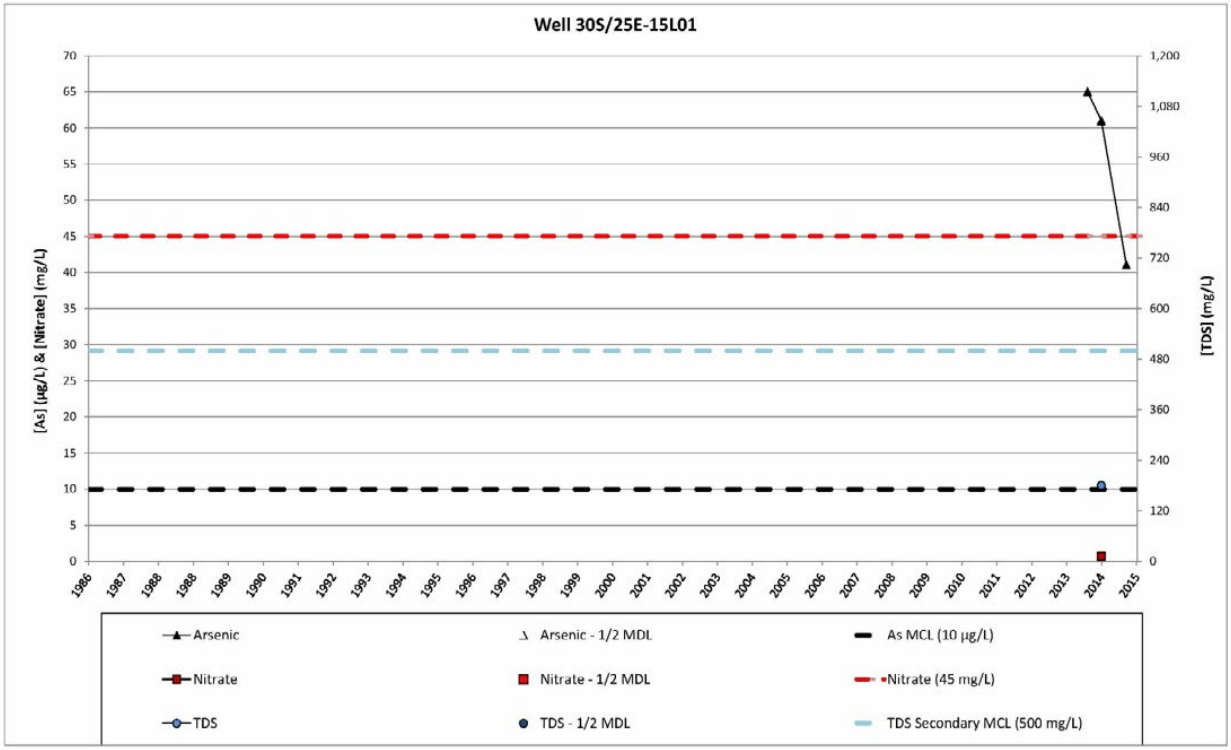

Well 30S/25E-14K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

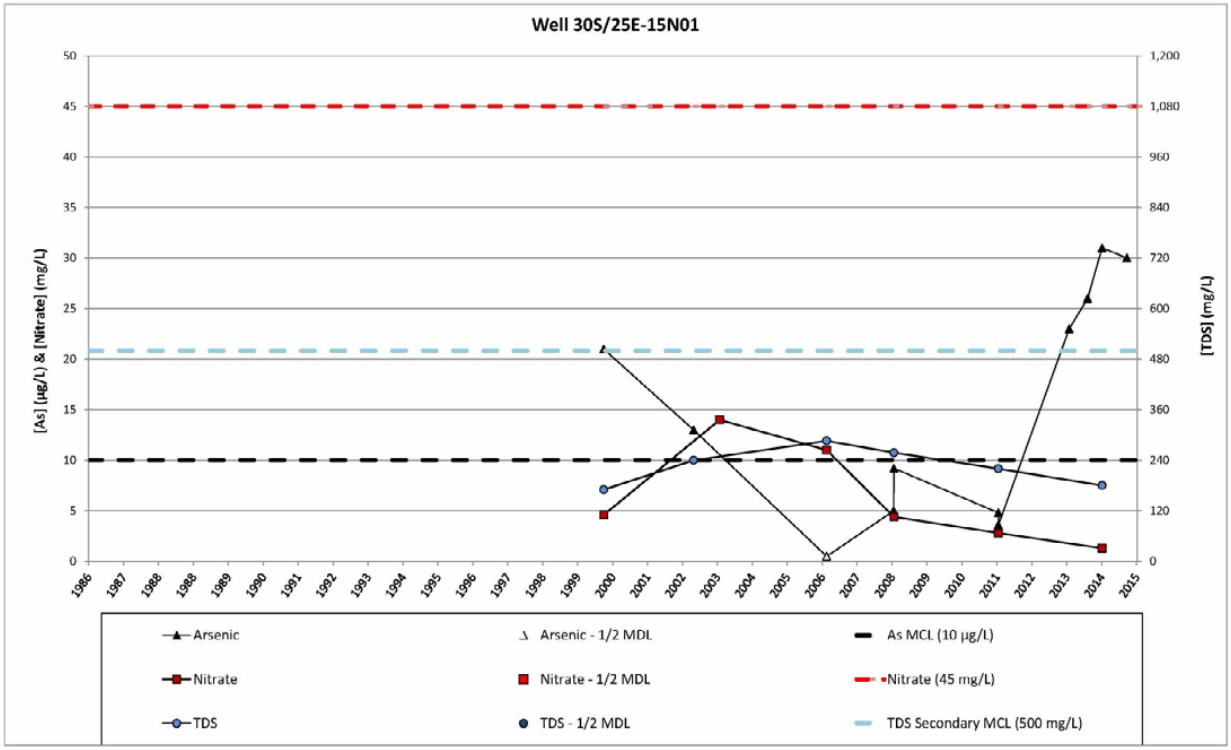

Well 30S/25E-14N01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

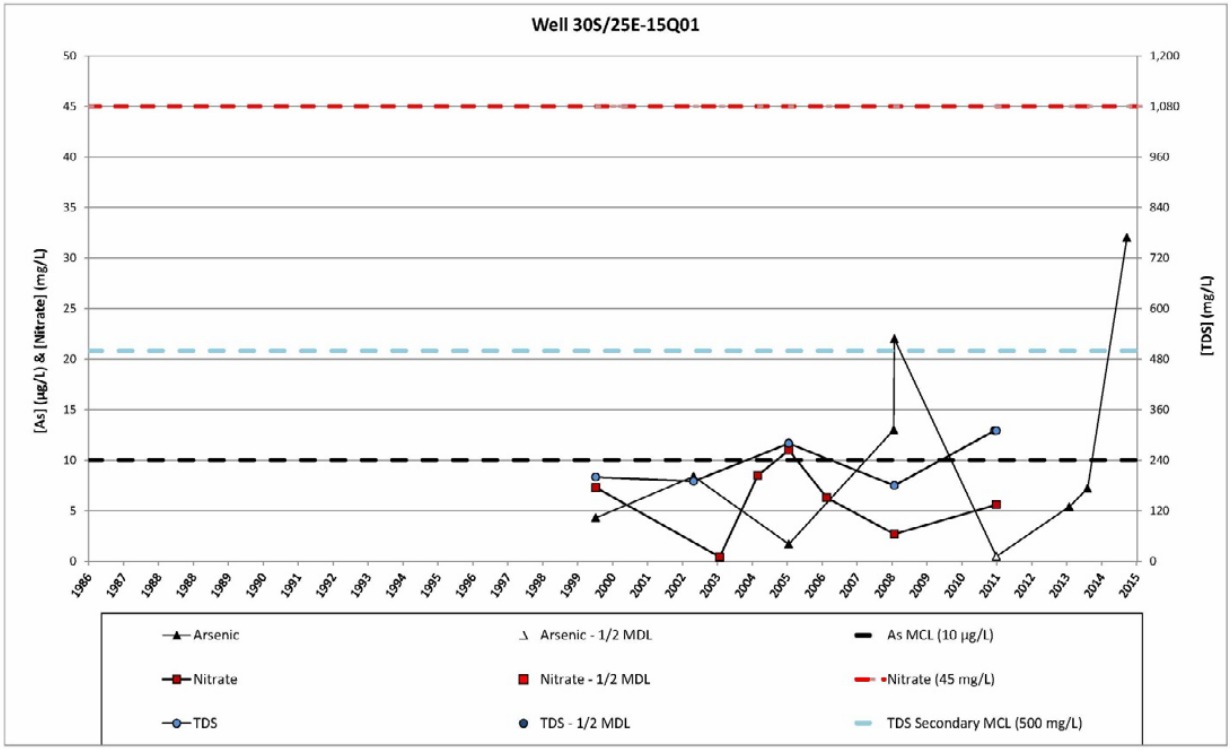

Well 30S/25E-14R01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

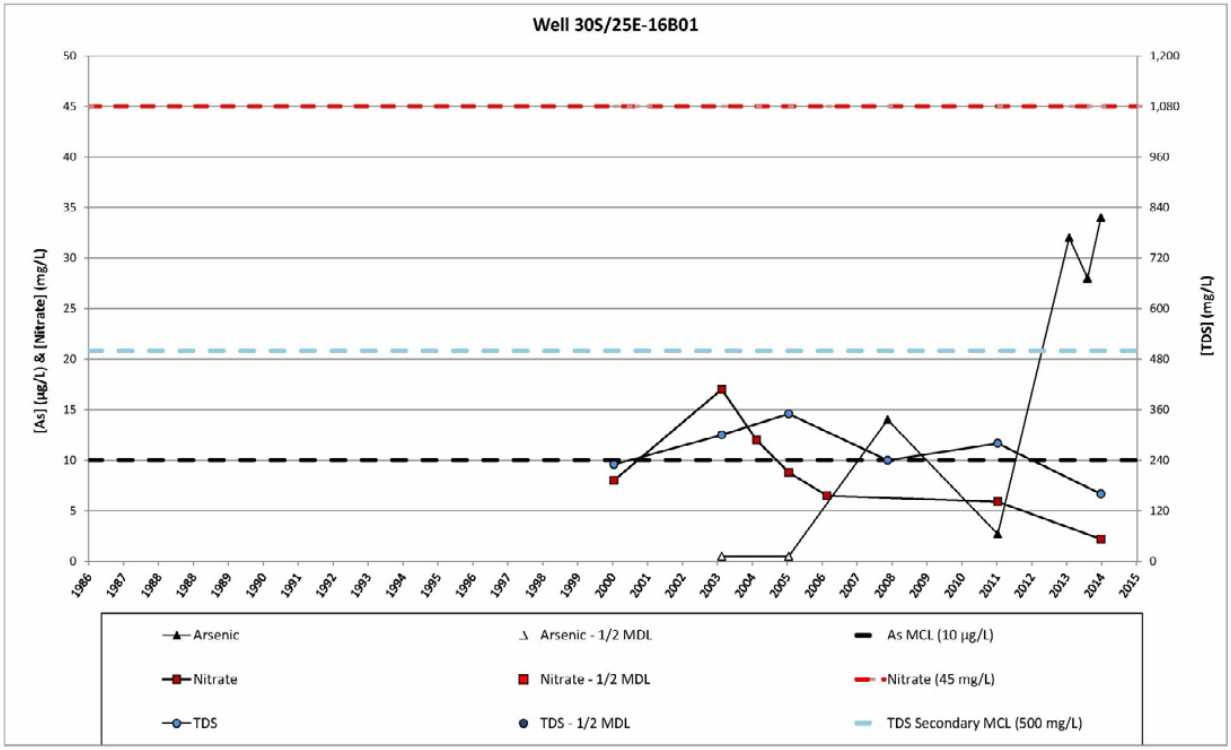

Well 30S/25E-15B01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

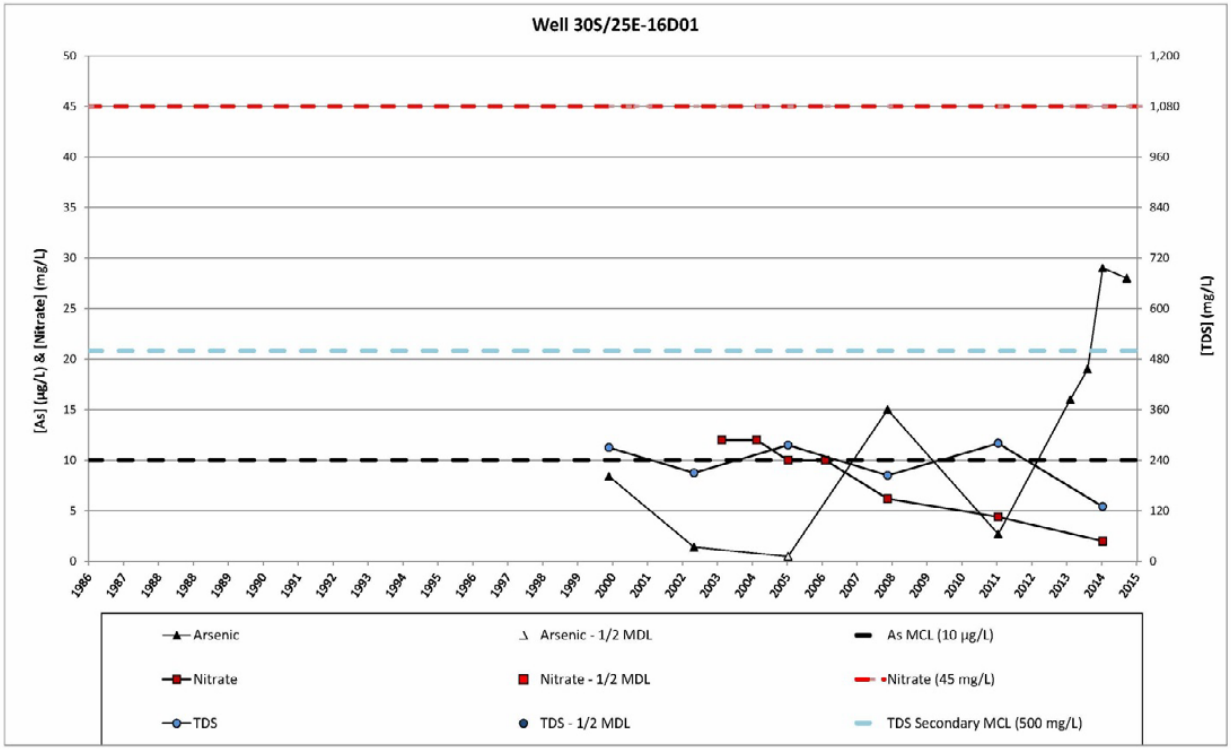

Well 30S/25E-15C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

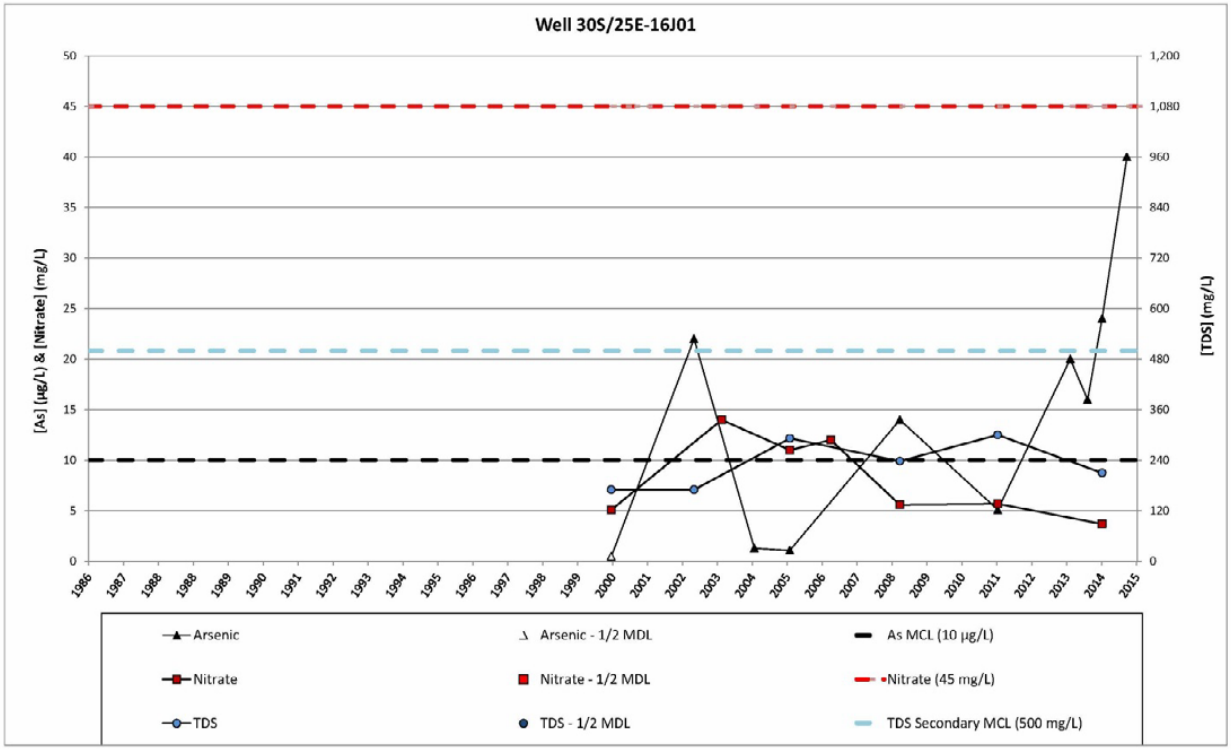

Well 30S/25E-15L01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

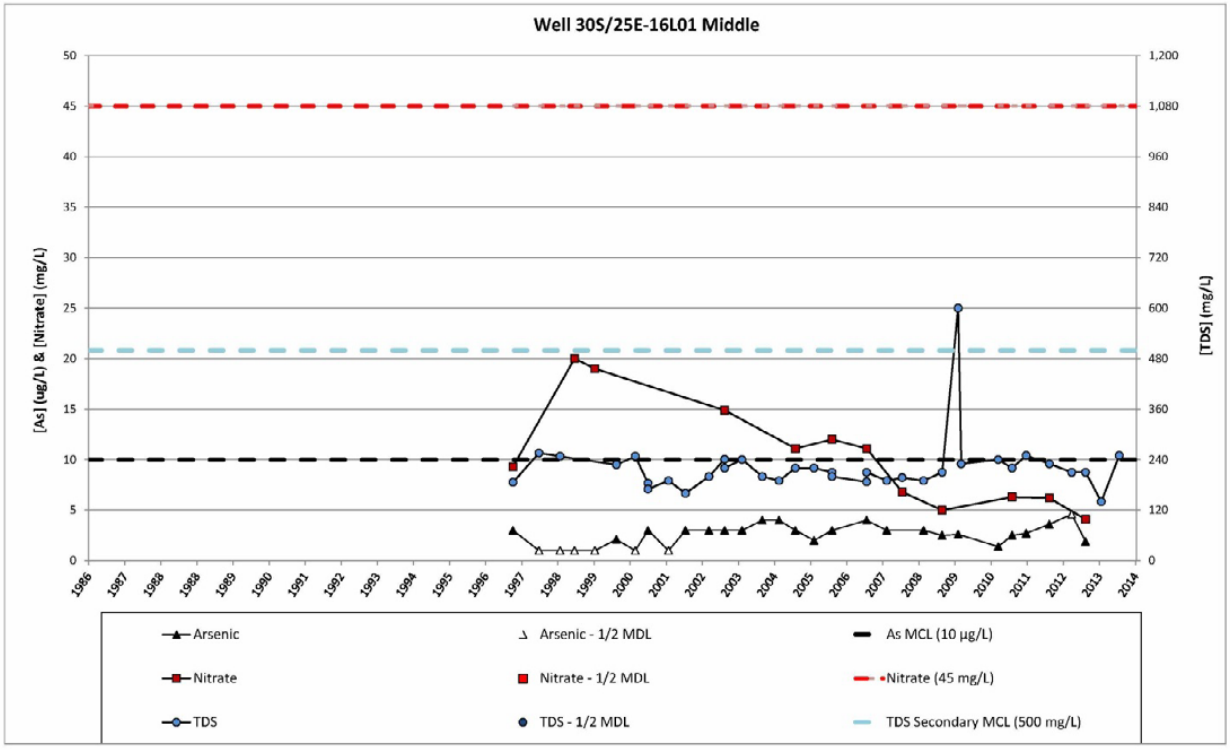

Well 30S/25E-15N01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

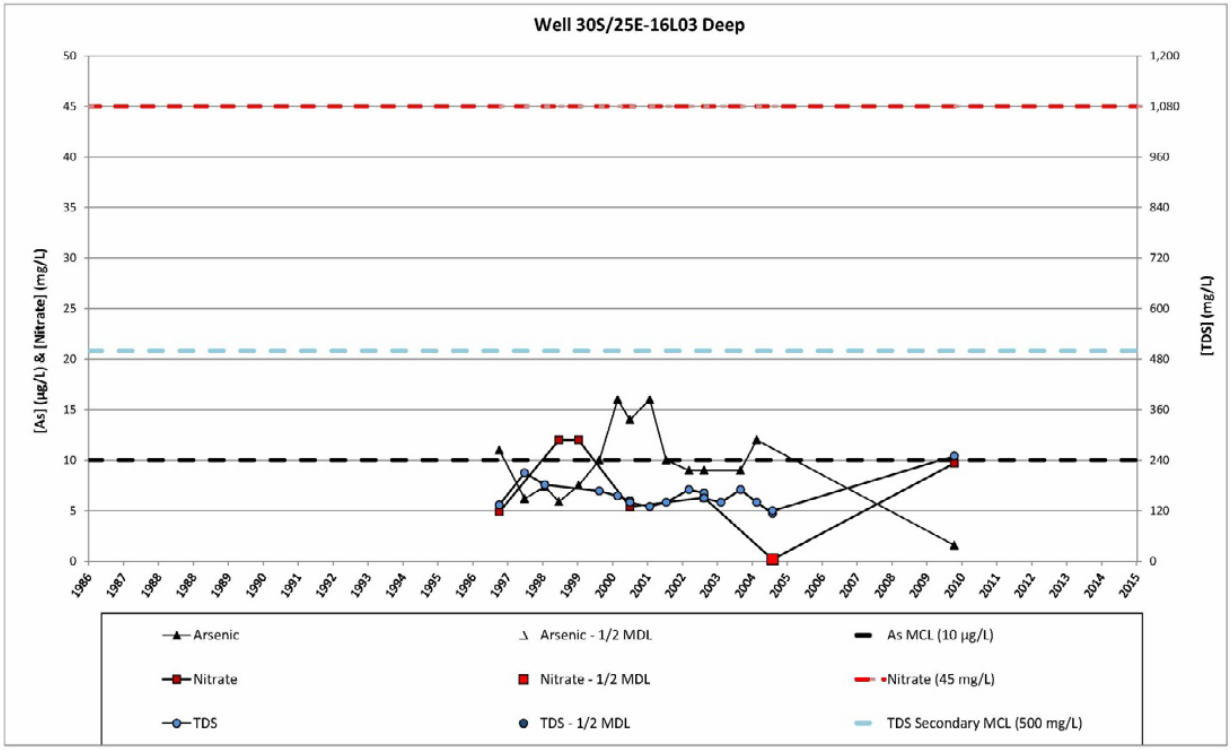

Well 30S/25E-15Q01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

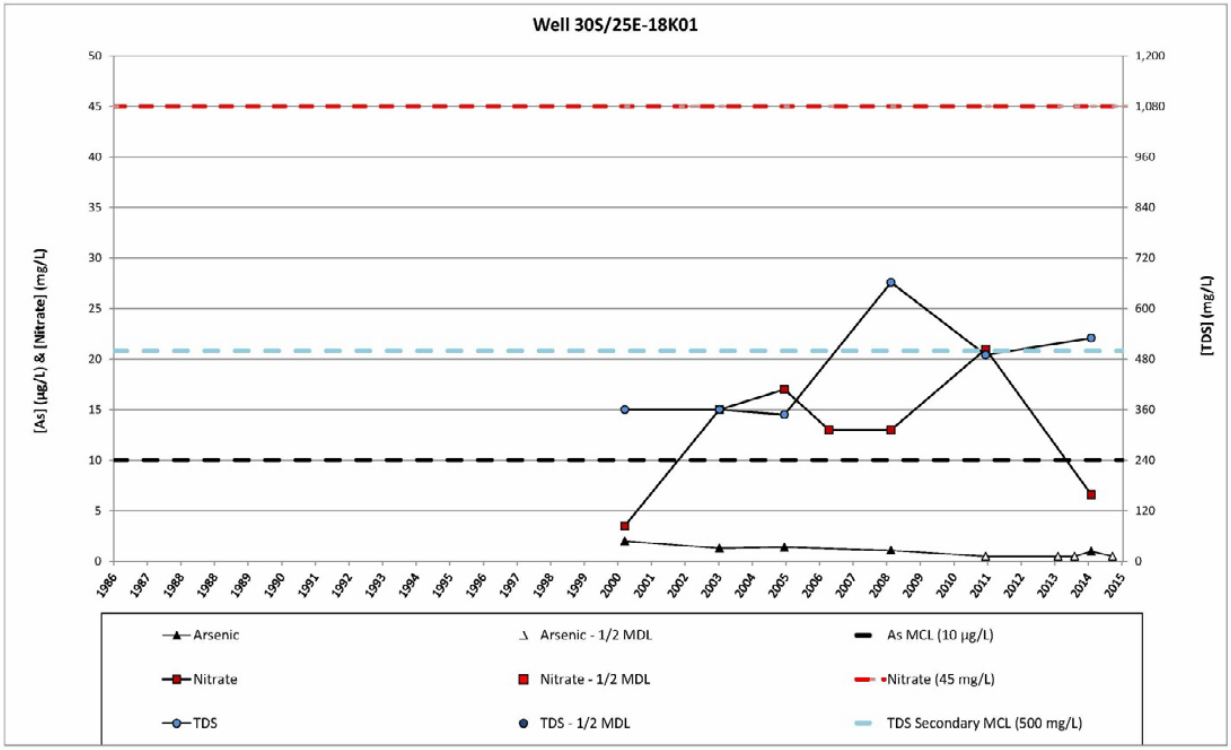

Well 30S/25E-16B01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

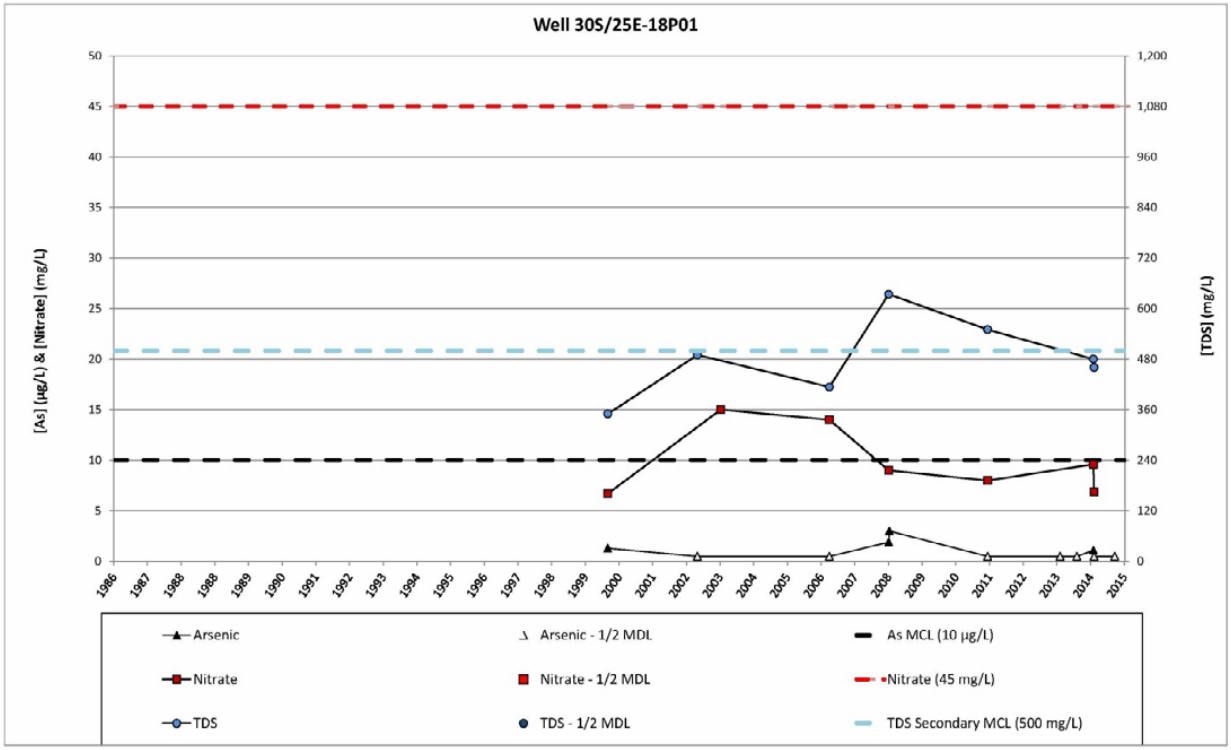

Well 30S/25E-16D01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

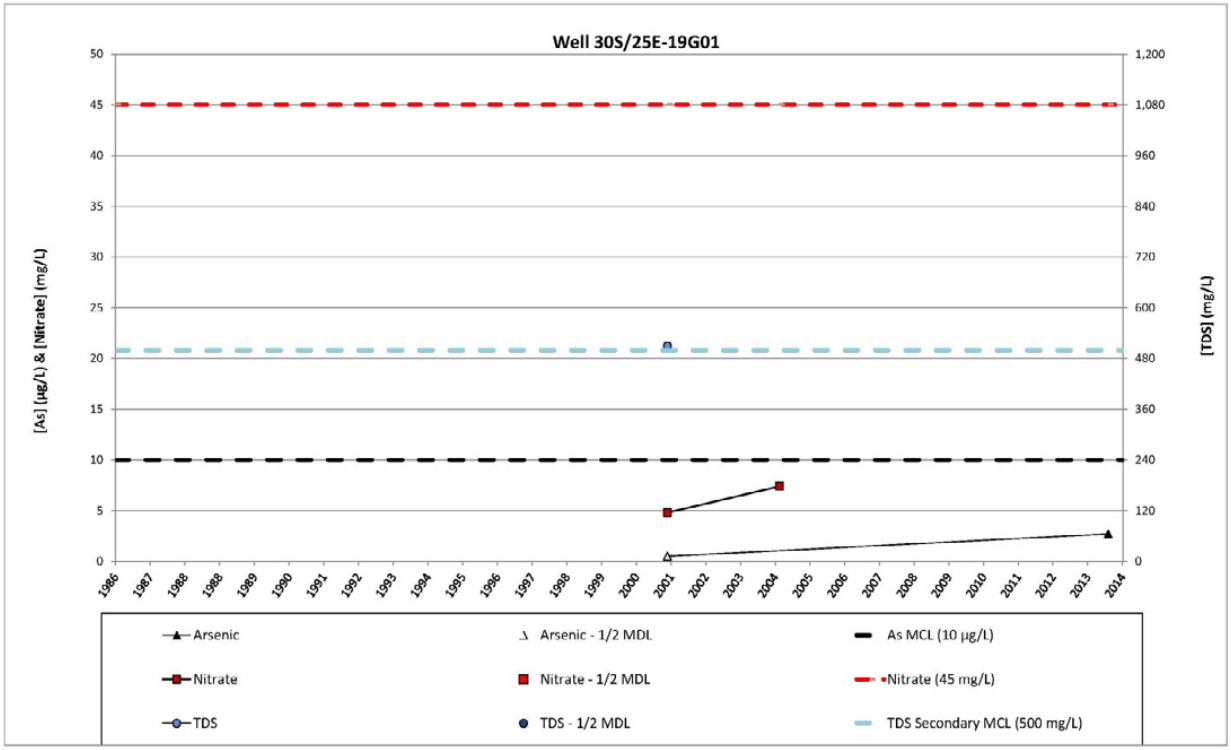

Well 30S/25E-16J01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

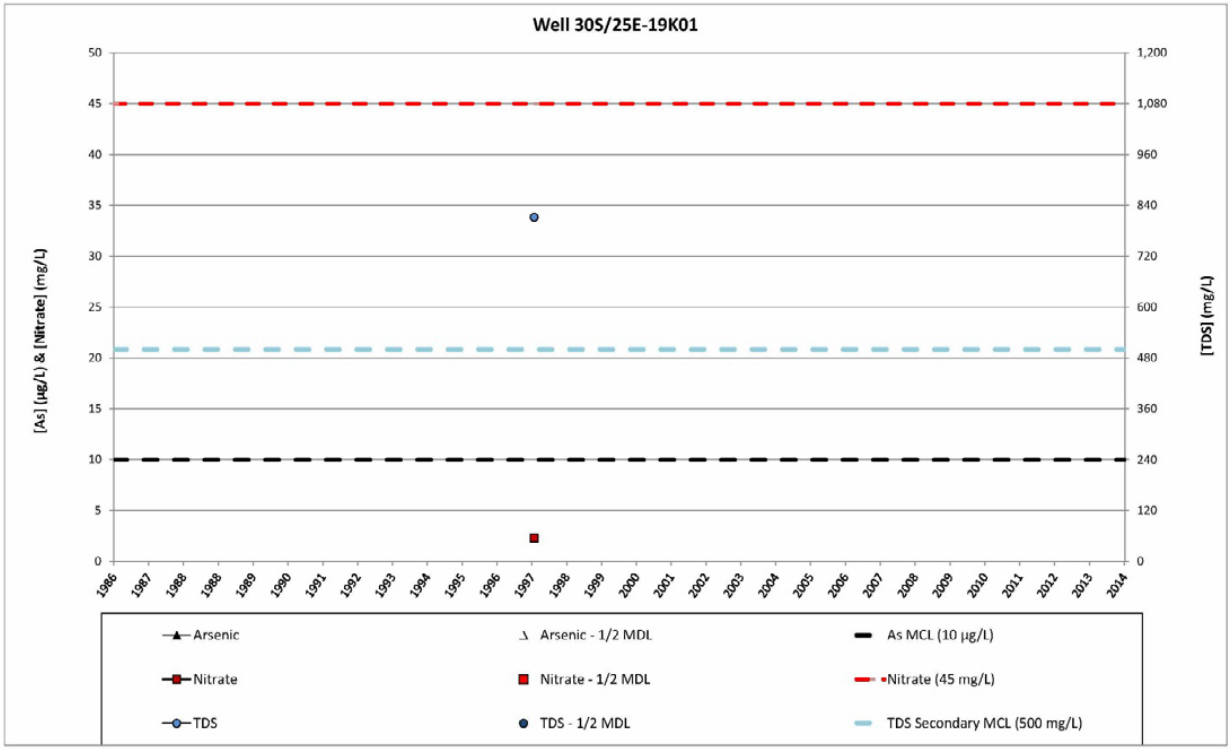

Well 30S/25E-16L01 Middle
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

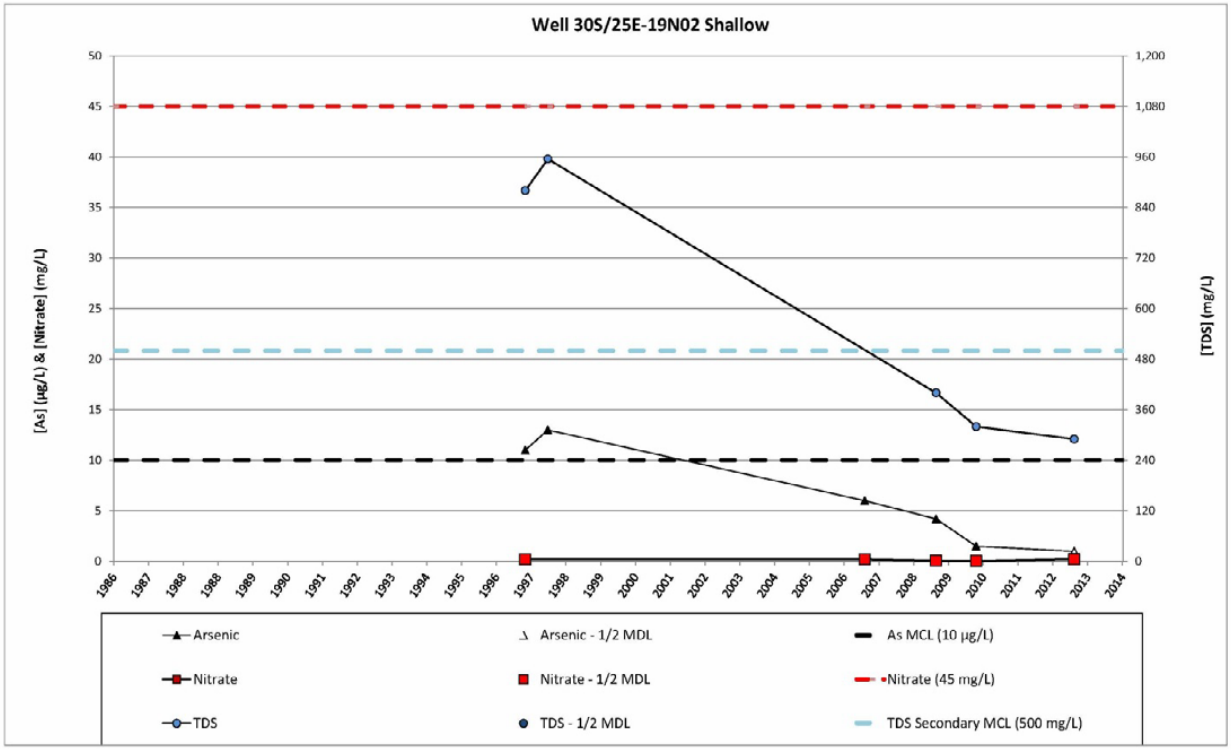

Well 30S/25E-16L03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

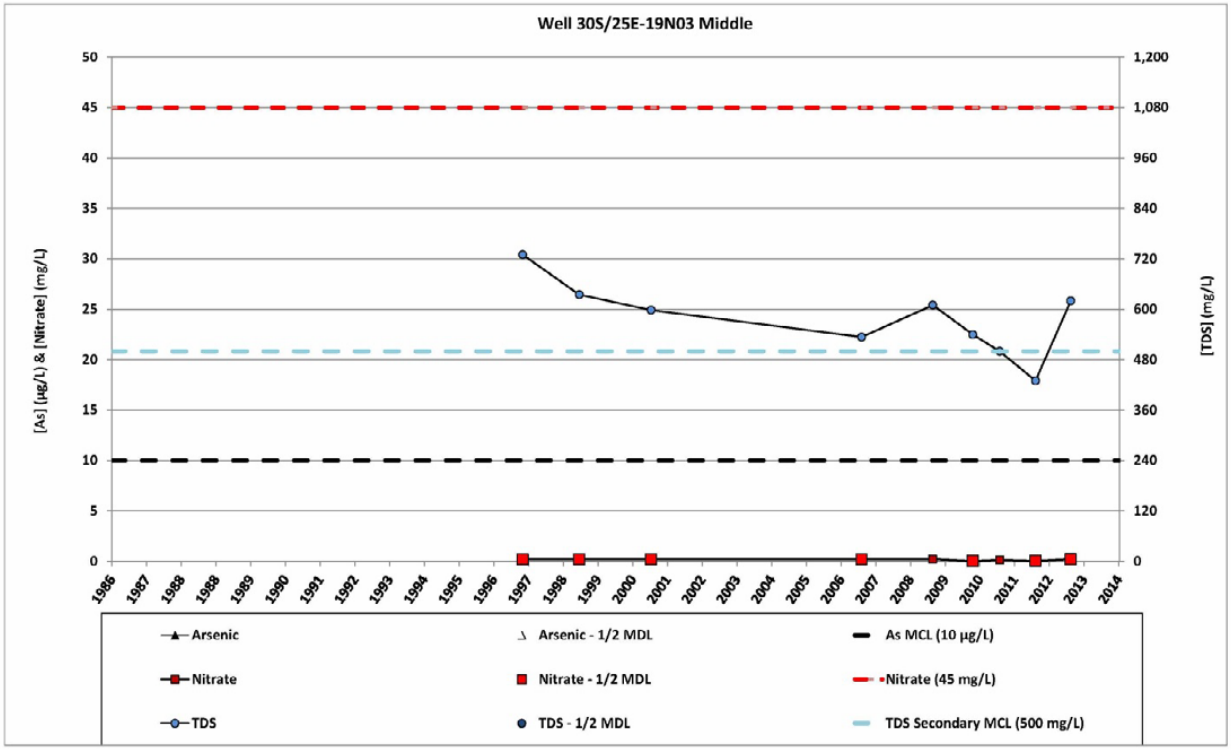

Well 30S/25E-18K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

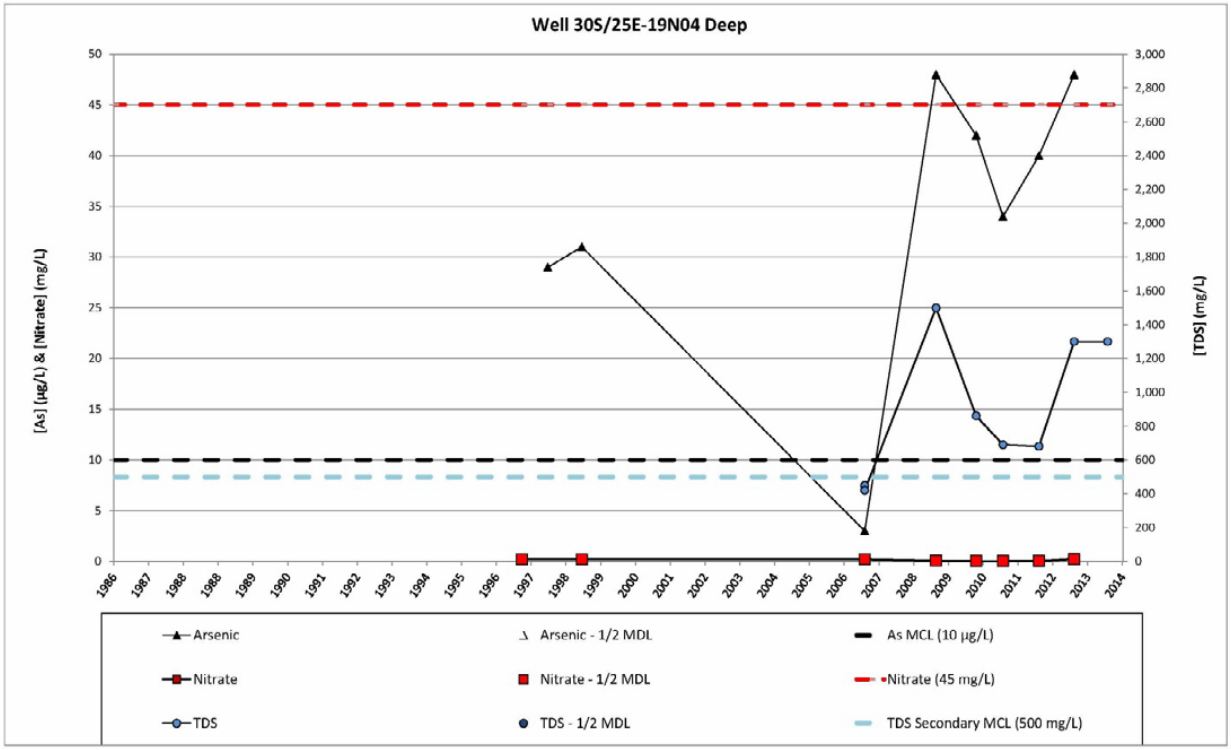

Well 30S/25E-18P01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

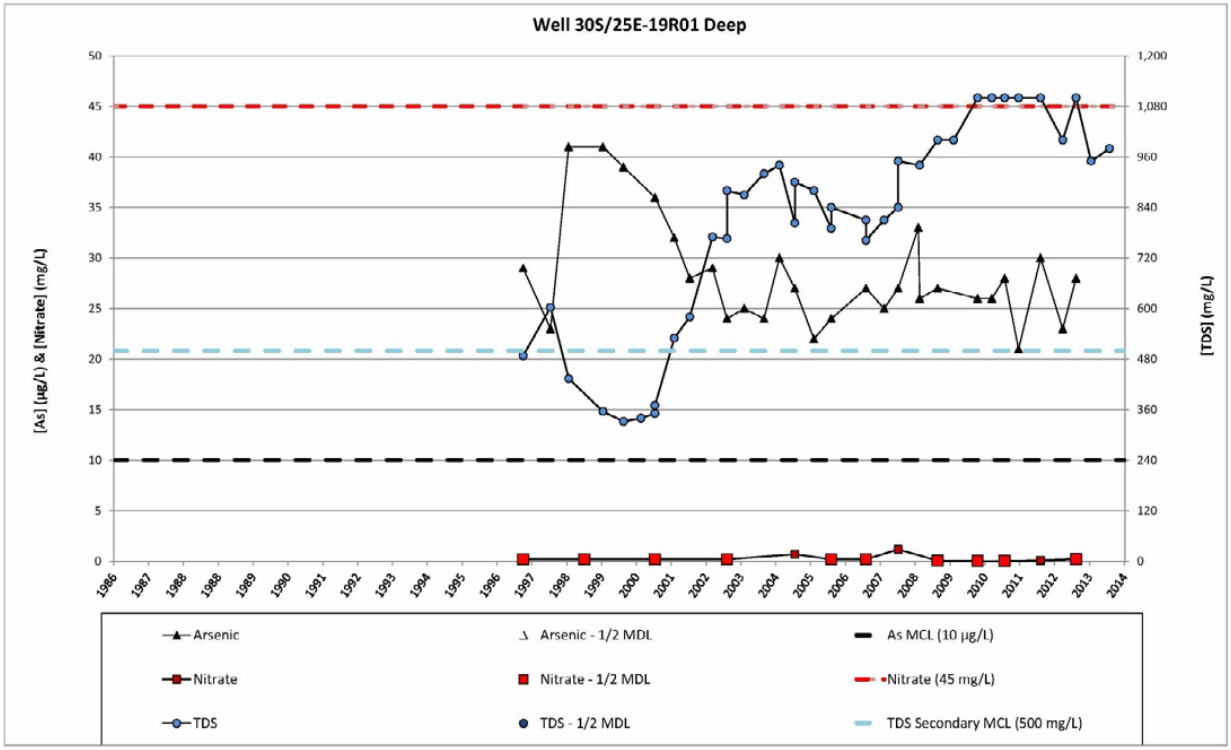

Well 30S/25E-19G01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

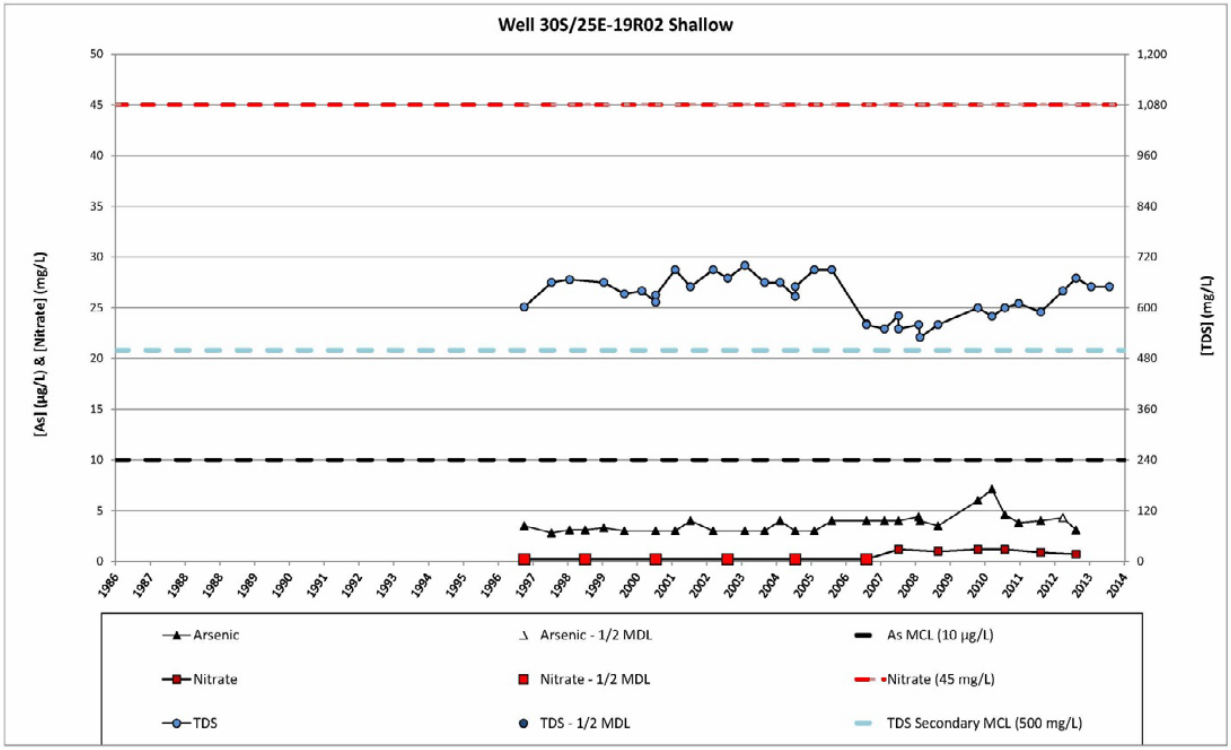

Well 30S/25E-19K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

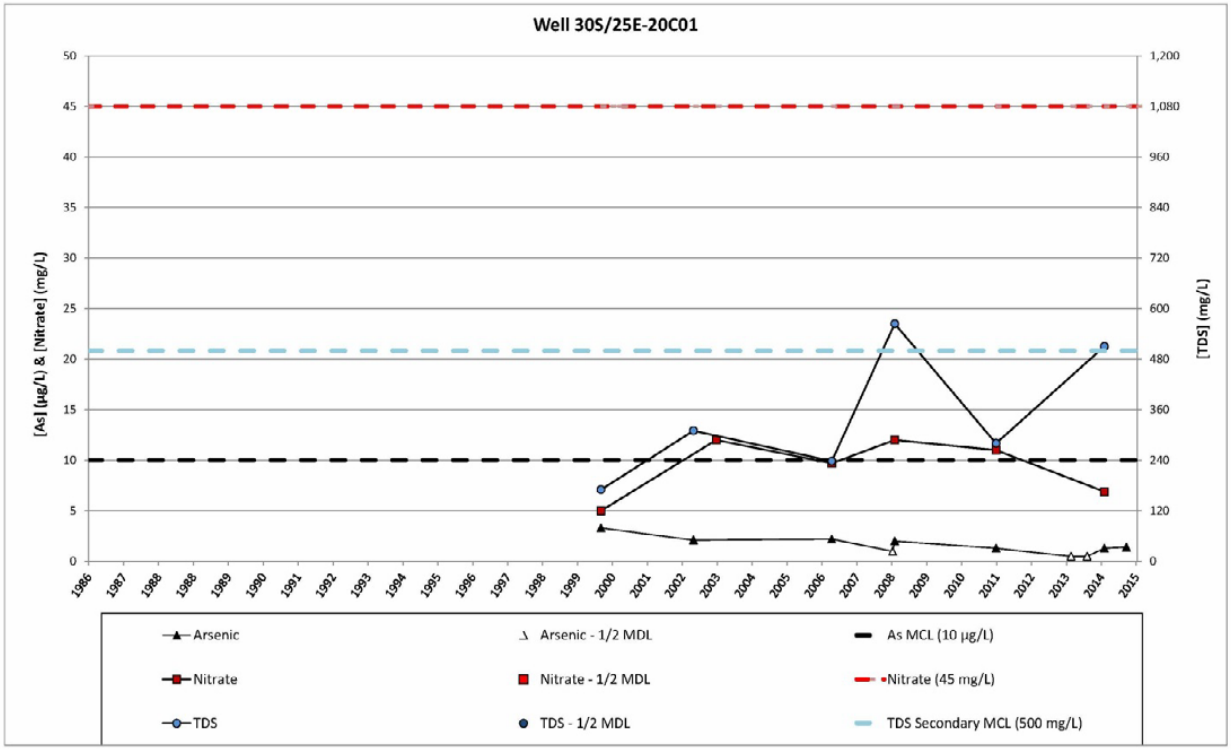

Well 30S/25E-19N02 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

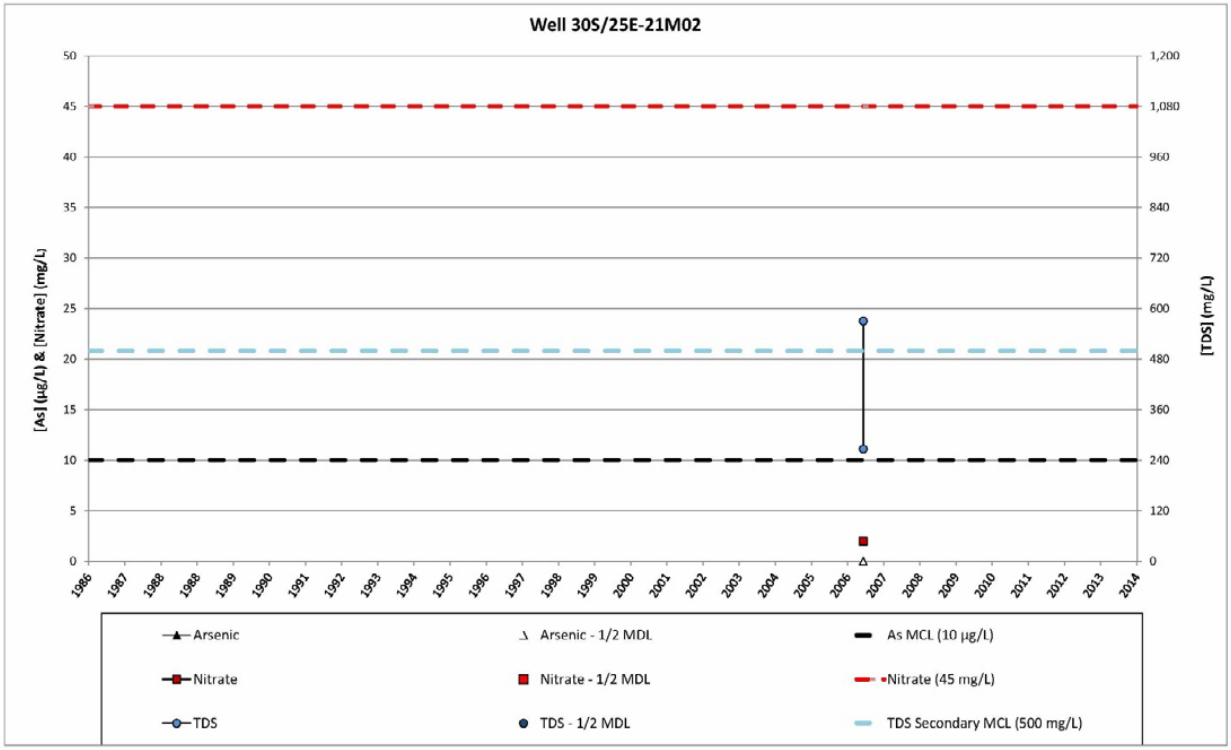

Well 30S/25E-19N03 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

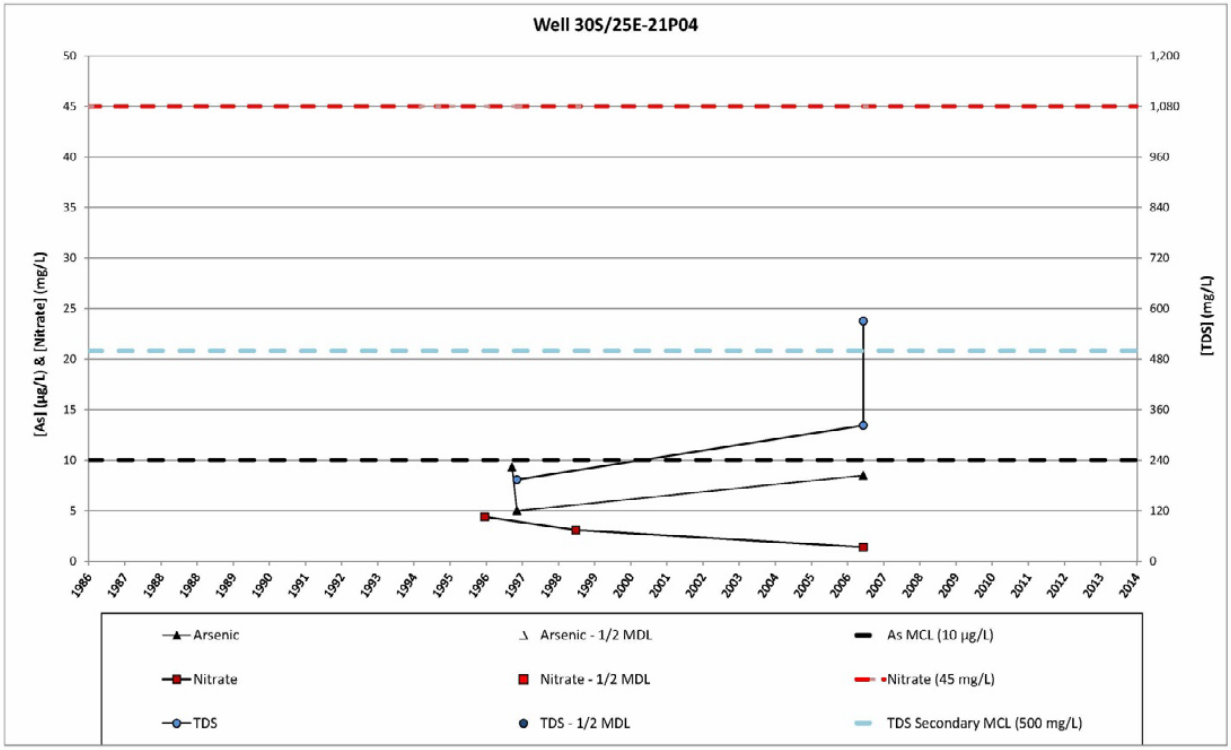

Well 30S/25E-19N04 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

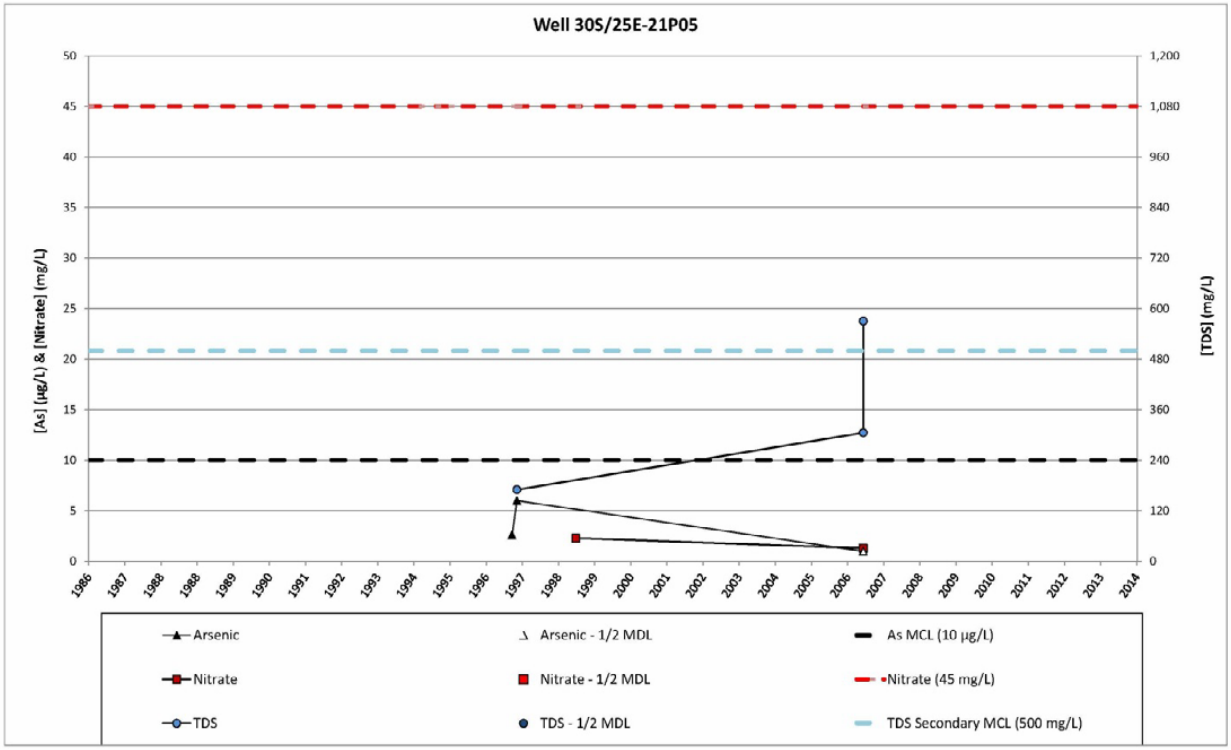

Well 30S/25E-19R01 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

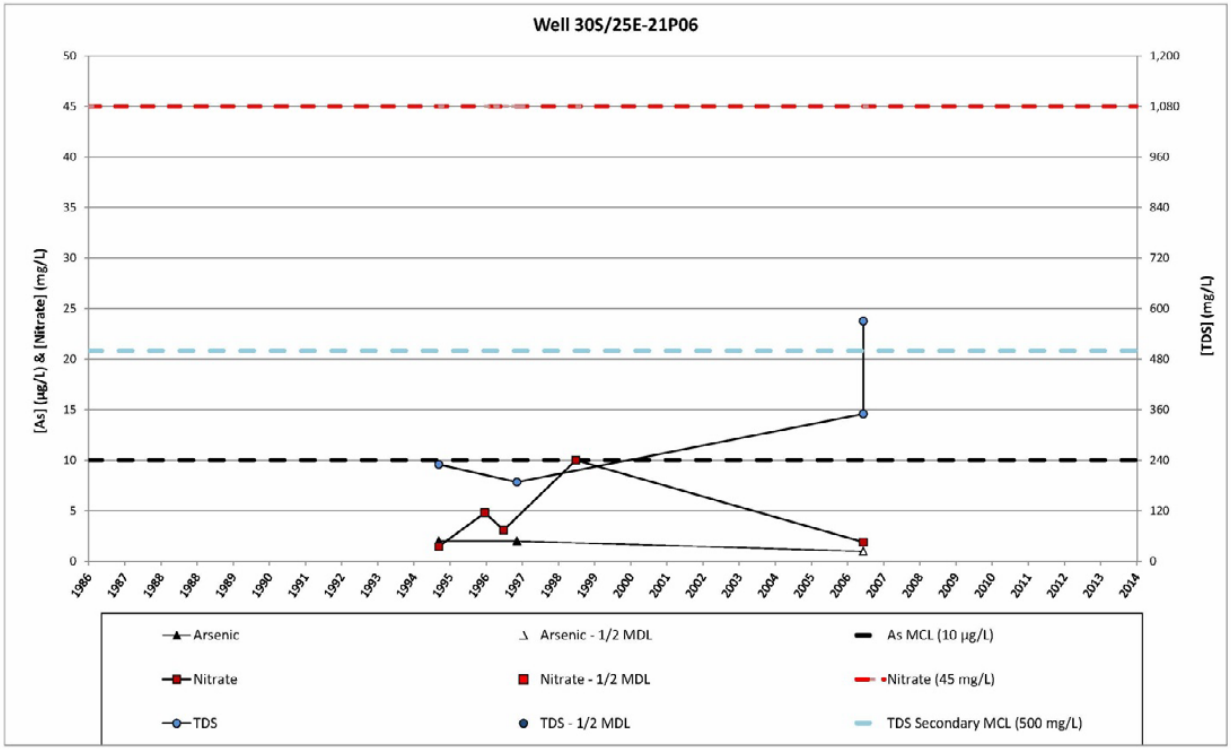

Well 30S/25E-19R02 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

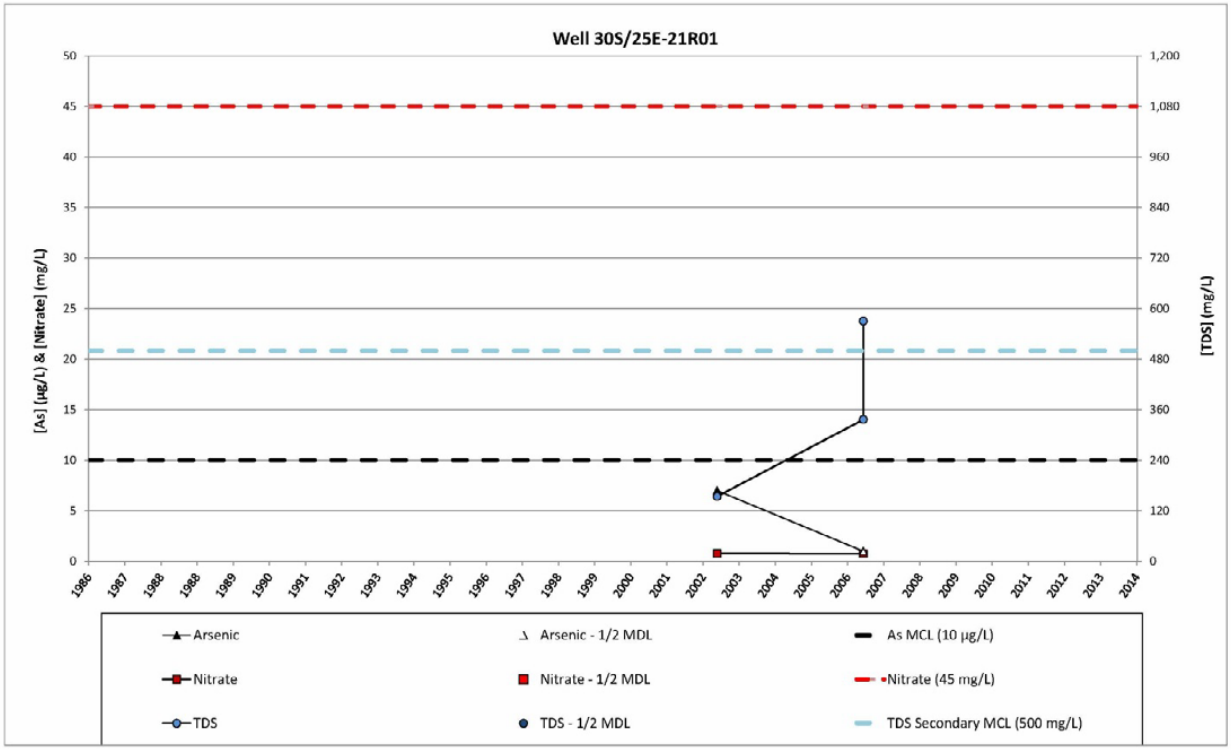

Well 30S/25E-20C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

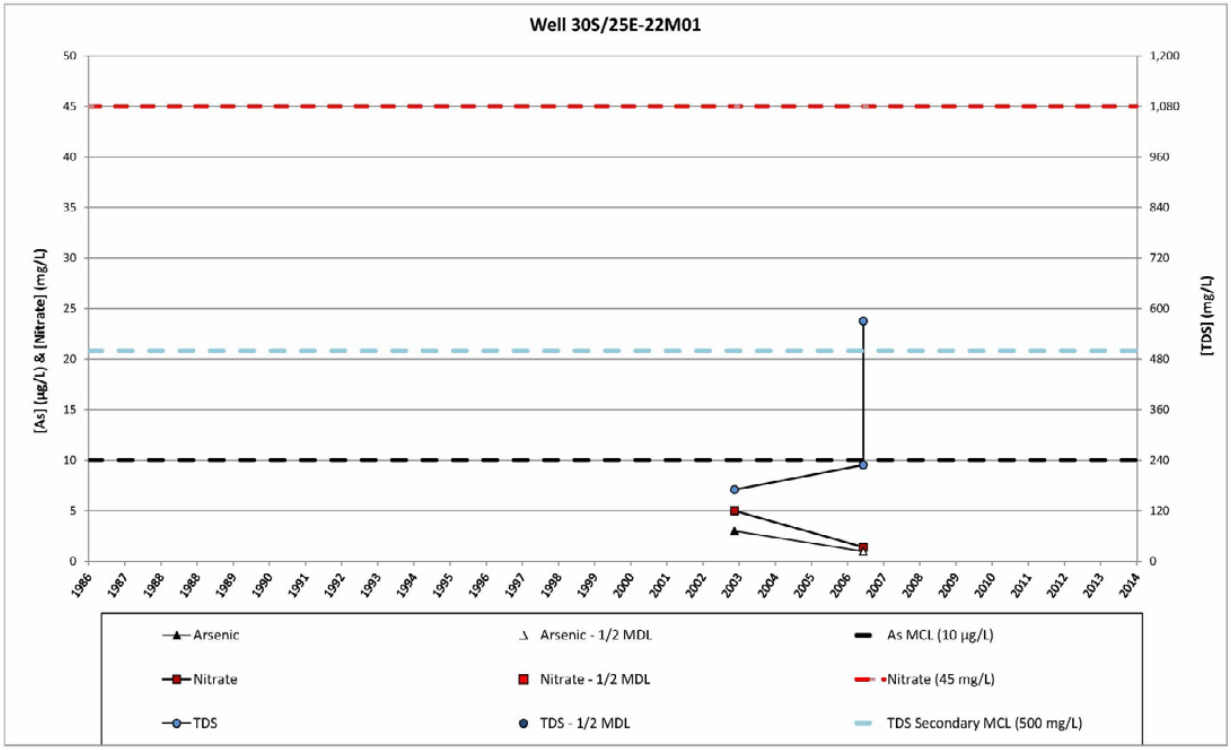

Well 30S/25E-21M02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

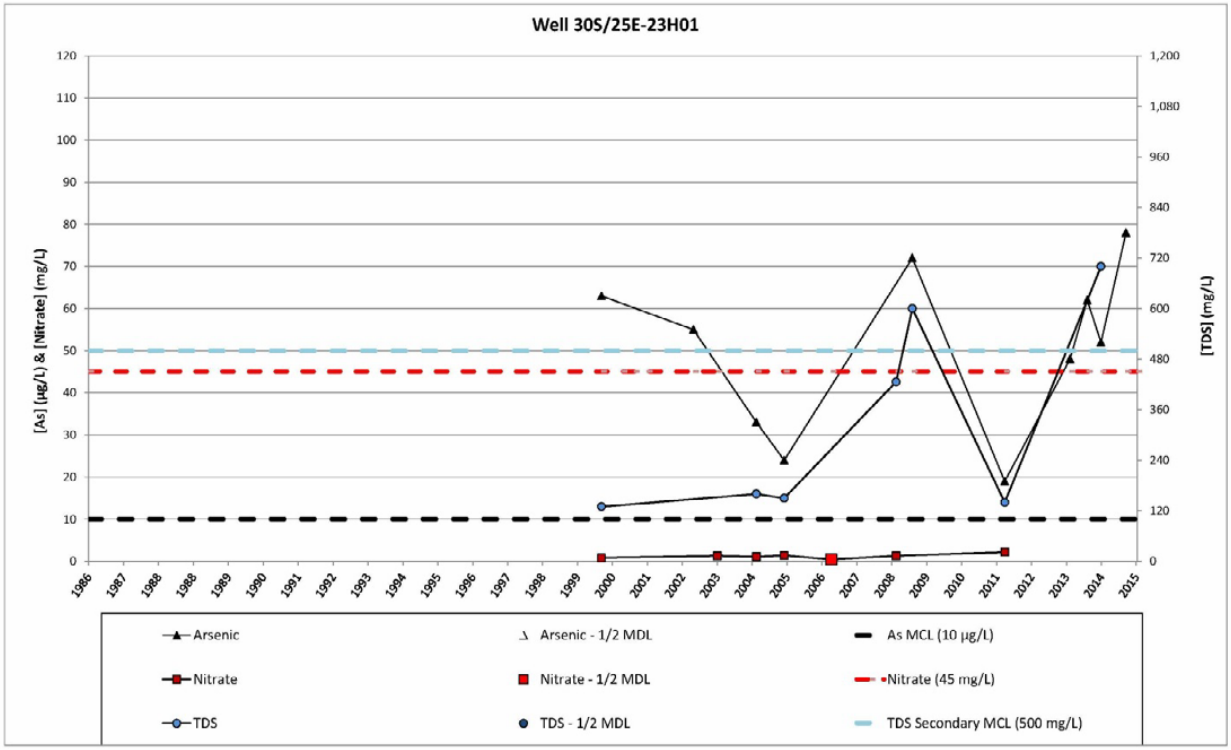

Well 30S/25E-21P04
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

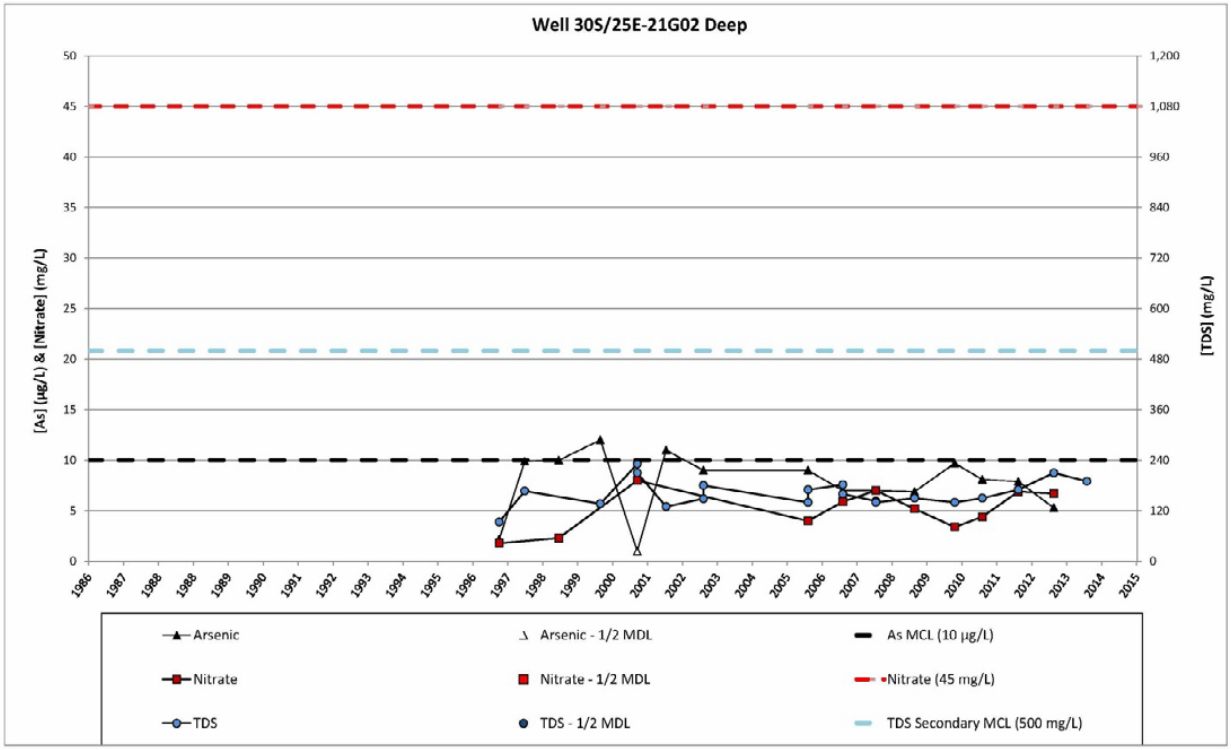

Well 30S/25E-21P05
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

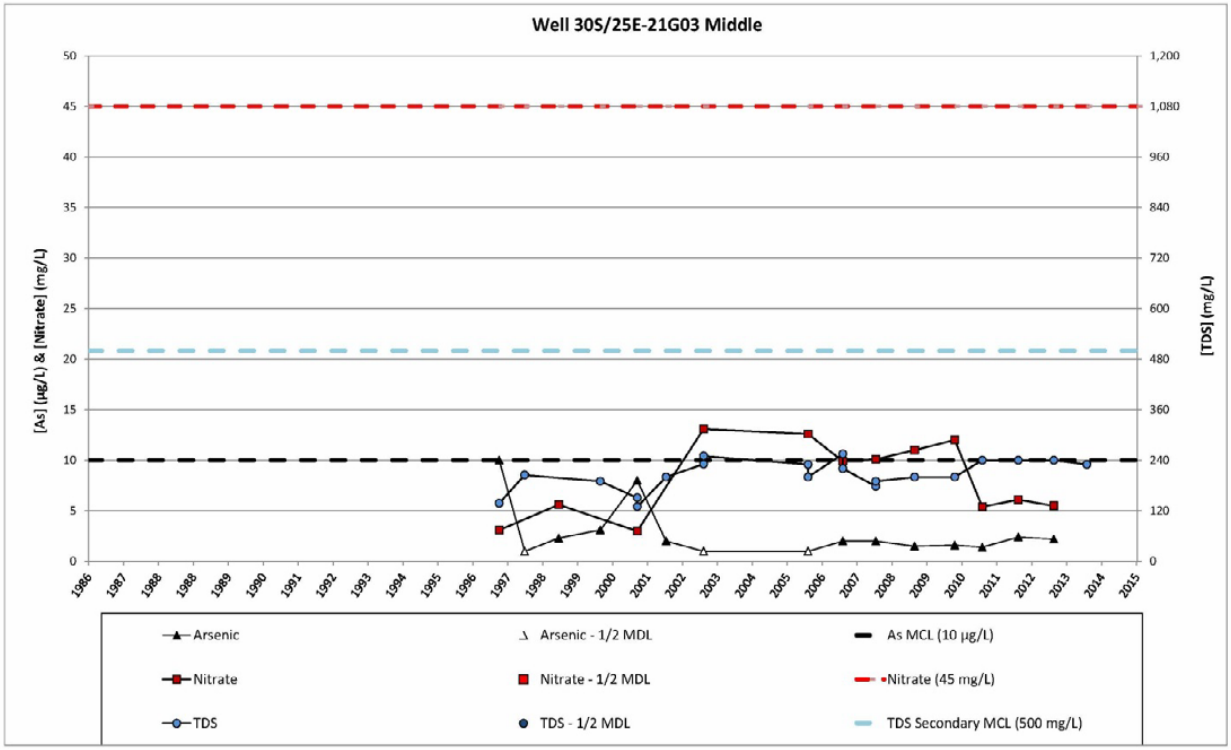

Well 30S/25E-21P06
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

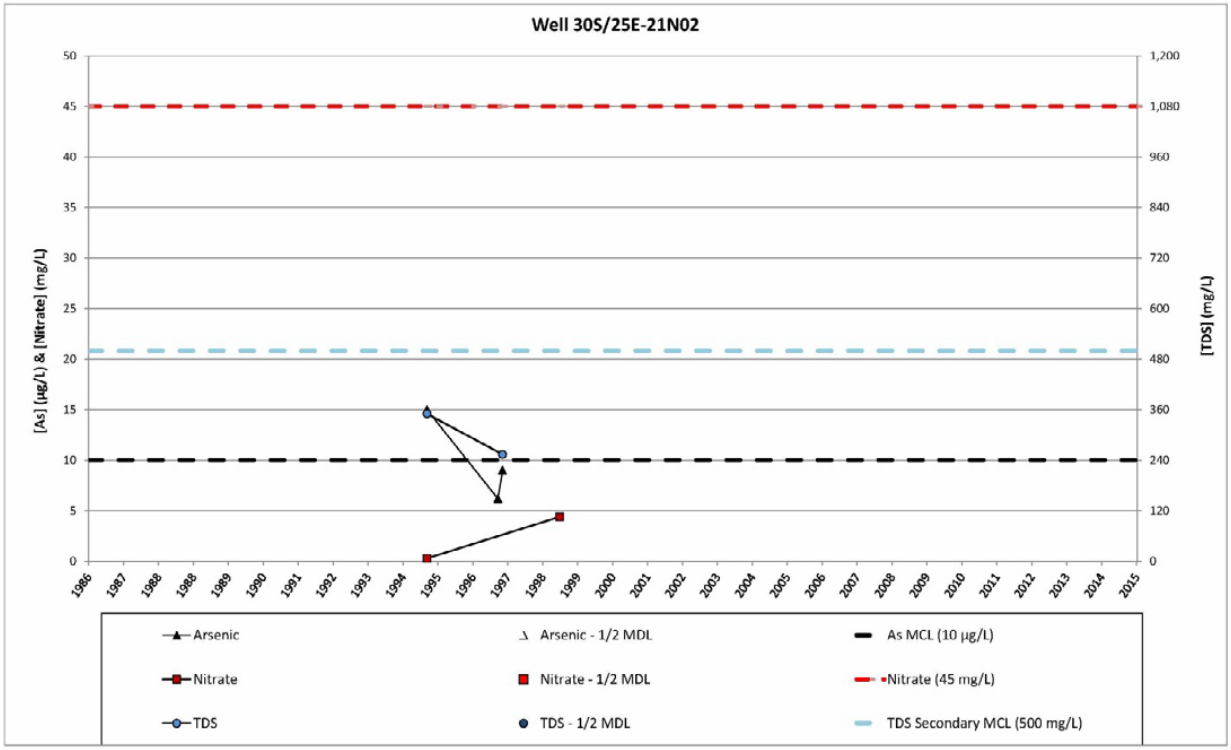

Well 30S/25E-21R01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

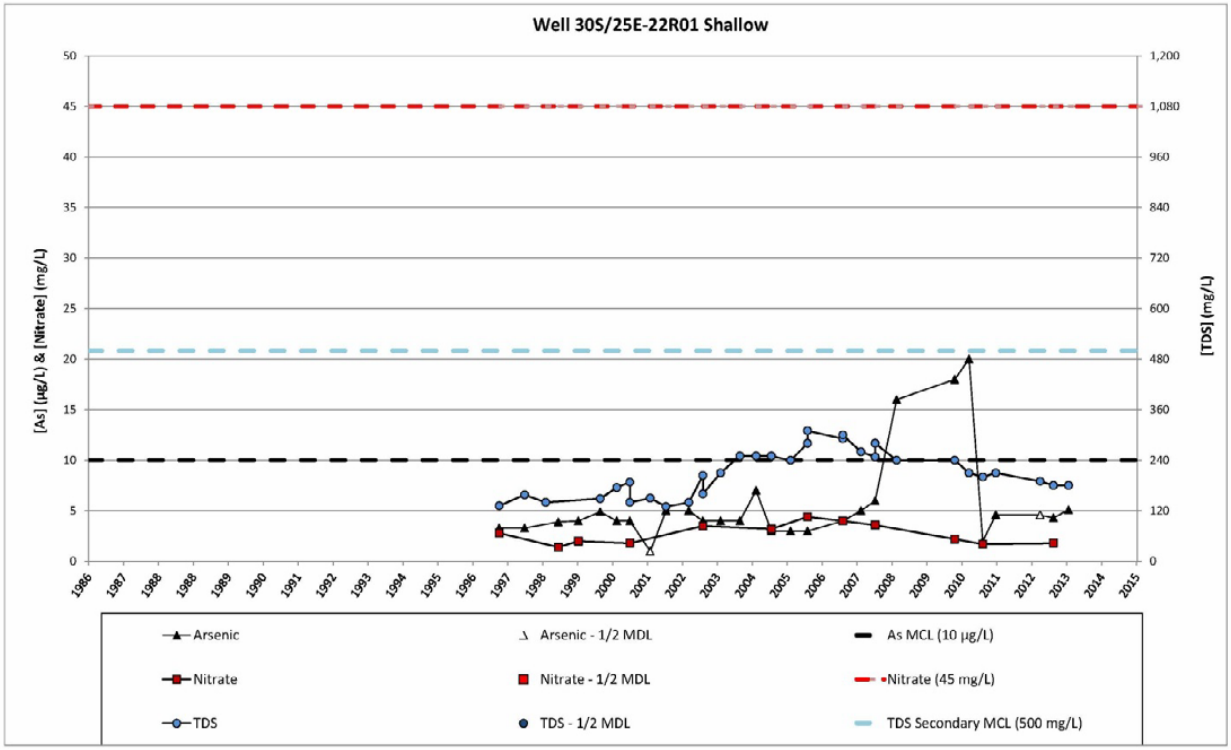

Well 30S/25E-22M01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

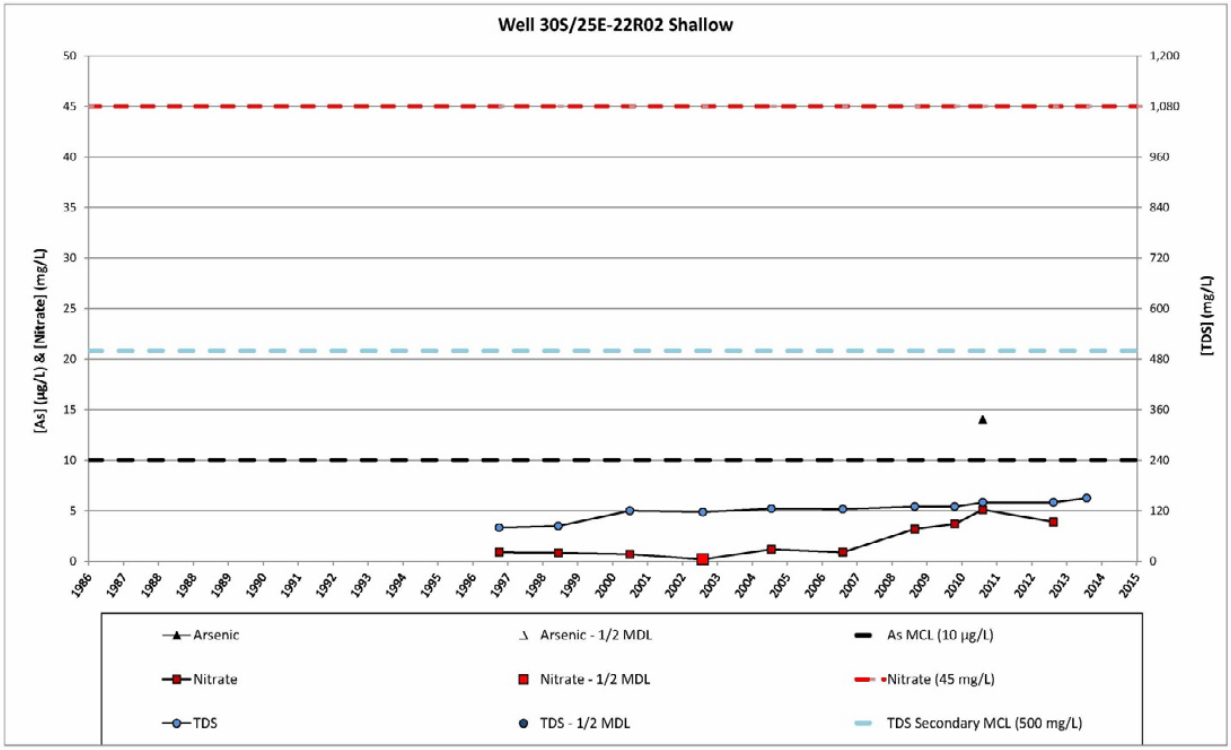

Well 30S/25E-23H01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

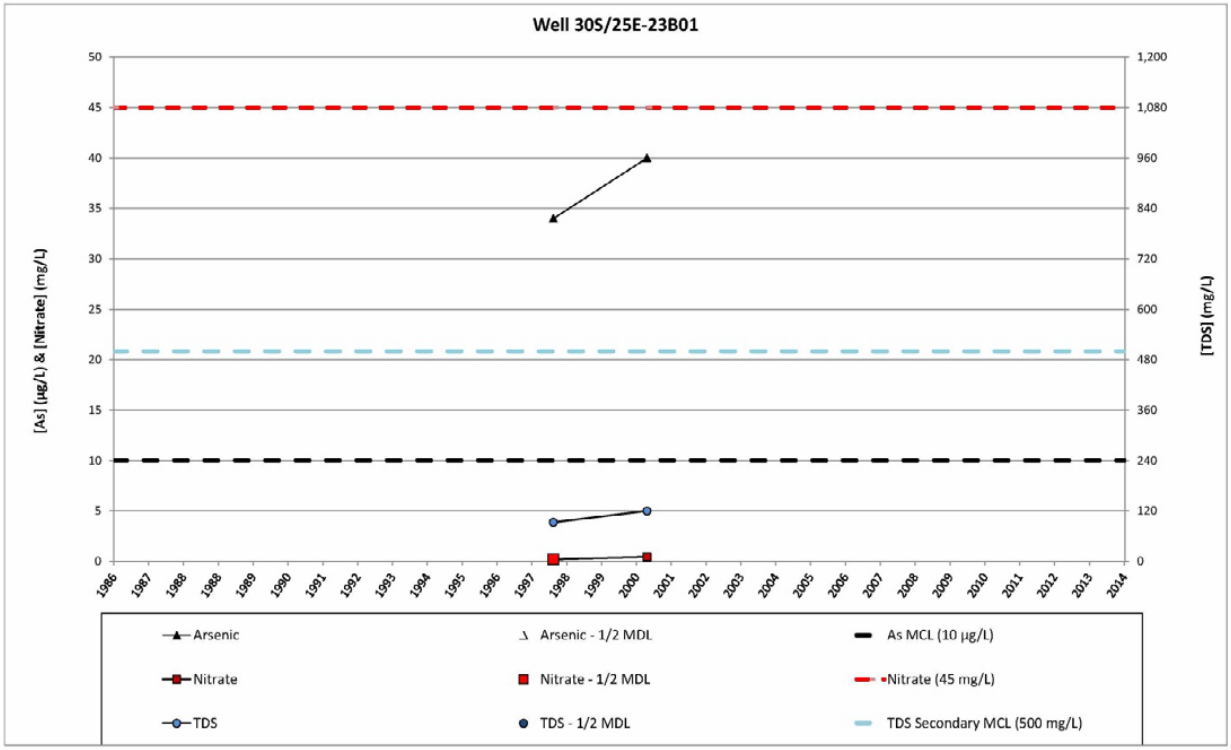

Well 30S/25E-21G02 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

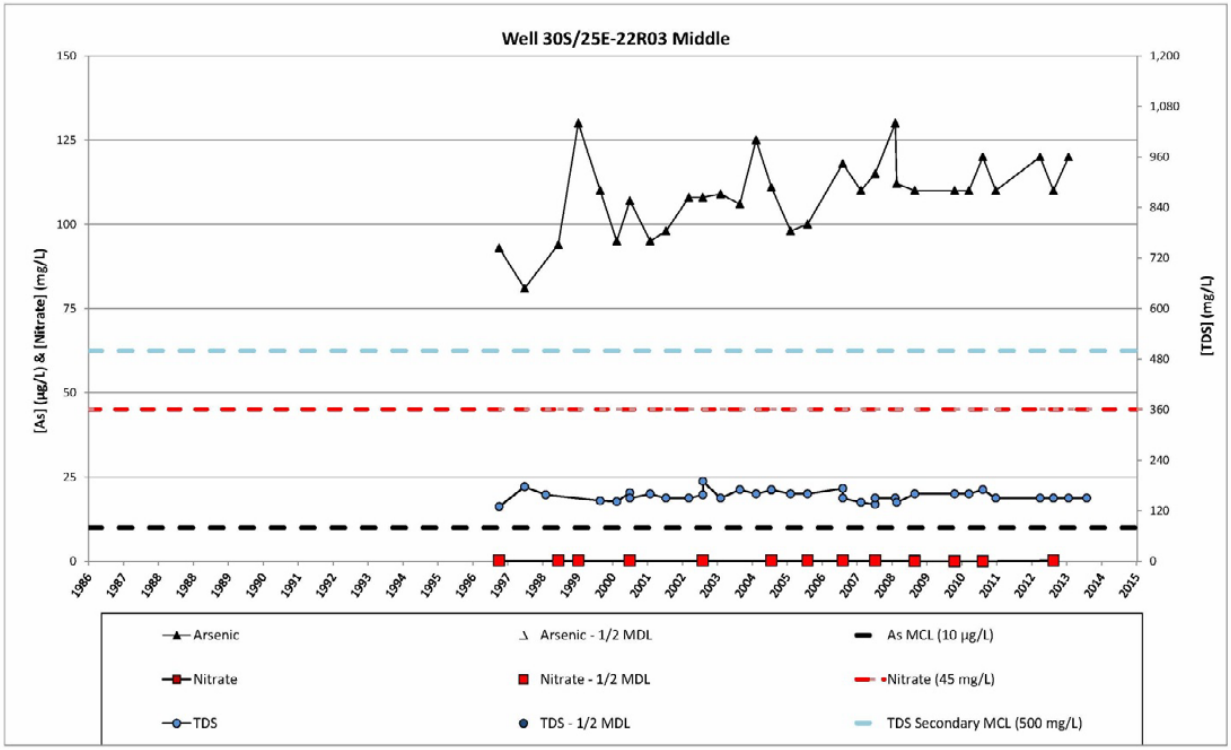

Well 30S/25E-21G03 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

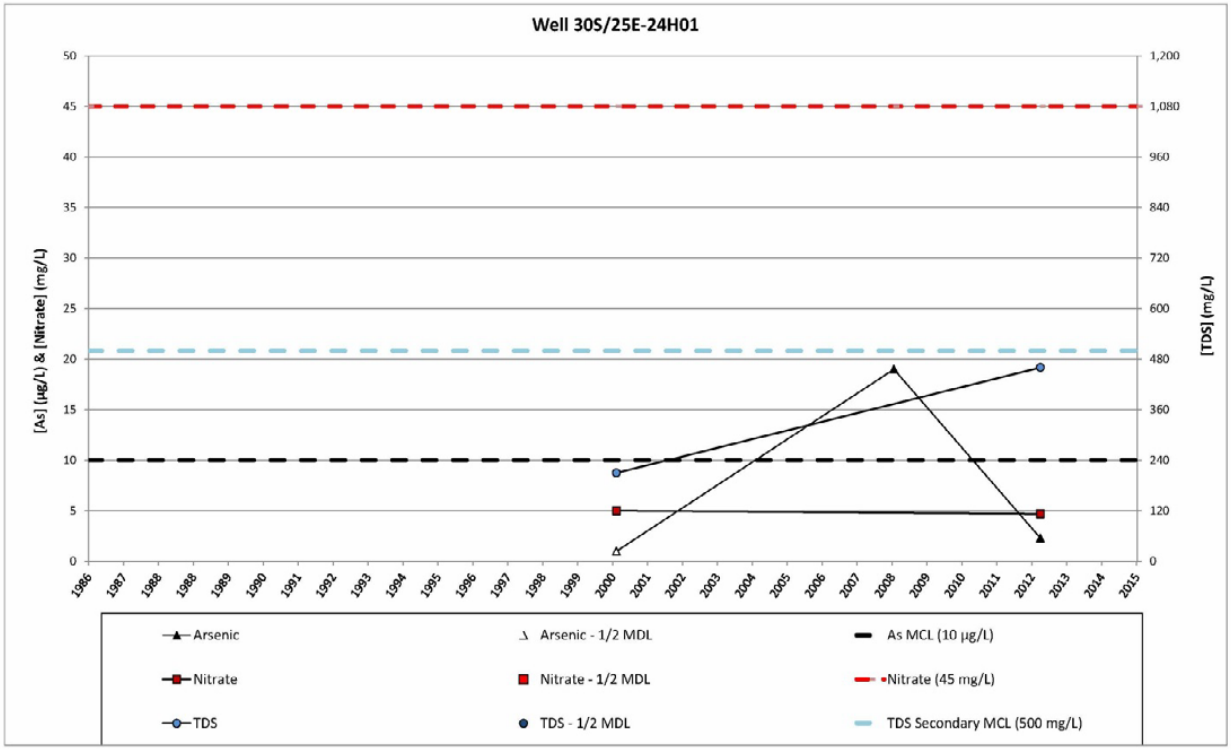

Well 30S/25E-21N02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

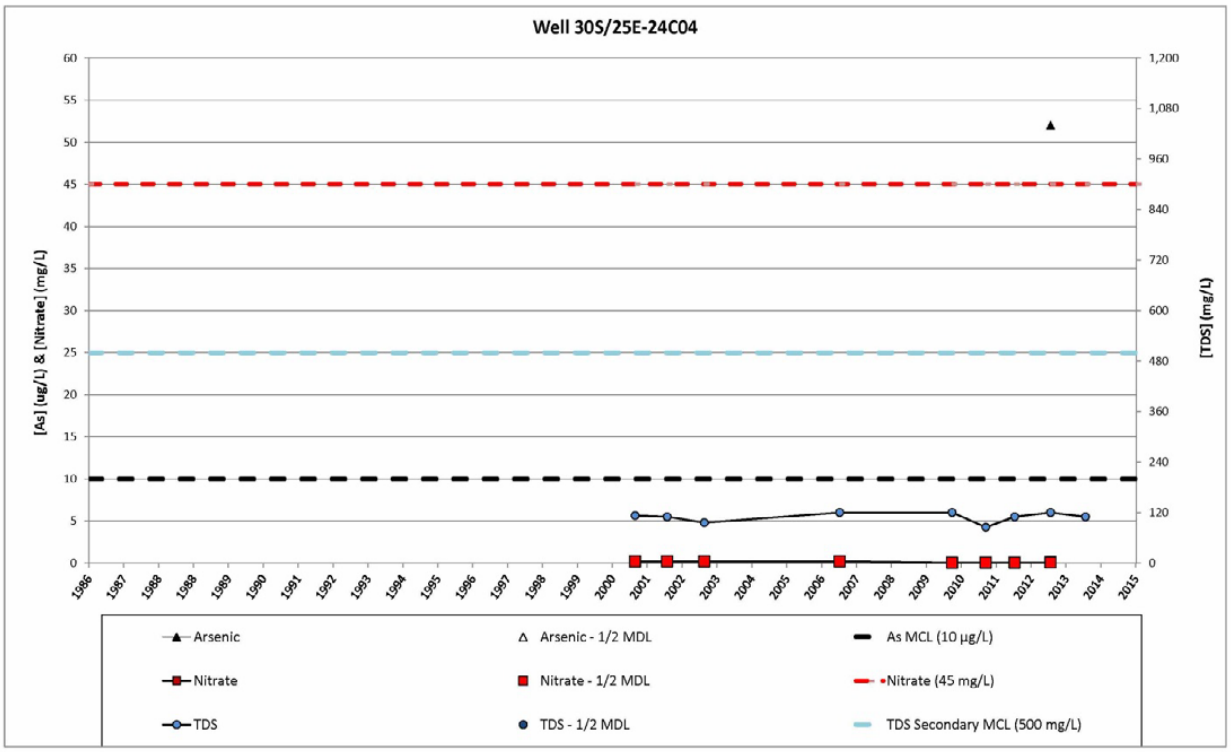

Well 30S/25E-22R01 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

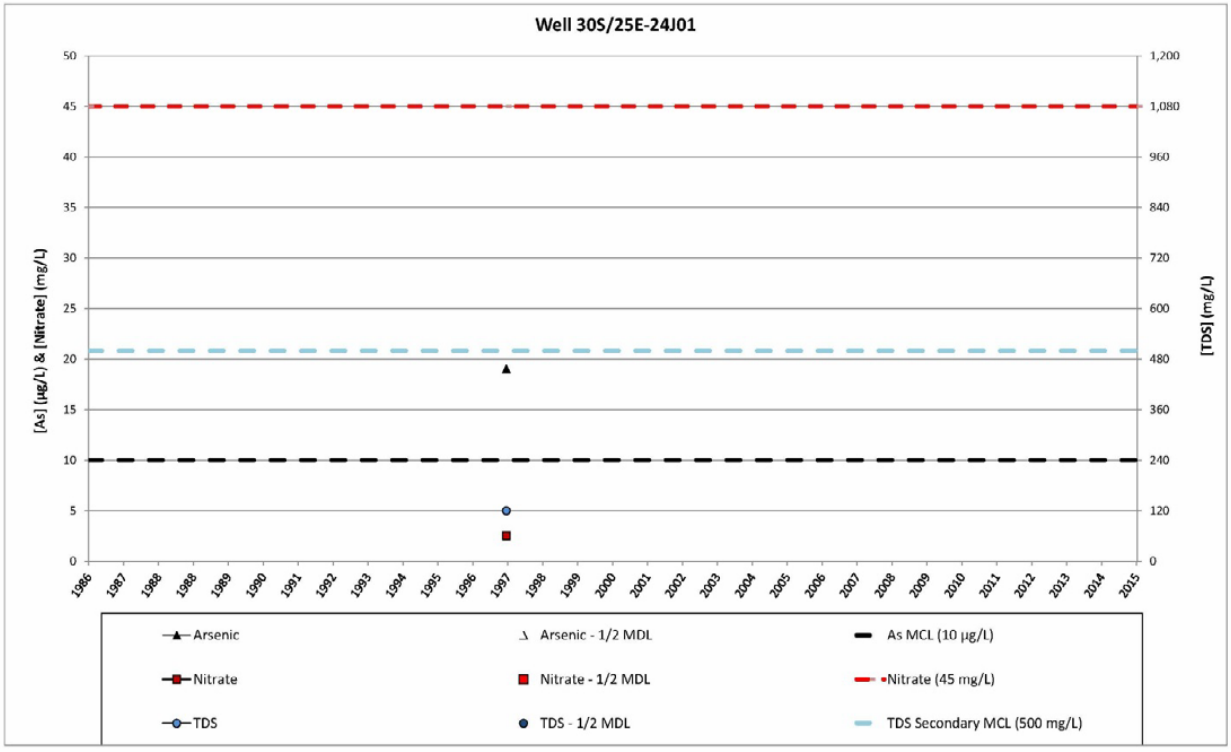

Well 30S/25E-22R02 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

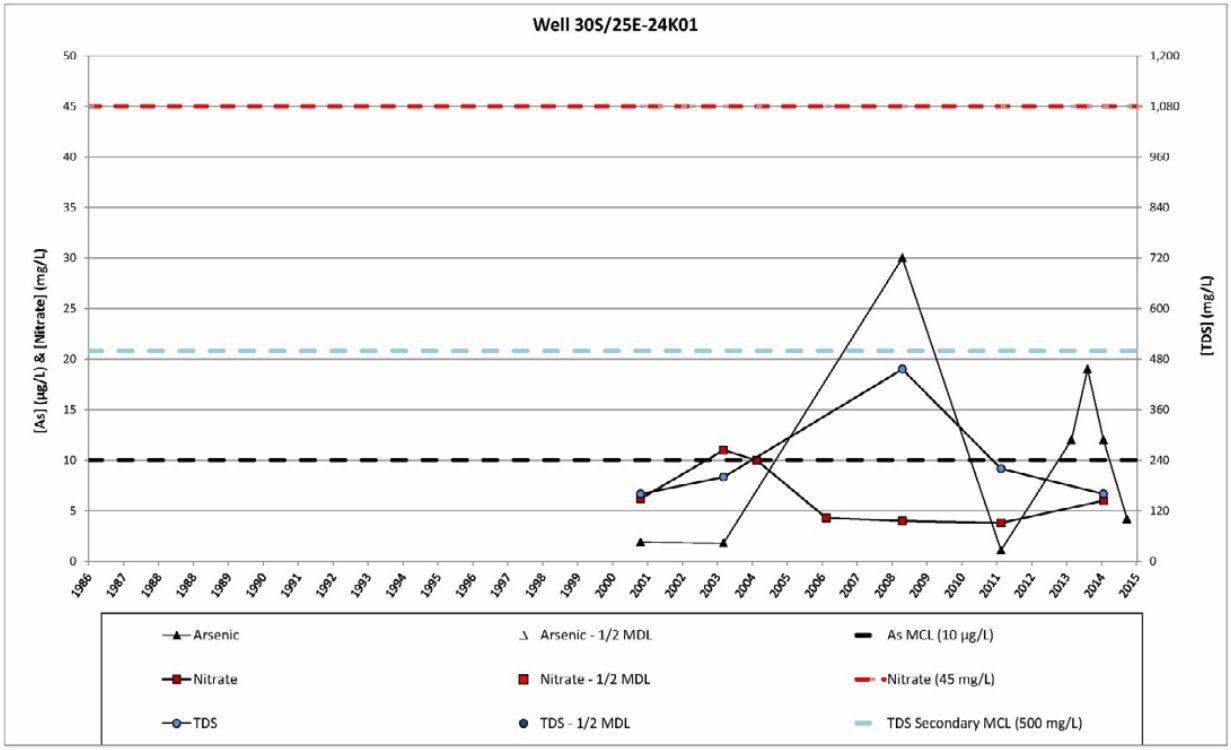

Well 30S/25E-23B01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

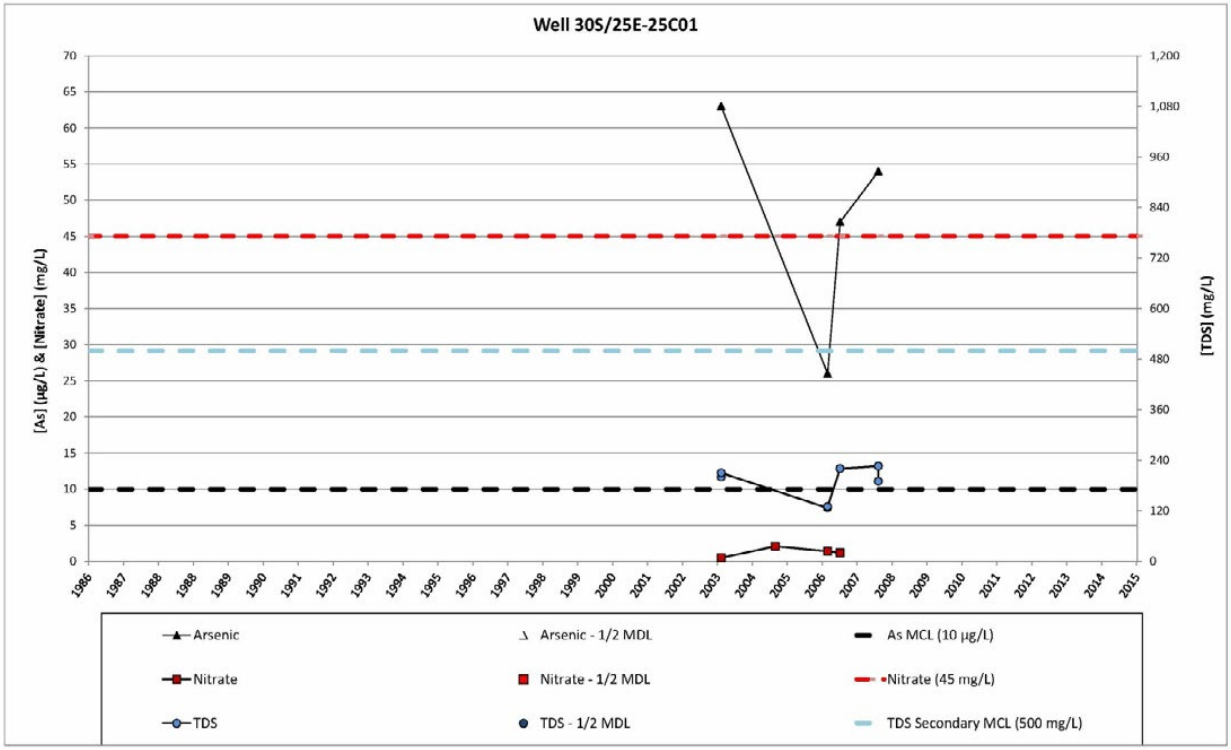

Well 30S/25E-22R03 Middle
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

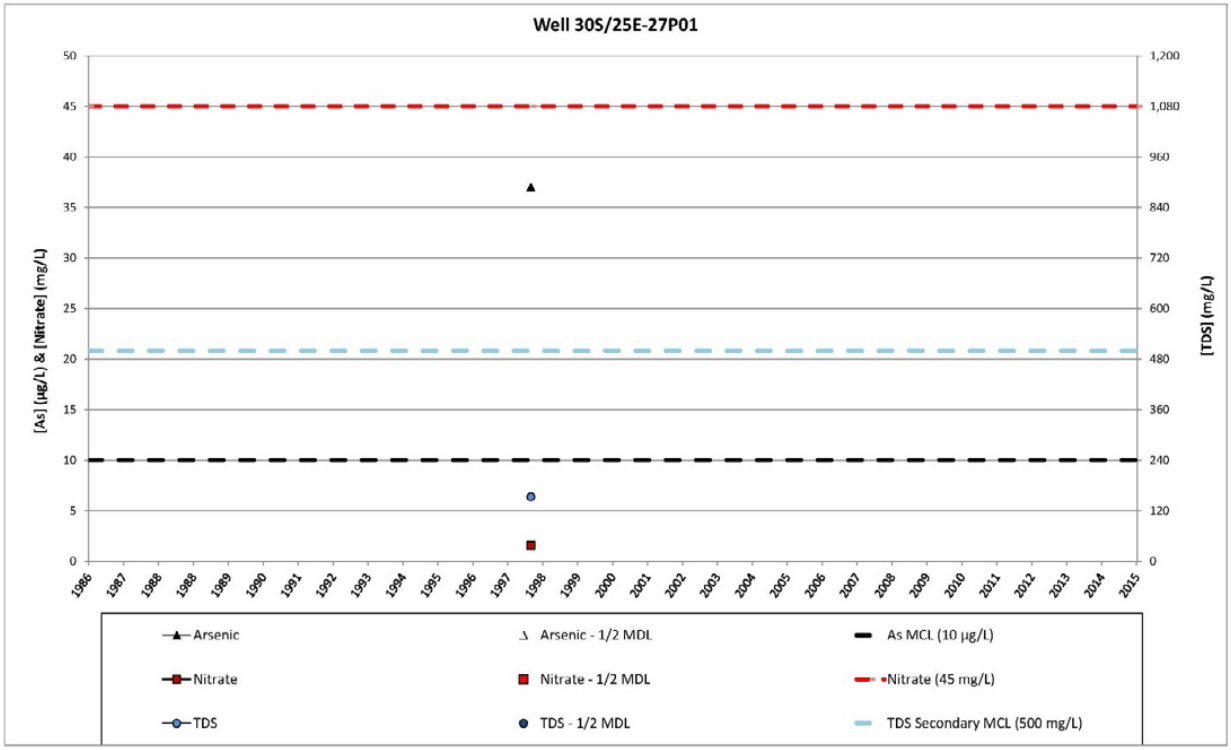

Well 30S/25E-24H01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

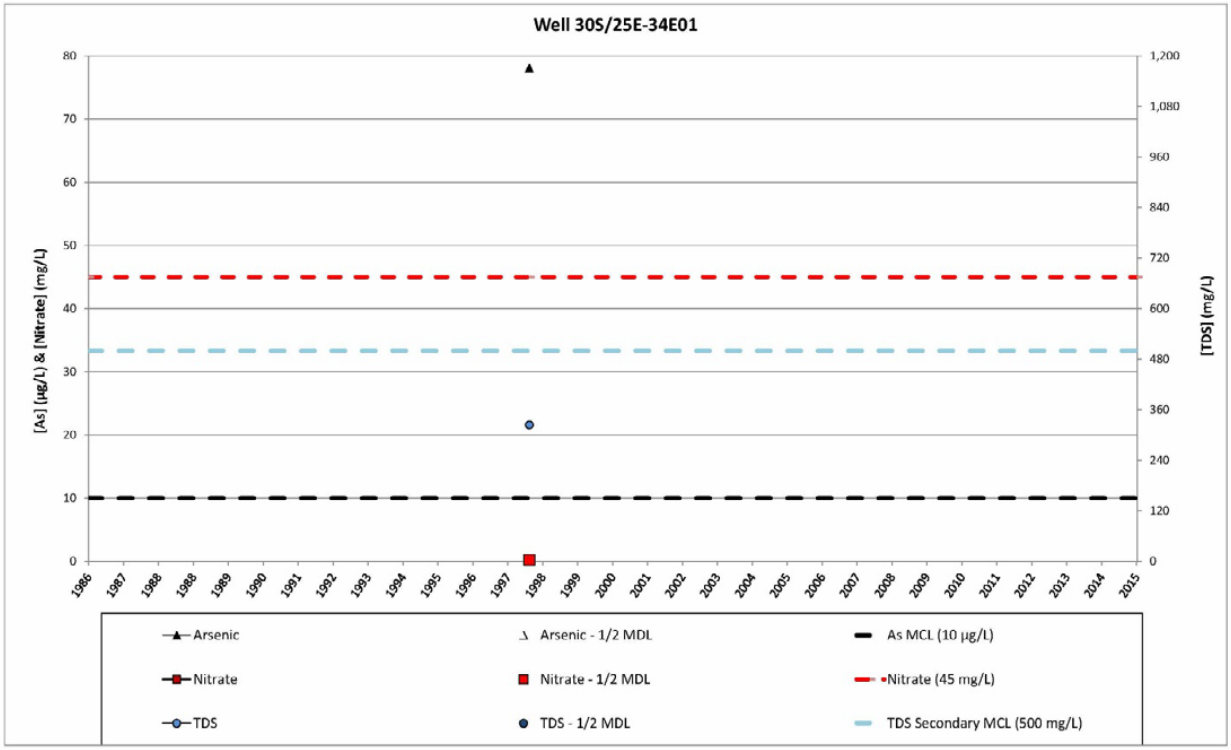

Well 30S/25E-24C04
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

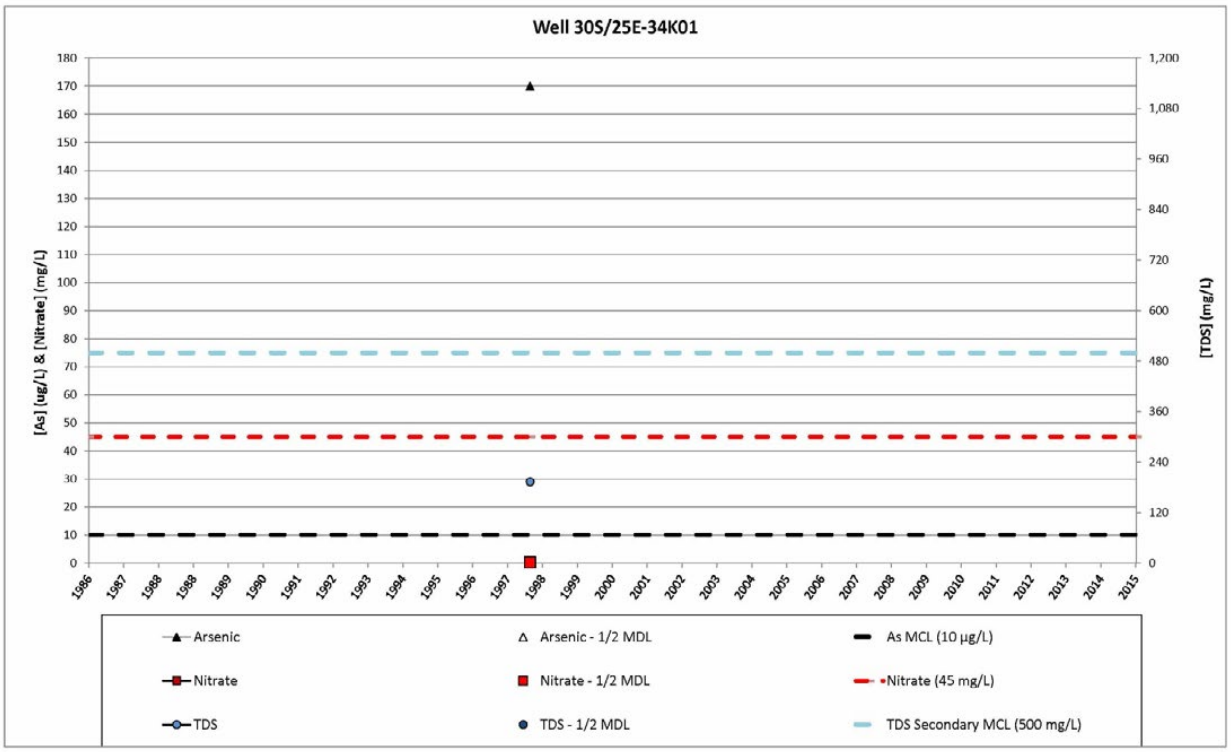

Well 30S/25E-24J01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

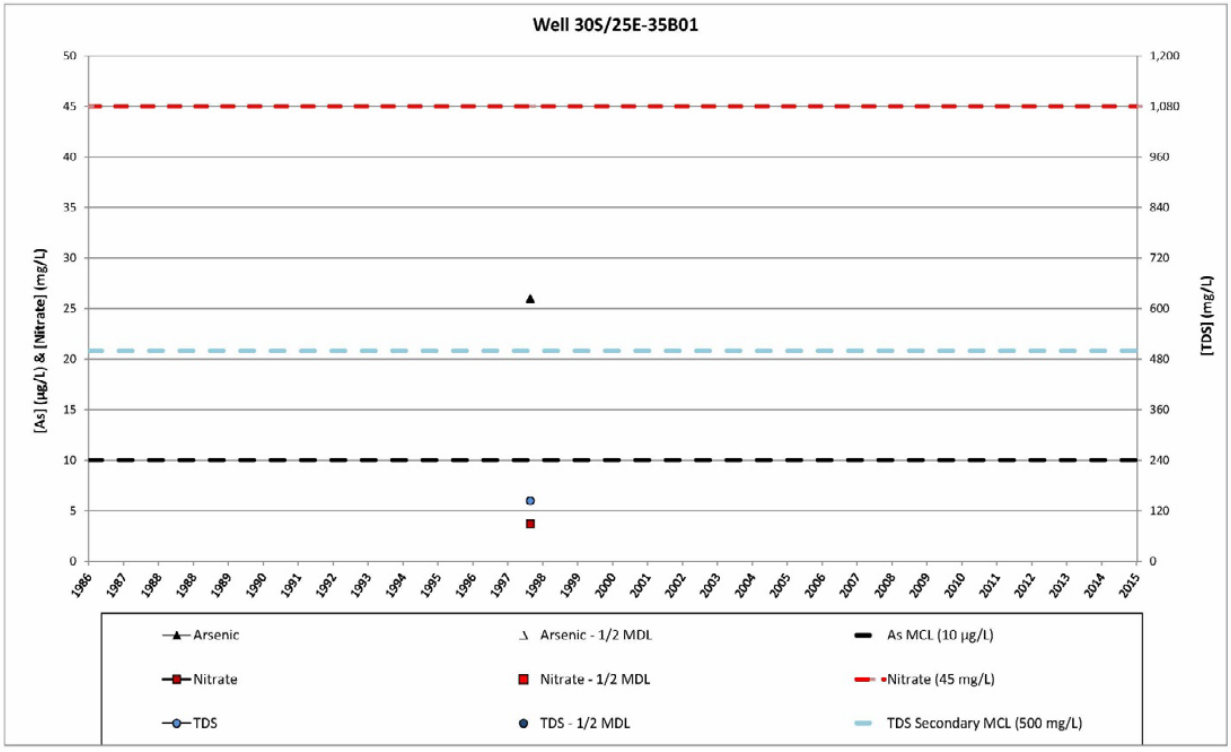

Well 30S/25E-24K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

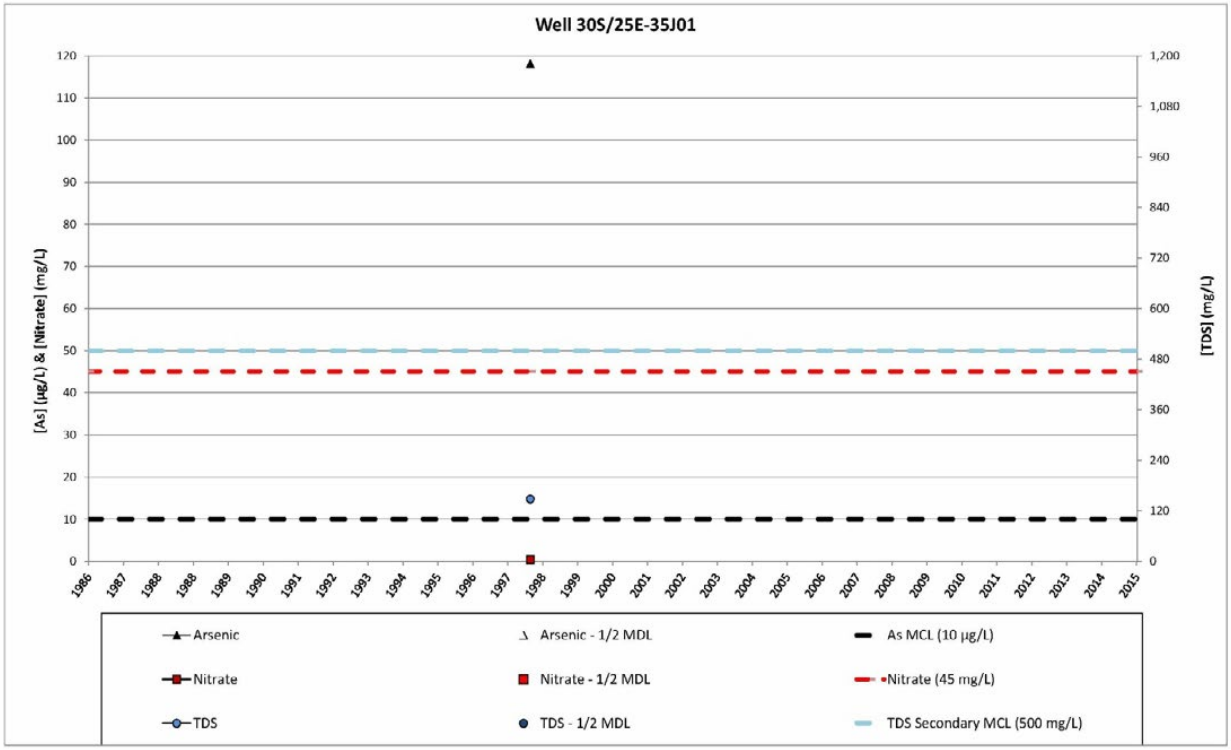

Well 30S/25E-25C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

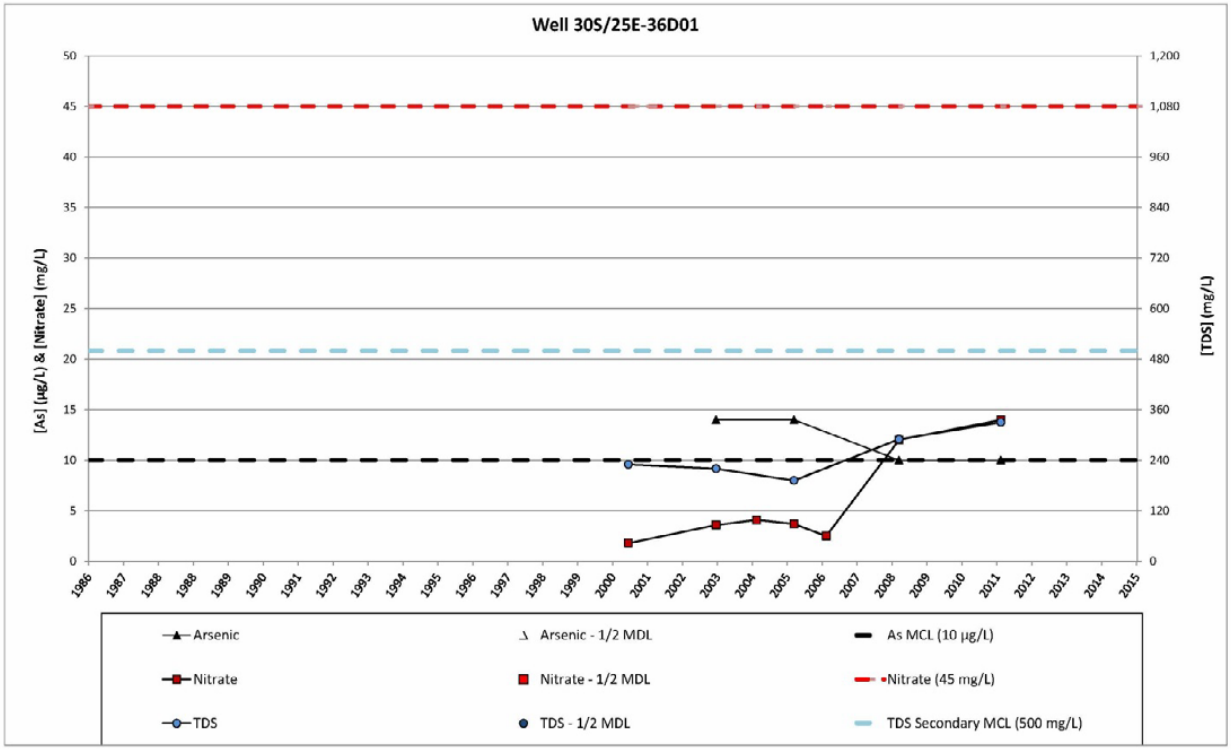

Well 30S/25E-27P01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

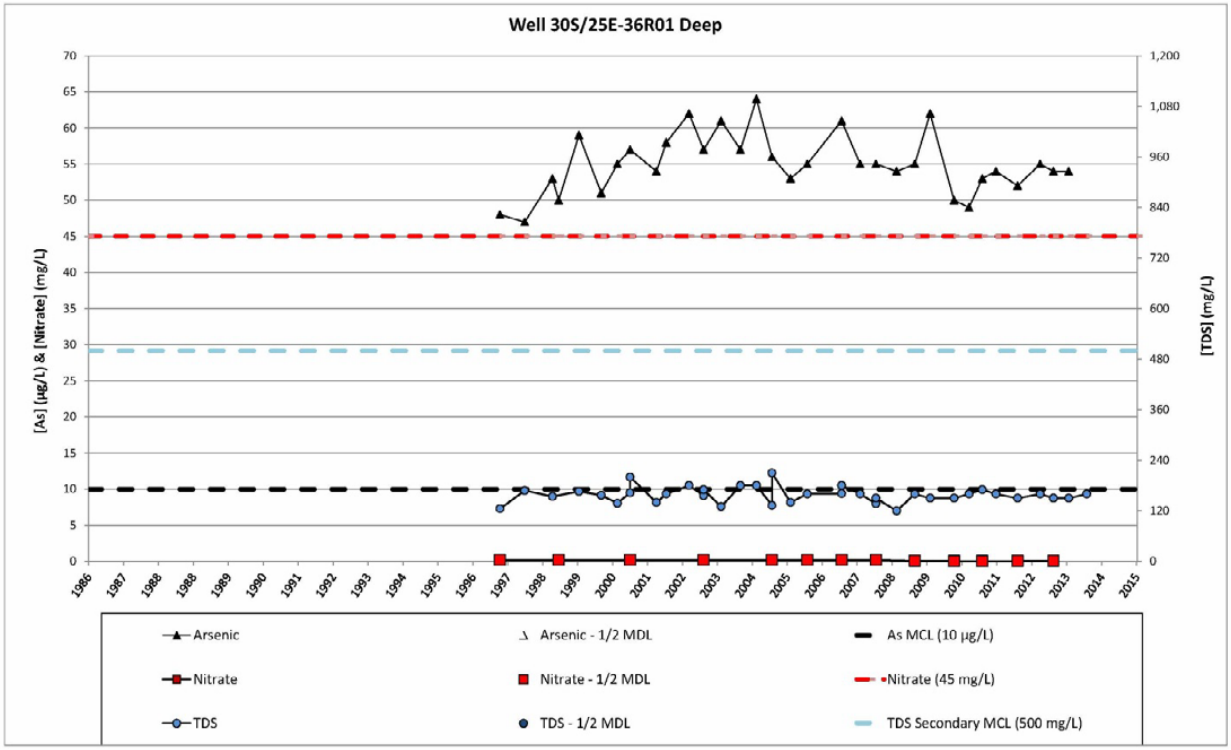

Well 30S/25E-34E01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

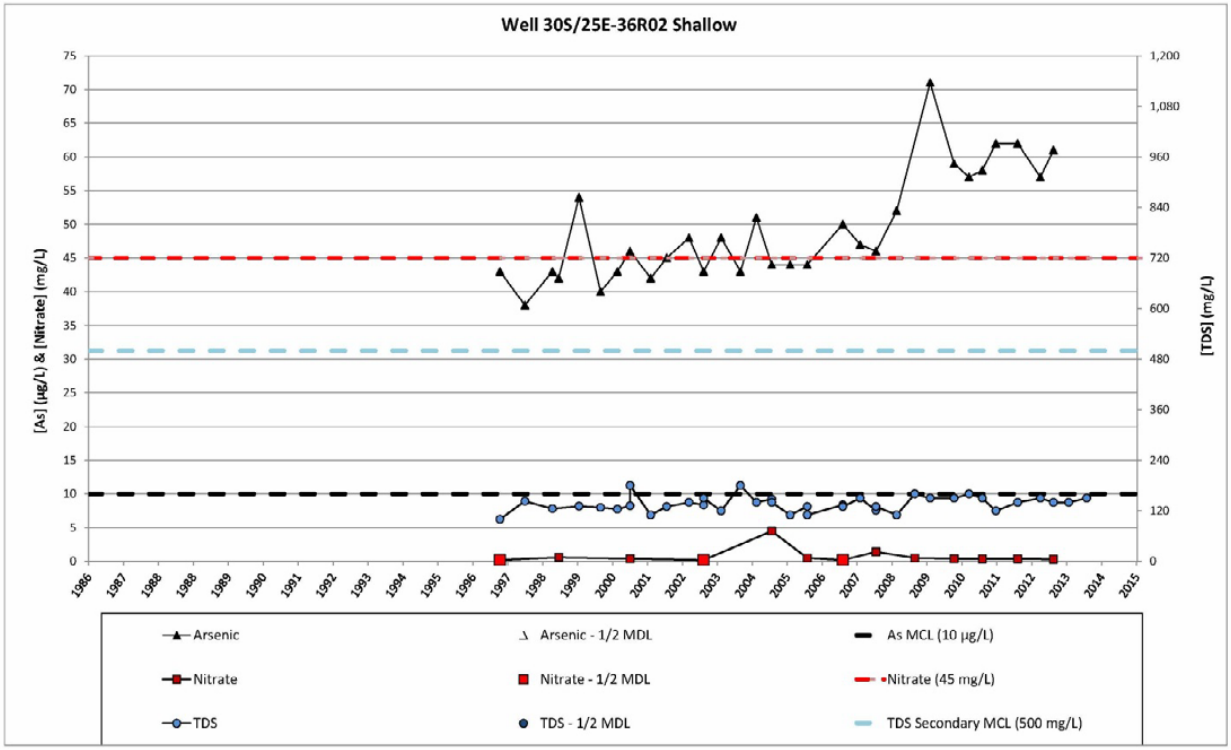

Well 30S/25E-34K01
[As] (ug/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/25E-35B01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/25E-35J01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

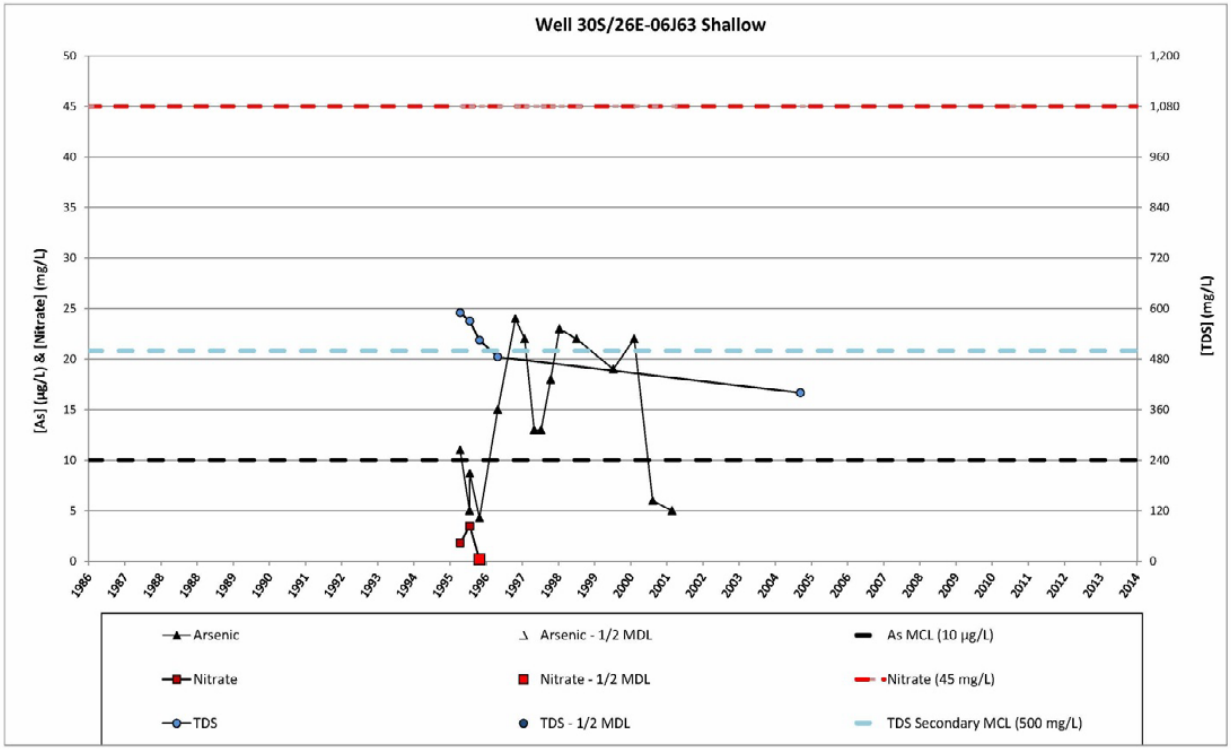

Well 30S/25E-36D01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

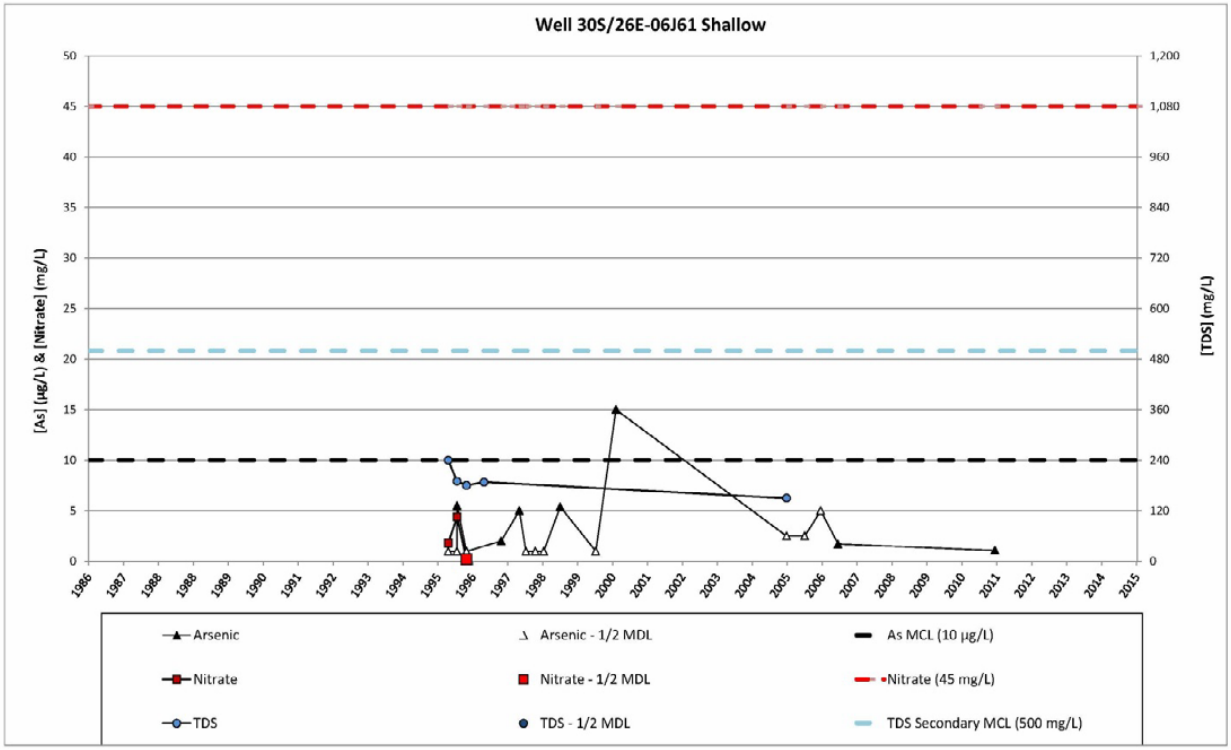

Well 30S/25E-36R01 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

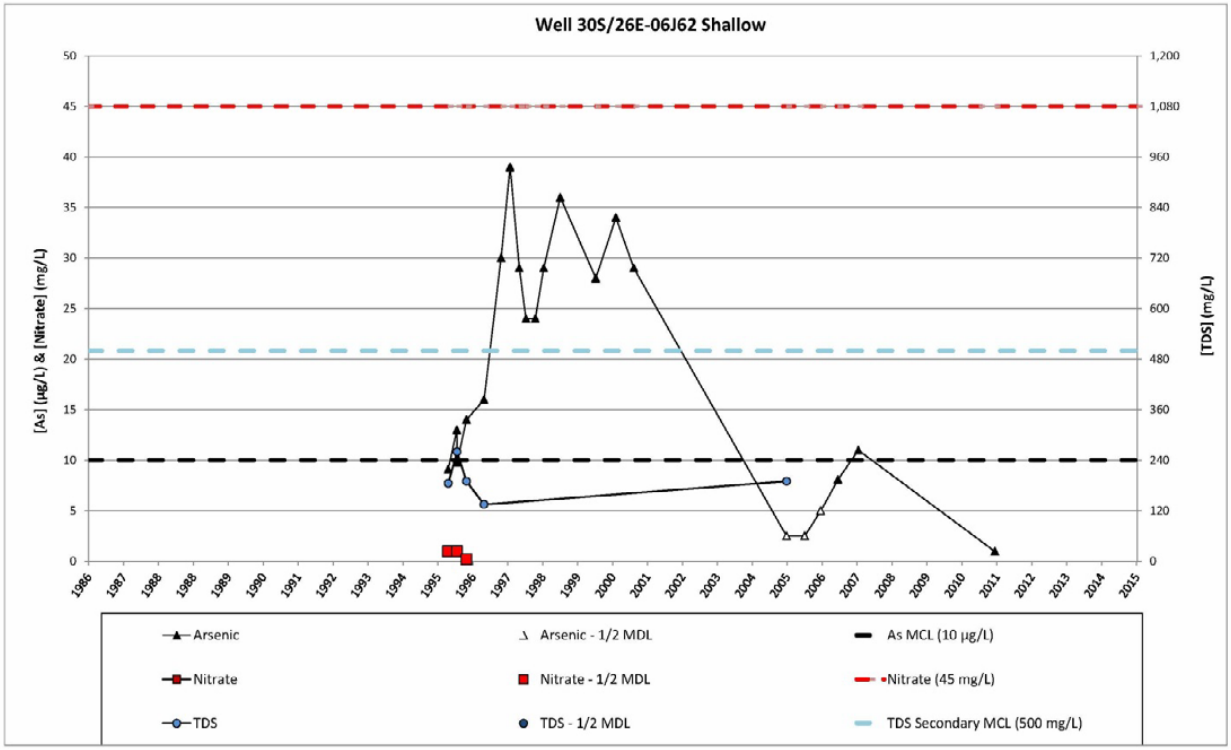

Well 30S/25E-36R02 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

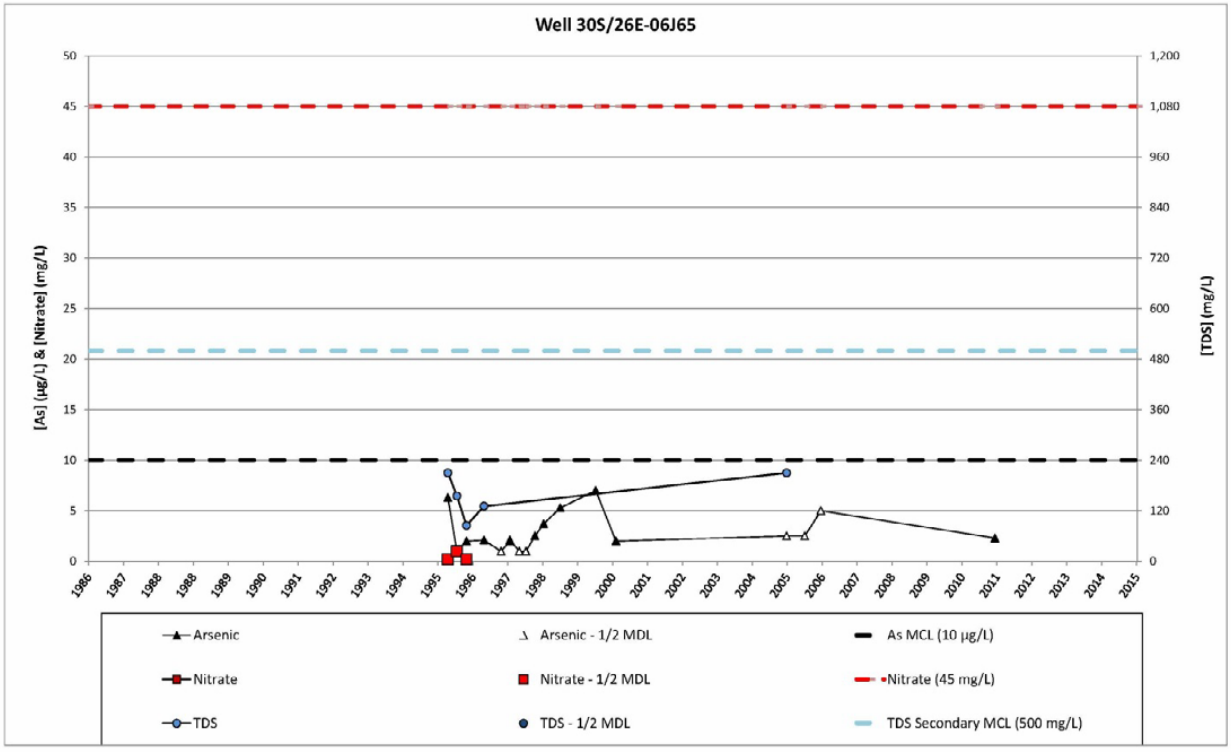
Township: 30 S

Section: 26 E

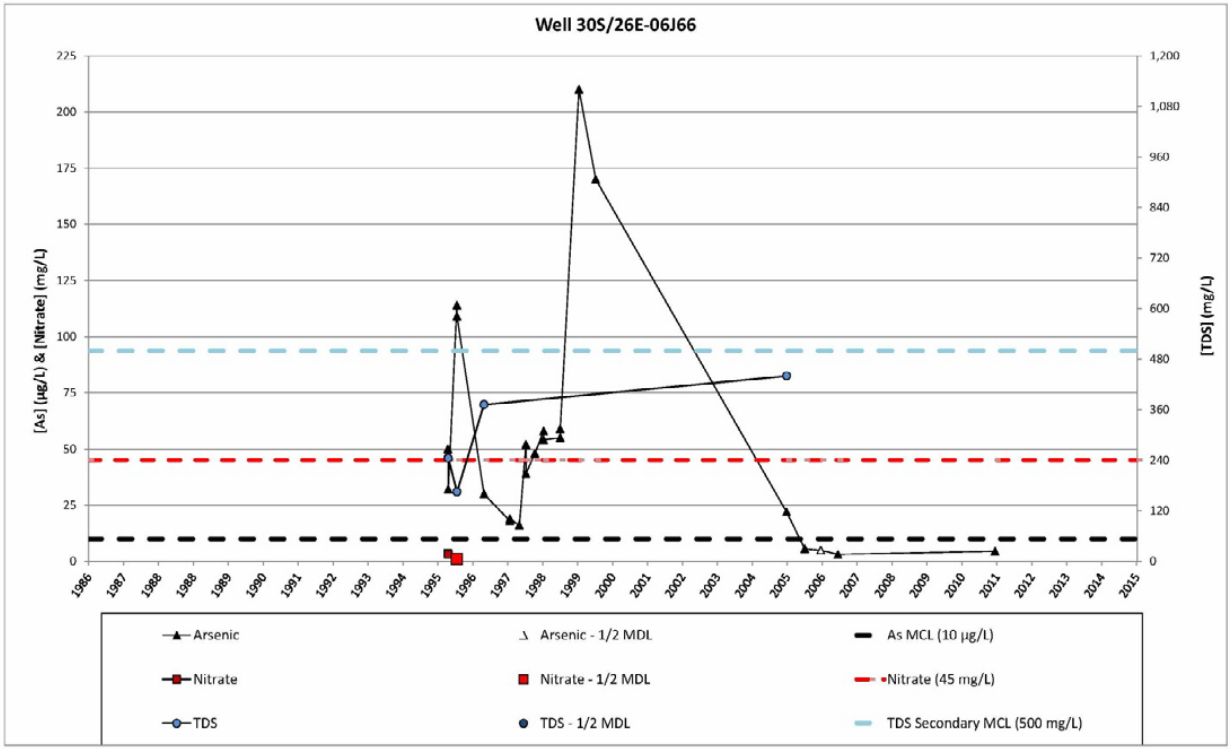

Well 30S/26E-06J63 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

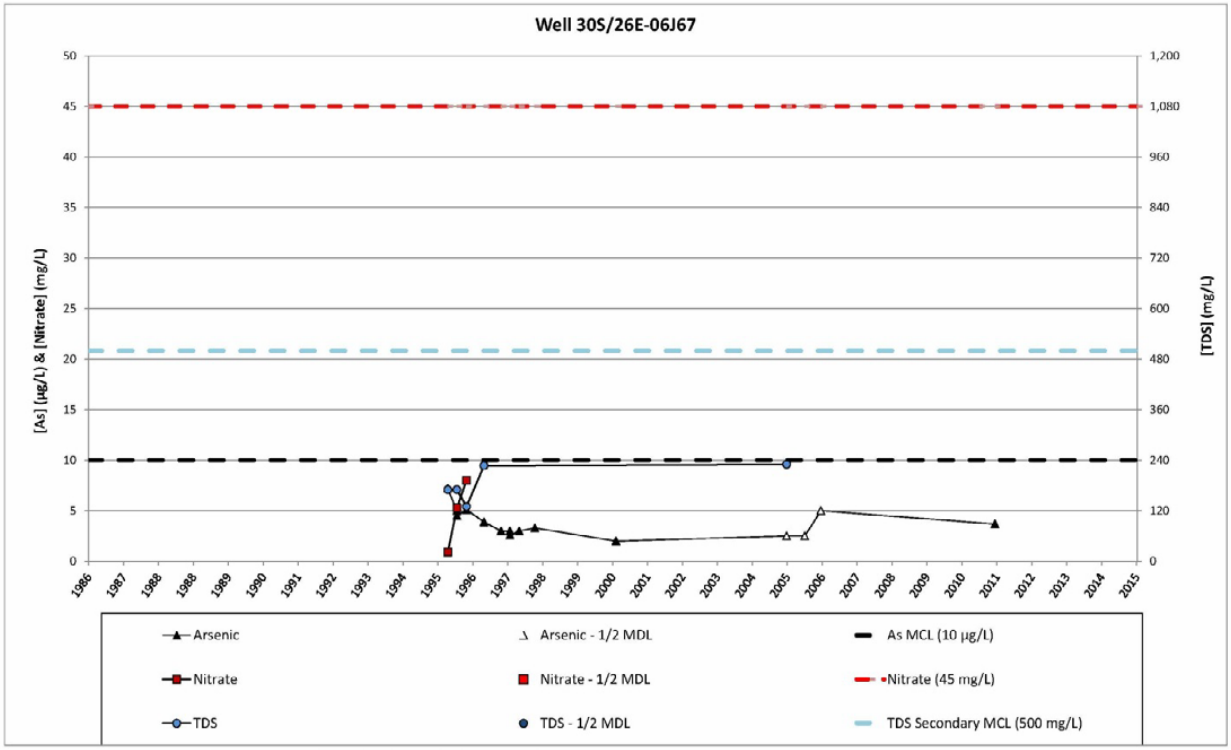

Well 30S/26E-06J61 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)



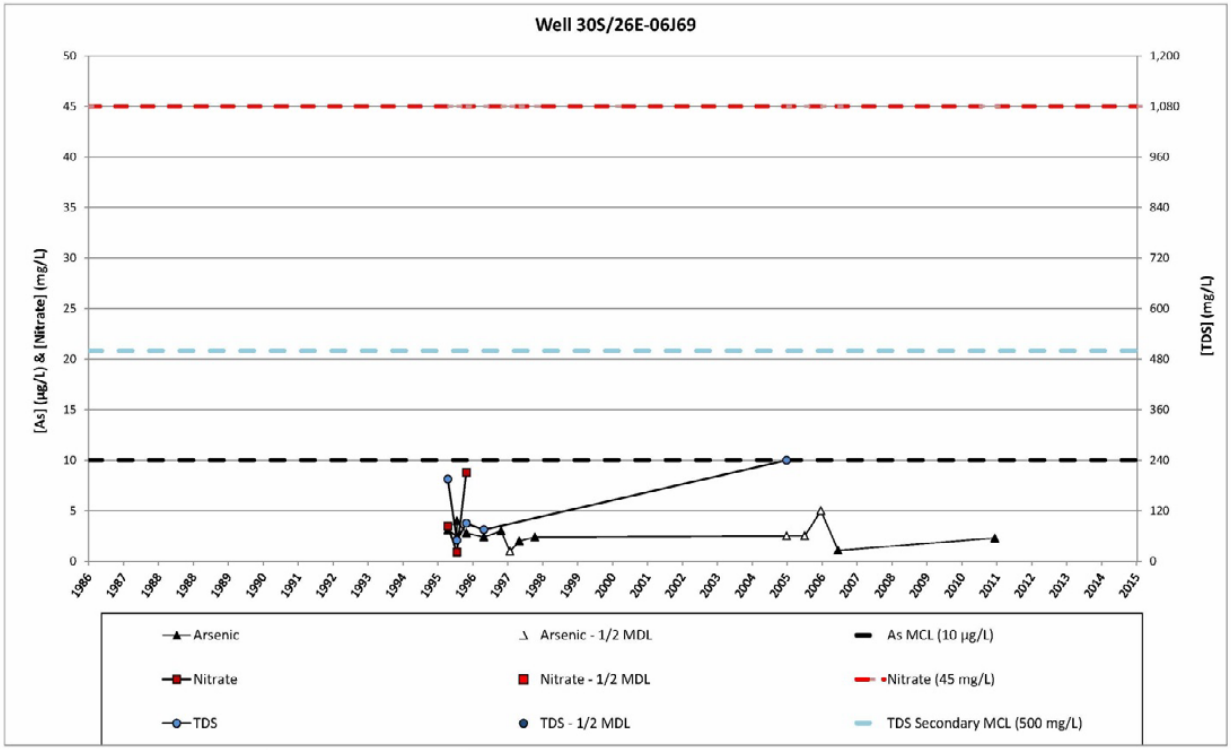


Note: Extreme outlier removed. The outlier was the only sample with a result higher than MCL.

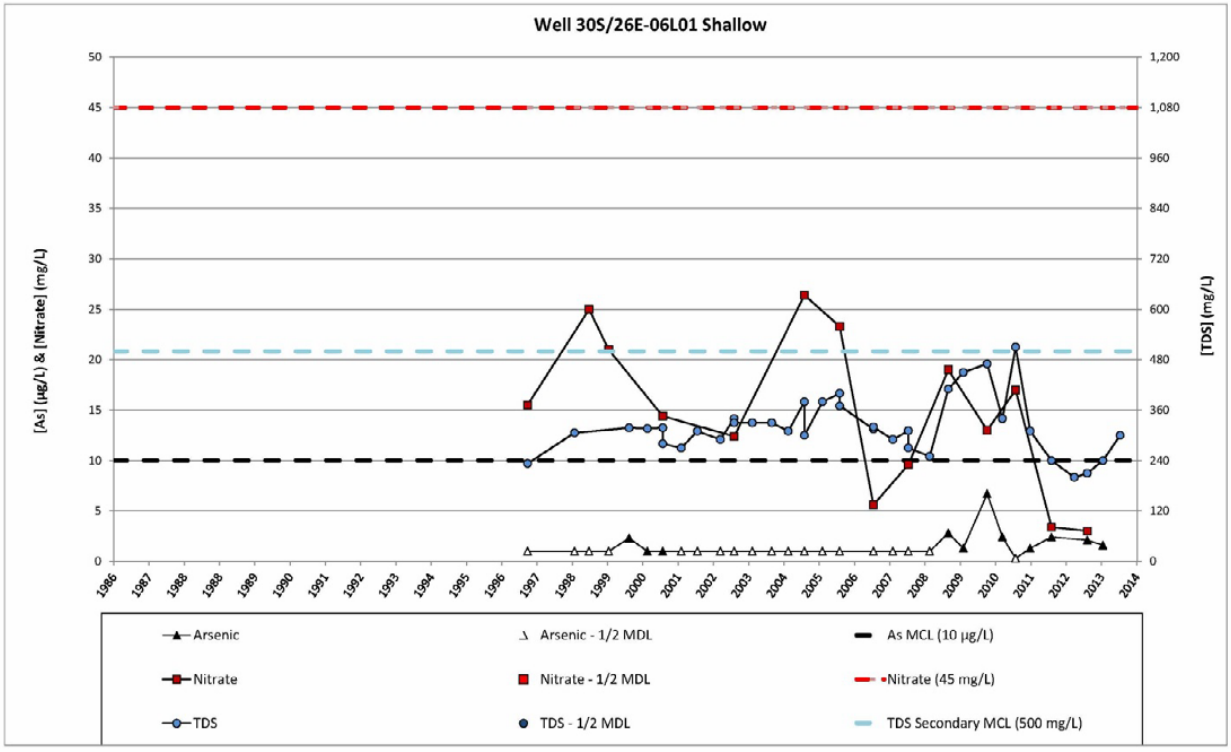


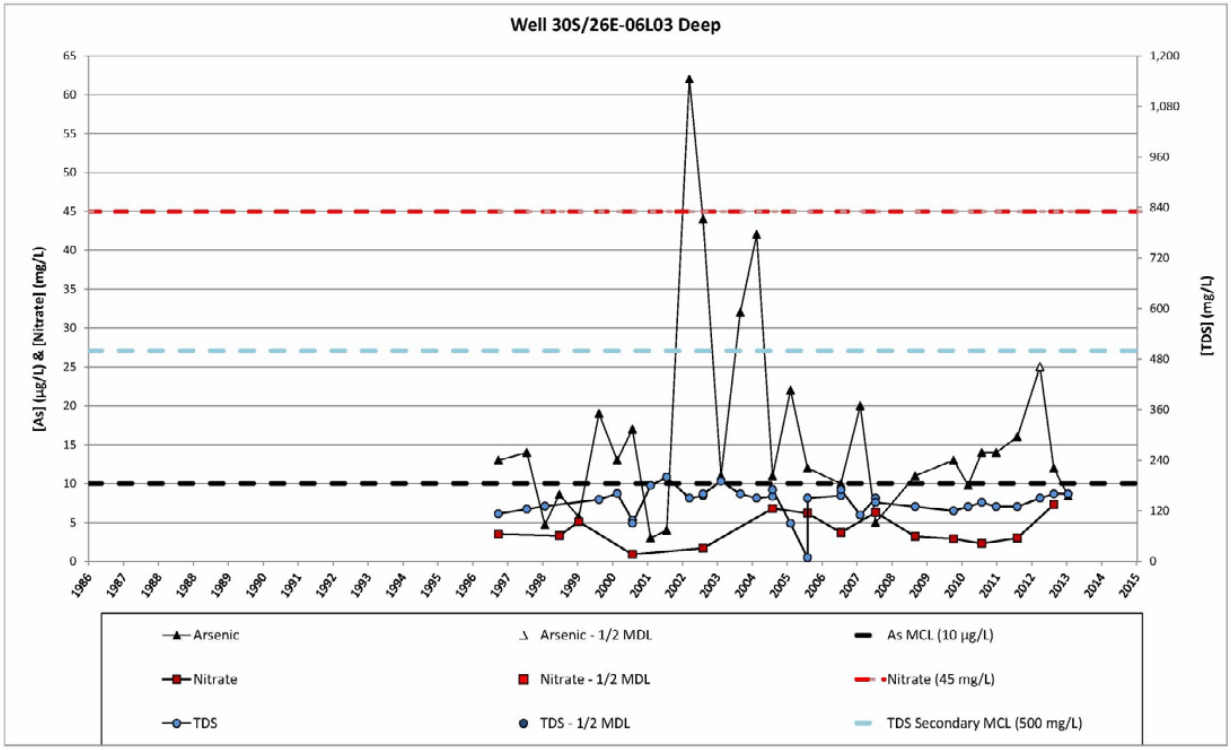


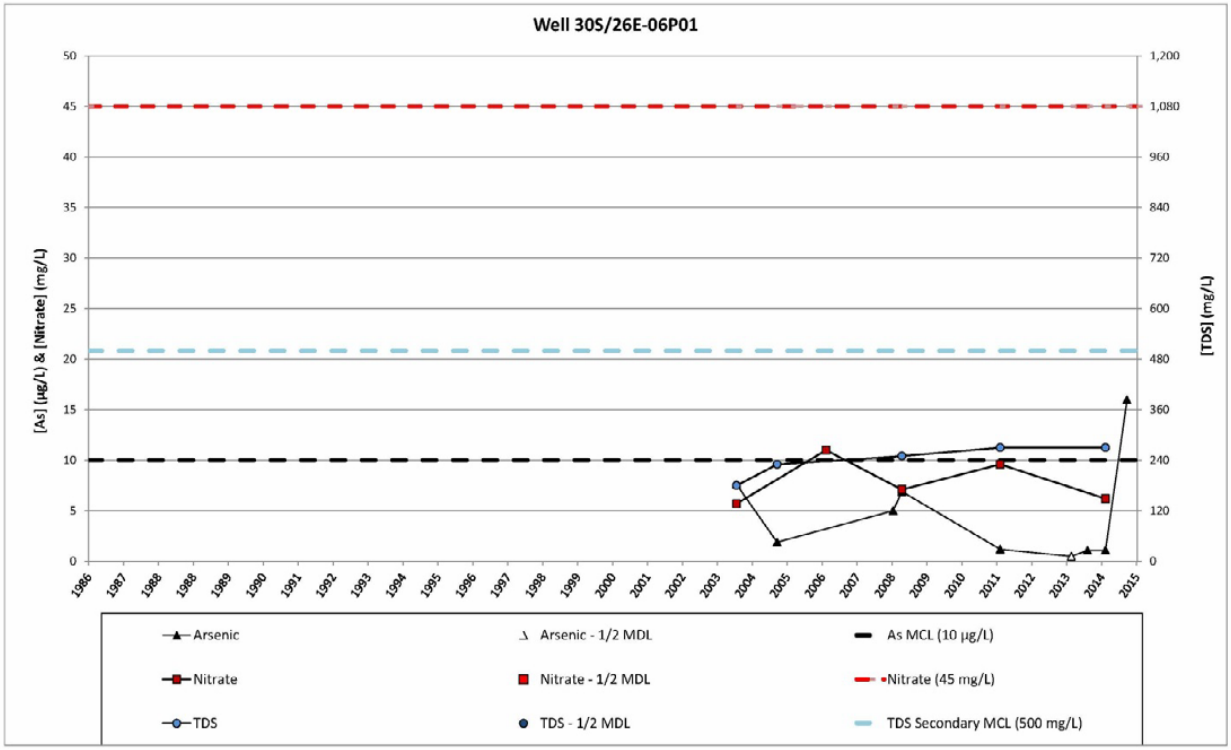
Note: Extreme outlier removed. The outlier was the only sample with a result higher than MCL.

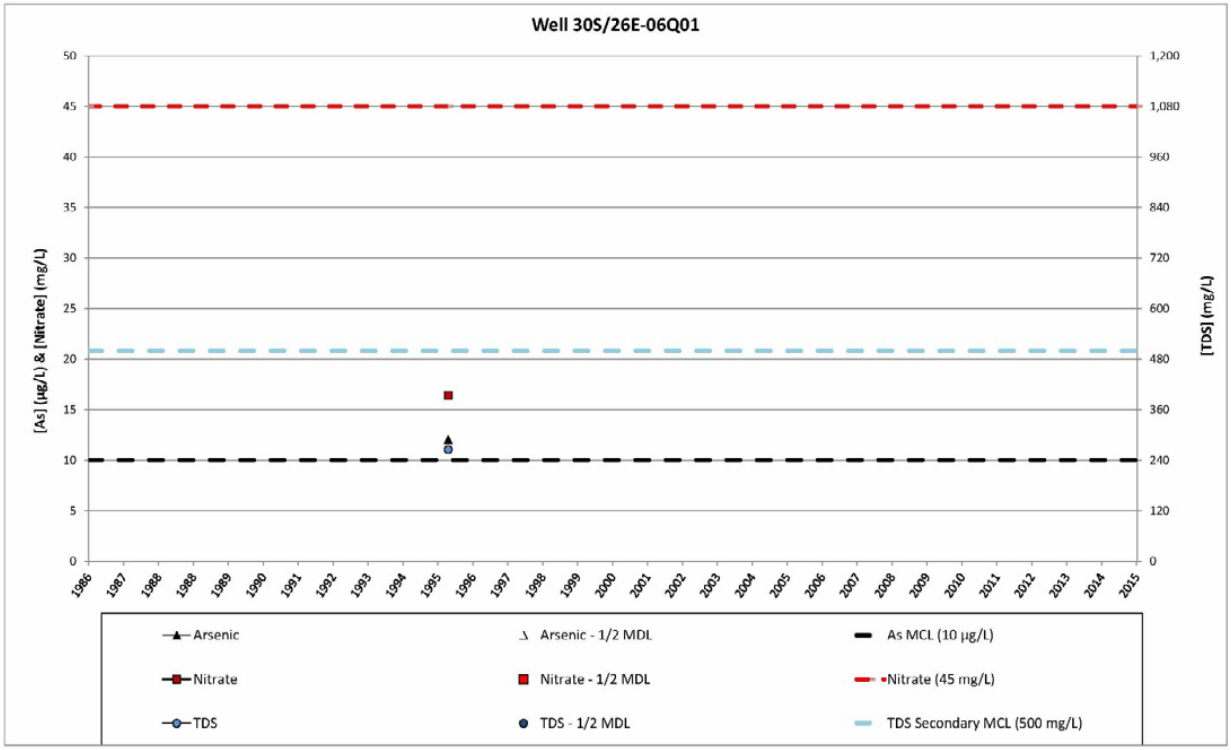


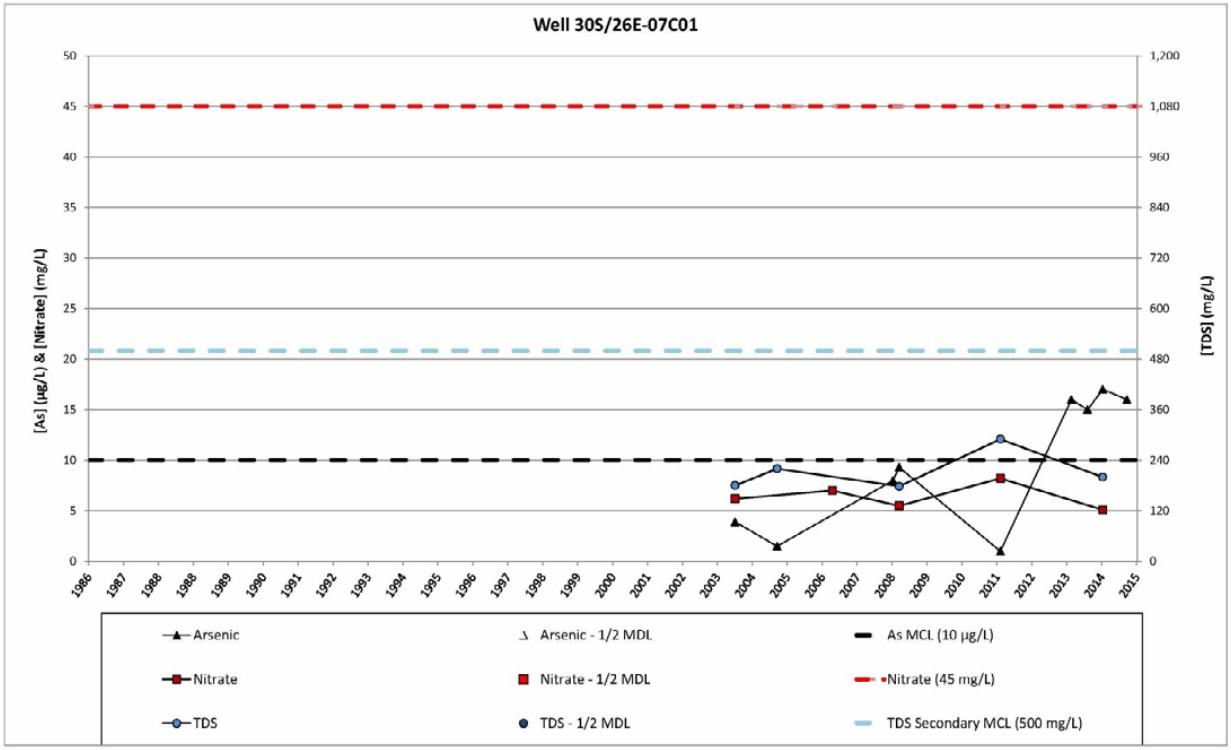
Note: Extreme outlier removed. The outlier was the only sample with a result higher than MCL.

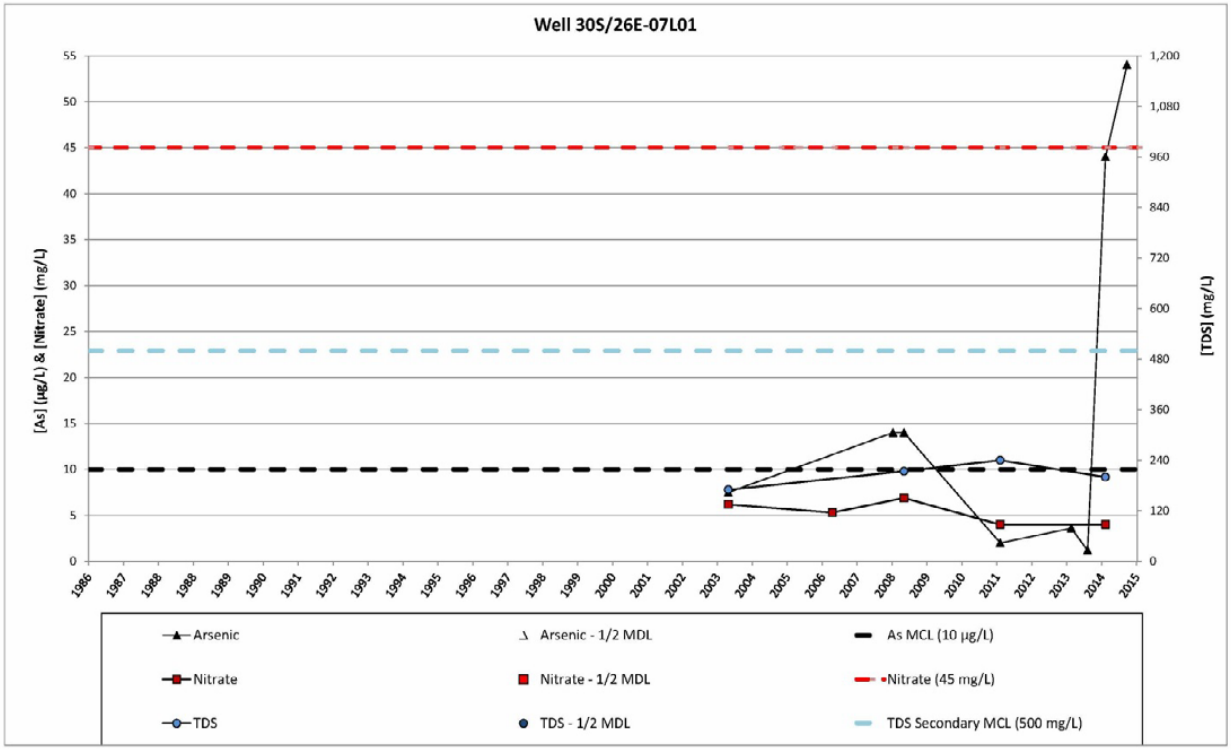


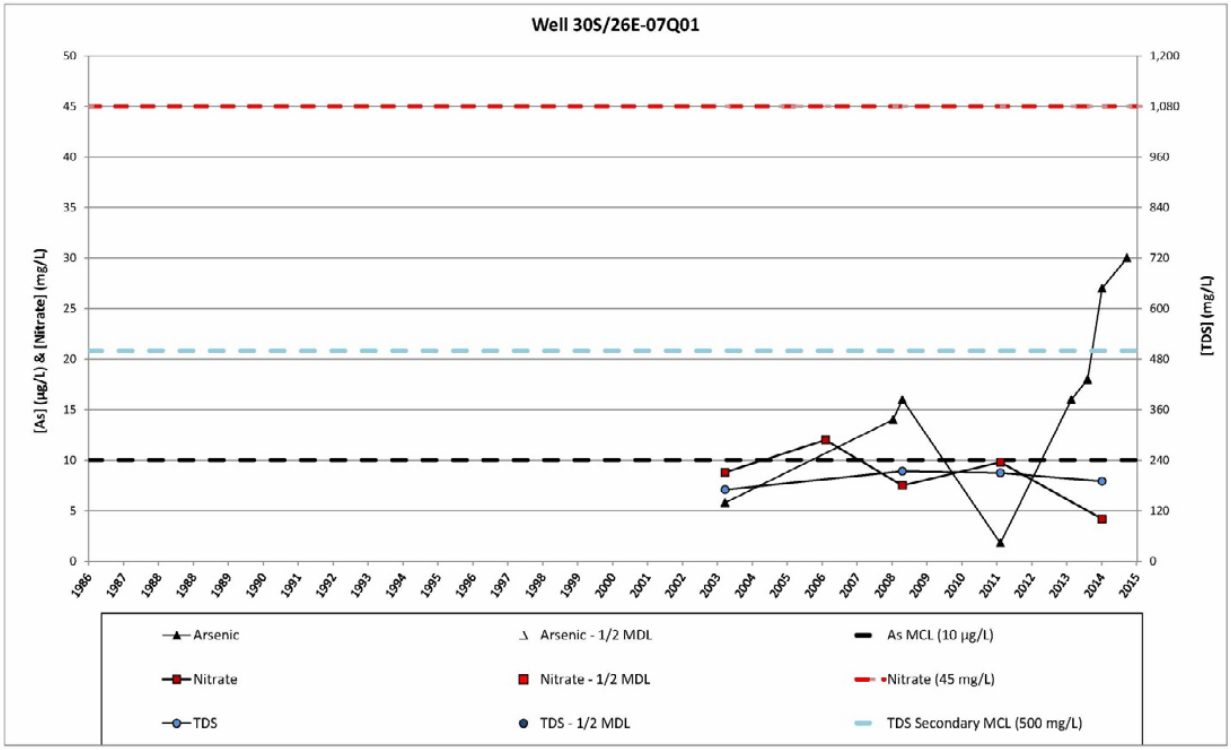

Well 30S/26E-06L03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

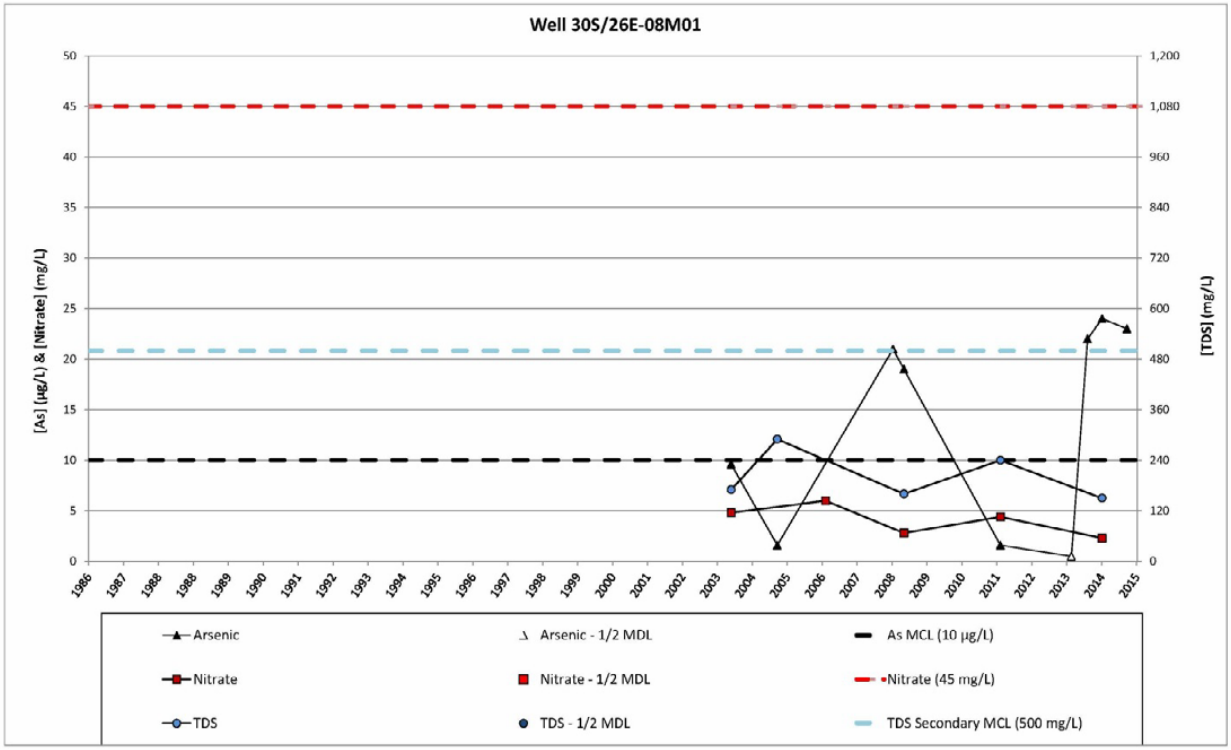

Well 30S/26E-06P01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

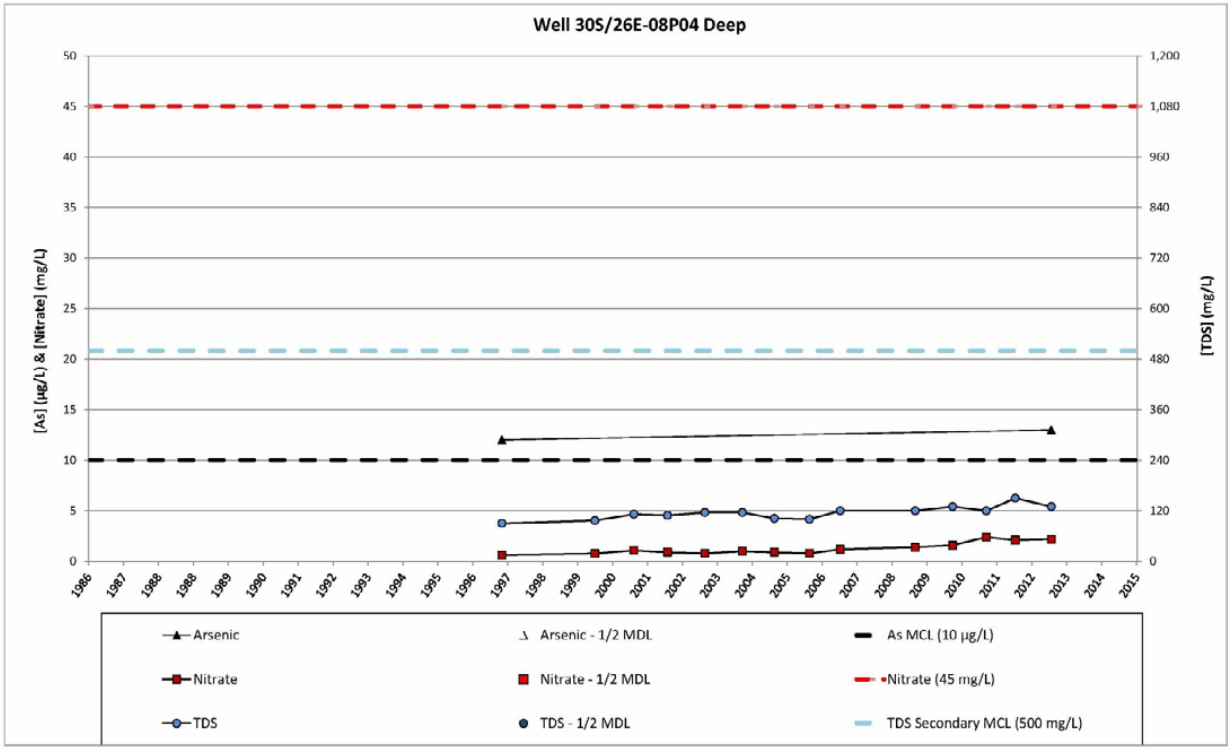

Well 30S/26E-06Q01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

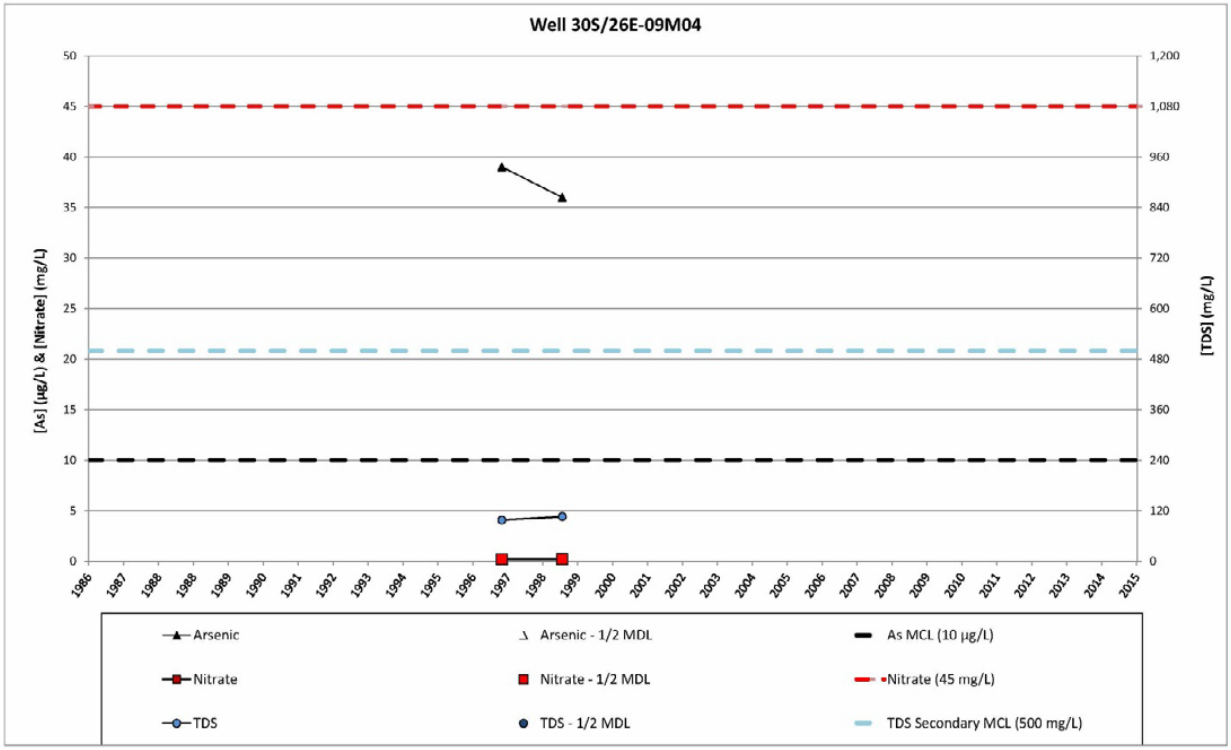

Well 30S/26E-07C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

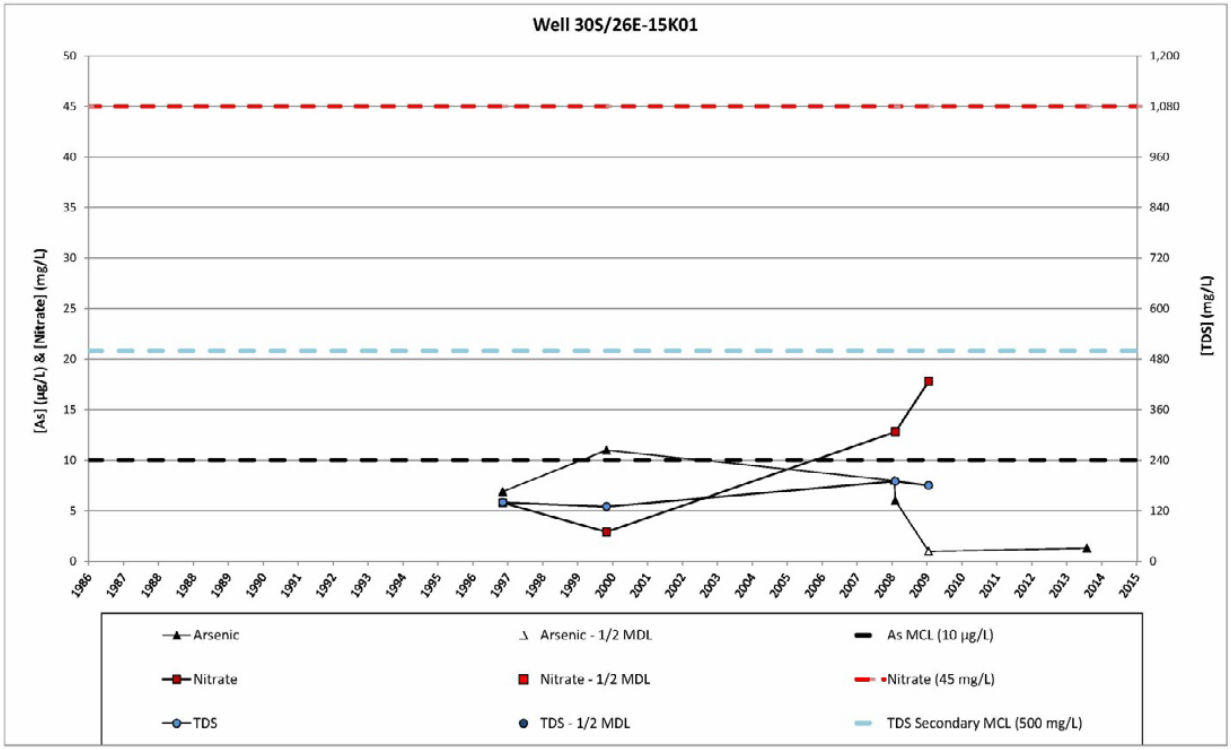

Well 30S/26E-07L01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

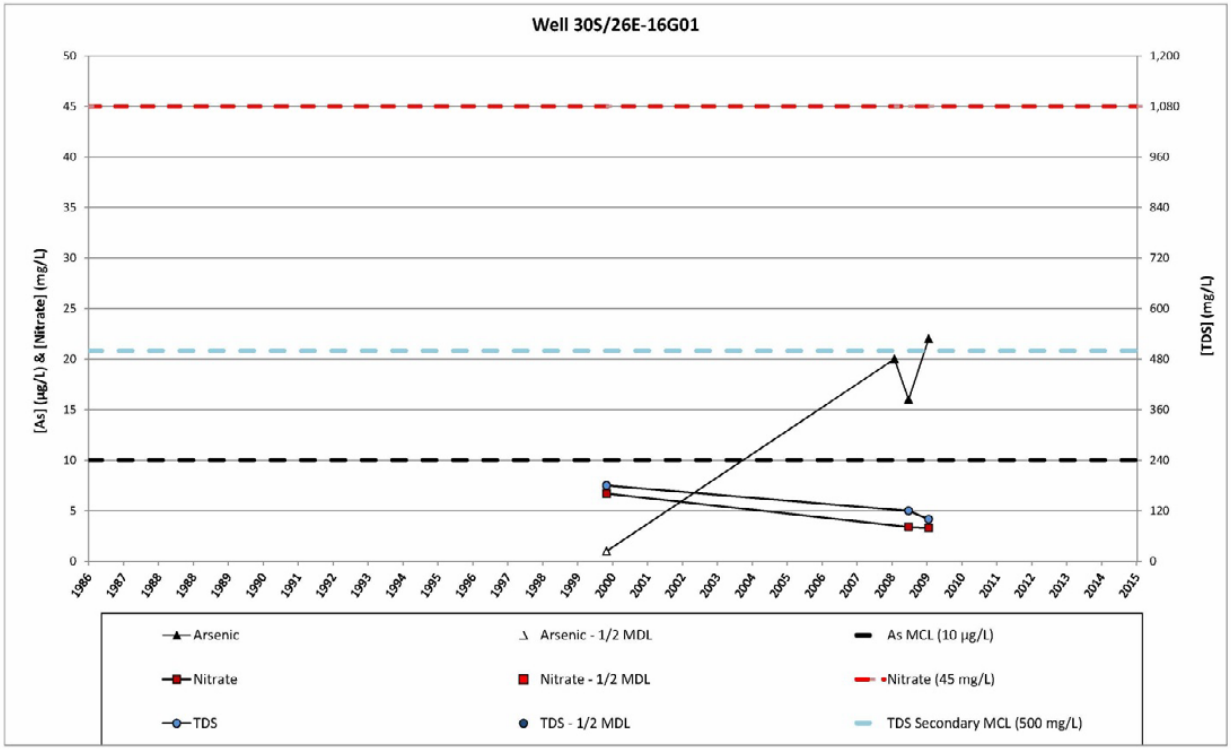

Well 30S/26E-07Q01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

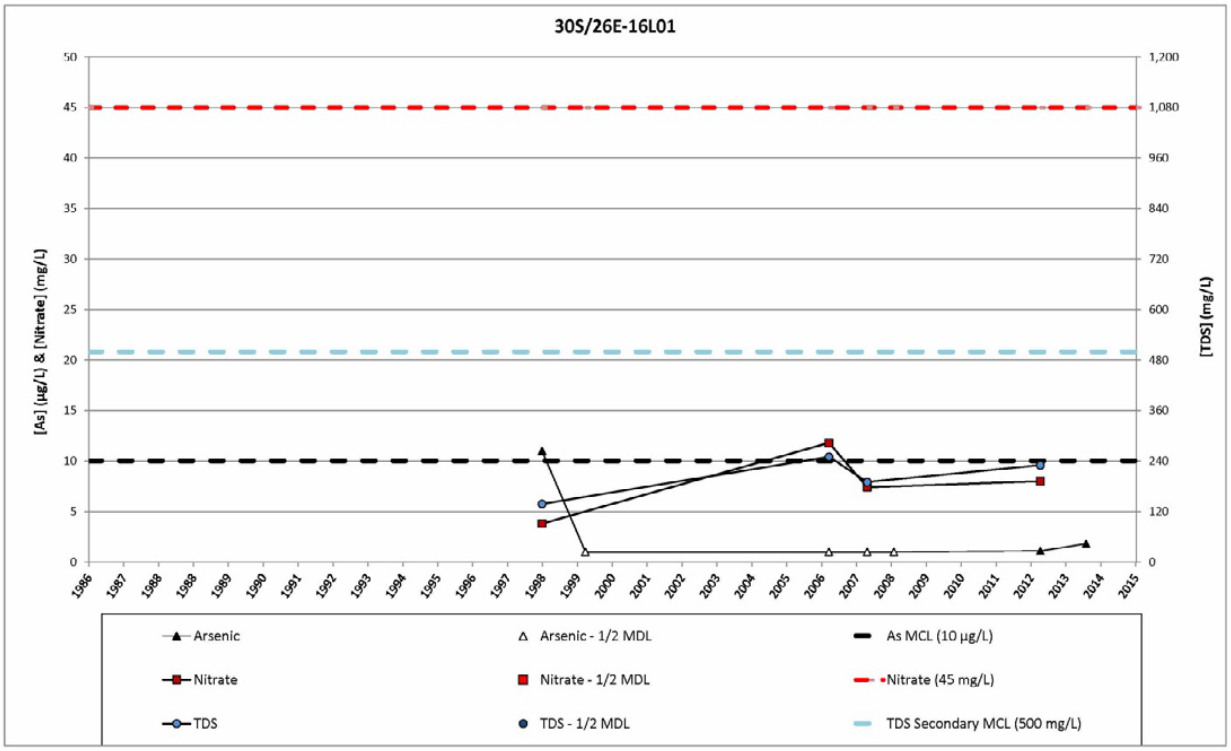

Well 30S/26E-08M01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

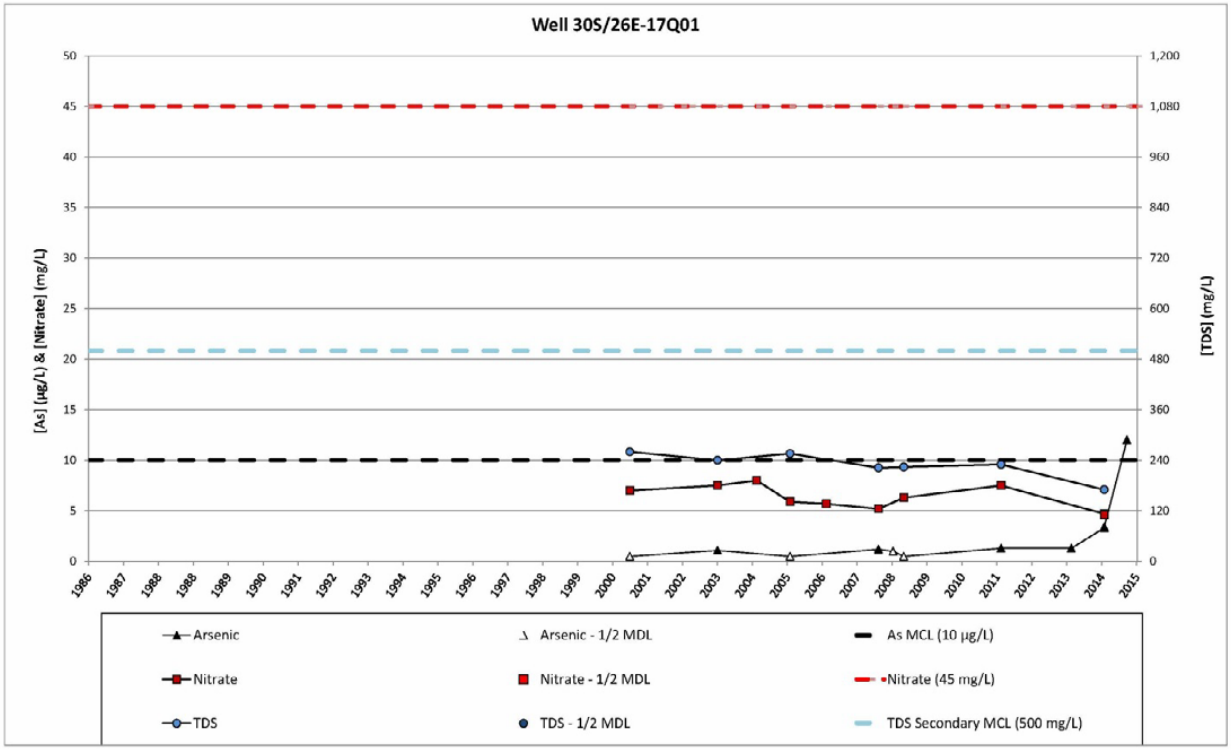

Well 30S/26E-08P04 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

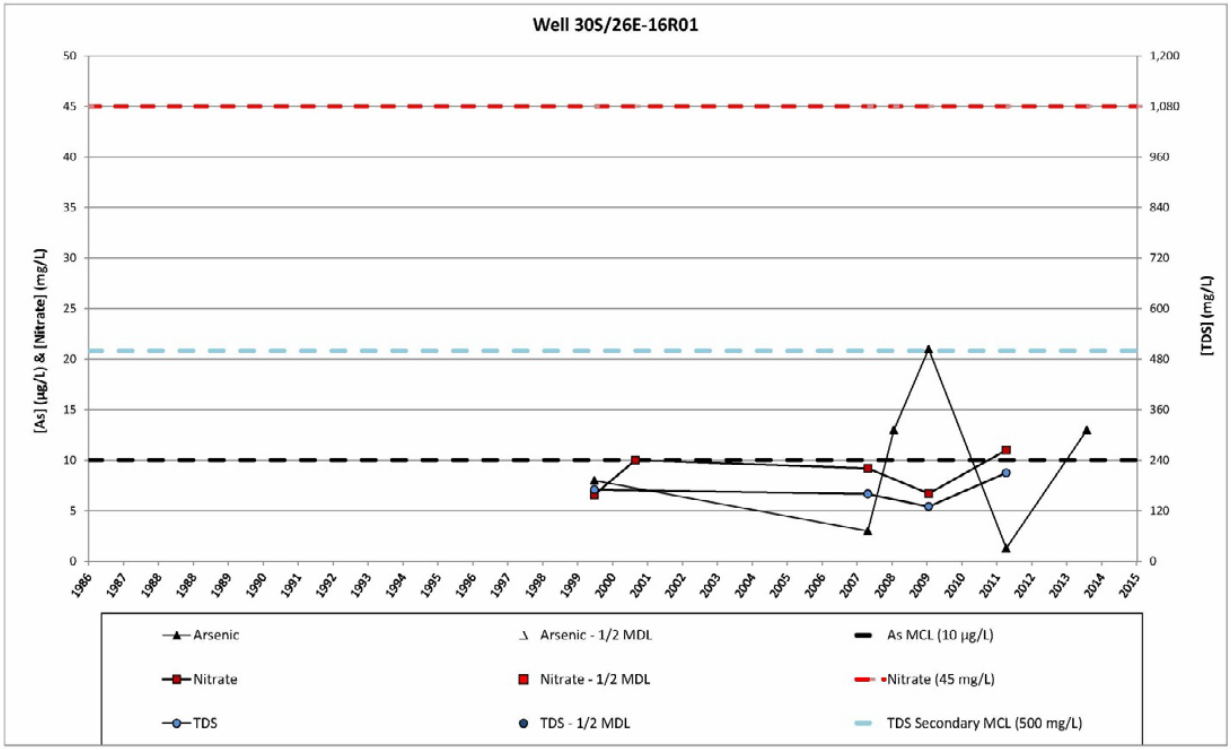

Well 30S/26E-09M04
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

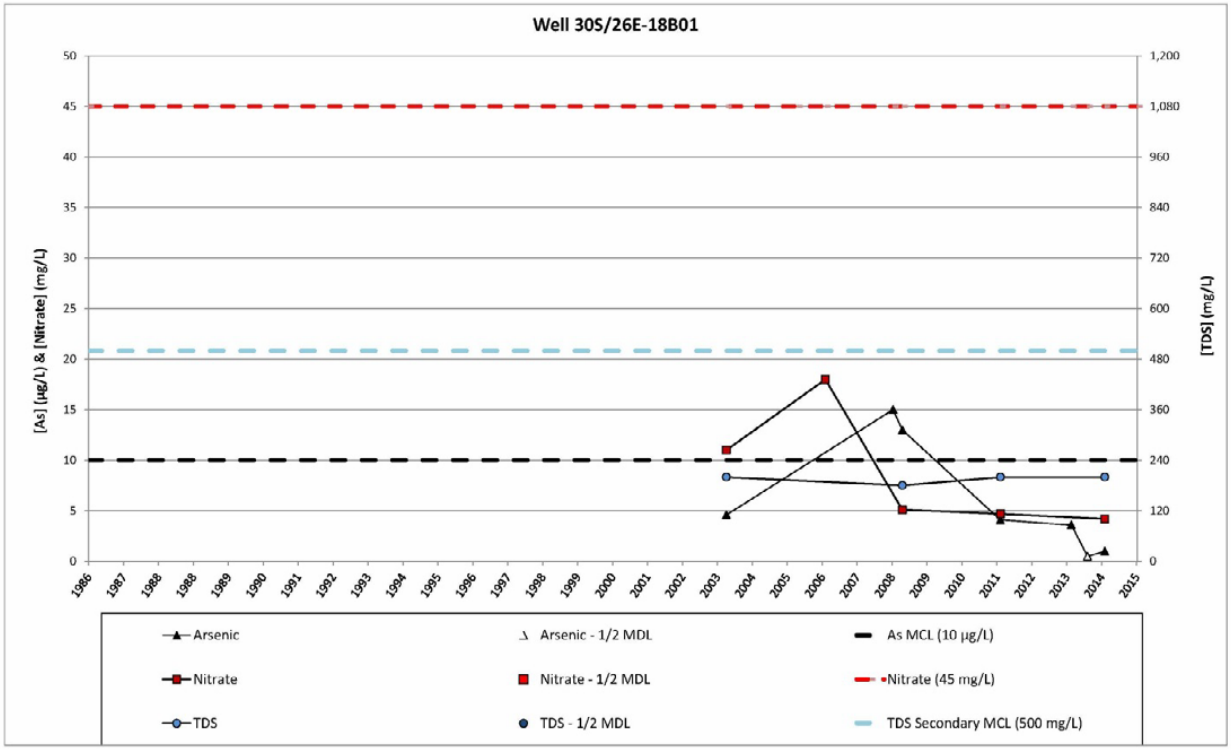

Well 30S/26E-15K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

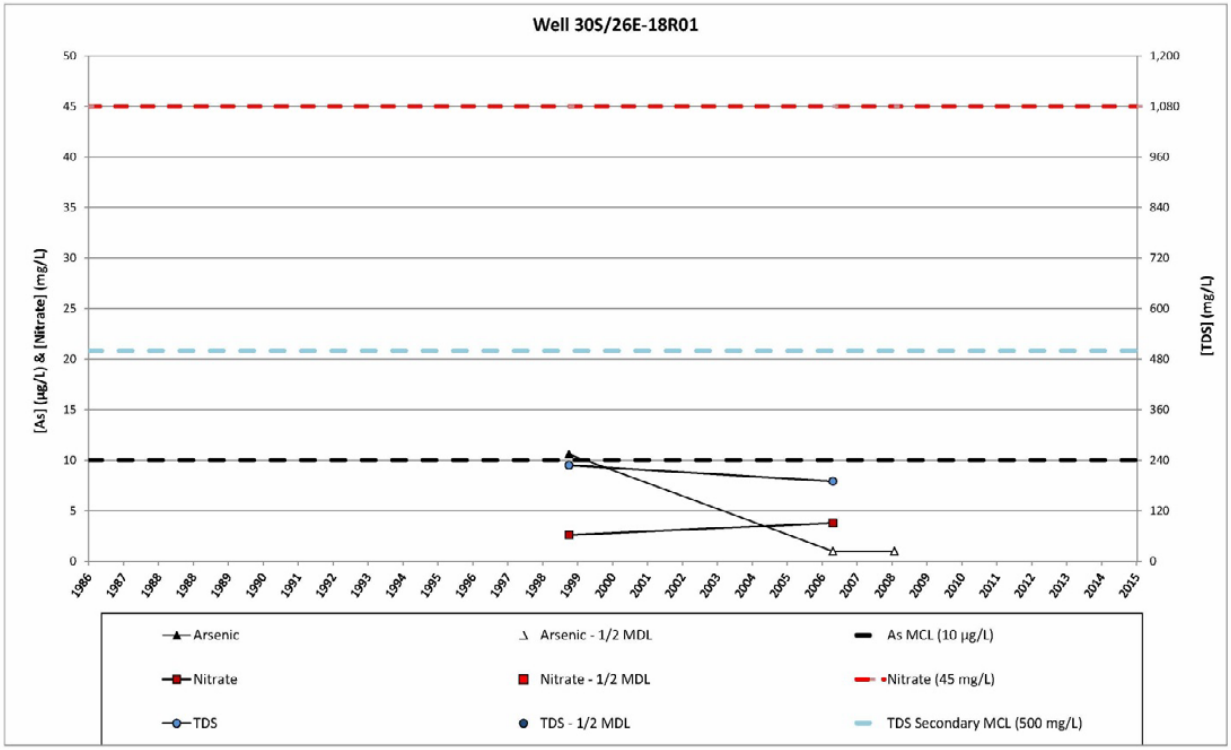

Well 30S/26E-16G01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

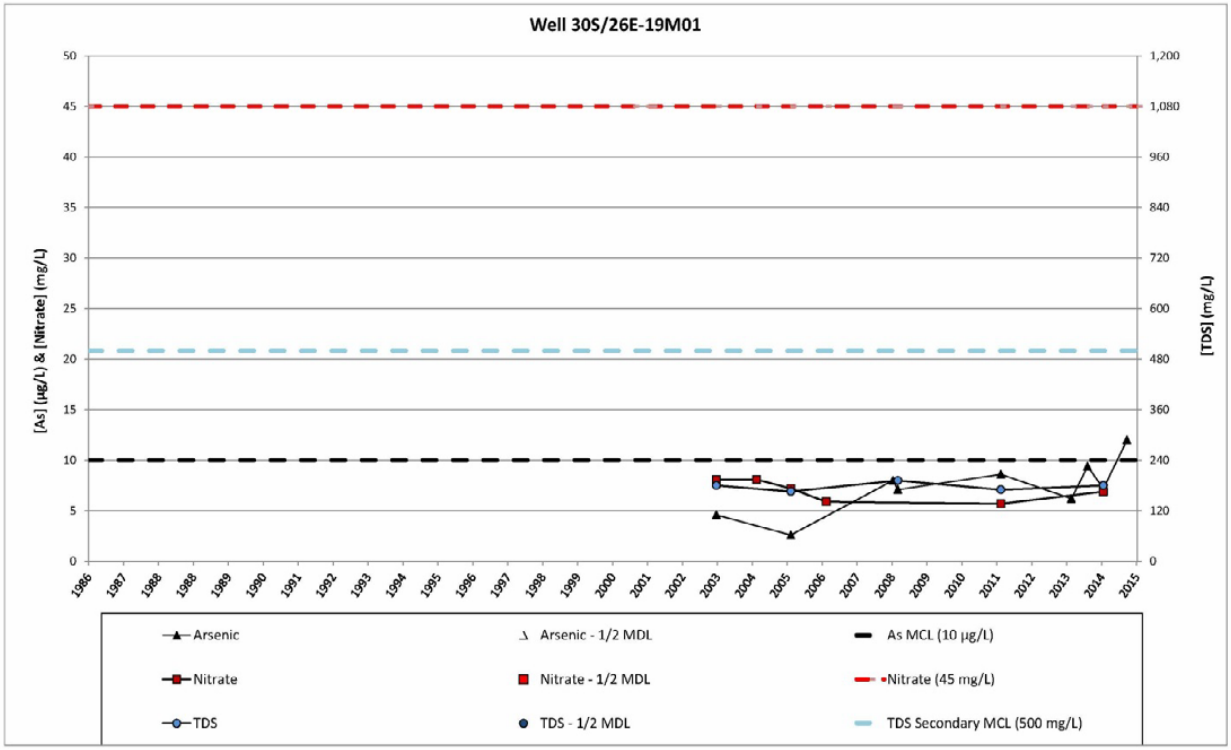

30S/26E-16L01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

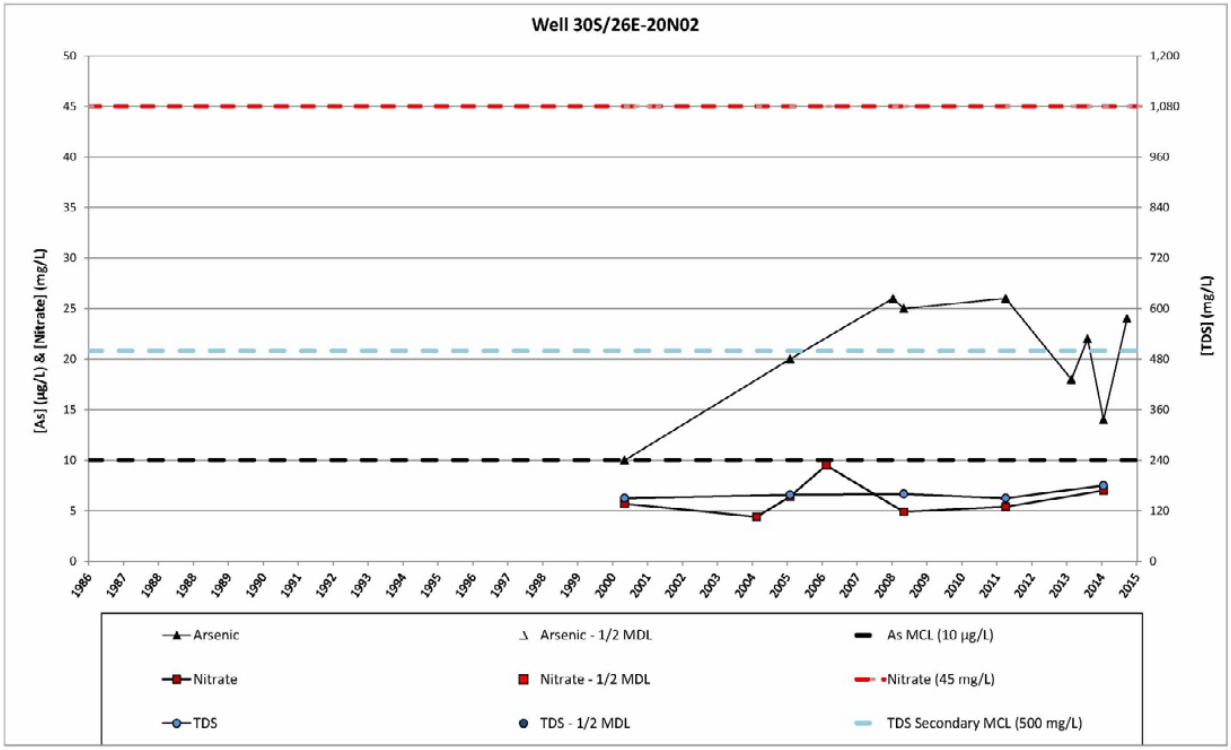

Well 30S/26E-17Q01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

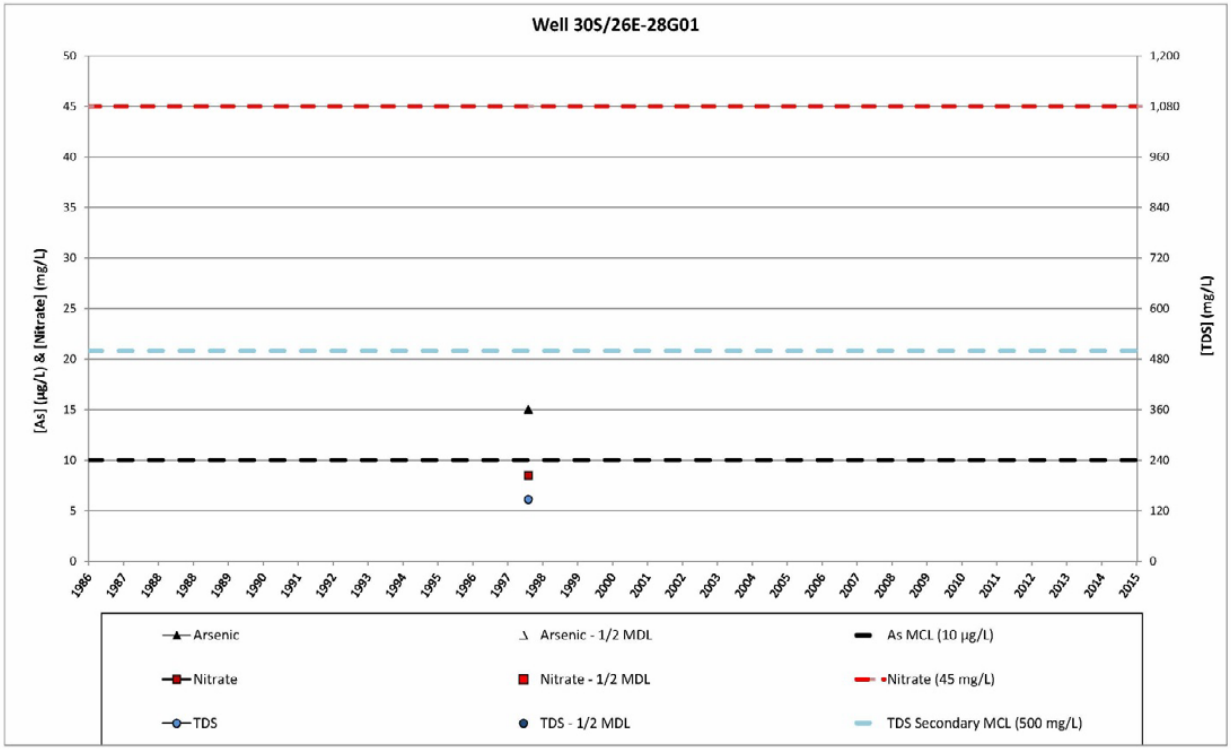

Well 30S/26E-16R01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

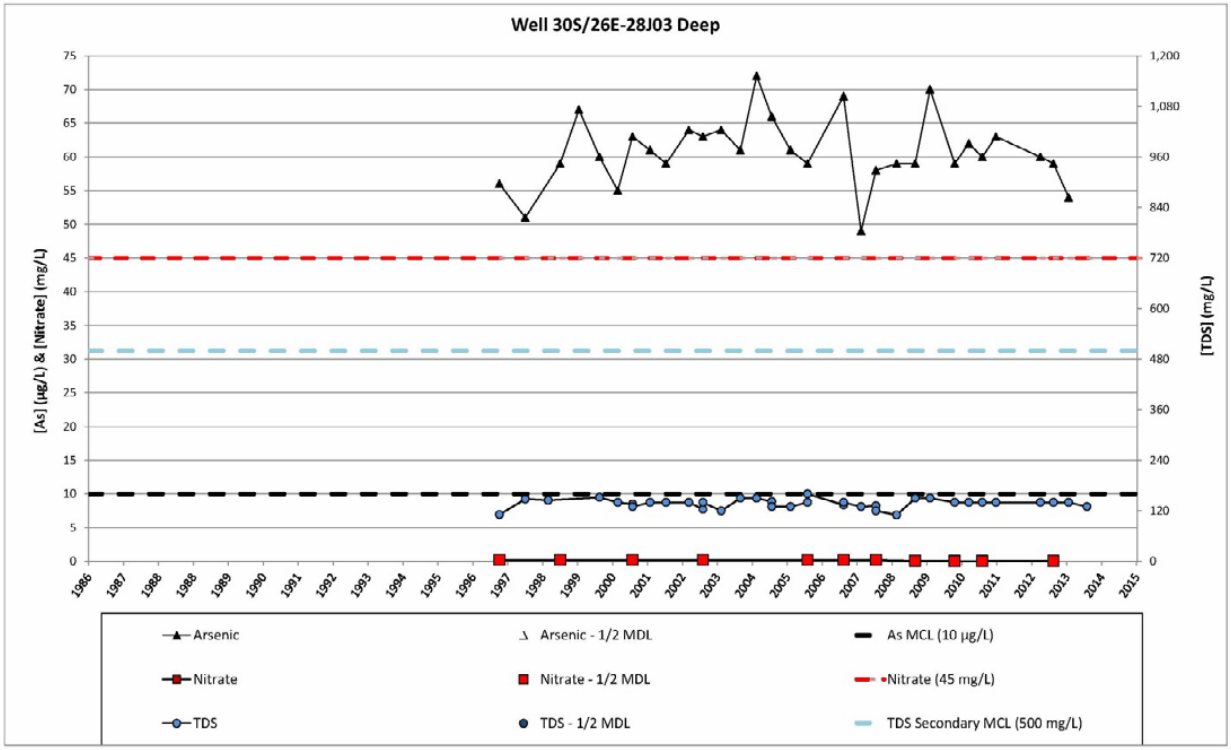

Well 30S/26E-18B01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

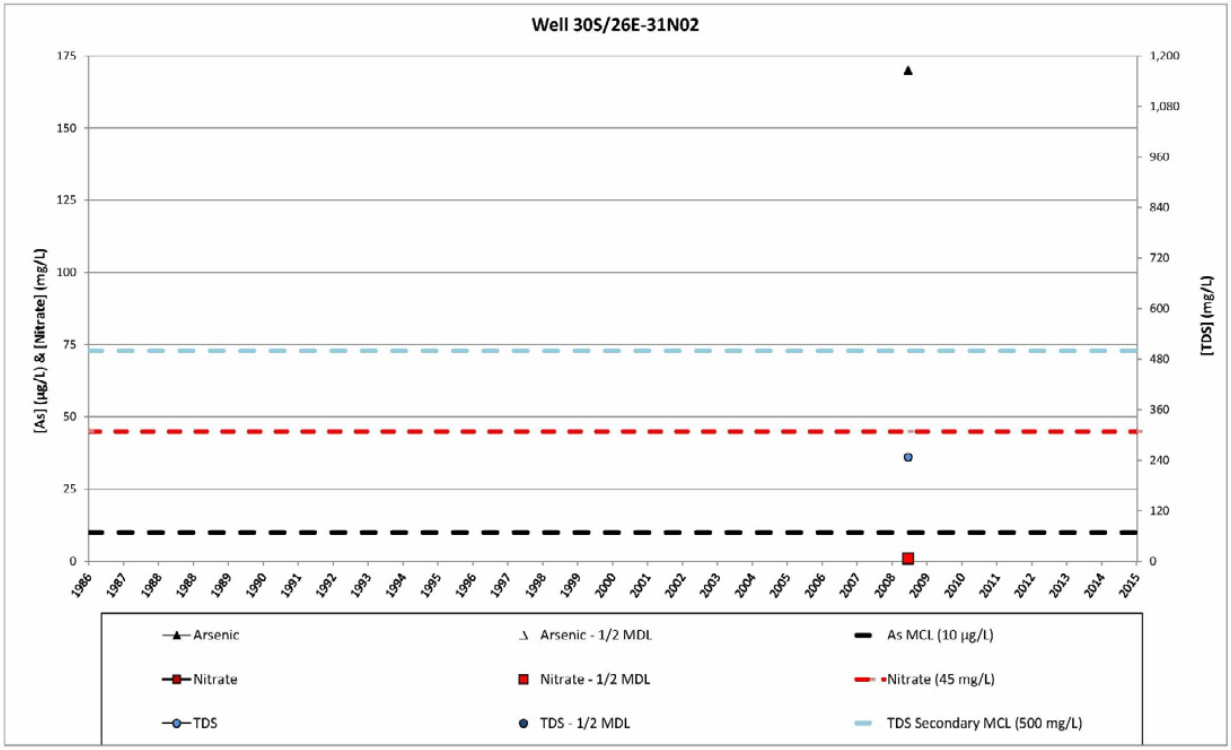

Well 30S/26E-18R01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

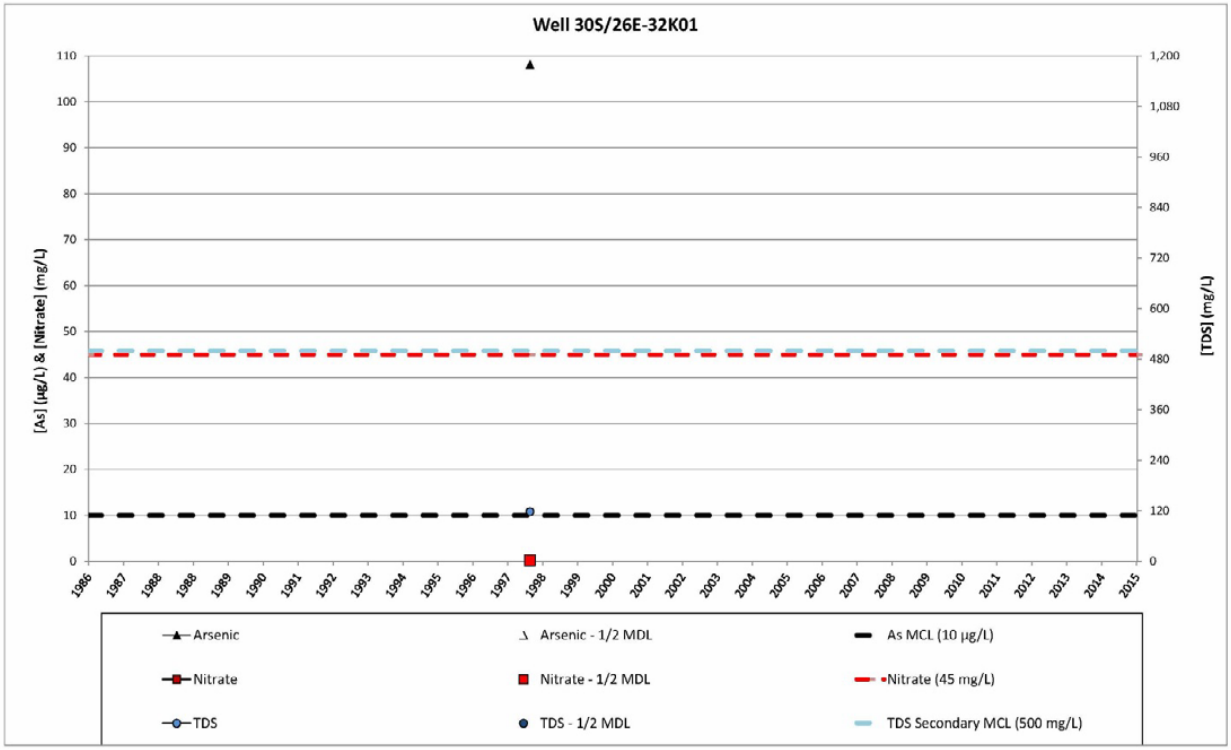

Well 30S/26E-19M01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

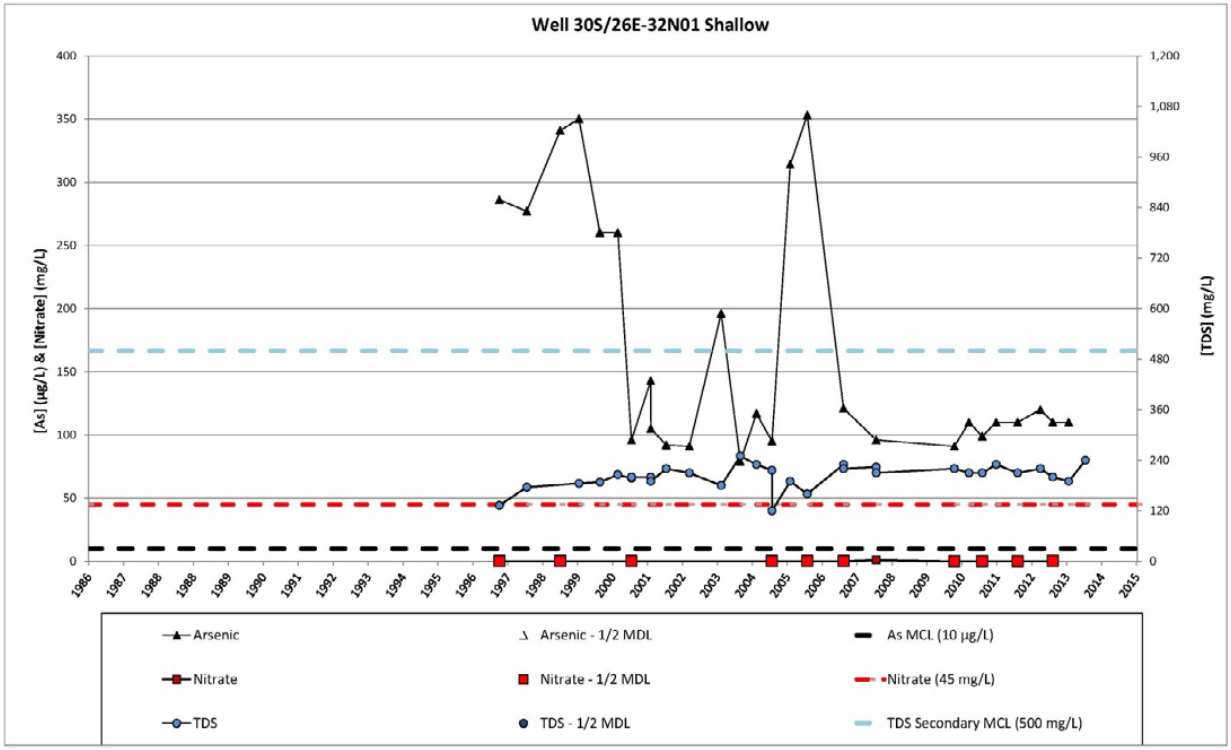

Well 30S/26E-20N02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

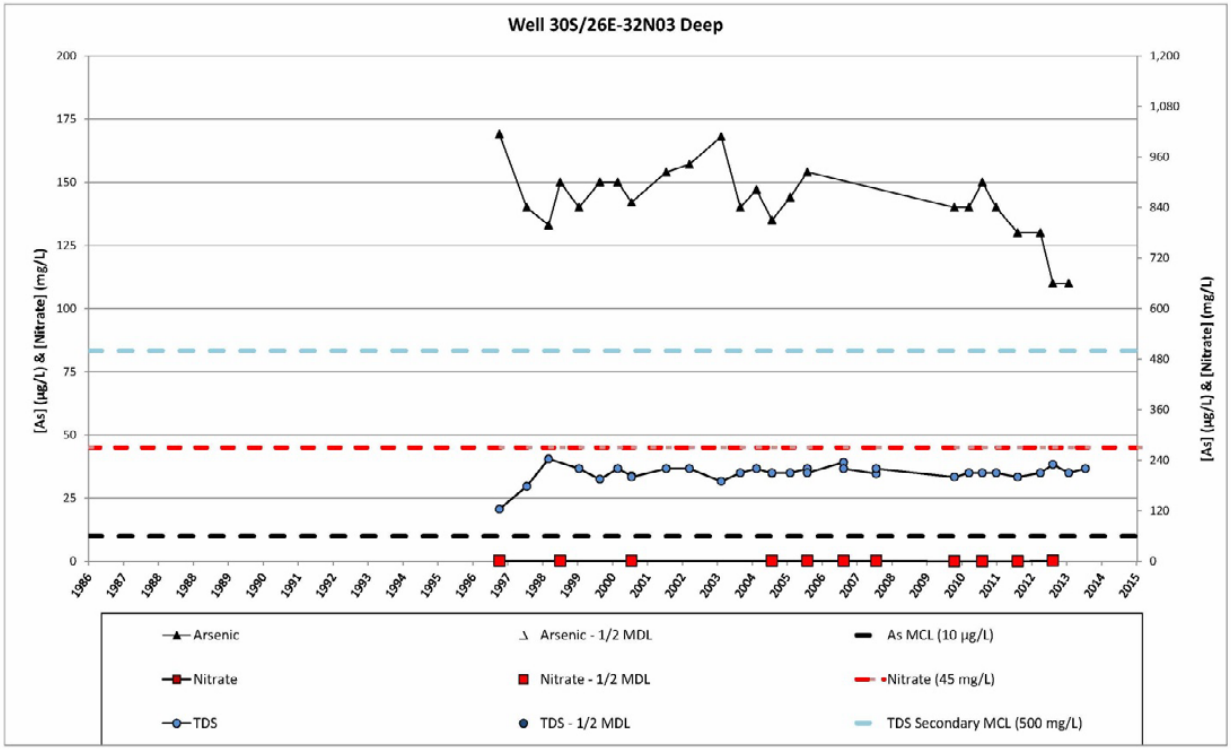

Well 30S/26E-28G01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-28J03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-31N02
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-32K01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-32N01 Shallow
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-32N03 Deep
[As] (µg/L) & [Nitrate] (mg/L)
[As] (µg/L) & [Nitrate] (mg/L)
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-33C01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
1,200
1,080
960
840
720
600
480
360
240
120
0
1986
1987
1988
1989
1990
1991
1992
1993
1994
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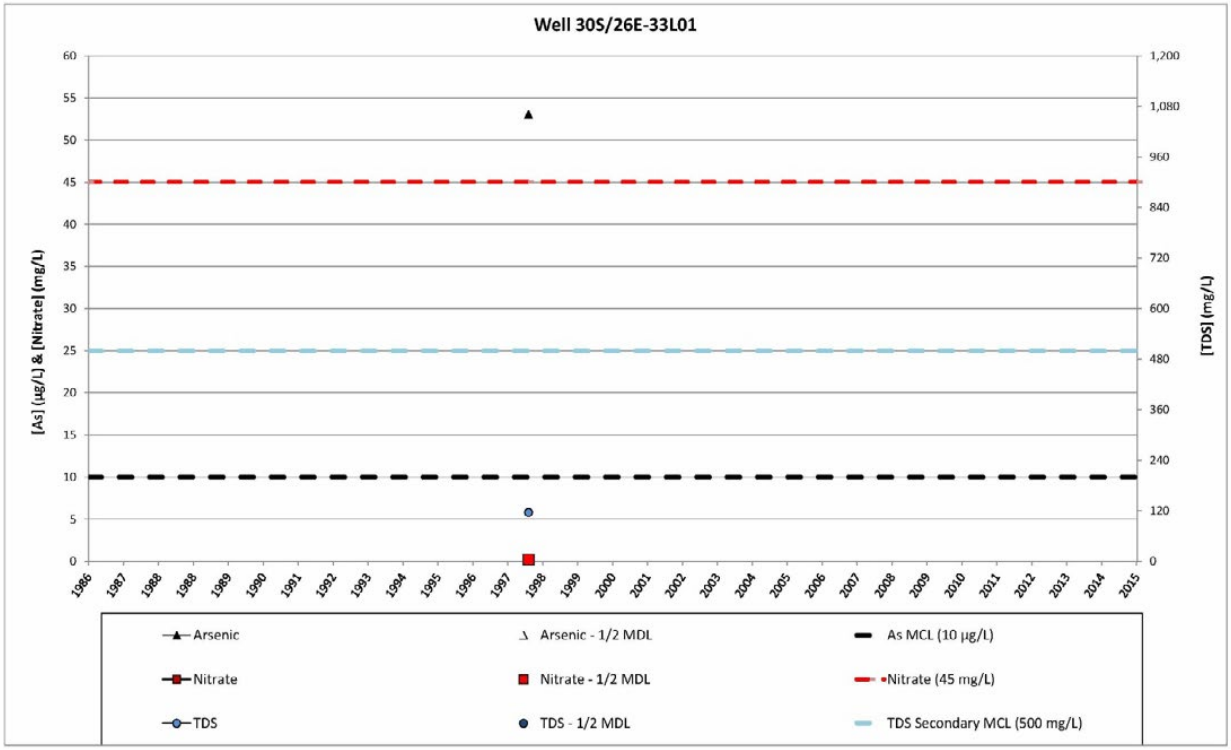
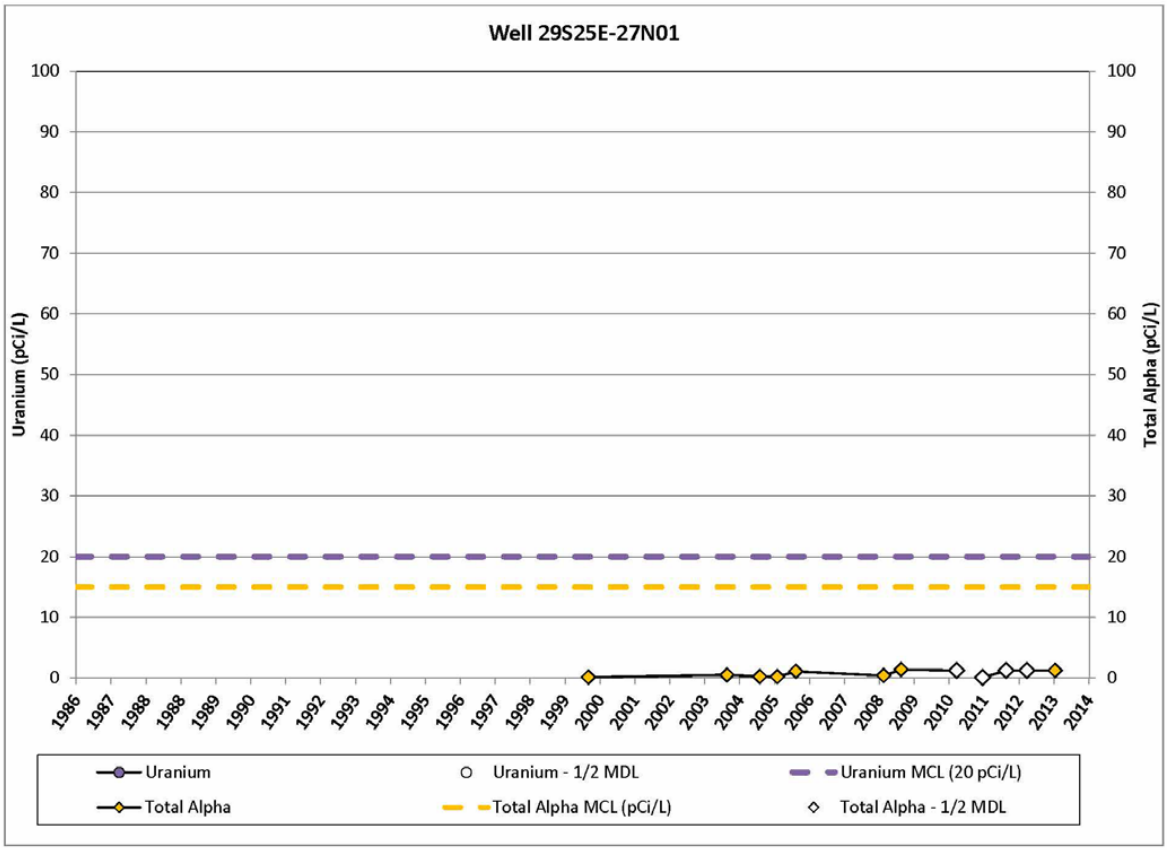
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)


Well 30S/26E-33L01
[As] (µg/L) & [Nitrate] (mg/L)
[TDS] (mg/L)
60
55
50
45
40
35
30
25
20
15
10
5
0
1,200
1,080
960
840
720
600
480
360
240
120
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Arsenic
Arsenic - 1/2 MDL
As MCL (10 µg/L)
Nitrate
Nitrate - 1/2 MDL
Nitrate (45 mg/L)
TDS
TDS - 1/2 MDL
TDS Secondary MCL (500 mg/L)

Township 29S

Section 25E


Well 29S25E-27N01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
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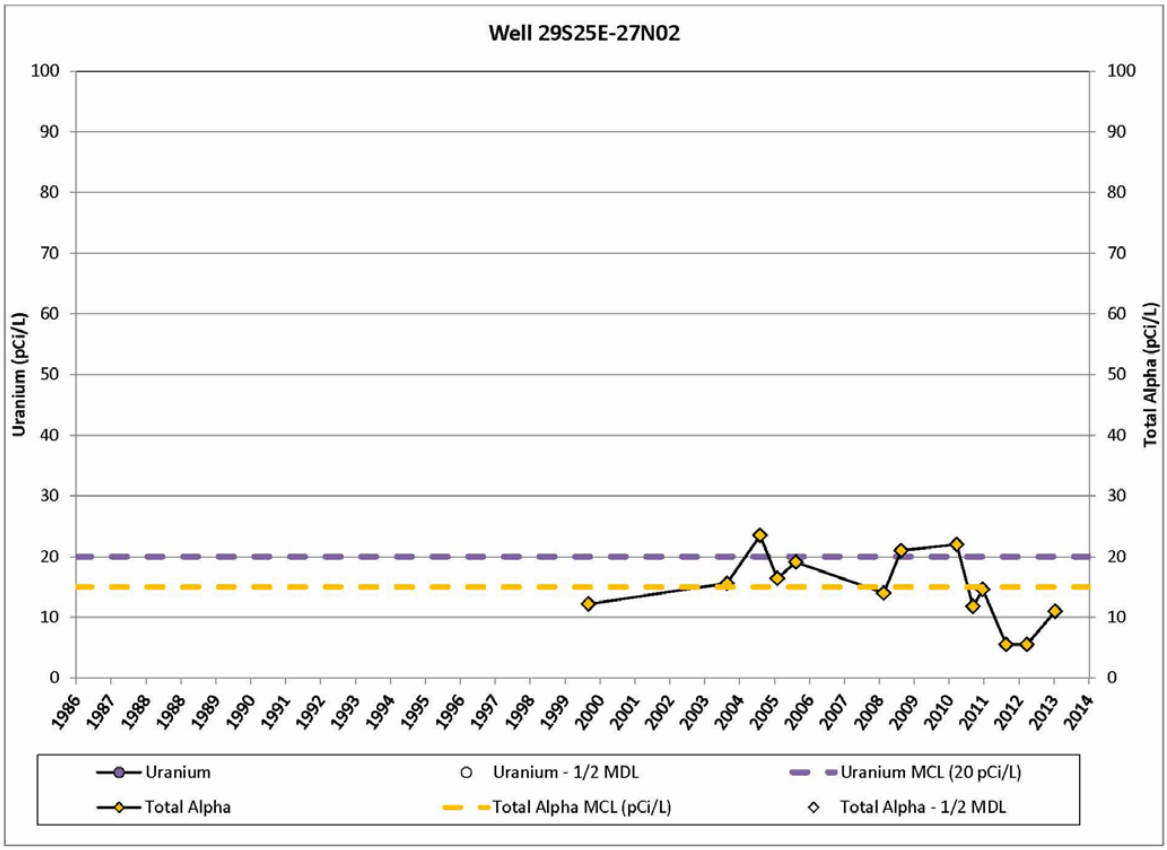
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha MCL (pCi/L)
Total Alpha - 1/2 MDL


Well 29S25E-27N02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
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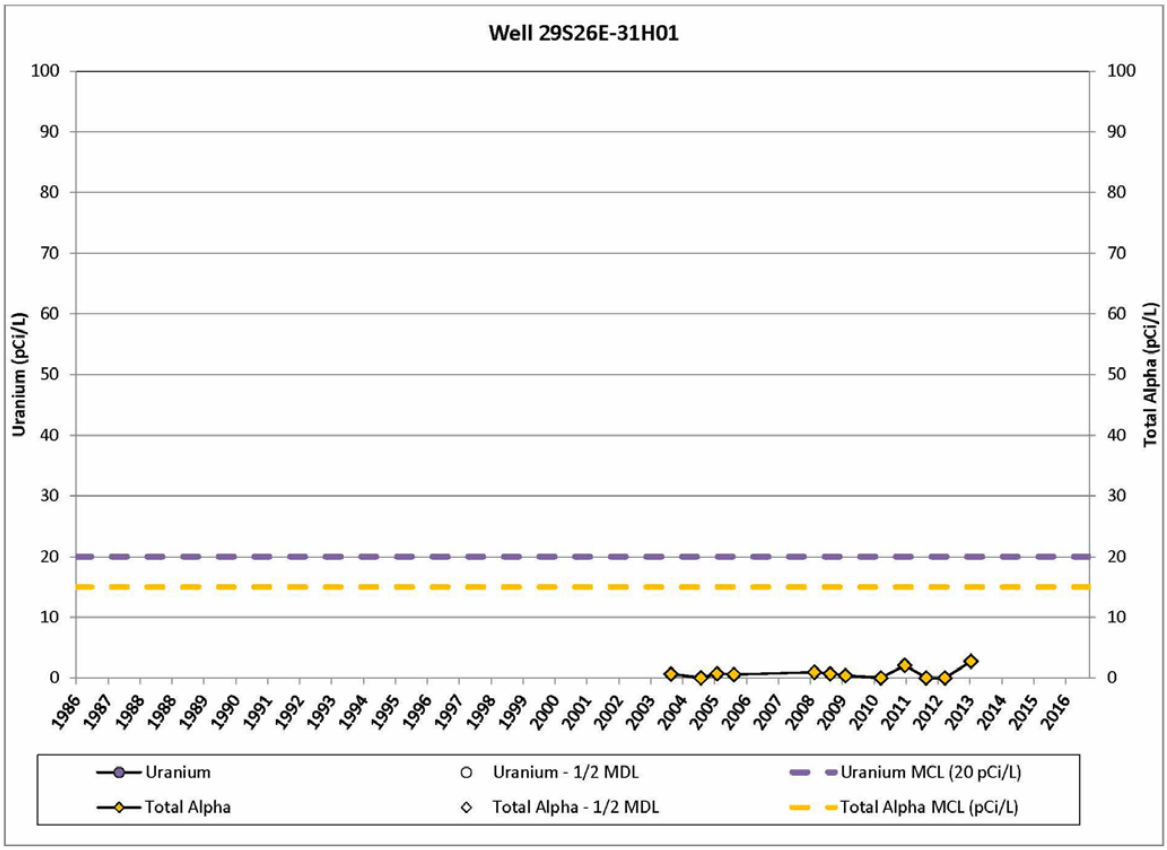
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha MCL (pCi/L)
Total Alpha - 1/2 MDL

Township 29S

Section 26E


Well 29S26E-31H01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
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2004
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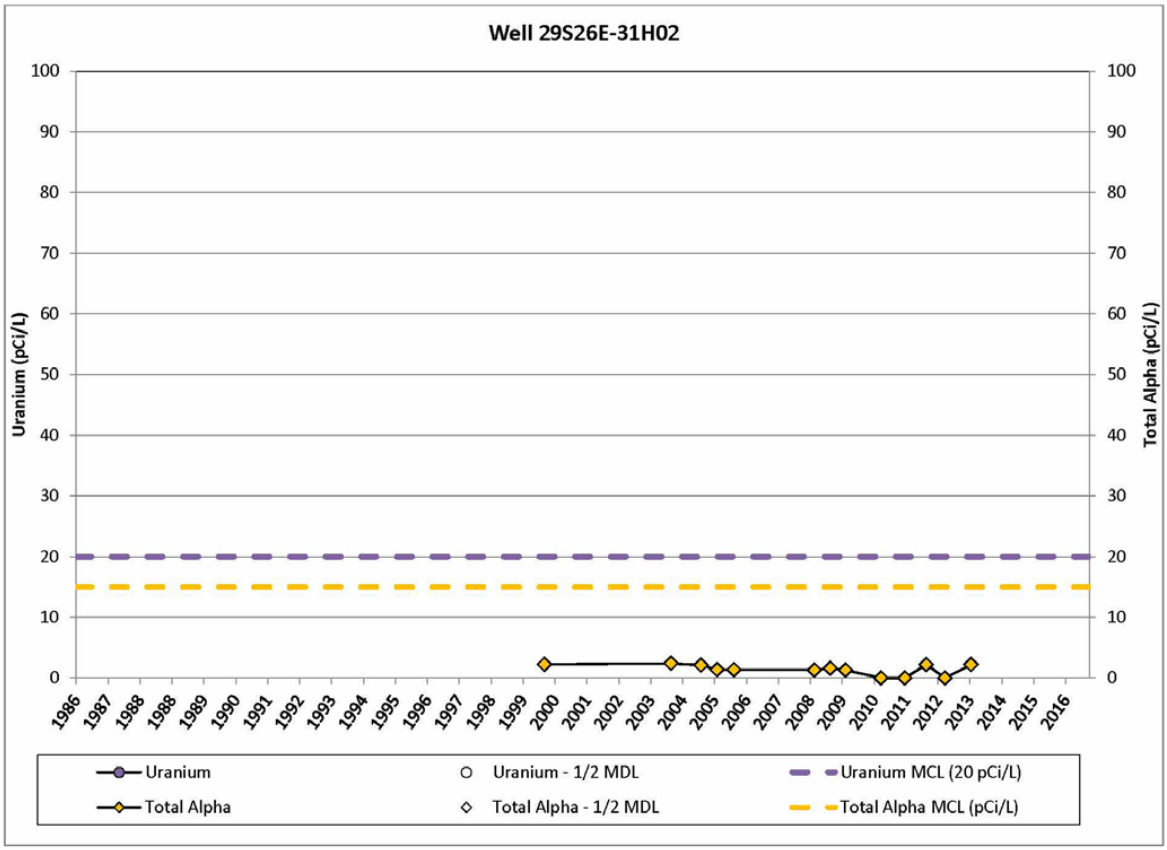
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 29S26E-31H02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
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2004
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2006
2007
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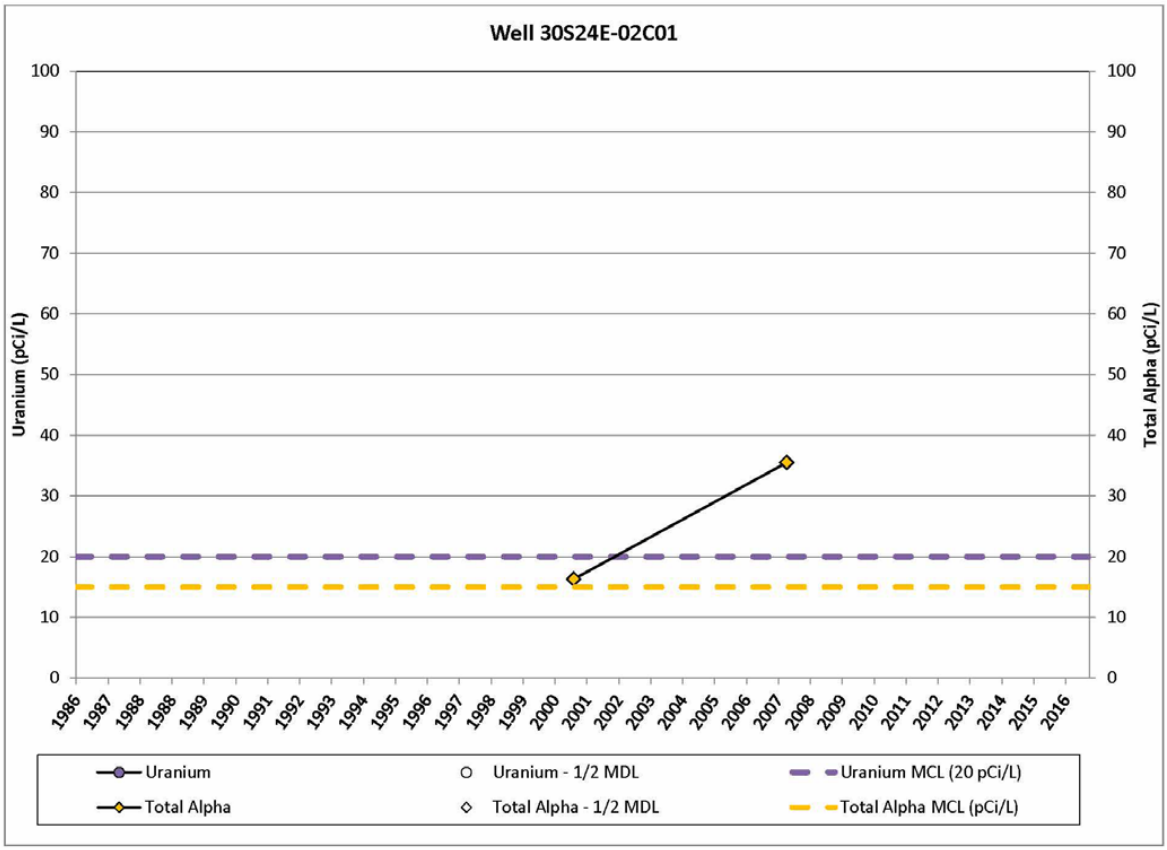
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)

Township 30S

Section 24E


Well 30S24E-02C01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
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1988
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1990
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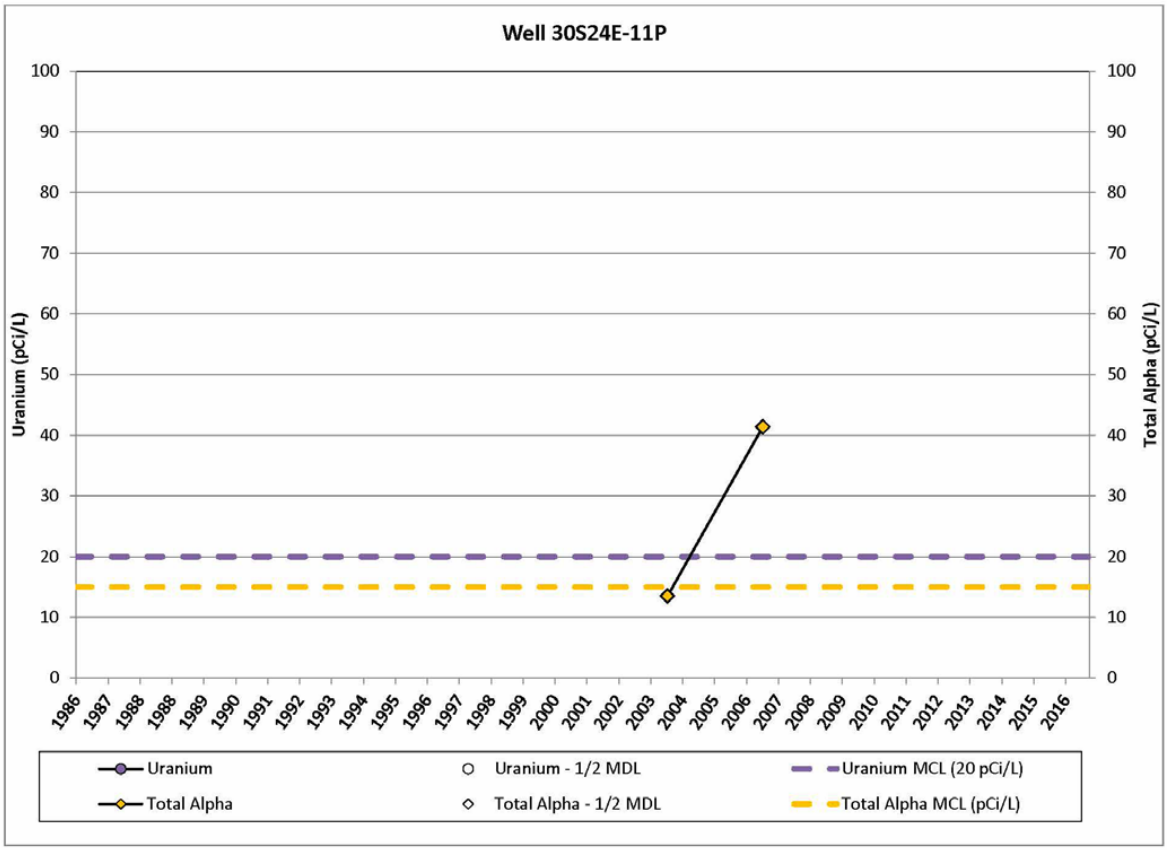
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-11P
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
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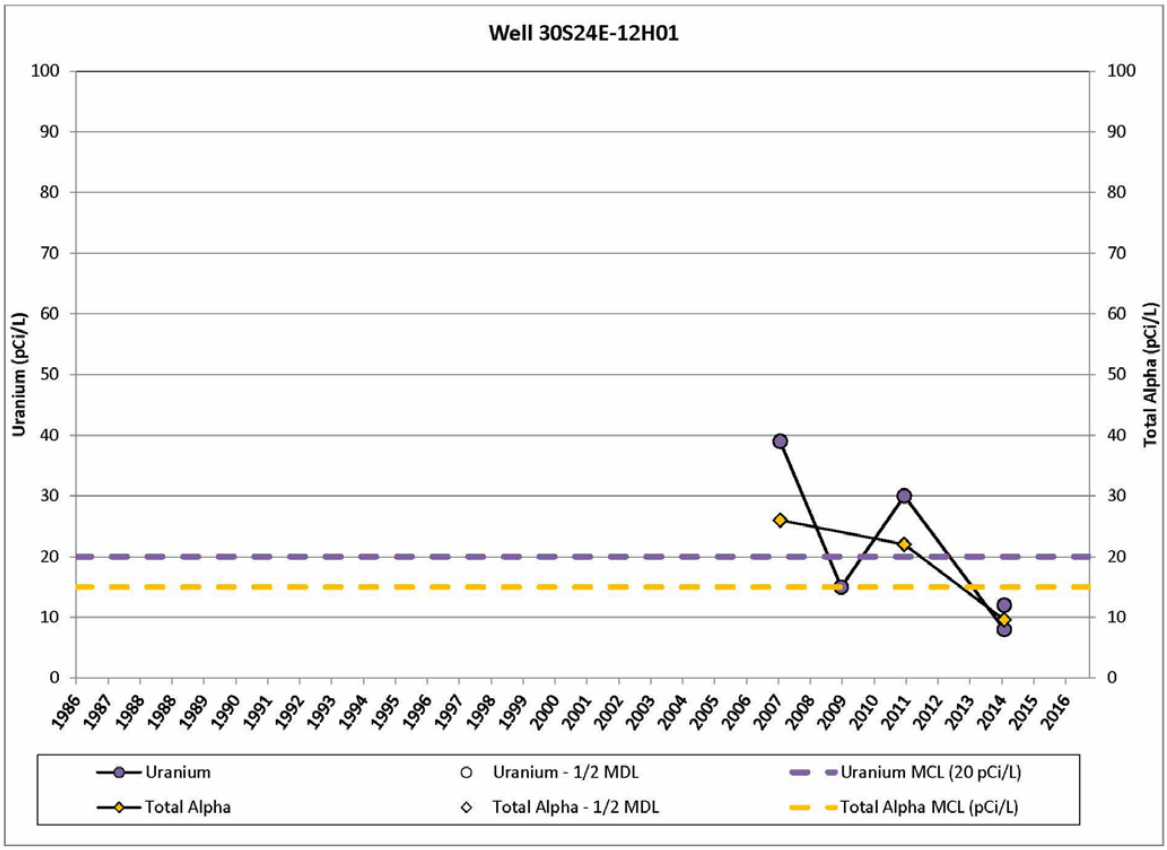
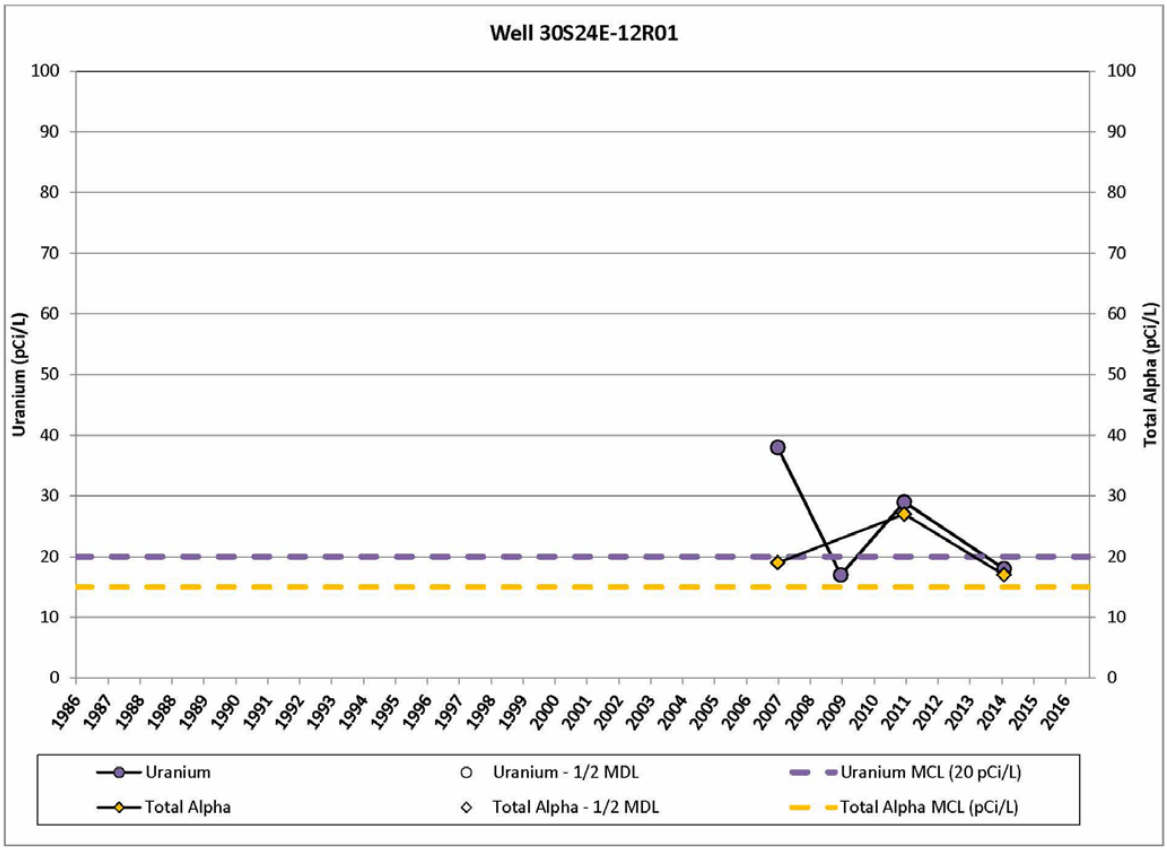
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-12H01
Uranium (pCi/L)
Total Alpha (pCi/L)
0
10
20
30
40
50
60
70
80
90
100
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-12R01
Uranium (pCi/L)
Total Alpha (pCi/L)
0
10
20
30
40
50
60
70
80
90
100
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
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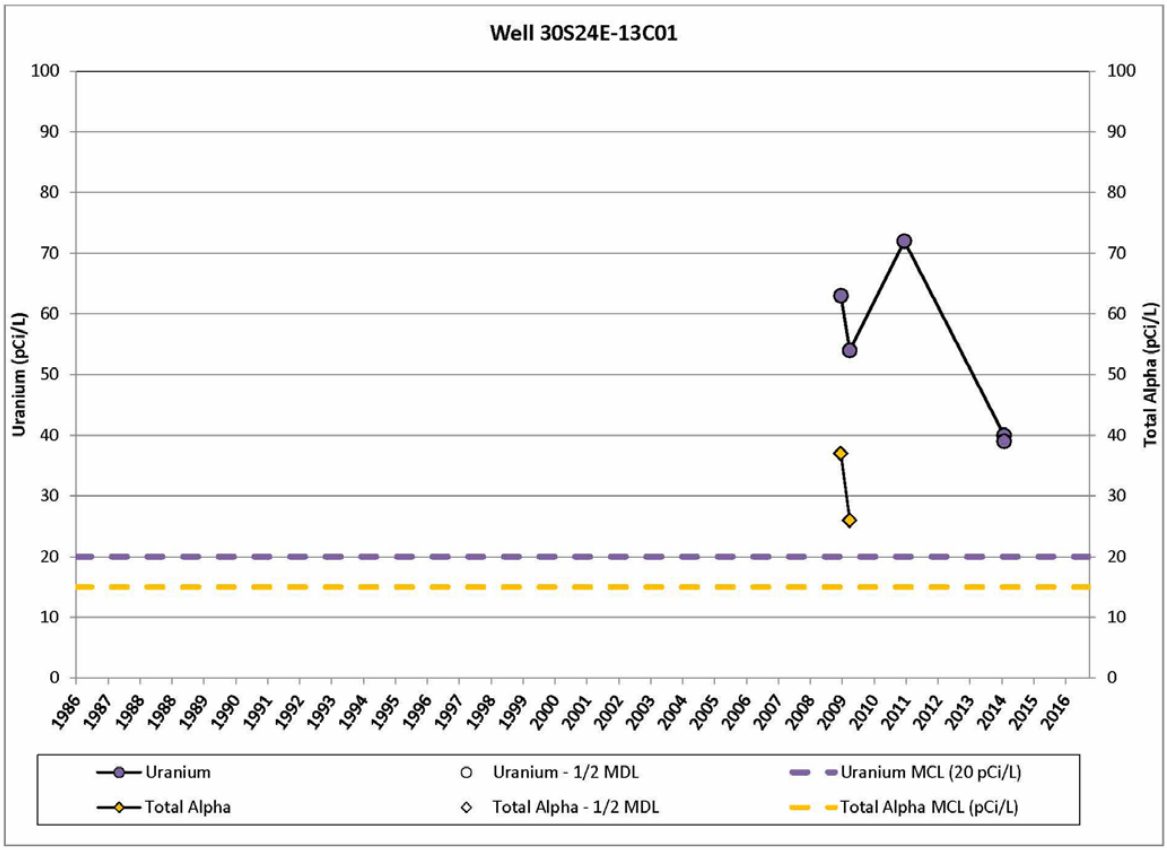
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-13C01
Uranium (pCi/L)
Total Alpha (pCi/L)
0
10
20
30
40
50
60
70
80
90
100
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
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2003
2004
2005
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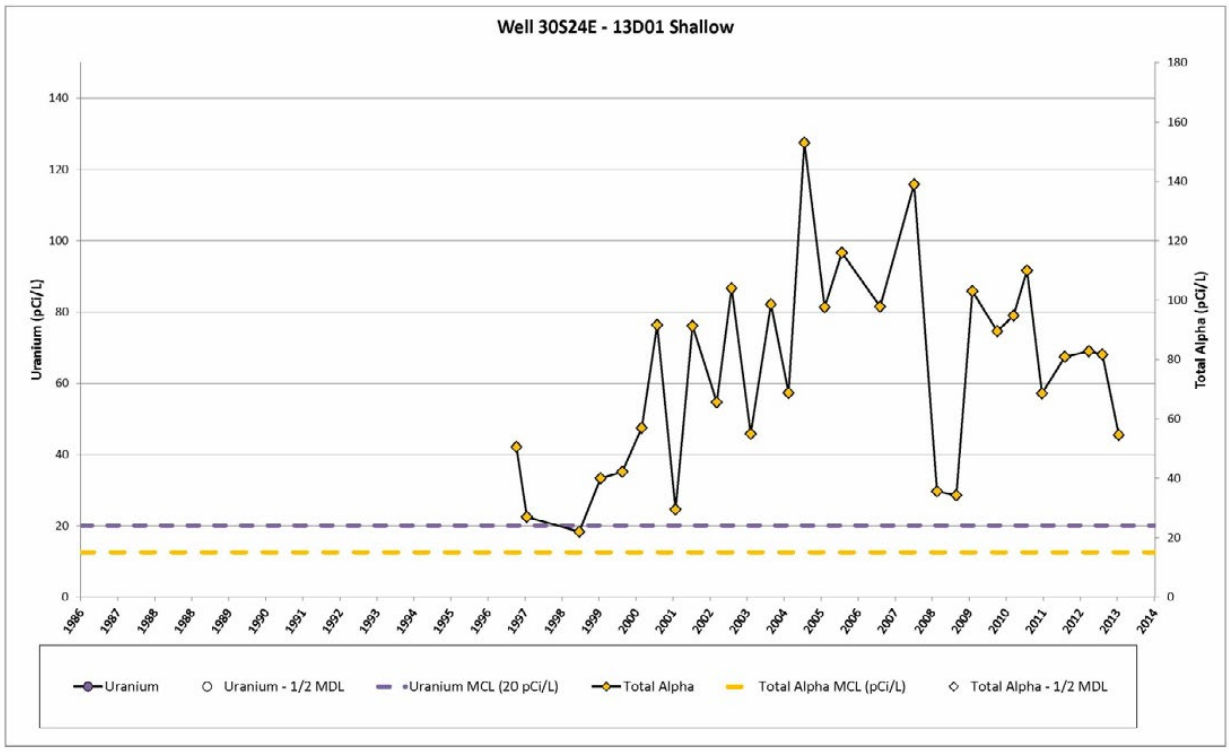
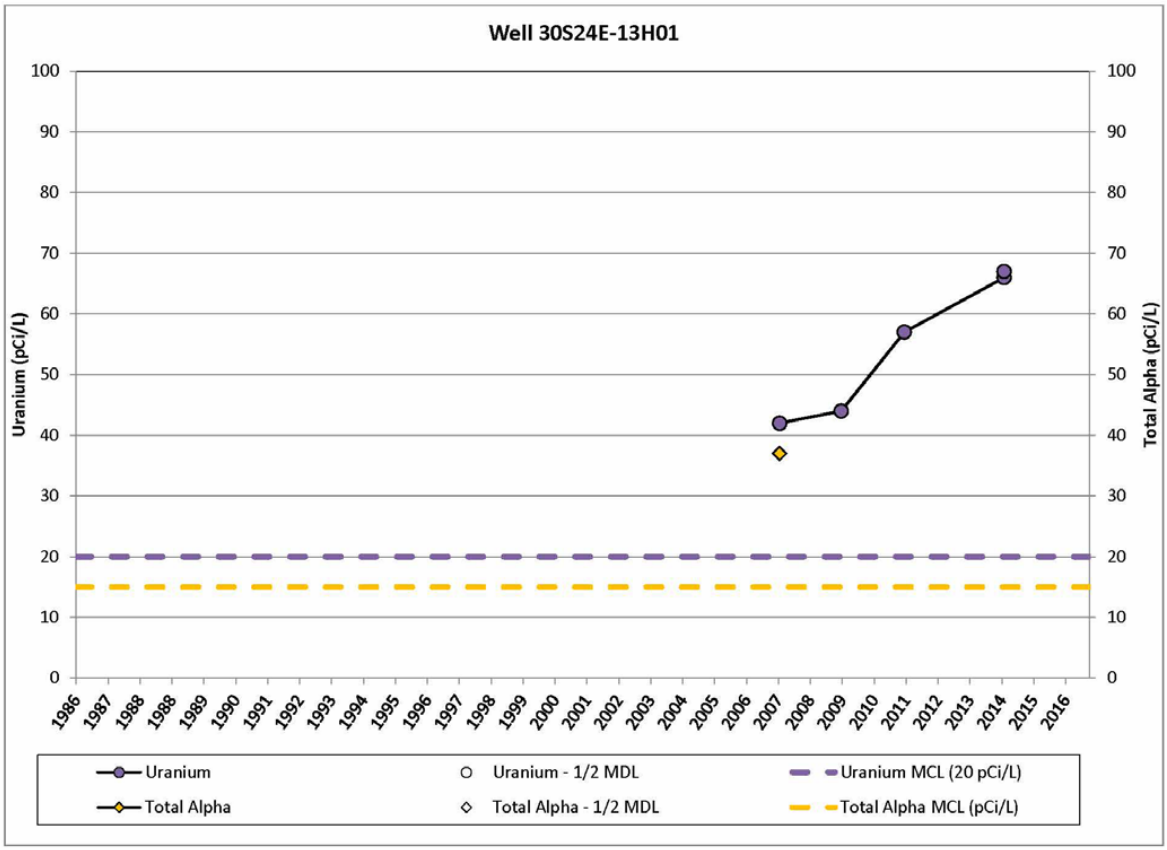
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E - 13D01 Shallow
Uranium (pCi/L)
Total Alpha (pCi/L)
0
20
40
60
80
100
120
140
160
180
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha MCL (pCi/L)
Total Alpha - 1/2 MDL


Well 30S24E-13H01
Uranium (pCi/L)
Total Alpha (pCi/L)
0
10
20
30
40
50
60
70
80
90
100
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
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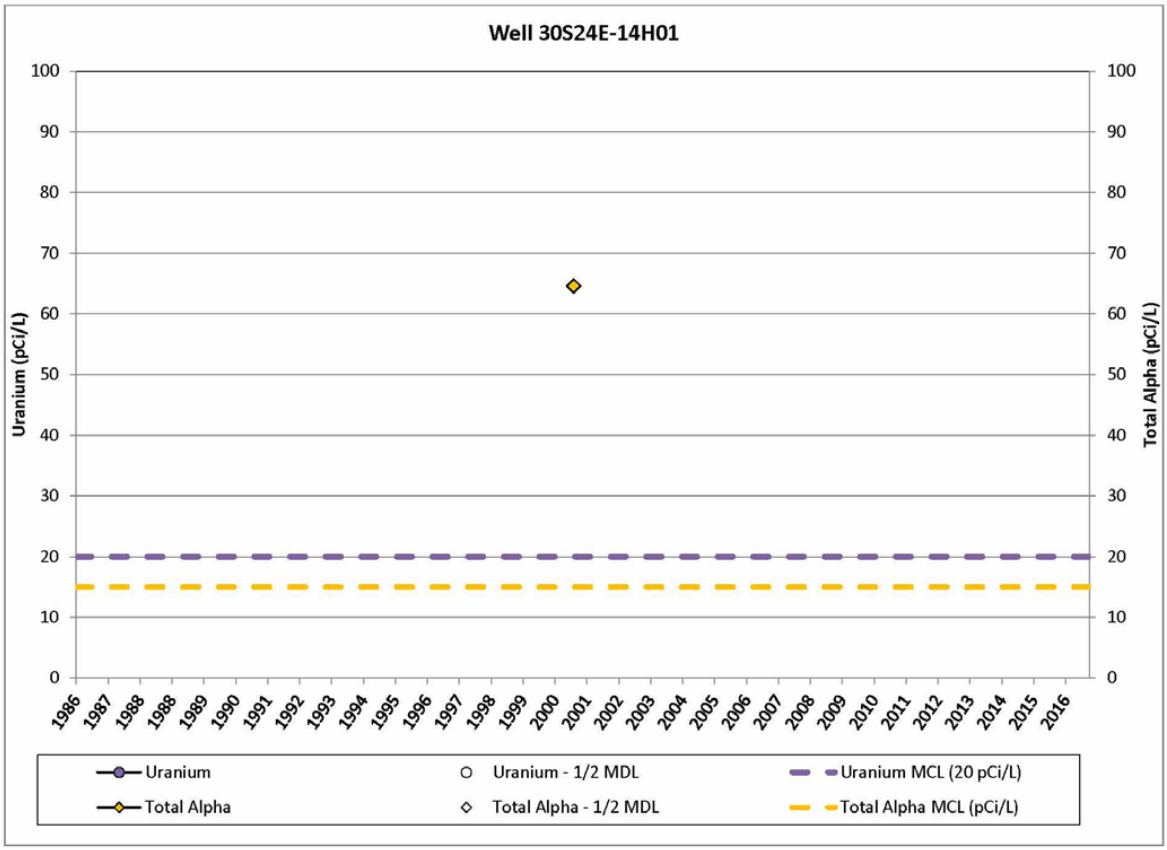
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-14H01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
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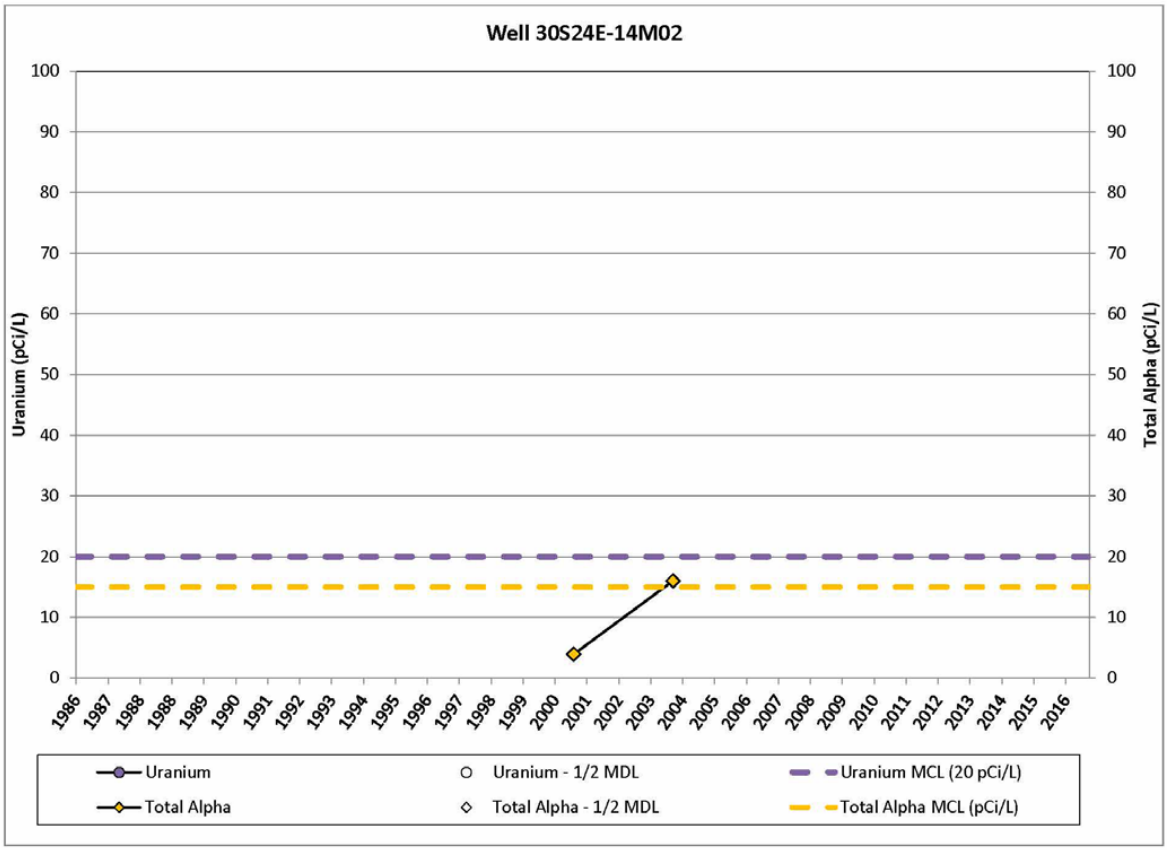
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-14M02
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
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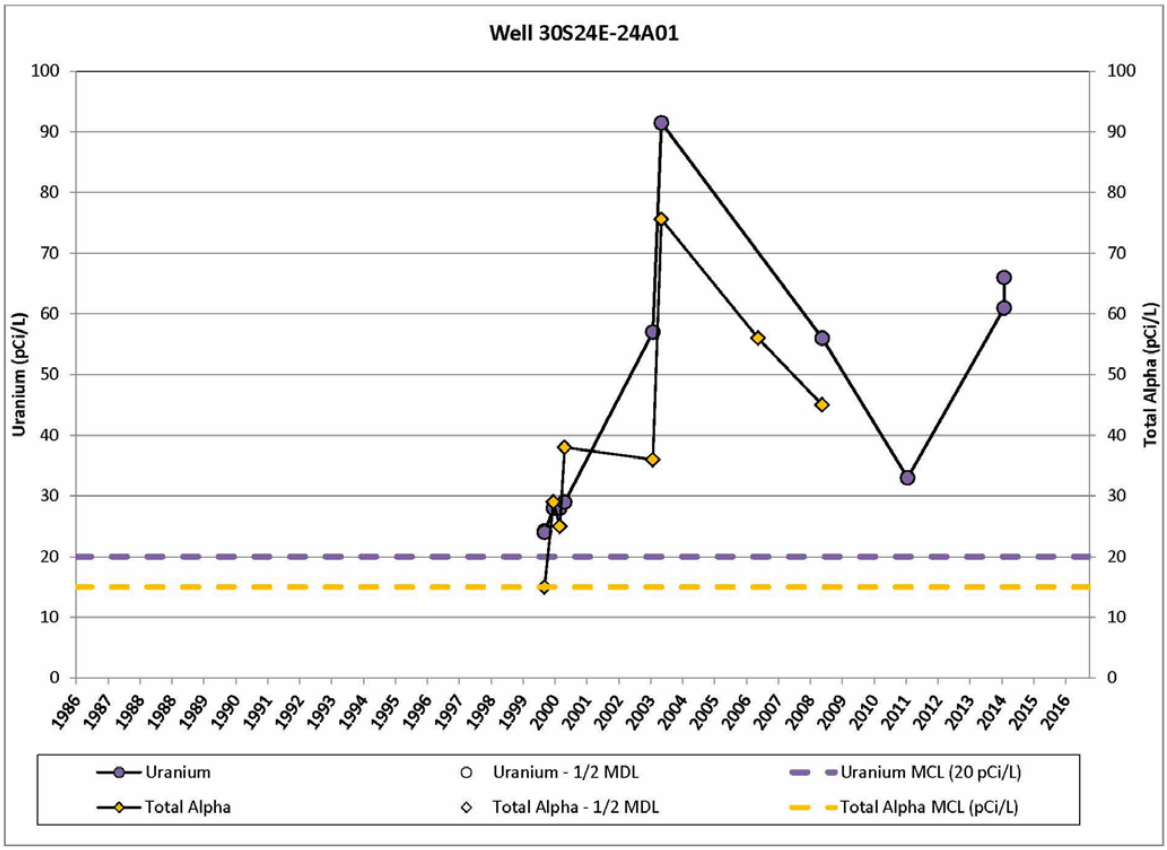
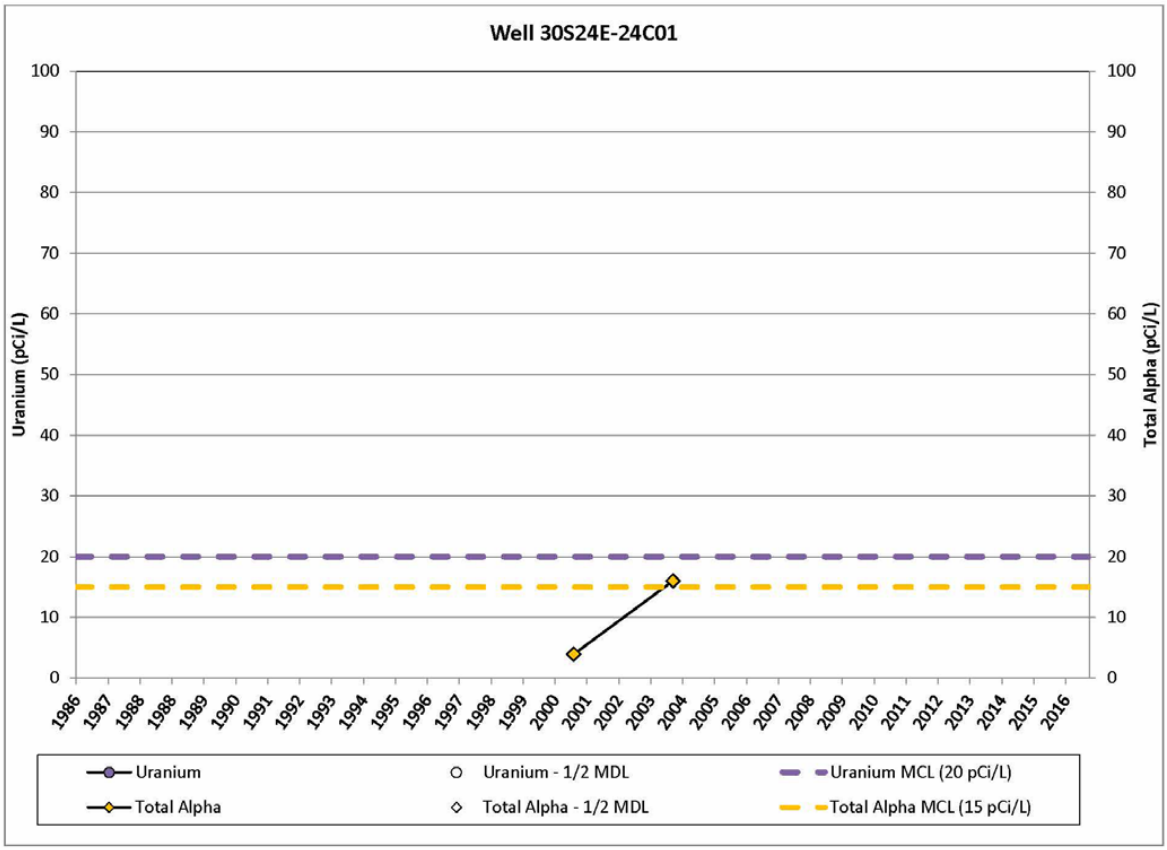
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-24A01
Uranium (pCi/L)
Total Alpha (pCi/L)
0
10
20
30
40
50
60
70
80
90
100
1986
1987
1988
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (pCi/L)


Well 30S24E-24C01
Uranium (pCi/L)
Total Alpha (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
1986
1987
1988
1988
1989
1990
1991
1992
1993
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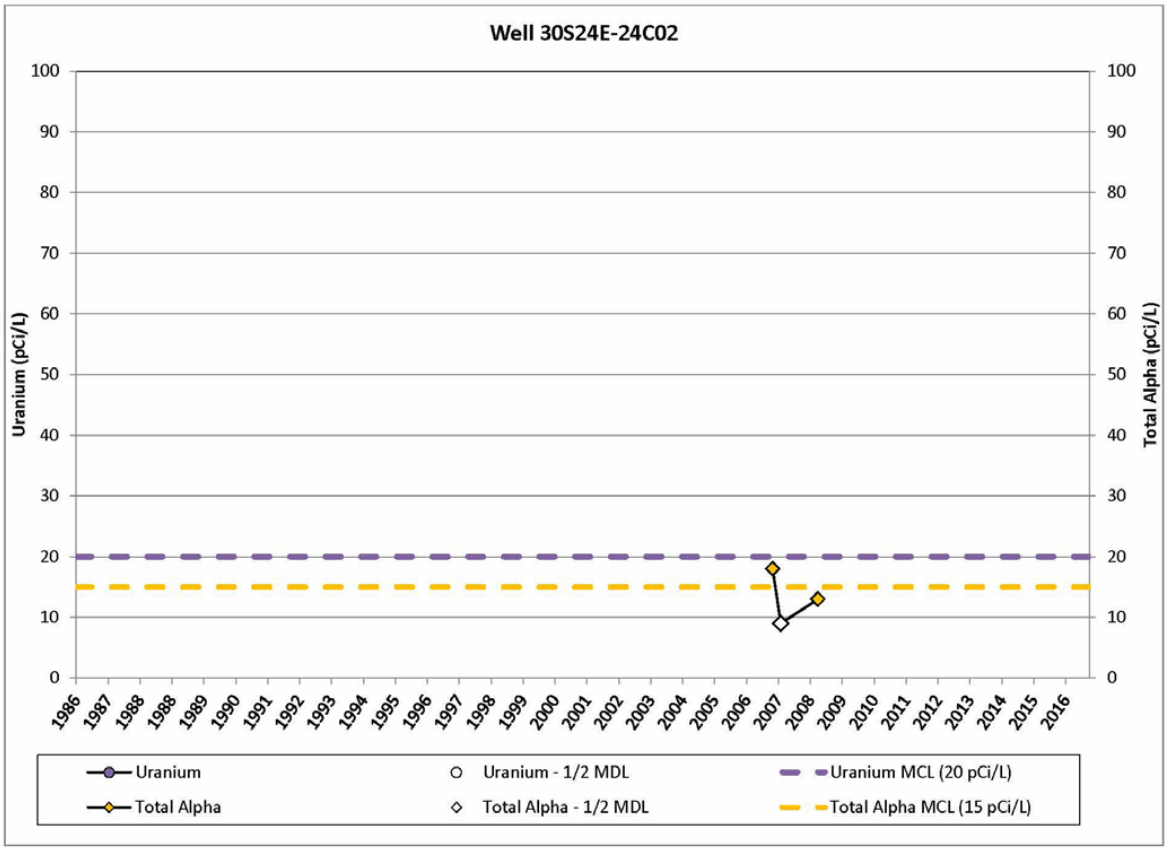
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)

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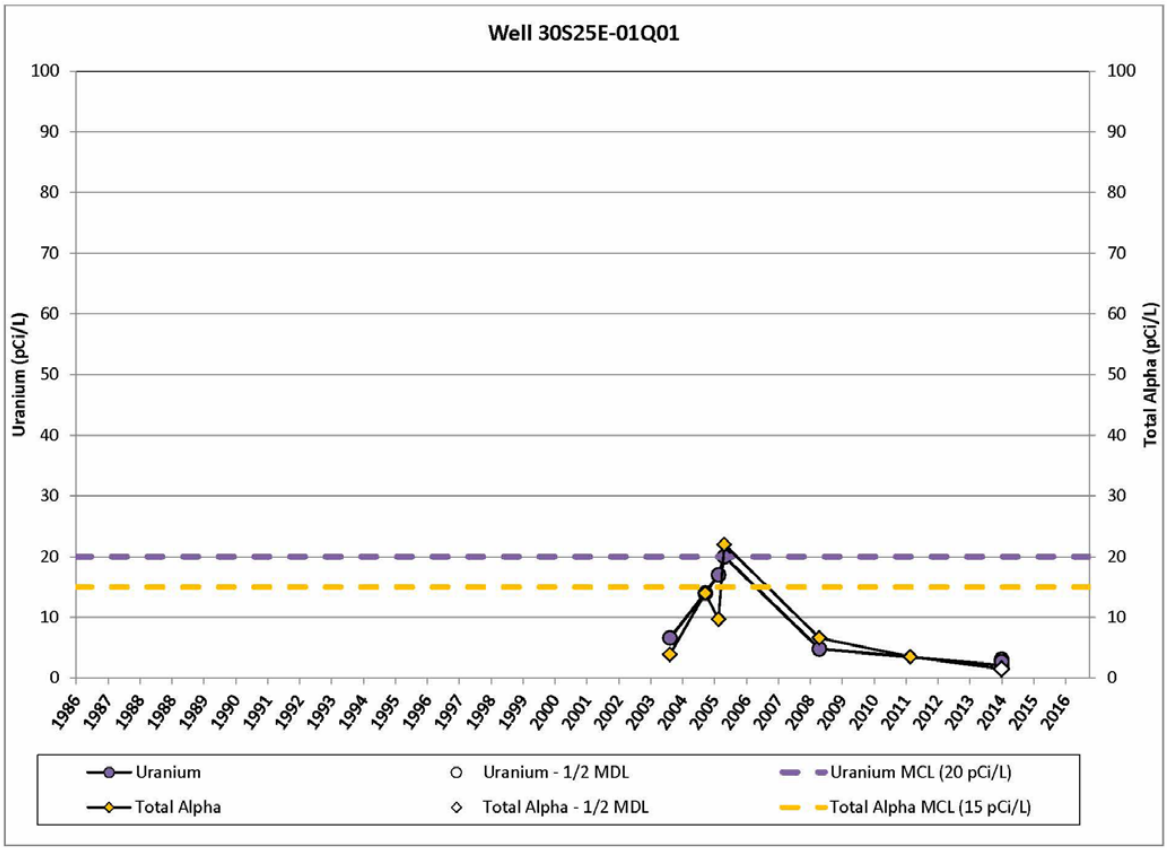
Section 25E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Total Alpha (pCi/L)
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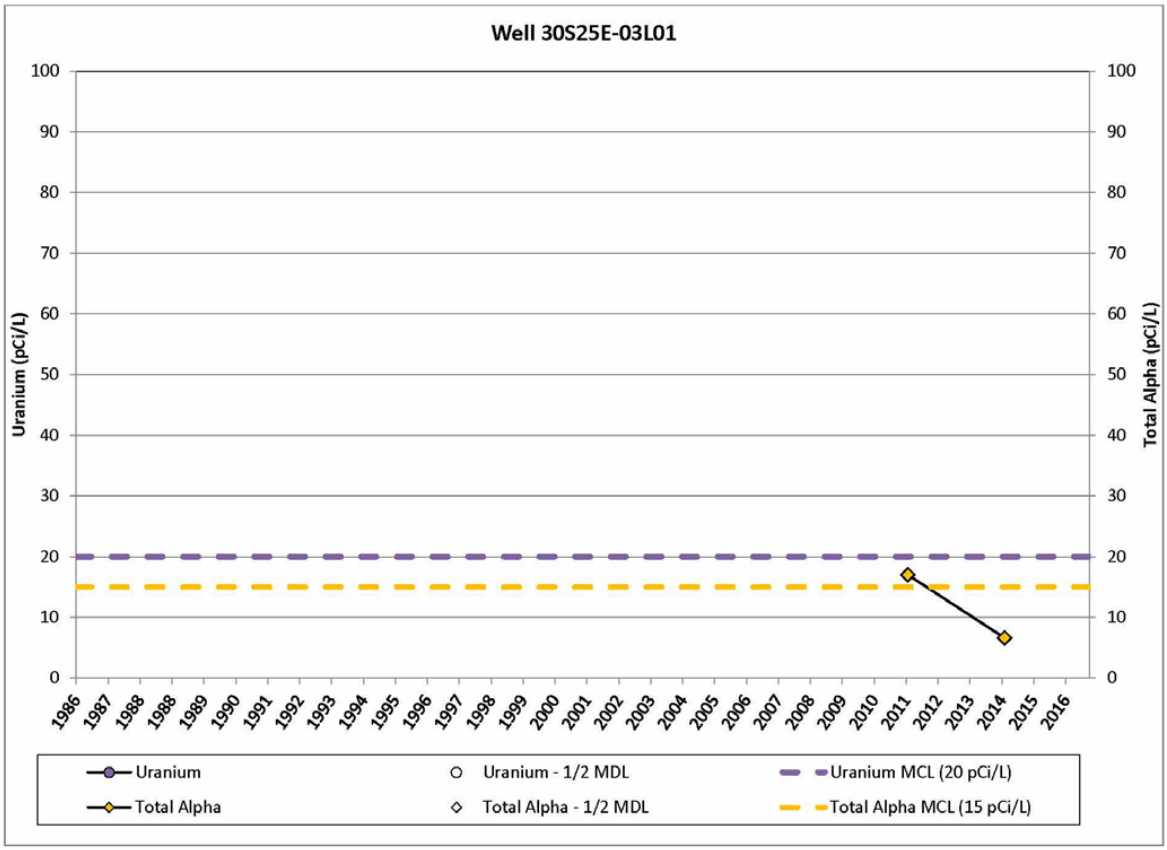
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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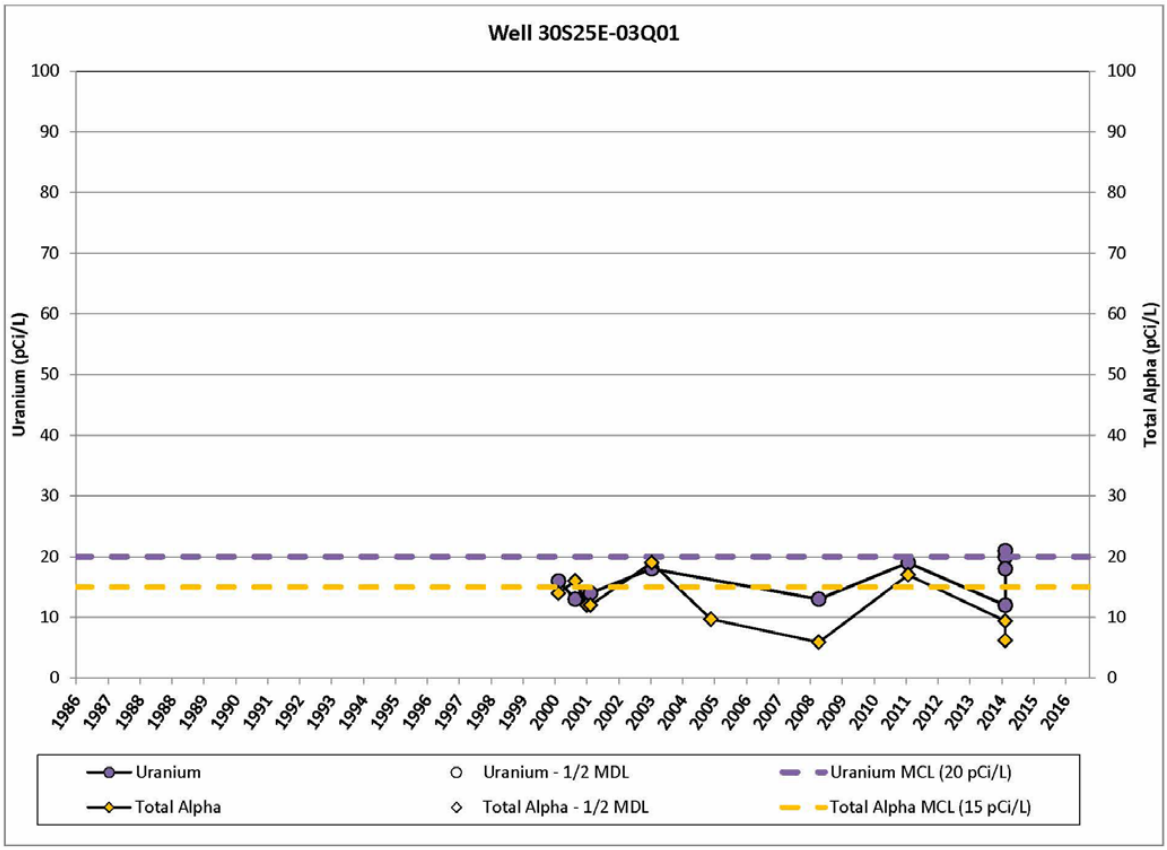
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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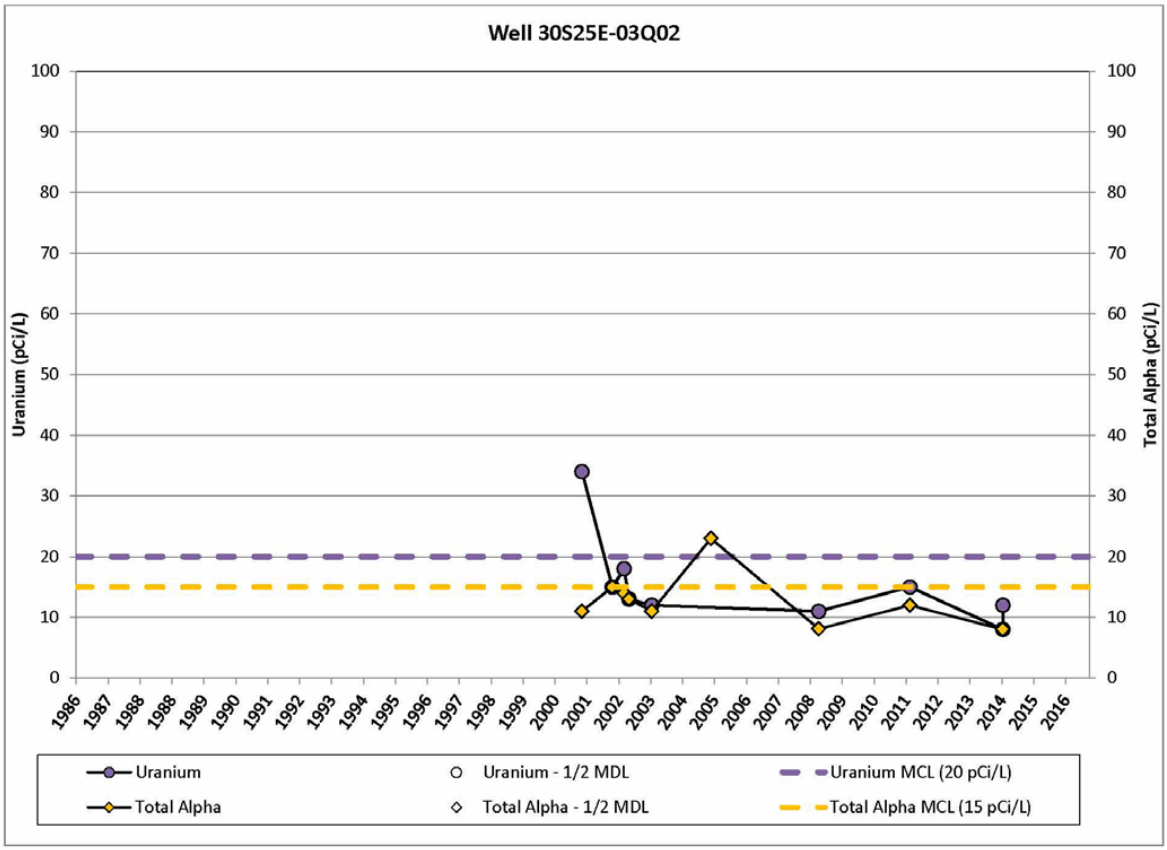
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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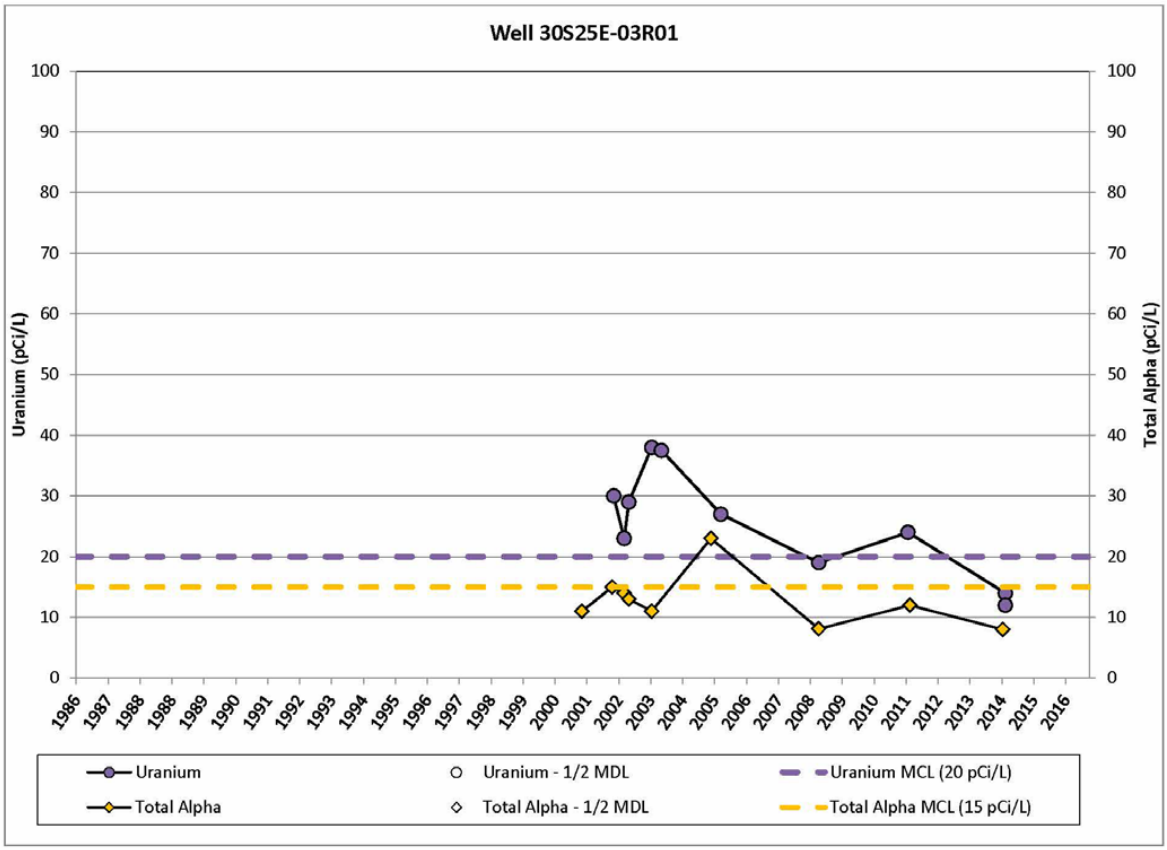
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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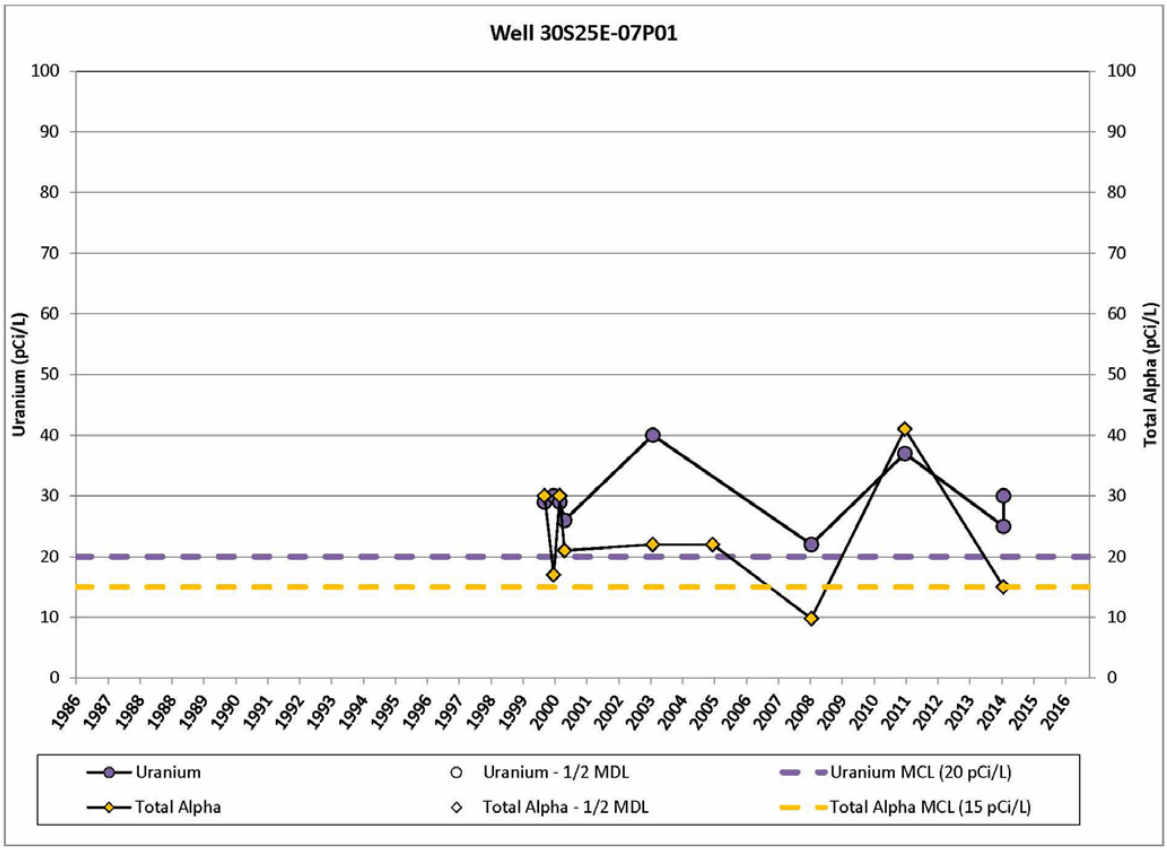
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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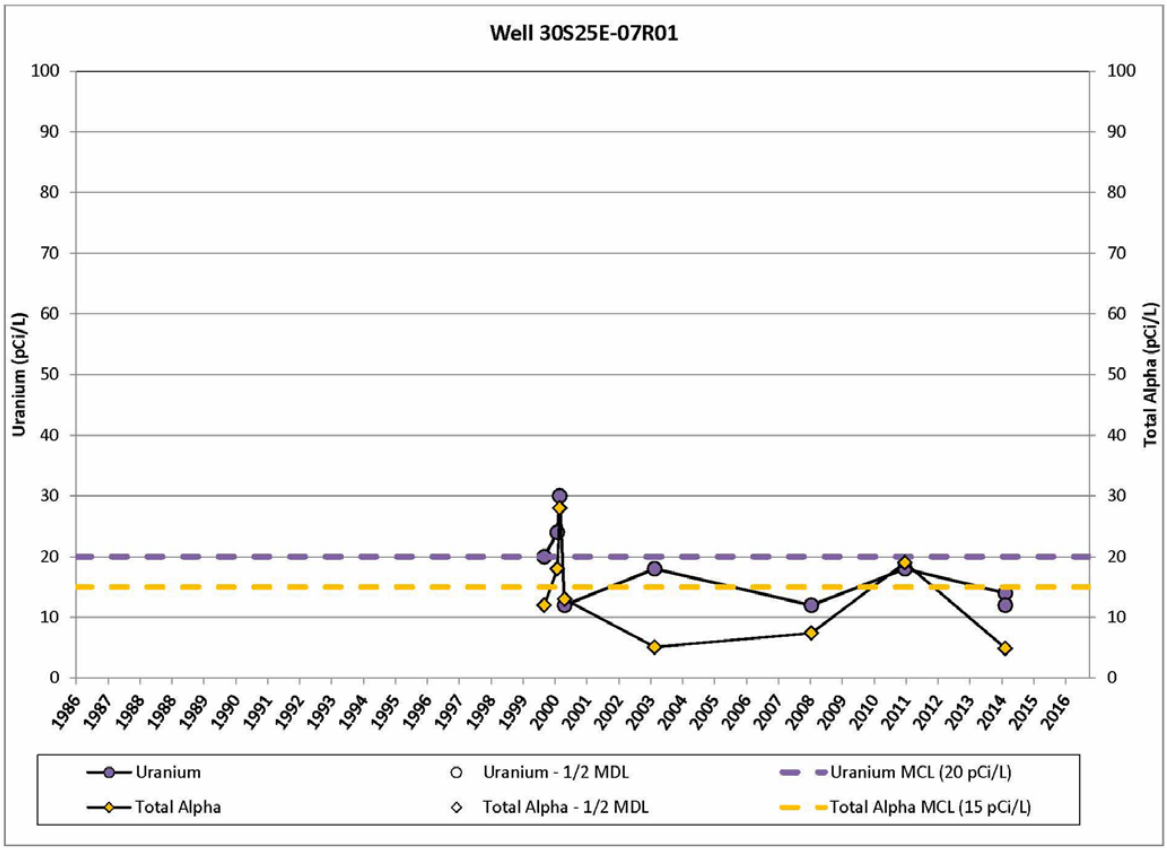
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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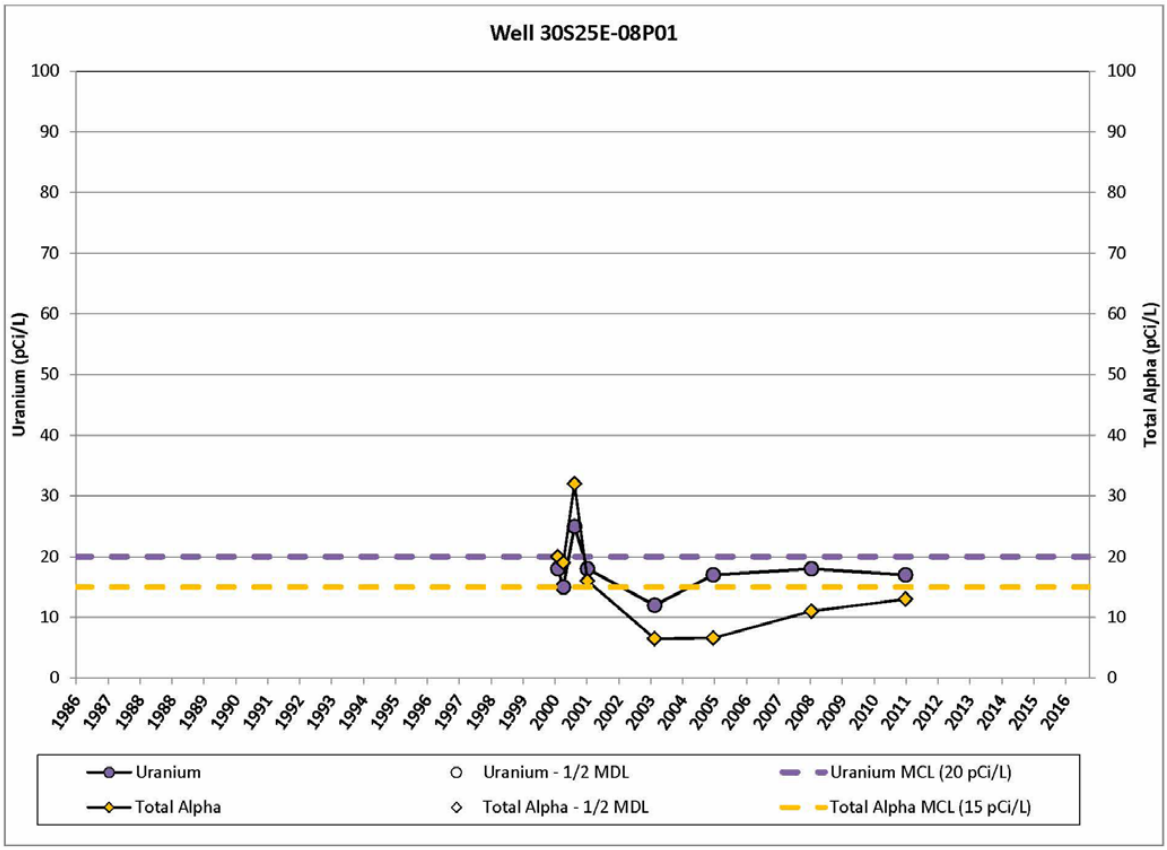
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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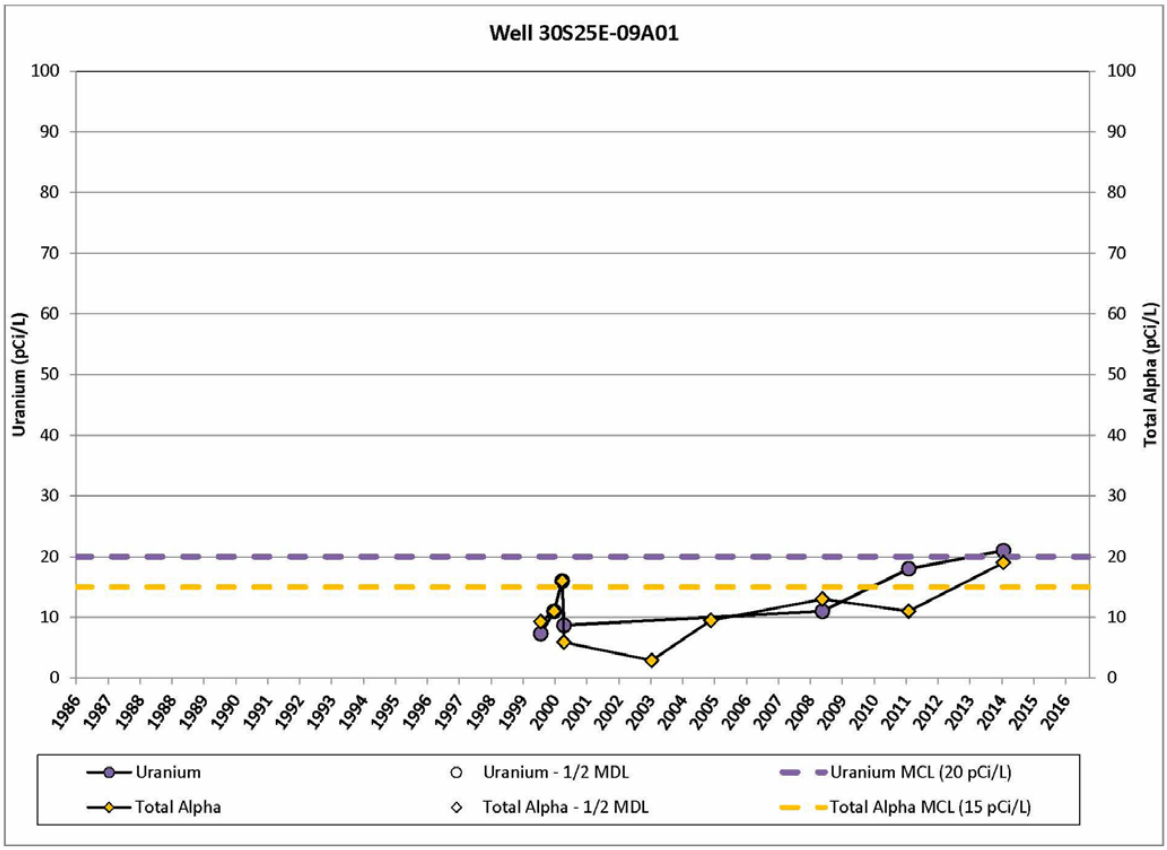
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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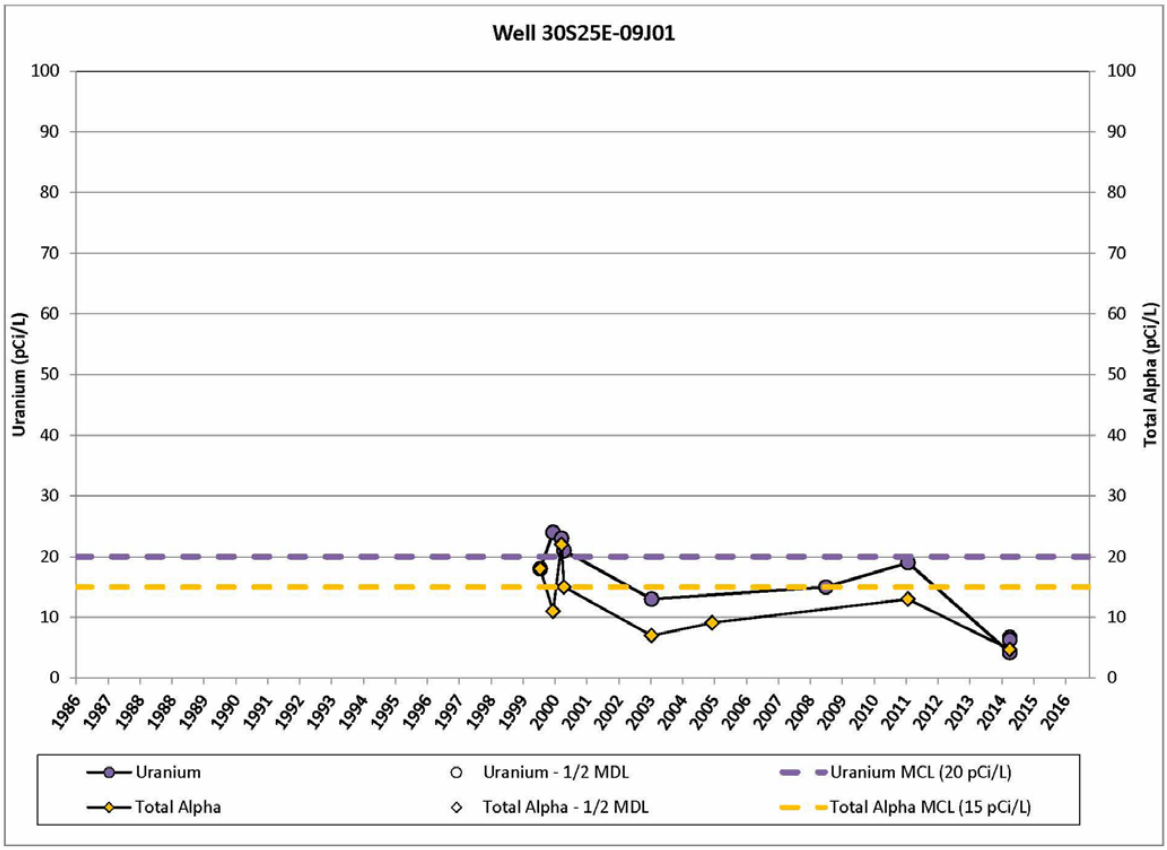
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)


Well 30S25E-09L01
Uranium (pCi/L)
Total Alpha (pCi/L)
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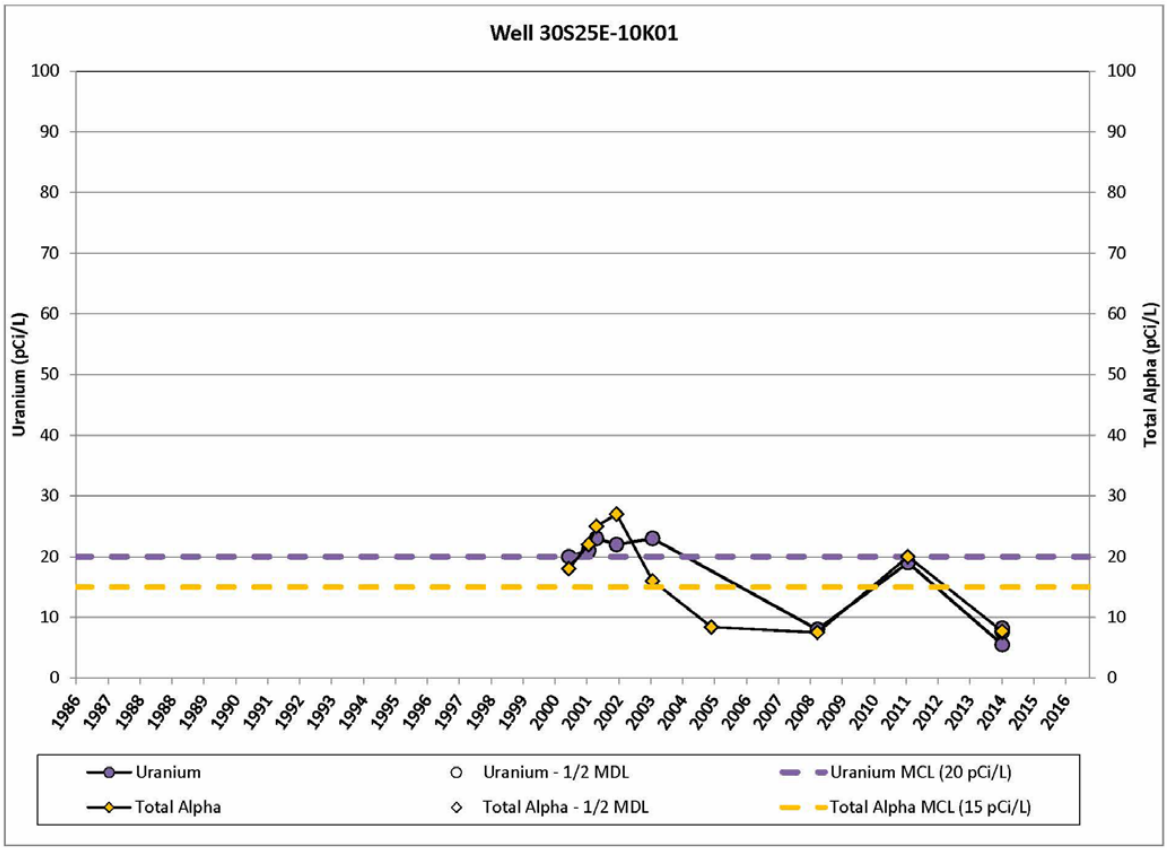
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Total Alpha (pCi/L)
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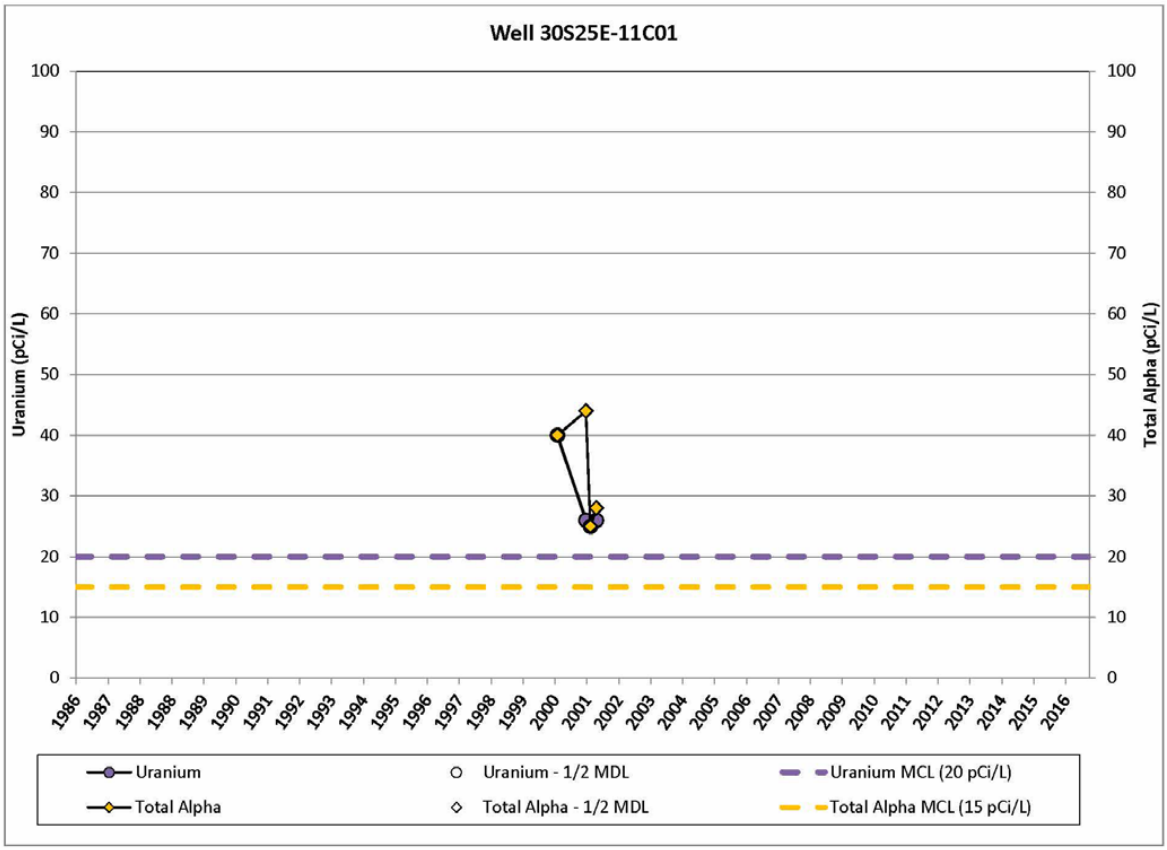
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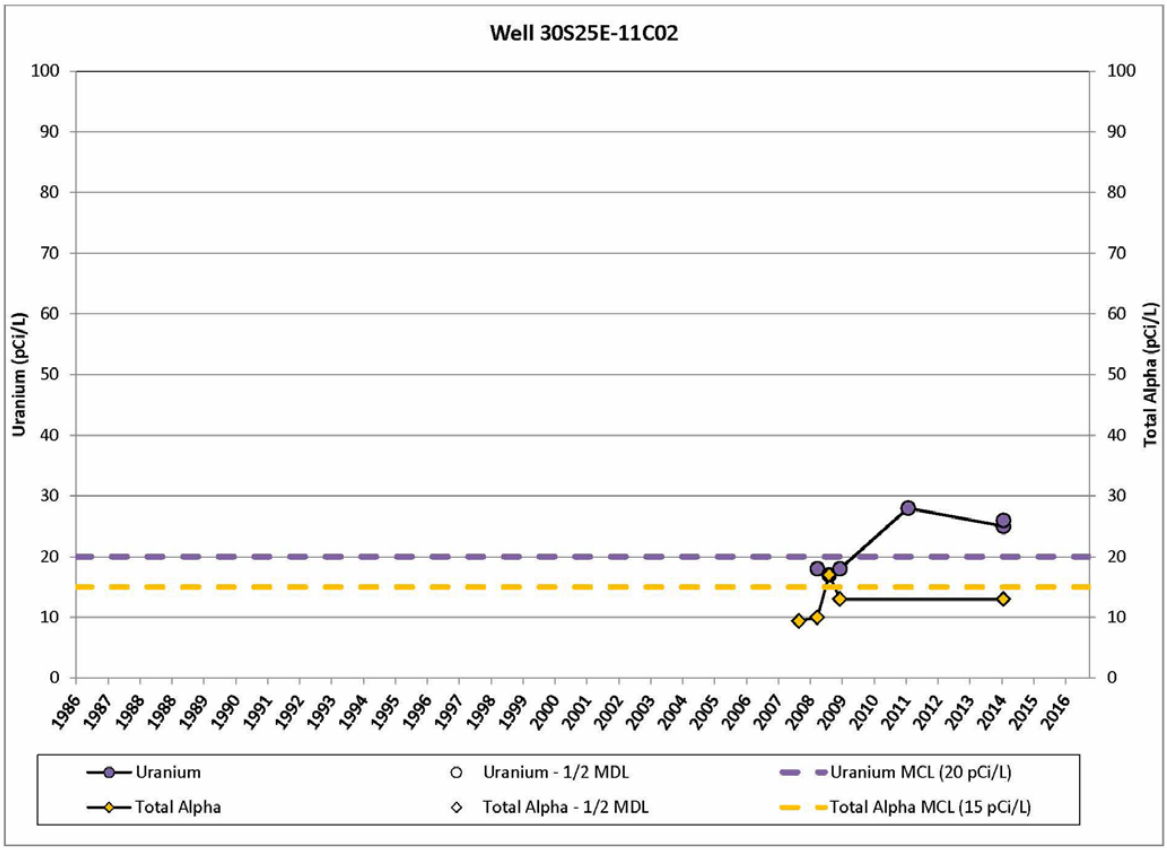
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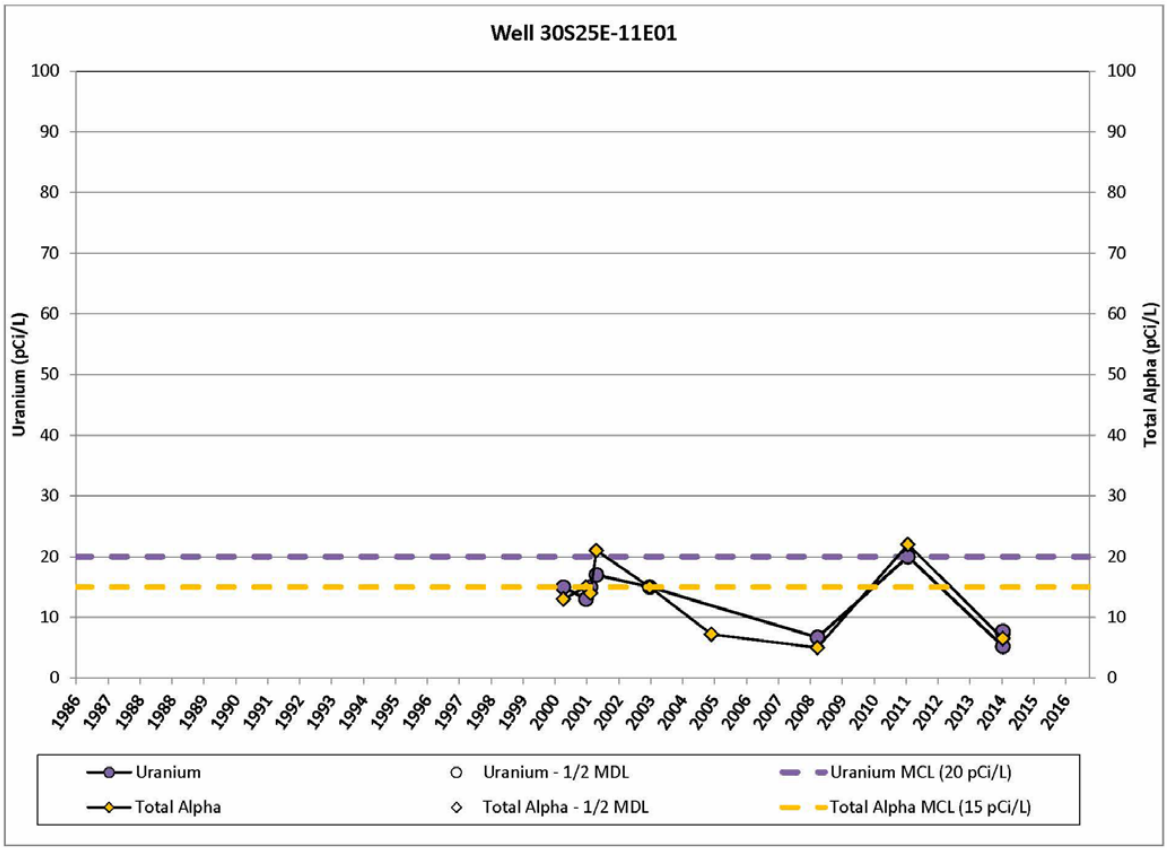
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha
Total Alpha - 1/2 MDL
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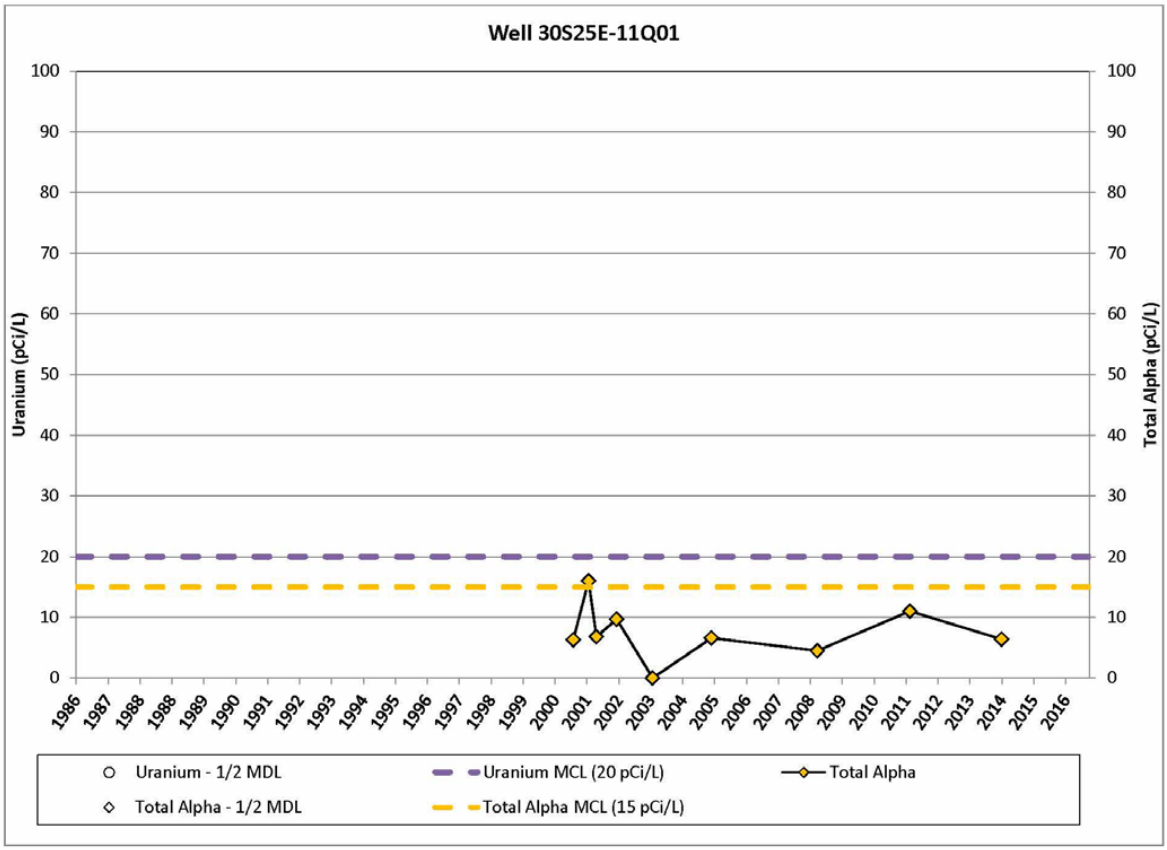
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Total Alpha
Total Alpha - 1/2 MDL
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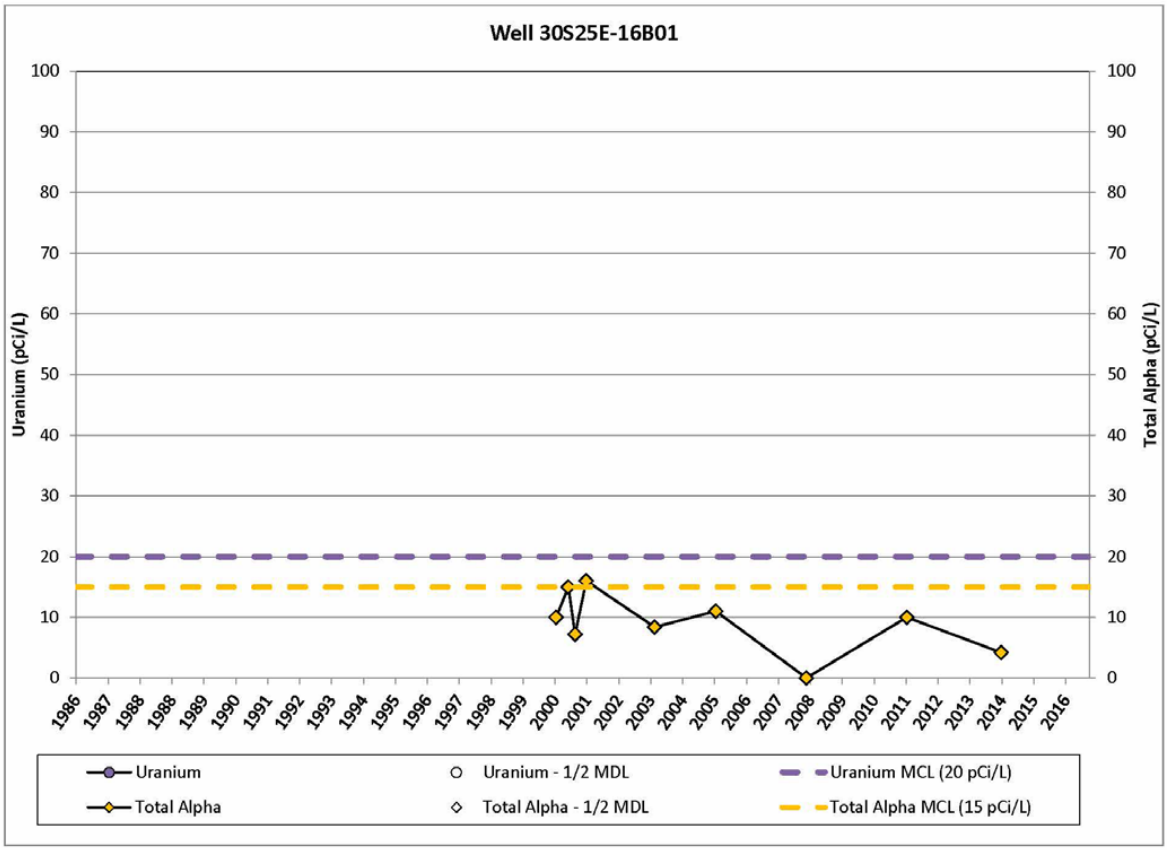
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Total Alpha
Total Alpha - 1/2 MDL
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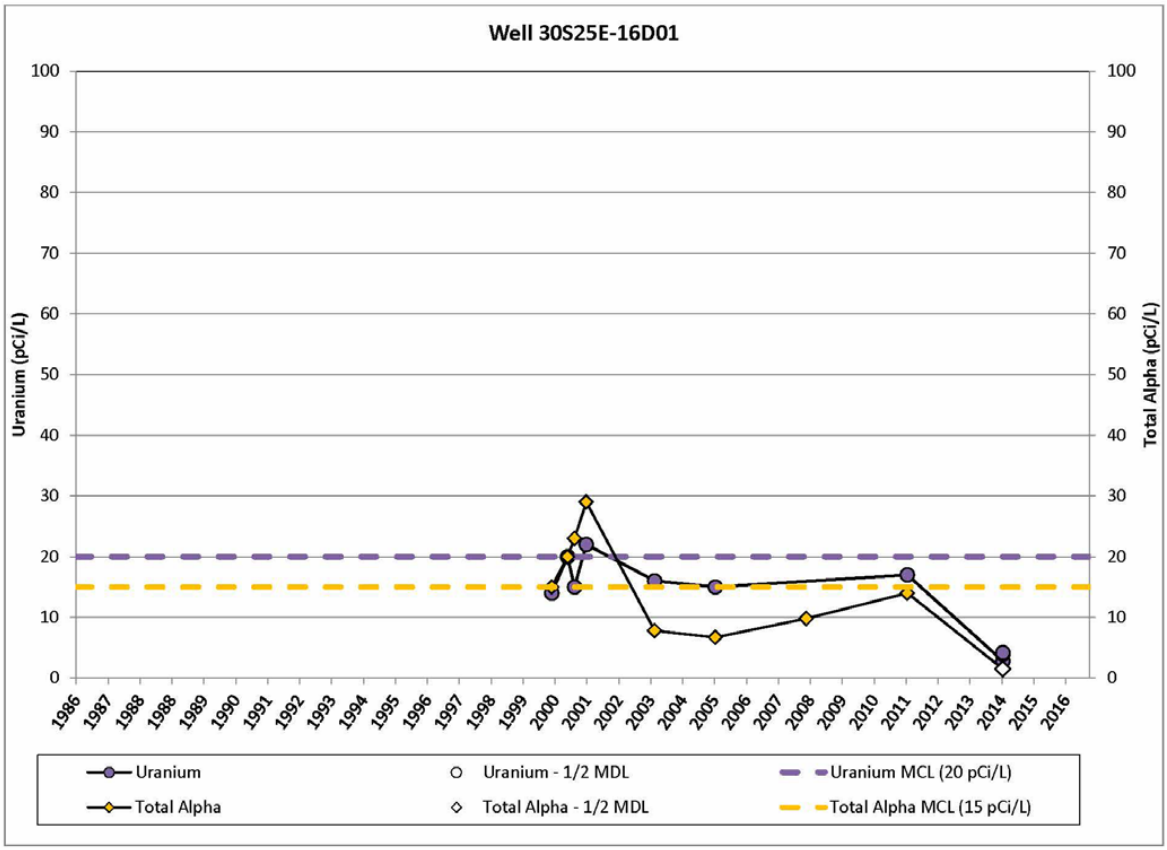
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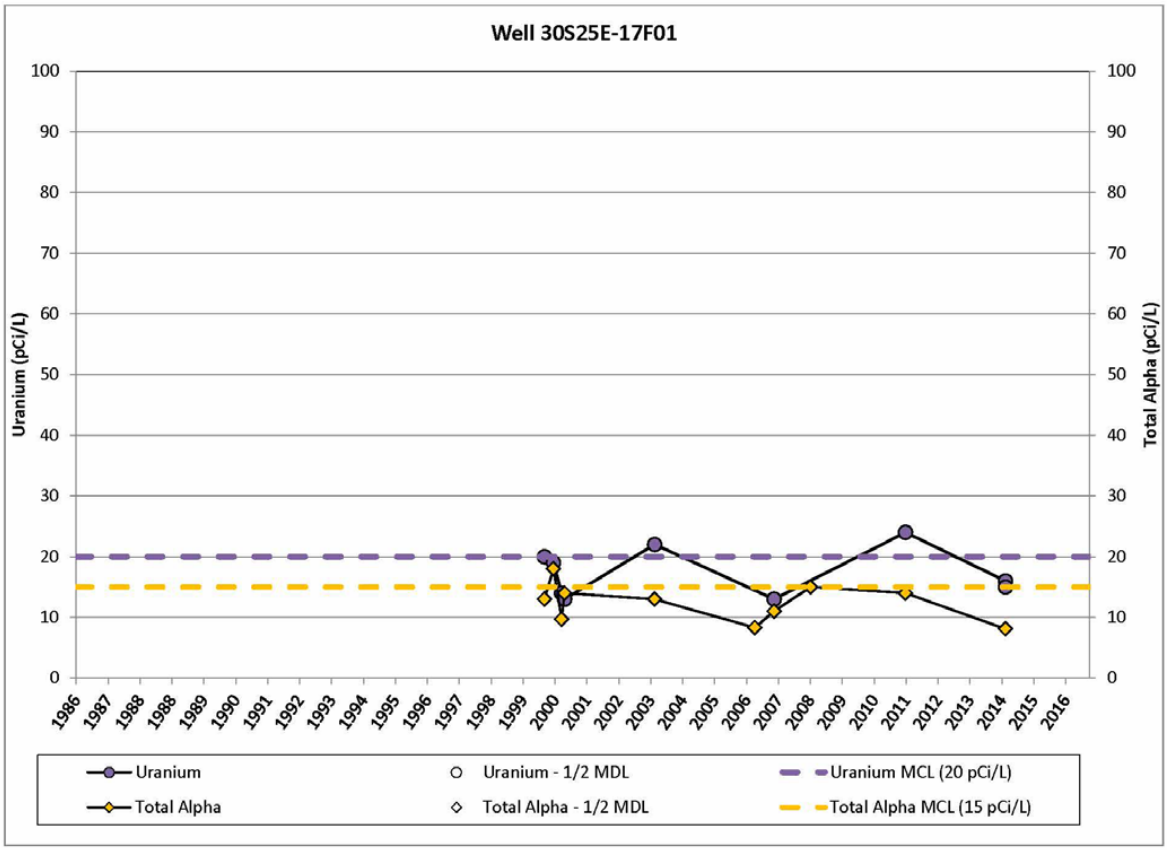
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Total Alpha
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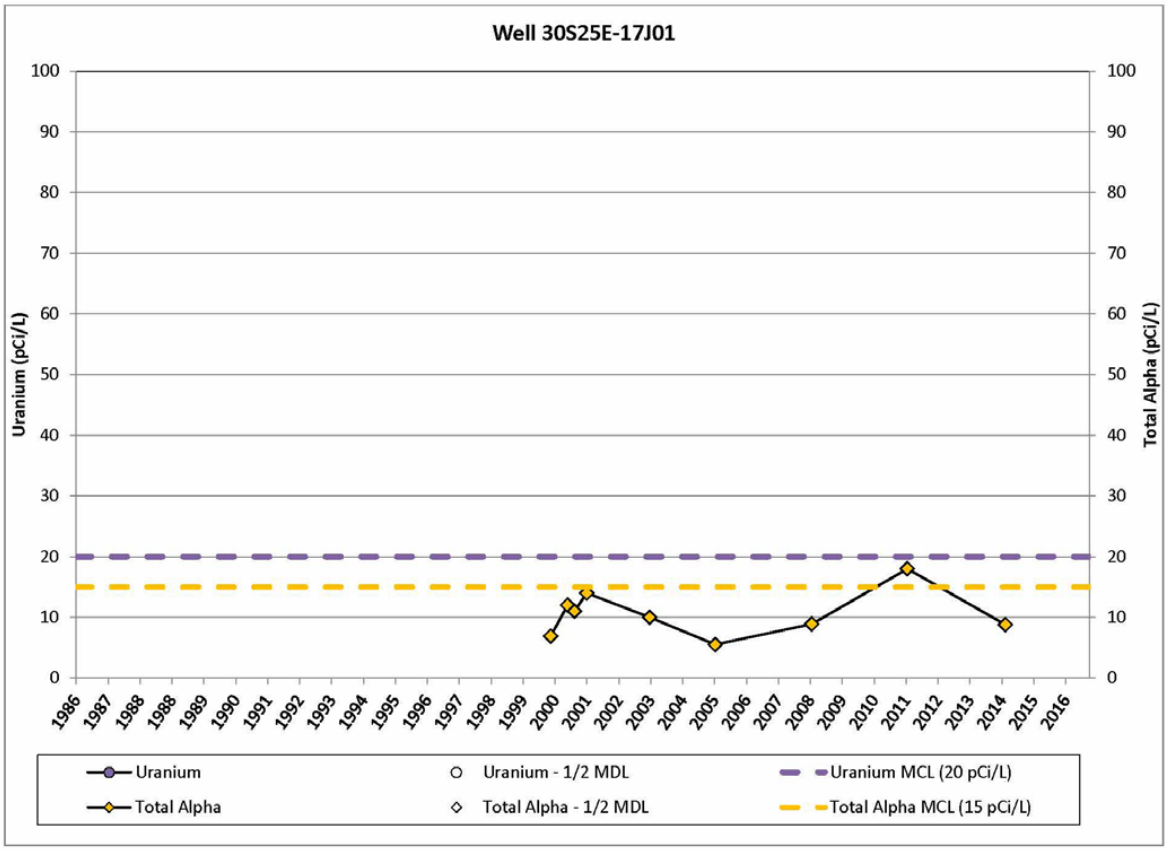
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Total Alpha (pCi/L)
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Total Alpha
Total Alpha - 1/2 MDL
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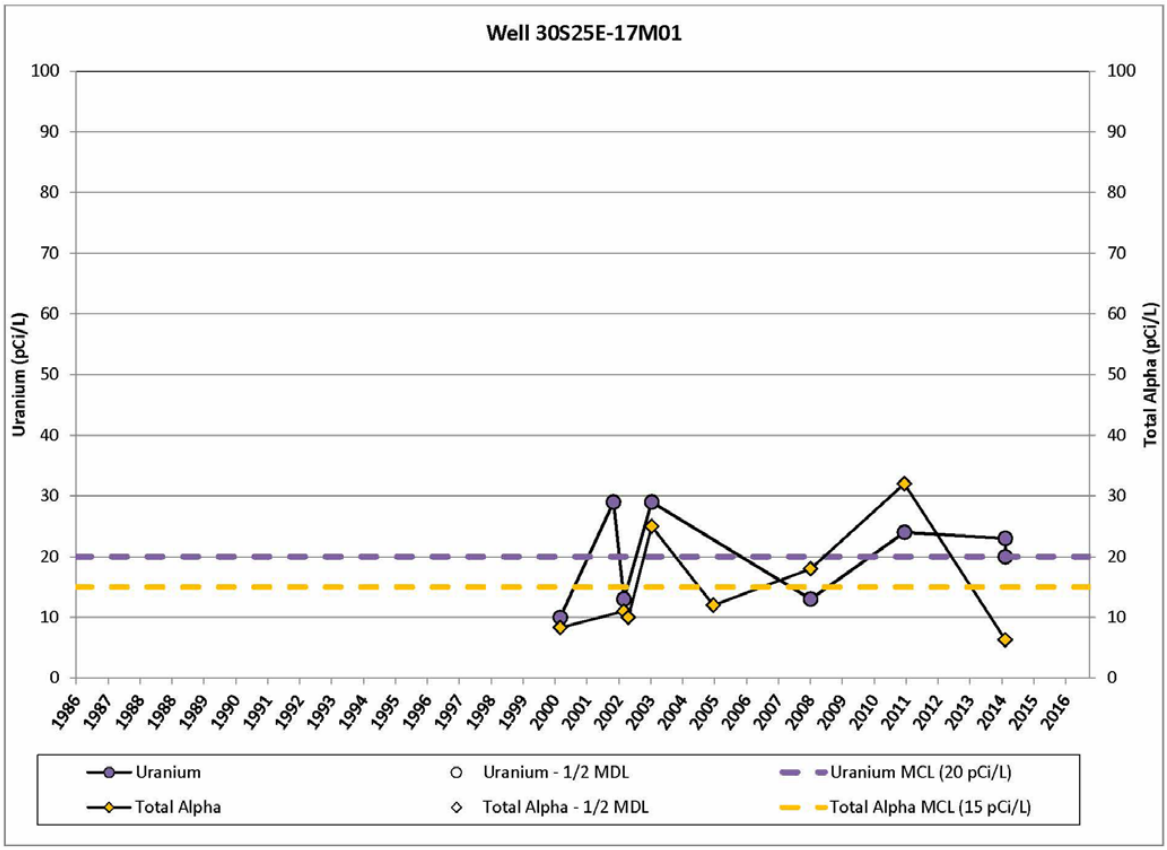
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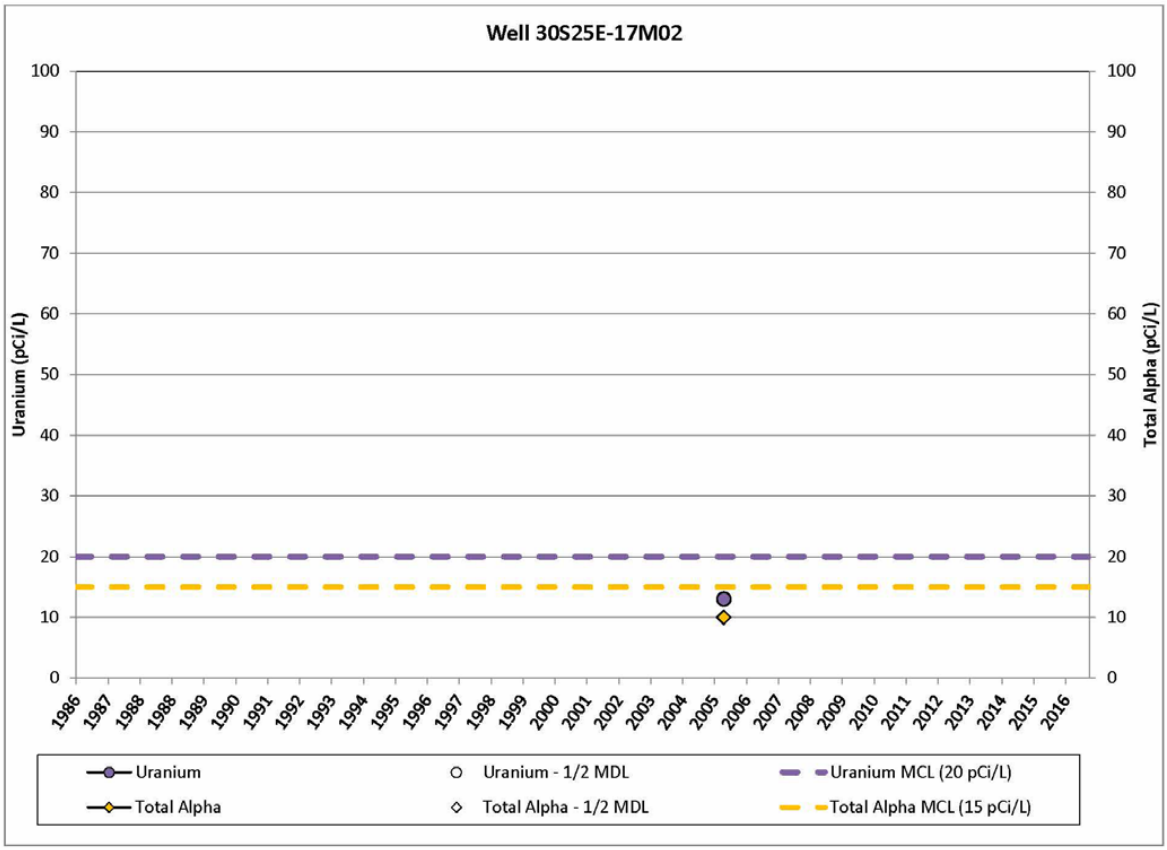
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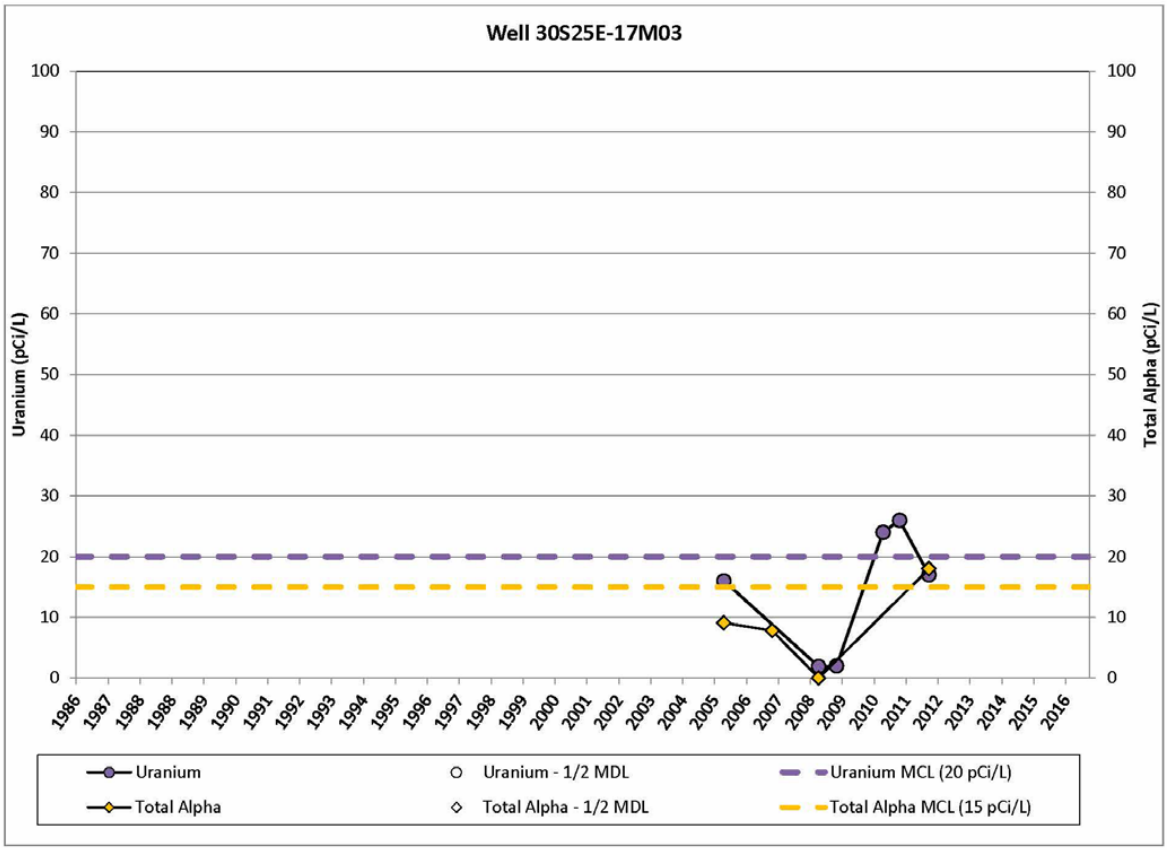
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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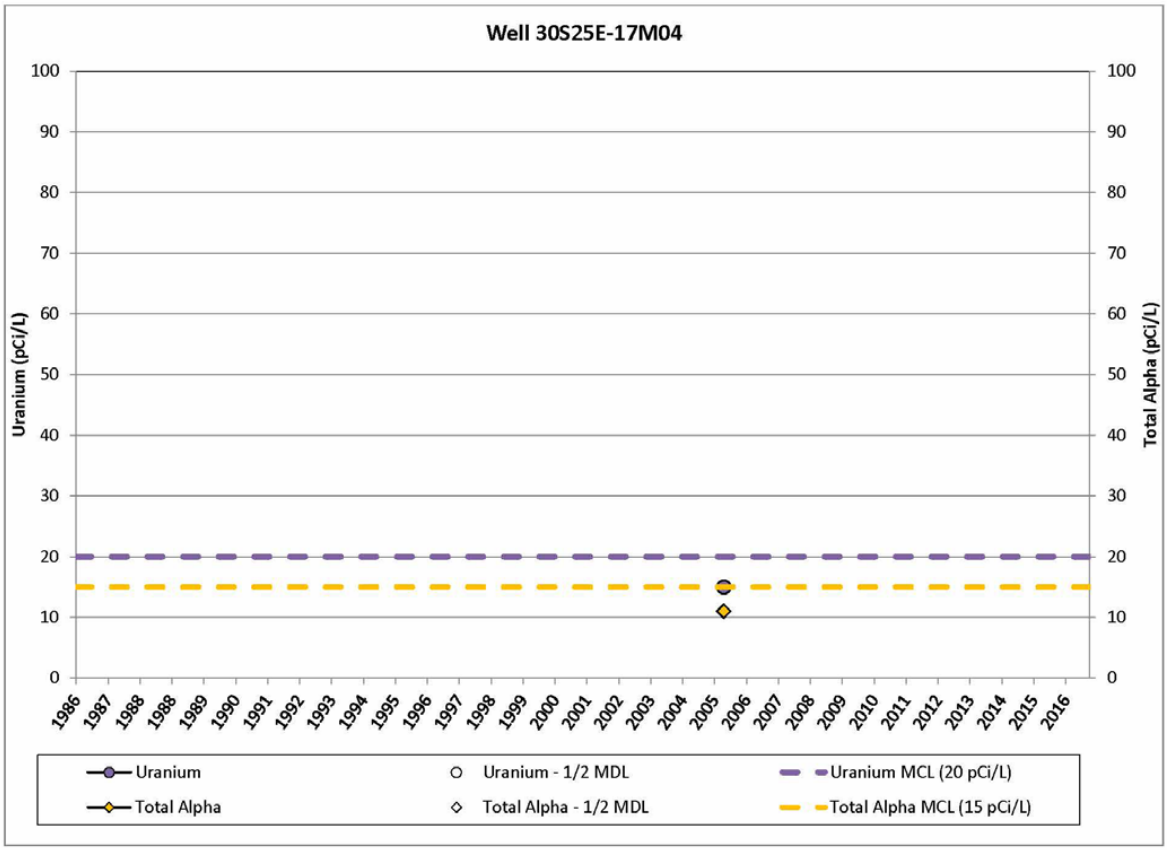
Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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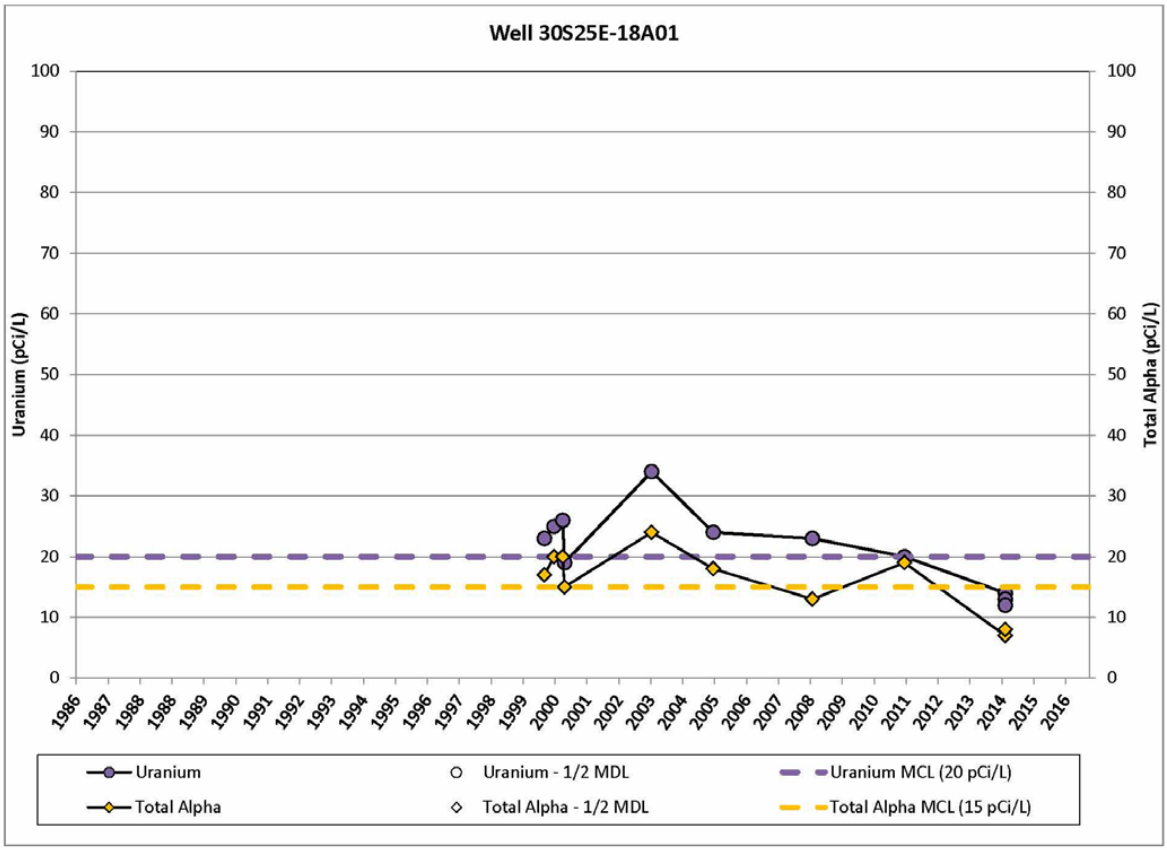
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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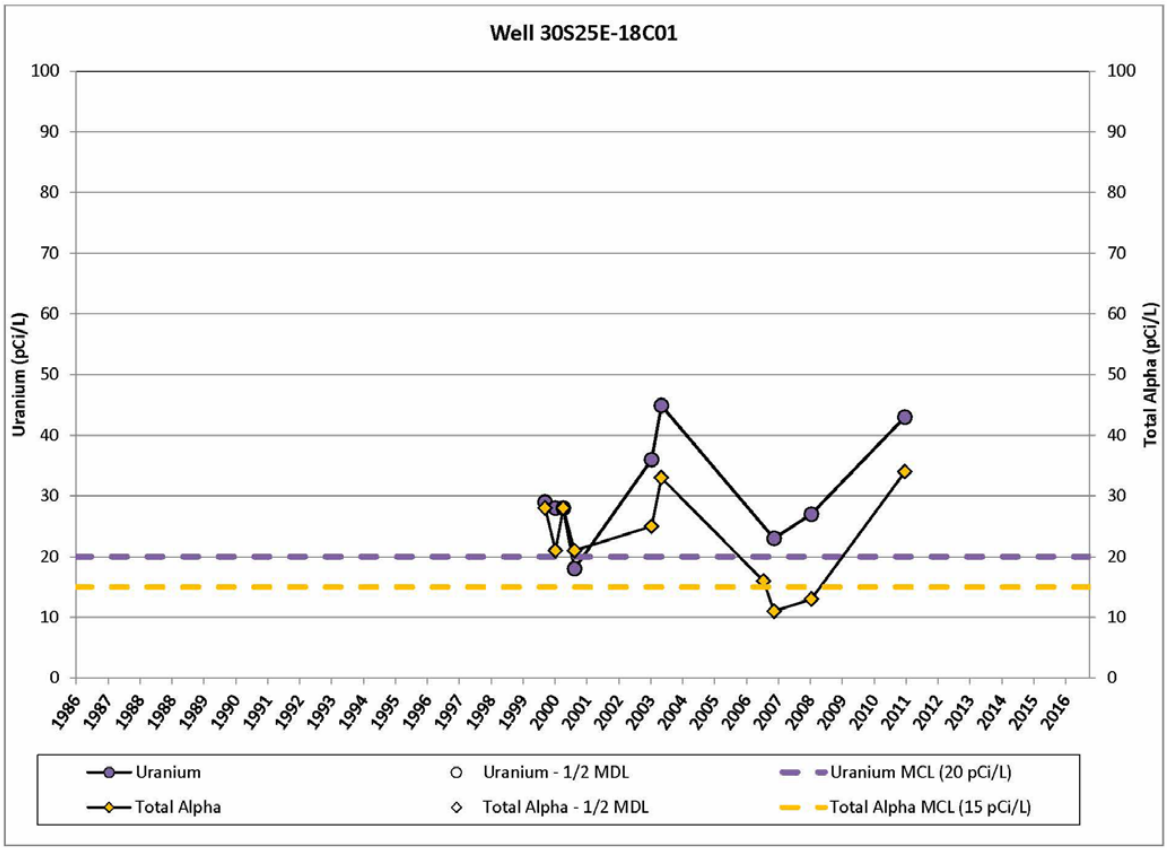
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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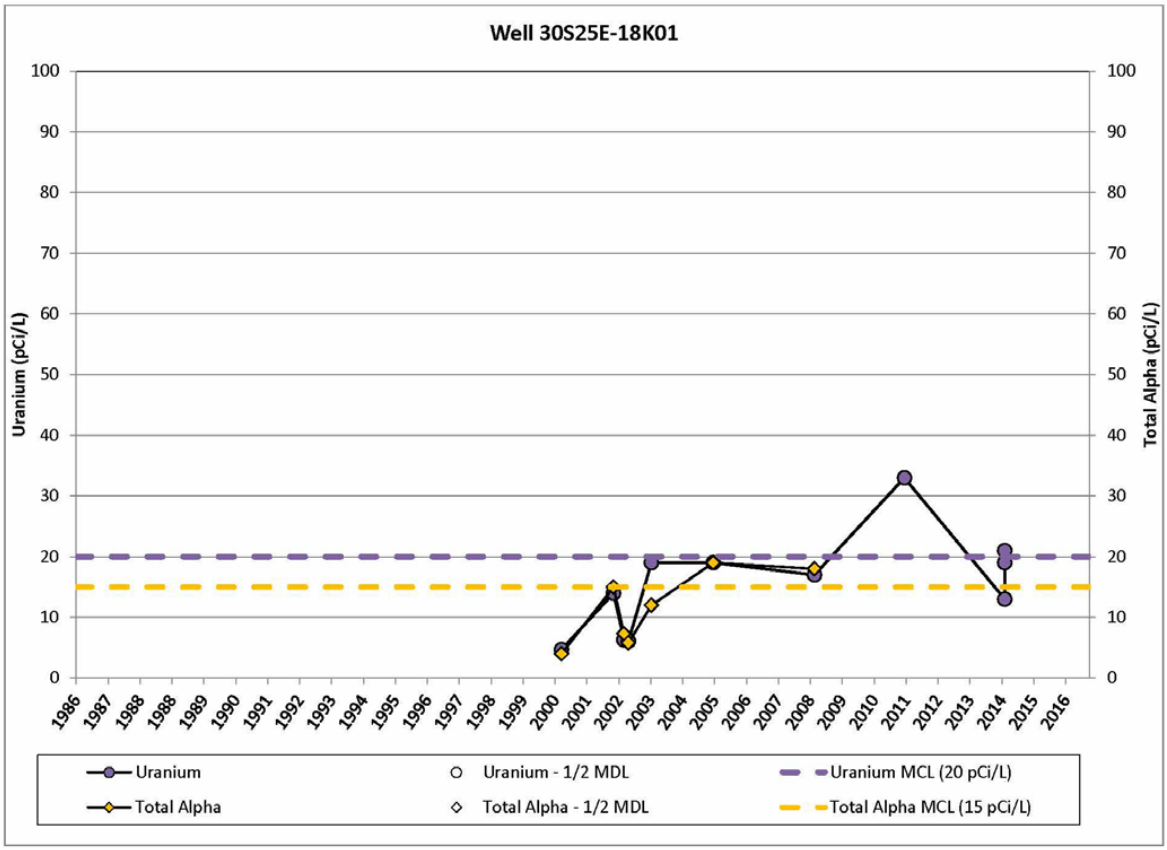
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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Total Alpha
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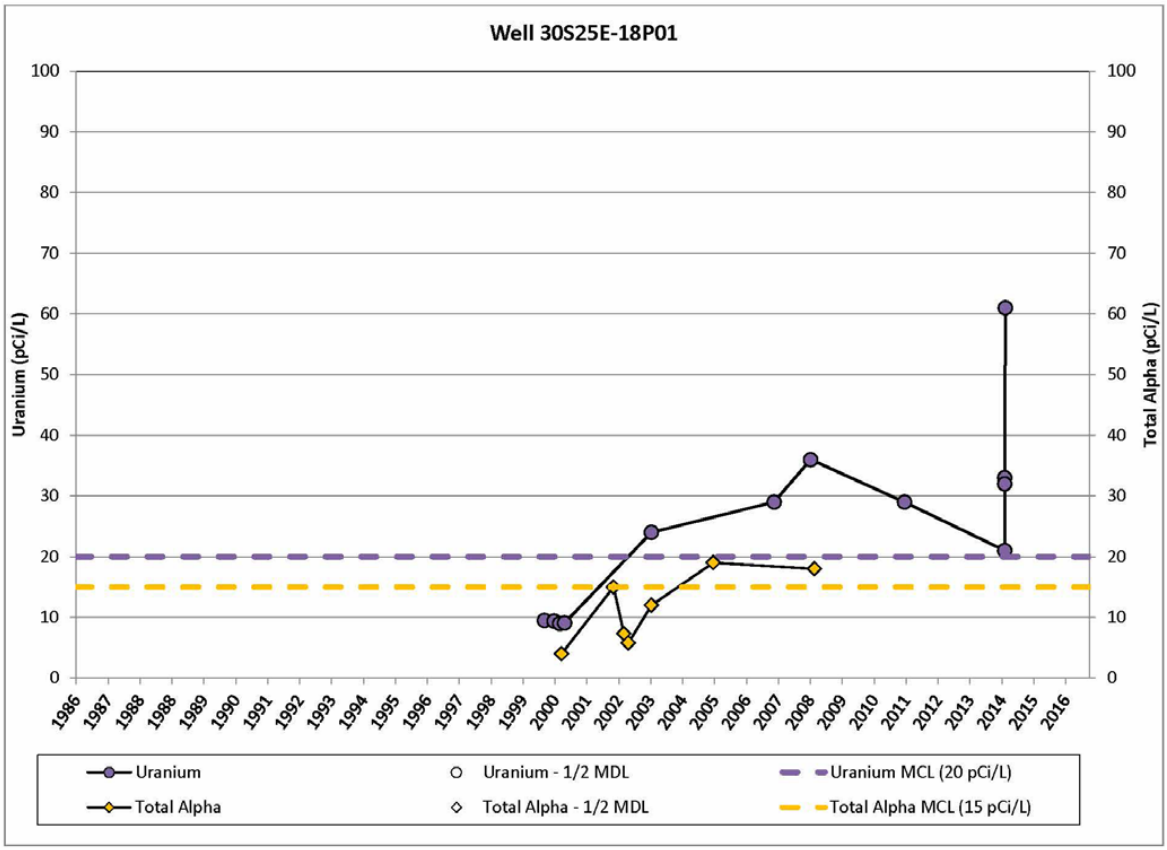
Total Alpha MCL (15 pCi/L)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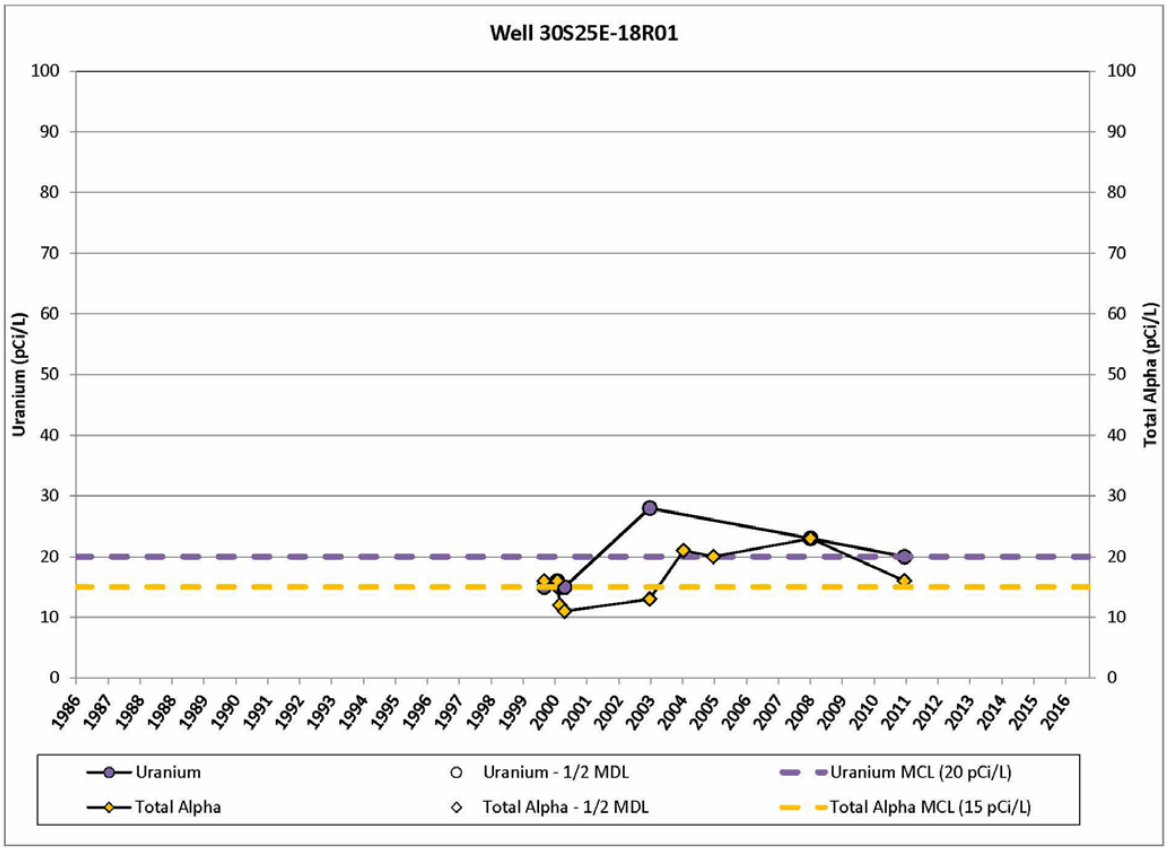
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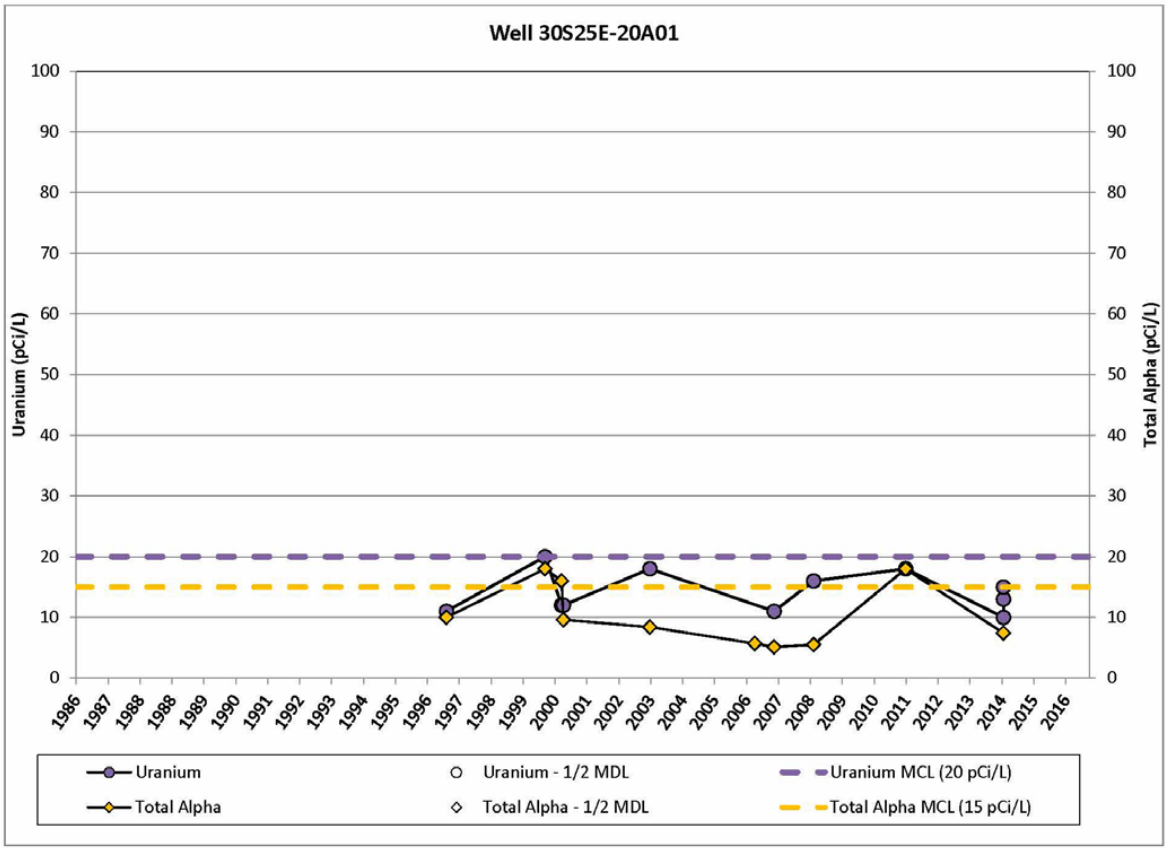
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Total Alpha
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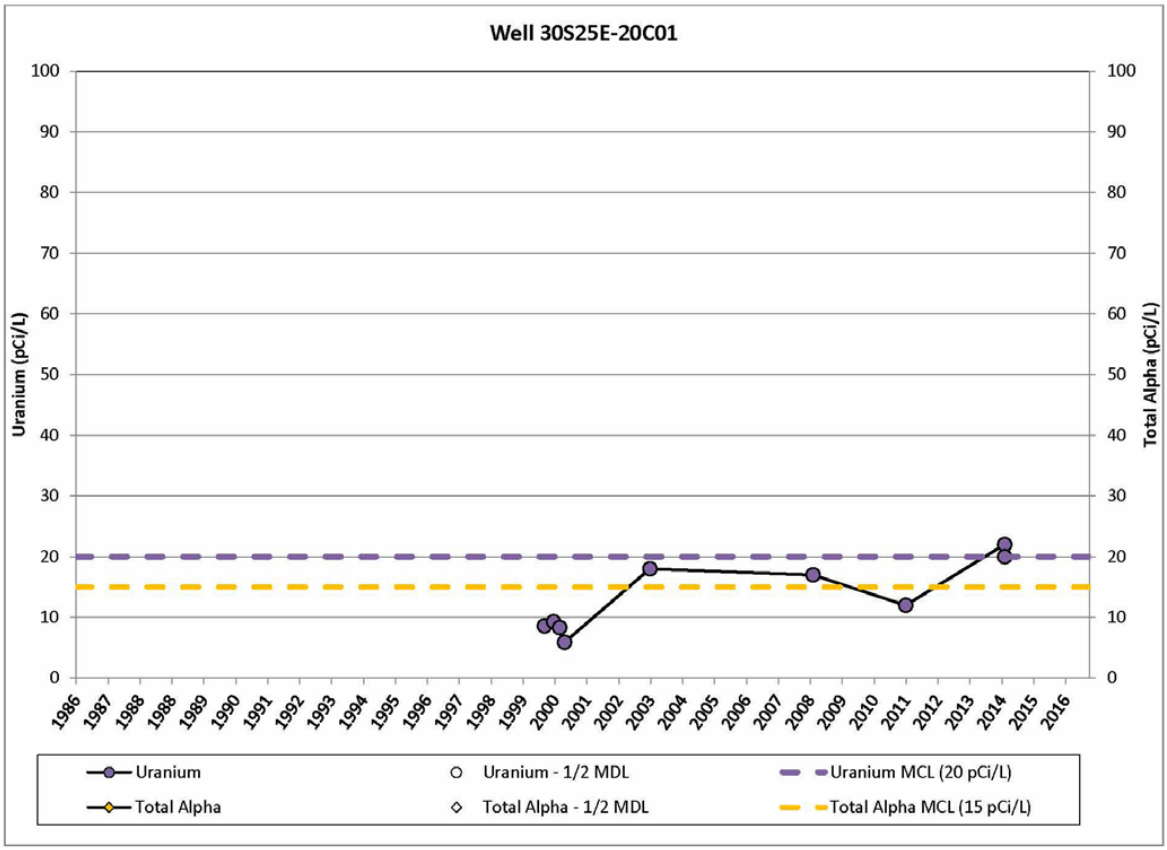
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Uranium MCL (20 pCi/L)
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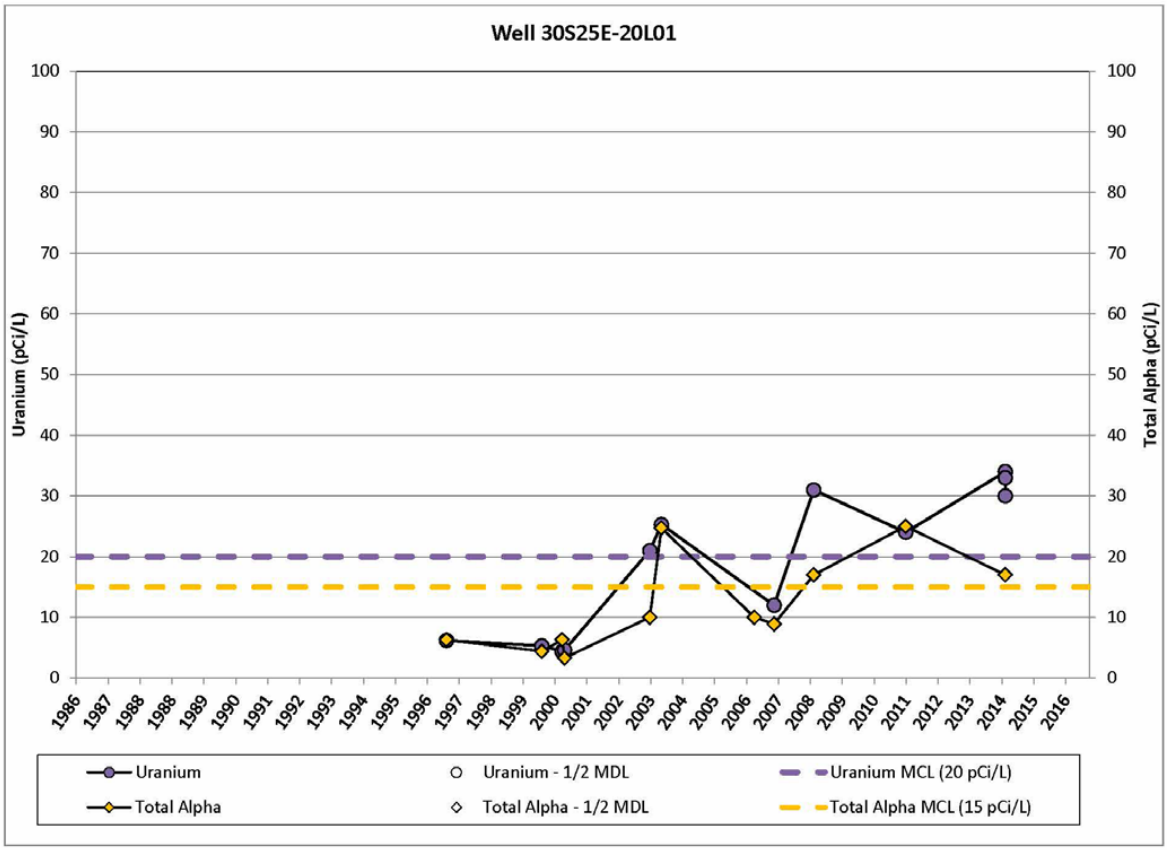
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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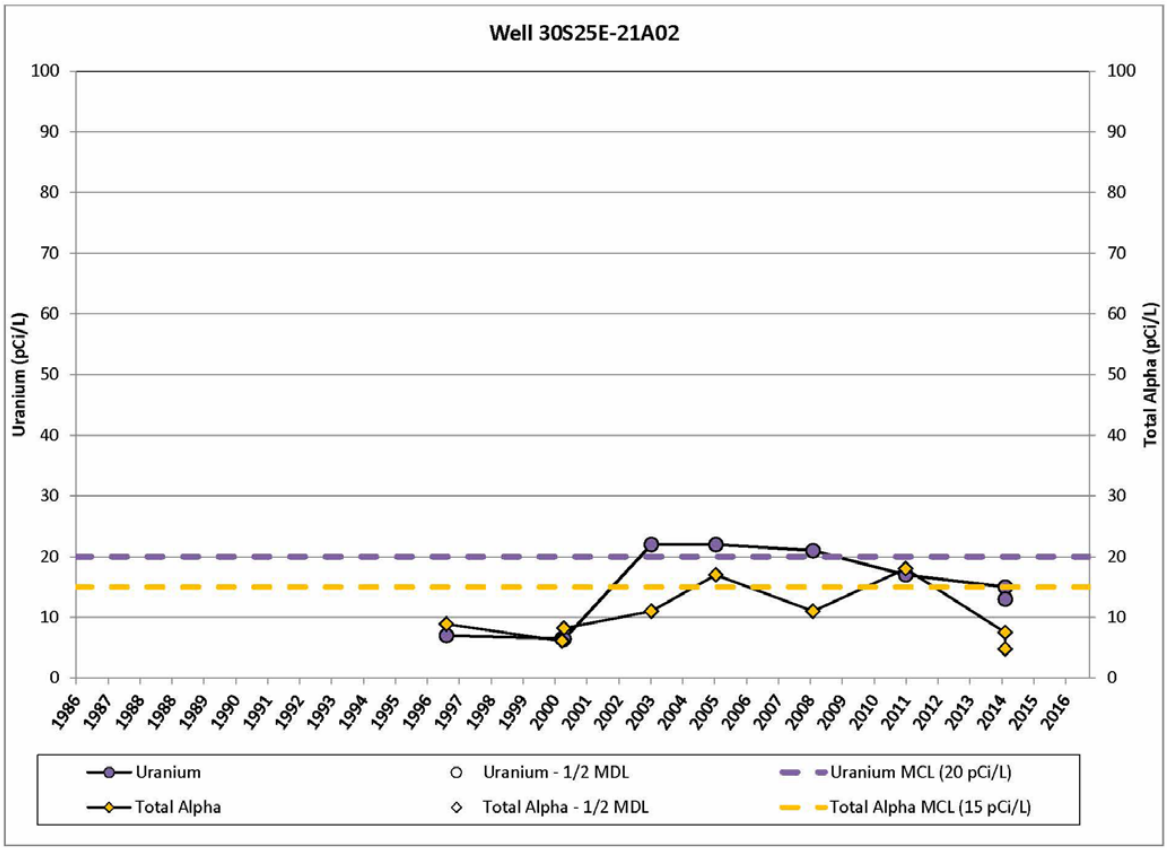
Total Alpha MCL (15 pCi/L)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Uranium MCL (20 pCi/L)
Total Alpha
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Total Alpha MCL (15 pCi/L)

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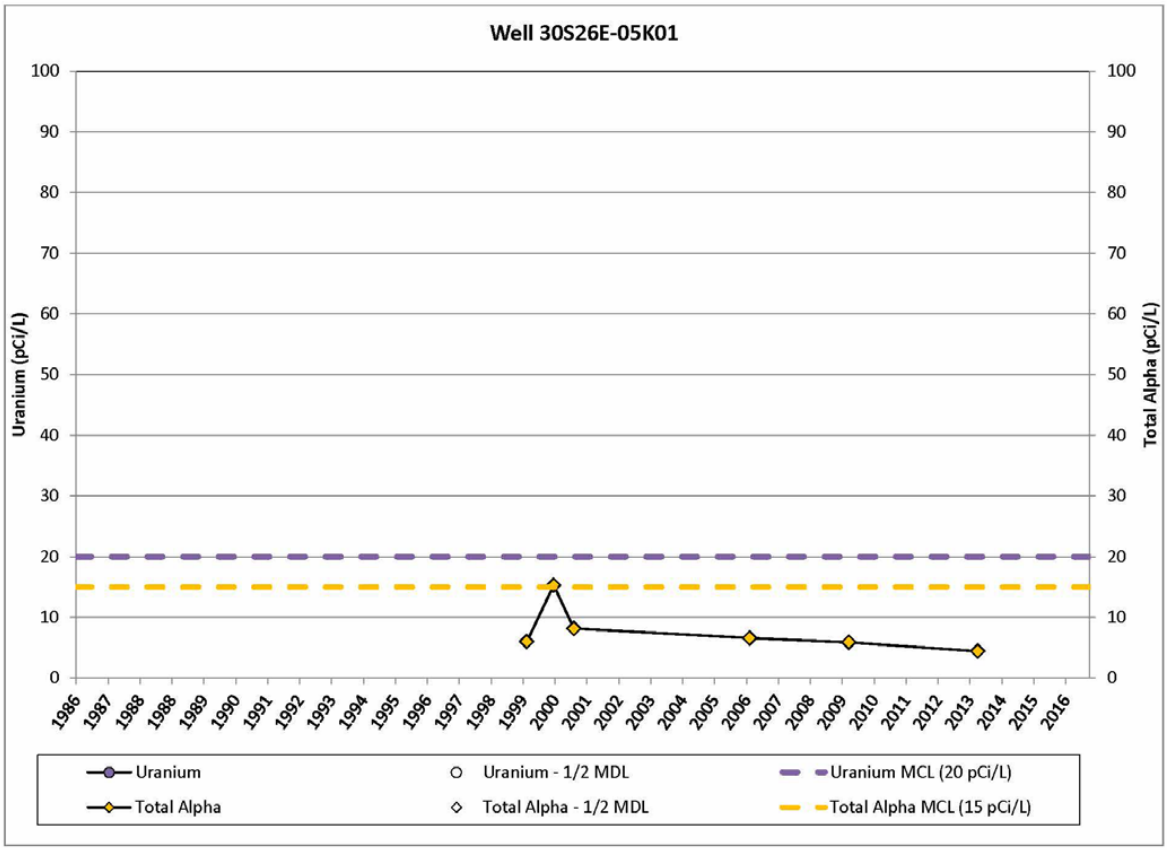
Section 26E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Total Alpha
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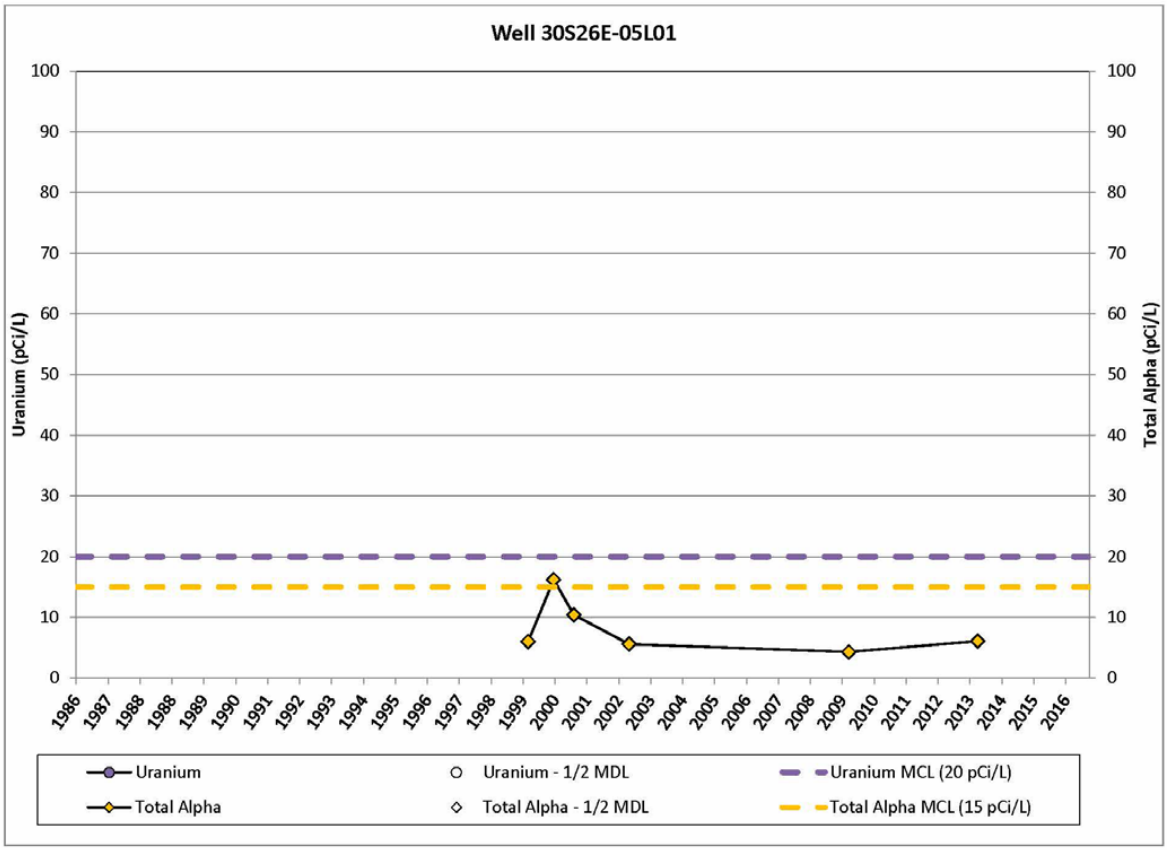
Total Alpha MCL (15 pCi/L)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Total Alpha (pCi/L)
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Total Alpha
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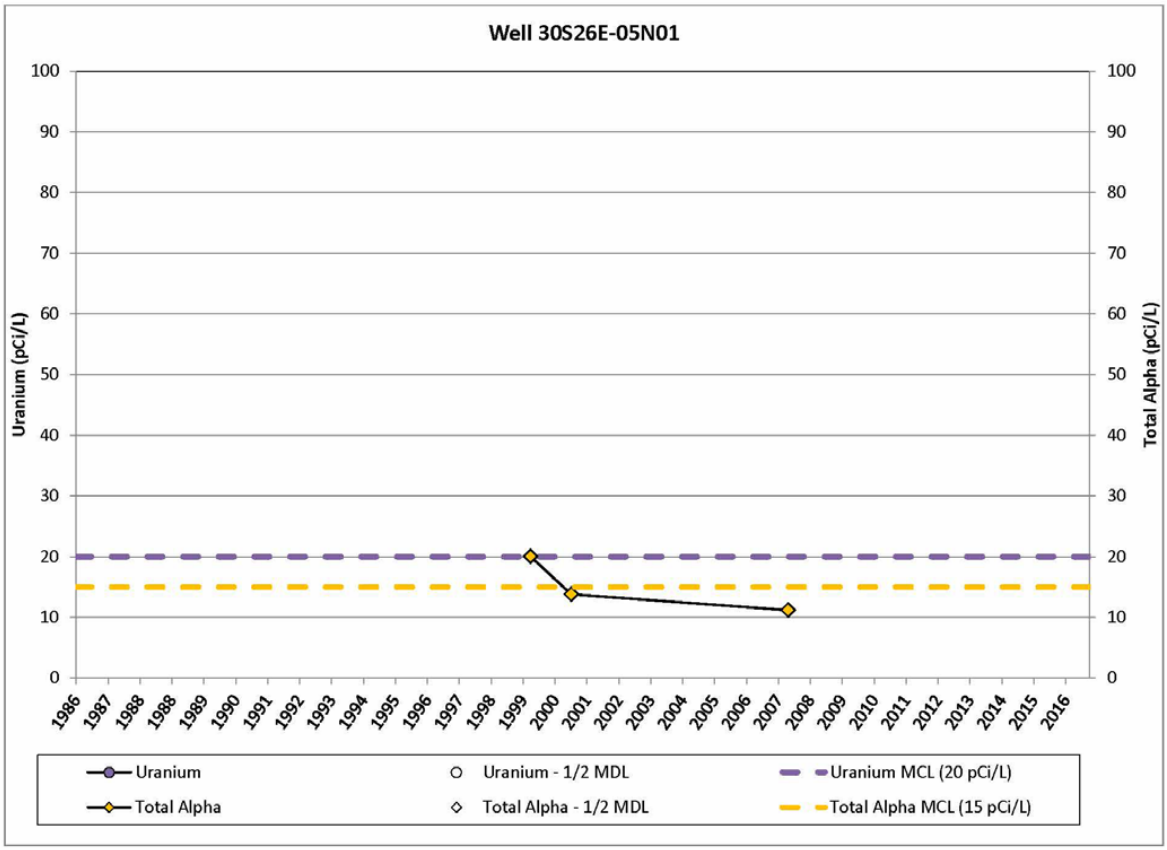
Total Alpha MCL (15 pCi/L)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Total Alpha
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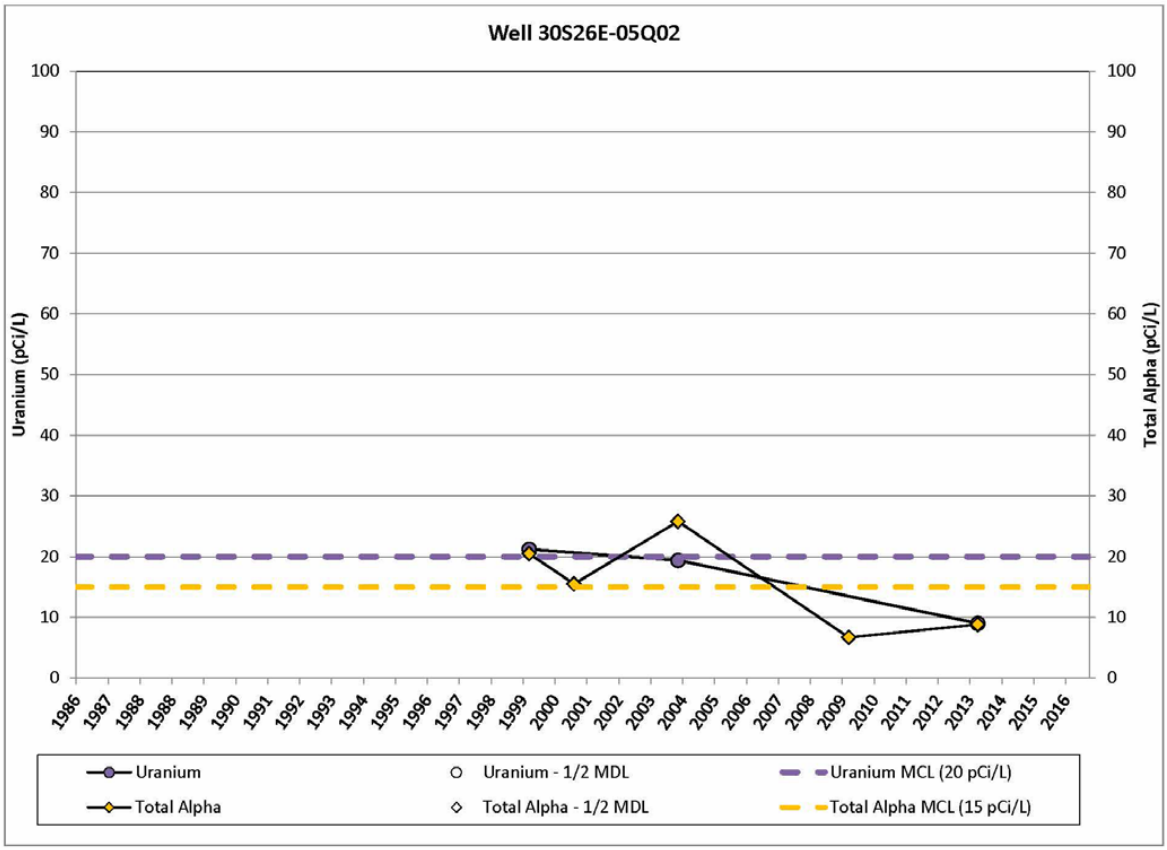
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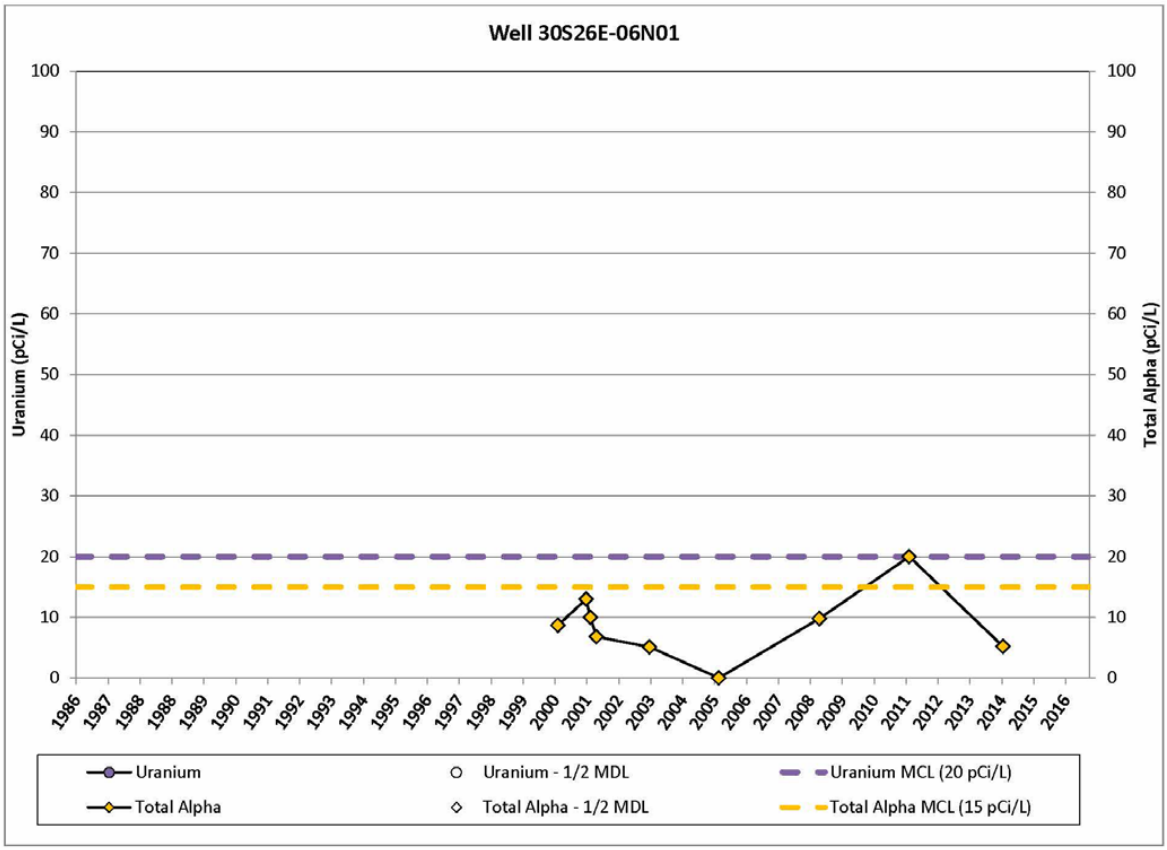
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Uranium
Uranium - 1/2 MDL
Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)


Well 30S26E-08B01
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Total Alpha (pCi/L)
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Total Alpha
Total Alpha - 1/2 MDL
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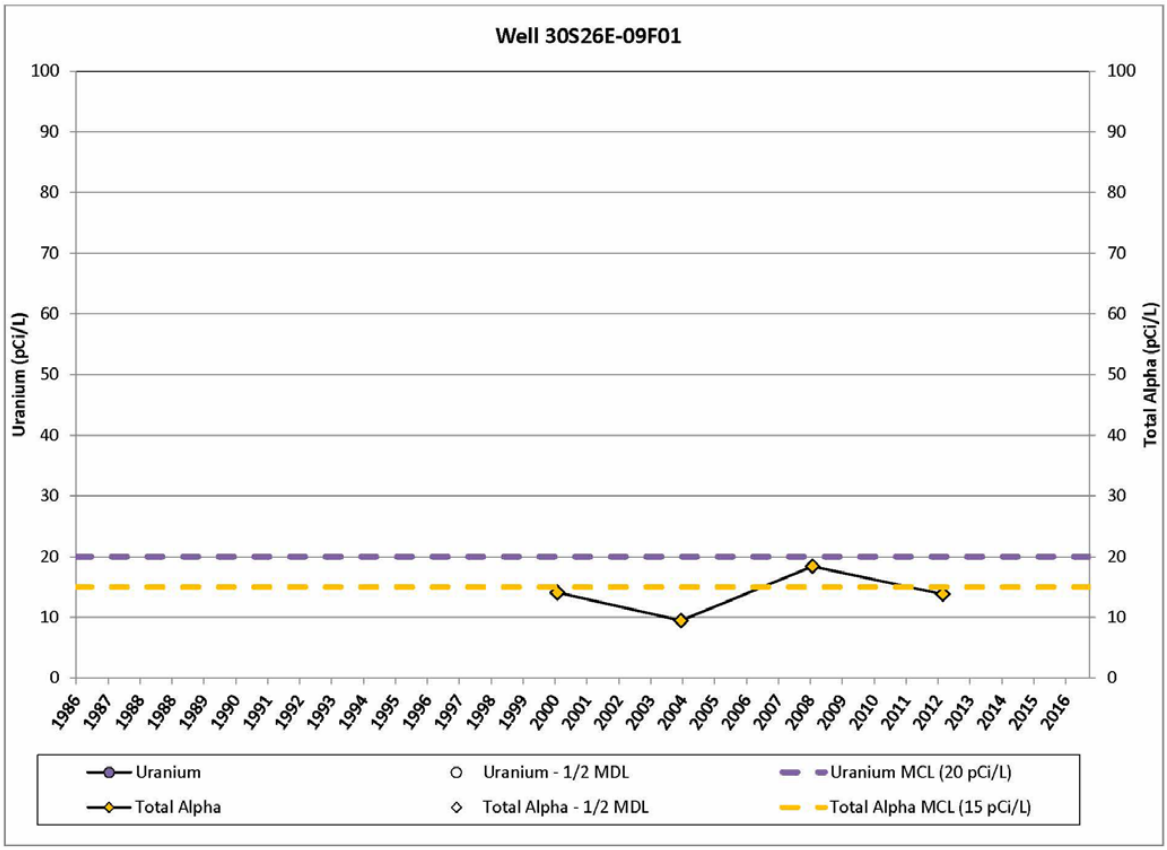
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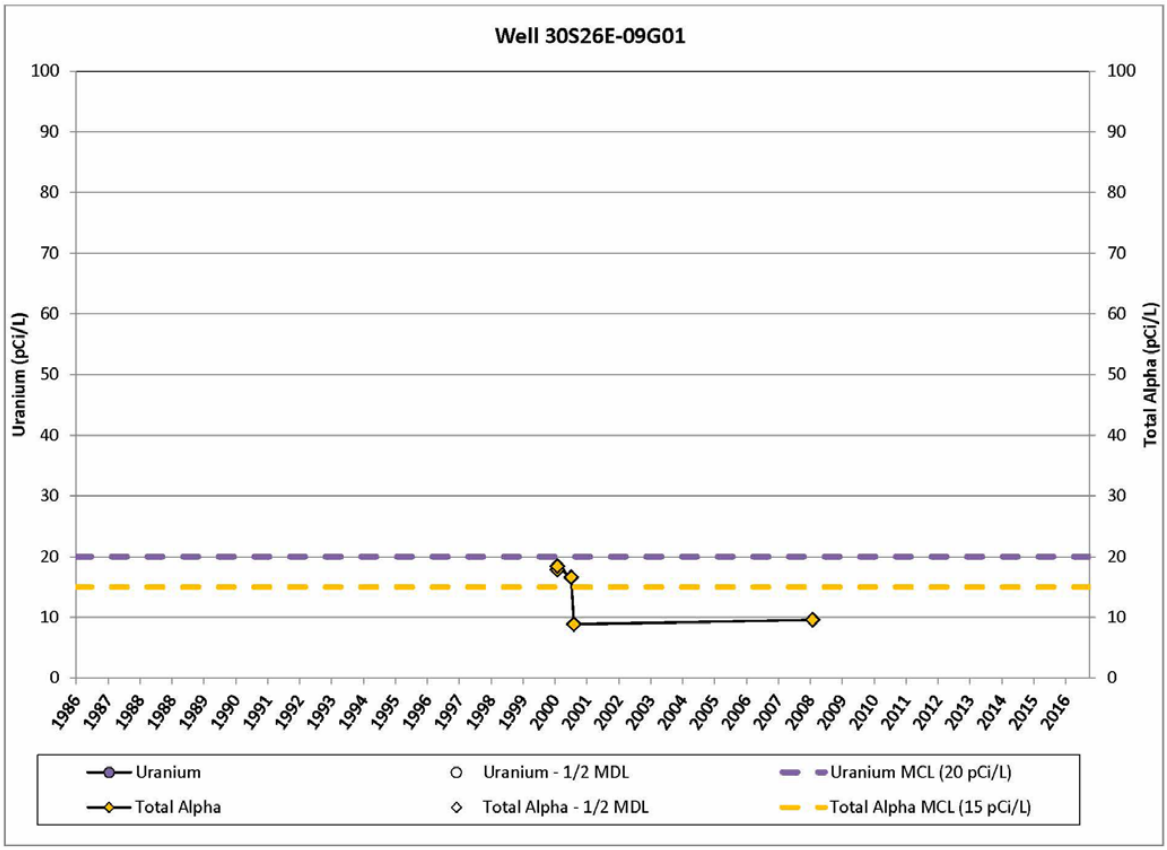
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)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Total Alpha
Total Alpha - 1/2 MDL
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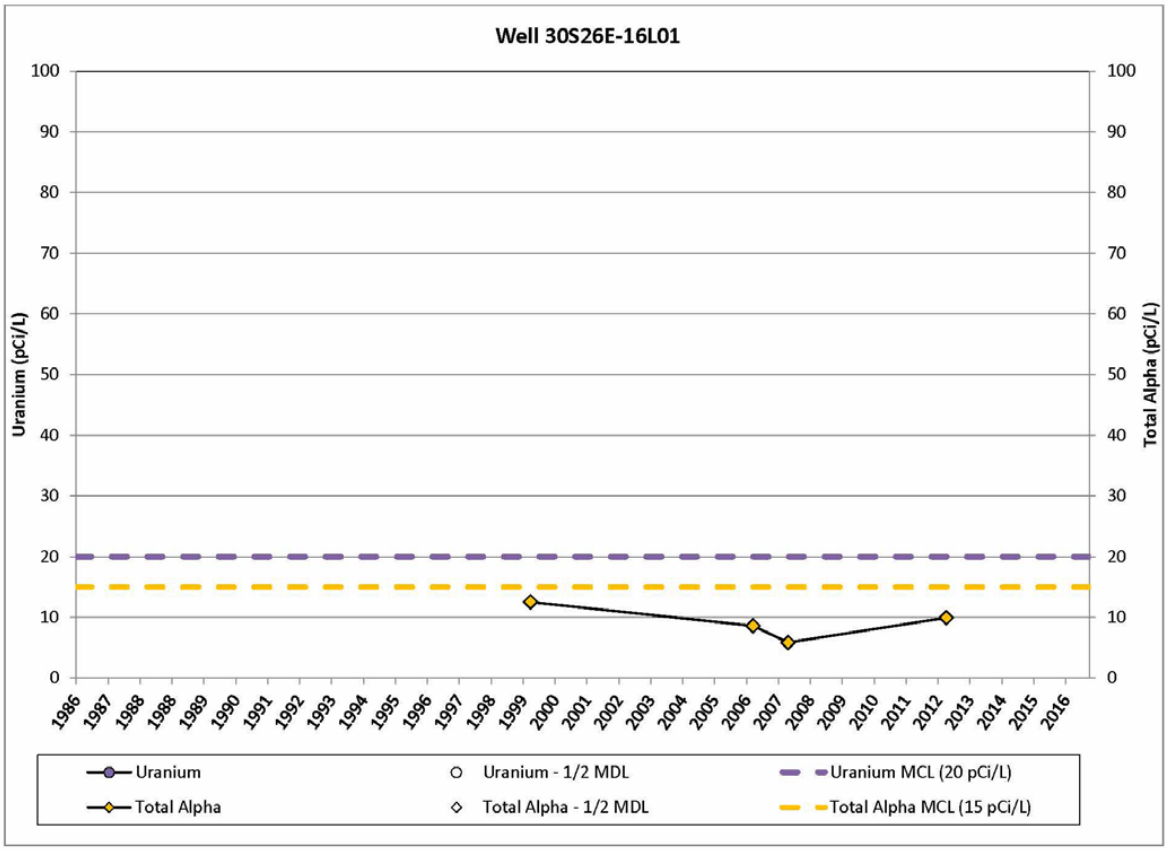
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Total Alpha
Total Alpha - 1/2 MDL
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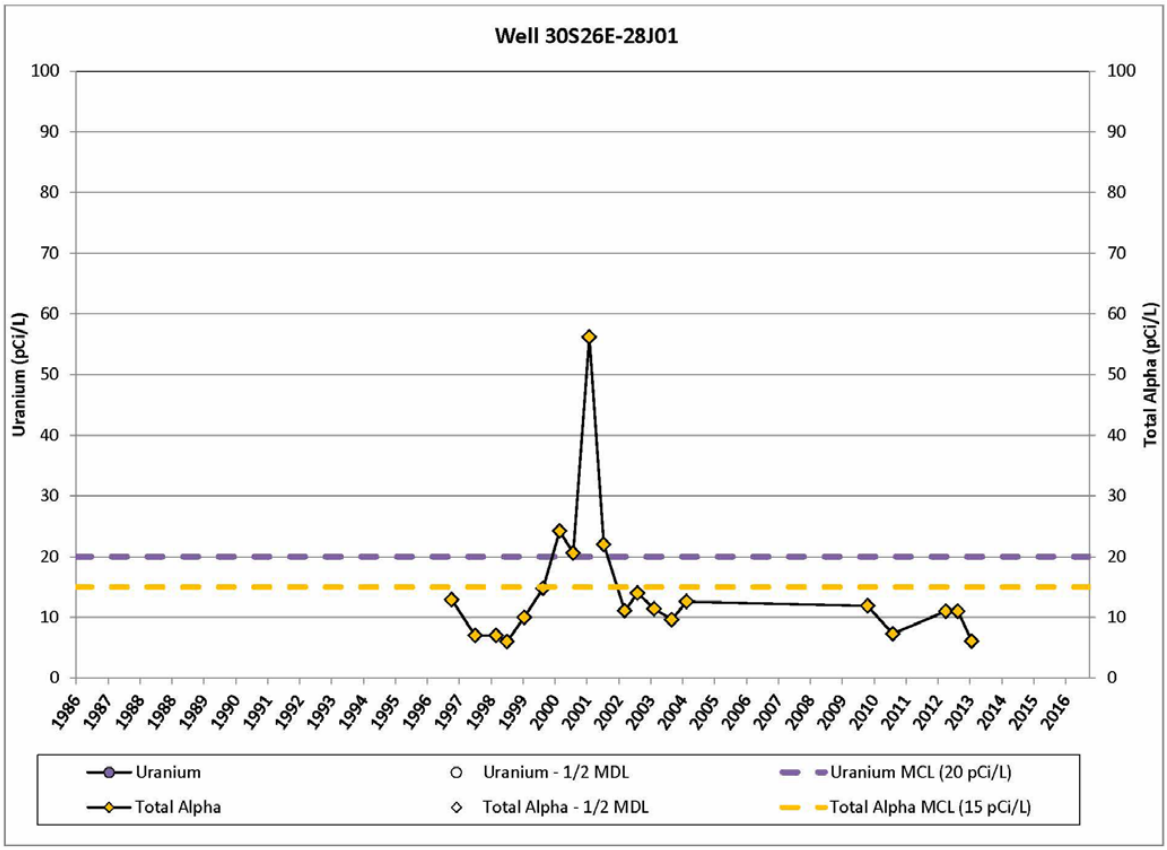
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Total Alpha - 1/2 MDL
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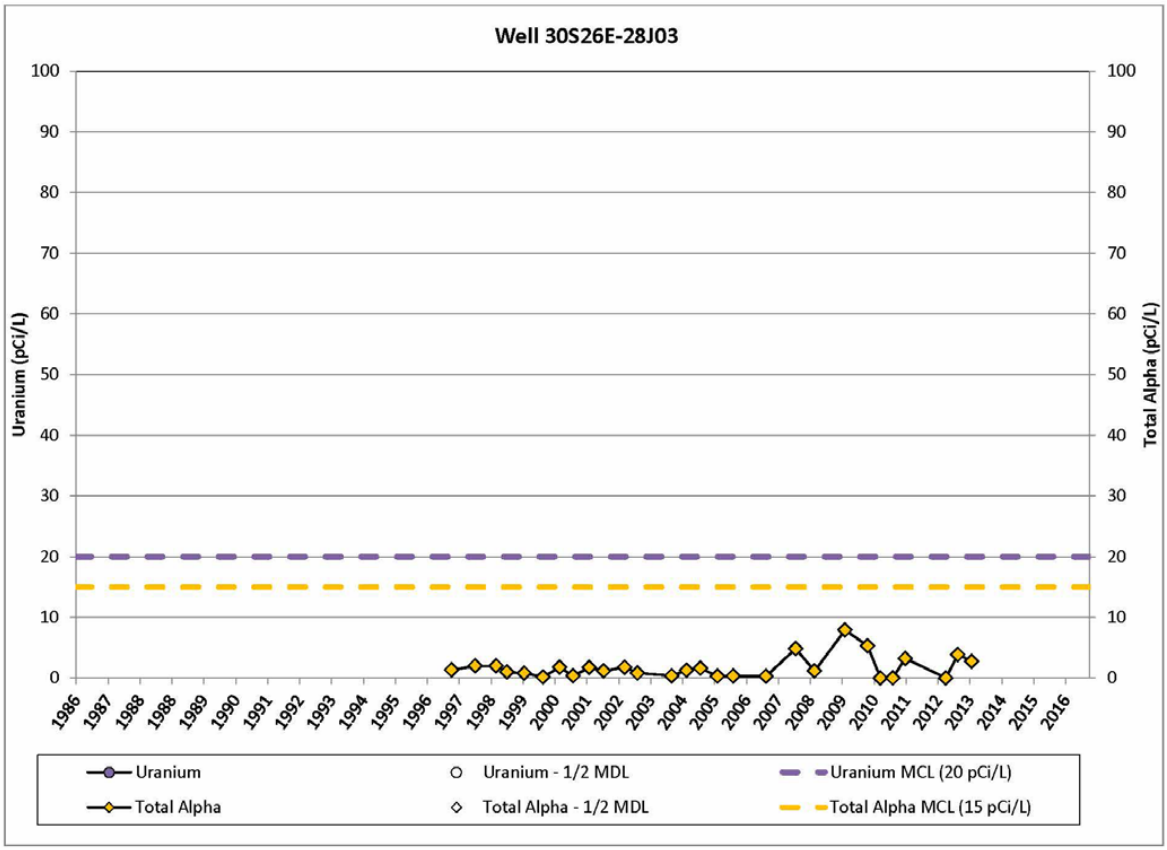
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Total Alpha - 1/2 MDL
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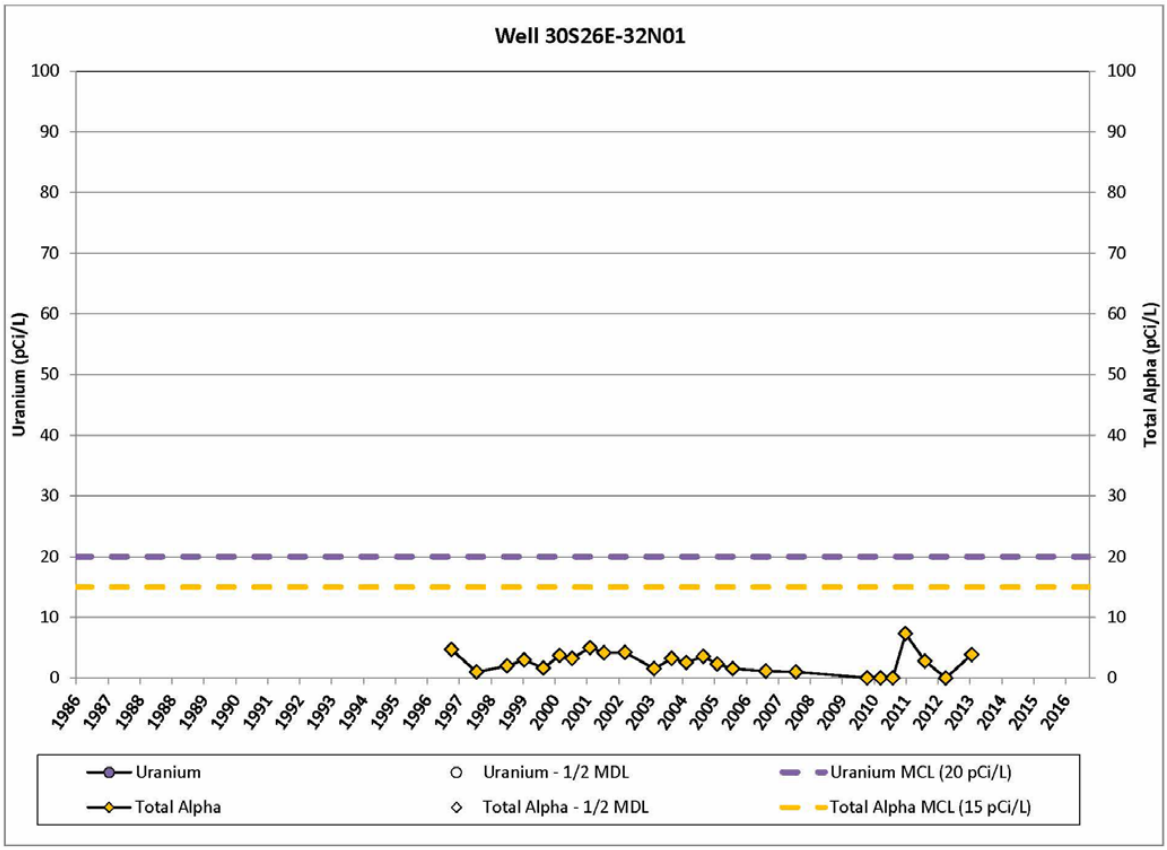
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Total Alpha - 1/2 MDL
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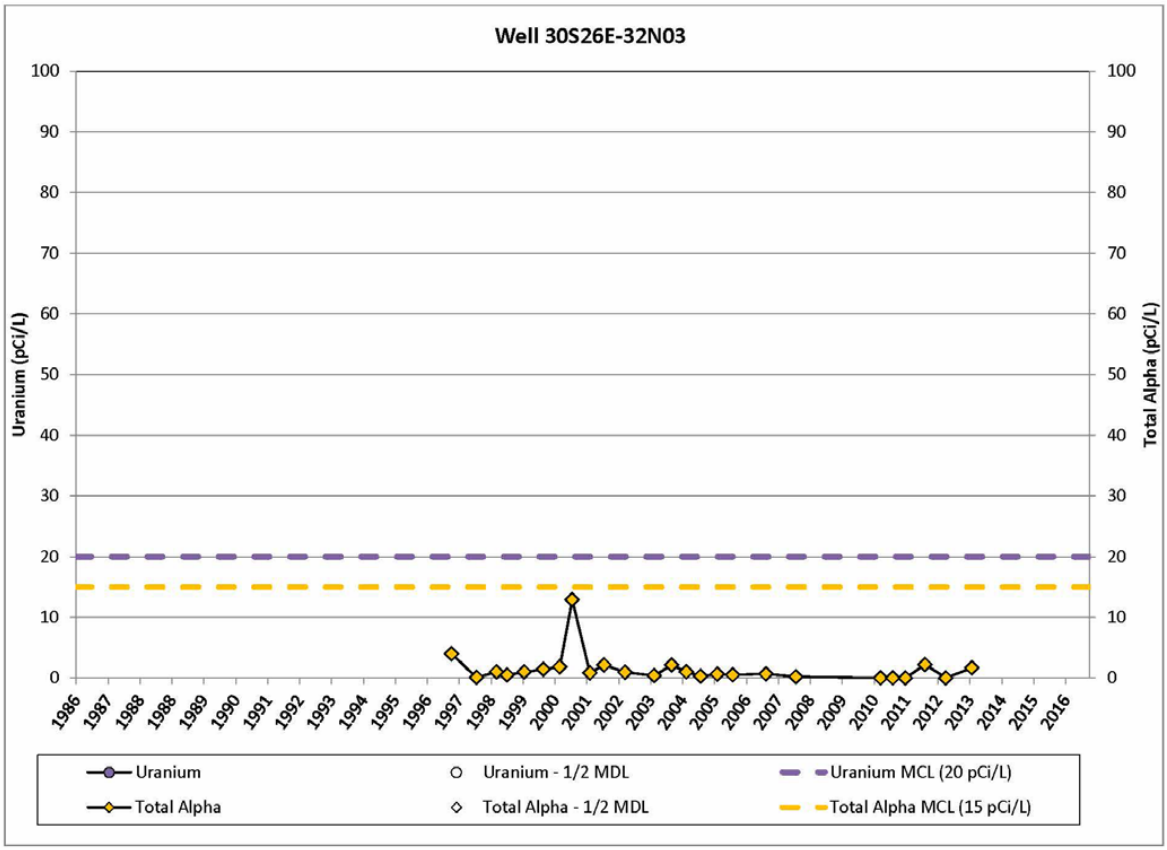
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Uranium
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Uranium MCL (20 pCi/L)
Total Alpha
Total Alpha - 1/2 MDL
Total Alpha MCL (15 pCi/L)

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