ADDENDUM TO THE CORRECTIVE ACTION PLAN FOR THE FORMER AVIS ON-STE FACILITY MCCARRAN INTERNATIONAL AIRPORT, LAS VEGAS, NEVADA

Submitted to:

Ms. Sara Arav-Piper
Nevada Division of Environmental Protection
Bureau of Corrective Actions
2030 East Flamingo Road, Suite 230
Las Vegas, Nevada 89119

On behalf of:

Ms. Rose Pelino
Avis Budget Car Rental, LLC
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Prepared by:

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May 2012

Project No. 95-01-150

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May 22, 2012

Project No. 95-01-150

Ms. Sara Arav-Piper
Nevada Division of Environmental Protection, Bureau of Corrective Actions
2030 East Flamingo Road, Suite 230
Las Vegas, Nevada 89119

Dear Ms. Arav-Piper:

Attached is the report titled *Addendum to the Corrective Action Plan for the Former Avis On-Site Facility, McCarran International Airport, Las Vegas, Nevada.* This report includes a summary of characterization and remediation to date, the results of the 2011 PulseOx™ pilot test, a comparison of potential remedial options, Broadbent's recommended remedial option, and a corrective action plan for implementation of the recommended option.

If you have any questions regarding the work performed or results obtained, please do not hesitate to contact us.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Jason Hoffman, CEM-1904 (exp. 1/26/13)
Senior Geologist

cc: Ms. Rose Pelino, Avis Budget Group, 6 Sylvan Way, Parsippany, NJ 07054
Mr. Nick Willden, 1354 Rossini Circle, Henderson, Nevada 89052
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Mr. Robert Gegenheimer, Converse Consultants, 731 Pilot Road, Suite H, Las Vegas, Nevada 89119-4429
Mr. Andy Rausch, OGI Environmental LLC, 830 South Durango Drive, Ste 103, Las Vegas, NV 89145

JURAT: I, Jason Hoffman, hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.

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1.0 INTRODUCTION

This report presents an addendum to the Corrective Action Plan (CAP) regarding petroleum hydrocarbons and methyl tertiary-butyl ether (MTBE) in groundwater beneath the former Avis Rent A Car facility located at 5164 Rent A Car Road in Las Vegas, Nevada. This CAP is presented pursuant to ongoing discussions between Broadbent & Associates, Inc. (Broadbent) and the Nevada Division of Environmental Protection (NDEP) regarding the ongoing voluntary efforts to reduce the timeframe and costs to remediate soil and groundwater beneath the former Avis facility.

1.1 Background Information

A gasoline release was first discovered at the former Avis facility in 1994 during a soil investigation performed in response to a leaking underground oil tank. During the characterization activities associated with the underground oil tank release, it was revealed that the fuel dispenser piping infrastructure associated with the five gasoline underground storage tanks (USTs) on the former Avis facility was leaking gasoline. In response, approximately 644 tons of soil was excavated from the vicinity of the dispensers. Soil was excavated down to the uppermost caliche layer (approximately 9 feet below ground surface) in the area.

Based on soil samples collected during the excavation activities, the Clark County Health District, the regulatory agency at the time, requested the installation of a monitoring well on the former Avis facility. Groundwater samples collected from the monitoring well indicated concentrations of dissolved benzene above the Nevada state action level.

In October of 1995, the Clark County Health District requested the preparation of a CAP to address dissolved benzene, toluene, ethylbenzene, and total xylenes (BTEX) in groundwater beneath the former Avis facility. Air sparge (AS), vapor extraction (VE), and aquifer pilot tests were performed to evaluate appropriate remedial techniques, and on March 18, 1997, a closed-loop air sparge/vapor extraction (AS/VE) remediation system was put into operation on the former Avis facility.

In March of 1997, the NDEP requested the addition of MTBE analyses for groundwater samples collected from the petroleum hydrocarbon plume. Elevated concentrations of MTBE were found dissolved in groundwater at the former Avis facility.

In October of 1997, the injection of a hydrogen peroxide solution into selected wells on the former Avis facility was instituted as an additional remedial technique. Hydrogen peroxide injection continued at the former Avis facility until August of 2005.

On August 10, 1998, the closed-loop AS/VE remediation system was converted to a conventional system with extracted soil vapors treated then emitted to the atmosphere. The AS/VE remediation system was shut down on June 19, 2007.

On November 8, 2001, the UST on the former Avis facility designated UST #3 failed a Veeder-Root tightness test. On November 13, 2001, 2.5 feet of product (unleaded gasoline) were discovered in monitoring well AVMW-9, which was a well that existed on the former Avis facility at the time of the discovery. Evidence suggested that the product leaked from UST #3 and the release was reported to the NDEP on November 14, 2001. UST #3 was drained and removed from service after the discovery of the release and free product recovery began immediately and continued through June, 2009.

In a work plan dated May 9, 2006, Broadbent proposed to investigate subsurface conditions through the drilling and sampling of up to thirty-two soil borings. In a letter dated June 16, 2006, the NDEP approved the work plan. Thirty soil borings were drilled to groundwater, approximately seventeen to twenty feet below ground surface (bgs). Total petroleum hydrocarbons (TPH) were detected in excess of the laboratory detection limit exclusively within the groundwater interface (i.e., the capillary fringe) in five of the soil borings

and the report concluded that the TPH concentrations that were observed in soil were due to the immediate proximity of the impacted groundwater and not due to a large impacted body remaining in the vadose zone. Please refer to the report entitled *Additional Source Area Investigation Report*, dated February 16, 2007.

In a work plan dated August 7, 2007, Broadbent proposed to investigate subsurface conditions through the excavation and removal of USTs and through the drilling and sampling of fifteen soil borings. Five 12,000-gallon USTs and associated product piping and dispensers were removed from the ground at the facility between May 21 and May 24, 2007. Fifteen soil borings were drilled to groundwater, approximately from ground surface to thirty-five feet bgs. TPH concentrations in excess of the Nevada regulatory action level of 100 mg/kg were detected in three soil samples collected from beneath the USTs. Based on field observations and the results of soil sampling two new releases were identified beneath the USTs. As a result, approximately 11,300 tons of petroleum hydrocarbon impacted soils were removed from the site. In order to characterize the extent of impacted soil remaining east of the excavation and the vertical extent of the MTBE dissolved in groundwater at the former Avis facility, a series of ten soil borings and two sets of clustered monitoring wells were drilled. The borings installed ranged from twenty feet bgs to forty feet bgs depending on the location of the borings. The clustered wells were installed to varying depths (25 feet bgs, 45 feet bgs, and 65 feet bgs) to evaluate the vertical profile of MTBE in groundwater. Results from soil samples collected indicate that limited petroleum hydrocarbon impacted soil remained in place east of the existing excavation. Groundwater samples collected from the set of clustered wells indicated that vertical migration of MTBE concentrations had occurred within a portion of the commingled MTBE plume with the highest impacts found in the intermediate groundwater zone (approximately 45 feet below ground surface). Complete details regarding the confirmatory sampling and the installation of soil borings east of the UST excavation are presented in the *Results of Further Characterization of the Commingled MTBE Plume in Groundwater* report, dated October 22, 2007.

Groundwater impacted by trace free-floating product had been identified in monitoring well AVMW-9 at the former Avis facility in June, 2008. In a work plan dated February 17, 2009, Broadbent proposed to characterize the trace free-floating product in monitoring well AVMW-9. Based on laboratory analyses, it did not appear that the free phase gasoline product was contributing to the commingled MTBE plume and that it was not a significant source of dissolved petroleum hydrocarbons that had been historically observed in groundwater in AVMW-9. Please refer to the *Results of AVMW-9 Groundwater Investigation and Work Plan for Additional Site Characterization* report, dated July 15, 2009 for further details.

Due to monitoring wells destroyed during demolition and excavation activities in 2007 and the results of preceding investigations, Broadbent recommended the installation of additional soil borings and monitoring wells at the former Avis facility down-gradient and up-gradient of the UST excavation. In a letter dated August 3, 2009, a work plan was approved by Ms. Sara Arav-Piper of the NDEP. The installation of the ten new soil borings ranging approximately from thirty-five feet bgs to sixty-five feet bgs did not indicate the presence of a significant body of impacted soil remaining in the subsurface beneath the former Avis facility, although some samples were collected in excess of of 100 mg/Kg TPH. The soil borings were completed as seven monitoring wells and one set of clustered monitoring wells. MTBE concentrations in excess of the Oxygenated Fuel Corrective Action Policy level of 200 µg/kg that has been established for the site were detected in six groundwater samples collected, with the highest concentrations again found in the intermediate groundwater zone. Dissolved petroleum hydrocarbon concentrations from within and upgradient of the former UST excavation were relatively low, with the majority of groundwater impacts found immediately downgradient of the former UST excavation. Complete details regarding the confirmatory sampling and the installation of soil borings are presented in the *Additional Environmental Characterization Report*, dated December 23, 2009.

As described in the *Additional Environmental Characterization Report* dated December 23, 2009, Broadbent recommended additional characterization of the intermediate groundwater zone in the vicinity of the former UST system. In a letter dated January 15, 2010, the NDEP approved the request. Clustered monitoring well AVMW-50 was found to contain elevated dissolved MTBE concentrations in the intermediate groundwater zone (approximately 50 feet below ground surface), further confirming the presence of a vertically stratified MTBE plume near the former UST area of the former Avis facility. The stratification of MTBE (in particular, the elevated concentrations identified within the intermediate groundwater zone) was consistent with stratification observed in previously installed clustered monitoring wells located down-gradient of the National and Payless releases and in the down-gradient commingled portion of the groundwater plume. Please refer to the *Results of Intermediate Groundwater Zone Characterization and Work Plan for PulseOx™ Pilot Test* report, dated August 20, 2010 for further details.

In the aforementioned report, Broadbent proposed a work plan to evaluate the use of a PulseOx™ remediation system to remediate dissolved MTBE concentrations found in the intermediate groundwater zone at the Property. In a letter dated August 26, 2010, the NDEP approved Broadbent's request. Nine PulseOx™ injection points were drilled and installed within and immediately downgradient of the former the UST location at the former Avis facility. Pilot testing of the PulseOx™ remediation technology at the site occurred from February through October 2011. Details regarding the PulseOx™ pilot test are presented in Section 2.0, below.

2.0 PULSEOX™ PILOT TEST RESULTS

Broadbent has conducted a 9-month pilot test at the property using PulseOx™ remediation technology to target elevated MTBE concentrations found in the intermediate groundwater zone at the Property. The locations of these injection points are displayed on Drawing 1. The borings for the injection points were drilled to a depth of approximately 52 feet bgs. PulseOx™ injection well hardware was installed down the center of the boreholes as detailed in the lithologic logs attached as Appendix A. In order to gauge the effectiveness of PulseOx™ remediation system, Broadbent utilized existing monitoring wells already installed in the vicinity of the former UST excavation.

During the performance of the pilot test, data recorded from dataloggers showed significant increases in oxidation reduction potential (ORP) and dissolved oxygen (DO) levels in groundwater in monitoring wells AVMW-59-35, AVMW-59-50, and AVMW-66-50. DO concentrations in groundwater in monitoring well AVMW-59-35, located 20 feet from the nearest injection point, increased from less than 1 mg/L prior to the pilot test to greater than 11 mg/L after eight weeks of PulseOx™ operations. ORP measurements in groundwater in monitoring well AVMW-59-35 also increased from approximately 50 mV prior to the pilot test to approximately 310 mV after eight weeks of PulseOx™ operations.

DO concentrations in monitoring well AVMW-59-50, located 20 feet from the nearest injection point, increased from less than 1 mg/L prior to the pilot test to 8 mg/L after fourteen weeks of PulseOx™ operations. ORP measurements in groundwater well AVMW-59-50 also increased from approximately 74 mV prior to the pilot test to approximately 254 mV after fourteen weeks of PulseOx™ operations.

DO concentrations in monitoring well AVMW-66-50, located 10 feet from the nearest injection point, increased from the measured value of 0.35 mg/L prior to the pilot test to greater than 20 mg/L after five weeks of PulseOx™ operations. The pre-pilot test measurement ORP measurements in groundwater well AVMW-66-50 remained relatively the same from approximately 557 mV prior to the pilot test to approximately 548 mV after five weeks of PulseOx™ operations.

Monitoring well AVMW-59-65, located 20 feet from the nearest injection point, displayed moderate increases in ORP in groundwater during the first 15 weeks of pilot testing (-75 mV to +28 mV), however, no DO effects were observed until Week 9 when DO increased from a starting concentration of 0 mg/L to 0.29 mg/L. Based on the injection point design, this lag time was anticipated to occur in this closest well, as the injection depth was nearly 10 feet below the depth of our sensor in the adjacent monitoring well. Due to the vertical separation, the affects of hydrogen peroxide and ozone injection were expected to be limited to groundwater beneath the sensor during the initial portion of the test. The datalogger graphs for the early pilot testing are included in Appendix B.

During pilot testing, groundwater samples were collected from monitoring wells AVMW-59-35, AVMW-59-50, AVMW-59-65, and AVMW-66. Decreases in dissolved MTBE concentrations of multiple orders of magnitude were observed in the monitoring wells, with the intermediate groundwater zone displaying the greatest decreases (31,000 µg/L to 150 µg/L in AVMW-66; 21,000 µg/L to 430 µg/L in AVMW-59-50). Graphs depicting dissolved MTBE and TBA concentrations are attached as Appendix C. As depicted on the graphs, TBA was generated as MTBE was oxidized; however, the PulseOx™ system further remediated the generated TBA during the pilot test.

To evaluate the thoroughness of remediation between PulseOx™ injection points and effects downgradient of the injection field, Broadbent drilled two SonicPoint™ borings (SP-1 and SP-2) at the locations depicted on Drawing 1. The borings were drilled in March, 2012, five months after completion of the pilot test. SonicPoint™ drilling allows for the collection of depth-discrete groundwater samples from specific elevations during drilling. Boring SP-1, drilled in the center of the pilot test injection field, was not found to contain dissolved MTBE in groundwater above the Oxygenated Fuel Corrective Action Policy level of 200 µg/L that has been established for the site. This finding supports that the PulseOx™ remediation system is actively remediating groundwater between injection points. Boring SP-2, drilled downgradient of the injection field between AVMW-59 and AVMW-50 clusters, was found to have dissolved MTBE concentrations of up to 14,000 µg/L. However, as AVMW-50 has concentrations of 82,000 µg/L, it appears that limited remediation has occurred downgradient of the injection field during the pilot test. The lithologic logs for SP-1 and SP-2 are included in Appendix A, which also depict SonicPoint™ results for MTBE for each sample elevation. Laboratory reports are attached in Appendix D.

Based on the evaluation of the results, Broadbent conducted a remedial options evaluation in order to select the most appropriate remedial technology for targeting the intermediate groundwater zone at the former Avis facility (incorporated herein).

3.0 REMEDIAL OPTIONS EVALUATION

Based on the results of the additional characterization activities detailed herein, Broadbent proposes to perform aggressive, intermediate zone targeted remediation at the former Avis facility. The following remedial options were considered to address the elevated dissolved MTBE concentrations found dissolved in intermediate zone groundwater at the former Avis facility.

3.1. Vapor Extraction/Air Sparge

A vapor extraction (VE) and air sparge (AS) system operated on the former Avis facility for approximately nine years. Based on the current site data, VE is no longer necessary for vapor capture because the plume has been depleted of benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE volatilization is not likely to require vapor capture. While air sparging could

potentially be effective at reducing concentrations in the subject MTBE groundwater plume, reductions in MTBE concentrations would likely be slow (based on past experience with AS within this plume), causing operation times to be significantly extended over other more aggressive remedial technologies. It is estimated that the cost to install an intermediate zone AS system at the former Avis facility and operate it for up to eight years would cost a minimum of $650,000. In addition, downgradient migration could be slowed, but would likely continue during AS operations, creating the need for additional downgradient remediation during this period. As a result, air sparge technology would not provide remediation benefits commensurate of the cost of installing and operating such a system at this time.

3.2. Hydrogen Peroxide Injection

Hydrogen peroxide injection activities occurred on the former Avis facility for approximately eight years. In the Las Vegas Valley, the regular injection of a dilute solution of hydrogen peroxide into the subsurface has been known to effectively reduce dissolved concentrations of BTEX plumes. MTBE plumes, however, have been found to be recalcitrant to the injection of hydrogen peroxide. As MTBE molecules require greater contact time with hydrogen peroxide to oxidize, the subsurface lithology in the Las Vegas Valley limits the effective radius of influence of hydrogen peroxide injections, causing largely ineffective break down of MTBE molecules. Since dissolved MTBE is the primary constituent of concern in groundwater at the former Avis facility, it does not appear that hydrogen peroxide injection is a viable remedial alternative at the property at this time. Because this remedial option is not considered potentially effective, Broadbent did not develop a cost estimate for implementation of this option.

3.3. PulseOx™ Remediation

The PulseOx™ system is an in-situ chemical oxidation technology designed to deliver ozone, hydrogen peroxide, and oxygenated air into the subsurface. Generally, a network of injection wells (or modified monitoring wells) is connected to a centrally located remediation trailer via subsurface conduits. The central trailer houses a hydrogen peroxide tank, an electric oxygen gas generator, and an electric ozone generator. The ozone, hydrogen peroxide, and oxygenated air are sent to each injection well where they combine to create a hydroxyl radical that has one of the highest known oxidation potentials. These hydroxyl radicals react with organic contaminants, such as BTEX and MTBE, breaking them down into carbon dioxide and water. In addition, natural biodegradation is increased within the groundwater plume due to an increase in dissolved oxygen levels during PulseOx™ remediation. The PulseOx™ pilot test demonstrated the sort of effectiveness that is generally desired with this remedial technology. The radius of influence observed during the pilot test was at least 20 feet; however, based on observations, Broadbent believes the radius of influence will likely be significantly greater than 20 feet after the PulseOx™ system is allowed to operate for a longer period of time. Elevated ORP and DO levels observed in monitoring wells in the vicinity of the injection points support a strong influence beyond the points themselves. Costs to install a full-scale PulseOx™ remediation system would be approximately $500,000. Based on the results of the pilot test conducted in 2011, the anticipated run-time of the PulseOx™ system is approximately nine to twelve months. This time frame for active remediation is confirmed by Broadbent's prior experience in the Las Vegas Valley with PulseOx™ remediation technology where cleanup has been completed in two years, or less. Broadbent's anticipated costs for twelve months of operation of the proposed PulseOx™ system is $35,000, for a total lifecycle cost estimate of $535,000.

3.4. Electrical Resistance Heating

Electrical Resistance Heating (ERH) is a remediation technology that uses large quantities of electricity to heat the subsurface to near boiling temperatures. Used in conjunction with a vapor recovery system, ERH is very effective at reducing petroleum hydrocarbon concentrations through volatilization in both soil and groundwater, regardless of subsurface lithology. However, due to the depth to the intermediate groundwater zone and the distribution of MTBE at the Property, costs to install and operate an ERH remediation system would be at least several million dollars. Therefore, this technology is not considered to be a viable remedial option at this time.

3.5. Pump and Treat

Pump and treat remedial technology has been previously evaluated for use at the former Avis facility (*Remedial Evaluation, Avis/Payless Commingled Plume,* July 19, 2005, prepared by Geomatrix). The 2005 evaluation of pump and treat remedial technology accounted for a shallow MTBE plume with an average thickness of five feet and an average MTBE concentration of 5,000 µg/L. Two scenarios of aggressiveness were considered for implementation, one with an anticipated operation timeframe of 1.5 to 2.5 years at a cost of $3 million and one with an anticipated operation of 3.5 to 6 years at a cost of $2 million. Due to the current understanding of the MTBE plume (vertically stratified with concentrations as high as 82,000 µg/L at 47.5 feet below ground surface), it is apparent that costs for deeper infrastructure, extracting from a greater plume thickness, and treatment costs of the higher concentrations would likely exceed the 2005 cost estimates. Therefore, it appears that this is not likely to be the lowest cost alternative for onsite remediation at the former Avis facility.

3.6. Soil Excavation

Soil excavation was performed at the former Avis facility in 2007 in response to the two releases from the UST system identified during UST decommissioning. The excavation was conducted down to a depth to approximately 35 feet, with approximate dimensions of 80 feet by 80 feet in the main-body of the excavation. Costs for the excavation were amplified by the dewatering required and the thickness and hardness of caliche layers in the subsurface and were approximately one million dollars. Due to the depth to the intermediate groundwater zone and the distribution of MTBE downgradient of the former UST pit excavation, costs for additional soil excavation would likely cost more than two million dollars. In addition, it is unlikely that such a surface disruption would be allowed by McCarran International Airport, as this location is now utilized for airport parking. Therefore, additional soil excavation is not likely to be the lowest cost alternative.

3.7. Monitored Natural Attenuation (No Action)

An evaluation of dissolved MTBE concentrations in the intermediate groundwater zone suggests that although dissolved MTBE concentrations decrease over time at the site, source area concentrations are not decreasing at a sufficient rate for this remedy to be a viable source area remedy. To expedite reduction of source area MTBE concentrations and thereby decrease the

overall time period for cleanup and case closure, Broadbent recommends active remediation of the source area.

4.0 RECOMMENDED REMEDIAL OPTION

Based on the remedial options evaluation discussed in Section 3.0 it is Broadbent's opinion that the PulseOx™ remediation technology is currently the best option to reduce concentrations of dissolved MTBE found in groundwater at the former Avis facility.

5.0 CORRECTIVE ACTION PLAN

Based on the remedial options, it appears that PulseOx™ groundwater remediation is a suitable remedial technology for dissolved hydrocarbons in groundwater beneath the former Avis facility. Broadbent proposes the full implementation of the PulseOx™ technology utilizing a PulseOx™ P-1500 trailer. The manufacturer specifications for a PulseOx™ Remediation trailer (P-1500 Trailer) are attached as Appendix E.

Drawing 1 displays the Fourth Quarter 2011 MTBE results and the existing PulseOx™ injection well locations. The addition of 25 proposed injection points with twenty active and five flex-points (points that will be intermittently operated) are depicted on Drawing 2.

Upon NDEP approval of this recommendation, Broadbent will begin the full implementation of the PulseOx™ remediation technology. Broadbent will coordinate and oversee the installation of the 25 additional MaxOx™ injection points at the former Avis facility. Broadbent anticipates the construction of the P-1500 remediation system will take about three to five months. Based on this schedule, Broadbent expects the PulseOx™ P-1500 remediation system to be fully implemented at the former Avis facility in October, 2012. The original nine injection points will be utilized as air sparge locations to promote continued oxidation and biodegradation of contaminants in groundwater and prevent impacted groundwater from unremediated areas from migrating back into the remediated area. As other areas are remediated during full-scale system operations, injection points in those areas will likely be converted to air sparge points as well.

6.0 WORK PLAN

6.1 PulseOx™ System Installation

Broadbent proposes the drilling and installation of 25 PulseOx™ injection points within and immediately downgradient of the former the UST location at the former Avis facility to support the PulseOx™ remediation technology. The locations of these injection points are displayed on Drawing 2. Pilot test spacing was approximately 20 feet between injection points. Based on the observed radius of influences and the results of the SonicPoint™ investigation, the injection points for the full-scale installation will be spaced approximately 25 feet apart. The borings for the injection points will be drilled to depth ranging from approximately 53.5 feet to 59.5 feet below ground surface by a driller licensed in the state of Nevada using an air rotary or hollow-stem auger drill rig. Based on pilot test data and characterization performed in the vicinity of the former UST excavation, some lower concentrations of MTBE exist in the deep groundwater zone (approximately 60 feet below ground surface). Six PulseOx™ injection point borings are proposed to be drilled to 59.5 feet and built with the capability to be converted to focus on the intermediate groundwater zone by turning a valve at the well head. Soil cuttings will be logged during drilling by a qualified geologist and will be stored in 55-gallon drums at the property, pending analytical results. Upon receipt of analytical results, Broadbent will arrange for

the proper disposal of the soil cuttings with a licensed contractor. PulseOx™ injection well hardware will be installed down the center of the boreholes. As detailed in the attached well construction diagrams (Drawing 3 and Drawing 4), alternating layers of sand and bentonite/grout will be utilized to fill the borehole as specified by the manufacturer. The well head will be completed with a security plug and lock and covered with a traffic-rated metal monitoring well vault. Use of PulseOx™ injection well hardware will allow for the optimization of delivery of the ozone, hydrogen peroxide, and oxygenated air.

The 25 injection points will be connected to the PulseOx™ remediation trailer via conduit placed into two foot-deep subsurface trenching (pending McCarran International Airport approval). The PulseOx™ remediation system contains a programmable logic control (PLC) unit which allows for complete customization of the injection cycle frequency, dose, and duration to each individual injection point. System optimization will occur after start-up, based on observed pressures and observation well measurements of DO, ORP, and dissolved MTBE changes, and will be reviewed on a quarterly basis during operations.

The maximum anticipated hydrogen peroxide flow rate per day will be 30 gallons (1.5 gallons per well; 25% hydrogen peroxide solution) and up to 25 pounds per day of ozone (1.25 pounds per well). The remediation trailer will be computer controlled and will continuously record injection rates and other system parameters. The P-1500 unit will also have the option of adding additional "flex" injection points that can be alternated with any of the 20 injection points on a weekly or monthly schedule to remediate a larger area or to focus on areas with higher MTBE concentrations as the clean-up progresses. As previously detailed in Section 5.0, five of these flex points are already slated for installation.

In order to gauge the effectiveness of PulseOx™, Broadbent will utilize existing monitoring wells already installed in the vicinity of the former UST excavation (as detailed in Section 6.2, below).

6.2 Gauging the Effectiveness of PulseOx™

Groundwater samples will be collected from wells AVMW-50-35, AVMW-50-50, AVMW-50-65, AVMW-59-35, AVMW-59-50, AVMW-59-65, AVMW-61, AVMW-62, AVMW-63, and AVMW-66 on a quarterly basis during operations to evaluate the efficacy of the PulseOx™ remediation system. Groundwater samples will be analyzed, at minimum, for BTEX, MTBE, and TBA by EPA Method 8260B. The remainder of the monitoring wells associated with the Property will continue to be sampled on a quarterly/yearly basis following the NDEP approved sampling schedule. The locations of these groundwater monitoring wells are depicted on Drawing 1.

Based on pilot test data and previous experience with PulseOx™ remediation systems, the total run time may be one year, or less. It is unlikely that returns commensurate with continued operations would be found after two years of operations, which is the current anticipated maximum operating time for the PulseOx™ system. However, Broadbent will evaluate the efficiency of operations on a quarterly basis to ensure that continued operation of the PulseOx™ system is warranted and will recommend system shut down based on these evaluations, when appropriate.

6.3 Project Schedule

Discussions regarding this CAP amendment have already been conducted with the current owner of the former Avis facility (Department of Aviation), the other responsible parties of the commingled portion of this plume (Payless and Department of Aviation), and with the

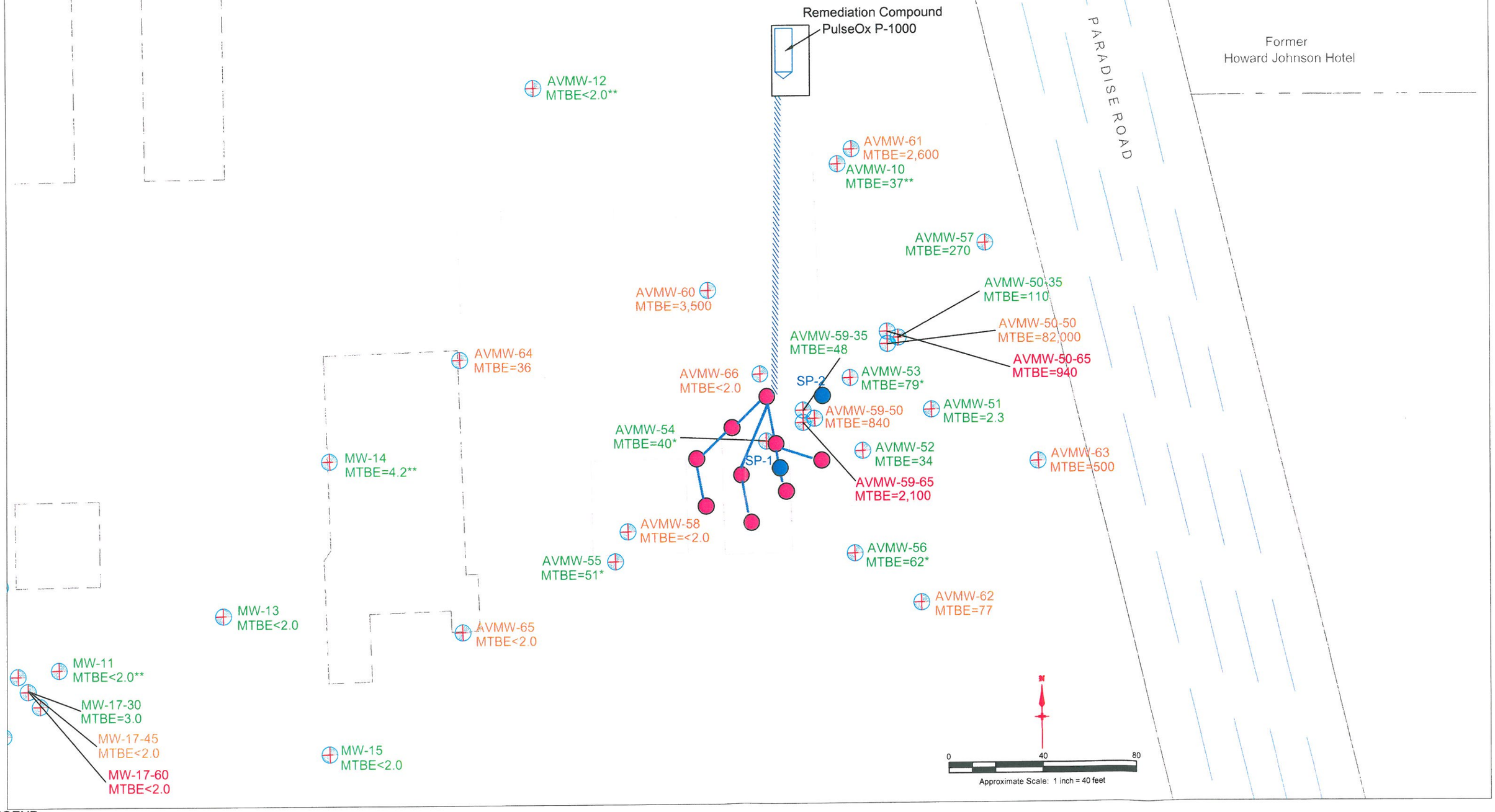
NDEP. Minutes from these meetings are available for public review. Following approval of this work plan, Broadbent will seek approval from the Department of Aviation for access to the Property and to install the infrastructure detailed in this work plan. Assuming approval of this Addendum by June 1, 2012, it is anticipated that the system can be built and fully installed prior to the Department of Aviation's construction blackout period which commences each year in October.

6.0 CLOSURE

The findings presented in this report are based upon the observations of our field personnel, points of investigation, and results of laboratory tests performed by the contracted laboratories.

Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended. It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

Drawings



LEGEND

AVMW-10 Monitoring Well on Avis Site

MW-1 Monitoring Well on National Site

AVMW-50 Clustered Monitoring Well Locations

Injection Well Locations

SonicPoint™ Drilling Locations

MTBE=450 Methyl Tertiary-Butyl Ether (MTBE) Concentration in Groundwater, 4th Quarter 2011

* MTBE Data from September, 2009

** MTBE Data from December, 2009

AVMW-52 Shallow Screened Interval (~25' to 35')

AVMW-62 Mid-Screened Interval (~40' to 45')

AVMW-50-65 Deep Screened Interval (~60' to 65')

PulseOx Trench

2007 Excavation Extents

Avis/National/Payless
Commingled Plume
McCarran International Airport
Las Vegas, Nevada

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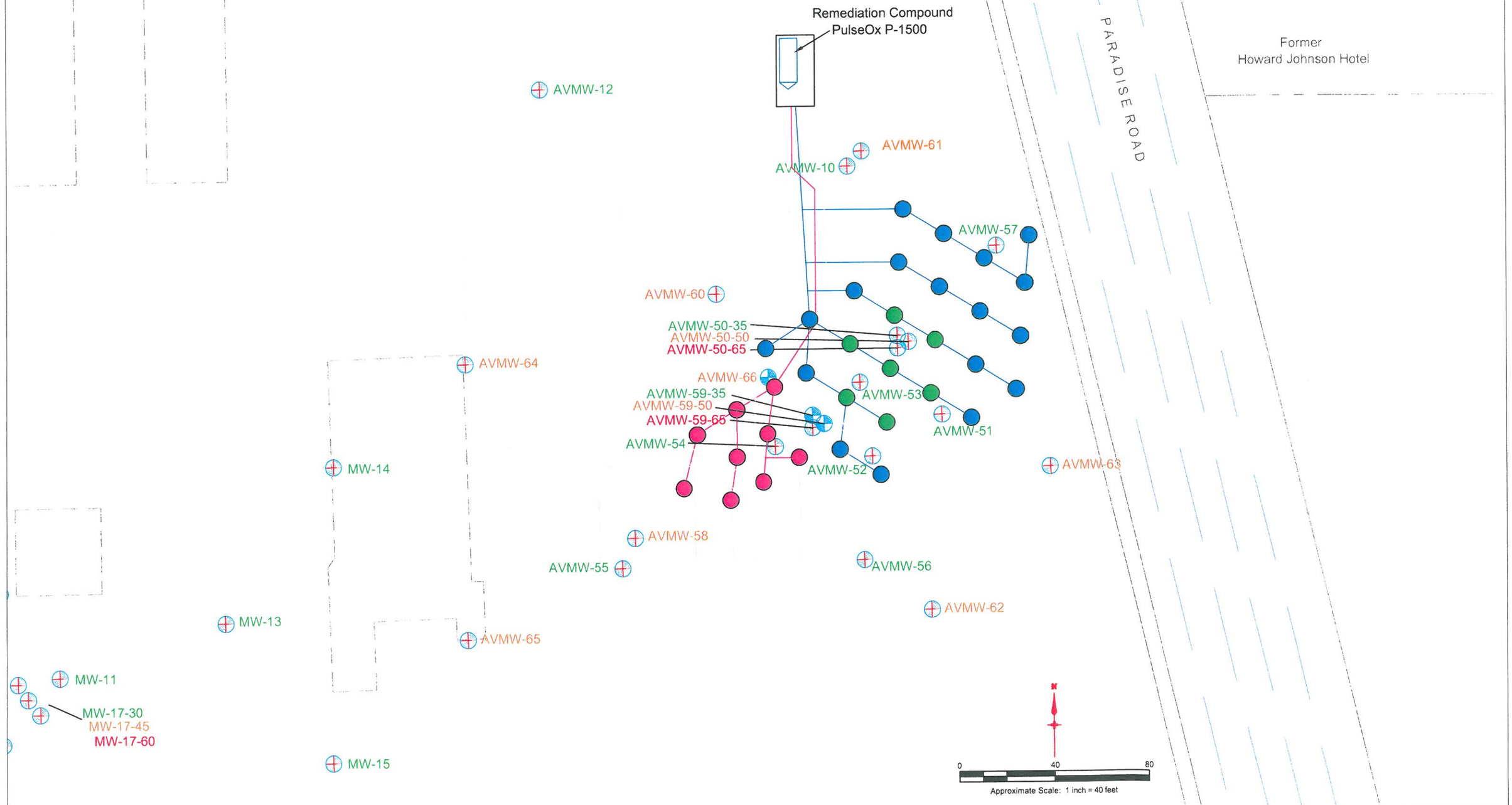
Drawing 1
Site Map with Dissolved MTBE Groundwater Concentrations, PulseOx™ Pilot Test Injection Well Locations and Trench



LEGEND

- AVMW-10 — Monitoring Well on Avis Site
- MW-1 — Monitoring Well on National Site
- AVMW-50 — Clustered Monitoring Well Locations
- PulseOx™ Injection Well Locations
- AVMW-52 — Shallow Screened Interval (~25' to 35')
- AVMW-62 — Mid-Screened Interval (~40' to 45')
- AVMW-50-65 — Deep Screened Interval (~60' to 65')
- 2007 Excavation Extents
- Proposed PulseOx™ Injection Well Locations
- Proposed Deep PulseOx™ Injection Well Locations (~52.5' to 62.5')

Avis/National/Payless
McCarran International Airport
Las Vegas, Nevada

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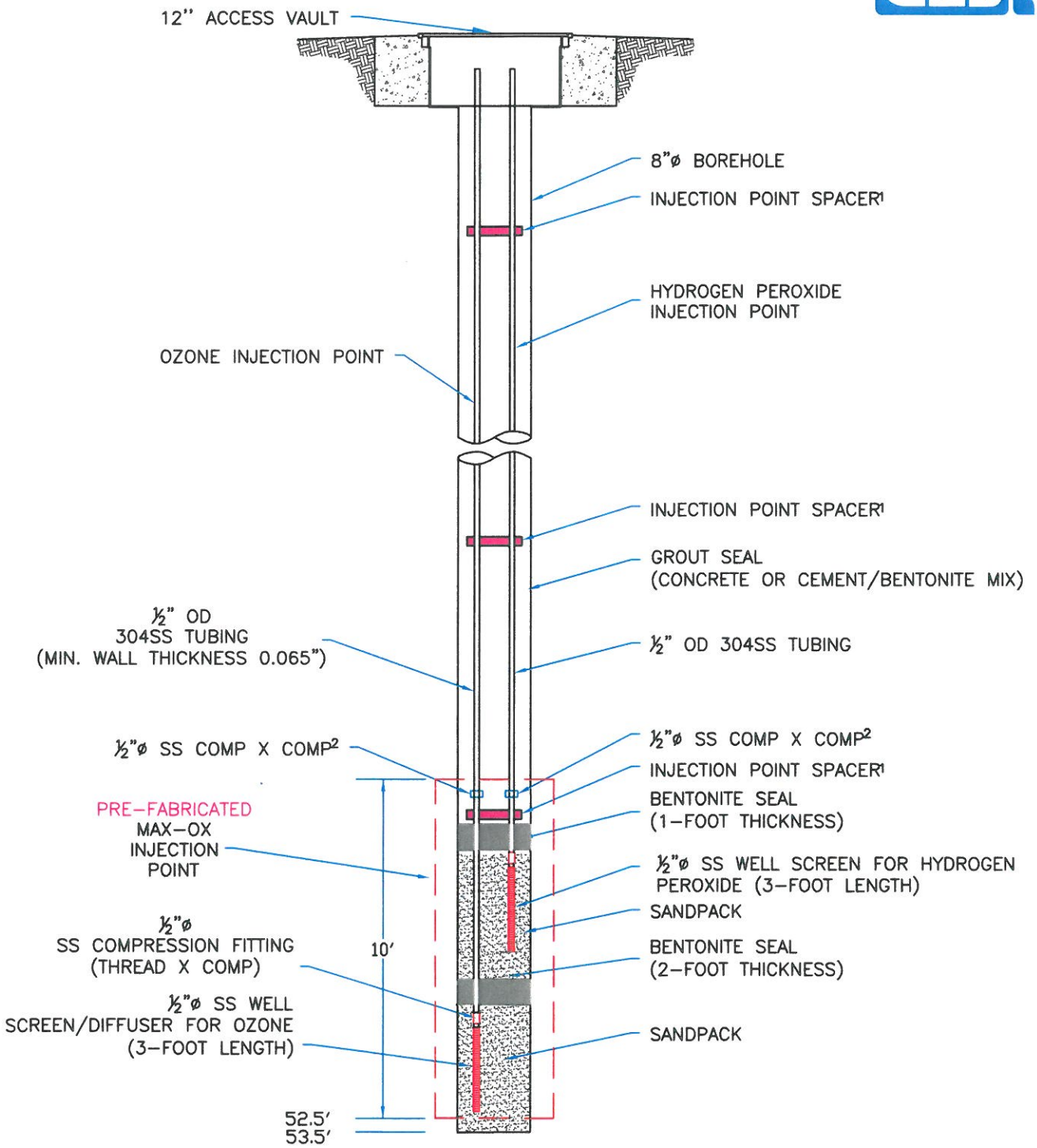
Drawing 2
Site Map with Proposed PulseOx™
Injection Well Locations



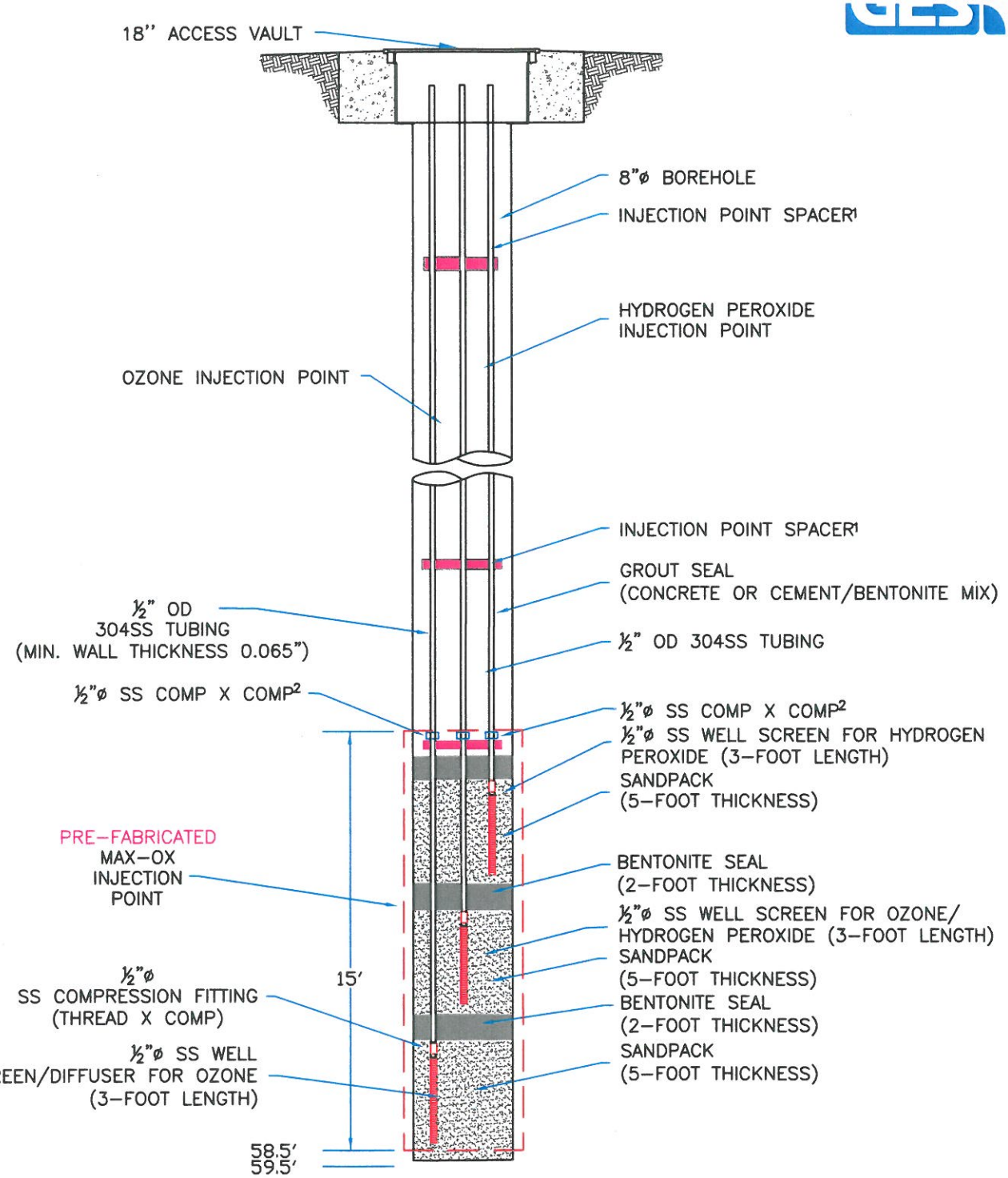
NOTES:

1) SPACERS MUST BE INSTALLED WITHIN GROUT SEAL. SPACERS SHOULD BE APPROX. EVERY FIVE TO TEN FEET.

2) EACH MAX-OX POINT WILL BE TERMINATED WITH A SS COMPRESSION BY COMPRESSION ON BOTH THE OZONE AND PEROXIDE POINTS TO CONNECT TO THE USER SUPPLIED SS TUBING. (APPROXIMATELY 1 FOOT ABOVE TOP WELL SCREEN).

3) INFORMATION CONTAINED WITHIN THIS DRAWING IS PROPRIETARY AND CONFIDENTIAL. ANY COPYING, DISTRIBUTION, OR DISSEMINATION WITHOUT THE CONSENT OF GROUNDWATER & ENVIRONMENTAL SERVICES, INC. IS PROHIBITED.

DRAFTED BY: HS	**INTERMEDIATE PULSEOX INJECTION POINT CONSTRUCTION DETAIL**
CHECKED BY: JEH	AVIS RENT A CAR
REVIEWED BY: JEH	Groundwater & Environmental Services, Inc. 440 CREAMERY WAY, SUITE 500, EXTON, PA 19341
	NOT TO SCALE / DATE 5-16-12 / DRAWING 3



NOTES:

1) SPACERS MUST BE INSTALLED WITHIN GROUT SEAL. SPACERS SHOULD BE APPROX. EVERY FIVE TO TEN FEET.

2) EACH MAX-OX POINT WILL BE TERMINATED WITH A SS COMPRESSION BY COMPRESSION ON BOTH THE OZONE AND PEROXIDE POINTS TO CONNECT TO THE USER SUPPLIED SS TUBING. (APPROXIMATELY 1 FOOT ABOVE TOP WELL SCREEN).

3) INFORMATION CONTAINED WITHIN THIS DRAWING IS PROPRIETARY AND CONFIDENTIAL. ANY COPYING, DISTRIBUTION, OR DISSEMINATION WITHOUT THE CONSENT OF GROUNDWATER & ENVIRONMENTAL SERVICES, INC. IS PROHIBITED.

DRAFTED BY: HS	**DEEP/INTERMEDIATE PULSEOX INJECTION POINT CONSTRUCTION DETAIL**
CHECKED BY: JEH	AVIS RENT A CAR
REVIEWED BY: JEH	Groundwater & Environmental Services, Inc. 440 CREAMERY WAY, SUITE 500, EXTON, PA 19341

NOT TO SCALE	DATE	DRAWING
	5-16-12	4

Appendix A

Lithologic Logs

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-1**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION

PROJECT:	**Former Avis Rent A Car**
SITE LOCATION:	**McCarran Airport**
JOB NO.:	**95-01-150**
LOGGED BY:	**W. Wiggins**
PROJECT MANAGER:	**J. Hoffman**
DATE DRILLED:	**10/11/10**

DRILLING INFORMATION

DRILLING CO.:	**WDC**
DRILLER:	**Dennis**
DRILLING METHOD:	**Hollow Stem Auger**
START TIME:	**1015**
STOP TIME:	**1210**
SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt		slightly moist	none	none	1.1			
-5			Type II								
		SM	Reddish brown silty sand with trace gravel, about 25%, <1", poorly sorted, sub angular to sub rounded, few small cobbles								
-10											
			Caliche								
-15											
-20			Light grey silty clay with trace gravel, about 5%, <½", mod sorted, sub rounded		moist	low	strong	298		Grouted Annulus	
-25											
-30			Wet brown clay with trace gravel, <5%, <¼", mod sorted, sub rounded		wet	low	low	12.5			
-35		CL									
-40								5.2		Bentonite	
								7.5		Sand Pack	
-45										Bentonite	
								2.0		Sand Pack	
-50											

NOTES:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-2**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**1230**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**1420**
DATE DRILLED:	**10/11/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt		low		none	0.0			
-5			Backfill								
-10											
-15			Pea gravel							Grouted Annulus	
-20											
-25											
-30											
-35			Wet brown clay with trace gravel, <5%, <¼", mod sorted, sub rounded								
-40										Bentonite	
-45		CL								Sand Pack	
-50					wet	none	none	12.2		Bentonite / Sand Pack	

NOTES:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-3**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**0830**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**0915**
DATE DRILLED:	**10/12/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt		low		none	0.0			
-5			Backfill								
-10											
-15			Pea gravel								
-20										Grouted Annulus	
-25											
-30											
-35			Wet brown clay with trace gravel, <5%, <¼", mod sorted, sub rounded								
-40										Bentonite	
-45		CL			wet	none	none	8.4		Sand Pack	
-50										Bentonite	
										Sand Pack	

NOTES:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

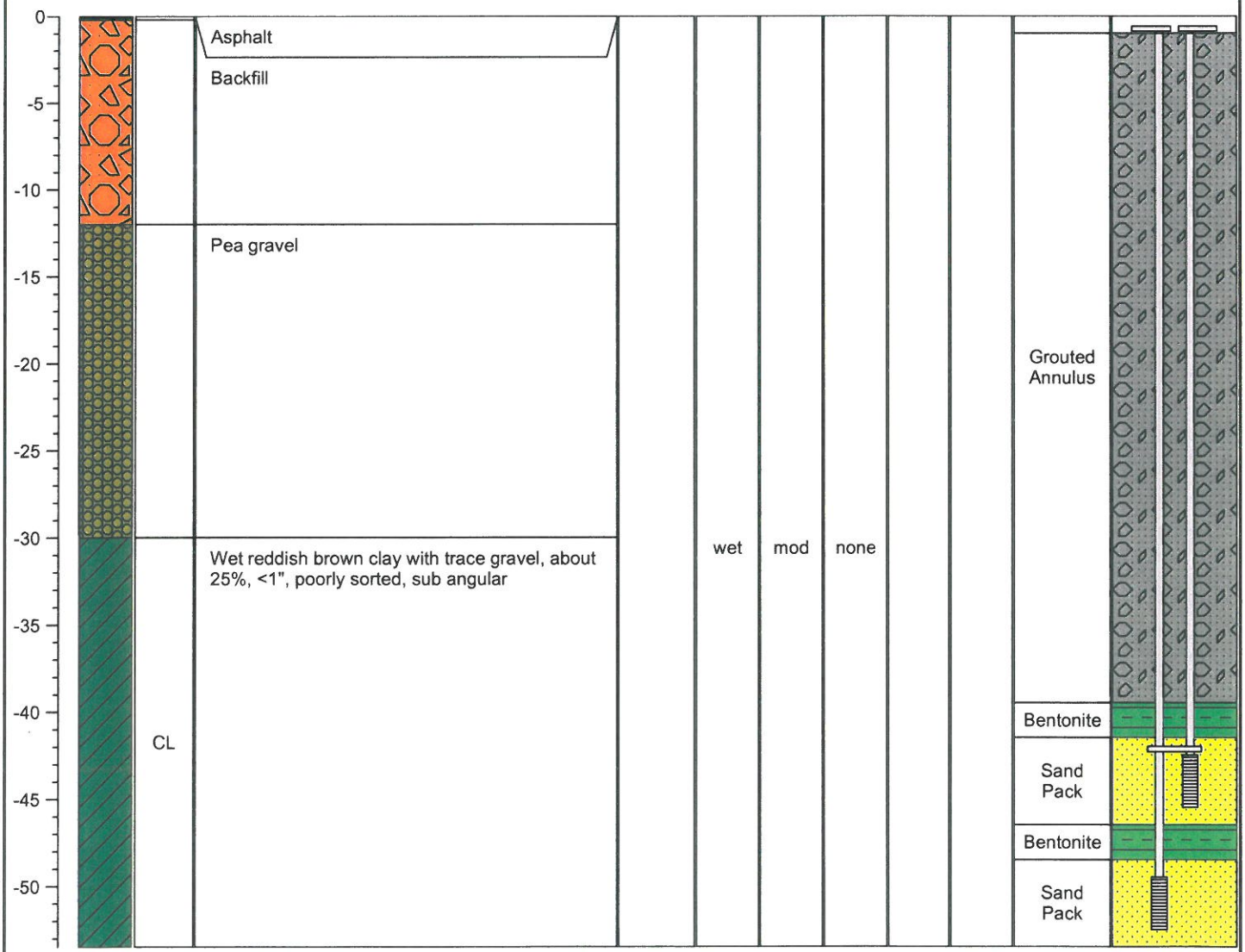
BORING: **IP-4**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**1600**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**1720**
DATE DRILLED:	**10/18/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	WELL CONSTRUCTION DETAILS CASING
0 to -12			Asphalt; Backfill							Grouted Annulus	
-12 to -30			Pea gravel							Grouted Annulus	
-30 to -53.5		CL	Wet reddish brown clay with trace gravel, about 25%, <1", poorly sorted, sub angular		wet	mod	none			Grouted Annulus; Bentonite; Sand Pack; Bentonite; Sand Pack	



NOTES:

BROADBENT & ASSOCIATES, INC.

ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

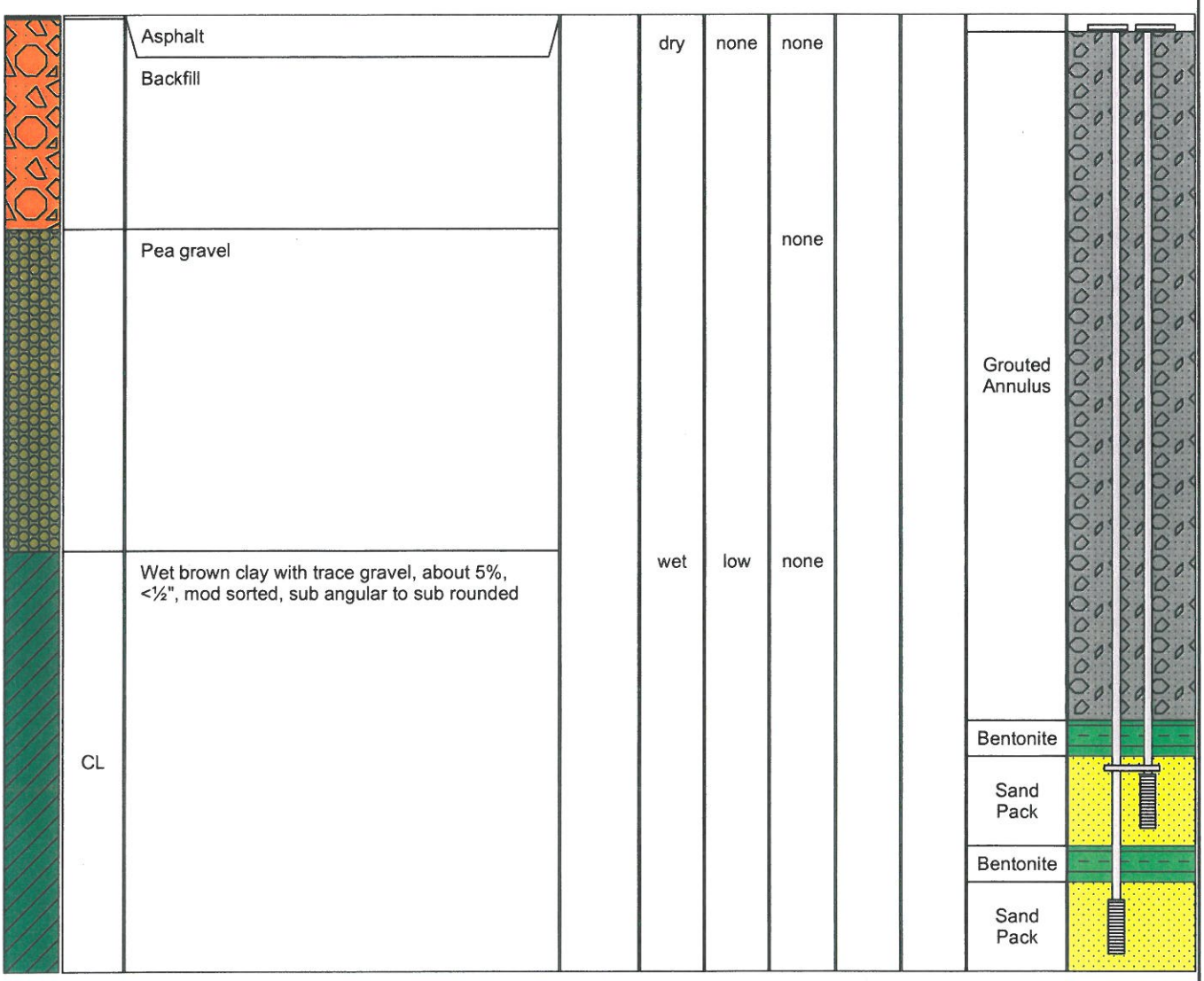
BORING: **IP-5**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**1000**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**1045**
DATE DRILLED:	**10/18/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt		dry	none	none				
-5			Backfill								
-10											
-15			Pea gravel				none				
-20											
-25											
-30			Wet brown clay with trace gravel, about 5%, <½", mod sorted, sub angular to sub rounded		wet	low	none				
-35											
-40		CL									
-45											
-50											



NOTES:

BROADBENT & ASSOCIATES, INC.

ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-6**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**1030**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**1230**
DATE DRILLED:	**10/13/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt		low		none				
			Type II backfill								
-10			Pea gravel								
-15			Caliche								
-20			Greyish brown clay with trace gravel. <5%, <¼", mod sorted, sub angular to sub rounded		moist	mod	mod			Grouted Annulus	
-30			Wet brown clay with trace gravel. <5%, <¼", mod sorted, sub angular to sub rounded		wet	mod					
-35		CL									
-40										Bentonite	
-45										Sand Pack	
-50										Bentonite	
										Sand Pack	

NOTES:

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ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-7**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**1130**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**1330**
DATE DRILLED:	**10/19/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt								
-5			Backfill								
-10											
-15			Pea gravel								
-20			Caliche								
-25		CL	Grey silty clay with trace gravel, about 5%, <½", mod sorted, sub rounded		moist	low	strong			Grouted Annulus	
-30			Greyish brown silty clay with trace gravel, about 5%, <½", mod sorted, sub rounded		wet	low	mod				
-35											
-40			Wet brown clay with trace gravel, about 5%, <½", mod sorted, sub rounded		wet	low	low			Bentonite	
-45										Sand Pack	
-50										Bentonite	
										Sand Pack	

NOTES:

BROADBENT & ASSOCIATES, INC.

ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-8**

TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**0830**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**1030**
DATE DRILLED:	**10/20/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Asphalt		dry	none					
-5			Backfill								
-10											
-15			Caliche		dry	none					
-20			Light grey silty clay with trace gravel, about 15%, <½", poorly sorted, sub angular							Grouted Annulus	
-25			Wet brown clay with trace gravel, about 5%, <½", mod sorted, sub angular to sub rounded		moist	none	mod	132			
-30								200			
-35		CL									
-40					wet	low	mod	7.5		Bentonite	
-45										Sand Pack	
-50										Bentonite	
										Sand Pack	

NOTES:

BROADBENT & ASSOCIATES, INC.

ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

BORING: **IP-9**
TOTAL DEPTH: **53.5 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Former Avis Rent A Car**	DRILLING CO.:	**WDC**
SITE LOCATION:	**McCarran Airport**	DRILLER:	**Dennis**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Hollow Stem Auger**
LOGGED BY:	**W. Wiggins**	START TIME:	**1540**
PROJECT MANAGER:	**J. Hoffman**	STOP TIME:	**0900**
DATE DRILLED:	**10/20-21/10**	SURFACE ELEVATION:	

▼ Water level in completed well - Not encountered

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	BLOWS/ in.	MOIST.	PLAST.	ODOR	PID (ppm)	TPH (mg/Kg)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0		GM	Asphalt		slight		none				
		GP	Type II		slight		none				
-5		GM	Silty sandy gravel, about 75%, <1", poorly sorted, sub angular to sub rounded		slight		none				
			Cobbles with trace sand, 5%, silt 5%, gravel 5%								
-10			Silty sandy gravel, about 70%, <1", poorly sorted, sub angular to sub rounded								
-15			Caliche								
-20										Grouted Annulus	
		SM	Light brown silty sand with gravel, about 35%, <1", poorly sorted, sub angular to sub rounded		slight	none	mod	258			
-25			Wet grey sandy silt with trace gravel, about 25%, <¼", mod sorted, sub angular to sub rounded		wet	none	strong	1067			
-30		CL	Wet greyish brown silty sandy clay with trace gravel, about 25%, <¼", mod sorted, sub angular to sub rounded								
-35			Wet brown silty sandy clay with trace gravel, about 25%, <¼", mod sorted, sub angular to sub rounded		wet	low	strong	1934			
-40					wet	low	strong	537		Bentonite	
										Sand Pack	
-45								483			
										Bentonite	
-50										Sand Pack	

NOTES:

BROADBENT

8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

MONITORING WELL.: **SP-1**

TOTAL DEPTH: **65 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Avis Rent A Car System, Inc.**	DRILLING CO.:	**WDC Exploration & Wells**
SITE LOCATION:	**McCarran Apt., Las Vegas, NV**	DRILLER:	**Cobin**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Sonic**
LOGGED BY:	**Will Wiggins**	START TIME:	**07:30**
PROJECT MANAGER:	**Jason Hoffman**	STOP TIME:	
DATE DRILLED:	**3-2-12**	SURFACE ELEVATION:	

▼ Water level in completed well

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	DISCRETE GW SAMPLE	MOIST.	PLAST.	ODOR	PID (ppm)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Type II Backfill						Bentonite	
-5		SM	Light brown sandy silt with trace gravel, caliche, and cobbles							
-10			Pea gravel		dry	low				
		ML	Dark brown silty sand with trace clay, gravel and cobbles present							
-15			Pea gravel							
			Caliche				strong	1126	Cement	
-20										
			Grey-brown silty clay with caliche fragments							
		ML			slight		none	5.6		
-25			Caliche			very				
			Red-brown silty clay with trace gravel and caliche fragments							
-30					dry					
-35										

NOTES: Borehole abandoned after drilling. Depth-discrete groundwater sample results are µg/L MTBE. Page 1 of 2

BROADBENT

8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

MONITORING WELL.: **SP-1**

TOTAL DEPTH: **65 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Avis Rent A Car System, Inc.**	DRILLING CO.:	**WDC Exploration & Wells**
SITE LOCATION:	**McCarran Apt., Las Vegas, NV**	DRILLER:	**Cobin**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Sonic**
LOGGED BY:	**Will Wiggins**	START TIME:	**07:30**
PROJECT MANAGER:	**Jason Hoffman**	STOP TIME:	
DATE DRILLED:	**3-2-12**	SURFACE ELEVATION:	

▼ Water level in completed well

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	DISCRETE GW SAMPLE	MOIST.	PLAST.	ODOR	PID (ppm)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
-35										
-40				27	wet	mod	none	0.4		
-45		ML		4.6		low	none	0.7		
-50				37				0.5	Cement	
								0.5		
								0.9		
-55				<2.0		low	none	0.7		
								1.4		
			color change to tan							
-60				3.6				1.4		
			color change to red-brown					1.3		
			color change to tan							
-65				5.0	wet	low	none	0.5		

NOTES: Borehole abandoned after drilling. Depth-discrete groundwater sample results are µg/L MTBE.

BROADBENT

8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

MONITORING WELL.: **SP-2**

TOTAL DEPTH: **65 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Avis Rent A Car System, Inc.**	DRILLING CO.:	**WDC Exploration & Wells**
SITE LOCATION:	**McCarran Apt., Las Vegas, NV**	DRILLER:	**Cobin and Eart**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Sonic**
LOGGED BY:	**Holly Springer**	START TIME:	**08:01**
PROJECT MANAGER:	**Jason Hoffman**	STOP TIME:	**18:40**
DATE DRILLED:	**2-27/28/29-12**	SURFACE ELEVATION:	

▼ Water level in completed well

DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	DISCRETE GW SAMPLE	MOIST.	PLAST.	ODOR	PID (ppm)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
0			Type II Backfill						Bentonite	
-5		SM	Brown sandy silt with gravel		dry	loose				
			Caliche							
-10		SM	Brown sandy silt with gravel and cobbles		dry	loose				
			Caliche							
-15		SM	Light brown sandy silt with tracel gravel		dry	loose				
			increase in gravel with cobbles							
-20			Black clay with cobbles			stiff	Strong	5.1 952	Cement	
			Light grey clay with caliche fragments and black staining		slight					
-25						stiff	Light	1213 225		
			Brown clay with caliche fragments		moist			41.7		
-30				370		loose		2.5 48.2		
					wet					
-35										

NOTES: Borehole abandoned after drilling. Depth-discrete groundwater sample results are µg/L MTBE. Page 1 of 2

BROADBENT

8 West Pacific Avenue
Henderson, NV 89015

FIELD BOREHOLE LOG

MONITORING WELL.: **SP-2**

TOTAL DEPTH: **65 feet**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Avis Rent A Car System, Inc.**	DRILLING CO.:	**WDC Exploration & Wells**
SITE LOCATION:	**McCarran Apt., Las Vegas, NV**	DRILLER:	**Cobin and Eart**
JOB NO.:	**95-01-150**	DRILLING METHOD:	**Sonic**
LOGGED BY:	**Holly Springer**	START TIME:	**08:01**
PROJECT MANAGER:	**Jason Hoffman**	STOP TIME:	**18:40**
DATE DRILLED:	**2-27/28/29-12**	SURFACE ELEVATION:	

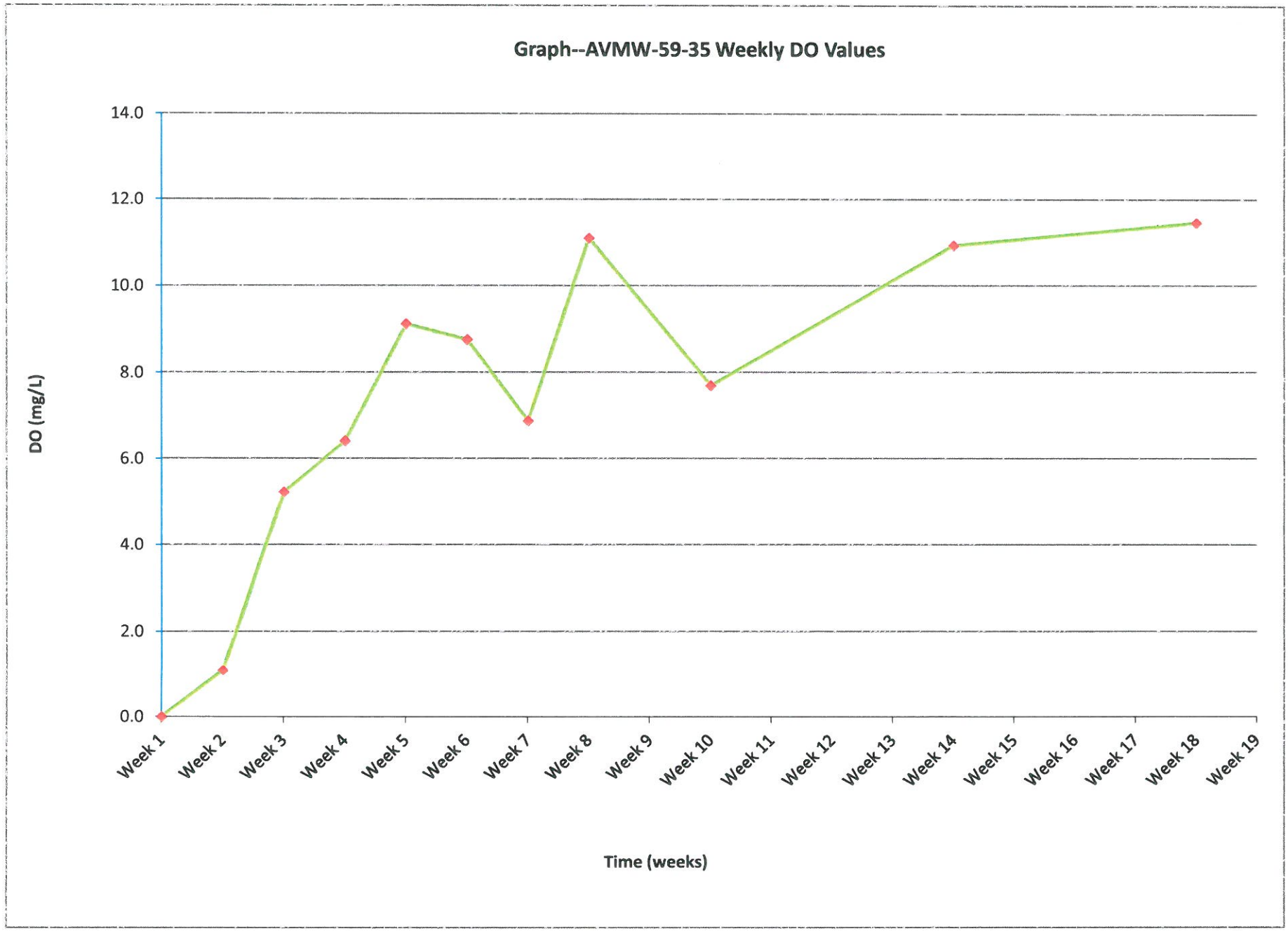
▼ Water level in completed well

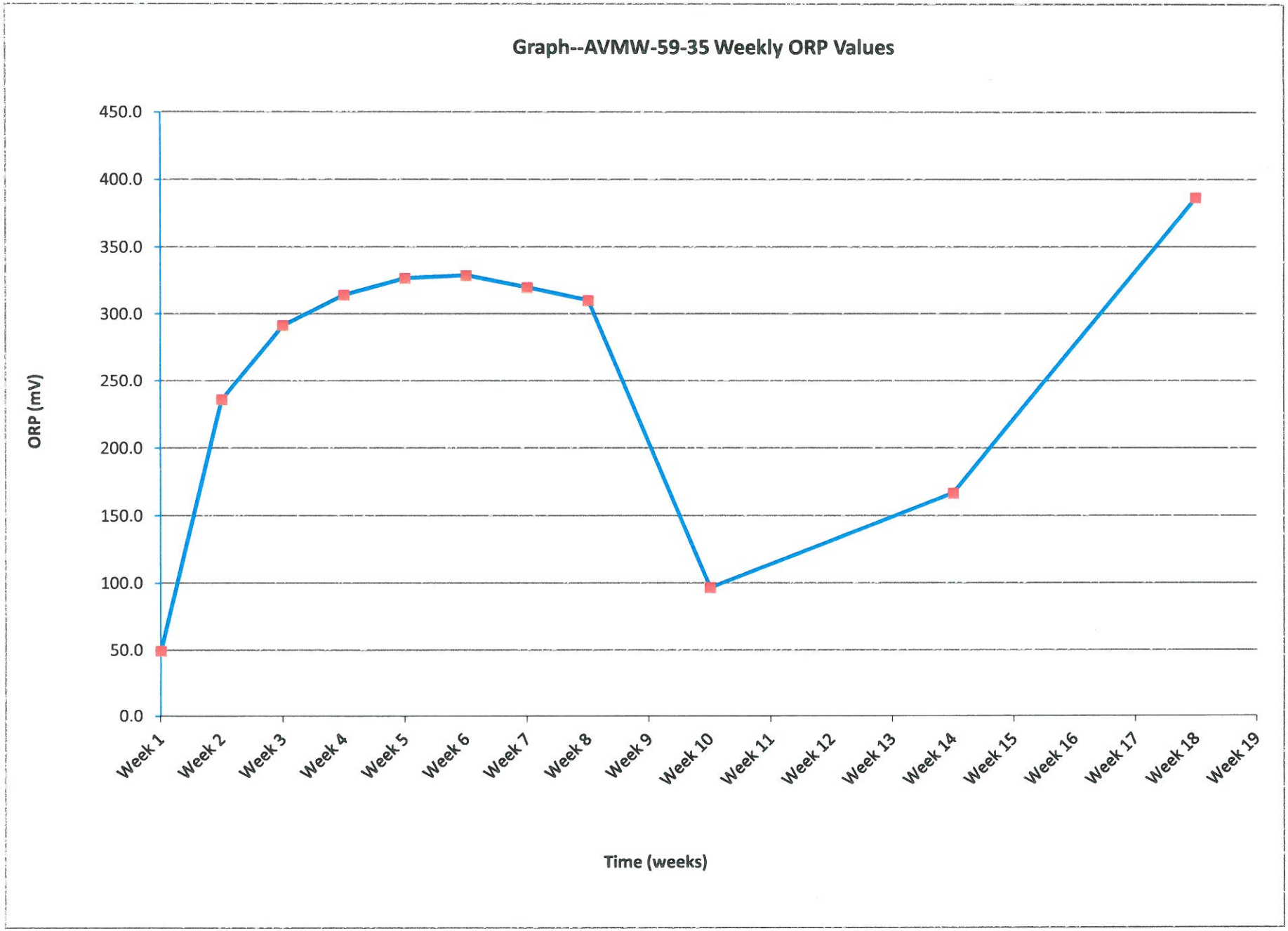
DEPTH	SOIL SYMB.	USCS	SOIL DESCRIPTION	DISCRETE GW SAMPLE	MOIST.	PLAST.	ODOR	PID (ppm)	WELL CONSTRUCTION DETAILS ANNULUS	CASING
-35					moist	stiff		11.1		
-40		ML	color change to light brown		slight	stiff				
-45			trace gravel	14,000	slight	stiff				
-50			no gravel, some cemented caliche	2,500	slight-dry	very			Cement	
-55			trace gravel and caliche fragments	13,000	slight	moderate				
-60				1,700	wet	slight				
-65				2,100						

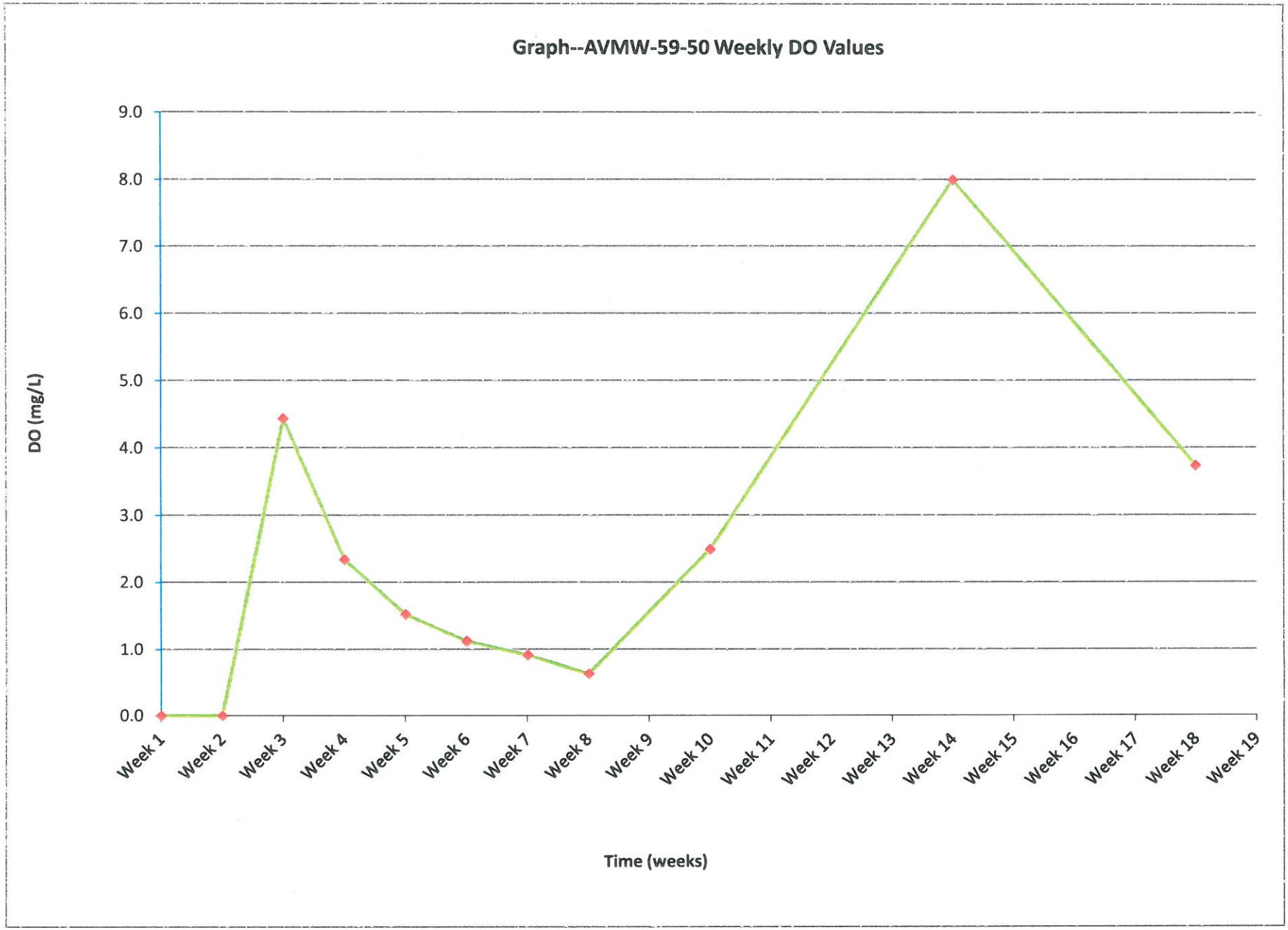
NOTES: Borehole abandoned after drilling. Depth-discrete groundwater sample results are µg/L MTBE. Page 2 of 2

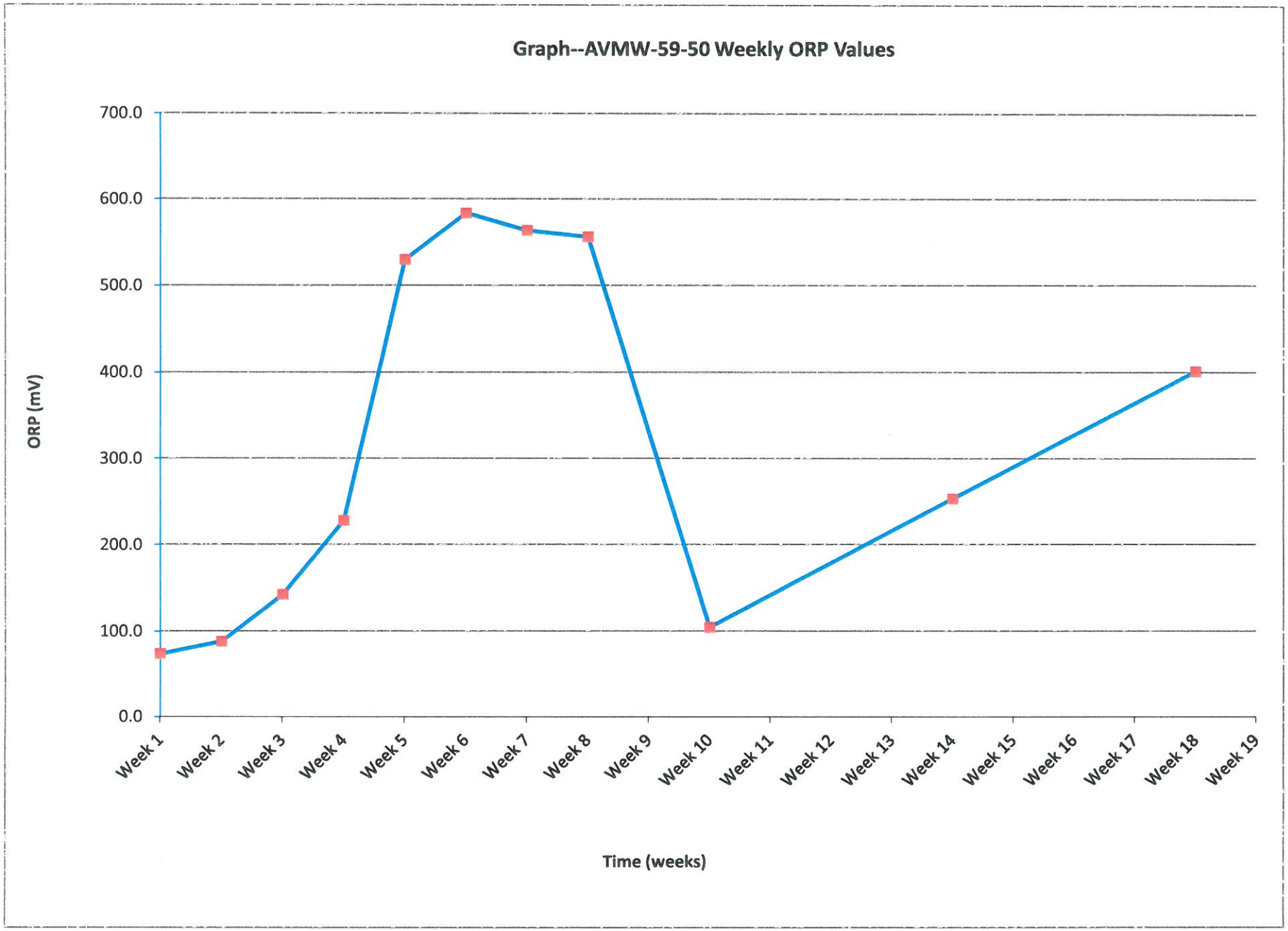
Appendix B

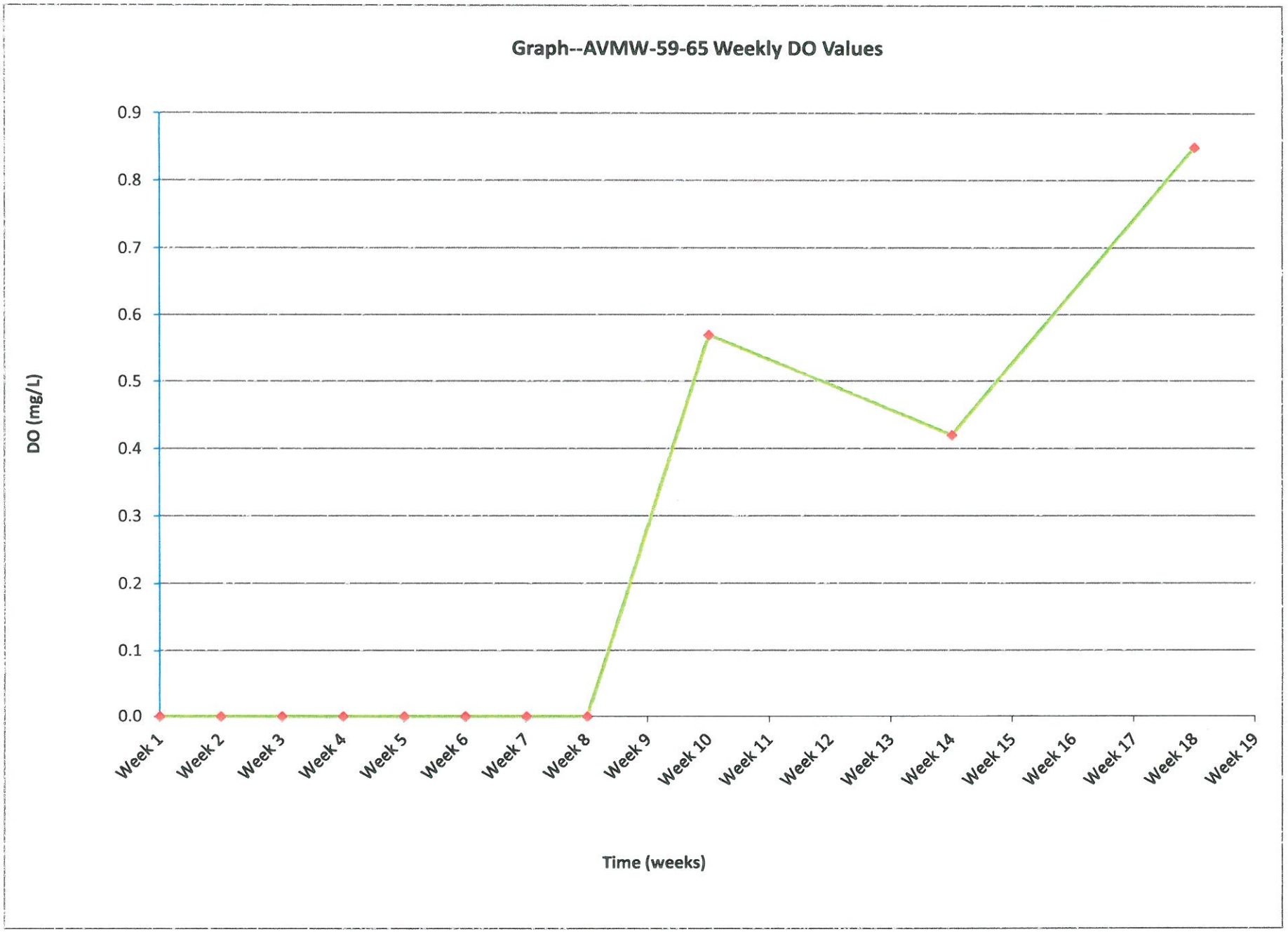
Datalogger Graphs

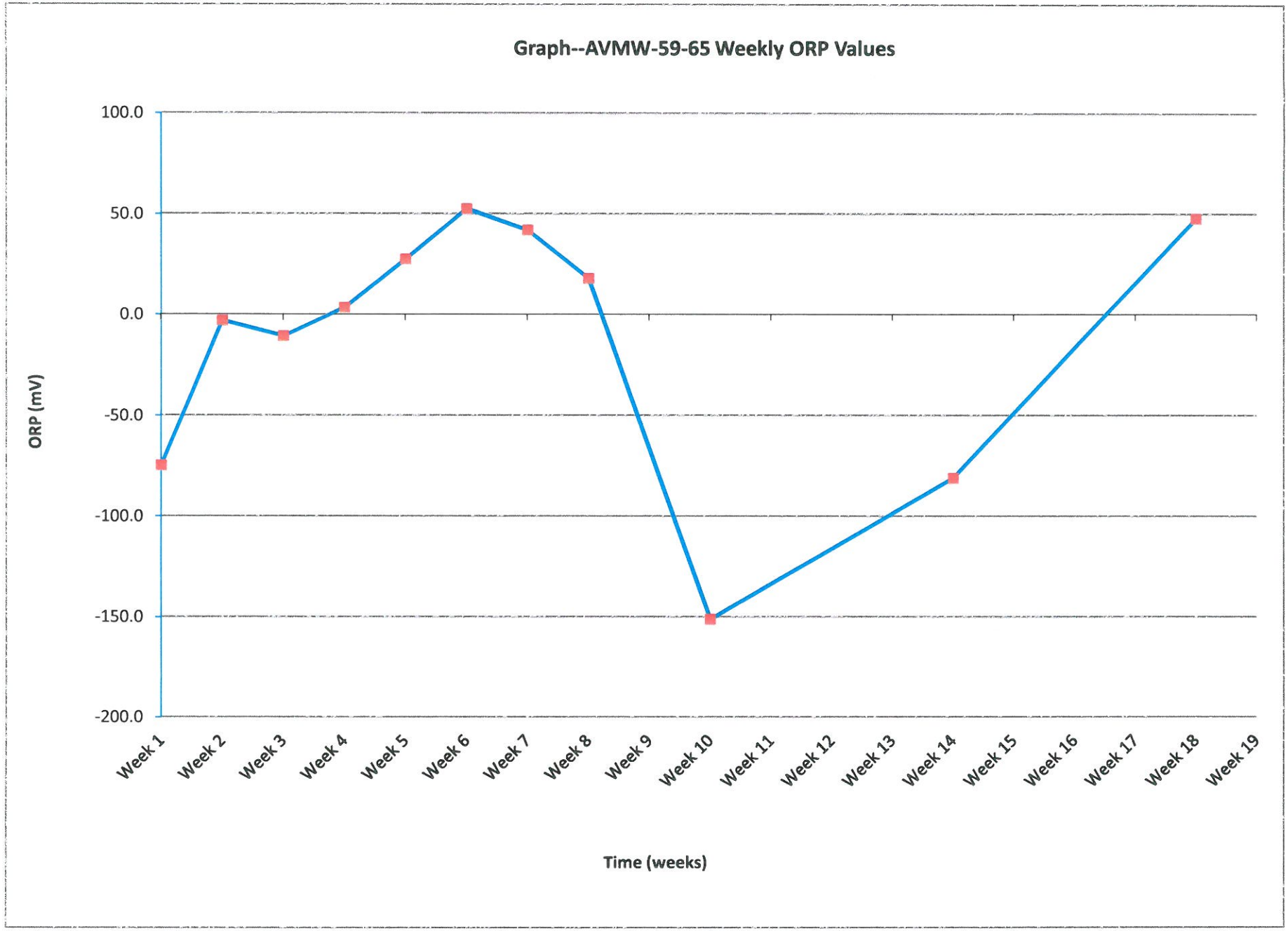

Graph--AVMW-59-35 Weekly DO Values
DO (mg/L)
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)

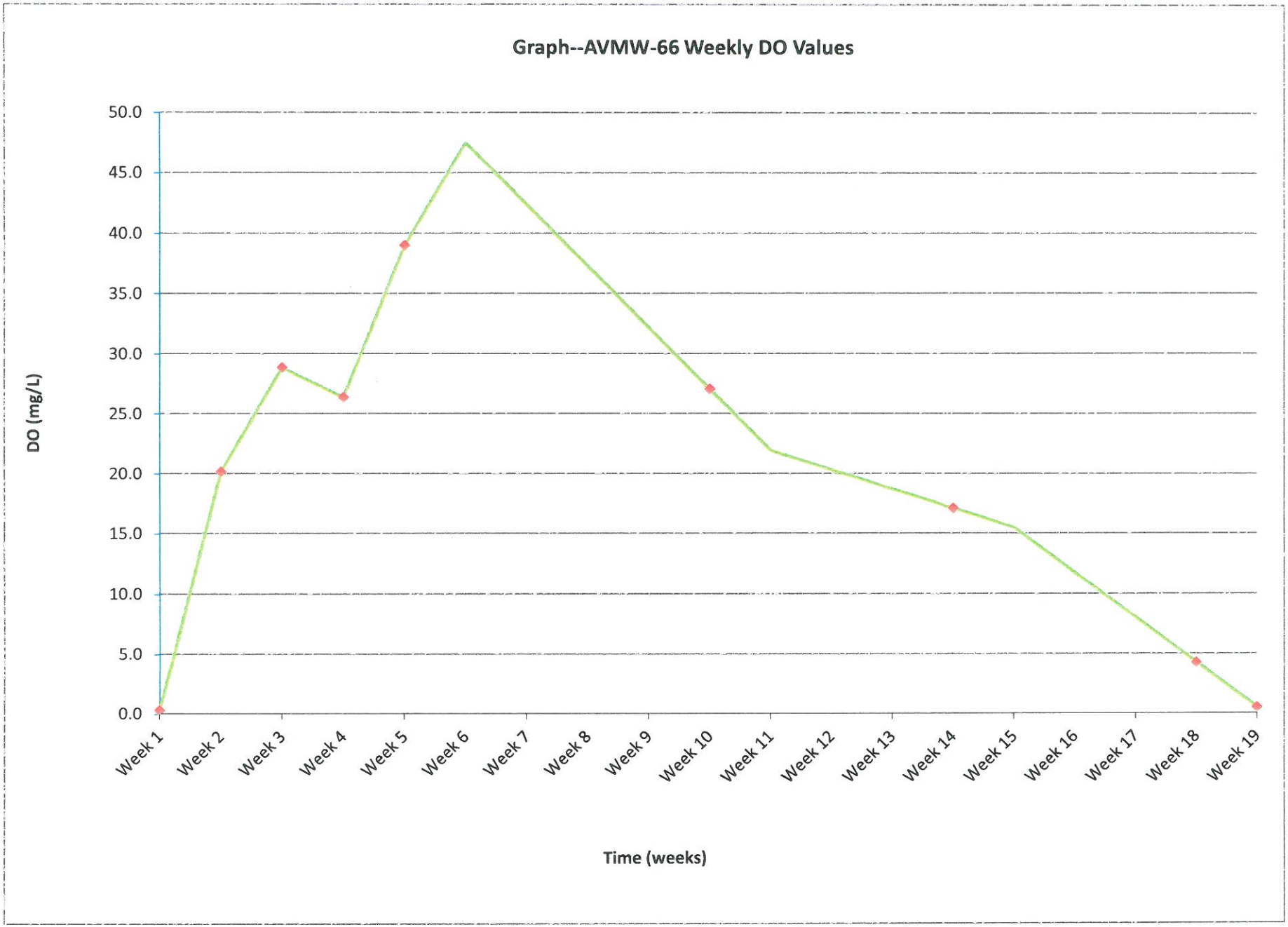

Graph--AVMW-59-35 Weekly ORP Values
ORP (mV)
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)

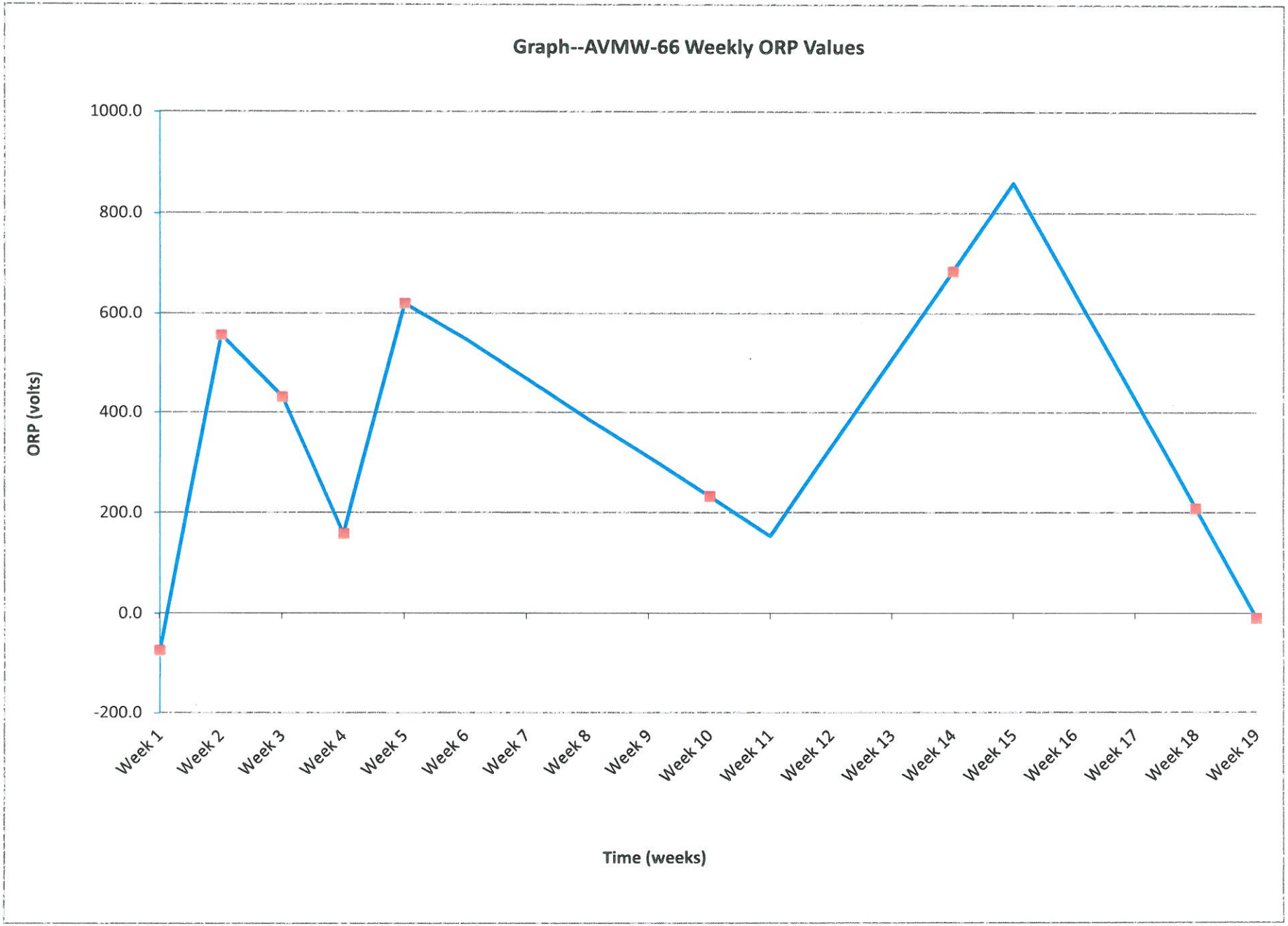

Graph--AVMW-59-50 Weekly DO Values
DO (mg/L)
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)


Graph--AVMW-59-50 Weekly ORP Values
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
ORP (mV)
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)


Graph--AVMW-59-65 Weekly DO Values
DO (mg/L)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)

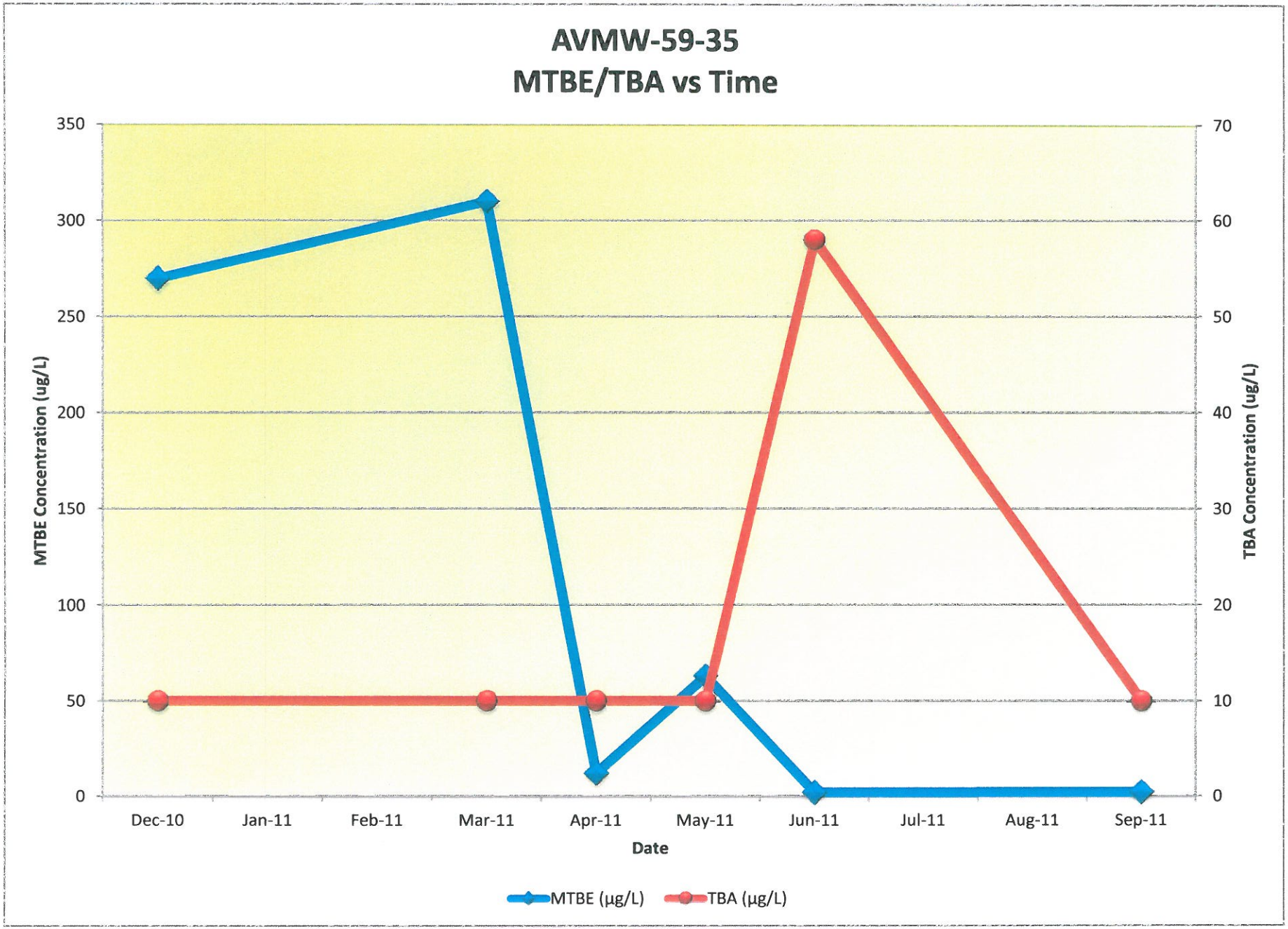

Graph--AVMW-59-65 Weekly ORP Values
100.0
50.0
0.0
-50.0
-100.0
-150.0
-200.0
ORP (mV)
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)

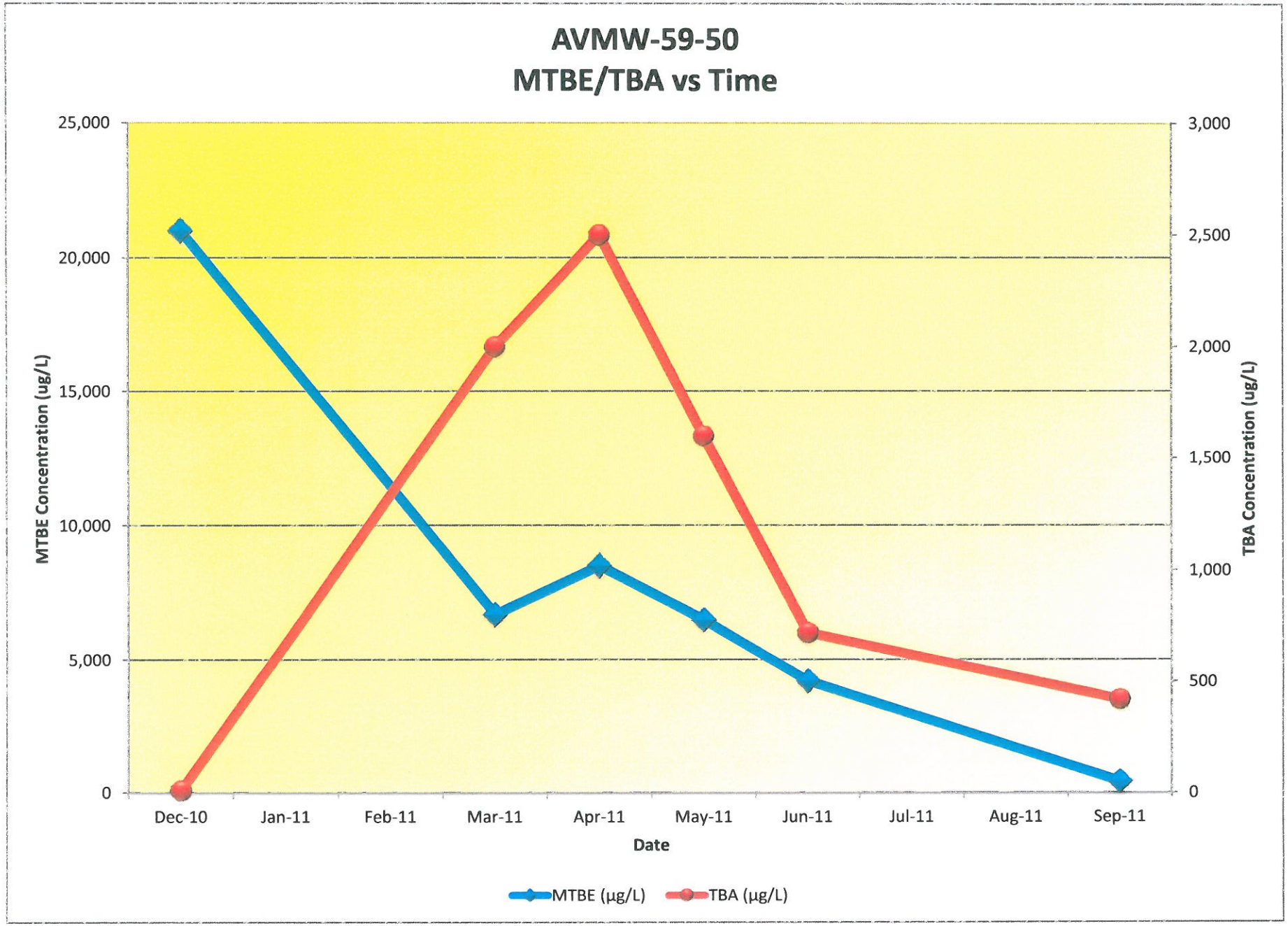

Graph--AVMW-66 Weekly DO Values
DO (mg/L)
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)

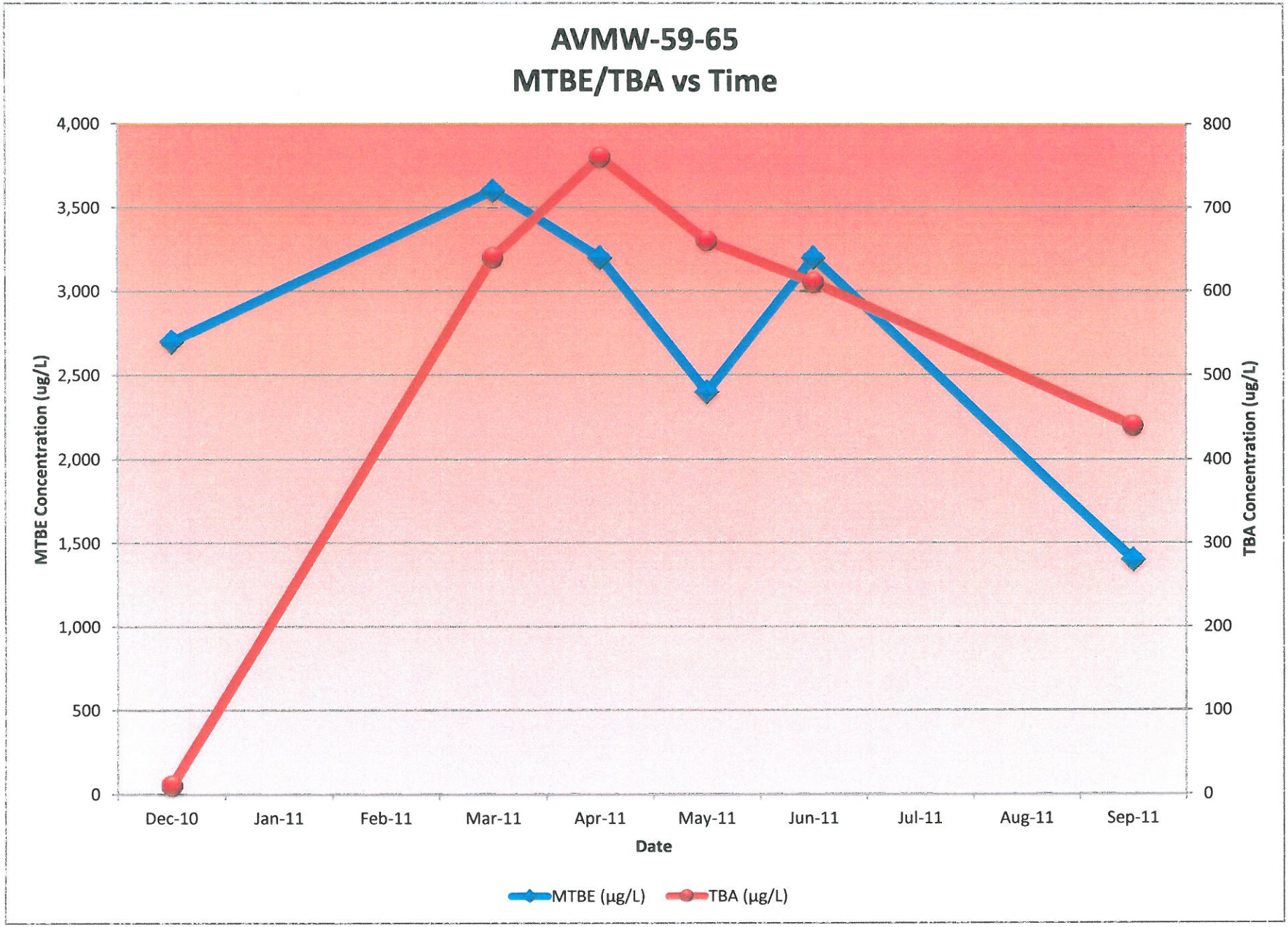

Graph--AVMW-66 Weekly ORP Values
ORP (volts)
1000.0
800.0
600.0
400.0
200.0
0.0
-200.0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Time (weeks)

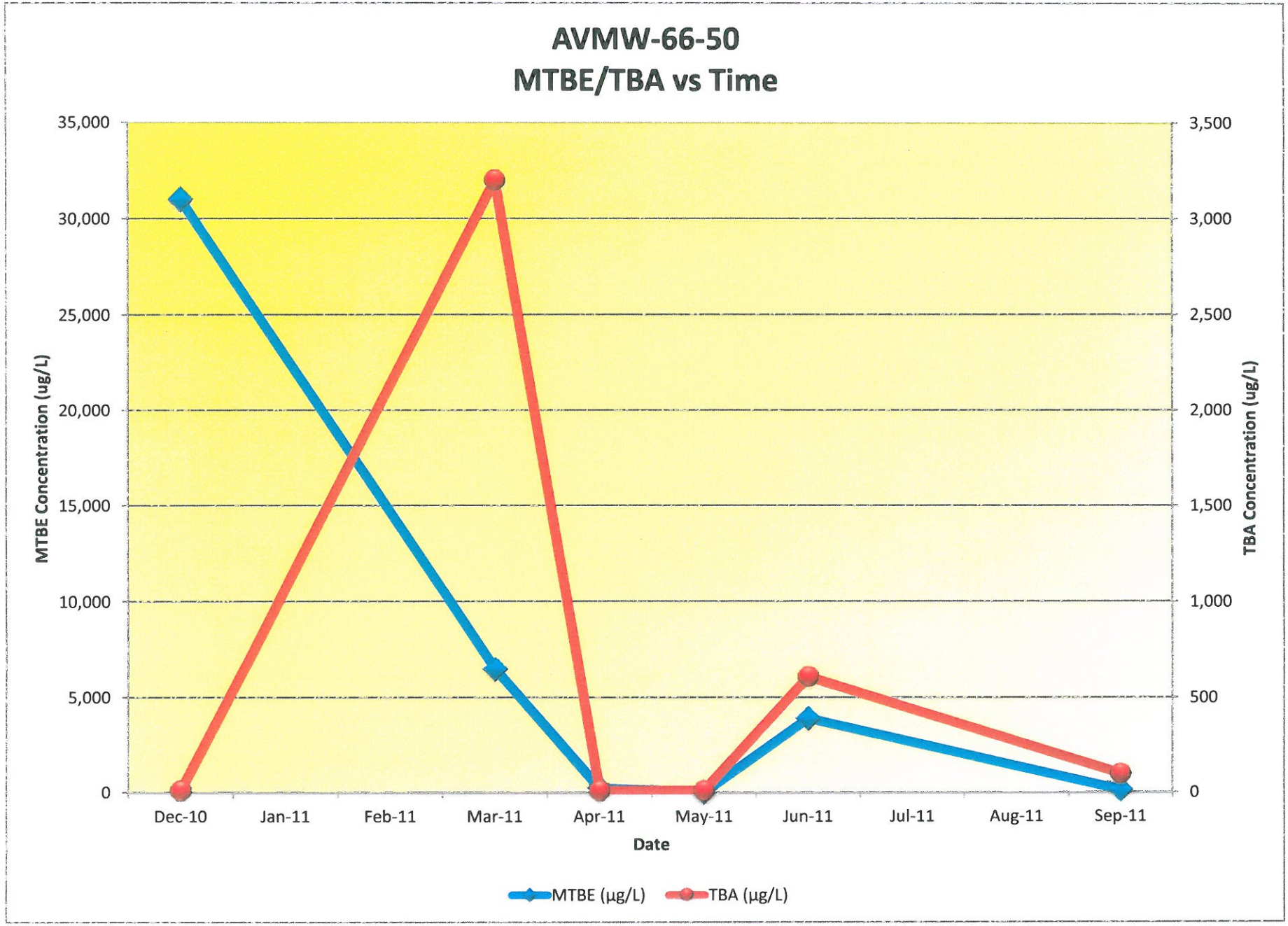
Appendix C

Dissolved MTBE Concentration Graphs


AVMW-59-35
MTBE/TBA vs Time
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
350
300
250
200
150
100
50
0
70
60
50
40
30
20
10
0
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Date
MTBE (µg/L)
TBA (µg/L)


AVMW-59-50
MTBE/TBA vs Time
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
25,000
20,000
15,000
10,000
5,000
0
3,000
2,500
2,000
1,500
1,000
500
0
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Date
MTBE (µg/L)
TBA (µg/L)


AVMW-59-65
MTBE/TBA vs Time
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
800
700
600
500
400
300
200
100
0
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Date
MTBE (µg/L)
TBA (µg/L)


AVMW-66-50
MTBE/TBA vs Time
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
MTBE Concentration (ug/L)
3,500
3,000
2,500
2,000
1,500
1,000
500
0
TBA Concentration (ug/L)
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Date
MTBE (µg/L)
TBA (µg/L)

Appendix D

Laboratory Reports

Veritas Laboratories
Truth in Quality, Truth in Service
6245 Harrison Drive, Suite 4, Las Vegas, NV 89120
(702) 321-8315 Phone
(702) 597-2098 Fax
Email: veritaslabs@msn.com

CLIENT NAME: Broadbent & Associates, Inc.
8 W. Pacific Avenue
Henderson, NV 89015
PROJECT MGR: Jason Hoffman

CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150
VERITAS LAB ORDER ID: V12C010
DATE RECEIVED AT LAB: 03/05/12

Presented herein are the analytical results for samples received from the above referenced project.

Samples submitted for this project were not sampled by Veritas Laboratories. Unless otherwise noted, samples were received by Veritas Laboratories under a chain of custody in good condition, properly preserved, and within hold time for the requested analyses.

All laboratory analytical data presented herein was generated by a laboratory certified by the Nevada Division of Environmental Protection for each constituent and media reported for which a certification is required and offered.

Should you have any questions or comments, please feel free to contact me at (702) 321-8315

General Comments:
None
Some Sample and/or QA results have been flagged as follows:
None

Bruce G. Cunningham

03/23/12

Bruce G. Cunningham
Veritas Laboratories
Nevada Lab ID NV00918

Date

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-2b-30'**
DATE SAMPLED: 02/28/11
VERITAS SAMPLE ID: V12C010-01

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	**74**	**5.0**	**µg/L**	**10**	**03/13/12**
Toluene	**570**	**5.0**	**µg/L**	**10**	**03/13/12**
Ethylbenzene	**360**	**5.0**	**µg/L**	**10**	**03/13/12**
Xylenes, Total	**2,700**	**10**	**µg/L**	**10**	**03/13/12**
MTBE	**370**	**5.0**	**µg/L**	**10**	**03/13/12**
tert-Butyl alcohol (TBA)	**1,700**	**50**	**µg/L**	**10**	**03/13/12**
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/13/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/13/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/13/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	93	72-120%
1,2-Dichloroethane-d4	97	56-120%
Toluene-d8	83	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-2b-45'**
DATE SAMPLED: 02/29/12
VERITAS SAMPLE ID: V12C010-02

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/13/12
Toluene	**2.0**	**2.0**	**µg/L**	**1**	**03/13/12**
Ethylbenzene	ND	2.0	µg/L	1	03/13/12
Xylenes, Total	ND	6.0	µg/L	1	03/13/12
MTBE	**14,000**	**250**	**µg/L**	**500**	**03/14/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/13/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/13/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/13/12
tert-Amyl Methyl Ether (TAME)	**11**	**2.0**	**µg/L**	**1**	**03/13/12**

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	113	72-120%
1,2-Dichloroethane-d4	107	56-120%
Toluene-d8	84	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150
CLIENT SAMPLE ID: **SP-2b-50'**
DATE SAMPLED: 02/29/12
VERITAS SAMPLE ID: V12C010-03

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**2,500**	**25**	**µg/L**	**50**	**03/16/12**
tert-Butyl alcohol (TBA)	**990**	**10**	**µg/L**	**1**	**03/14/12**
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	**3.0**	**2.0**	**µg/L**	**1**	**03/14/12**

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	107	72-120%
1,2-Dichloroethane-d4	124	56-120%
Toluene-d8	83	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150
CLIENT SAMPLE ID: **SP-2b-55'**
DATE SAMPLED: 02/29/12
VERITAS SAMPLE ID: V12C010-04

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**13,000**	**250**	**µg/L**	**500**	**03/16/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	**9.4**	**2.0**	**µg/L**	**1**	**03/14/12**

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	118	72-120%
1,2-Dichloroethane-d4	111	56-120%
Toluene-d8	87	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-2b-60'**
DATE SAMPLED: 02/29/12
VERITAS SAMPLE ID: V12C010-05

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**1,700**	**25**	**µg/L**	**50**	**03/15/12**
tert-Butyl alcohol (TBA)	**120**	**10**	**µg/L**	**1**	**03/14/12**
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	103	72-120%
1,2-Dichloroethane-d4	120	56-120%
Toluene-d8	86	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-2b-65'**
DATE SAMPLED: 02/29/12
VERITAS SAMPLE ID: V12C010-06

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**2,100**	**50**	**µg/L**	**100**	**03/16/12**
tert-Butyl alcohol (TBA)	**180**	**10**	**µg/L**	**1**	**03/14/12**
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	106	72-120%
1,2-Dichloroethane-d4	115	56-120%
Toluene-d8	90	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-1b-40'**
DATE SAMPLED: 03/01/12
VERITAS SAMPLE ID: V12C010-07

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	**8.1**	**2.0**	**µg/L**	**1**	**03/14/12**
Ethylbenzene	**6.2**	**2.0**	**µg/L**	**1**	**03/14/12**
Xylenes, Total	**53**	**6.0**	**µg/L**	**1**	**03/14/12**
MTBE	**27**	**2.0**	**µg/L**	**1**	**03/14/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	97	72-120%
1,2-Dichloroethane-d4	94	56-120%
Toluene-d8	89	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-1b-45'**
DATE SAMPLED: 03/02/12
VERITAS SAMPLE ID: V12C010-08

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**4.6**	**2.0**	**µg/L**	**1**	**03/14/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	94	72-120%
1,2-Dichloroethane-d4	94	56-120%
Toluene-d8	89	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-1b-50'**
DATE SAMPLED: 03/02/12
VERITAS SAMPLE ID: V12C010-09

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**37**	**2.0**	**µg/L**	**1**	**03/14/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	94	72-120%
1,2-Dichloroethane-d4	88	56-120%
Toluene-d8	90	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-1b-55'**
DATE SAMPLED: 03/02/12
VERITAS SAMPLE ID: V12C010-10

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	ND	2.0	µg/L	1	03/14/12
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	95	72-120%
1,2-Dichloroethane-d4	87	56-120%
Toluene-d8	90	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-1b-60'**
DATE SAMPLED: 03/02/12
VERITAS SAMPLE ID: V12C010-11

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**3.6**	**2.0**	**µg/L**	**1**	**03/14/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	96	72-120%
1,2-Dichloroethane-d4	89	56-120%
Toluene-d8	87	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **SP-1b-65'**
DATE SAMPLED: 03/02/12
VERITAS SAMPLE ID: V12C010-12

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	**5.0**	**2.0**	**µg/L**	**1**	**03/14/12**
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	99	72-120%
1,2-Dichloroethane-d4	99	56-120%
Toluene-d8	90	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **METHOD BLANK**
DATE SAMPLED: NA
SAMPLE ID: D120313MB2

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/13/12
Toluene	ND	2.0	µg/L	1	03/13/12
Ethylbenzene	ND	2.0	µg/L	1	03/13/12
Xylenes, Total	ND	6.0	µg/L	1	03/13/12
MTBE	ND	2.0	µg/L	1	03/13/12
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/13/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/13/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/13/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/13/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	92	72-120%
1,2-Dichloroethane-d4	88	56-120%
Toluene-d8	89	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

Veritas Laboratories
Truth in Quality, Truth in Service

CLIENT COMPANY NAME: Broadbent & Associates, Inc.
CLIENT PROJECT NAME: **Avis**
CLIENT PROJECT NUMBER: 95-01-150

CLIENT SAMPLE ID: **METHOD BLANK**
DATE SAMPLED: NA
SAMPLE ID: D120314MB4

ANALYSIS: BTXE/MTBE & Fuel Oxygenates by EPA Method 8260B, GC/MS
MATRIX: Groundwater

PARAMETER	RESULT	REPORTING LIMIT (PQL)	UNITS	DILUTION FACTOR	DATE ANALYZED
Benzene	ND	2.0	µg/L	1	03/14/12
Toluene	ND	2.0	µg/L	1	03/14/12
Ethylbenzene	ND	2.0	µg/L	1	03/14/12
Xylenes, Total	ND	6.0	µg/L	1	03/14/12
MTBE	ND	2.0	µg/L	1	03/14/12
tert-Butyl alcohol (TBA)	ND	10	µg/L	1	03/14/12
Di-isopropyl ether (DIPE)	ND	2.0	µg/L	1	03/14/12
Ethyl tert-butyl ether (ETBE)	ND	2.0	µg/L	1	03/14/12
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1	03/14/12

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	93	72-120%
1,2-Dichloroethane-d4	87	56-120%
Toluene-d8	89	80-123%

PQL-Practical Quantitation Limit.

ND - Not Detected at indicated Reporting Limit (PQL).

V12C010

CHAIN OF CUSTODY

PROJ. NO.	PROJECT NAME
05-01-150	AUIS

SAMPLERS: (Signature)

	STATION NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	BTEX / MTBE / TBA 8260						REMARKS
#01	SP-2b-30'	2-28-12	10:42		X	AQ	3	X						P.M. Jason Hoffman
02	SP-2b-45'	2-29-12	09:12											
03	SP-2b-50'		10:52											
04	SP-2b-55'		13:11											
05	SP-2b-60'		16:54											
06	SP-2b-65'		18:41											
07	SP-1b-40'	3-1-12	17:21											
08	SP-1b-45'	3/2/12	1010											
09	SP-1b-50'		1145											
10	SP-1b-55'		1340											
11	SP-1b-60'		1455											
12	SP-1b-65'		1620											

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	3/5/12 3:10				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
				8°C	

BROADBENT & ASSOCIATES, INC.
8 W. Pacific Avenue
Henderson, Nevada 89015
Voice (702) 563-0600 Fax (702) 563-0610

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Appendix E

PulseOx™ P-1500 Trailer Specifications

Applied
Process Technology, Inc.

Spec Sheet
PulseOx P-1500

Clean Water. No Waste.

The new PulseOx P-1500 is a compact and mobile ground water remediation unit designed specifically for large, ISCO applications, including the treatment of hot-spots, or for use as a barrier technology.

Using aggressive in-situ chemical oxidation process technology and four reagents—ozone, hydrogen peroxide, oxygen and air—Applied's PulseOx P-1500 can destroy a wide variety of dangerous contaminants in difficult-to-treat ground water situations while also enhancing biodegradation.

The PulseOx P-1500 is easy to install, easy to operate, easy to maintain, is cost-effective, and generates no waste.

PulseOx P-1500 Trailer

Dimensions: 7'(h) x 7'(w) x 20'(d) enclosure; total external length 25 ft.
Curb Weight: Approx. 7,000 lbs.
Electrical Requirements: 230 V, 3 Phase, 60 Hz (90 A service)
Power Consumption: 30-40 kW
Enclosure: Ventilated, tandem axle trailer; power and process connections conveniently located to facilitate quick installation
Safety: Ambient ozone monitor; ozone destruct unit on system exhaust fan; automatic shutdown features

Standard Features

Ozone: Delivers 25 lbs/day of ozone at pressures up to to 20 psi standard pressure (option up to 40 psi)
Ozone not destroyed by compression

Oxygen: PSA oxygen concentrator (7 scfm) delivers 90% oxygen purity to ozone generator (2-7 scfm)

Adjustable Flow Rates

Programmable Logic Controller (PLC): controlled by an Operator Interface Terminal (OIT), auto-dialer ready, capable of remote operation

Independently-timed Control of Sparge Points for:
Ozone, Oxygen, Peroxide, and Compressed Air

16 Point Independent Valve Sparge Manifold for:
Ozone, Oxygen, Peroxide, and Compressed Air
*Optional 20 Point Independent Valve Sparge Manifold

Safety Features: Ozone Detection
High and Low Pressure Detection
Low Oxygen Flow
Low Generator Power

Gauges and Monitoring Devices:
Ozone, Oxygen and Compressed Air Pressure Gauges
Ozone, Oxygen and Compressed Air Flow Meters

Advanced Oxidation: 150 gal. Double-Contained Hydrogen Peroxide Tank
5 to 35% Hydrogen Peroxide Solution
Injection Capacity up to 75 gal/day at 25 psig
Hydrogen Peroxide Level Alarm
Pressure Gauge(s)

Compressed Air System: 8 - 18 scfm
Programmable Logic Controller (PLC)
Flow Meter(s)
Pressure Gauge(s)

Reagent ratio-controlled independently at each sparge point

System is configurable for delivery of other reagents

One Year Warranty

Systems

Ozone Generation
On-board, solid-state, air-cooled ozone generator(s) using oxygen produced by the oxygen generation system.
Generator Capacity: 25 ppb
Concentration: 3-12% (TBD)
Injection Capacity: Low flows (<1.3scfm) at 10-12% concentrations; or high flows (up to 18 scfm) at 1-9% concentrations.

Oxygen Generation
An oxygen-fed generator with no gas cylinders or oxygen dewars required.
Method: Pressure swing adsorption (PSA)
Concentration: 90-95% oxygen
Injection Capacity: 200-500 lbs/day

Reagent Distribution
Capacity: Up to 16 ozone and 16 hydrogen peroxide injection points; upgradeable to handle additional injection points.
Reagent Control: Reagent ratios are individually controlled and adjusted as needed at each injection point.

Optional Features & Accessories

Hydrogen Peroxide
Injection rates are subject to site conditions.
Storage: 150 gallon, double-walled tank
Concentration: 35% technical grade
Injection Capacity: Up to 25 gal/day at 25 psi or higher.

Compressed Air
Operating Pressure: Up to 120 psi
Injection Capacity: 8-18 scfm

Transfer Tubing & Injection Points
Type and Quantity available from Applied Process Technology, Inc.

Expandable Manifold Configurations Available

Larger Systems Available on Request

Applied Process Technology, Inc.
3333 Vincent Road, Suite 222
Pleasant Hill, Ca 94523
phone: 925-977-1811 fax: 925-977-1818
www.aptwater.com email:info@aptwater.com