REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE WQARF SITE
PHOENIX, ARIZONA

Prepared for:
NXP USA, Inc.

Prepared by:
Clear Creek Associates, LLC

November 2018

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ASSOCIATES

CLEAR CREEK ASSOCIATES

Practical Solutions
In Groundwater Science

6155 East Indian School Rd. #200
Scottsdale, Arizona 85251
480-659-7131 office
480-659-7143 fax
www.clearcreekassociates.com

November 20, 2018

Ms. Nichole Osuch, Project Manager
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, Arizona 85007

RE: Remedial Investigation Report
56th Street and Earll Drive WQARF Site, Phoenix, Arizona
For NXP USA, Inc.

Dear Nichole:

At the request of Jenn McCall of NXP USA, Inc. (formerly Freescale Semiconductor, Inc.), Clear Creek Associates, LLC (Clear Creek) hereby submits the final Remedial Investigation Report (RIR) for the 56th Street and Earll Drive WQARF Site (hard copy and electronic copies) to the Arizona Department of Environmental Quality (ADEQ).

This submittal is pursuant to the provisions of the Consent Order, Docket No. RP-23-15, issued May 27, 2015 by the Director of the Arizona Department of Environmental Quality (ADEQ) with Freescale Semiconductor, Inc. and has been prepared in accordance with Arizona Administrative Code (A.A.C) R18-16-406.

Please call or contact me at Clear Creek Associates or Jenn McCall at NXP if you have any questions.

Sincerely,

CLEAR CREEK ASSOCIATES, LLC

Thomas R. Suriano, RG
Principal

cc: Jenn McCall, NXP USA, Inc. (hardcopy and CD)

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November 2018

REGISTERED GEOLOGIST
CERTIFICATE NO.
26775
THOMAS R.
SURIANO
Date Signed 11/16/18
ARIZONA, U.S.A.
Expires 03 / 31 / 2020

CLEAR
CREEK
ASSOCIATES

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REGISTERED GEOLOGIST
CERTIFICATE NO.
26775
THOMAS R. SUHANO
Date Signed 11/16/13
ARIZONA, U.S.A.
Expires 06/30/2020

LIST OF ACRONYMS AND ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ADWR	Arizona Department of Water Resources
af	acre feet
amsl	above mean sea level
ARS	Arizona Revised Statutes
ATSDR	Agency for Toxic Substances and Disease Registry
AWQS	Arizona Water Quality Standards
AZPDES	Arizona Pollutant Discharge Elimination System
bgs	below ground surface
c-1,2-DCE	cis-1,2-Dichloroethylene
COC	contaminants of concern
COPC	contaminants of potential concern
CSM	Conceptual Site Model
1,1–DCA	1,1-Dichloroethane
1,2–DCA	1,2-Dichloroethane
DCE	1,1-Dichloroethene
DNAPL	dense non-aqueous phase liquids
EPA	US Environmental Protection Agency
ERA	Early Response Action
FCDMC	Flood Control District of Maricopa County
ft	feet
freon 113	1,1,2-trichloro-1,2,2-trifluoroethane
FS	Feasibility Study
GAC	Granular Activated Carbon
GED	Government Electronics Division
gpm	gallons per minute
HVAC	heating, ventilating, and air conditioning system
ISR	Investigation Summary Report
LAU	Lower Alluvial Unit
LUST	Leaking Underground Storage Tank
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
mg/l or mg/L	milligrams per liter
MAU	Middle Alluvial Unit
msl or MSL	mean sea level
NAPL	non-aqueous phase liquids
NFA	No Further Action
OCC	Old Crosscut Canal
OU2	Operable Unit Number 2 (of Motorola 52nd Street Superfund Site)
PAL	Proposed Action Level
PCE	Tetrachloroethene
ppb	parts per billion
ppbv	parts per billion by volume
PQGWWP	Poor Quality Groundwater Withdrawal Permit
PRAP	Proposed Remedial Action Plan
PRP	Potentially Responsible Party
RA	Remedial Action
RI	Remedial Investigation
RO	Remedial Objectives
ROD	Record of Decision
RSL	Residential Screening Level
SRP	Salt River Project

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

SVE	Soil Vapor Extraction
TCA	1,1,1-Trichloroethane
TCE	Trichloroethene
TCLP	toxicity characteristic leach procedure
t-1,2-DCE	trans-1,2-Dichloroethene
UAU	Upper Alluvial Unit
ug/l or µg/L	micrograms per liter (note: "u" may be used in place of "µ" with the same meaning)
US	United States
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
VC	Vinyl Chloride
WMEC	Western Military and Electronics Center
WQARF	Water Quality Assurance Revolving Fund

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE WQARF SITE

1.0 EXECUTIVE SUMMARY

In accordance with the Arizona Department of Environmental Quality (ADEQ) Water Quality Assurance Revolving Fund (WQARF) Remedy Selection Rules (adopted August 31, 2002) and Consent Order RP-23-15 (May 27, 2015) between ADEQ and Freescale Semiconductor, Inc. (Freescale) (now NXP USA, Inc.) (NXP), Clear Creek Associates, LLC (Clear Creek) has completed this Remedial Investigation (RI) Report for the 56th Street and Earll Drive WQARF Site (Site). The Site is an area of groundwater impacted by volatile organic compounds (VOCs), primarily trichloroethene (TCE) and tetrachloroethene (PCE), in the east central Phoenix area. Prior to listing as a WQARF site, the Site was referred to in historical reports as the 56th Street Study Area.

The Site is defined by the extent of impacted groundwater located downgradient of the former Motorola facility which consists of an approximately 14-acre parcel on the northwest corner of 56th Street and Earll Drive (Facility) The Contaminants of Concern (COCs) at the Site are TCE and PCE. Historical soil and vadose zone remediation efforts at the Facility have successfully removed sources of contamination and the groundwater beneath and immediately downgradient of the Facility is no longer impacted by the COCs.

The Facility was first occupied in the spring of 1950 by Motorola Inc. as a research and development operation and was used for a variety of product development, manufacturing, and testing operations until 1982. After 1982, manufacturing operations were discontinued and the Facility was redeveloped for office uses. Starting in 1984, investigations were conducted at the Facility to determine if the soils and groundwater in the area were contaminated; other potential sources in the area also were evaluated. Various source removal and remediation activities were conducted at the Facility over time. The Facility was vacated by Motorola and sold to developers in 2005. The Facility is currently used as a charter school and is expected to remain as such for many years. The remaining land use at the Site is primarily residential, light commercial, retail, schools, restaurants, and office buildings. The area is nearly fully developed and no major land use changes are expected.

Groundwater wells are registered with the Arizona Department of Water Resources (ADWR). Groundwater use in the Site is limited to withdrawal by the Early Response Action (ERA) extraction wells used as part of the remediation project. The City of Phoenix does not use groundwater from wells in the Land and Water Use study area as a source of drinking water. Salt River Project (SRP) has three irrigation supply wells identified in the Land and Water Use study area. The SRP wells are not impacted by COCs and are occasionally pumped to produce groundwater which is discharged into the various laterals feeding the Grand Canal or directly to the Grand Canal where the groundwater is blended with surface water in the canal. The Grand Canal is currently used for agricultural and urban irrigation and aquifer recharge purposes and meets the water quality standards for such purposes. SRP has stated that they have an agreement with the City of Goodyear to transmit raw water via the Grand Canal to a potential future drinking water treatment facility.

Surface water in the area is limited to concrete-lined canals. There is no perennial flow and there are no ponds or lakes. There is occasional surface water flow in drainages as a result of storm water runoff such

as to the landscaped-covered greenbelt of the Old Crosscut Canal (OCC) along 48th Street and to the north of McDowell Road.

The local hydrogeology is comprised of a saturated alluvial (Basin Fill) aquifer overlying bedrock. Groundwater impacts occur primarily in the alluvial aquifer although there are limited areas with identified impacts in the underlying bedrock. Groundwater flow and contaminant migration is primarily to the southwest across the majority of the Site. West of the Grand Canal, groundwater flow and contaminant migration changes to a westerly direction in response to the presence of a bedrock high located to the south of the Site which locally re-directs groundwater flow. Review of VOC time series charts for off-site monitor wells demonstrate the highest concentrations representing the centroid of the contaminant mass have migrated to the southwest over time along the predominant flow path. Peak TCE concentrations have also declined within the center of the plume over time as a result of natural attenuation by varying processes and overall decreasing concentration trends are observed in monitor wells in the central and eastern portion of the Site. NXP is currently operating an ERA at the Site in accordance with Arizona Revised Statutes (ARS) §49-282.06.A and Arizona Administrative Code (A.A.C.) R18-16-405 to protect a water supply well and to control or contain contamination to reduce the scope or cost of the remedy needed at the Site. The ERA consists of two extraction wells and a groundwater treatment plant on the Grand Canal. Remediated water is currently provided to SRP for beneficial re-use for agricultural and urban irrigation and groundwater replenishment.

Groundwater impacts generally occur at the base of the alluvial aquifer near the alluvium-bedrock interface. Vertical profile sampling indicates that overlying groundwater is not impacted by COCs except in localized areas where groundwater flows over bedrock highs. Historical soil gas investigations conducted in the eastern portion of the Site (east of approximately 46th Street) identified low to non-detect concentrations of TCE in areas where groundwater impacts occurred near the alluvium-bedrock contact. Elevated soil gas concentrations were observed historically in an area with a bedrock high located at the City of Phoenix Water Production facility at 52nd Street and Thomas Road.

A Remedial Objectives (RO) report, prepared by ADEQ, is Appendix B of the Final RI Report. The ROs establish the remedial objectives for the Site that will be used to evaluate remedial alternatives as part of the Feasibility Study (FS) for the Site.

2.0 INTRODUCTION

In accordance with the Arizona Department of Environmental Quality (ADEQ) Water Quality Assurance Revolving Fund (WQARF) Remedy Selection Rules (adopted August 31, 2002) and Consent Order RP-23-15 (May 27, 2015) between ADEQ and Freescale Semiconductor, Inc. (Freescale) (now NXP USA, Inc. (NXP), Clear Creek Associates, LLC (Clear Creek) has completed this Remedial Investigation (RI) Report for the 56th Street and Earll Drive WQARF Site (Site). NXP Semiconductors N.V. acquired Freescale by a merger finalized on December 7, 2015 and the name change to NXP USA, Inc. was effective November 7, 2016. Freescale was a spinoff of Motorola Inc.'s Semiconductor Product Sector. NXP has assumed Freescale's (and Freescale's predecessor Motorola) responsibilities with respect to remediation of the Site.

The Site is an area of groundwater impacted by volatile organic compounds (VOCs), primarily trichloroethene (TCE) and tetrachloroethene (PCE), in the east central Phoenix area (Figure 1). Prior to listing as a WQARF site, the Site was referred to in historical reports as the 56th Street Study Area. The Site includes the former Motorola facility which consists of an approximately 14-acre parcel on the northwest corner of 56th Street and Earll Drive and includes four buildings, parking lots, and landscaped areas (Facility) (Figure 2). Site characterization and groundwater monitoring has been by the installation of a network of monitor wells (Figure 3 and Table 1) and routine water level and water quality assessments (Tables 2 and 3). Starting in 1984, investigations were conducted at the Facility to determine if the soils and groundwater in the area were contaminated (Figure 4) and other potential sources (Figure 5) were also evaluated in the area. A variety of source removal and remediation activities were conducted at the Facility over time. The Facility was vacated by Motorola and sold to developers in 2005.

Clear Creek has performed RI and remedial action (RA) activities at the Site for NXP since 1999. Prior to 1999, Dames and Moore and Woodward-Clyde consultants performed RI activities for Motorola Inc. The RI and RA activities conducted at the Site included groundwater investigations, monitoring well installation, groundwater monitoring, soil and soil gas investigations, source removal activities and operation of a soil vapor extraction (SVE) system. This RI report summarizes the results of previous investigations and remedial activities performed at the Site, as well as implementation of an Early Response Action (ERA).

This RI Report has been prepared in accordance with the Consent Order and A.A.C R18-16-406 (2002). In compliance with the Consent Order, the RI Report includes: (1) a summary of prior Site investigations; (2) a presentation on the investigation of Site physical characteristics; (3) a presentation of the sources, nature, and extent of contamination;(4) an analysis and discussion of contaminant fate and transport; (5) an analysis of any potential or known risks to human health; and (6) conclusions and recommendations for any future remedial investigation work or the preparation of a Feasibility Study.

During completion of the RI, numerous reports were generated, including groundwater monitoring reports and source characterization reports. Copies of these documents were provided to, and should be available through the ADEQ Records Center and some documents are available through the online information repository at the ADEQ website. Appendix C is a bibliographic list of many reports, documents, and key correspondence produced as part of the site characterization and ongoing remediation investigations.

3.0 WATER QUALITY ASSURANCE REVOLVING FUND (WQARF) PROCESS

The RI identifies and characterizes the soil and groundwater impacts of a WQARF Site. The RI provides a detailed assessment of site conditions, including an evaluation of the extent and type of soil and groundwater contamination and an assessment of potential source areas. Information about land and water uses is collected to support the selection of remedial objectives (ROs). The objective of the RI is to provide sufficient information to identify and characterize the site so an appropriate remedial action (cleanup method) can be developed in the FS phase.

The Land and Water Use Study (Appendix A) presents current and reasonably foreseeable uses of land and water within and in the vicinity of the Site, using information gathered from discussions with stakeholders including property owners, water providers, municipalities, and well owners.

The RO Report is prepared by ADEQ. The RO Report identifies remediation (cleanup) goals which will:

- protect against the loss or impairment of existing land or water uses,
- restore, replace or otherwise provide for each listed use;
- establish time frames when action is needed to protect or provide for the use; and
- identify the projected duration of the needed remedial actions.

The RO Report includes an evaluation and interpretation of information obtained from the Land and Water Use Study and reflects public input obtained during the comment period and public meeting. The Final RO report is Appendix B of the Final RI Report. The FS will be conducted after the Final RI Report is issued. The FS will identify proposed remedies that are capable of achieving the remedial objectives and will select a preferred remediation methodology. The preferred remedy will:

- Assure the protection of public health, welfare, and the environment;
- To the extent practicable, provide for the control, management, or cleanup of hazardous substances so as to allow for the maximum beneficial use of waters of the state;
- Be reasonable, necessary, cost-effective, and technically feasible; and
- Identify any well that either supplies water for municipal, domestic, industrial, irrigation, or agricultural uses or is part of a public water system, if the well would now or in the reasonably foreseeable future produce water that would not be fit for its current or reasonably foreseeable end use without treatment.

The FS will include the evaluation of a Reference Remedy, and at least two Alternative Remedies. The FS will identify remedial strategies and develop the remedial measures to be employed by each strategy. A remedial strategy may be plume remediation, physical containment, controlled migration, source control, monitoring, natural attenuation or no action. A comparative evaluation of the remedies including practicality, risk, costs, and benefit, as well as consistency with water provider plans, will be included in the FS.

Following completion of the FS Report, ADEQ will prepare a Proposed Remedial Action Plan (PRAP) identifying the proposed preferred remedy. The PRAP will describe how the proposed remedy will meet each of the remedial objectives identified in the Final RI Report and how accomplishment of the ROs will be measured. The PRAP will also include an estimated cost of the proposed remedy.

After conclusion of all required public comment periods, ADEQ will issue a Record of Decision (ROD). The ROD will include a description of the remedy, a summary of comments received on the PRAP and a demonstration that the remedy meets the remedial objectives and will remain in place as long as necessary to ensure continued achievement of those objectives. The ROD will also include time frames for implementing and completing the remedy and the total estimated cost of the remedy.

4.0 PHYSICAL CHARACTERISTICS OF THE SITE

4.1 Regional Geology

The 56th Street and Earll Drive WQARF Site is located within the Basin and Range physiographic province in central Arizona. The Site, which includes the former Motorola 56th Street facility (Facility), is located within the lowermost portion of the topographic swale between Camelback Mountain and the Papago Buttes, near the eastern margin of the West Salt River Valley sub-basin of the Salt River Valley. The Salt River Valley is a large geologic basin filled with sedimentary deposits. Based on data compiled by the ADWR for a regional groundwater model (Corkhill and others, 1993), the basin-fill deposits are characterized in most areas by (a) a lower unit consisting mainly of conglomerate and gravel, (b) a middle unit consisting predominantly of silt and clay, and (c) an upper unit consisting mainly of sand and gravel. ADWR defined these hydrogeologic units using data on particle-size and lithology, where available. The three units are characterized by unique hydraulic properties and were subdivided into three hydrogeologic units for hydrogeologic modeling purposes. The three hydrogeologic units, in ascending order, from the ADWR study are as follows: the Lower Alluvial Unit or LAU, the Middle Alluvial Unit or MAU, and the Upper Alluvial Unit or UAU. The west sub-basin consists of westward thickening sequence of Quaternary alluvial and colluvial sediments. Alluvium is loose, unconsolidated soil or sediments that have been eroded and redeposited in a non-marine setting. Alluvium typically consists of a variety of materials, including fine particles of silt and clay and larger particles of sand and gravel. Colluvium is a general name for loose, unconsolidated sediments that have been deposited at the base of slopes such as by rainwash, sheetwash, downslope creep, or a combination of these processes (US Geological Survey 2013, 2015). Alluvial-colluvial deposits are common throughout the region.

4.2 Local Geology

Geologic and hydrological data from hundreds of monitor wells were reviewed as part of an investigation into the subsurface geology and its influence on groundwater flow in the eastern edge of the West Salt River Valley (Reynolds and Bartlett 2000), primarily for the 52nd Street Superfund Site, but including portions of the adjacent 56th Street and Earll Drive WQARF Site area. This additional analysis conducted by Dr. Stephen Reynolds (Department of Geological Sciences, Arizona State University) and Doug Bartlett (Clear Creek Associates) of well boring logs, cores and cuttings in and in the vicinity of the Site identified three kinds of unconsolidated sediments in the Site area: Basin Fill, Salt River Gravels, and uppermost alluvium. These three locally identified hydrostratigraphic sub-units are all part of what is identified as the UAU in the regional geologic setting. The three alluvial sub-units together fill the Phoenix basin extending west from the Papago Park area, immediately to the south southeast of the Facility, deepening toward the west. To be consistent with prior reports, the term “alluvium” has been used in this and other documents to describe the alluvial sub-units overlying bedrock. The alluvium is considered a single layer and is underlain by Tertiary and Precambrian bedrock where shallow bedrock is encountered in the eastern part of the Site. The bedrock consists of Precambrian granites and metarhyolites, Tertiary volcanics and arkosic sandstone.

The Basin Fill consists of slightly to moderately consolidated sandy and silty sediments and was deposited on top of the Tertiary and Precambrian bedrock units. Only the Basin Fill and uppermost alluvium units underlie the Facility and the majority of the Site. At the westernmost portion of the Site, but absent from the actual Facility area, the Basin Fill is overlain by very coarse, unconsolidated gravels,

consisting of pebbles, cobbles, gravels, and boulders in a sandy matrix. This unit represents older channel deposits of the Salt River and is, therefore, named the Salt River Gravels. The youngest unit in the Site area is the uppermost alluvium and consists of silt, sand, and minor amounts of gravel. Only the Basin Fill is saturated throughout the majority of the Site. Farther to the west, near the western boundary of study area for the Site, saturated Salt River Gravels are encountered. Although the Salt River Gravels and Basin Fill have differing hydrogeologic properties based on the differences in lithology, they are in hydraulic communication.

4.3 Local Hydrogeology

As noted above, saturated Salt River Gravels are absent from the majority of the Site. Therefore, two distinct geologic units have been described as the primary water bearing formations in the Site area. These include the unconsolidated alluvium (unconsolidated Basin Fill) and bedrock. The bedrock consists of Precambrian metarhyolite and granite as well as Tertiary volcanics and indurated sediments. Previous investigations have demonstrated that groundwater and contaminants can move between the alluvium and bedrock under certain conditions. Because these geologic units interact hydraulically and chemically, they have been classified in previous reports including the Motorola 52nd Street Superfund Site Operable Unit 1 Effectiveness Report (Dames & Moore, 1993) as the alluvial-bedrock aquifer system. Unlike alluvium, however, bedrock is not sufficiently permeable to yield usable quantities of water. Therefore, the alluvium and the bedrock are referred to as separate hydrologic units in many of the references.

The Facility is underlain by gravelly sandy clayey alluvial/colluvial deposits and bedrock. Depth to bedrock in the vicinity of the Facility is about 12 to 100 feet. From early investigations, depth to water beneath the Facility was estimated at between 11 and 19 feet. The saturated thickness of alluvium ranged from less than 10 feet in the eastern portion of the property to more than 70 feet in the southwestern portion of the property. Preliminary estimates of water on site prior to 1962 suggest shallow groundwater conditions beneath the Facility may have resulted from irrigation of the golf course immediately to the east of the Facility and from seepage of the unlined Arizona Canal, about one-half mile to the north. Early estimates of the alluvium parameters include a porosity of 0.28, a hydraulic conductivity range of 30 to 45 feet per day, and a gradient of 0.006 feet per foot.

Due to cementation, the primary permeability of the bedrock matrix can be quite low. The porosity of the bedrock is related to the frequency of fractures and vugs in the rock. The hydraulic conductivity depends on the interconnection of these fractures. The hydraulic conductivity for the bedrock was assumed to range from 0.002 to 0.05 feet per day based on hydraulic conductivity values for bedrock in the vicinity of Papago Buttes. Contaminants migrating in fractures can diffuse out of a fracture and into the surrounding bedrock matrix. The extent of this diffusion is affected by the degree of cementation of the bedrock matrix, but the diffuse contaminants will act as a continuing source of contamination as the VOCs slowly diffuse back into the groundwater within the bedrock fractures.

Historic groundwater elevation data show groundwater flow to the west southwest. Historic land use may have affected groundwater flow conditions in the area. Almost the entire area had been in citrus production until urbanization. To alleviate high groundwater problems in the citrus groves, SRP installed a drain field in the 1920s to lower water levels. According to SRP, this drain field was installed as part of an effort to lower the water table in an area from 56th Street west to the OCC (48th Street) and from Earll Drive north to the Arizona Canal. The drain field is believed to consist of a series of four parallel

buried pipe lines draining from east to west and discharging to the OCC. SRP reports these drains consist of 8-to 10-inch diameter perforated pipe packed in gravel and placed in ditches at 12 to 14 feet deep. The outlet was identified by Dames & Moore in the east bank of the OCC. In October 1989, discharge from this feature was estimated at 20 gallons per minute (gpm). The southernmost drain is located between the north boundary of the Facility and Cheery Lynn Road. The OCC flows from north to south about one mile west of the Facility and is used to carry flood waters, although it was used in the past to transfer water from the Arizona Canal to the Grand Canal. The OCC was unlined for many years. The bottom of the Arizona Canal west of 56th Street was lined in 1945 and the banks were lined in 1950; the bottom of the Arizona Canal to the east of 56th Street was lined in 1962 and banks were lined in 1982. SRP reports pumping irrigation wells located near 48th Street and Indian School Road to lower the water table in this area (Dames & Moore, Stage III Report, 1990).

There are several northwest-southeast trending bedrock ridges to the west of the Facility. These ridges are the result of normal faulting in the Precambrian bedrock and fault block tilting. These ridges affect groundwater flow and contaminant plume migration in the area. One bedrock ridge underlies the 52nd Street and Thomas Road area. At this location, the saturated thickness of the alluvium is greatly reduced. There are several other less prominent northwest-southeast trending ridges to the west including near wells DM-26 and DM-24, DM-23 and DM-21, and DM-28. The topography of the bedrock has a significant localized influence on VOC transport. In the area, VOC concentrations tend to be higher in the alluvium-bedrock interface. A contour map of the top of bedrock surface is presented on Figure 6. A cross-section of the Site extending from east of the facility to the southwest through the furthest west monitor wells is shown on Figure 7. A cross-section perpendicular to the plume through the extraction and monitor wells on the Grand Canal is shown on Figure 8. The cross section figures show the well locations, bedrock surface and the water table observed in October 2016.

In the southwestern portion of the Site, localized groundwater flow and contaminant migration is influenced by a localized bedrock high encountered in the vicinity of well DM-42. More regionally, groundwater flow in this area is further influenced by a bedrock high within the Operable Unit 2 (OU2) Area of the Motorola 52nd Street Superfund Site located to the south. The northern extent of what is identified as the Honeywell Ridge (GHD, 2017) lies to the south of well DM511 which is within the OU2 area southwest of well DM-42. Heterogeneities may have resulted in the alluvial sediments as they were deposited in the areas around these bedrock highs. Alluvial groundwater in the OU2 Area is re-directed to the northwest around the Honeywell Ridge and then westerly as it flows in the gap between the Honeywell Ridge and the bedrock high encountered near well DM-42. The net effect of this more regional bedrock /alluvium geometry is that the leading edge of the plume at the Site has been re-directed in a more westerly direction than is observed in up-gradient portions of the Site.

Figure 9 shows groundwater elevations and contours from October 2016. The groundwater contours on Figure 9 show groundwater flowing to the west-southwest and that a cone of depression has developed around the extraction wells on the Grand Canal intercepting the observed contaminants in groundwater.

4.4 Climate

The climate in the eastern Phoenix metropolitan area, including the area of the Facility, is generally that of an arid desert environment. The expected (average) high temperature in winter is 75°F and in summer, 107°F. The expected (average) low temperature in winter is 40°F and 80°F in the summer. The wind speed averages 2-15 miles per hour and the wind direction is predominantly from the south. The

wind direction is typically easterly in the mornings and westerly in the afternoons. The average annual rainfall precipitation total at Phoenix Sky Harbor International Airport is 7 inches (National Weather Service, 2016).

5.0 CURRENT LAND AND WATER USE

The Facility property is now the Great Hearts Academy charter school. This site has been investigated and remediated by NXP and previously by Freescale and Motorola since 1985. Freescale was a spinoff of Motorola's Semiconductor Product Sector. Freescale was incorporated on December 3, 2003 under the name SPS, SpinCo., Inc. On February 13, 2004, SPS, SpinCo., Inc. changed its name to Freescale Semiconductor, Inc. Pursuant to an agreement between Freescale and Motorola, Freescale assumed the obligations of Motorola for the purposes of the investigation and remediation of the Site. NXP Semiconductors N.V. acquired Freescale by a merger finalized on December 7, 2015 and the name change to NXP USA, Inc. was effective November 7, 2016. NXP has assumed Freescale's (and Freescale's predecessor Motorola) responsibilities with respect to remediation of the Site.

A Land and Water Use Study Report was prepared as part of the Remedial Investigation (RI) of the Site (see Appendix A). The Land and Water Use Study presents a summary of current and anticipated potential future uses of land and water within the Site area. The study is intended to be a summary compilation of information gathered from primary property owners, water providers, municipalities, and well owners of public water supply wells. In general, the study does not discriminate between reasonably foreseeable uses and other uses that are identified.

The identification of land and water use included the review of planning documents, reports, State agency databases, and consultation with water providers, property owners, and stakeholders pertinent to the Site. The ADWR database on registered groundwater wells and water rights information was also reviewed to obtain information about current and future use of groundwater in the area. City of Phoenix land use and zoning information was reviewed for current and proposed future use and development. The current land owner of the Facility was contacted regarding current use and future planned use.

5.1 Land Use

The Facility is currently used as a charter school and is expected to remain as such for many years. The remaining typical land use in the study area boundary is primarily residential, light commercial, retail, schools, restaurants, and office buildings. The area is nearly fully developed and no major land use changes are expected.

5.2 Groundwater Use

Groundwater wells are registered with the ADWR. Groundwater use in the area is limited to withdrawal by the extraction wells as part of the remediation project and some minor private wells located outside the plume that are used for flood irrigation. The City of Phoenix does not use groundwater from wells in this area as a source of drinking water. Salt River Project has three irrigation supply wells in the Land and Water Use study area. These wells are not impacted by COCs and are occasionally pumped to produce groundwater which is discharged into the various laterals feeding the Grand Canal or directly to the Grand Canal where the groundwater is blended with surface water in the canal. The water is currently used for agricultural and urban irrigation and aquifer recharge purposes and meets the water quality standards for such purposes. Two of the wells (SRP 18.5E-7N on 44th Street north of Thomas Road and SRP 18E-5N on the Grand Canal west of 40th Street) are located cross-gradient from the identified plume. The third well, SRP 16.9E-6N on McDowell Road west of 32nd Street, is currently outside of and cross-gradient of the identified plume; however, extended operation of this well could

alter upgradient flow paths to a sufficient degree to represent a potential future risk to the well. As discussed further in Section 10.0, protection of this well is one of the reasons an ERA has been implemented at the Site.

5.3 Surface Water Use

Surface water in the area is limited to concrete-lined canals. There is no perennial flow and there are no ponds or lakes. There is occasional surface water flow in drainages as a result of storm water runoff such as to the landscaped-covered greenbelt of the OCC along 48th Street and to the north of McDowell Road.

6.0 FACILITY HISTORY

The Facility is located at 3102 North 56th Street, Phoenix, Arizona, within the boundaries of the Site (Figure 1). The Facility consists of an approximately 14-acre parcel on the northwest corner of 56th Street and Earll Drive and includes four buildings, parking lots, and landscaped areas (Figure 2). This section presents a history of development and usage of the Facility, as well as an identification of potential source areas based on reports by Dames & Moore (1985a,b) and Kary (1985). These reports are summarized in the Investigation Summary Report (ISR) (Clear Creek Associates, 2011) submitted to ADEQ in August 2011 detailing the historical remedial investigations at the Site. Attachment A, Stage I Investigations Report, provides figures showing Facility development, source locations (Attachment A, Stage I Investigation Report, Figure 2) (reproduced and shown as Figure 4, Locations of Disposal Methods, in this report), and data from early investigations.

6.1 Historical Operations

The Facility was first occupied in the spring of 1950 by Motorola Inc. as a research and development operation and was used for a variety of product development, manufacturing, and testing operations until 1982. As products became successful, these product lines were transferred to other facilities for routine production. After 1982, manufacturing operations were discontinued and the Facility was redeveloped for office uses. Starting in 1984, investigations were conducted at the Facility to determine if the soils and groundwater in the area were contaminated. As discussed in Section 7.0, a variety of source removal and remediation activities were conducted at the Facility over time. The Facility was vacated by Motorola and sold to developers in 2005.

Prior to 1950, the property was used for agricultural purposes. The Facility was initially constructed in 1950 and occupied a single 40,000 square foot (sf) building. The Facility was then known as the Western Military and Electronics Center (WMEC). The WMEC was a research facility and was used for electronic research, bench-type electronics and electronic assembly, some of which used solvent degreasers and soldering metals. Solvents and metals used for bench-type electronics and electronic assembly included: alcohol, acetone, TCE, solder flux, tin, lead, and copper.

From 1951 through 1956, bench type electronics, assembly and piece part plating activity continued and semiconductor crystal growing activity started. Acids, solvents and metals used in association with these activities included: beryllium, cyanide, nickel, gold, silver, cadmium, chromium, nitric acid, phosphoric acid, acetic acid, sulfuric acid, hydrochloric acid, chromic acid, xylene, ferric chloride, freon, carbon tetrachloride, alcohol, acetone, and TCE. From 1951 through 1956, acids, solvents and metals used in the semiconductor assembly activity included: nitric acid, hydrofluoric acid, acetic acid, acetone, alcohol, xylene, TCE, germanium, indium, gallium, arsenic, boron, sodium hydroxide, potassium hydroxide, and freon. In 1954, three buildings were added and the Facility nearly doubled in size. In 1957, the Facility supported Motorola's Government Electronics Division (GED) (Motorola eventually sold the Government Electronics Division to General Dynamics), a continuation of WMEC, and that continued through 1970.

In 1957-1958 the semiconductor operations moved to Motorola's 52nd Street facility. From 1959 through 1961, the Facility was also used for document storage. From 1962 through 1970, Motorola's GED and Solid State Systems Division were at the Facility. From 1957 to 1970, assembly of circuit boards, plating, and degreasing operations at the Facility used copper, cyanide, nickel, gold, silver,

cadmium, chromium, nitric acid, phosphoric acid, acetic acid, sulphuric acid, hydrochloric acid, chromic acid, xylene, ferric chloride, alcohol, acetone, freon, TCE, solder flux, tin, lead, copper, and PCE.

In 1971-1972 Westinghouse leased part of the Facility. From 1971 through 1974, Time Piece and Business Systems operations established by Motorola were at the Facility. From 1970 to 1974, Time Piece and Business Systems at the Facility used ferric chloride, TCE, and freon. In 1974, the use of TCE was discontinued and substituted by the use of 1,1,1-trichloroethane (TCA). From 1975 through 1979, Liquid Crystal and Microsystems operations established by Motorola conducted development and assembly operations at the Facility. From 1975 to 1979, liquid crystal development at the Facility used hexane, alcohol, tetra ethyl ortho silicate, acetone, hydrochloric acid, indium butyl acetate, potassium hydroxide, and platinum. From 1980 through 1982, Microsystems performed circuit board assembly at the Facility which involved the assembly of circuit boards and included the use of TCA, freon, and PCE.

In 1982, the Facility was converted to office space and all electronic manufacture and assembly at the Facility ceased. Motorola sold the Facility in September 2005.

6.2 Contaminants of Concern and Contaminants of Potential Concern

ADEQ's Remedial Projects Unit letter to NXP defined Contaminants of Concern (COCs) as "contaminants above an Aquifer Water Quality Standard (AWQS)" and "Contaminants of Potential Concern (COPCs) are contaminants that have historically been detected, but are now non-detect or below an applicable AWQS" (ADEQ, 2016).

Early Facility and Site investigations identified a number of COPCs at the Site. Analytical results of groundwater samples from beneath and downgradient of the Facility indicated the presence of 1,1,1-trichloroethane (TCA), 1,1,2-trichloro-1,2,2-trifluoroethane (freon 113), tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethylene (1,1-DCE), trans-1,2-dichloroethylene (t-DCE), fluoride, and arsenic. Historical analytical results of soil vapor samples from beneath the Facility indicated the presence of freon, TCA, TCE, and PCE. Historical analytical results of soil samples from the Facility indicated the presence of bis (2-ethylhexyl) phthalate and di-nibutyl phthalate, methylene chloride, acetone, copper, mercury, and gold. The phthalates are plasticizers and considered common laboratory contaminants. Methylene chloride was not used on site so its presence is also believed to be from the laboratory. Acetone was reportedly disposed of on-site but its presence was limited to a single boring on-site which may have been the result of that disposal.

With regard to inorganics, Motorola conducted an inorganics investigation at the Site in the early 1990s at the request of ADEQ. Dames & Moore evaluated inorganics in historical groundwater data and determined that only three constituents – arsenic, fluoride, and nitrate – exceeded the then-current EPA Maximum Contaminant Level (MCL). After evaluating those constituents in depth, Dames & Moore concluded that the Facility was unlikely to be a source of elevated concentrations of any of those three inorganics in groundwater downgradient of the Facility (Dames & Moore, 1997a).

The COCs for the Site are shown on Table 4. The list of COPCs for the Site is provided in Table 5. For each COC and COPC, the table includes the number of samples analyzed, the number of detections, the number of results above the AWQS (if one exists), and a notes field with additional information. Only TCE and PCE are considered COCs at the Site with verifiable monitoring data above their respective AWQS. Table 6 includes additional chemicals analyzed in the past but not detected and, therefore, not considered COCs or COPCs.

6.2.1 VOC Constituents

With the exception of vinyl chloride in bedrock discussed below, only TCE and PCE have exhibited concentrations above their respective AWQSs since the 1990s. Accordingly, TCE and PCE are considered COCs at the Site. Historical data are available for additional VOC compounds that are considered COPCs. Twenty-six of these parameters have an AWQS. Of these 26 constituents only nine (1,1,1-trichloroethane, 1,1-dichlorethene, cis-1,2-dichloroethene, vinyl chloride, benzene, methylene chloride, toluene and chloroform) have ever had sample results that exceeded the AWQS.

<u>1,1,1-Trichloroethane</u>

1,1,1-Trichloroethane was detected above the AWQS in only one of the of the 2497 samples for which it was analyzed. TCA has not been detected in any samples since 1996. TCA transforms to 1,1,-DCE in water and is not expected to occur based on observed groundwater conditions. Since TCA is not detected above AWQS, it is not considered a COC.

<u>1,1-Dichloroethene</u>

1,1-Dichloroethene was detection above the AWQS in 23 of the 2497 samples for which it was analyzed. The last exceedance was in 1997 in well DM-15-070. For the last five years DCE has only been detected in two wells, DM-09 and DM-26. In 2016 DCE was only detected in DM-26 (0.79µg/L in October 2016). Since DCE is not detected above the AWQS, it is not considered a COC.

<u>Cis-1,2-Dichloroethene</u>

Only three samples of 2448 samples analyzed for cis-1,2-dichloroethene exceeded the AWQS. The last time an exceedance was observed was in well DM-15-070 in 1995. The absence of cis-1,2-DCE is an indication that no significant natural biodegradation is occurring at the Site. Since cis-1,2-DCE is not detected above the AWQS, it is not considered a COC.

<u>Vinyl Chloride</u>

Vinyl Chloride was analyzed for in 2485 samples of which 27 exceeded the AWQS. Most of the exceedances occurred in bedrock wells. The last exceedance in an alluvium well was observed in 1999. Over the last five years, there have been only two detections of vinyl chloride above the AWQS in two different sampling ports in a single Westbay monitoring well. The sample from DM-15-105 exceeded the AWQS in 2016. The sample from DM-15-207 exceeded the AWQS in 2015 but was non-detect in 2016. All other results for the last 5 years from these two sampling ports plus sampling ports DM-15-070 and DM-15-135 were either non-detect or detected below the AWQS. The absence of vinyl chloride is attributed to generally aerobic groundwater conditions and the absence of any significant natural biodegradation at the Site. Since there are no recent confirmed detections of vinyl chloride above the AWQS, it is not considered a COC.

<u>Benzene</u>

Benzene was detected above the AWQS in four of the 96 samples for which it was analyzed. Three of the samples were collected from a well located at the former Mobil station located north of the Site at 56th Street and Indian School. This location is approximately a quarter mile north of the Facility, up-gradient and somewhat off-gradient from the Facility, and therefore cannot be attributable to the Site. Benzene was detected above the AWQS at 9.6 ug/L (micrograms per liter) in one sample collected from monitoring well DM-12OW1 in November 1996. The results from samples collected in other wells upgradient and

downgradient, both before and after November 1996, do not indicate that the concentration observed in well DM-12OW1 were anything but anomalous and benzene is not considered a COC.

Methylene Chloride

Methylene Chloride, a common lab contaminant, was analyzed for in 1,260 samples from the Site's monitor wells resulting in 11 detections. Of those detections only four were above the AWQS, once each in four different wells (COP-52, DM-06, DM-15-070 and DM-22-138). Non-detections for Methylene Chloride in these wells, before and after the observed exceedance, indicate that these results are either anomalous or lab contamination. Methylene chloride is commonly used in analytical laboratories and is often identified as a laboratory contaminant in analytical samples. Methylene chloride is considered to be a laboratory artifact and not a COC.

Toluene

Toluene was detected above the AWQS only one time. This result occurred at the Mobil well located north of the Site. This location is approximately a quarter mile north of the Facility, up-gradient and somewhat off-gradient from the Facility, and therefore cannot be attributable to the Site and is not considered a COC.

Chloroform

Chloroform, another common lab contaminant, was analyzed for in 1,278 samples but had only one exceedance of the AWQS for Total Trihalomethanes which includes the sum of bromoform, chloroform, bromodichloromethane and dibromochloromethane. The exceedance was observed in well DM-15-070 in September of 1996. Seven subsequent sample results for chloroform collected from well DM-15-070 are all less than the detection limit or less than the AWQS and therefore chloroform is not considered a COC.

There are 17 constituents listed in Table 5 that do not have an AWQS. The results for these constituents were mostly non-detect with relatively few results above the detection limits.

6.2.2 Inorganics Constituents

Inorganic constituents which have historically been analyzed as part of the 56th Street facility investigation are listed on Tables 5 and 6. Only eight of the constituents historically sampled for have an observed exceedance of an AWQS: Arsenic, Beryllium, Chromium, Cyanide, Fluoride, Lead, Nitrate, and Nitrate+Nitrites. As discussed below, these constituents are considered COPCs at the Site.

Arsenic

Motorola conducted a thorough inorganics investigation at the Site in the 1990s at the request of ADEQ. Dames & Moore evaluated inorganics in historical groundwater data and determined that only three constituents – arsenic, fluoride, and nitrate – were selected for further investigation primarily based on the number of samples that exceeded the then-current AWQS. After evaluating arsenic concentrations in depth, Dames & Moore concluded that the Facility was unlikely to be a source of elevated arsenic concentrations in groundwater downgradient of the Facility. This conclusion is based on the following factors: 1) the small amount of arsenic believed to have been previously used at the facility; 2) the lack of correlation between the distribution of arsenic in groundwater in the Study Area versus the distribution of TCE; 3) the results of solute transport modeling which show limited transport distances; and 4) the presence of other possible sources, such as the use of agricultural arsenical pesticides in the area (Dames & Moore, 1997b). The results of this investigation indicate that arsenic is not a COC at the Site.

Beryllium

Of the 257 samples analyzed for beryllium, only one sample showed a detection. Beryllium was reported at 0.005 mg/L (milligrams per liter) in a sample collected from well DM-20-170 in June of 1993 which exceeded the AWQS for beryllium of 0.004 mg/L. Subsequent samples analyzed for beryllium were non-detect. Based on these results beryllium is not considered a COC.

Chromium

Groundwater samples from the Site have been analyzed for chromium in 377 samples. The results have shown chromium being detected in 31 samples and exceeding the AWQS of 0.1 mg/L in only three of those samples. The three exceedances were 0.11 mg/L and 0.1 mg/L collected from well DM-11 and 0.12 mg/L at well DM-22-098. Both wells have subsequent samples that were non-detect for chromium. Based on these results chromium is not considered a COC.

Cyanide

Cyanide has been detected in seven of 259 samples at the site. Only one sample exceeded the AWQS of 0.2 mg/L. The exceedance was observed in well DM-22-098 in 1994. Based on these results cyanide is not considered a COC.

Fluoride

Motorola conducted an inorganics investigation at the Site in the 1990s at the request of ADEQ. Dames & Moore evaluated inorganics in historical groundwater data and determined that only three constituents – arsenic, fluoride, and nitrate – were selected for further investigation primarily based on the number of samples that exceeded the then-current AWQS. After evaluating fluoride in depth, Dames & Moore concluded that the Facility was unlikely to be a source of elevated concentrations of fluoride in groundwater downgradient of the Facility. This conclusion is based on the following factors: 1) the small amount of fluoride believed to have been previously used at the facility; 2) the lack of correlation between the distribution of fluoride in groundwater in the Study Area versus the distribution of TCE; 3) the results of solute transport modeling which do not match the widespread distribution of fluoride; and 4) the presence of other sources such as leachate from the bedrock and the use of agricultural fluorine pesticides in the area (Dames & Moore, 1997b). Based on these findings fluoride is not considered to be a COC at the Site.

Lead

Lead was detected in 24 of the 271 samples in which it was analyzed. Only two of those samples exceeded the MCL for lead of 0.15 mg/L. The two exceedances were observed in wells DM-04 and DM-11 at 0.04 mg/L and 0.046 mg/L respectively. Both samples were collected in the 1980s and subsequent observations were non-detect. Based on these results lead is not considered a COC.

Nitrate (as N)

Motorola conducted an inorganics investigation at the Site in the 1990s at the request of ADEQ. Dames & Moore (1997b) evaluated inorganics in historical groundwater data and determined that only three constituents – arsenic, fluoride, and nitrate – were selected for further investigation primarily based on the number of samples that exceeded the then-current EPA Maximum Contaminant Level. After evaluating nitrate in depth, Dames & Moore concluded that the Facility was unlikely to be a source of elevated concentrations of nitrate in groundwater downgradient of the Facility. This conclusion is based

on the following factors: 1) the small amount of nitrate-bearing chemical believed to have been previously used at the facility; 2) the relatively low nitrate concentrations in the groundwater downgradient of the facility; 3) elevated background concentrations of nitrate in groundwater in the Study Area; 4) the results of the solute transport modeling which do not correlate to observed concentrations; and 5) the presence of other likely sources, such as leaking septic systems and past agricultural practices (Dames & Moore, 1997b). Based on these findings nitrate is not considered to be a COC at the Site.

Nitrate + Nitrite (as N)

Nitrate + Nitrite (as N) was analyzed in 34 samples in the fall sampling round of 1997. Normally only nitrate was analyzed, however nitrate +nitrite (as N) was reported in this one sampling round. One additional sample for nitrate + nitrite (as N) was analyzed in a 2009 sample from well DM-31. Of the 35 samples, all but three showed a detected concentration, but of those 32 detections only five were above the AWQS of 10 mg/L for nitrate. Due to the limited data and since Nitrate (as N) has been much more extensively evaluated and is not considered a COC, nitrate + nitrite (as N) is also not considered a COC.

6.3 Potential Facility Source Areas

In 1985, in response to the discovery of soil and groundwater contamination at its 52nd Street facility (part of the Motorola 52nd Street Superfund Site), Motorola initiated investigations at several additional facilities including the former 56th Street facility. Initial investigations determined that groundwater underlying the Facility was contaminated with chlorinated solvents.

Investigation at the Site began in February 1985 to evaluate whether groundwater contamination existed beneath the Facility and if so, to conduct an assessment of on-site contaminant sources, estimate the degree of contamination of groundwater on-site, and evaluate whether off site groundwater contamination may have been caused by operations at the Facility. This Stage I investigation (Dames & Moore, 1985a) included an investigation of potential source areas at the Facility based on a source study of historical facility operations prepared by Raymond E. Kary, Ph.D. entitled “Chemical Disposal Methods Report to Motorola Inc., 56th Street Facility, Phoenix, Arizona” dated September 1985 (Appendix A to the Stage I Report, Dames & Moore, 1985a).

The potential source areas investigation is a summary of chemical disposal methods which were identified (see Attachment A) as part of the Kary (1985) report. The Stage I investigation identified sources based on disposal methods along with other sources from the early soil-gas investigations. The identified sources based on disposal methods were dry wells, concrete tanks, sewage leach fields, grease pits, and shallow holes which were presented as Figure 2 in the Stage I Report. This figure is reproduced for this report also as Figure 4, Locations of Disposal Methods. In the Stage I Report, 11 disposal methods or sources were identified:

Source 1 - Dry wells south of Building #1

Source 2 - Acid treatment discharge west of Building #1

Source 3 - Dry wells/grease pits northwest of Building #1

Source 4 - Sewage leaching field north of Building #2

Source 5 - Dry wells east of leach fields north of Building #1

Source 6 - Dry wells west of Building #2

Source 7 - Sewage leaching field northwest of Building #3

Source 8 - Shallow holes north of Building #1

Source 9 - Sewer connection

Source 10 - Freon reclaim system

Source 11 - Buried waste solvent and acid treatment tanks north of Building #2

Of the 11 sources or disposal methods, sources 3, 6, 9, 10, and 11 resulted in little or no chemical discharges to the environment. Disposal method/source 2, a neutralized acid (water) discharge, was inconsequential. The remaining disposal methods/sources 1, 4, 5, 7, and 8 involved the discharge of solvents to the environment. Dr. Kary (1985) provided potential worst-case source estimates based on interviews and conservative assumptions of discharge volumes based on operational history since no written records were available. The interviews indicated that production levels varied considerably over the years depending on the processes at the Facility. In all cases of the waste disposal estimates, Kary assigned a discharge percentage and assumed that the production level was high for that type of activity so the waste volume estimates are also high. The quantities discharged represent a maximum quantity discharged based on available information and are to be considered an unlikely worst case scenario.

Kary (1985) noted that solvents and other contaminants were probably discharged to the soil or groundwater via sewage leach fields, dry wells, and shallow hand-dug holes between 1950 and 1971. A total of about 17,500 gallons of solvents were estimated to have been discharged. The highest disposal rate was between 1954 and 1957. Eleven disposal methods for solvents and/or metals were utilized between 1950 and 1982. Six of the disposal methods resulted in the known discharge of solvents and/or metals to the environment. All process discharges at the facility were to dry wells or sewage leach fields until the Facility was connected to the City of Phoenix sewer system in 1962. From 1950 to 1954, the estimated rate of solvent disposal was approximately 730 gallons per year. With the three buildings added in 1954, production activity increased and an estimated 2240 gallons per year were disposed from 1955 through 1959. Reclamation of freon also began in 1954 and continued through 1982. Activity at the facility decreased from 1959 to 1961 and processes moved to other facilities so the estimated amount of disposal dropped to about 200 gallons per year during this period. It is also reported that when the Facility was connected to the City sewer in 1962 and spent solvents began to be collected in 55-gallon drums, the solvents were then poured into shallow holes (identified as Source 8). This is the only known point of discharge source from 1961 and 1971. Off-site reclamation of solvents other than freon began in 1972. Solvents were collected in two underground storage tanks from 1974 through 1978. The two underground storage tanks were abandoned in 1978 and removed in 1980. Solvents were stored in 55-gallon drums for reclamation from 1972 to 1974 and 1979 through 1982 (Dames & Moore 1985a).

These potential sources were further investigated by soil, soil gas, and groundwater sampling described in Section 7.1 (Investigations). As described in Section 7.3 (Remediation Activities), remedial actions were implemented to address the on-site source areas. The dry wells were abandoned. Motorola implemented soil vapor extraction activities to remediate, prior to the excavation and removal of, additional identified sources of contamination along the northern side of the property at the Facility in 1996. In response to Motorola’s source excavation and soil vapor extraction activities, ADEQ concurred with Motorola’s conclusion that no further remedial action for soils was needed. Although an official No

Further Action letter was never issued by ADEQ, in a comment letter dated July 10, 1997, ADEQ stated "no further remedial action for soils was needed unless new data becomes available that warrants further investigation or remediation".

7.0 PREVIOUS INVESTIGATIONS AND REMEDIATIONS

Remedial investigations, including soil, soil gas, and groundwater investigations, were conducted in multiple phases over time. The early investigations were developed and implemented under the guidance and oversight of a stakeholder group that included representatives from the Arizona Department of Health Services (ADHS) (the predecessor to ADEQ), EPA, ADWR, SRP, the City of Phoenix and Motorola. Subsequent investigations were conducted under the oversight and direction of ADEQ.

For reference along with the summary of the investigation reports, Figure 3 shows the locations of the monitor and extraction wells installed as part of the RI and RA activities conducted over time at the Site. A summary of well construction information is included as Table 1.

7.1 Investigations

A phased program of investigation was used to evaluate whether soils and groundwater contamination existed beneath the Facility. The consulting firm of Dames & Moore, located in Phoenix, Arizona was contracted by Motorola to conduct the investigations. An oversight committee oversaw the design and implementation of the early phased investigations. The technical oversight committee included ADWR, ADHS, EPA, SRP and the City of Phoenix. ADEQ did not exist at this time.

The early investigations were implemented in various phases that were termed “Stages”. Four stages, termed Stage I through Stage IV, comprised the early investigation. The Stages included investigations of on-site soils plus on-site and off-site soil gas and groundwater investigations. The purpose of the early investigations were to determine if contamination existed at the Facility; evaluate potentials sources if contamination did exist; and evaluate the nature and extent of contamination from on-site sources. The investigations were conducted in stages so that each phase of the investigation could be tailored based on the findings from prior investigations until the nature and extent of contamination could be defined. These investigations along with ongoing monitoring and remedy-related projects are summarized in this report in general chronological order. Figure 4 in this report shows the disposal or source locations identified and further evaluated by the later investigations.

7.1.1 Stage I Investigation

The Stage I investigation began in February 1985. The purpose of the Stage I Investigation was to evaluate whether groundwater contamination existed beneath the 56th Street Facility and if so, to conduct an assessment of on-site contaminant sources, estimate the degree of contamination of groundwater on-site, and evaluate whether off site groundwater contamination may have been caused by operations at the 56th Street Facility. Besides the potential source areas investigation described in Section 5.3, above, this Stage I investigation included an on-site soil gas sampling investigation, on-site soil borings and sampling, and water quality sampling of on-site and off-site wells (installation and sampling of five on-site monitor wells [DM-1, DM-2A, DM-2B, DM-3 and DM-4], sampling two private off-site wells). This work was presented in the Report (Draft) Results of Stage I Preliminary Investigation Report (Dames & Moore, 1985a). Attachment A of this report includes tables and figures from the Stage I Investigation report to illustrate and summarize the findings of the Stage I investigation.

<u>Soil Gas Investigation</u>

The soil gas survey of the Facility was performed to confirm the existence and/or evaluate the probable

magnitude of suspected sources, and to delineate potential directions of contaminant migration to assist in siting monitor wells on site. The soil gas investigations in March 1985 included 24 sampling sites in a grid designed to cover the open areas of the property including the boundaries. Additional locations were added to delineate soil gas gradients in areas where high concentrations were observed. The soil gas samples were analyzed for TCE, PCE, TCA, and 1,1,2-trifluorotrichloroethane (freon). These constituents were selected for analyses because these solvents were known to have been used or disposed of on-site and were therefore considered indicators of the contaminant plume. The pattern of highest detected concentrations for TCE, PCE, and freon followed a northeast – southwest trend through the central portion of the site.

Sources confirmed by the sampling included the sewage leach field (Source 4), dry wells west of Building 2, underground solvent tanks (used from 1974 to 1978), dry wells south of Building 1, and an area of shallow holes (Source 8). The leach field (Source 7) was designated by Kary (Appendix A of the Stage I Investigation Report) as receiving the largest amount of spent solvents. However, soil gas concentrations were very low for all constituents at the sampling locations near leach field. The soil gas investigation revealed several anomalous findings and further investigations were recommended for: (1) an area where detectable freon (F-113) soil-gas concentrations were reported although freon was reclaimed after 1954 and no further discharges to the environment were reported; (2) low to non-existent soil gas concentrations near Source 8 which is reported to have been the discharge site of one third of the solvents at the facility; (3) the underground storage tanks (Source 11) is reported to not have leaked or discharged any solvents to the environment although soil-gas concentrations in this area are some of the highest observed on the site; (4) the leach field (Source 7) was reported to have received over one-third of the solvents discharged at the Facility but the soil gas data do not indicate that this area is a source.

Soil Investigation

The soil boring and sampling program was completed in March and April 1985. The objective was to (1) evaluate the probable lateral and vertical extent of “source contamination” within the alluvium near the suspected disposal locations, and (2) to supplement previous geotechnical work to develop stratigraphic cross-sections, define water table elevations, and estimate the depth to bedrock. Nine borings were drilled on site and soil samples were obtained for organic (by EPA methods 624/624) and metals analyses. Water levels were also measured from the boreholes. The boreholes were drilled to auger refusal, thereby penetrating the alluvium to the top of the bedrock. Depth to auger refusal ranged from approximately 15 to 83 feet from east to west across the property, more than 50 feet in the central portion of the property, and from about 20 to 30 feet at the eastern side of the property. The observed alluvium consisted mainly of gravelly clay or clayey silty gravel with some intervals of sand and gravel.

This information was used in determining the depth to bedrock topography of the site. The organic compounds detected in the soil borings included bis (2-ethylhexl) phthalate, di-n-butyl phthalate, acetone, and methylene chloride. The phthalates are plasticizers and considered common laboratory contaminants and were detected in all but one boring and were not useful in determining sources. Methylene chloride was not used on site so its presence is also believed to be from the laboratory. Acetone was reportedly disposed of on-site so its presence in one boring may be the result of that disposal. Several soil samples were taken from areas near known metal source areas. One sample was purposely taken away from source areas to serve as a background sample. One boring had high concentrations of copper and mercury, confirming the sewage leach field as a source (Source 7) where copper was known to have been disposed. Metals concentrations from other boreholes were not

significantly higher than the background sample so no further sources were confirmed or identified from the metals data. The data from two boreholes drilled by Western Technologies in 1982 near Source 4 were compared with the background sample. Copper and gold were noted in the samples, but only gold was high enough to indicate disposal.

Groundwater Investigation

Five groundwater monitoring wells were installed on site in May 1985. The purpose of the monitor well installation was to estimate levels of groundwater contamination from observed results at well locations, and to obtain additional information about the geology and groundwater flow directions. Three wells (DM-1, DM-2A and DM-2B) were installed near borings that had high soil gas concentrations or where the water sampled in the borings had high levels of TCE, TCA, and freon (F-113). Two wells (DM-3 and DM-4) were completed as shallow wells to provide additional information on the groundwater surface and water quality, as well as being located near other suspected sources. Geologic logs were completed to gain a better understanding of the geology and hydrogeology of the area.

Two off-site wells were identified as part of a well inventory within ½ mile of the site and were selected for sampling because of their proximity and relationship to the hydraulic gradient in the area. The wells were sampled and analyzed for VOCs by EPA methods 624/625. No detectable concentrations of compounds were found in either well. It was noted in the report that although the off-site wells that were sampled had not been impacted, the occurrence and extent of off-site contamination could not be confirmed from these results. Additional sampling of the on-site wells in June, July, and August 1985 yielded trace amounts of mercury and zinc in well DM-2A, and arsenic, zinc and copper in well DM-4. The water quality sampling results indicated that VOCs and semi-VOCs (primarily TCE, TCA, and PCE) were present in groundwater beneath the Facility. The pattern of contamination indicated that diffusion and dispersion of the contaminants in the groundwater had taken place since the disposal of solvents in the environment ceased in the 1970s. The low metals concentrations in groundwater indicated that metals disposed of on-site were essentially immobile and remained near the disposal locations.

7.1.2 Stage II Investigation

The Stage II investigation was initiated in October 1985 to investigate the extent of volatile organic compounds (VOCs) in groundwater to the west and southwest, or downgradient, of the Facility. The objective of the Stage II studies was to estimate the extent and movement of contamination off-site in the alluvium. During the Stage II Investigation six off-site wells were installed and sampled, on-site groundwater samples were collected, a well inventory was conducted, and off-site soil gas samples were collected. Results of the soil gas testing conducted in October and November 1985 were transmitted in a letter report “Stage II Soil-Gas Investigation” on December 4, 1985 with additional data from later November 1985 transmitted as “Analytical Results for November 1985 Sampling at 56th Street Facility”, on December 17, 1985. The soil gas sampling data results from off-site were used to determine locations for the installation of off-site groundwater monitor wells.

The soil gas investigation presented maps with data for freon (F-113), TCA, TCE, and PCE. Monitor wells DM-5, DM-6, and DM-7 were installed off-site and downgradient from the Facility. Water quality samples were collected from the on-site and off-site wells and analyzed for VOCs and semi-VOCs. TCE, TCA, PCE, and freon (F-113) were the most often detected in sampling. TCE was detected at the highest

concentrations and more frequently than the other compounds. The investigation confirmed the presence of VOCs in groundwater as beneath the plant site and extending off-site. The results of the soil gas and groundwater program were determined as inconclusive in satisfying the objective so additional wells were recommended to define the extent of groundwater contamination. A well inventory was also conducted to locate any unregistered wells that could provide a point of exposure to groundwater contamination.

Conclusions from the early Stage II investigations were that (1) disposal practices at the 56th Street Facility during its history as an active manufacturing and assembly plant resulted in the reported discharge of solvents to the environment, (2) the thickness of alluvial sediments is variable over the study area, (3) observed depths to water are 10 to 20 feet below land surface at the facility with flow to the southwest, (4) groundwater VOC contamination is present beneath portions of the plant site and contamination extends off-site, (5) TCE is the most often detected VOC, is detected at the highest concentrations, and is found off-site, (6) water quality and soil gas data indicate that groundwater contamination has migrated off-site to the southwest from the plant site, and (7) the present monitoring network does not provide enough data to estimate the boundary of the plume. In response to these findings, three additional wells (DM-8, DM-9, and DM-10) were installed to the west and downgradient in December 1986 and additional groundwater sampling at wells DM-1 through DM-10 was conducted.

Later Stage II tasks in 1988 included the objective to define the nature and extent of the groundwater contamination associated with the Facility further downgradient and to also evaluate the possible presence of contaminants within the bedrock. To address these objectives, task specifications were proposed for additional groundwater sampling, installation of a bedrock well (DM-11) on-site, and a cluster of alluvial wells (DM-12, DM-12-OW1, DM-12-OW2) to be added downgradient for monitoring and aquifer testing.

Partial Stage II findings were presented in a report entitled “Draft Progress Report Stage II” (Dames & Moore, October 3, 1986). A summary of the Stage II investigation results were later provided in a report entitled “Stage II Report” (Dames & Moore, 1988). A compilation of all Stage II documents entitled “Summary of Stage II Submittals” (Dames & Moore, 1992) was submitted to ADEQ in August 1992. This Summary of Stage II Submittals includes a summary list of select Stage I and Stage II activities related to the groundwater contamination investigations of the Motorola 56th Street site, and Task Specifications for additional wells as part of Stage III (Dames & Moore, 1992).

Attachment B of this report includes tables and figures from the Stage II Investigation reports to illustrate and summarize the findings of the Stage II investigation.

7.1.3 Stage III Investigation

The Stage III investigation was conducted in 1989-1990 to further define the nature and extent of groundwater contamination in alluvium from the Facility. This investigation was initiated in August 1989 and included: water quality sampling and measurement of water levels in existing monitor wells in June 1989, installation of a bedrock monitor well (DM-11) at the Facility in October 1989, installation of aquifer test pumping well DM-12 and observation wells DM-12OW1 and DM-12-OW2 in September 1989, completion of a 52-½ hour aquifer test in October 1989, water quality sampling in on-site and off-site wells (wells DM-1 through DM-12-OW2, and COP-52), and conducting two-dimensional (2D) groundwater modeling. The City of Phoenix was conducting an investigation of its Underground Storage

Tanks (USTs) at its Water Production Facility and maintenance yard at 52nd Street and Thomas Road in 1988 so some of these wells were added to the Site monitoring well network.

Additional geologic and hydrogeologic information was included in this Stage III report from the additional wells installed in various stages of the investigation and aquifer test data. This additional information included VOC data and contaminant plume modeling, and comparison of soil gas data with bedrock and VOC contaminant plume contouring. Also, additional information about historic land use that may have affected groundwater flow conditions in the area was noted including the drain field installed by SRP in the 1920s to lower water levels and that SRP reports pumping irrigation wells located near 48th Street and Indian School Road to lower the water table in this area. More of these details were included in this report under Section 2.0, General Geology and Hydrogeology of the Site.

Four rounds of water quality sampling were conducted during Stage III to increase the database. Samples were collected and all were analyzed for VOCs, and some rounds included inorganics. Additional sampling was conducted during the aquifer test. TCE, PCE, 1,1-DCE, chloroform, and Freon (F-113) were the contaminants that were most often detected during the Stage III sampling. TCA and PCE were less frequently detected than during the Stage I and II sampling rounds. TCE was detected in 39 of 42 samples. The highest concentrations were 230 ug/l in on-site well DM-2A and 500 ug/l in off-site well DM-6. Inorganic sampling was conducted in Stage III to (1) compare alluvial versus bedrock water quality and VOC contaminant plume versus background, (2) assess the potential for contamination of groundwater by inorganic constituents, and (3) to assist in defining the extent of the VOC contaminant plume. Water quality data confirmed that TCE is the primary contaminant detected in the groundwater. TCE concentrations were generally increasing in every well during Stage III analysis in comparison with previous sampling.

A northwest-southeast trending bedrock high was postulated near wells DM-6, COP-52 and DM-10 based on the relatively thin saturated thickness and the contaminant migration in the area. It appears to have retarded the flow of the contaminant plume, with possible periods where water levels were lowered and there was unsaturated alluvium over the bedrock ridge, thereby further constricting flow. The greatest concentrations were in off-site well DM-6 with 500 ug/l of TCE in November 1989. From review of the data and groundwater flow, it appeared that well DM-12 is located close to the center of the contaminant plume migrating downgradient of well DM-6. The bedrock monitoring well DM-11 was located near on-site wells DM-2A and DM-2B because the highest on-site VOC concentrations were measured at well DM-2 during Stage I. Well DM-11 was installed to allow an evaluation of potential VOC contamination in the bedrock of the Site. Hydrogeologic and water quality data indicated that the hydraulic connection between the alluvial aquifer and the bedrock is poor and VOC contamination has not migrated into the bedrock at that location. Concentrations of major ions and metals were also different in well DM-11 from the nearby alluvial aquifer well. Migration into the bedrock is not likely because of the apparently small hydraulic gradient between the alluvial aquifer and the bedrock at well DM-11. Concentrations of most inorganic constituents were much lower in groundwater in the bedrock than in the alluvial aquifer.

Stage III also included groundwater modeling to define the magnitude and extent of the groundwater contamination. Based on the modeling analyses, it was concluded (1) that the observed TCE distribution cannot be explained by modeling conducted to date (even with the use of a small effectively decaying TCE source which continued to the present [1989] the modeling produced a predicted plume that does not compare favorably with existing water quality data); and (2) TCE releases occurring prior to 1975

were assessed using the model but produced predicted plumes that could not be verified with observed data because of a lack of water quality data southwest of the area where the monitor wells were located. The modeling, although not as successful at predicting the extent of contaminant migration, was useful in identifying potential alternative explanations to VOC contamination in groundwater from the Facility. It was concluded that the history of groundwater flow and the dissolution of VOCs into groundwater is not well known and the hydrogeologic conditions in the area are complicated so the prediction of transport between 1950 and 1989 is very difficult using the presently available data. The conclusion of the Stage III investigation was that the horizontal extent of groundwater contaminated by VOCs from the 56th Street Facility had not been defined with a reasonable degree of confidence. An aggressive water quality data collection program was recommended to further define the contaminant plume.

A summary of Stage III results was presented in the report entitled “Stage III Report, Ground-Water Quality Investigation, 56th Street Facility, Phoenix, Arizona for Motorola Inc.” (May 4, 1990) (Dames & Moore, 1990).

Attachment C of this report includes select tables and figures from the Stage III Investigation report to illustrate and summarize the findings of the Stage III investigation.

7.1.4 Stage IV Investigation

The Stage IV investigation initiated in December 1990 was conducted to provide further definition of the extent of VOCs in groundwater (Dames & Moore, 1991a). The Stage IV activities included: installation of five additional monitor wells (DM-13, DM-14, DM-16, DM-17, DM-18), groundwater sampling from new and existing monitor wells, additional inventory of wells and USTs/leaking underground storage tanks (LUSTs) in the area, collection of available data from Flood Control District of Maricopa County (FCDMC) piezometers installed along the OCC, and sampling of the FCDMC piezometers. Groundwater sampling in January and April 1991 did not reveal any significant changes in groundwater concentrations observed in 1989. The UST/LUST file review resulted in a UST site at the City of Phoenix Maintenance Yard and a LUST site at the Texaco station, both located at 52nd St. and Thomas Road, directly in the area of the VOCs.

Based on the data and observations as part of the Stage IV investigation, conclusions in the Draft Interim Report were that it appears that TCE contamination does not extend west of the OCC. TCE is the principal VOC detected in groundwater and can be used as the primary indicator of contaminant migration from the Facility. The highest concentrations of TCE occurred in well DM-13 located downgradient of the bedrock high. High concentrations of PCE in wells DM-13 and COP-52 may be due to another source of VOC contamination. In 2008, in response to an ADEQ request to assist in its investigations, Freescale (2008) provided ADEQ with information on PRP sources from various internal investigations Motorola had conducted in addition to the soil gas investigation conducted by Dames & Moore (1993). The 1993 Dames & Moore report identified several dry cleaners and other businesses based on records research for businesses that used the COCs and COPCs in the Site area (shown on Figure 5 of this report). Large concentrations of arsenic, fluoride, and total dissolved solids observed in some monitor wells appeared to be related to large background concentrations in the general area and not to releases from the Facility or to VOC contamination encountered in the area. Pumping in the vicinity of the Texaco facility as part of remediation of the LUST site may have altered hydraulic gradients and captured part of the observed VOC contamination in the area. Additional wells and more

frequent groundwater monitoring were recommended to evaluate changes in the contaminant plume migration and to establish a baseline for conduct of remedial action or clean up in the area.

The results were documented in two reports entitled “Progress Report No. 1, Stage IV Groundwater Quality Investigation” (April 16, 1991)(Dames & Moore, 1991a) and “Motorola 56th St., Draft Interim Report, Ground-Water Quality investigation for Motorola Inc.” (October 4, 1991)(Dames & Moore, 1991b). Attachment D of this report includes select tables and figures from the Stage IV Investigation report to illustrate and summarize the findings of the Stage IV investigation.

7.1.5 1992 Soils Investigation

An additional soil investigation was conducted at the request of ADEQ to confirm the findings of the Stage I on-site soil investigations and evaluate the necessity of implementing an interim source control program in conjunction with the on-going groundwater remedial investigation. The investigation took place in December 1992 and included the collection and analyses of soil samples from the vadose zone at eight borings located on-site. Seven of the borings were located in the vicinity of previously identified disposal areas and in areas of elevated VOCs in soil gas. The results of this soil investigation and the Stage I study in 1985 revealed no detection of VOCs in soils that are subject of groundwater studies at the time. Potential source area inorganic results for confirmation and Stage I investigations were similar to background results, indicating no inorganic source areas. The conclusion of the report was that since none of the suspected contaminants was detected in soil samples from the area, that further on-site soils investigations were not warranted. The results of the investigation are presented in “Draft On-site Confirmation Soil Boring Investigation Report Motorola 56th St. Facility” (Dames & Moore, 1993). Attachment E, Supplemental Investigations, of this report includes select figures from the soil boring investigation report to illustrate and summarize the findings of that investigation.

7.1.6 1993 Soil Gas Investigation

An additional soil-gas investigation was conducted during August 1993. The objectives of the investigation were to evaluate whether observed soil gas concentrations could be related to groundwater contamination and to identify additional VOC sources. This soil gas investigation as well as three previous soil gas investigations are compared and summarized in “1993 Soil-Gas Investigation Motorola 56th St. Facility” (Dames & Moore, 1995). The results from the soil gas investigation indicated that several additional sources may exist that contributed to the observed groundwater contamination. In the report, Dames & Moore identified one source area on-site at the Facility (later remediated as discussed in Section 7.3, below) and four off-site source areas. No specific entities were identified as sources in those off-site areas. Attachment E, Supplemental Investigations, of this report includes select tables and figures from the soil gas investigation report to illustrate and summarize the findings of that investigation.

7.1.7 1992 to 1996 Groundwater Investigations

Additional groundwater investigations, termed the Pre-Design Remedial Investigation, started in 1992 and were completed in various segments over a two-year period and documented in quarterly progress reports to ADEQ. This program included the installation of three Westbay wells (DM-15, DM-20, DM-22) and sampling both existing and new monitor wells (Dames & Moore 1992-1994).

Hydropunch samples were collected in March, April, June and July of 1994 in the alluvial aquifer to evaluate the vertical and lateral extent of groundwater contamination in an area west of the OCC. Ten borings were drilled and samples from various depth intervals were collected from each boring. A total of 42 samples were analyzed. The results of the chemical analysis indicated that the TCE contaminant distribution is relatively narrow perpendicular to groundwater flow, with a lateral extent of about one quarter mile. In the report on the investigation, Woodward-Clyde concluded that the longitudinal extent of the contaminants may extend beyond 44th Street and that the depth to bedrock has not been positively identified beyond 44th Street (Woodward-Clyde 1994). Analytical results indicate that maximum VOC concentrations are generally present along the alluvium-bedrock contact with limited to no impacts in the shallow alluvium away from the Facility. The migration of the VOCs within the study area of the investigation may be facilitated by a bedrock low that appears to be trending east-west through the study area. The distribution of arsenic and fluoride do not correlate with the distribution of the concentrations of the VOCs.

Supplemental groundwater investigations were conducted in 1995 and 1996 to evaluate the extent of VOCs in groundwater downgradient of the Facility (Dames & Moore, 1995; 1996). Eight monitor wells were installed in three stages progressing west from approximately 48th Street to 38th Street and Monte Vista. The monitor wells installed were DM-19, DM-21 and DM-23 through DM-28. In addition, this investigation included obtaining water quality and water level data from the new and existing wells. The report concluded that VOCs are contained primarily within the saturated alluvium. The highest concentrations of VOCs are present and move primarily along the bedrock-alluvium interface. In the area of the bedrock high near 52nd Street and Thomas Road, VOCs were present in bedrock at greater depths relative the rest of the Study Area. The westernmost limit of VOCs in groundwater appeared to be at about 38th to 40th Street. With the addition of these new wells, the monitor well network was believed to be adequate for ongoing groundwater quality monitoring and to evaluate the influence of bedrock and potential sources on contaminant transport (Dames & Moore, 1996). The understanding of the geology and hydrogeology of the Site has changed over time as more wells were completed and more data collected and reviewed. Attachment E, Supplemental Investigations, of this report includes select figures from the supplemental groundwater investigation report to illustrate and summarize the findings of that investigation.

An inorganic groundwater quality investigation was conducted in 1993 and 1996 to characterize the inorganic geochemistry of groundwater at and downgradient of the Facility (Dames & Moore, 1997b) and to assess the potential contribution of these constituents from natural and anthropogenic sources, including past operations at the Facility. The investigation of inorganic constituents in groundwater included conducting groundwater sampling of monitor and private wells, review of analyses of inorganic groundwater quality data, evaluation of bedrock (from outcrop and core samples) and alluvium as a source of arsenic and fluoride, evaluation of the attenuation of arsenic and fluoride in groundwater, conducting equilibrium thermodynamic modeling to predict migration distances and distribution, and review of historical land use (aerial photographs and reports) showing agricultural land use history with cotton and citrus which included the application of agricultural pesticides containing arsenic and fluoride. Land use in Maricopa County and the Phoenix area included agriculture, especially cotton and citrus production. It is known that pesticides and herbicides containing arsenic and fluorine were used on these crops so it was concluded that land use represented one potential source for arsenic and fluoride in groundwater. Bedrock and alluvium was determined to be a source of fluoride. Bedrock was not a source

of arsenic. The results of the investigation also indicated that it is unlikely that the Facility is a source of elevated arsenic, fluoride, or nitrate concentrations in groundwater downgradient of the Facility.

7.1.8 1995 Internal PRP Search and 2008 PRP Information to ADEQ

In 1995, Motorola conducted an internal PRP search under the direction of legal counsel. In response to an ADEQ request for PRP information in 2008, Freescale provided a summary of the results of Motorola's PRP investigations (letter from Jenn McCall, Freescale, to Cathy O'Connell, ADEQ, September 24, 2008) (Freescale, 2008) to aid ADEQ in its PRP investigations. Freescale referred to the source areas identified in the Dames & Moore 1993 soil gas investigation (Section 7.1.6, above) and identified several dry cleaners and other businesses based on records research for businesses that used the COCs or COPCs in the Site area. The letter is included as Attachment F.

7.1.9 2005 Well Abandonments and Installations

In 2005, Motorola sold the Facility and the purchaser was planning to redevelop the property as a residential community. Six on-site monitor wells (DM-1, DM-2A, DM-2B, DM-3, DM-4, and DM-11) were abandoned in May 2005. Two replacement wells (located immediately off-site near the DM-2A, DM-2B, and DM-11 well cluster), DM-35 and DM-36, were completed in July 2005. Six additional wells were drilled downgradient of the Facility (wells DM-29 through DM-33) as part of the ongoing investigation. These six new off-site and downgradient wells were completed in July – August 2005 (Table 1 and Figure 3). The new groundwater monitor wells were installed to provide more detailed definition of the observed groundwater plume in the area and to replace on-site wells previously abandoned because of redevelopment of the Facility (Clear Creek Associates, 2005).

7.1.10 Additional Groundwater Monitor Wells Installed 2012 - 2016

Two additional monitor wells (DM-41 and DM-42) were installed downgradient of the extraction wells and treatment system in 2012 to monitor the plume. The details of those wells are included in the Well Installation Report, 56th Street and Earll Drive WQARF Site, Phoenix, Arizona (Clear Creek Associates, 2013). These wells are part of the overall monitoring network for the Site. Based on the concentrations in monitor wells DM-41 and DM-42, two more monitor wells (DM-43 and DM-44) were installed in 2016 to define the downgradient extent of the plume. The details of those wells are included in the Monitor Well Installation Report, 56th Street and Earll Drive WQARF Site, Phoenix, Arizona (Clear Creek Associates, 2017). These four wells are shown with the other monitoring wells for the Site on Figure 3.

7.1.11 Historical Groundwater Monitoring

Water quality results and water level data were included in various quarterly, semi-annual, and annual reports and data submittals (Dames & Moore 1992 – 1999; Clear Creek Associates 1999 – 2017) (see Appendix C for list of reports). Groundwater samples were collected in general accordance with the sample collection procedures outlined in the applicable Groundwater Monitoring Plan(s)[1]. Conductivity,

[1] The current Sampling and Analysis Plan was submitted to ADEQ in 2016 (Clear Creek Associates, 2016, revised 2017).

pH, and temperature were measured in the field during sampling. Water quality samples were analyzed for a short list of analytes known or suspected to occur in the area: 1,1,1-Trichloroethane (TCA), 1,1-Dichloroethane (DCA), 1,1-Dichloroethene (DCE), 1,2-Dichloroethane (1,2–DCA), cis-1,2-Dichloroethene (c-1,2-DCE), trans-1,2-Dichloroethene (t-1,2-DCE), Tetrachloroethene (PCE), Trichloroethene (TCE) and Vinyl Chloride (VC). Historic groundwater level data for these wells are presented in Table 2. Table 3 is a summary of the groundwater quality in monitor wells for the currently reported constituents. Appendix D includes time series charts showing the changes in groundwater levels and changes in water quality over time in the monitor wells.

7.1.12 Facility Indoor Air and Sub-Slab Soil Vapor and Soil Investigation

The Facility is currently owned by Great Hearts Academies and is the location of its Veritas Preparatory Academy/Archway Veritas charter school. As part of the remodeling and construction at the school, Great Hearts conducted indoor air investigations and Freescale conducted soil sampling and soil removal.

Indoor air sampling was initially conducted in November and December 2010 by Environ on behalf of Great Hearts Academies. In November, sampling was conducted without the HVAC (heating, ventilating, and air conditioning) system running on the day of sampling to simulate the worst-case conditions. Concentrations of TCE were above both the then-current EPA residential and commercial/industrial regional risk-based screening levels for TCE in three locations in the proposed gymnasium/performing arts area (Environ, November 2013). A second round of indoor air sampling was conducted in December 2010 with the HVAC system operating to see if concentrations decreased under operating conditions. Samples were repeated in the November locations, but also three new locations. Concentrations of TCE decreased with the HVAC operating, but still did not meet the then-current Residential Screening Levels (RSLs).

In January 2011, Environ conducted a sub-slab soil vapor investigation to identify the source of the indoor air TCE concentrations (Environ, November 2013). This investigation identified a potential source area beneath the proposed gym/performing arts area. Environ then expanded its sub-slab soil vapor investigation in May and June 2011 using a refined step-out basis to further define the area of elevated concentrations of sub-slab soil vapor.

Environ used the soil vapor information to conduct a sub-slab soil investigation in June 2011. Six soil borings were drilled in the gymnasium area and soil samples were collected at multiple depths. TCE was the highest detected VOC in the samples with a maximum of 3400 mg/kg (milligrams per kilogram). The results of the soil vapor and soil sub-slab samples were communicated to Freescale which then performed remedial measures based on the results as described in Section 7.3.4, below.

7.2 Risk Assessments and Health Consultations

The Arizona Department of Health Services conducted a risk assessment for ADEQ to determine whether exposure to contaminants in various media as a result of releases to the environment of potentially toxic substances from the Facility represents a threat to public health (ADHS, 1994). The goal of the risk assessment was to provide risk information necessary to assist in decision-making within the risk management process. The Final Baseline Risk Assessment (ADHS, 1994) was based on groundwater, soil gas, and soil data collected during Stage I, II, III, and IV monitoring by Dames & Moore. Data collected from 1985 through 1993 were used for the assessment of potential risks

associated with groundwater use. Risks associated with exposure to VOC vapors released from the soil were based on data collected in 1993. The Final Baseline Risk Assessment provided a site background and noted that the investigations have been conducted to date that have shown 1) there are elevated concentrations of VOCs in soil gases on and off-site, and 2) the groundwater on-site is contaminated, and 3) the groundwater extends off-site. TCE, PCE, DCE, chloroform, F-113 have been the most frequently detected VOCs during the investigations. ADHS conclusions included:

- Using water from private irrigation and domestic wells, and the Salt River Project irrigation wells to water gardens would not be expected to present a significant health risk to those consuming produce from those gardens.
- Close monitoring for VOCs in downgradient private wells used for domestic purposes was recommended.
- The concentrations of VOCs detected in soils gases in the 1993 soil gas investigation would not be expected to present a health risk to residents.
- Groundwater quality downgradient of the Facility has been downgraded. The concentrations of contaminants found in many of the monitor wells are at levels that would be of public health concern if people were to consume water from these monitor wells. The primary chemical of potential concern from a health risk standpoint in these wells is arsenic; however, significant levels of DCE, TCE, and PCE are present.

The ADHS conducted a health consultation under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) in 2003. The purpose of the health consultation was to determine whether contaminants in groundwater from the Facility represent a threat to public health. As part of the ADHS study, various documents and data were reviewed and interviews were conducted. Comprehensive organic priority pollutant and inorganic chemical analyses were performed on groundwater samples collected from five (5) downgradient irrigation wells in 1993. The samples were analyzed for common VOCs and metals. It was noted that all of the homes in the area receive their drinking water from the City of Phoenix municipal water system. There are no municipal supply wells in the known area of contamination. All residential irrigation well owners were contacted and interviewed. In all cases, the irrigation wells were specifically used to water outside plants or were no longer in use. All occupants were aware of the non-potable nature of the water.

Groundwater data from the affected area included five private irrigation wells downgradient of the facility. The samples were analyzed for common VOCs and metals. The results were reviewed and the contaminants of concern were identified: arsenic and fluoride. Solvent contaminants that were found in the 1980s were no longer present at detectable levels in the wells. The study also included exposure pathway and child health issues. ADHS concluded that "There are 5 private irrigation wells down-gradient of the Motorola 56th Street facility that have elevated levels of arsenic and fluoride in the water. All the wells are used solely for flood irrigation, and none is plumbed into the dwellings. Use of the private wells for flood irrigation poses **no public health hazard**." This exposure assessment focused on residents who live west (downgradient) of the Facility and have private irrigation wells. ADHS had no recommendations.

7.3 Remediation Activities

7.3.1 Soil Gas

Soil gas data collected during the 1993 Soil Gas Investigation detected TCE and PCE at two sample locations at the Facility. In October 1994, a pilot soil vapor extraction (SVE) system was installed at one of the soil gas sampling locations where elevated VOCs were encountered in 1993. Monthly reports starting in December 20, 1994 were prepared describing the installation and operation of the pilot system (Dames & Moore, 1994). The SVE system was operated for about 15 months, removing about 30 pounds of VOCs, but due to vacuum induced water level mounding, the SVE system well lost capacity to a level of 10% of its original capacity. In 1996, Motorola decided to replace the existing SVE well with a horizontal SVE system to alleviate the loss of vacuum associated with water level mounding and to treat a larger area. During excavation of the trench for the horizontal SVE, a strong odor was encountered and operations ceased. This encounter led to the excavation and soil removal project in 1996-1997, described below (Dames & Moore, 1997).

7.3.2 Soils

In 1993, six (6) dry wells at the Facility were abandoned. The locations of the dry wells correspond approximately to some of the potential disposal sites identified in the source report by Kary (1985) (for locations of dry wells, see Figure 4, Locations of Disposal Methods; and see Attachment A, Figures 2 and 12, Locations of Disposal Methods). The Kary report concluded that various historical activities at the Facility may have resulted in disposal of VOCs and/or inorganic constituents to these dry wells which may have been utilized for wastewater disposal by varying amounts from about 1950 and 1962. The Facility was connected to the City of Phoenix sanitary sewer in 1962 and the dry wells were no longer used. In May of 1993, six dry wells located at the Facility were characterized and abandoned (see Attachment G, Supplemental Remediation, Dry Well Abandonment Report Motorola 56th St. Facility, Figures 1 and 2). Dry well abandonment activities involved the initial characterization of sediment at the base of each dry well, excavation of the dry well and adjacent soils, confirmation sampling after excavation and closure of each dry well site using a concrete slurry backfill. Sediments collected from the dry wells for characterization and confirmation soil samples were analyzed for VOCs and inorganic constituents. VOCs were not detected above the laboratory detection levels. Although detectable levels of several inorganic constituents were found to be present in samples, in most instances the concentrations were found to be consistent with the results of previous on-site investigations in 1985 and 1993. Inorganic concentrations were below EPA proposed action levels (PALs) and applicable toxicity characteristic leach procedure (TCLP) analysis. The closure of the wells was complete and no further investigation was warranted. The report prepared to summarize the procedures and findings associated with the dry well abandonment is entitled “Dry Well Abandonment Report Motorola 56th St. Facility” (Dames & Moore 1993). Attachment G, Supplemental Remediation, contains select figures from this report to summarize the locations of the dry wells and provide the results of the abandonment.

In 1996, during installation of a horizontal SVE well to modify the SVE remediation system at the Facility (discussed above), elevated VOC concentrations (primarily TCE and PCE) in soils were encountered while trenching along the central and northern portion of the property. ADEQ was informed of the situation. While excavating, two concrete structures, each containing multiple vaults or chambers, were discovered. The structures may have been related to a former wastewater facility at the Site.

Exploratory excavations conducted in the vicinity of the structures were conducted and no additional structures were located.

The area of the concrete structures was over-excavated using a backhoe and guided by visual observation and field screening with a photoionization detector. Soil materials from the structures were removed and placed into lined and covered roll-off bins for characterization and off-site disposal. A single vault from one structure contained liquid that was pumped out and placed in 55-gallon drums for characterization and disposal. Maximum TCE and PCE concentrations detected in the soils inside the vaults were 35,000 mg/kg and 7,200 mg/kg, respectively. Xylene was also detected with a maximum concentration reported of 9,000 mg/kg. In addition to TCE, PCE and xylene, pentachlorophenol was detected in the liquid material removed from the single vault in one structure. Details of the disposal are included in the Excavation Completion Report prepared by Dames & Moore (Dames & Moore, 1996).

During excavation, the sidewalls of the structures were partially damaged but upon removal of the soil materials from within the structures it was determined that the bottoms of the structures were intact. The structures were swept clean and a hole was cored through the bottom of the vaults for sampling. Soils samples collected below and adjacent to the vaults had concentrations of TCE, PCE and xylene that were significantly (up to several orders of magnitude) lower than the materials inside the vaults. Maximum TCE, PCE and xylene concentrations detected below or adjacent to the vaults were 53 mg/kg, 11 mg/kg and 32 mg/kg, respectively. The concrete structures were broken up with a ramhoe attached to the backhoe, the concrete removed and area around the vault was over-excavated prior to confirmation sampling. The PCE and xylene results from all confirmation soil samples were non-detect (<0.05 mg/kg and <0.15 mg/kg, respectively). All but three confirmation samples were below detection limits (<0.05 mg/kg) for TCE with the results from the remaining samples ranging from 0.11 to 0.20 mg/kg. Based on these results, all confirmation samples collected from the final excavation were below both 3.0 mg/kg TCE residential soil remediation level set by ADEQ (A.A.C. R-18-7-205.A) and the minimum groundwater protection levels established by ADEQ. After confirmation sampling, the excavation was backfilled with clean soil material.

In total, an estimated 209 cubic yards of soil and concrete were excavated from the area. Approximately 300 to 350 gallons of liquid were pumped from the single vault in one structure. Since excavation of the impacted soils and the two below-grade concrete structures removed any potential threat to groundwater on-site, no further soil vapor extraction or other source control activities were proposed for on-site. The activities associated with this excavation are documented in “Excavation Completion Report Motorola 56th Street Facility” (Dames & Moore, 1996). Confirmation and follow-up soil gas testing conducted in January 1997 to confirm the completeness of this excavation work was documented in a report “56th Street Soil Excavation Final Report for Motorola Inc., Phoenix, Arizona” (Dames & Moore, 1997). A figure showing the results of those soil gas sampling rounds is included in Attachment G. The overall soil gas concentrations had decreased significantly since the excavation work was completed, confirming that the source was removed and no further soil removal or soil vapor extraction was necessary at the facility. Motorola remediated and removed the source of contamination at the Facility in 1996 as evidenced by ADEQ’s “No Further Action” letter for soils at the Facility in response to Motorola’s source excavation and soil vapor extraction activities (Maria Fant, ADEQ letter dated July 10, 1997) (Attachment H).

7.3.3 Groundwater

In 1992, a preliminary evaluation of the feasibility for in situ bioremediation of TCE-contaminated groundwater was performed. A bench-scale study was implemented using soil and groundwater from the Site. The results were documented in "Feasibility Study in Situ Bioremediation for Trichloroethylene Motorola 56th Street Facility" dated January 11, 1993 (Dames & Moore, 1993).

As part of a study on various remedial technologies for VOC-impacted groundwater, Motorola constructed a pilot-scale groundwater treatment facility to evaluate ex situ and in situ remediation techniques. The report "Motorola 48th Street Pilot-Scale Treatment Facility Baseline Report" summarizes the work performed (Dames & Moore 1995).

In 2013, Freescale implemented an ERA consisting of a pump and treat system located at the Grand Canal near 34th Street. Groundwater is pumped and treated at a treatment plant located on the Grand Canal at around 34th Street and then the treated groundwater is discharged into the Grand Canal as further detailed in Section 9.0, below.

7.3.4 Indoor Air (and resulting soil removal)

As a result of the indoor air, sub-slab soil vapor, and soil investigation at Great Hearts Academies detailed in Section 7.1.12 above, in July 2011 Freescale contracted Chemical Transportation, Inc. to remove the slab in the area of interest defined by the investigations and excavate soils beneath the slab. Freescale also contracted Clear Creek to oversee the excavation and conduct confirmation soil sampling (see Environ, 2013). A subsurface concrete structure was removed and soil excavation continued into August 2011 until the soil confirmation samples met the 3.0 mg/kg TCE residential soil remediation level (RSL) set by ADEQ (A.A.C. R-18-7-205.A). Clean fill was then used to backfill the excavation and the cement slab was re-poured incorporating a CUPOLEX® passive sub-slab venting system as an additional precaution against residual vapors.

In October 2011, Environ conducted post-remediation indoor air sampling in the area of the excavation activities (Environ, 2013). At the time of sampling, the new concrete floor had not cured and was unsealed, and the HVAC system was not operating. Two samples still exceeded the then-current RSL of 0.080 ppbv (parts per billion by volume) (0.34 ppbv and 0.87 ppbv) for TCE but Environ believed this may have been caused by residual off-gassing and the unfinished nature of the building. Environ recommended conducting another round of sampling when the building was complete.

Accordingly, Environ conducted additional indoor air sampling in March 2013 after the gym/performing arts areas were completed and the HVAC was operational. All sampling results were below the EPA residential RSL of 0.080 ppbv for TCE (non-detect at <0.04 ppbv and 0.04 and 0.06 ppbv) (see Table 1 of the Environ Report, 2013 – Attachment I). Environ concluded that the vapor intrusion pathway at the school had been effectively mitigated and that "under normal HVAC operating conditions indoor air concentrations are below USEPA's benchmarks for residential exposures indicates [sic] that risk levels for teachers, children, and workers at the school are below levels of concern." (Environ, 2013).

8.0 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of contamination described below is based on evaluation of the historical operations and potential sources at the Facility (Section 6.0) and prior investigations and remediation activities conducted at the Site (Section 7.0).

8.1 Soil Gas

Soil gas sampling was conducted on-site and off-site during the various stages of the investigation and has adequately characterized the soil gas at the Facility (refer to Attachment A (Stage I Investigations Report, Figures 5, 6, 7, 8), Attachment B (Stage II Investigation Report, Figures unnumbered by constituent F-113, TCA, TCE, and PCE), Attachment C (Stage III Investigation Report Figure 2.15), Attachment E (Supplemental Investigations, Figures 2, 3, 4, and 5; Figures 2, 3, , 4, 5, 6, 7, 8, 9 10, 11A-C, 12, and 13) and Attachment G (Supplemental Remediation, Figure 1) for figures showing soil gas sampling locations and results).

On-site: As discussed in Section 7.3, on-site sources have been remediated.

Off-site: Soil gas sampling results from locations off site yielded detections of Freon (F-113) to the south of the Facility; several spot locations of TCA to the west, south and east of the facility; with TCE and PCE noted extensively to the west and south of the Facility. The distribution of off-site soil gas concentrations indicates that additional sources of soil and groundwater contamination from other facilities may exist in the Site as described in Sections 7.1.6, above. Historical soil gas investigations conducted in the eastern portion of the Site (east of approximately 46th Street) identified low to non-detect concentrations of TCE in areas where groundwater impacts occurred near the alluvium-bedrock contact. As discussed in Section 13.0, additional soil gas sampling will be conducted in certain portions of the Site with identified data gaps.

8.2 Soils

Soil boring and sampling conducted on-site at the Facility were used in conjunction with the soil gas testing to identify locations of possible contaminant sources and to evaluate the probable lateral and vertical extent of the source contamination within the alluvium near the suspected disposal locations. Nine borings were drilled. Methylene chloride, TCE, TCA, and Freon (F-113) were detected most frequently in the samples. Metals concentrations from the boreholes were not significantly higher than the background sample so no further sources were confirmed. The low metals concentrations in groundwater samples from the boreholes indicated that metals disposed of on-site were essentially immobile and remained near the disposal locations.

From the various stage investigations, dry wells were abandoned in 1993, and the known contaminated soils at the Facility were remediated and removed in 1996, thereby resulting in ADEQ's "No Further Action" letter for soils at the Facility in response to Motorola's source excavation and soil vapor extraction activities (ADEQ, 1997) (Attachment H, Maria Fant, ADEQ letter dated July 10, 1997). In the July 1997 letter, ADEQ commented "ADEQ agrees with the recommendation of no further remedial action for the soils at this facility unless new data becomes available which warrants further investigation or remediation." Additional sub-slab soil vapor and soil sampling conducted by Environ in 2011 indicated a source of contamination under the gym/performing arts area of the Great Hearts

Academy. That source was removed in 2011 as verified by soil sampling and subsequent indoor air sampling (see Section 7.3.4, above).

8.3 Groundwater

The monitor well network for the Site includes 48 wells with data that have been used to characterize the Site. Figure 3 shows the locations of the monitor and extraction wells installed and used as part of the monitor well network. Several of the wells were abandoned as part of the redevelopment of the Facility when sold in 2005. Some wells are part of the Motorola 52nd Street Superfund Site but because of proximity to the migrating 56th Street plume, those wells have been added to the reporting for the Site. The plume is defined by the extent of the 5 micrograms per liter (µg/L) TCE concentration contour. Table 1 presents a list of the groundwater monitor wells included as part of the monitor wells and the current monitoring and sampling schedule for the wells. Table 3 is a summary of the groundwater quality in monitor wells for the currently reported constituents. Figures 10 and 11 show groundwater quality data from the monitor wells for September 2016 through April 2017 for TCE and PCE, respectively. As seen on Figure 10, the western-most monitor wells (DM-43 and DM-44) have observed TCE concentrations in excess of 5 µg/L. The western extent of TCE impacts may represent a potential data gap to be addressed in the FS; however, there are no current supply wells near the downgradient boundary of the plume. Figure 12 shows October 2016 through April 2017 TCE results on a cross-section running the length of the plume and Figure 13 is a cross-section across the width of the plume showing April 2017 TCE concentrations in the wells along the Grand Canal. Appendix D is a series of graphs showing the changes in groundwater levels and changes in water quality over time in the monitor wells.

8.3.1 On-site

Groundwater flow is to the west-southwest across the Facility and the Site. Historically, elevated VOC concentrations were typically in wells located at the southwestern portion of the Facility. Groundwater quality results from on-site wells declined to non-detect levels of TCE and PCE for many years before the on-site wells were abandoned in 2005. The reduction of concentrations to less than the detection level demonstrated that the on-site soil and soil gas remediation activities were successful at removing the sources of groundwater contamination at the Facility.

8.3.2 Off-site

Groundwater flow is to the west-southwest and southwest downgradient from the Facility. Two new wells, DM-43 and DM-44, were installed near the end of the plume in late 2016 and sampled in January and April of 2017. A trend is not apparent yet from these first two samples, but the results show that the concentrations in well DM-43 are higher than in wells DM-42 and DM-44, which are both located to the south of well DM-43; therefore, the center of the plume is north of well DM-42 and DM-44 and runs approximately through well DM-43. The location of the plume centerline indicates that the plume migration direction changes in this area from southwest, upgradient of the Grand Canal, to west downgradient of the Grand Canal. This change in plume migration is consistent with the anticipated groundwater flow direction based on the regional hydrogeology as discussed in Section 3.4.2.

On-going groundwater monitoring of wells adjacent to and downgradient of the Facility indicate all contaminant sources or potential sources to groundwater have been removed as the upgradient edge of the plume (as indicated by the TCE 5 µg/l or 5 ppb [parts per billion] concentration contour) is now located to the southwest, downgradient of the Facility. Generally, the off-site impacted groundwater is migrating along the bottom of the Basin Fill aquifer near and along the bedrock contact. Review of VOC time series charts for off-site monitor wells (see DM-13, DM-15-105, DM-20-120, DM-26, and DM-30 in Appendix D) demonstrate the highest concentrations representing the centroid of the contaminant mass have migrated to the southwest over time along the predominant flow path. Peak TCE concentrations have also declined within the center of the plume as a result of natural attenuation by varying processes and overall decreasing concentration trends are observed in monitor wells in the central and eastern portion of the Site. More recently, increasing TCE trends have been observed in monitor wells located to the east of the Grand Canal (wells DM-29, DM-31 and DM-33) which is one of the factors leading to the installation of the ERA extraction wells and treatment system along the Grand Canal as discussed in Section 10.0. As noted above, additional monitor wells (DM-43 and DM-44) were recently installed to monitor groundwater conditions downgradient of the ERA extraction wells and treatment system.

9.0 CONTAMINANT FATE AND TRANSPORT

9.1 Contaminant Transport Processes

The movement of contaminants in the subsurface is dependent on the chemical properties of the contaminants and the characteristics of the materials through which the contaminants move. Contaminants can move through the vadose zone, or unsaturated zone, as well as the saturated zone. The vadose zone, also termed the unsaturated zone, is the part of Earth between the land surface and the top of the phreatic zone i.e., the position at which the groundwater (the water in the soil's pores) is at atmospheric pressure. Hence, the vadose zone is the portion of the subsurface above the groundwater table. The soil and rock in this zone contains air as well as water in its pores. Hydrologically, the unsaturated zone is often the main factor controlling water movement from the land surface to the aquifer. Thus, it strongly affects the rate of aquifer recharge. Flow rates and chemical reactions in the unsaturated zone control if, where, and how fast contaminants enter groundwater supplies (US Geological Survey, 2013). Since TCE and PCE are the COCs at the Site, this section will discuss the properties that factor into the transport of TCE and PCE in the subsurface.

9.1.1 Vadose Zone

Pankow and Cherry (1996) noted that in most instances, releases of dense non-aqueous phase liquids (DNAPLs), including TCE and PCE, penetrate the vadose zone and migrate vertically into the saturated zone. However, residual contamination can remain in the vadose zone particularly in instances where fine grained materials are present in the vadose zone such as those encountered at the Site. VOCs were observed in the vadose zone primarily near the on-site source areas. As previously described in Section 7.1, TCE and PCE concentrations were observed in the vadose zone near potential source areas. The source areas were excavated and an SVE system was installed to remove VOCs in the vadose zone.

In areas with elevated VOC concentrations in groundwater, the VOCs can volatilize and migrate from the water table into the vadose zone. In areas of shallow groundwater, volatilized VOCs can migrate by diffusion to the land surface which could cause a potential exposure to VOCs in structures. Areas with deep or confined groundwater or groundwater with low concentrations would not be expected to have elevated soil vapors present.

9.1.2 Saturated Zone

In the saturated zone, VOCs can be dissolved in groundwater or present as non-aqueous phase liquids (NAPLs). DNAPLs are heavier than water and tend to sink below the water table. TCE and PCE are DNAPLs; however, as discussed below, concentration levels that would indicate the presence of DNAPL have not been encountered.

Dissolved VOC migration in groundwater is driven by advection and dispersion. Of these two mechanisms, advection is the principal factor that accounts for the transport of the plume in the direction of groundwater flow in the alluvium aquifer at the Site.

9.1.3 Advection and Dispersion

Advection is the mass transport caused by the bulk movement of flowing groundwater and is the primary mechanism that controls the movement of a contaminant in groundwater at this Site. Dispersion is the irregular spreading of solutes due to aquifer heterogeneities at pore-grain scale (mechanical dispersion)

or at field scale (macroscopic dispersion). Dispersion causes the dispersal of solute along (longitudinal dispersion) and perpendicular (transverse dispersion) to the direction of groundwater flow.

9.1.4 Diffusion

Diffusion is driven by concentration gradients as contaminants migrate from areas of high concentrations to lower concentrations. Diffusion can cause the migration of contaminants out from the primary flow paths into non-contributing flow paths or low permeability zones/ bedrock matrix. Back-diffusion (also known as matrix-diffusion) can occur if the concentration gradient between the high permeability materials and low permeability materials reverses and contaminants diffuse back out from the low-permeability zones into the high permeability zones.

9.1.5 Sorption

Sorption refers to adsorption and desorption. Adsorption describes the adhesion of molecules or ions to the grain surfaces in the aquifer. The release from the solid phase is called desorption. Sorption slows the migration rate as the solute continuously sorbs and desorbs to maintain local equilibrium. This reducing of the migration rate is called retardation. The amount of sorption depends on a number of factors, including the concentration and the characteristics of the contaminant, the soil type and is composition, the degree of organic carbon content in the soils and water, the pH value of the water, and the presence of other water solutes.

9.1.6 Degradation

Contaminants can be degraded in the subsurface by biochemical or chemical oxidation-reduction reactions. Bacteria in groundwater can consume certain organic chemicals (such as fuel hydrocarbons) directly or can reduce contaminants into degradation products indirectly by a process known as co-metabolic reductive dechlorination. Abiotic processes such as dehydrohalogenation and hydrolysis can also degrade contaminants. For TCE and PCE, the most important biodegradation process is reductive dechlorination where the chlorinated solvent is used as an electron acceptor and the chlorine atom is replaced with a hydrogen atom and an electron donor or food source is necessary to support the degradation process (McCarty, 2010). Fuel hydrocarbons have been demonstrated to be an effective food source supporting the reductive dechlorination degradation process (Wiedemeir, et al., 1997).

The biological degradation pathways by reductive dechlorination of PCE and TCE are presented on Figure 14. Evidence of the occurrence of reductive dechlorination is an observed decrease in the parent compounds (PCE or TCE) and an associated increase in daughter products and an increase in chloride ions (US EPA, 1998). Continued reduction of these chlorinated VOCs leads to end-products such as ethene, ethane, and carbon dioxide which are innocuous. Except for select wells located in proximity to fuel hydrocarbon releases, biodegradation of TCE is not considered to be a significant factor at the Site given the minimal levels of daughter products observed at the Site,

In the majority of the wells throughout the Site, cis-1,2-DCE concentrations are non-detect. Of the wells that do have detectable concentrations of cis-1,2-DCE, most are low levels, less than 1 ug/L. Examination of the VOC time series charts (Appendix C) indicate that, with the exception of select wells discussed below, the concentration trends of these low levels of cis-1,2-DCE generally coincide with the concentration trends of TCE suggesting biodegradation of TCE is not occurring on a Site-wide basis.

Three wells (DM-12OW1, DM-16, and to a lesser extent DM-20-120) located between 48th Street and 52nd Street have shown long-term detectable concentrations of cis-1,2-DCE with increasing cis-1,2-DCE (daughter product) concentration trends are associated with decreasing TCE (parent compound) concentration trends indicating that some level of degradation is occurring in this area. These three wells are located downgradient of a former Texaco gasoline station located on the southeast corner of 52nd Street and Thomas Road. This Texaco station was an ADEQ LUST site from 1988 to 2008. The fuel hydrocarbons associated with LUST sites are known to support reductive de-chlorination of chlorinated solvents. The proximity to this LUST may account for the historical observations of low levels of cis-1,2-DCE in these monitor wells; however, as there are still elevated TCE concentrations in the area downgradient of this LUST site, the extent of biodegradation associated with the fuel release is limited potentially due to fact that the migration of chlorinated solvents occurs primarily at the base of the alluvial aquifer.

9.2 Physical and Chemical Properties That Affect Contaminant Fate and Transport

How TCE and PCE migrate within the Site is discussed in this section. The concentrations of TCE and PCE are the primary focus because they are observed in relatively higher concentrations and are more widely distributed than other constituents.

9.2.1 Water Solubility

Water solubility is the maximum concentration of a solute that can be dissolved in water under equilibrium conditions. The water solubility limit of TCE is 1,385 mg/L. This is the maximum concentration of TCE that can be in dissolved in water at 25 degrees Celsius. The solubility of PCE is 237 mg/L of water at 25 degrees Celsius (Pankow and Cherry, 1996). While these solubilities are low, they are elevated with respect to risk based remediation levels.

Contaminants with low solubilities can occur as DNAPL. As discussed in Section 9.3.1, below, no concentrations have been observed that would indicate the presence of DNAPL.

9.2.2 Vapor Pressure/Henry’s Law Constant

The vapor pressure of a liquid can indicate at what rate the chemical will volatilize. Liquids exposed to the atmosphere can evaporate and chemicals with higher vapor pressures will evaporate faster than those with lower vapor pressures. Henry’s Law constant (H) is not really constant but is temperature dependent and is used to estimate the potential for a contaminant dissolved in water to evaporate. TCE and PCE have relatively high H and therefore can easily evaporate from water into air.

9.2.3 Density and Viscosity

TCE and PCE are denser than water and would form a DNAPL if existing in free phase. Because of their density, DNAPLs can move downward through soils and groundwater due to gravity. However, when TCE and PCE are dissolved in water their density will have a negligible impact.

9.3 Fate and Transport in Groundwater

9.3.1 Presence of DNAPLs

Due to the extreme difficulty in identifying the presence of DNAPLs in the subsurface, most

investigations rely on indirect evidence to infer the presence or absence of DNAPLs in the subsurface. In addition to an evaluation of historical site usage, Cohen and Mercer (1993), suggested three lines of evidence to assess the potential for DNAPLs to exist in a source zone: direct visual examination of subsurface samples, inferring the presence based on chemical analyses in comparison to solubility limits (generally 1% of the solubility limit), and the presence of anomalous conditions (e.g. unexpected chemical distribution) that may suggest the presence of DNAPLs. In its illustrated DNAPL handbook, the Environment Agency expanded upon these lines of evidence and added additional indirect lines of evidence including the persistence of contaminants in the subsurface (Environment Agency 2003).

Based on site history, it is known that DNAPLS were used historically on the Facility. Their presence was identified during the excavation of the subsurface concrete structures in the northern portion of the Facility (Dames and Moore, 1996b). Based on confirmation soil sampling, no residual DNAPLs remained in the vadose zone after the excavation of the structures. Multiple indirect lines of evidence indicate that DNAPLs do not occur in the saturated zone at the Site. These lines of evidence are:

- The maximum concentrations of TCE and PCE reported at the site are less than 0.5% of the solubility limits. No concentrations have been observed that would indicate the presence of DNAPL.
- The distribution of observed contamination is generally consistent with groundwater flow conditions as they may be influenced by the alluvial/bedrock surface conditions at the Site.
- After removal of the on-site sources, groundwater concentrations under the Facility have declined to non-detectable levels indicating that there is no persistent residual source.

9.3.2 Contaminant Migration

The estimated rate of plume expansion accounts for the impacts from advection, dispersion, sorption and degradation. Plume migration rates can be estimated by dividing the extent of contamination by the time elapsed since contaminants were released or by estimating a groundwater velocity using aquifer parameters. In this section, both methods will be discussed.

Since it is not known when releases first occurred, for estimation purposes it is assumed that the first release occurred in 1951, when operations began at the Facility. As the plume has continued to migrate, additional monitoring wells have been installed ahead of the plume. The distance contamination traveled was measured after evaluating concentration data over time in wells located approximately down the centerline of the plume. After review of the data, three dates were chosen to calculate the migration rate based on plume extent. Figure 15 is a TCE concentration contour map based on samples collected from January to June 1991. In the spring of 1991, the extent of the TCE plume was approximately 4,100 feet which results in a migration rate of approximately 0.3 feet per day. Figure 16 depicts the TCE concentration contours for the spring of 1996 and shows that the TCE plume extended approximately 11,000 feet from the Facility which results in a migration rate of approximately 0.7 feet per day. As shown on Figure 17, the TCE plume reached an extent of approximately 18,600 feet in October 2012 which equates to approximately 0.84 feet/day. These estimated expansion rates show increasing speed as the plume moves to the southwest. This agrees with the updated conceptual model, discussed in Section 12.0, that describes hydraulic conductivity as increasing with distance from the bedrock outcrops located north and east of the Facility. Another factor that could contribute to the increasing rate is that the source started with a low volume and/or concentration and increased over time. This agrees with the probability that as activity increased over time at the Facility, greater amounts of solvents were used and discharged.

Effective groundwater flow velocity can be estimated with the equation,

$$\gamma = \frac{Ki}{n}$$

where K is the hydraulic conductivity, is the hydraulic gradient and n is the effective porosity. This equation would also describe the velocity of a dissolved solute in groundwater due to advection, assuming no sorption, dispersion or degradation. The hydraulic gradient, which is a measure of the slope of the potentiometric surface, can vary spatially as well as vary over time. The hydraulic conductivity and effective porosity can also vary spatially as well as with depth. Therefore, the velocity may be faster or slower depending on location and time. This makes calculating an accurate estimate difficult. The gradient in the east part of the Site tends to be flatter and the gradient in the west part of the plume tends to be slightly steeper. An average gradient from the Facility to the end of the plume is approximately 0.009. Assuming a hydraulic conductivity of 30 feet per day and an effective porosity of 0.25 would yield an effective velocity of 1.08 feet/day or 394 feet/year.

10.0 EARLY RESPONSE ACTION

NXP is currently operating an ERA at the Site in accordance with ARS §49-282.06.A and A.A.C. R18-16-405 to protect a water supply well (SRP 16.9E-6N) and to control or contain contamination to reduce the scope or cost of the remedy needed at the Site. The ERA is a groundwater extraction and treatment system located at the Grand Canal near 34th Street in Phoenix, Arizona. The ERA consists of two extraction wells and a groundwater treatment plant on the Grand Canal as further described in this section. Remediated water is provided to SRP for beneficial re-use for agricultural and urban irrigation and groundwater replenishment. Two new monitor wells were installed along with the extraction wells on the Grand Canal for purposes of initially assessing the extraction wells. Those wells are now part of the overall monitoring network for the Site.

10.1 Treatment System

Two monitor wells (DM-37 and DM-38) and two extraction wells (DM-39 and DM-40) were installed on the Grand Canal as part of the ERA in 2009. The wells were located along the Grand Canal to prevent downgradient migration of the VOC plume defined by the historical groundwater investigations and groundwater monitoring at the Site and to protect a nearby SRP well (SRP 16.9E-6N). Details on the well installations are contained in the Well Installation Report, 56th Street and Earll Drive WQARF Site, Phoenix, Arizona (Clear Creek Associates, 2010). The extraction wells pump on average approximately 330 gallons per minute pursuant to ADWR Poor Quality Groundwater Withdrawal Permit (PQGWWP) No. 59-541491.0002.

The treatment plant is designed to treat a maximum of 1,100 gpm of extracted groundwater using carbon adsorption technology. The extracted groundwater is conveyed through a particulate filter to remove sediments prior to entering the granular activated carbon (GAC) vessels. Treatment of water is achieved by utilizing GAC vessels in primary (lead) and secondary (lag) configuration. Treated groundwater is metered and discharged pursuant to an Arizona Pollution Discharge Elimination System (AZPDES) permit (No. AZ0025861) and agreement with SRP into the SRP Grand Canal approximately 250 feet west of the treatment plant.

The extraction and treatment system consists of the following five major sub-systems:

1) Groundwater Extraction System: for pumping groundwater from two extraction wells
2) Groundwater Conveyance System: for conveyance of the extracted groundwater from the extraction wells to a treatment plant by below-ground force mains
3) Groundwater Treatment Plant: for housing equipment that provides treatment of the extracted groundwater by liquid phase Granular Activated Carbon (GAC) adsorption
4) Discharge Conveyance System: for conveyance of the treated groundwater from the plant, by a below-ground force main, to the discharge location along the SRP Grand Canal
5) Controls System: to provide necessary controls to the System

Details on the treatment plant and its operation can be found in the Operation and Maintenance Manual, Groundwater Remediation System, 56th Street and Earll Drive WQARF Site (Conestoga-Rovers & Associates, July 2014).

10.2 Aquifer Testing

Although the extraction and monitor wells were installed in 2009, aquifer testing could not be conducted at that time because there was no place to discharge the volume of groundwater that would be produced. Prior to the installation and testing of the new extraction wells, site-specific aquifer parameters were not known and assumptions had been used to estimate the pumping required in support of the design the treatment plant. Aquifer testing was needed to acquire better estimates of the hydrogeologic properties of the aquifer and the efficiency of the extraction wells.

Once the treatment plant was completed in 2013, the water produced from aquifer testing could be processed through the treatment plant and discharged to the Grand Canal. Accordingly, the extraction wells were redeveloped in 2013 and aquifer testing was conducted in October through December 2013. Step test and constant rate tests were conducted at both wells.

The results of the aquifer test indicated that the hydraulic conductivity in the vicinity of the extraction wells is lower than previously predicted and that the wells would not be able to produce as much water as originally estimated prior to their installation and testing. The existing groundwater model was revised to incorporate the hydraulic conductivity derived from the aquifer testing and updated predictions of hydraulic capture were prepared at the lower pumping rates. Details of the aquifer testing and the revised model simulation are provided in a letter report to ADEQ entitled Extraction Well Testing Report, 56th Street and Earll Drive WQARF Site, dated May 12, 2014 (Clear Creek Associates, 2014).

11.0 EXPOSURE PATHWAY EVALUATION

As required by A.A.C. R18-16-406.C.4, an evaluation of the currently and reasonably foreseeable exposure pathways was conducted as part of this RI report. Since there are no remaining areas of impacted surface or subsurface soils, and there is no currently or reasonably foreseeable completed exposure pathway to a surface water body, an evaluation of exposure pathways to aquatic and terrestrial biota is not necessary under A.A.C. R18-16-406.C.6.

For a potential risk to human health from a COC to exist, there must be a completed exposure pathway. All of the following elements must exist for there to be a completed exposure pathway:

- A source for the COC;
- A mechanism for the release of the COC;
- The presence of an impacted environmental media (e.g. soil or groundwater);
- A route or pathway for chemical transport to an exposure point; and
- A receptor.

The absence of any one of the elements described above means there is no completed exposure pathway, thus, there can be no risk associated with the COC for that potential pathway.

Figure 18, presents a summary of the potential migration and exposure pathways for potentially impacted media at the Site. Potentially impacted media include soil, soil gas and groundwater. As noted in Section 5.2, SRP irrigation supply well 16.9E-6N is located in close proximity to the western extent of the plume. Although the well is currently not impacted, this evaluation considers a hypothetical exposure pathway via the SRP irrigation canal. A description of the potential exposure pathway for each impacted medium, and whether that pathway is potentially complete or incomplete, is included in the following subsections.

11.1 Surface and Subsurface Soil Pathways

As discussed in Section 6.0, there were historical releases of VOCs to soils on the Facility. The releases were primarily to the subsurface, via drywells and underground sumps, although limited surficial releases may have also occurred. Surface and subsurface soil contamination on the Facility was investigated through multiple phases of soil and soil gas investigations (Section 7.0). No surficial soil impacts have been identified, thus the current and future surficial soils exposure pathways are considered to be incomplete (Figure18).

Remediation activities, including excavation of the drywells, soil vapor extraction, and soil excavation activities were implemented at the Facility over time. No VOCs were detected after removal of the drywells. Confirmation samples from the soil excavation project in October 1995 were either non-detect or below the then-current TCE and PCE residential health based guidance levels for soils (120 mg/kg and 27 mg/kg, respectively). There were no detections of PCE and only three detections of TCE, ranging from 0.11 to 0.20 mg/kg. Based on ADEQs review of and comments on the April 1997 Motorola 56th Street Soil Excavation Final Report (Dames & Moore, 1997a), ADEQ issued a No Further Action (NFA) determination for on-site soils in July 1997 (Attachment H, ADEQ, 1997). Additional soil excavation and sump removal activities were conducted under Building 3 during subsequent re-development of the property by Great Hearts Academies (Figure 2). As a result of these historic remediation activities, the potential current on-site subsurface soils exposure pathway is considered incomplete due to

implementation of engineering controls. The potential future on-site subsurface soils exposure pathway is incomplete (Figure18).

There are no known off-site surface or subsurface soil impacts; thus, the current and potential future off-site soils exposure pathways are also incomplete (Figure18).

11.2 Soil Gas to Indoor Air Pathway

Potential exposure pathways on the Facility include the transport of vapor phase (e.g. soil gas) contaminants to indoor air which would result in an inhalation exposure. With regard to the potential for vapor intrusion from soils/soil-gas to indoor air at the Facility, as discussed in Section 7.1.12 above, Environ conducted vapor intrusion to indoor air investigations from 2011 to 2013 at the Facility for the Great Hearts Academies during the remodeling of the property for the school. Indoor air concentrations initially exceeded the then-current EPA RSLs for TCE both with and without the HVAC system operating. As a result, Freescale conducted soil excavation in the area defined by Environ's indoor air and sub-slab sampling and removed both contaminated soil and a concrete structure as described in Section 7.3.4, above. Post-excavation indoor air sampling showed that the vapor intrusion source had been mitigated. As an additional precaution, Great Hearts installed a CUPOLEX® passive vapor barrier under the slab prior to pouring the new slab after the excavation. Thus, the potential current and future on-site soil gas to indoor air vapor intrusion exposure pathway from a vadose zone source is considered incomplete due to the implementation of engineering controls (Figure 18). The Phase II due diligence investigation conducted at the Facility for Great Hearts did identify somewhat elevated levels of TCE in shallow soil gas in limited areas near the Facility property line adjacent to residential areas (Environ, 2011). An indoor air vapor intrusion investigation in those select areas is warranted to address this potential exposure pathway data gap. These data gaps will be addressed through the development of a work plan prior to the Feasibility Study (as discussed in Section 13.0, below).

Although TCE also has the potential to volatilize from impacted groundwater into the vapor phase, TCE impacted water must exist at the water table and the capillary fringe to allow for the mass transfer from impacted groundwater into the vadose zone. As little as one meter (or approximately three feet) of clean water at the water table surface is thought to be sufficient to prevent the mass transfer from groundwater to soil gas (New Jersey Department of Environmental Protection, October 2005). Groundwater monitoring of wells on and adjacent to the Facility since 1985 demonstrates that groundwater under the Facility is no longer impacted. Thus, the potential current and future on-site soil gas to indoor air vapor intrusion exposure pathway from an on-site groundwater source is considered incomplete (Figure 18).

Off-site, multi-level groundwater monitoring conducted at the Site demonstrates that impacted groundwater occurs at the base of the alluvium near the alluvium/bedrock interface; however, unimpacted groundwater exists between the deep impacted water and the water table. This is demonstrated by monitoring results from well DM-15, a Westbay multi-level monitoring well located south of Thomas Road near 50th Street. Historical water quality monitoring shows that the 70-foot sampling port, completed at the alluvium bedrock interface, has elevated TCE levels; however, the shallow alluvium port, completed at 38 feet below ground surface (bgs) has no detectable levels of TCE (Figure 3). The water table occurs at approximately 28 feet bgs at this well location meaning there is a minimum of 10 feet, and potentially up to 42 feet, of clean water overlying the observed TCE plume at the well DM-15 location. Similar results are seen at monitoring well DM-20, located on Edgemont at 48th Street, in the shallow (<0.5 ug/L at 90 feet bgs) and deep (59.8 ug/L at 120 feet bgs) sampling

ports. With a depth to water at well DM-20 at approximately 29.5 feet bgs, a minimum of 60 feet and up to 90 feet of clean water overlays the observed plume at well DM-20.

11.3 Groundwater Pathway

As discussed in Section 4.0, there are no private supply wells that have been impacted by groundwater contamination; thus, the potential current and future exposure pathways via the regional aquifer are considered incomplete (Figure 18).

11.4 Surface Water Pathway

SRP irrigation supply well 16.9E-6N is located along McDowell Road west of 32nd Street and discharges directly to the Grand Canal. SRP 16.9E-6N is currently not impacted by the plume; thus, the current surface water exposure pathway is considered to be incomplete (Figure 18).

Although currently not impacted, SRP 16.9E-6N is located just over 1/4-mile laterally (cross-gradient) away from the plume; thus, a hypothetical surface water impact was evaluated related to discharges from SRP 16.9-E-6N to the Grand Canal. Observed TCE concentrations in monitoring wells and extraction wells near the western extent of the plume range between 24 and 42 ug/L, below the ADEQ established numeric surface water quality standard for partial body contact (280 ug/L). Additionally, the capacity of the Grand Canal at 32nd Street is 750 cubic feet per second (or 336,000 gallons per minute) and the estimated capacity of SRP16.9E-6N is only 2,000 gpm – or 0.01% of the rated capacity of the Grand Canal. Based on current TCE levels in groundwater, it is assumed that hypothetical discharges from SRP 16.9E-6N to the Grand Canal would be acceptable for irrigation use. Additionally, an ERA has been implemented along the Grand Canal in order to prevent future impacts to SRP 16.9E-6N; thus, the potential future surface water exposure pathway is considered incomplete due to the implementation of engineering controls (Figure 18).

11.5 Summary

Potential current and future on-site and off-site exposure pathways were evaluated for soils, groundwater and surface water. All potential current and future exposure pathways were determined to be incomplete or incomplete due to the implementation of engineering controls. Additional investigation will be conducted to evaluate the soil gas to indoor air vapor intrusion pathway in select areas of the Site as described in Section 11.2, above as part of a data gaps investigation to be completed prior to the Feasibility Study. With regard to all other media, since there are no potential completed exposure pathways, there are no potential current or future human health risks for those media at the Site and the need for additional human health risk evaluations is considered unnecessary.

12.0 UPDATED CONCEPTUAL SITE MODEL

This updated Conceptual Site Model (CSM) summarizes the current understanding of the Site including key physical characteristics of the Site, current and reasonably foreseeable land and water uses, known or suspected sources of contamination, the contaminants of potential concern, the nature and extent of contamination, and current and potential future migration pathways and potential receptors. This updated CSM is based on the results of the various stages of site investigations, source studies, historical groundwater elevation and groundwater quality monitoring, and the implementation of the ERA documented in this RI Report.

- Historic releases of chlorinated solvents are known to have occurred at the Facility (Figure 4). The Facility was first occupied in the spring of 1950 by Motorola Inc. and was used for a variety of product development, manufacturing, and testing operations until 1982. In addition to operations by various elements of Motorola's Semiconductor Products Sector, operations were also conducted at the Facility by Motorola's Western Military and Electronics Center, its successor the Government Electronics Divisions and Westinghouse (Section 6.1). From 1982, the Facility was used for office purposes. The Facility was vacated by Motorola, sold to developers in 2005, and subsequently developed into the Great Hearts Academy (see Section 5.0).
- Starting in 1984, Motorola conducted investigations at the Facility to determine if the soils and groundwater in the area were contaminated. Disposal of acids, solvents, metals, and other wastes at the Facility during the period of manufacturing occurred via dry wells, concrete tanks, sewage leach fields and shallow holes as discussed in detail in Section 6.0. Historical releases at the Facility resulted in localized impacts to soils as well as impacts to the underlying groundwater which subsequently migrated off-site.
- The COCs at the Site are TCE and PCE in groundwater. Concentrations of other VOCs in groundwater are either non-detect or are present at levels below aquifer water quality standards.
- The Facility is currently used as a charter school and is expected to remain as such for many years (Figure 2). The remaining land use in the study area boundary is primarily residential, light commercial, retail, schools, restaurants, and office buildings. The area is nearly fully developed and no major land use changes are expected.
- Groundwater use in the Site is limited to withdrawal by the extraction wells as part of the ERA and some minor private wells located outside the plume that are used for flood irrigation. The City of Phoenix does not use groundwater from wells in this area as a source of drinking water. Salt River Project has three irrigation supply wells in the Land and Water Use study area. These wells occasionally are pumped to produce groundwater which is discharged into the various laterals feeding the Grand Canal or directly to the Grand Canal where the groundwater is blended with surface water in the canal. The water is used for agricultural and urban irrigation and aquifer recharge purposes and meets the water quality standards for such purposes.
- On-site remediation activities, including excavation and removal of the dry wells, soil vapor extraction and soils removal, have been implemented to address each of the identified source areas on the Facility. ADEQ issued a No Further Action letter (ADEQ, 1997) for on-site soils in 1997.

- Subsequent development of the Facility into the Great Hearts Academy resulted in additional soils and source removal activities under Building 3. A CUPOLEX® passive soil vapor venting system was incorporated into the final construction to provide additional protection for the soil gas to indoor air exposure pathway.
- The Site is underlain by basin-fill deposits. Only the Basin Fill and uppermost alluvium units underlie the Facility and the majority of the Site. At the westernmost portion of the Site, the Basin Fill is overlain by unsaturated Salt River Gravel deposits.
- There are several northwest-southeast trending bedrock ridges to the west of the Facility. These ridges affect groundwater flow and contaminant plume migration in the Site. VOC concentrations tend to be higher in the alluvium-bedrock interface; thus, the topography of the bedrock has a significant localized influence on VOC transport.
- Water quality in on-site monitoring wells has been generally non-detect from the late 1990s indicating the successful removal of sources at the Facility.
- TCE and PCE in off-site groundwater remain above the aquifer water quality standards. Off-site, the observed plume has migrated approximately 3-1/2 miles down-gradient to the southwest. TCE concentrations in wells at the eastern, upgradient portion of the plume have declined showing the reduction of the tail of the contaminant plume. The tail of the TCE plume in alluvium is estimated to be at about 52nd Street and just north of Thomas Road. The highest TCE concentration in alluvium from samples collected during the October 2016 sample round was observed in well DM-26 (77 ug/l). As the plume migrates to the southwest, concentrations in general are observed to be declining.
- Although localized areas of impacted water is observed in bedrock, the impacted plume occurs primarily in the overlying Basin Fill sediments. VOC-impacted groundwater generally occurs in the deep Basin Fill sediments near the alluvium-bedrock interface. Vertical groundwater monitoring demonstrates that unimpacted groundwater overlies the TCE-impacted water observed at depth.
- There are no completed current or potential future exposure pathways to surface or subsurface soils as a result of the soil remediation and source removal activities conducted at the Facility. There are no impacted surface or subsurface soils that have been identified off the Facility.
- As a result of the on-site soil remediation and removal activities, as well as incorporation of passive venting system in the final construction of Building 3, there are no completed current or potential future exposure pathways via the soil gas to indoor air pathway on the Facility.
- No private or public water supply wells have been impacted by the groundwater plume; thus, the current and potential future groundwater exposure pathways are incomplete.
- Irrigation supply well SRP 16.9E-6N is currently not impacted by the groundwater plume and an ERA has been implemented to protect the well against future impacts as well as to mitigate continued expansion of the plume. As a result of the ERA, the current and future surface water exposure pathways are incomplete.

13.0 DATA GAPS

As discussed in Section 11.2 above, NXP will conduct an indoor air vapor intrusion investigation in residential areas adjacent to the Facility. A work plan for the investigation was submitted to ADEQ for review and approved by letter from ADEQ dated July 31, 2018.

As discussed in Section 8.3, the western most well exceeds the AWQS for TCE. There are no current supply wells near the downgradient boundary of the plume. NXP will work with ADEQ to evaluate the potential need to further define the western boundary of the plume.

14.0 LIST OF REPORTS AND REFERENCES

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TABLES

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-1 55-511096	C	28-48	1985 abandoned in 2005	A	N903849.00 E486155.00	1237.58	1237.22
DM-2A 55-511215	C	24-44	1985 abandoned in 2005	A	N903507.00 E485860.00	1237.77	1237.8
DM-2B 55-511214	C	59-79	1985 abandoned in 2005	A	N903507.00 E485842.00	1237.76	1237.77
DM-3 55-511097	C	21-41	1985 abandoned in 2005	A	N903871.00 E485803.00	1237.02	1237.09
DM-4 55-511216	C	14-44	1985 abandoned in 2005	A	N903514.00 E486399.00	1242.35	1241.56
DM-5 55-513424	C	72-92	1986 abandoned in 2014	A	N902910.00 E485377.00	1237	1237.32
DM-6 55-513497	C	17-27	1986	A	N902350.00 E484433.00	1232	1231.71
DM-7 55-513498	C	68-88	1986	A	N903483.00 E484175.00	1228	1227.86
DM-8 55-516146	C	63-83	1986	A	N901478.00 E485286.00	1243	1242.28
DM-9 55-516147	C	65-85	1986	A	N900859.00 E482724.00	1217	1216.12
DM-10 55-516148	C	39-49	1986 abandoned in 2014	A	N902820.00 E483258.00	1222	1221.43
DM-11 55-525689	C	102-150	1989 abandoned in 2005	B	N903522.00 E485850.00	1238	1237.49
DM-12 55-525692	C	11-77	1989	A, I	N901569.00 E483366.00	1222	1222.17
DM-12OW1 55-525690	C	66-78	1989	I	N901569.00 E483366.00	1221	1220.86
DM-12OW2 55-525691	C	11-67	1989	A, I	N901569.00 E483366.00	1223	1222.74
DM-13 55-531215	C	63-83	1991	A	N902089.51 E482859.13	1218.53	1218.53
DM-14 55-530424	C	42-55	1991	A	N903552.76 E482339.37	1218.72	1218.22

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-15 55-536578	WB	18	1993	A	N902.053.854 E483.048.2395	1220	1219.62
		38		A			
		70		I			
		105		B			
		135		B			
		165		B			
		207		B			
DM-16 55-530527	C	99-120	1993	A	N901516.75 E481821.96	1209.93	1209.94
DM-17 55-530756	C	66-86	1993	A	N902790.52 E481871.60	1214.30	1214.17
DM-18 55-530526	C	20-30	1993	I	N902089.51 E482859.13	1242.50	1242.41
DM-19 55-548179	C	115-125	1995	I	N900710.54 E477369.41	1181	1179.81
DM-20 55-538644	WB	22	1993	A	N901.794.6809 E481.362.6670	1208.45	1207.60
		59		A			
		90		A			
		120		I			
		170		B			
		200		B			
		235		B			
		265		B			
DM-21 55-548368	C	123-135	1995	I	N900863.89 E475837.66	1174	1172.66
DM-22 55-538306	WB	18	1993	A	N902.925.8947 E484.914.0087	1233.95	1233.15
		45		A			
		81		A			
		98		I			
		138		B			
		175		B			
		220		B			
		265		B			
		305		B			
DM-23 55-550731	C	75-85	1996	I	N899.123.8570 E478.773.0520	1182	1181.65

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-24 55-550730	C	141-161	1995	I	N899.363.65 E479.872.27	1185	1185.42
DM-25 55-550729	C	103-123	1995	I	N900897.9296 E480869.7742	1200	1200.32
DM-26 55-550732	C	73-93	1995	I	N899124.9570 E479150.4289	1194	1193.77
DM-27 55-548369	C	160-180	1995	I	N899.621.124 E476483.928	1172	1171.43
DM-28 55-552877	C	75-215	1995	I	N898764.21 E474845.92	1161	1161.06
DM-29 55-207723	C	227-257	2005	A	N896631.74 E471657.83	1139.63	1139.25
DM-30 55-207724	C	195-225	2005	A	N898016.38 E474844.63	1159.32	1158.95
DM-31 55-207725	C	180-210	2005	A	N896269.42 E472669.14	1141.97	1141.39
DM-32 55-207726	C	128-158	2005	A, I	N897753.85 E473153.95	1150.04	1149.5
DM-33 55-207727	C	170-200	2005	A	N895881.16 E473502.86	1143.84	1143.57
DM-34 55-207728	C	70-100	2005	A	N899767.02 E477448.68	1178.25	1177.51
DM-35 55-207680	C	51-81	2005	A, I	N903468.25 E485857.04	1239.01	1238.71
DM-36 55-207681	C	125-165	2005	B	N903469.01 E485849.70	1239.12	1238.5
DM-37 55-219307	C	131-181	2009	A	N895680.72 E471458.53	1135.88	1135.36
DM-38 55-219306	C	166-216	2009	A	N895254.36 E471987.85	1136.32	1136.36
DM-39 55-219352	E	134-184	2009	A	N895624.38 E471586.24	1136.34	1136.1
DM-40 55-219351	E	165-215	2009	A,I	N895381.28 E47823.28	1136.23	1136.21
DM-41 55-221555	C	153-203	2013	A,I	N895014.52 E470267.41	1128.33	1127.63
DM-42 55-221554	C	78-108	2013	A	N894603.15 E468888.85	1121.57	1120.95
DM-43A 55-226432	MP	110	2016	A	N895000.263 E468330.434	1121.50	1121.24
DM-43B 55-226432	MP	167	2016	A	N894999.938 E468330.383	1121.50	1121.19
DM-44A 55-226433	MP	109	2016	A	N894564.938 E467573.004	1117.88	1117.58

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-44B 55-226433	MP	135	2016	A	N894564.550 E467573.01	1117.88	1117.56
COP-52	PC	13-23	Unknown	A	N902457 E484382	1232	1232
COP (GM-01)	PC	Unknown	Unknown	A, I	N902697 E484381	Unknown	1232
DM505 55-529811	C	214-263	1991	I	N895048.4 E472612.5	1136.92	1137.87

NOTES:
ADWR Reg # – Arizona Department of Water Resources well registration number
ft bgs – feet below ground surface
amsl – above mean sea level

Well Type
C – Conventional Well
E – Extraction Well
MP – Multiple Port Well
PC – City of Phoenix Conventional Well
WB – Westbay™ Well

Geologic Unit
A – Alluvium
B – Bedrock
I – Interface (alluvium/bedrock)

Northings and Eastings are in Arizona State Plane Coordinate System, North American Datum NAD27. Northings and Eastings for wells COP-52 and COP (GM-01) are estimated.

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
COP-52	7/2/1992	1232.00	13.70	1218.30
COP-52	11/13/1992	1232.00	13.28	1218.72
COP-52	10/6/1994	1232.00	14.15	1217.85
COP-52	12/19/1994	1232.00	14.08	1217.92
COP-52	3/23/1995	1232.00	14.07	1217.93
COP-52	5/15/1995	1232.00	14.62	1217.38
COP-52	6/14/1995	1232.00	14.32	1217.68
COP-52	6/27/1995	1232.00	14.67	1217.33
COP-52	9/25/1995	1232.00	14.11	1217.89
COP-52	10/3/1995	1232.00	14.27	1217.73
COP-52	12/13/1995	1232.00	14.53	1217.47
COP-52	1/8/1996	1232.00	14.79	1217.21
COP-52	3/4/1996	1232.00	15.07	1216.93
COP-52	3/22/1996	1232.00	15.02	1216.98
COP-52	6/4/1996	1232.00	15.45	1216.55
COP-52	6/13/1996	1232.00	15.51	1216.49
COP-52	9/3/1996	1232.00	14.98	1217.02
COP-52	9/24/1996	1232.00	15.27	1216.73
COP-52	12/5/1996	1232.00	15.32	1216.68
COP-52	12/18/1996	1232.00	15.30	1216.70
COP-52	3/4/1997	1232.00	15.45	1216.55
COP-52	3/13/1997	1232.00	15.45	1216.55
COP-52	6/20/1997	1232.00	15.80	1216.20
COP-52	7/18/1997	1232.00	15.99	1216.01
COP-52	9/4/1997	1232.00	15.78	1216.22
COP-52	10/1/1997	1232.00	15.66	1216.34
COP-52	12/29/1997	1232.00	15.64	1216.36
COP-52	3/2/1998	1232.00	14.57	1217.43
COP-52	3/9/1998	1232.00	14.58	1217.42
COP-52	6/11/1998	1232.00	15.20	1216.80
COP-52	9/3/1998	1232.00	14.95	1217.05
COP-52	9/17/1998	1232.00	15.08	1216.92
COP-52	12/30/1998	1232.00	15.42	1216.58
COP-52	3/25/1999	1232.00	16.14	1215.86
COP-52	6/16/1999	1232.00	16.46	1215.54
COP-52	9/21/1999	1232.00	16.02	1215.98
COP-52	9/23/1999	1232.00	16.05	1215.95
COP-52	1/5/2000	1232.00	16.50	1215.50
COP-52	2/28/2000	1232.00	16.75	1215.25
COP-52	3/2/2000	1232.00	16.75	1215.25
COP-52	6/7/2000	1232.00	16.72	1215.28
COP-52	9/27/2000	1232.00	17.01	1214.99
COP-52	10/6/2000	1232.00	16.91	1215.09
COP-52	12/19/2000	1232.00	15.18	1216.82
COP-52	3/20/2001	1232.00	15.17	1216.83
COP-52	6/7/2001	1232.00	15.52	1216.48
COP-52	10/23/2001	1232.00	16.14	1215.86
COP-52	11/9/2001	1232.00	16.30	1215.70
COP-52	1/8/2002	1232.00	16.34	1215.66
COP-52	4/1/2002	1232.00	16.58	1215.42
COP-52	4/9/2002	1232.00	16.70	1215.30
COP-52	7/8/2002	1232.00	17.10	1214.90
COP-52	10/3/2002	1232.00	17.15	1214.85

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
COP-52	1/6/2003	1232.00	17.51	1214.49
COP-52	4/2/2003	1232.00	17.20	1214.80
COP-52	7/1/2003	1232.00	18.52	1213.48
COP-52	10/3/2003	1232.00	18.29	1213.71
COP-52	10/10/2003	1232.00	18.32	1213.68
COP-52	4/1/2004	1232.00	18.33	1213.67
COP-52	4/6/2004	1232.00	18.22	1213.78
COP-52	10/1/2004	1232.00	19.02	1212.98
COP-52	10/6/2004	1232.00	19.06	1212.94
COP-52	4/4/2005	1232.00	17.71	1214.29
COP-52	10/3/2005	1232.00	18.87	1213.13
COP-52	10/11/2005	1232.00	18.84	1213.16
COP-52	4/5/2006	1232.00	18.99	1213.01
COP-52	10/5/2006	1232.00	19.54	1212.46
COP-52	4/3/2007	1232.00	19.50	1212.50
COP-52	10/1/2007	1232.00	20.20	1211.80
COP-52	4/1/2008	1232.00	19.22	1212.78
COP-52	10/1/2008	1232.00	19.37	1212.63
COP-52	10/9/2008	1232.00	19.37	1212.63
COP-52	4/1/2009	1232.00	18.62	1213.38
COP-52	10/1/2009	1232.00	19.57	1212.43
COP-52	10/16/2009	1232.00	19.45	1212.55
COP-52	4/1/2010	1232.00	16.85	1215.15
COP-52	10/1/2010	1232.00	17.95	1214.05
COP-52	10/8/2010	1232.00	17.92	1214.08
COP-52	4/1/2011	1232.00	15.43	1216.57
COP-52	10/3/2011	1232.00	16.30	1215.70
COP-52	4/4/2012	1232.00	16.19	1215.81
COP-52	10/1/2012	1232.00	17.34	1214.66
COP-52	10/4/2012	1232.00	17.09	1214.91
COP-52	4/3/2013	1232.00	16.27	1215.73
COP-52	10/1/2013	1232.00	17.41	1214.59
COP-52	10/9/2013	1232.00	17.31	1214.69
COP-52	4/1/2014	1232.00	16.65	1215.35
COP-52	10/10/2014	1232.00	16.28	1215.72
COP-52	4/1/2015	1232.00	15.99	1216.01
COP-52	10/20/2015	1232.00	16.89	1215.11
COP-52	4/12/2016	1232.00	16.91	1215.09
COP-52	10/3/2016	1232.00	16.79	1215.21
DM-01	6/5/1985	1237.22	11.47	1225.75
DM-01	6/25/1985	1237.22	11.02	1226.20
DM-01	7/11/1985	1237.22	11.62	1225.60
DM-01	8/8/1985	1237.22	11.10	1226.12
DM-01	5/16/1986	1237.22	11.31	1225.91
DM-01	6/11/1986	1237.22	13.45	1223.77
DM-01	1/12/1987	1237.22	11.11	1226.11
DM-01	2/3/1987	1237.22	11.16	1226.06
DM-01	11/9/1988	1237.22	10.69	1226.53
DM-01	11/2/1989	1237.22	10.89	1226.33
DM-01	11/9/1989	1237.22	11.07	1226.15
DM-01	1/9/1991	1237.22	11.00	1226.22
DM-01	4/9/1991	1237.22	11.28	1225.94
DM-01	5/23/1991	1237.22	11.65	1225.57

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-01	12/4/1991	1237.22	11.12	1226.10
DM-01	12/6/1991	1232.00	14.02	1217.98
DM-01	3/24/1992	1237.22	10.83	1226.39
DM-01	6/4/1992	1237.22	9.97	1227.25
DM-01	9/4/1992	1237.22	10.00	1227.22
DM-01	11/10/1992	1237.22	10.91	1226.31
DM-01	1/15/1993	1237.22	8.35	1228.87
DM-01	4/9/1993	1237.22	8.66	1228.56
DM-01	5/21/1993	1237.22	9.15	1228.07
DM-01	6/22/1993	1237.22	10.45	1226.77
DM-01	7/12/1993	1237.22	10.62	1226.60
DM-01	8/17/1993	1237.22	10.98	1226.24
DM-01	9/7/1993	1237.22	10.89	1226.33
DM-01	9/15/1993	1237.22	10.87	1226.35
DM-01	10/5/1993	1237.22	10.96	1226.26
DM-01	12/18/1993	1237.22	9.61	1227.61
DM-01	1/18/1994	1237.22	9.92	1227.30
DM-01	2/16/1994	1237.22	10.72	1226.50
DM-01	3/9/1994	1237.22	11.07	1226.15
DM-01	4/12/1994	1237.22	11.06	1226.16
DM-01	5/16/1994	1237.22	11.16	1226.06
DM-01	6/27/1994	1237.22	10.87	1226.35
DM-01	7/9/1994	1237.22	11.45	1225.77
DM-01	9/7/1994	1237.22	11.30	1225.92
DM-01	9/19/1994	1237.22	12.30	1224.92
DM-01	9/28/1994	1237.22	11.73	1225.49
DM-01	11/23/1994	1237.22	10.85	1226.37
DM-01	12/12/1994	1237.22	10.94	1226.28
DM-01	3/1/1995	1237.22	10.73	1226.49
DM-01	5/15/1995	1237.22	10.82	1226.40
DM-01	6/14/1995	1237.22	11.14	1226.08
DM-01	9/14/1995	1237.22	10.38	1226.84
DM-01	9/20/1995	1237.22	11.12	1226.10
DM-01	12/11/1995	1237.22	10.62	1226.60
DM-01	3/4/1996	1237.22	11.47	1225.75
DM-01	3/13/1996	1237.22	11.20	1226.02
DM-01	6/3/1996	1237.22	11.36	1225.86
DM-01	9/3/1996	1237.22	10.04	1227.18
DM-01	9/9/1996	1237.22	10.05	1227.17
DM-01	12/5/1996	1237.22	10.70	1226.52
DM-01	3/3/1997	1237.22	11.45	1225.77
DM-01	3/7/1997	1237.22	11.11	1226.11
DM-01	6/20/1997	1237.22	11.67	1225.55
DM-01	7/8/1997	1237.22	11.80	1225.42
DM-01	9/4/1997	1237.22	11.88	1225.34
DM-01	9/22/1997	1237.22	11.00	1226.22
DM-01	12/29/1997	1237.22	11.73	1225.49
DM-01	3/2/1998	1237.22	10.31	1226.91
DM-01	6/11/1998	1237.22	10.52	1226.70
DM-01	9/3/1998	1237.22	11.11	1226.11
DM-01	12/30/1998	1237.22	10.93	1226.29
DM-01	3/30/1999	1237.22	11.60	1225.62
DM-01	6/16/1999	1237.22	11.15	1226.07

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-01	1/6/2000	1237.22	11.12	1226.10
DM-01	2/28/2000	1237.22	11.82	1225.40
DM-01	6/7/2000	1237.22	11.87	1225.35
DM-01	9/25/2000	1237.22	11.21	1226.01
DM-01	12/20/2000	1237.22	10.56	1226.66
DM-01	3/20/2001	1237.22	10.47	1226.75
DM-01	6/7/2001	1237.22	10.90	1226.32
DM-01	10/26/2001	1237.22	11.44	1225.78
DM-01	1/8/2002	1237.22	11.32	1225.90
DM-01	4/1/2002	1237.22	12.05	1225.17
DM-01	7/8/2002	1237.22	12.61	1224.61
DM-01	10/4/2002	1237.22	11.97	1225.25
DM-01	1/7/2003	1237.22	12.26	1224.96
DM-01	4/2/2003	1237.22	11.95	1225.27
DM-01	7/1/2003	1237.22	12.80	1224.42
DM-01	10/3/2003	1237.22	12.97	1224.25
DM-01	10/1/2004	1237.22	14.85	1222.37
DM-01	4/4/2005	1237.22	13.74	1223.48
DM-02A	6/5/1985	1237.80	13.80	1224.00
DM-02A	6/25/1985	1237.80	13.76	1224.04
DM-02A	7/11/1985	1237.80	14.05	1223.75
DM-02A	8/8/1985	1237.80	13.77	1224.03
DM-02A	5/16/1986	1237.80	13.79	1224.01
DM-02A	6/11/1986	1237.80	13.98	1223.82
DM-02A	1/12/1987	1237.80	13.48	1224.32
DM-02A	2/3/1987	1237.80	13.65	1224.15
DM-02A	10/26/1988	1237.80	13.31	1224.49
DM-02A	11/2/1989	1237.80	13.47	1224.33
DM-02A	11/8/1989	1237.80	13.54	1224.26
DM-02A	11/9/1989	1237.80	13.54	1224.26
DM-02A	1/9/1991	1237.80	13.68	1224.12
DM-02A	5/23/1991	1237.80	14.21	1223.59
DM-02A	6/20/1991	1237.80	14.38	1223.42
DM-02A	12/5/1991	1237.80	13.83	1223.97
DM-02A	3/26/1992	1237.80	13.53	1224.27
DM-02A	7/1/1992	1237.80	13.94	1223.86
DM-02A	9/4/1992	1237.80	13.28	1224.52
DM-02A	11/10/1992	1237.80	13.89	1223.91
DM-02A	1/20/1993	1237.80	12.44	1225.36
DM-02A	4/13/1993	1237.80	10.23	1227.57
DM-02A	5/21/1993	1237.80	10.21	1227.59
DM-02A	6/22/1993	1237.80	13.20	1224.60
DM-02A	7/12/1993	1237.80	13.53	1224.27
DM-02A	8/17/1993	1237.80	13.82	1223.98
DM-02A	9/7/1993	1237.80	13.73	1224.07
DM-02A	9/15/1993	1237.80	13.72	1224.08
DM-02A	10/11/1993	1237.80	13.48	1224.32
DM-02A	12/18/1993	1237.80	12.77	1225.03
DM-02A	1/18/1994	1237.80	12.99	1224.81
DM-02A	2/16/1994	1237.80	13.66	1224.14
DM-02A	3/9/1994	1237.80	13.86	1223.94
DM-02A	4/12/1994	1237.80	13.88	1223.92
DM-02A	5/16/1994	1237.80	14.07	1223.73

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-02A	7/9/1994	1237.80	14.36	1223.44
DM-02A	9/7/1994	1237.80	14.38	1223.42
DM-02A	9/20/1994	1237.80	15.42	1222.38
DM-02A	9/28/1994	1237.80	15.28	1222.52
DM-02A	11/23/1994	1237.80	13.88	1223.92
DM-02A	12/15/1994	1237.80	13.65	1224.15
DM-02A	3/1/1995	1237.80	13.58	1224.22
DM-02A	3/21/1995	1237.80	13.47	1224.33
DM-02A	5/15/1995	1237.80	13.81	1223.99
DM-02A	6/14/1995	1237.80	14.05	1223.75
DM-02A	9/14/1995	1237.80	13.39	1224.41
DM-02A	9/21/1995	1237.80	14.21	1223.59
DM-02A	12/11/1995	1237.80	13.77	1224.03
DM-02A	3/4/1996	1237.80	14.31	1223.49
DM-02A	3/19/1996	1237.80	14.00	1223.80
DM-02A	6/3/1996	1237.80	13.89	1223.91
DM-02A	9/3/1996	1237.80	13.72	1224.08
DM-02A	9/23/1996	1237.80	13.76	1224.04
DM-02A	12/5/1996	1237.80	14.02	1223.78
DM-02A	3/3/1997	1237.80	14.44	1223.36
DM-02A	3/10/1997	1237.80	14.11	1223.69
DM-02A	6/19/1997	1237.80	14.74	1223.06
DM-02A	7/16/1997	1237.80	14.80	1223.00
DM-02A	9/4/1997	1237.80	15.01	1222.79
DM-02A	9/24/1997	1237.80		
DM-02A	12/29/1997	1237.80	13.91	1223.89
DM-02A	3/2/1998	1237.80	13.39	1224.41
DM-02A	6/11/1998	1237.80	13.66	1224.14
DM-02A	9/3/1998	1237.80	14.29	1223.51
DM-02A	9/17/1998	1237.80	14.15	1223.65
DM-02A	12/30/1998	1237.80	13.94	1223.86
DM-02A	3/30/1999	1237.80	14.67	1223.13
DM-02A	6/16/1999	1237.80	14.42	1223.38
DM-02A	9/7/1999	1237.80	14.17	1223.63
DM-02A	9/22/1999	1237.80	14.17	1223.63
DM-02A	1/6/2000	1237.80	14.33	1223.47
DM-02A	2/28/2000	1237.80	14.91	1222.89
DM-02A	6/7/2000	1237.80	14.84	1222.96
DM-02A	9/25/2000	1237.80	14.48	1223.32
DM-02A	10/4/2000	1237.80	14.70	1223.10
DM-02A	12/20/2000	1237.80	13.69	1224.11
DM-02A	3/20/2001	1237.80	13.59	1224.21
DM-02A	6/7/2001	1237.80	14.18	1223.62
DM-02A	10/26/2001	1237.80	14.69	1223.11
DM-02A	11/6/2001	1237.80	14.70	1223.10
DM-02A	1/8/2002	1237.80	14.42	1223.38
DM-02A	4/1/2002	1237.80	15.14	1222.66
DM-02A	7/8/2002	1237.80	15.87	1221.93
DM-02A	10/3/2002	1237.80	15.25	1222.55
DM-02A	10/10/2002	1237.80	15.18	1222.62
DM-02A	1/7/2003	1237.80	15.37	1222.43
DM-02A	4/2/2003	1237.80	15.09	1222.71
DM-02A	7/1/2003	1237.80	16.23	1221.57
DM-02A	10/8/2003	1237.80	16.23	1221.57
DM-02A	4/1/2004	1237.80	17.02	1220.78
DM-02A	10/1/2004	1237.80	17.83	1219.97
DM-02A	10/4/2004	1237.80	17.93	1219.87
DM-02A	4/4/2005	1237.80	16.55	1221.25
DM-02B	6/5/1985	1237.77	13.86	1223.91
DM-02B	6/25/1985	1237.77	13.79	1223.98
DM-02B	7/11/1985	1237.77	14.04	1223.73
DM-02B	8/8/1985	1237.77	13.82	1223.95
DM-02B	5/16/1986	1237.77	13.79	1223.98
DM-02B	6/11/1986	1237.77	13.92	1223.85
DM-02B	1/13/1987	1237.77	13.46	1224.31
DM-02B	2/4/1987	1237.77	13.66	1224.11
DM-02B	10/25/1988	1237.77	13.23	1224.54
DM-02B	11/9/1988	1237.77	13.31	1224.46
DM-02B	7/13/1989	1237.77	13.21	1224.56
DM-02B	11/1/1989	1237.77	13.51	1224.26
DM-02B	11/8/1989	1237.77	13.48	1224.29
DM-02B	1/9/1991	1237.77	13.64	1224.13
DM-02B	5/23/1991	1237.77	14.17	1223.60
DM-02B	12/5/1991	1237.77	13.79	1223.98
DM-02B	3/25/1992	1237.77	13.48	1224.29
DM-02B	6/24/1992	1237.77	13.79	1223.98
DM-02B	6/30/1992	1237.77	13.90	1223.87
DM-02B	9/4/1992	1237.77	13.27	1224.50
DM-02B	11/11/1992	1237.77	13.92	1223.85
DM-02B	1/19/1993	1237.77	12.46	1225.31
DM-02B	4/12/1993	1237.77	10.28	1227.49
DM-02B	5/21/1993	1237.77	10.89	1226.88
DM-02B	6/22/1993	1237.77	13.24	1224.53
DM-02B	7/12/1993	1237.77	13.55	1224.22
DM-02B	8/17/1993	1237.77	13.85	1223.92
DM-02B	9/15/1993	1237.77	13.74	1224.03
DM-02B	10/8/1993	1237.77	13.52	1224.25
DM-02B	12/18/1993	1237.77	12.79	1224.98
DM-02B	1/18/1994	1237.77	13.03	1224.74
DM-02B	2/16/1994	1237.77	13.69	1224.08
DM-02B	3/9/1994	1237.77	13.87	1223.90
DM-02B	4/12/1994	1237.77	13.90	1223.87
DM-02B	5/16/1994	1237.77	14.09	1223.68
DM-02B	6/21/1994	1237.77	14.10	1223.67
DM-02B	7/9/1994	1237.77	14.36	1223.41
DM-02B	9/7/1994	1237.77	14.38	1223.39
DM-02B	9/20/1994	1237.77	15.44	1222.33
DM-02B	9/28/1994	1237.77	15.28	1222.49
DM-02B	11/23/1994	1237.77	13.88	1223.89
DM-02B	12/15/1994	1237.77	14.64	1223.13
DM-02B	3/1/1995	1237.77	13.60	1224.17
DM-02B	3/21/1995	1237.77	13.50	1224.27
DM-02B	5/15/1995	1237.77	13.83	1223.94
DM-02B	6/14/1995	1237.77	14.08	1223.69
DM-02B	9/14/1995	1237.77	13.35	1224.42
DM-02B	9/20/1995	1237.77	14.18	1223.59

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-02B	3/4/1996	1237.77	14.33	1223.44
DM-02B	3/19/1996	1237.77	14.05	1223.72
DM-02B	6/3/1996	1237.77	14.00	1223.77
DM-02B	9/3/1996	1237.77	13.75	1224.02
DM-02B	12/5/1996	1237.77	14.05	1223.72
DM-02B	3/3/1997	1237.77	14.42	1223.35
DM-02B	3/7/1997	1237.77	14.22	1223.55
DM-02B	6/19/1997	1237.77	14.75	1223.02
DM-02B	7/9/1997	1237.77	14.90	1222.87
DM-02B	9/4/1997	1237.77	14.98	1222.79
DM-02B	9/22/1997	1237.77	14.15	1223.62
DM-02B	12/29/1997	1237.77	13.92	1223.85
DM-02B	3/2/1998	1237.77	13.40	1224.37
DM-02B	6/11/1998	1237.77	13.71	1224.06
DM-02B	9/3/1998	1237.77	14.30	1223.47
DM-02B	9/17/1998	1237.77	14.17	1223.60
DM-02B	12/30/1998	1237.77	14.01	1223.76
DM-02B	3/30/1999	1237.77	14.64	1223.13
DM-02B	6/16/1999	1237.77	14.52	1223.25
DM-02B	9/7/1999	1237.77	14.21	1223.56
DM-02B	9/22/1999	1237.77	14.21	1223.56
DM-02B	1/6/2000	1237.77	14.31	1223.46
DM-02B	2/28/2000	1237.77	14.90	1222.87
DM-02B	6/7/2000	1237.77	14.88	1222.89
DM-02B	9/25/2000	1237.77	14.58	1223.19
DM-02B	10/13/2000	1237.77	14.24	1223.53
DM-02B	12/20/2000	1237.77	13.71	1224.06
DM-02B	3/20/2001	1237.77	13.64	1224.13
DM-02B	6/7/2001	1237.77	14.20	1223.57
DM-02B	10/26/2001	1237.77	14.72	1223.05
DM-02B	11/6/2001	1237.77	14.71	1223.06
DM-02B	1/8/2002	1237.77	14.44	1223.33
DM-02B	4/1/2002	1237.77	15.17	1222.60
DM-02B	7/8/2002	1237.77	15.89	1221.88
DM-02B	10/3/2002	1237.77	15.28	1222.49
DM-02B	1/7/2003	1237.77	15.39	1222.38
DM-02B	4/2/2003	1237.77	15.13	1222.64
DM-02B	7/1/2003	1237.77	16.26	1221.51
DM-02B	10/3/2003	1237.77	16.05	1221.72
DM-02B	10/8/2003	1237.77	16.27	1221.50
DM-02B	4/1/2004	1237.77	17.02	1220.75
DM-02B	10/1/2004	1237.77	17.86	1219.91
DM-02B	10/4/2004	1237.77	17.95	1219.82
DM-02B	4/4/2005	1237.77	16.58	1221.19
DM-03	6/5/1985	1237.09	11.73	1225.36
DM-03	6/25/1985	1237.09	11.50	1225.59
DM-03	7/11/1985	1237.09	11.94	1225.15
DM-03	8/8/1985	1237.09	11.46	1225.63
DM-03	5/16/1986	1237.09	11.55	1225.54
DM-03	6/11/1986	1237.09	11.61	1225.48
DM-03	1/12/1987	1237.09	11.62	1225.47
DM-03	2/3/1987	1237.09	11.63	1225.46
DM-03	11/9/1988	1237.09	10.97	1226.12
DM-03	11/9/1989	1237.09	11.30	1225.79
DM-03	1/9/1991	1237.09	11.31	1225.78
DM-03	5/23/1991	1237.09	11.93	1225.16
DM-03	3/25/1992	1237.09	11.41	1225.68
DM-03	6/24/1992	1237.09	11.41	1225.68
DM-03	6/30/1992	1237.09	11.63	1225.46
DM-03	9/4/1992	1237.09	10.92	1226.17
DM-03	11/10/1992	1237.09	11.82	1225.27
DM-03	1/15/1993	1237.09	9.60	1227.49
DM-03	4/8/1993	1237.09	9.95	1227.14
DM-03	5/21/1993	1237.09	10.07	1227.02
DM-03	6/22/1993	1237.09	11.16	1225.93
DM-03	7/12/1993	1237.09	11.41	1225.68
DM-03	7/13/1993	1237.09	11.42	1225.67
DM-03	8/17/1993	1237.09	11.75	1225.34
DM-03	9/7/1993	1237.09	11.49	1225.60
DM-03	9/15/1993	1237.09	10.57	1226.52
DM-03	10/5/1993	1237.09	11.50	1225.59
DM-03	12/18/1993	1237.09	10.39	1226.70
DM-03	1/18/1994	1237.09	10.89	1226.20
DM-03	2/16/1994	1237.09	11.77	1225.32
DM-03	3/9/1994	1237.09	11.72	1225.37
DM-03	4/12/1994	1237.09	11.73	1225.36
DM-03	5/16/1994	1237.09	11.85	1225.24
DM-03	6/21/1994	1237.09	11.78	1225.31
DM-03	7/9/1994	1237.09	12.22	1224.87
DM-03	9/7/1994	1237.09	11.85	1225.24
DM-03	9/19/1994	1237.09	13.01	1224.08
DM-03	9/28/1994	1237.09	12.86	1224.23
DM-03	11/23/1994	1237.09	11.53	1225.56
DM-03	12/15/1994	1237.09	11.42	1225.67
DM-03	3/1/1995	1237.09	11.50	1225.59
DM-03	3/21/1995	1237.09	11.32	1225.77
DM-03	5/15/1995	1237.09	11.55	1225.54
DM-03	6/14/1995	1237.09	11.78	1225.31
DM-03	9/14/1995	1237.09	11.01	1226.08
DM-03	9/21/1995	1237.09	11.80	1225.29
DM-03	12/11/1995	1237.09	11.65	1225.44
DM-03	3/4/1996	1237.09	12.28	1224.81
DM-03	3/13/1996	1237.09	11.80	1225.29
DM-03	6/3/1996	1237.09	11.95	1225.14
DM-03	9/3/1996	1237.09	11.04	1226.05
DM-03	9/9/1996	1237.09	11.04	1226.05
DM-03	12/5/1996	1237.09	11.85	1225.24
DM-03	3/3/1997	1237.09	12.33	1224.76
DM-03	3/6/1997	1237.09	11.88	1225.21
DM-03	6/19/1997	1237.09	12.37	1224.72
DM-03	7/8/1997	1237.09	12.66	1224.43
DM-03	9/4/1997	1237.09	12.33	1224.76
DM-03	9/23/1997	1237.09	11.46	1225.63
DM-03	12/29/1997	1237.09	11.62	1225.47
DM-03	3/2/1998	1237.09	11.17	1225.92
DM-03	6/11/1998	1237.09	11.38	1225.71

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-03	9/17/1998	1237.09	11.84	1225.25
DM-03	12/30/1998	1237.09	11.94	1225.15
DM-03	3/30/1999	1237.09	12.53	1224.56
DM-03	6/16/1999	1237.09	11.85	1225.24
DM-03	9/7/1999	1237.09	11.52	1225.57
DM-03	9/22/1999	1237.09	11.52	1225.57
DM-03	1/6/2000	1237.09	11.99	1225.10
DM-03	2/28/2000	1237.09	12.61	1224.48
DM-03	6/7/2000	1237.09	12.47	1224.62
DM-03	9/25/2000	1237.09	11.82	1225.27
DM-03	10/4/2000	1237.09	12.00	1225.09
DM-03	12/20/2000	1237.09	11.22	1225.87
DM-03	3/21/2001	1237.09	11.35	1225.74
DM-03	6/7/2001	1237.09	14.05	1223.04
DM-03	10/26/2001	1237.09	12.42	1224.67
DM-03	11/2/2001	1237.09	12.59	1224.50
DM-03	1/8/2002	1237.09	12.07	1225.02
DM-03	4/1/2002	1237.09	12.89	1224.20
DM-03	7/8/2002	1237.09	13.47	1223.62
DM-03	10/3/2002	1237.09	12.73	1224.36
DM-03	10/10/2002	1237.09	12.51	1224.58
DM-03	1/7/2003	1237.09	13.15	1223.94
DM-03	4/2/2003	1237.09	12.82	1224.27
DM-03	7/1/2003	1237.09	14.01	1223.08
DM-03	10/3/2003	1237.09	13.74	1223.35
DM-03	10/8/2003	1237.09	14.00	1223.09
DM-03	4/1/2004	1237.09	14.90	1222.19
DM-03	10/1/2004	1237.09	15.36	1221.73
DM-03	10/4/2004	1237.09	15.83	1221.26
DM-03	4/4/2005	1237.09	14.53	1222.56
DM-04	6/5/1985	1241.56	17.25	1224.31
DM-04	6/25/1985	1241.56	17.36	1224.20
DM-04	7/11/1985	1241.56	18.88	1222.68
DM-04	8/8/1985	1241.56	17.26	1224.30
DM-04	5/16/1986	1241.56	17.07	1224.49
DM-04	1/12/1987	1241.56	16.23	1225.33
DM-04	2/3/1987	1241.56	16.65	1224.91
DM-04	11/10/1988	1241.56	16.53	1225.03
DM-04	11/9/1989	1241.56	15.40	1226.16
DM-04	1/10/1991	1241.56	16.02	1225.54
DM-04	4/9/1991	1241.56	16.43	1225.13
DM-04	5/23/1991	1241.56	16.40	1225.16
DM-04	6/20/1991	1241.56	16.52	1225.04
DM-04	12/4/1991	1241.56	16.27	1225.29
DM-04	3/25/1992	1241.56	15.81	1225.75
DM-04	6/30/1992	1241.56	15.92	1225.64
DM-04	9/4/1992	1241.56	15.52	1226.04
DM-04	11/10/1992	1241.56	16.41	1225.15
DM-04	1/15/1993	1241.56	15.73	1225.83
DM-04	4/12/1993	1241.56	15.72	1225.84
DM-04	5/21/1993	1241.56	16.28	1225.28
DM-04	6/22/1993	1241.56	15.41	1226.15
DM-04	7/12/1993	1241.56	15.74	1225.82
DM-04	9/15/1993	1241.56	16.56	1225.00
DM-04	10/5/1993	1241.56	16.25	1225.31
DM-04	12/18/1993	1241.56	14.55	1227.01
DM-04	1/18/1994	1241.56	15.29	1226.27
DM-04	2/16/1994	1241.56	16.08	1225.48
DM-04	3/9/1994	1241.56	16.46	1225.10
DM-04	4/12/1994	1241.56	16.72	1224.84
DM-04	5/16/1994	1241.56	16.70	1224.86
DM-04	6/22/1994	1241.56	16.50	1225.06
DM-04	7/9/1994	1241.56	16.75	1224.81
DM-04	9/7/1994	1241.56	16.77	1224.79
DM-04	9/20/1994	1241.56	17.95	1223.61
DM-04	9/28/1994	1241.56	17.86	1223.70
DM-04	11/23/1994	1241.56	16.28	1225.28
DM-04	12/15/1994	1241.56	15.80	1225.76
DM-04	3/1/1995	1241.56	15.70	1225.86
DM-04	5/15/1995	1241.56	15.43	1226.13
DM-04	6/14/1995	1241.56	16.24	1225.32
DM-04	9/14/1995	1241.56	15.79	1225.77
DM-04	9/28/1995	1241.56	16.53	1225.03
DM-04	12/11/1995	1241.56	15.76	1225.80
DM-04	3/4/1996	1241.56	16.75	1224.81
DM-04	6/4/1996	1241.56	16.74	1224.82
DM-04	9/3/1996	1241.56	16.48	1225.08
DM-04	9/10/1996	1241.56	16.22	1225.34
DM-04	12/5/1996	1241.56	13.45	1228.11
DM-04	3/3/1997	1241.56	16.85	1224.71
DM-04	6/23/1997	1241.56	17.58	1223.98
DM-04	9/4/1997	1241.56	17.67	1223.89
DM-04	10/1/1997	1241.56	17.17	1224.39
DM-04	12/29/1997	1241.56	16.74	1224.82
DM-04	3/2/1998	1241.56	16.11	1225.45
DM-04	6/11/1998	1241.56	16.25	1225.31
DM-04	9/3/1998	1241.56	17.09	1224.47
DM-04	12/30/1998	1241.56	15.05	1226.51
DM-04	3/30/1999	1241.56	17.34	1224.22
DM-04	6/16/1999	1241.56	17.21	1224.35
DM-04	9/7/1999	1241.56	16.67	1224.89
DM-04	1/6/2000	1241.56	16.92	1224.64
DM-04	2/28/2000	1241.56	17.71	1223.85
DM-04	6/7/2000	1241.56	17.67	1223.89
DM-04	9/25/2000	1241.56	17.39	1224.17
DM-04	12/20/2000	1241.56	16.31	1225.25
DM-04	3/20/2001	1241.56	16.12	1225.44
DM-04	6/7/2001	1241.56	16.70	1224.86
DM-04	10/26/2001	1241.56	17.06	1224.50
DM-04	1/8/2002	1241.56	17.15	1224.41
DM-04	4/1/2002	1241.56	17.81	1223.75
DM-04	7/8/2002	1241.56	18.61	1222.95
DM-04	10/3/2002	1241.56	17.69	1223.87
DM-04	1/7/2003	1241.56	18.09	1223.47
DM-04	4/2/2003	1241.56	17.72	1223.84
DM-04	7/1/2003	1241.56	17.48	1224.08

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-04	4/1/2004	1241.56	19.33	1222.23
DM-04	10/1/2004	1241.56	19.29	1222.27
DM-04	4/4/2005	1241.56	18.94	1222.62
DM-05	5/16/1986	1237.32	16.65	1220.67
DM-05	1/12/1987	1237.32	16.40	1220.92
DM-05	2/3/1987	1237.32	16.04	1221.28
DM-05	10/27/1988	1237.32	16.01	1221.31
DM-05	11/9/1988	1237.32	15.85	1221.47
DM-05	7/13/1989	1237.32	16.58	1220.74
DM-05	11/1/1989	1237.32	16.28	1221.04
DM-05	11/9/1989	1237.32	16.21	1221.11
DM-05	1/9/1991	1237.32	16.34	1220.98
DM-05	2/28/1991	1237.32	16.70	1220.62
DM-05	4/11/1991	1237.32	16.50	1220.82
DM-05	5/23/1991	1237.32	16.77	1220.55
DM-05	6/21/1991	1237.32	17.03	1220.29
DM-05	12/6/1991	1237.32	16.45	1220.87
DM-05	3/26/1992	1237.32	16.02	1221.30
DM-05	7/1/1992	1237.32	16.50	1220.82
DM-05	9/4/1992	1237.32	15.83	1221.49
DM-05	9/8/1992	1237.32	16.60	1220.72
DM-05	11/11/1992	1237.32	16.11	1221.21
DM-05	1/19/1993	1237.32	15.30	1222.02
DM-05	4/12/1993	1237.32	15.83	1221.49
DM-05	5/21/1993	1237.32	16.12	1221.20
DM-05	6/22/1993	1237.32	15.29	1222.03
DM-05	7/12/1993	1237.32	15.63	1221.69
DM-05	8/17/1993	1237.32	16.77	1220.55
DM-05	9/15/1993	1237.32	16.63	1220.69
DM-05	10/8/1993	1237.32	15.84	1221.48
DM-05	12/18/1993	1237.32	15.05	1222.27
DM-05	1/18/1994	1237.32	16.16	1221.16
DM-05	2/16/1994	1237.32	16.91	1220.41
DM-05	3/9/1994	1237.32	16.06	1221.26
DM-05	4/12/1994	1237.32	16.14	1221.18
DM-05	5/16/1994	1237.32	16.34	1220.98
DM-05	6/22/1994	1237.32	17.69	1219.63
DM-05	7/9/1994	1237.32	16.71	1220.61
DM-05	9/7/1994	1237.32	16.93	1220.39
DM-05	9/20/1994	1237.32	17.87	1219.45
DM-05	9/28/1994	1237.32	17.75	1219.57
DM-05	11/23/1994	1237.32	16.45	1220.87
DM-05	12/15/1994	1237.32	16.25	1221.07
DM-05	3/1/1995	1237.32	15.98	1221.34
DM-05	3/21/1995	1237.32	15.95	1221.37
DM-05	5/15/1995	1237.32	16.45	1220.87
DM-05	6/14/1995	1237.32	16.58	1220.74
DM-05	9/14/1995	1237.32	16.81	1220.51
DM-05	9/21/1995	1237.32	16.69	1220.63
DM-05	12/11/1995	1237.32	16.29	1221.03
DM-05	3/4/1996	1237.32	16.78	1220.54
DM-05	3/18/1996	1237.32	16.78	1220.54
DM-05	6/4/1996	1237.32	17.98	1219.34
DM-05	9/10/1996	1237.32	17.64	1219.68
DM-05	12/5/1996	1237.32	16.76	1220.56
DM-05	3/3/1997	1237.32	17.00	1220.32
DM-05	3/6/1997	1237.32	16.90	1220.42
DM-05	6/20/1997	1237.32	16.67	1220.65
DM-05	9/4/1997	1237.32	17.26	1220.06
DM-05	9/25/1997	1237.32	16.95	1220.37
DM-05	12/29/1997	1237.32	16.76	1220.56
DM-05	3/3/1998	1237.32	16.21	1221.11
DM-05	6/11/1998	1237.32	16.41	1220.91
DM-05	9/2/1998	1237.32	16.93	1220.39
DM-05	9/16/1998	1237.32	16.79	1220.53
DM-05	12/30/1998	1237.32	16.55	1220.77
DM-05	3/30/1999	1237.32	18.19	1219.13
DM-05	9/7/1999	1237.32	17.15	1220.17
DM-05	9/21/1999	1237.32	17.15	1220.17
DM-05	1/5/2000	1237.32	18.06	1219.26
DM-05	2/28/2000	1237.32	18.46	1218.86
DM-05	6/7/2000	1237.32	18.56	1218.76
DM-05	9/25/2000	1237.32	18.45	1218.87
DM-05	10/5/2000	1237.32	18.45	1218.87
DM-05	12/19/2000	1237.32	16.54	1220.78
DM-05	3/20/2001	1237.32	16.42	1220.90
DM-05	6/7/2001	1237.32	16.85	1220.47
DM-05	10/23/2001	1237.32	17.49	1219.83
DM-05	11/1/2001	1237.32	17.62	1219.70
DM-05	1/8/2002	1237.32	17.20	1220.12
DM-05	4/1/2002	1237.32	17.86	1219.46
DM-05	7/8/2002	1237.32	18.58	1218.74
DM-05	10/3/2002	1237.32	18.30	1219.02
DM-05	1/6/2003	1237.32	18.36	1218.96
DM-05	4/3/2003	1237.32	18.14	1219.18
DM-05	7/1/2003	1237.32	19.19	1218.13
DM-05	10/3/2003	1237.32	19.10	1218.22
DM-05	10/8/2003	1237.32	19.97	1217.35
DM-05	4/1/2004	1237.32	19.61	1217.71
DM-05	10/1/2004	1237.32	20.48	1216.84
DM-05	10/5/2004	1237.32	20.59	1216.73
DM-05	4/4/2005	1237.32	19.22	1218.10
DM-05	10/3/2005	1237.32	19.89	1217.43
DM-05	10/6/2005	1237.32	19.85	1217.47
DM-05	4/5/2006	1237.32	20.72	1216.60
DM-05	10/4/2006	1237.32	21.20	1216.12
DM-05	10/13/2006	1237.32	21.13	1216.19
DM-05	4/2/2007	1237.32	21.10	1216.22
DM-05	10/1/2007	1237.32	21.41	1215.91
DM-05	4/1/2008	1237.32	20.60	1216.72
DM-05	10/1/2008	1237.32	20.43	1216.89
DM-05	10/7/2008	1237.32	20.43	1216.89
DM-05	4/1/2009	1237.32	20.53	1216.79
DM-05	10/1/2009	1237.32	21.53	1215.79
DM-05	10/12/2009	1237.32	21.43	1215.89
DM-05	4/1/2010	1237.32	21.08	1216.24

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-05	10/6/2010	1237.32	21.67	1215.65
DM-05	4/1/2011	1237.32	21.84	1215.48
DM-05	10/3/2011	1237.32	22.11	1215.21
DM-05	4/9/2012	1237.32	22.65	1214.67
DM-05	10/1/2012	1237.32	22.83	1214.49
DM-05	10/8/2012	1237.32	22.89	1214.43
DM-05	4/2/2013	1237.32	23.19	1214.13
DM-05	10/7/2013	1237.32	23.65	1213.67
DM-06	5/16/1986	1231.71	14.11	1217.60
DM-06	6/11/1986	1231.71	14.13	1217.58
DM-06	1/13/1987	1231.71	13.86	1217.85
DM-06	2/3/1987	1231.71	14.00	1217.71
DM-06	10/26/1988	1231.71	13.42	1218.29
DM-06	11/9/1988	1231.71	13.59	1218.12
DM-06	7/13/1989	1231.71	15.09	1216.62
DM-06	11/1/1989	1231.71	14.83	1216.88
DM-06	11/9/1989	1231.71	14.85	1216.86
DM-06	1/9/1991	1231.71	14.94	1216.77
DM-06	2/28/1991	1231.71	15.60	1216.11
DM-06	4/11/1991	1231.71	15.47	1216.24
DM-06	5/23/1991	1231.71	15.44	1216.27
DM-06	6/24/1991	1231.71	15.22	1216.49
DM-06	12/6/1991	1231.71	15.32	1216.39
DM-06	3/27/1992	1231.71	14.86	1216.85
DM-06	6/24/1992	1231.71	14.72	1216.99
DM-06	7/2/1992	1231.71	14.89	1216.82
DM-06	11/13/1992	1231.71	14.44	1217.27
DM-06	10/4/1994	1231.71	15.37	1216.34
DM-06	12/19/1994	1231.71	15.36	1216.35
DM-06	3/1/1995	1231.71	15.16	1216.55
DM-06	3/23/1995	1231.71	15.30	1216.41
DM-06	5/15/1995	1231.71	15.86	1215.85
DM-06	6/14/1995	1231.71	15.28	1216.43
DM-06	6/27/1995	1231.71	15.85	1215.86
DM-06	9/25/1995	1231.71	15.16	1216.55
DM-06	10/3/1995	1231.71	15.31	1216.40
DM-06	12/13/1995	1231.71	15.69	1216.02
DM-06	1/8/1996	1231.71	15.67	1216.04
DM-06	3/4/1996	1231.71	16.11	1215.60
DM-06	3/22/1996	1231.71	16.21	1215.50
DM-06	6/4/1996	1231.71	15.55	1216.16
DM-06	6/13/1996	1231.71	16.71	1215.00
DM-06	9/3/1996	1231.71	15.92	1215.79
DM-06	9/24/1996	1231.71	16.42	1215.29
DM-06	12/5/1996	1231.71	16.30	1215.41
DM-06	12/18/1996	1231.71	16.30	1215.41
DM-06	3/4/1997	1231.71	16.52	1215.19
DM-06	3/12/1997	1231.71	16.65	1215.06
DM-06	6/20/1997	1231.71	17.48	1214.23
DM-06	7/17/1997	1231.71	17.12	1214.59
DM-06	9/4/1997	1231.71	16.88	1214.83
DM-06	9/29/1997	1231.71	16.85	1214.86
DM-06	12/29/1997	1231.71	16.90	1214.81

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-06	3/9/1998	1231.71	15.94	1215.77
DM-06	6/11/1998	1231.71	16.32	1215.39
DM-06	9/3/1998	1231.71	15.97	1215.74
DM-06	9/17/1998	1231.71	16.28	1215.43
DM-06	12/30/1998	1231.71	16.67	1215.04
DM-06	3/25/1999	1231.71	17.36	1214.35
DM-06	9/21/1999	1231.71	17.08	1214.63
DM-06	9/21/1999	1231.71	17.08	1214.63
DM-06	1/5/2000	1231.71	17.51	1214.20
DM-06	2/28/2000	1231.71	17.89	1213.82
DM-06	3/2/2000	1231.71	12.81	1218.90
DM-06	6/7/2000	1231.71	17.93	1213.78
DM-06	9/27/2000	1231.71	18.24	1213.47
DM-06	10/2/2000	1231.71	18.24	1213.47
DM-06	12/19/2000	1231.71	16.73	1214.98
DM-06	3/20/2001	1231.71	16.19	1215.52
DM-06	6/7/2001	1231.71	16.54	1215.17
DM-06	10/23/2001	1231.71	17.14	1214.57
DM-06	11/8/2001	1231.71	17.25	1214.46
DM-06	1/8/2002	1231.71	17.57	1214.14
DM-06	4/1/2002	1231.71	17.89	1213.82
DM-06	4/9/2002	1231.71	18.02	1213.69
DM-06	7/8/2002	1231.71	18.12	1213.59
DM-06	10/3/2002	1231.71	18.27	1213.44
DM-06	10/16/2002	1231.71	18.59	1213.12
DM-06	1/6/2003	1231.71	18.69	1213.02
DM-06	4/2/2003	1231.71	18.44	1213.27
DM-06	7/1/2003	1231.71	19.26	1212.45
DM-06	10/3/2003	1231.71	19.45	1212.26
DM-06	10/10/2003	1231.71	19.32	1212.39
DM-06	4/1/2004	1231.71	19.77	1211.94
DM-06	10/1/2004	1231.71	20.21	1211.50
DM-06	10/6/2004	1231.71	20.10	1211.61
DM-06	4/5/2005	1231.71	18.78	1212.93
DM-06	10/3/2005	1231.71	20.20	1211.51
DM-06	10/11/2005	1231.71	20.20	1211.51
DM-06	4/5/2006	1231.71	20.23	1211.48
DM-06	10/5/2006	1231.71	20.84	1210.87
DM-06	10/13/2006	1231.71	20.89	1210.82
DM-06	4/3/2007	1231.71	20.62	1211.09
DM-06	10/1/2007	1231.71	21.60	1210.11
DM-06	4/1/2008	1231.71	20.61	1211.10
DM-06	10/1/2008	1231.71	21.72	1209.99
DM-06	10/9/2008	1231.71	20.70	1211.01
DM-06	4/1/2009	1231.71	19.31	1212.40
DM-06	10/1/2009	1231.71	20.13	1211.58
DM-06	10/16/2009	1231.71	19.98	1211.73
DM-06	4/1/2010	1231.71	16.34	1215.37
DM-06	10/1/2010	1231.71	17.84	1213.87
DM-06	10/8/2010	1231.71	17.80	1213.91
DM-06	4/1/2011	1231.71	14.25	1217.46
DM-06	10/3/2011	1231.71	15.20	1216.51
DM-06	4/4/2012	1231.71	14.79	1216.92

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-06	4/3/2013	1231.71	14.69	1217.02
DM-06	10/1/2013	1231.71	16.24	1215.47
DM-06	10/9/2013	1231.71	16.16	1215.55
DM-06	4/1/2014	1231.71	15.19	1216.52
DM-06	10/10/2014	1231.71	15.41	1216.30
DM-06	4/1/2015	1231.71	15.02	1216.69
DM-06	10/20/2015	1231.71	Dry	Dry
DM-06	4/12/2016	1231.71	16.65	1215.06
DM-06	10/3/2016	1231.71	16.66	1215.05
DM-07	5/16/1986	1227.86	9.87	1217.99
DM-07	6/11/1986	1227.86	9.72	1218.14
DM-07	1/13/1987	1227.86	10.42	1217.44
DM-07	2/4/1987	1227.86	10.31	1217.55
DM-07	10/26/1988	1227.86	9.48	1218.38
DM-07	11/9/1988	1227.86	9.39	1218.47
DM-07	7/13/1989	1227.86	9.97	1217.89
DM-07	10/31/1989	1227.86	8.49	1219.37
DM-07	11/7/1989	1227.86	9.32	1218.54
DM-07	1/9/1991	1227.86	10.37	1217.49
DM-07	5/23/1991	1227.86	9.89	1217.97
DM-07	12/4/1991	1227.86	10.08	1217.78
DM-07	3/25/1992	1227.86	9.98	1217.88
DM-07	6/30/1992	1227.86	9.50	1218.36
DM-07	9/4/1992	1227.86	9.63	1218.23
DM-07	11/10/1992	1227.86	10.12	1217.74
DM-07	1/19/1993	1227.86	8.35	1219.51
DM-07	4/9/1993	1227.86	8.63	1219.23
DM-07	5/21/1993	1227.86	9.43	1218.43
DM-07	6/22/1993	1227.86	9.76	1218.10
DM-07	7/12/1993	1227.86	9.88	1217.98
DM-07	7/13/1993	1227.86	9.82	1218.04
DM-07	8/17/1993	1227.86	10.15	1217.71
DM-07	9/15/1993	1227.86	10.11	1217.75
DM-07	10/6/1993	1227.86	5.62	1222.24
DM-07	12/18/1993	1227.86	9.18	1218.68
DM-07	1/18/1994	1227.86	9.82	1218.04
DM-07	2/16/1994	1227.86	10.43	1217.43
DM-07	3/9/1994	1227.86	9.89	1217.97
DM-07	4/12/1994	1227.86	10.04	1217.82
DM-07	5/16/1994	1227.86	10.46	1217.40
DM-07	6/20/1994	1227.86	10.04	1217.82
DM-07	7/9/1994	1227.86	10.60	1217.26
DM-07	9/7/1994	1227.86	10.54	1217.32
DM-07	9/20/1994	1227.86	11.50	1216.36
DM-07	9/28/1994	1227.86	10.68	1217.18
DM-07	11/23/1994	1227.86	9.68	1218.18
DM-07	12/15/1994	1227.86	9.78	1218.08
DM-07	3/1/1995	1227.86	10.05	1217.81
DM-07	5/15/1995	1227.86	10.14	1217.72
DM-07	6/14/1995	1227.86	10.42	1217.44
DM-07	9/14/1995	1227.86	9.55	1218.31
DM-07	9/22/1995	1227.86	10.18	1217.68
DM-07	12/11/1995	1227.86	10.41	1217.45

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-07	3/14/1996	1227.86	10.16	1217.70
DM-07	6/4/1996	1227.86	10.45	1217.41
DM-07	9/3/1996	1227.86	10.88	1216.98
DM-07	9/10/1996	1227.86	9.80	1218.06
DM-07	3/3/1997	1227.86	11.11	1216.75
DM-07	6/20/1997	1227.86	10.19	1217.67
DM-07	9/4/1997	1227.86	10.57	1217.29
DM-07	9/23/1997	1227.86	9.41	1218.45
DM-07	12/29/1997	1227.86	10.17	1217.69
DM-07	3/2/1998	1227.86	9.99	1217.87
DM-07	6/11/1998	1227.86	9.88	1217.98
DM-07	9/2/1998	1227.86	10.33	1217.53
DM-07	12/30/1998	1227.86	10.86	1217.00
DM-07	3/30/1999	1227.86	11.28	1216.58
DM-07	6/16/1999	1227.86	10.95	1216.91
DM-07	9/7/1999	1227.86	10.57	1217.29
DM-07	1/5/2000	1227.86	10.15	1217.71
DM-07	2/28/2000	1227.86	10.77	1217.09
DM-07	6/7/2000	1227.86	10.99	1216.87
DM-07	9/25/2000	1227.86	10.56	1217.30
DM-07	12/19/2000	1227.86	9.31	1218.55
DM-07	3/20/2001	1227.86	9.97	1217.89
DM-07	6/7/2001	1227.86	10.06	1217.80
DM-07	10/23/2001	1227.86	10.91	1216.95
DM-07	1/8/2002	1227.86	10.63	1217.23
DM-07	4/1/2002	1227.86	10.89	1216.97
DM-07	7/8/2002	1227.86	11.28	1216.58
DM-07	10/3/2002	1227.86	11.16	1216.70
DM-07	1/6/2003	1227.86	11.64	1216.22
DM-07	4/2/2003	1227.86	11.34	1216.52
DM-07	7/1/2003	1227.86	12.75	1215.11
DM-07	10/3/2003	1227.86	11.10	1216.76
DM-07	4/1/2004	1227.86	12.10	1215.76
DM-07	10/1/2004	1227.86	12.59	1215.27
DM-07	4/4/2005	1227.86	11.53	1216.33
DM-07	10/3/2005	1227.86	11.76	1216.10
DM-07	4/5/2006	1227.86	11.86	1216.00
DM-07	10/4/2006	1227.86	12.02	1215.84
DM-07	4/2/2007	1227.86	13.31	1214.55
DM-07	10/1/2007	1227.86	13.05	1214.81
DM-07	4/1/2008	1227.86	12.93	1214.93
DM-07	10/1/2008	1227.86	12.50	1215.36
DM-07	4/1/2009	1227.86	13.19	1214.67
DM-07	10/1/2009	1227.86	13.69	1214.17
DM-07	4/1/2010	1227.86	13.42	1214.44
DM-07	10/1/2010	1227.86	13.45	1214.41
DM-07	4/1/2011	1227.86	14.47	1213.39
DM-07	10/3/2011	1227.86	14.47	1213.39
DM-07	4/4/2012	1227.86	15.59	1212.27
DM-07	10/1/2012	1227.86	14.21	1213.65
DM-07	4/1/2013	1227.86	15.49	1212.37
DM-07	10/1/2013	1227.86	14.68	1213.18
DM-07	4/1/2014	1227.86	16.34	1211.52

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-07	4/1/2015	1227.86	15.63	1212.23
DM-07	10/14/2015	1227.86	14.68	1213.18
DM-07	4/12/2016	1227.86	16.60	1211.26
DM-07	10/3/2016	1227.86	16.12	1211.74
DM-08	1/12/1987	1242.28	23.78	1218.50
DM-08	2/4/1987	1242.28	24.61	1217.67
DM-08	10/25/1988	1242.28	23.54	1218.74
DM-08	11/9/1988	1242.28	24.19	1218.09
DM-08	7/12/1989	1242.28	24.58	1217.70
DM-08	10/31/1989	1242.28	24.06	1218.22
DM-08	11/7/1989	1242.28	24.19	1218.09
DM-08	1/9/1991	1242.28	25.25	1217.03
DM-08	5/23/1991	1242.28	25.81	1216.47
DM-08	12/5/1991	1242.28	25.50	1216.78
DM-08	3/26/1992	1242.28	26.27	1216.01
DM-08	7/1/1992	1242.28	25.14	1217.14
DM-08	9/4/1992	1242.28	23.80	1218.48
DM-08	11/11/1992	1242.28	24.04	1218.24
DM-08	1/19/1993	1242.28	23.93	1218.35
DM-08	4/9/1993	1242.28	23.61	1218.67
DM-08	5/21/1993	1242.28	23.21	1219.07
DM-08	6/22/1993	1242.28	23.04	1219.24
DM-08	7/12/1993	1242.28	23.02	1219.26
DM-08	8/17/1993	1242.28	22.97	1219.31
DM-08	9/15/1993	1242.28	23.54	1218.74
DM-08	10/5/1993	1242.28	23.17	1219.11
DM-08	12/18/1993	1242.28	23.09	1219.19
DM-08	1/18/1994	1242.28	23.59	1218.69
DM-08	2/16/1994	1242.28	24.61	1217.67
DM-08	3/9/1994	1242.28	24.61	1217.67
DM-08	4/12/1994	1242.28	24.97	1217.31
DM-08	5/16/1994	1242.28	24.87	1217.41
DM-08	6/23/1994	1242.28	24.93	1217.35
DM-08	7/9/1994	1242.28	25.05	1217.23
DM-08	9/7/1994	1242.28	24.61	1217.67
DM-08	9/21/1994	1242.28	25.72	1216.56
DM-08	9/28/1994	1242.28	25.69	1216.59
DM-08	11/23/1994	1242.28	25.23	1217.05
DM-08	12/15/1994	1242.28	25.48	1216.80
DM-08	3/1/1995	1242.28	25.59	1216.69
DM-08	5/15/1995	1242.28	25.70	1216.58
DM-08	6/14/1995	1242.28	25.48	1216.80
DM-08	9/14/1995	1242.28	25.73	1216.55
DM-08	9/26/1995	1242.28	25.13	1217.15
DM-08	12/11/1995	1242.28	25.69	1216.59
DM-08	3/4/1996	1242.28	28.30	1213.98
DM-08	6/4/1996	1242.28	16.35	1225.93
DM-08	9/3/1996	1242.28	28.05	1214.23
DM-08	9/19/1996	1242.28	25.66	1216.62
DM-08	12/5/1996	1242.28	25.97	1216.31
DM-08	3/4/1997	1242.28	26.91	1215.37
DM-08	6/19/1997	1242.28	27.24	1215.04
DM-08	9/5/1997	1242.28	26.67	1215.61
DM-08	12/29/1997	1242.28	27.15	1215.13
DM-08	3/3/1998	1242.28	27.47	1214.81
DM-08	6/11/1998	1242.28	26.83	1215.45
DM-08	9/3/1998	1242.28	27.02	1215.26
DM-08	12/30/1998	1242.28	27.53	1214.75
DM-08	3/30/1999	1242.28	28.82	1213.46
DM-08	6/16/1999	1242.28	28.33	1213.95
DM-08	9/7/1999	1242.28	27.70	1214.58
DM-08	1/5/2000	1242.28	28.35	1213.93
DM-08	2/28/2000	1242.28	29.02	1213.26
DM-08	6/7/2000	1242.28	28.74	1213.54
DM-08	9/25/2000	1242.28	28.52	1213.76
DM-08	12/19/2000	1242.28	27.32	1214.96
DM-08	3/20/2001	1242.28	26.96	1215.32
DM-08	6/7/2001	1242.28	27.00	1215.28
DM-08	10/23/2001	1242.28	28.61	1213.67
DM-08	1/7/2002	1242.28	28.86	1213.42
DM-08	4/3/2002	1242.28	29.71	1212.57
DM-08	7/8/2002	1242.28	30.16	1212.12
DM-08	10/3/2002	1242.28	30.43	1211.85
DM-08	1/7/2003	1242.28	30.88	1211.40
DM-08	4/1/2003	1242.28	30.96	1211.32
DM-08	7/1/2003	1242.28	31.99	1210.29
DM-08	10/3/2003	1242.28	31.36	1210.92
DM-08	4/1/2004	1242.28	32.71	1209.57
DM-08	10/1/2004	1242.28	32.74	1209.54
DM-08	4/4/2005	1242.28	32.69	1209.59
DM-08	10/3/2005	1242.28	32.50	1209.78
DM-08	4/5/2006	1242.28	33.87	1208.41
DM-08	10/4/2006	1242.28	33.70	1208.58
DM-08	4/2/2007	1242.28	34.63	1207.65
DM-08	10/1/2007	1242.28	33.47	1208.81
DM-08	4/1/2008	1242.28	33.89	1208.39
DM-08	10/1/2008	1242.28	32.81	1209.47
DM-08	4/1/2009	1242.28	33.52	1208.76
DM-08	10/1/2009	1242.28	33.73	1208.55
DM-08	4/1/2010	1242.28	34.48	1207.80
DM-08	10/1/2010	1242.28	34.03	1208.25
DM-08	2/9/2011	1242.28	35.09	1207.19
DM-08	4/1/2011	1242.28	34.89	1207.39
DM-08	10/3/2011	1242.28	34.26	1208.02
DM-08	4/4/2012	1242.28	35.53	1206.75
DM-08	10/1/2012	1242.28	35.03	1207.25
DM-08	4/1/2013	1242.28	36.20	1206.08
DM-08	10/1/2013	1242.28	36.17	1206.11
DM-08	4/1/2014	1242.28	36.72	1205.56
DM-08	10/10/2014	1242.28	36.13	1206.15
DM-08	4/1/2015	1242.28	36.46	1205.82
DM-08	10/14/2015	1242.28	36.32	1205.96
DM-08	4/11/2016	1242.28	36.57	1205.71
DM-08	10/3/2016	1242.28	36.55	1205.73
DM-09	1/12/1987	1216.12	13.90	1202.22
DM-09	2/3/1987	1216.12	14.24	1201.88

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-09	11/9/1988	1216.12	12.99	1203.13
DM-09	7/12/1989	1216.12	14.20	1201.92
DM-09	10/31/1989	1216.12	13.58	1202.54
DM-09	11/7/1989	1216.12	13.67	1202.45
DM-09	1/9/1991	1216.12	15.38	1200.74
DM-09	5/23/1991	1216.12	15.65	1200.47
DM-09	12/4/1991	1216.12	15.48	1200.64
DM-09	3/25/1992	1216.12	15.66	1200.46
DM-09	7/1/1992	1216.12	14.88	1201.24
DM-09	9/4/1992	1216.12	13.69	1202.43
DM-09	11/11/1992	1216.12	14.02	1202.10
DM-09	1/20/1993	1216.12	13.65	1202.47
DM-09	4/13/1993	1216.12	13.20	1202.92
DM-09	5/21/1993	1216.12	13.44	1202.68
DM-09	6/22/1993	1216.12	13.76	1202.36
DM-09	7/12/1993	1216.12	13.91	1202.21
DM-09	8/17/1993	1216.12	14.24	1201.88
DM-09	9/15/1993	1216.12	14.47	1201.65
DM-09	10/8/1993	1216.12	14.06	1202.06
DM-09	12/18/1993	1216.12	12.89	1203.23
DM-09	1/18/1994	1216.12	13.62	1202.50
DM-09	2/16/1994	1216.12	14.43	1201.69
DM-09	3/9/1994	1216.12	14.58	1201.54
DM-09	4/12/1994	1216.12	14.95	1201.17
DM-09	5/16/1994	1216.12	14.84	1201.28
DM-09	6/22/1994	1216.12	15.07	1201.05
DM-09	7/9/1994	1216.12	15.02	1201.10
DM-09	9/7/1994	1216.12	15.02	1201.10
DM-09	9/21/1994	1216.12	16.10	1200.02
DM-09	9/28/1994	1216.12	16.29	1199.83
DM-09	11/23/1994	1216.12	15.43	1200.69
DM-09	12/15/1994	1216.12	15.15	1200.97
DM-09	3/1/1995	1216.12	15.05	1201.07
DM-09	3/22/1995	1216.12	15.11	1201.01
DM-09	5/15/1995	1216.12	15.75	1200.37
DM-09	6/14/1995	1216.12	15.98	1200.14
DM-09	6/26/1995	1216.12	16.16	1199.96
DM-09	9/14/1995	1216.12	15.09	1201.03
DM-09	9/27/1995	1216.12	15.84	1200.28
DM-09	12/11/1995	1216.12	16.72	1199.40
DM-09	1/4/1996	1216.12	17.17	1198.95
DM-09	3/4/1996	1216.12	17.58	1198.54
DM-09	3/19/1996	1216.12	17.48	1198.64
DM-09	6/4/1996	1216.12	17.98	1198.14
DM-09	6/11/1996	1216.12	17.95	1198.17
DM-09	9/3/1996	1216.12	17.25	1198.87
DM-09	9/20/1996	1216.12	17.23	1198.89
DM-09	12/5/1996	1216.12	17.64	1198.48
DM-09	12/16/1996	1216.12	17.50	1198.62
DM-09	3/4/1997	1216.12	18.87	1197.25
DM-09	3/10/1997	1216.12	18.87	1197.25
DM-09	6/19/1997	1216.12	19.90	1196.22
DM-09	7/14/1997	1216.12	19.94	1196.18
DM-09	9/25/1997	1216.12	20.22	1195.90
DM-09	12/29/1997	1216.12	20.48	1195.64
DM-09	3/3/1998	1216.12	20.28	1195.84
DM-09	6/11/1998	1216.12	20.09	1196.03
DM-09	9/3/1998	1216.12	20.72	1195.40
DM-09	9/14/1998	1216.12	20.09	1196.03
DM-09	12/30/1998	1216.12	20.45	1195.67
DM-09	3/30/1999	1216.12	21.35	1194.77
DM-09	6/16/1999	1216.12	21.13	1194.99
DM-09	9/7/1999	1216.12	21.33	1194.79
DM-09	9/21/1999	1216.12	21.33	1194.79
DM-09	1/5/2000	1216.12	21.93	1194.19
DM-09	2/28/2000	1216.12	22.45	1193.67
DM-09	6/7/2000	1216.12	22.70	1193.42
DM-09	9/25/2000	1216.12	23.10	1193.02
DM-09	10/3/2000	1216.12	23.10	1193.02
DM-09	12/19/2000	1216.12	21.99	1194.13
DM-09	3/20/2001	1216.12	22.10	1194.02
DM-09	6/7/2001	1216.12	22.10	1194.02
DM-09	10/23/2001	1216.12	23.20	1192.92
DM-09	11/2/2001	1216.12	23.28	1192.84
DM-09	1/7/2002	1216.12	23.32	1192.80
DM-09	4/1/2002	1216.12	24.21	1191.91
DM-09	7/8/2002	1216.12	24.98	1191.14
DM-09	10/3/2002	1216.12	25.28	1190.84
DM-09	10/15/2002	1216.12	25.31	1190.81
DM-09	1/6/2003	1216.12	25.48	1190.64
DM-09	4/1/2003	1216.12	25.75	1190.37
DM-09	7/1/2003	1216.12	26.66	1189.46
DM-09	10/3/2003	1216.12	26.55	1189.57
DM-09	10/9/2003	1216.12	26.68	1189.44
DM-09	4/1/2004	1216.12	27.77	1188.35
DM-09	4/5/2004	1216.12	27.81	1188.31
DM-09	10/1/2004	1216.12	28.59	1187.53
DM-09	10/5/2004	1216.12	28.63	1187.49
DM-09	4/4/2005	1216.12	28.56	1187.56
DM-09	4/6/2005	1216.12	28.59	1187.53
DM-09	10/3/2005	1216.12	28.49	1187.63
DM-09	10/10/2005	1216.12	28.44	1187.68
DM-09	4/5/2006	1216.12	29.38	1186.74
DM-09	4/10/2006	1216.12	29.39	1186.73
DM-09	10/4/2006	1216.12	28.51	1187.61
DM-09	10/11/2006	1216.12	28.48	1187.64
DM-09	4/2/2007	1216.12	29.67	1186.45
DM-09	4/5/2007	1216.12	29.66	1186.46
DM-09	10/1/2007	1216.12	29.55	1186.57
DM-09	4/1/2008	1216.12	30.10	1186.02
DM-09	4/7/2008	1216.12	30.35	1185.77
DM-09	10/1/2008	1216.12	28.97	1187.15
DM-09	10/7/2008	1216.12	29.12	1187.00
DM-09	4/1/2009	1216.12	30.21	1185.91
DM-09	4/8/2009	1216.12	30.52	1185.60
DM-09	10/1/2009	1216.12	30.58	1185.54

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-09	4/1/2010	1216.12	30.79	1185.33
DM-09	4/6/2010	1216.12	30.83	1185.29
DM-09	10/1/2010	1216.12	30.69	1185.43
DM-09	4/1/2011	1216.12	31.17	1184.95
DM-09	10/3/2011	1216.12	31.48	1184.64
DM-09	4/4/2012	1216.12	32.17	1183.95
DM-09	4/11/2012	1216.12	32.21	1183.91
DM-09	10/1/2012	1216.12	32.76	1183.36
DM-09	10/8/2012	1216.12	32.79	1183.33
DM-09	4/1/2013	1216.12	32.99	1183.13
DM-09	4/4/2013	1216.12	33.01	1183.11
DM-09	10/1/2013	1216.12	32.97	1183.15
DM-09	10/4/2013	1216.12	33.01	1183.11
DM-09	4/1/2014	1216.12	33.51	1182.61
DM-09	10/10/2014	1216.12	33.05	1183.07
DM-09	4/1/2015	1216.12	32.75	1183.37
DM-09	10/14/2015	1216.12	32.60	1183.52
DM-09	4/11/2016	1216.12	33.57	1182.55
DM-09	10/3/2016	1216.12	33.60	1182.52
DM-10	1/12/1987	1221.43	10.41	1211.02
DM-10	2/3/1987	1221.43	10.81	1210.62
DM-10	10/26/1988	1221.43	9.97	1211.46
DM-10	11/9/1988	1221.43	9.70	1211.73
DM-10	7/13/1989	1221.43	11.05	1210.38
DM-10	11/1/1989	1221.43	10.24	1211.19
DM-10	11/8/1989	1221.43	10.02	1211.41
DM-10	1/9/1991	1221.43	11.44	1209.99
DM-10	5/23/1991	1221.43	10.68	1210.75
DM-10	6/21/1991	1221.43	10.70	1210.73
DM-10	12/6/1991	1221.43	11.13	1210.30
DM-10	3/27/1992	1221.43	10.40	1211.03
DM-10	7/2/1992	1221.43	10.74	1210.69
DM-10	9/4/1992	1221.43	9.85	1211.58
DM-10	11/11/1992	1221.43	10.32	1211.11
DM-10	1/20/1993	1221.43	8.03	1213.40
DM-10	4/14/1993	1221.43	12.18	1209.25
DM-10	5/21/1993	1221.43	9.01	1212.42
DM-10	6/22/1993	1221.43	9.81	1211.62
DM-10	7/12/1993	1221.43	10.36	1211.07
DM-10	8/17/1993	1221.43	10.68	1210.75
DM-10	9/15/1993	1221.43	10.59	1210.84
DM-10	10/11/1993	1221.43	10.42	1211.01
DM-10	12/18/1993	1221.43	9.23	1212.20
DM-10	1/18/1994	1221.43	10.02	1211.41
DM-10	2/16/1994	1221.43	10.60	1210.83
DM-10	3/9/1994	1221.43	10.48	1210.95
DM-10	4/12/1994	1221.43	10.50	1210.93
DM-10	5/16/1994	1221.43	10.60	1210.83
DM-10	6/24/1994	1221.43	10.63	1210.80
DM-10	7/9/1994	1221.43	11.21	1210.22
DM-10	9/7/1994	1221.43	11.20	1210.23
DM-10	9/21/1994	1221.43	11.96	1209.47
DM-10	9/28/1994	1221.43	11.89	1209.54

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-10	12/19/1994	1221.43	10.88	1210.55
DM-10	3/1/1995	1221.43	10.78	1210.65
DM-10	3/22/1995	1221.43	10.75	1210.68
DM-10	5/15/1995	1221.43	11.20	1210.23
DM-10	6/14/1995	1221.43	11.34	1210.09
DM-10	6/26/1995	1221.43	11.05	1210.38
DM-10	9/14/1995	1221.43	10.86	1210.57
DM-10	9/27/1995	1221.43	11.08	1210.35
DM-10	12/12/1995	1221.43	11.57	1209.86
DM-10	1/5/1996	1221.43	12.02	1209.41
DM-10	3/5/1996	1221.43	12.30	1209.13
DM-10	3/22/1996	1221.43	11.71	1209.72
DM-10	6/4/1996	1221.43	12.30	1209.13
DM-10	6/12/1996	1221.43	12.65	1208.78
DM-10	9/3/1996	1221.43	12.18	1209.25
DM-10	9/20/1996	1221.43	12.13	1209.30
DM-10	12/5/1996	1221.43	12.39	1209.04
DM-10	12/17/1996	1221.43	11.81	1209.62
DM-10	3/4/1997	1221.43	12.45	1208.98
DM-10	3/11/1997	1221.43	12.04	1209.39
DM-10	6/20/1997	1221.43	13.02	1208.41
DM-10	7/14/1997	1221.43	13.54	1207.89
DM-10	9/4/1997	1221.43	12.83	1208.60
DM-10	9/25/1997	1221.43	12.92	1208.51
DM-10	12/29/1997	1221.43	12.86	1208.57
DM-10	3/3/1998	1221.43	11.99	1209.44
DM-10	6/11/1998	1221.43	12.20	1209.23
DM-10	9/2/1998	1221.43	13.22	1208.21
DM-10	9/14/1998	1221.43	12.20	1209.23
DM-10	1/7/1999	1221.43	12.93	1208.50
DM-10	3/30/1999	1221.43	13.71	1207.72
DM-10	6/16/1999	1221.43	13.76	1207.67
DM-10	9/7/1999	1221.43	13.48	1207.95
DM-10	9/22/1999	1221.43	13.48	1207.95
DM-10	1/6/2000	1221.43	13.62	1207.81
DM-10	2/28/2000	1221.43	14.13	1207.30
DM-10	6/7/2000	1221.43	13.98	1207.45
DM-10	10/2/2000	1221.43	14.34	1207.09
DM-10	10/3/2000	1221.43	14.34	1207.09
DM-10	1/31/2001	1221.43	13.66	1207.77
DM-10	3/21/2001	1221.43	13.12	1208.31
DM-10	6/7/2001	1221.43	13.46	1207.97
DM-10	10/25/2001	1221.43	14.67	1206.76
DM-10	11/8/2001	1221.43	14.50	1206.93
DM-10	1/8/2002	1221.43	14.36	1207.07
DM-10	4/1/2002	1221.43	14.30	1207.13
DM-10	7/8/2002	1221.43	14.99	1206.44
DM-10	10/3/2002	1221.43	14.90	1206.53
DM-10	10/17/2002	1221.43	14.77	1206.66
DM-10	1/6/2003	1221.43	15.45	1205.98
DM-10	4/2/2003	1221.43	15.30	1206.13
DM-10	7/1/2003	1221.43	16.38	1205.05
DM-10	10/3/2003	1221.43	15.50	1205.93

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-10	4/1/2004	1221.43	16.24	1205.19
DM-10	10/1/2004	1221.43	17.39	1204.04
DM-10	10/5/2004	1221.43	17.51	1203.92
DM-10	4/4/2005	1221.43	16.11	1205.32
DM-10	10/3/2005	1221.43	16.45	1204.98
DM-10	10/10/2005	1221.43	16.12	1205.31
DM-10	4/5/2006	1221.43	16.95	1204.48
DM-10	10/4/2006	1221.43	17.38	1204.05
DM-10	10/13/2006	1221.43	16.92	1204.51
DM-10	4/3/2007	1221.43	17.91	1203.52
DM-10	10/1/2007	1221.43	18.21	1203.22
DM-10	4/1/2008	1221.43	17.63	1203.80
DM-10	10/1/2008	1221.43	17.51	1203.92
DM-10	10/7/2008	1221.43	17.62	1203.81
DM-10	4/1/2009	1221.43	18.08	1203.35
DM-10	10/20/2009	1221.43	19.01	1202.42
DM-10	4/1/2010	1221.43	18.29	1203.14
DM-10	10/1/2010	1221.43	18.98	1202.45
DM-10	10/7/2010	1221.43	18.79	1202.64
DM-10	4/1/2011	1221.43	18.93	1202.50
DM-10	10/3/2011	1221.43	19.56	1201.87
DM-10	4/4/2012	1221.43	20.13	1201.30
DM-10	10/1/2012	1221.43	19.67	1201.76
DM-10	10/9/2012	1221.43	19.79	1201.64
DM-10	4/1/2013	1221.43	20.17	1201.26
DM-10	10/1/2013	1221.43	20.44	1200.99
DM-10	10/6/2013	1221.43	20.36	1201.07
DM-11	10/30/1989	1237.49	13.48	1224.01
DM-11	11/8/1989	1237.49	13.26	1224.23
DM-11	11/10/1989	1237.49	13.31	1224.18
DM-11	1/9/1991	1237.49	13.70	1223.79
DM-11	5/23/1991	1237.49	14.61	1222.88
DM-11	12/5/1991	1237.49	13.53	1223.96
DM-11	3/24/1992	1237.49	13.30	1224.19
DM-11	6/24/1992	1237.49	13.73	1223.76
DM-11	6/29/1992	1237.49	13.88	1223.61
DM-11	9/4/1992	1237.49	13.11	1224.38
DM-11	11/10/1992	1237.49	14.09	1223.40
DM-11	1/18/1993	1237.49	12.59	1224.90
DM-11	4/12/1993	1237.49	12.14	1225.35
DM-11	5/21/1993	1237.49	12.42	1225.07
DM-11	6/22/1993	1237.49	12.97	1224.52
DM-11	7/12/1993	1237.49	13.24	1224.25
DM-11	7/13/1993	1237.49	13.34	1224.15
DM-11	8/17/1993	1237.49	13.61	1223.88
DM-11	9/15/1993	1237.49	13.54	1223.95
DM-11	10/7/1993	1237.49	13.55	1223.94
DM-11	12/18/1993	1237.49	12.70	1224.79
DM-11	1/18/1994	1237.49	12.74	1224.75
DM-11	2/16/1994	1237.49	13.40	1224.09
DM-11	3/9/1994	1237.49	13.78	1223.71
DM-11	4/12/1994	1237.49	13.76	1223.73
DM-11	5/16/1994	1237.49	13.77	1223.72
DM-11	7/9/1994	1237.49	14.25	1223.24
DM-11	9/7/1994	1237.49	14.23	1223.26
DM-11	9/21/1994	1237.49	15.28	1222.21
DM-11	9/28/1994	1237.49	15.14	1222.35
DM-11	11/23/1994	1237.49	13.74	1223.75
DM-11	12/28/1994	1237.49	13.42	1224.07
DM-11	3/1/1995	1237.49	13.30	1224.19
DM-11	5/15/1995	1237.49	13.63	1223.86
DM-11	6/14/1995	1237.49	13.80	1223.69
DM-11	9/28/1995	1237.49	13.83	1223.66
DM-11	12/11/1995	1237.49	13.49	1224.00
DM-11	3/4/1996	1237.49	14.02	1223.47
DM-11	6/4/1996	1237.49	13.88	1223.61
DM-11	6/10/1996	1237.49	13.40	1224.09
DM-11	9/3/1996	1237.49	13.81	1223.68
DM-11	9/11/1996	1237.49	13.60	1223.89
DM-11	12/5/1996	1237.49	13.78	1223.71
DM-11	3/3/1997	1237.49	14.26	1223.23
DM-11	6/19/1997	1237.49	14.66	1222.83
DM-11	7/18/1997	1237.49	15.37	1222.12
DM-11	9/4/1997	1237.49	14.86	1222.63
DM-11	9/29/1997	1237.49	14.05	1223.44
DM-11	12/29/1997	1237.49	13.73	1223.76
DM-11	3/2/1998	1237.49	13.20	1224.29
DM-11	6/11/1998	1237.49	13.53	1223.96
DM-11	9/3/1998	1237.49	14.00	1223.49
DM-11	12/30/1998	1237.49	13.55	1223.94
DM-11	3/30/1999	1237.49	14.33	1223.16
DM-11	6/16/1999	1237.49	14.35	1223.14
DM-11	9/7/1999	1237.49	13.99	1223.50
DM-11	1/6/2000	1237.49	14.25	1223.24
DM-11	2/28/2000	1237.49	14.70	1222.79
DM-11	6/7/2000	1237.49	14.63	1222.86
DM-11	9/25/2000	1237.49	14.44	1223.05
DM-11	12/20/2000	1237.49	13.43	1224.06
DM-11	3/20/2001	1237.49	13.36	1224.13
DM-11	6/7/2001	1237.49	16.81	1220.68
DM-11	10/26/2001	1237.49	14.57	1222.92
DM-11	1/8/2002	1237.49	14.24	1223.25
DM-11	4/1/2002	1237.49	14.95	1222.54
DM-11	7/8/2002	1237.49	15.81	1221.68
DM-11	10/3/2002	1237.49	15.29	1222.20
DM-11	1/7/2003	1237.49	15.31	1222.18
DM-11	4/2/2003	1237.49	15.11	1222.38
DM-11	7/1/2003	1237.49	16.22	1221.27
DM-11	10/3/2003	1237.49	15.83	1221.66
DM-11	4/1/2004	1237.49	16.79	1220.70
DM-11	10/1/2004	1237.49	17.69	1219.80
DM-11	4/4/2005	1237.49	16.30	1221.19
DM-12	10/16/1989	1222.17	15.64	1206.53
DM-12	10/17/1989	1222.17	15.61	1206.56
DM-12	10/18/1989	1222.17	15.64	1206.53
DM-12	10/19/1989	1222.17	15.68	1206.49

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-12	5/23/1991	1222.17	17.17	1205.00
DM-12	6/21/1991	1222.17	17.29	1204.88
DM-12	7/2/1992	1222.17	16.38	1205.79
DM-12	9/4/1992	1222.17	15.28	1206.89
DM-12	11/10/1992	1222.17	15.64	1206.53
DM-12	5/21/1993	1222.17	15.34	1206.83
DM-12	6/22/1993	1222.17	14.98	1207.19
DM-12	7/12/1993	1222.17	15.18	1206.99
DM-12	8/17/1993	1222.17	15.47	1206.70
DM-12	9/15/1993	1222.17	15.63	1206.54
DM-12	12/18/1993	1222.17	14.47	1207.70
DM-12	1/18/1994	1222.17	14.84	1207.33
DM-12	2/16/1994	1222.17	15.39	1206.78
DM-12	3/9/1994	1222.17	15.71	1206.46
DM-12	4/12/1994	1222.17	15.99	1206.18
DM-12	5/16/1994	1222.17	16.20	1205.97
DM-12	7/9/1994	1222.17	16.51	1205.66
DM-12	9/7/1994	1222.17	16.43	1205.74
DM-12	11/23/1994	1222.17	16.70	1205.47
DM-12	3/1/1995	1222.17	16.35	1205.82
DM-12	5/15/1995	1222.17	16.98	1205.19
DM-12	6/14/1995	1222.17	17.20	1204.97
DM-12	12/13/1995	1222.17	17.51	1204.66
DM-12	3/4/1996	1222.17	18.41	1203.76
DM-12	6/4/1996	1222.17	18.39	1203.78
DM-12	9/4/1996	1222.17	18.21	1203.96
DM-12	12/5/1996	1222.17	19.04	1203.13
DM-12	3/4/1997	1222.17	19.36	1202.81
DM-12	3/11/1997	1222.17	19.38	1202.79
DM-12	6/20/1997	1222.17	20.44	1201.73
DM-12	9/5/1997	1222.17	20.67	1201.50
DM-12	12/29/1997	1222.17	20.90	1201.27
DM-12	3/3/1998	1222.17	20.50	1201.67
DM-12	6/11/1998	1222.17	20.64	1201.53
DM-12	9/2/1998	1222.17	21.15	1201.02
DM-12	12/30/1998	1222.17	20.82	1201.35
DM-12	3/30/1999	1222.17	21.59	1200.58
DM-12	6/16/1999	1222.17	21.78	1200.39
DM-12	9/8/1999	1222.17	21.58	1200.59
DM-12	1/5/2000	1222.17	22.10	1200.07
DM-12	2/28/2000	1222.17	22.45	1199.72
DM-12	6/7/2000	1222.17	22.64	1199.53
DM-12	9/25/2000	1222.17	23.18	1198.99
DM-12	12/19/2000	1222.17	21.91	1200.26
DM-12	3/20/2001	1222.17	21.91	1200.26
DM-12	6/8/2001	1222.17	22.20	1199.97
DM-12	10/23/2001	1222.17	23.38	1198.79
DM-12	1/7/2002	1222.17	23.29	1198.88
DM-12	4/1/2002	1222.17	23.98	1198.19
DM-12	7/8/2002	1222.17	24.75	1197.42
DM-12	10/3/2002	1222.17	25.13	1197.04
DM-12	1/6/2003	1222.17	25.33	1196.84
DM-12	4/1/2003	1222.17	25.35	1196.82
DM-12	10/3/2003	1222.17	26.51	1195.66
DM-12	4/1/2004	1222.17	27.39	1194.78
DM-12	10/1/2004	1222.17	28.19	1193.98
DM-12	4/4/2005	1222.17	27.85	1194.32
DM-12	10/3/2005	1222.17	28.28	1193.89
DM-12	4/5/2006	1222.17	28.78	1193.39
DM-12	10/4/2006	1222.17	28.63	1193.54
DM-12	4/2/2007	1222.17	29.38	1192.79
DM-12	10/1/2007	1222.17	28.80	1193.37
DM-12	4/1/2008	1222.17	29.51	1192.66
DM-12	10/1/2008	1222.17	29.09	1193.08
DM-12	4/1/2009	1222.17	29.78	1192.39
DM-12	10/1/2009	1222.17	30.61	1191.56
DM-12	4/1/2010	1222.17	30.34	1191.83
DM-12	10/4/2010	1222.17	30.51	1191.66
DM-12	10/27/2010	1222.17	30.50	1191.67
DM-12	4/1/2011	1222.17	30.60	1191.57
DM-12	10/3/2011	1222.17	31.20	1190.97
DM-12	4/4/2012	1222.17	30.48	1191.69
DM-12	10/1/2012	1222.17	29.60	1192.57
DM-12	4/2/2013	1222.17	32.10	1190.07
DM-12	10/1/2013	1222.17	32.82	1189.35
DM-12	4/1/2014	1222.17	32.89	1189.28
DM-12	10/10/2014	1222.17	32.63	1189.54
DM-12	4/1/2015	1222.17	32.06	1190.11
DM-12	10/14/2015	1222.17	32.32	1189.85
DM-12	4/11/2016	1222.17	32.89	1189.28
DM-12	10/3/2016	1222.17	33.18	1188.99
DM-12OW1	4/10/1991	1220.86	16.46	1204.40
DM-12OW1	5/23/1991	1220.86	17.48	1203.38
DM-12OW1	12/6/1991	1220.86	16.34	1204.52
DM-12OW1	3/27/1992	1220.86	16.04	1204.82
DM-12OW1	7/2/1992	1220.86	15.91	1204.95
DM-12OW1	9/4/1992	1220.86	14.77	1206.09
DM-12OW1	11/11/1992	1220.86	15.24	1205.62
DM-12OW1	1/20/1993	1220.86	14.48	1206.38
DM-12OW1	4/13/1993	1220.86	14.63	1206.23
DM-12OW1	5/21/1993	1220.86	15.21	1205.65
DM-12OW1	6/22/1993	1220.86	14.52	1206.34
DM-12OW1	7/12/1993	1220.86	14.69	1206.17
DM-12OW1	8/17/1993	1220.86	14.92	1205.94
DM-12OW1	9/15/1993	1220.86	15.11	1205.75
DM-12OW1	10/8/1993	1220.86	14.90	1205.96
DM-12OW1	12/18/1993	1220.86	13.86	1207.00
DM-12OW1	1/18/1994	1220.86	14.32	1206.54
DM-12OW1	2/16/1994	1220.86	14.86	1206.00
DM-12OW1	3/9/1994	1220.86	15.15	1205.71
DM-12OW1	4/12/1994	1220.86	15.45	1205.41
DM-12OW1	5/16/1994	1220.86	15.67	1205.19
DM-12OW1	6/24/1994	1220.86	15.85	1205.01
DM-12OW1	7/9/1994	1220.86	16.87	1203.99
DM-12OW1	9/7/1994	1220.86	15.85	1205.01
DM-12OW1	9/22/1994	1220.86	16.97	1203.89

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-12OW1	11/23/1994	1220.86	15.95	1204.91
DM-12OW1	12/27/1994	1220.86	15.85	1205.01
DM-12OW1	3/1/1995	1220.86	15.73	1205.13
DM-12OW1	3/22/1995	1220.86	15.73	1205.13
DM-12OW1	5/15/1995	1220.86	16.37	1204.49
DM-12OW1	6/14/1995	1220.86	16.61	1204.25
DM-12OW1	6/26/1995	1220.86	16.70	1204.16
DM-12OW1	10/3/1995	1220.86	16.33	1204.53
DM-12OW1	12/13/1995	1220.86	17.07	1203.79
DM-12OW1	1/9/1996	1220.86	17.47	1203.39
DM-12OW1	3/4/1996	1220.86	17.93	1202.93
DM-12OW1	3/19/1996	1220.86	17.93	1202.93
DM-12OW1	6/4/1996	1220.86	17.98	1202.88
DM-12OW1	6/12/1996	1220.86	18.50	1202.36
DM-12OW1	9/4/1996	1220.86	17.68	1203.18
DM-12OW1	9/20/1996	1220.86	18.00	1202.86
DM-12OW1	12/5/1996	1220.86	18.18	1202.68
DM-12OW1	12/17/1996	1220.86	18.15	1202.71
DM-12OW1	3/4/1997	1220.86	18.91	1201.95
DM-12OW1	3/11/1997	1220.86	18.83	1202.03
DM-12OW1	6/20/1997	1220.86	20.00	1200.86
DM-12OW1	7/14/1997	1220.86	20.16	1200.70
DM-12OW1	9/5/1997	1220.86	19.95	1200.91
DM-12OW1	9/26/1997	1220.86	20.43	1200.43
DM-12OW1	12/29/1997	1220.86	20.44	1200.42
DM-12OW1	3/3/1998	1220.86	20.00	1200.86
DM-12OW1	6/11/1998	1220.86	20.19	1200.67
DM-12OW1	9/2/1998	1220.86	20.70	1200.16
DM-12OW1	9/14/1998	1220.86	20.19	1200.67
DM-12OW1	12/30/1998	1220.86	20.36	1200.50
DM-12OW1	3/30/1999	1220.86	21.12	1199.74
DM-12OW1	6/16/1999	1220.86	21.30	1199.56
DM-12OW1	9/8/1999	1220.86	21.15	1199.71
DM-12OW1	9/23/1999	1220.86	21.15	1199.71
DM-12OW1	1/5/2000	1220.86	21.65	1199.21
DM-12OW1	2/28/2000	1220.86	22.03	1198.83
DM-12OW1	6/7/2000	1220.86	22.27	1198.59
DM-12OW1	9/25/2000	1220.86	22.79	1198.07
DM-12OW1	10/3/2000	1220.86	22.84	1198.02
DM-12OW1	12/19/2000	1220.86	21.53	1199.33
DM-12OW1	3/20/2001	1220.86	21.58	1199.28
DM-12OW1	6/8/2001	1220.86	21.76	1199.10
DM-12OW1	10/23/2001	1220.86	23.00	1197.86
DM-12OW1	11/13/2001	1220.86	23.08	1197.78
DM-12OW1	1/7/2002	1220.86	22.95	1197.91
DM-12OW1	4/1/2002	1220.86	23.62	1197.24
DM-12OW1	7/8/2002	1220.86	24.40	1196.46
DM-12OW1	10/3/2002	1220.86	24.86	1196.00
DM-12OW1	10/15/2002	1220.86	24.92	1195.94
DM-12OW1	1/6/2003	1220.86	24.97	1195.89
DM-12OW1	4/1/2003	1220.86	25.05	1195.81
DM-12OW1	7/1/2003	1220.86	25.96	1194.90
DM-12OW1	10/3/2003	1220.86	26.14	1194.72
DM-12OW1	4/1/2004	1220.86	27.08	1193.78
DM-12OW1	10/1/2004	1220.86	27.94	1192.92
DM-12OW1	10/8/2004	1220.86	27.50	1193.36
DM-12OW1	4/4/2005	1220.86	27.55	1193.31
DM-12OW1	10/3/2005	1220.86	28.00	1192.86
DM-12OW1	10/11/2005	1220.86	27.91	1192.95
DM-12OW1	4/5/2006	1220.86	28.43	1192.43
DM-12OW1	10/4/2006	1220.86	28.39	1192.47
DM-12OW1	10/17/2006	1220.86	28.28	1192.58
DM-12OW1	4/2/2007	1220.86	28.97	1191.89
DM-12OW1	10/1/2007	1220.86	29.35	1191.51
DM-12OW1	4/1/2008	1220.86	29.10	1191.76
DM-12OW1	10/1/2008	1220.86	28.76	1192.10
DM-12OW1	10/13/2008	1220.86	28.76	1192.10
DM-12OW1	4/1/2009	1220.86	29.42	1191.44
DM-12OW1	10/1/2009	1220.86	30.26	1190.60
DM-12OW1	10/13/2009	1220.86	30.21	1190.65
DM-12OW1	4/1/2010	1220.86	29.98	1190.88
DM-12OW1	10/4/2010	1220.86	30.20	1190.66
DM-12OW1	4/1/2011	1220.86	30.32	1190.54
DM-12OW1	10/3/2011	1220.86	30.98	1189.88
DM-12OW1	4/4/2012	1220.86	31.33	1189.53
DM-12OW1	10/1/2012	1220.86	32.70	1188.16
DM-12OW1	10/17/2012	1220.86	32.05	1188.81
DM-12OW1	4/2/2013	1220.86	32.08	1188.78
DM-12OW1	10/1/2013	1220.86	32.47	1188.39
DM-12OW1	10/10/2013	1220.86	32.39	1188.47
DM-12OW1	4/1/2014	1220.86	32.55	1188.31
DM-12OW1	10/10/2014	1220.86	32.22	1188.64
DM-12OW1	4/1/2015	1220.86	31.72	1189.14
DM-12OW1	10/14/2015	1220.86	32.05	1188.81
DM-12OW1	4/11/2016	1220.86	32.63	1188.23
DM-12OW1	10/3/2016	1220.86	32.86	1188.00
DM-12OW2	5/23/1991	1222.74	16.66	1206.08
DM-12OW2	7/2/1992	1222.74	16.75	1205.99
DM-12OW2	9/4/1992	1222.74	15.61	1207.13
DM-12OW2	11/11/1992	1222.74	15.99	1206.75
DM-12OW2	1/21/1993	1222.74	15.41	1207.33
DM-12OW2	5/21/1993	1222.74	16.02	1206.72
DM-12OW2	6/22/1993	1222.74	15.32	1207.42
DM-12OW2	7/12/1993	1222.74	15.52	1207.22
DM-12OW2	8/17/1993	1222.74	15.82	1206.92
DM-12OW2	9/15/1993	1222.74	15.96	1206.78
DM-12OW2	12/18/1993	1222.74	14.80	1207.94
DM-12OW2	1/18/1994	1222.74	15.18	1207.56
DM-12OW2	2/16/1994	1222.74	15.75	1206.99
DM-12OW2	3/9/1994	1222.74	16.02	1206.72
DM-12OW2	4/12/1994	1222.74	16.27	1206.47
DM-12OW2	5/16/1994	1222.74	16.50	1206.24
DM-12OW2	7/9/1994	1222.74	16.87	1205.87
DM-12OW2	9/7/1994	1222.74	16.78	1205.96
DM-12OW2	10/12/1994	1222.74	16.93	1205.81
DM-12OW2	11/23/1994	1222.74	16.98	1205.76

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-12OW2	5/15/1995	1222.74	17.29	1205.45
DM-12OW2	6/14/1995	1222.74	17.49	1205.25
DM-12OW2	12/13/1995	1222.74	17.87	1204.87
DM-12OW2	3/5/1996	1222.74	18.41	1204.33
DM-12OW2	6/4/1996	1222.74	18.52	1204.22
DM-12OW2	9/4/1996	1222.74	18.22	1204.52
DM-12OW2	12/5/1996	1222.74	18.65	1204.09
DM-12OW2	3/4/1997	1222.74	19.98	1202.76
DM-12OW2	3/11/1997	1222.74	19.75	1202.99
DM-12OW2	6/20/1997	1222.74	20.73	1202.01
DM-12OW2	9/5/1997	1222.74	20.67	1202.07
DM-12OW2	12/29/1997	1222.74	21.13	1201.61
DM-12OW2	3/3/1998	1222.74	20.67	1202.07
DM-12OW2	6/11/1998	1222.74	20.89	1201.85
DM-12OW2	9/2/1998	1222.74	21.42	1201.32
DM-12OW2	12/30/1998	1222.74	21.04	1201.70
DM-12OW2	3/30/1999	1222.74	21.89	1200.85
DM-12OW2	6/16/1999	1222.74	22.00	1200.74
DM-12OW2	9/8/1999	1222.74	21.82	1200.92
DM-12OW2	1/5/2000	1222.74	22.39	1200.35
DM-12OW2	2/28/2000	1222.74	22.75	1199.99
DM-12OW2	6/7/2000	1222.74	22.94	1199.80
DM-12OW2	9/25/2000	1222.74	23.45	1199.29
DM-12OW2	12/19/2000	1222.74	22.12	1200.62
DM-12OW2	3/20/2001	1222.74	22.21	1200.53
DM-12OW2	6/8/2001	1222.74	22.41	1200.33
DM-12OW2	10/23/2001	1222.74	23.63	1199.11
DM-12OW2	1/7/2002	1222.74	23.54	1199.20
DM-12OW2	4/1/2002	1222.74	24.15	1198.59
DM-12OW2	7/8/2002	1222.74	24.95	1197.79
DM-12OW2	10/3/2002	1222.74	25.40	1197.34
DM-12OW2	1/6/2003	1222.74	25.49	1197.25
DM-12OW2	4/1/2003	1222.74	25.60	1197.14
DM-12OW2	7/1/2003	1222.74	26.50	1196.24
DM-12OW2	10/3/2003	1222.74	26.72	1196.02
DM-12OW2	4/1/2004	1222.74	27.58	1195.16
DM-12OW2	10/1/2004	1222.74	28.40	1194.34
DM-12OW2	4/4/2005	1222.74	27.92	1194.82
DM-12OW2	10/3/2005	1222.74	28.42	1194.32
DM-12OW2	4/5/2006	1222.74	28.98	1193.76
DM-12OW2	10/4/2006	1222.74	28.95	1193.79
DM-12OW2	4/2/2007	1222.74	29.44	1193.30
DM-12OW2	10/1/2007	1222.74	29.92	1192.82
DM-12OW2	4/1/2008	1222.74	29.55	1193.19
DM-12OW2	10/1/2008	1222.74	29.27	1193.47
DM-12OW2	4/1/2009	1222.74	29.86	1192.88
DM-12OW2	10/1/2009	1222.74	30.73	1192.01
DM-12OW2	4/1/2010	1222.74	30.40	1192.34
DM-12OW2	10/4/2010	1222.74	30.62	1192.12
DM-12OW2	4/1/2011	1222.74	30.60	1192.14
DM-12OW2	10/3/2011	1222.74	31.31	1191.43
DM-12OW2	4/4/2012	1222.74	31.83	1190.91
DM-12OW2	10/1/2012	1222.74	32.42	1190.32
DM-12OW2	10/1/2013	1222.74	32.88	1189.86
DM-12OW2	4/1/2014	1222.74	32.83	1189.91
DM-12OW2	10/10/2014	1222.74	32.62	1190.12
DM-12OW2	4/1/2015	1222.74	32.02	1190.72
DM-12OW2	10/14/2015	1222.74	32.41	1190.33
DM-12OW2	4/11/2016	1222.74	32.91	1189.83
DM-12OW2	10/3/2016	1222.74	33.14	1189.60
DM-13	4/11/1991	1218.53	14.65	1203.88
DM-13	5/23/1991	1218.53	15.08	1203.45
DM-13	6/24/1991	1218.53	15.17	1203.36
DM-13	12/6/1991	1218.53	14.73	1203.80
DM-13	3/27/1992	1218.53	14.20	1204.33
DM-13	7/6/1992	1218.53	14.29	1204.24
DM-13	9/4/1992	1218.53	13.24	1205.29
DM-13	11/11/1992	1218.53	13.72	1204.81
DM-13	1/21/1993	1218.53	12.41	1206.12
DM-13	4/14/1993	1218.53	12.29	1206.24
DM-13	5/21/1993	1218.53	12.68	1205.85
DM-13	6/22/1993	1218.53	13.11	1205.42
DM-13	7/12/1993	1218.53	13.15	1205.38
DM-13	8/17/1993	1218.53	13.57	1204.96
DM-13	9/15/1993	1218.53	18.73	1199.80
DM-13	10/11/1993	1218.53	13.55	1204.98
DM-13	12/18/1993	1218.53	12.46	1206.07
DM-13	1/18/1994	1218.53	12.76	1205.77
DM-13	2/16/1994	1218.53	13.26	1205.27
DM-13	3/9/1994	1218.53	13.44	1205.09
DM-13	4/12/1994	1218.53	13.72	1204.81
DM-13	5/16/1994	1218.53	14.05	1204.48
DM-13	6/24/1994	1218.53	14.28	1204.25
DM-13	7/9/1994	1218.53	14.45	1204.08
DM-13	9/7/1994	1218.53	14.26	1204.27
DM-13	9/22/1994	1218.53	17.11	1201.42
DM-13	9/28/1994	1218.53	17.27	1201.26
DM-13	11/23/1994	1218.53	14.04	1204.49
DM-13	12/16/1994	1218.53	16.15	1202.38
DM-13	3/1/1995	1218.53	13.81	1204.72
DM-13	3/24/1995	1218.53	13.81	1204.72
DM-13	5/15/1995	1218.53	14.58	1203.95
DM-13	6/14/1995	1218.53	14.73	1203.80
DM-13	10/2/1995	1218.53	14.71	1203.82
DM-13	12/13/1995	1218.53	15.45	1203.08
DM-13	3/4/1996	1218.53	16.24	1202.29
DM-13	3/25/1996	1218.53	16.15	1202.38
DM-13	6/4/1996	1218.53	16.51	1202.02
DM-13	9/4/1996	1218.53	16.03	1202.50
DM-13	9/24/1996	1218.53	16.15	1202.38
DM-13	12/5/1996	1218.53	16.51	1202.02
DM-13	3/4/1997	1218.53	16.94	1201.59
DM-13	3/13/1997	1218.53	16.74	1201.79
DM-13	6/20/1997	1218.53	18.18	1200.35
DM-13	9/5/1997	1218.53	18.37	1200.16
DM-13	9/29/1997	1218.53	18.65	1199.88

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-13	3/3/1998	1218.53	17.65	1200.88
DM-13	6/11/1998	1218.53	18.10	1200.43
DM-13	9/2/1998	1218.53	18.71	1199.82
DM-13	9/17/1998	1218.53	18.52	1200.01
DM-13	12/30/1998	1218.53	18.09	1200.44
DM-13	3/30/1999	1218.53	19.22	1199.31
DM-13	6/16/1999	1218.53	19.10	1199.43
DM-13	9/8/1999	1218.53	19.00	1199.53
DM-13	9/23/1999	1218.53	19.00	1199.53
DM-13	1/5/2000	1218.53	19.65	1198.88
DM-13	2/28/2000	1218.53	19.98	1198.55
DM-13	6/7/2000	1218.53	20.24	1198.29
DM-13	9/25/2000	1218.53	20.75	1197.78
DM-13	10/6/2000	1218.53	20.62	1197.91
DM-13	12/19/2000	1218.53	19.38	1199.15
DM-13	3/20/2001	1218.53	19.38	1199.15
DM-13	6/8/2001	1218.53	19.80	1198.73
DM-13	10/23/2001	1218.53	20.92	1197.61
DM-13	11/12/2001	1218.53	21.00	1197.53
DM-13	1/7/2002	1218.53	20.57	1197.96
DM-13	4/1/2002	1218.53	21.26	1197.27
DM-13	7/8/2002	1218.53	22.15	1196.38
DM-13	10/3/2002	1218.53	22.56	1195.97
DM-13	10/21/2002	1218.53	22.56	1195.97
DM-13	1/6/2003	1218.53	22.50	1196.03
DM-13	4/3/2003	1218.53	22.49	1196.04
DM-13	7/1/2003	1218.53	23.56	1194.97
DM-13	10/3/2003	1218.53	23.96	1194.57
DM-13	10/10/2003	1218.53	23.98	1194.55
DM-13	4/1/2004	1218.53	24.67	1193.86
DM-13	10/1/2004	1218.53	25.59	1192.94
DM-13	10/7/2004	1218.53	25.51	1193.02
DM-13	4/4/2005	1218.53	24.49	1194.04
DM-13	10/3/2005	1218.53	25.25	1193.28
DM-13	10/11/2005	1218.53	25.14	1193.39
DM-13	4/5/2006	1218.53	25.36	1193.17
DM-13	10/4/2006	1218.53	25.82	1192.71
DM-13	10/16/2006	1218.53	25.69	1192.84
DM-13	4/2/2007	1218.53	26.30	1192.23
DM-13	10/1/2007	1218.53	26.90	1191.63
DM-13	4/1/2008	1218.53	26.37	1192.16
DM-13	10/1/2008	1218.53	26.04	1192.49
DM-13	10/10/2008	1218.53	26.17	1192.36
DM-13	4/1/2009	1218.53	26.64	1191.89
DM-13	10/1/2009	1218.53	27.62	1190.91
DM-13	10/14/2009	1218.53	27.64	1190.89
DM-13	4/1/2010	1218.53	27.12	1191.41
DM-13	10/1/2010	1218.53	27.56	1190.97
DM-13	10/13/2010	1218.53	27.47	1191.06
DM-13	4/1/2011	1218.53	27.59	1190.94
DM-13	10/3/2011	1218.53	28.58	1189.95
DM-13	4/4/2012	1218.53	28.74	1189.79
DM-13	10/1/2012	1218.53	29.42	1189.11
DM-13	4/1/2013	1218.53	29.29	1189.24
DM-13	10/1/2013	1218.53	29.78	1188.75
DM-13	10/10/2013	1218.53	29.49	1189.04
DM-13	4/1/2014	1218.53	29.63	1188.90
DM-13	10/10/2014	1218.53	29.06	1189.47
DM-13	4/1/2015	1218.53	28.67	1189.86
DM-13	10/16/2015	1218.53	29.15	1189.38
DM-13	4/11/2016	1218.53	29.83	1188.70
DM-13	10/3/2016	1218.53	29.98	1188.55
DM-14	2/27/1991	1218.22	11.02	1207.20
DM-14	4/10/1991	1218.22	10.49	1207.73
DM-14	5/23/1991	1218.22	10.49	1207.73
DM-14	6/20/1991	1218.22	10.70	1207.52
DM-14	12/4/1991	1218.22	10.31	1207.91
DM-14	3/23/1992	1218.22	10.20	1208.02
DM-14	6/24/1992	1218.22	10.15	1208.07
DM-14	6/25/1992	1218.22	10.50	1207.72
DM-14	9/4/1992	1218.22	9.80	1208.42
DM-14	11/10/1992	1218.22	9.92	1208.30
DM-14	1/19/1993	1218.22	8.97	1209.25
DM-14	4/9/1993	1218.22	9.67	1208.55
DM-14	5/21/1993	1218.22	10.21	1208.01
DM-14	6/22/1993	1218.22	10.09	1208.13
DM-14	7/12/1993	1218.22	10.32	1207.90
DM-14	7/13/1993	1218.22	10.34	1207.88
DM-14	8/17/1993	1218.22	10.22	1208.00
DM-14	9/15/1993	1218.22	10.43	1207.79
DM-14	10/7/1993	1218.22	9.74	1208.48
DM-14	12/18/1993	1218.22	9.67	1208.55
DM-14	1/18/1994	1218.22	9.88	1208.34
DM-14	2/16/1994	1218.22	10.47	1207.75
DM-14	3/9/1994	1218.22	10.32	1207.90
DM-14	4/12/1994	1218.22	10.07	1208.15
DM-14	5/16/1994	1218.22	10.24	1207.98
DM-14	6/21/1994	1218.22	10.77	1207.45
DM-14	7/9/1994	1218.22	10.32	1207.90
DM-14	9/7/1994	1218.22	10.31	1207.91
DM-14	9/22/1994	1218.22	13.07	1205.15
DM-14	9/28/1994	1218.22	12.90	1205.32
DM-14	11/23/1994	1218.22	9.80	1208.42
DM-14	12/14/1994	1218.22	12.30	1205.92
DM-14	3/1/1995	1218.22	10.01	1208.21
DM-14	5/15/1995	1218.22	10.63	1207.59
DM-14	6/14/1995	1218.22	10.75	1207.47
DM-14	9/26/1995	1218.22	10.59	1207.63
DM-14	12/12/1995	1218.22	10.61	1207.61
DM-14	3/4/1996	1218.22	10.77	1207.45
DM-14	6/4/1996	1218.22	10.48	1207.74
DM-14	9/4/1996	1218.22	10.53	1207.69
DM-14	9/10/1996	1218.22	10.57	1207.65
DM-14	12/5/1996	1218.22	10.60	1207.62
DM-14	3/3/1997	1218.22	9.91	1208.31
DM-14	6/20/1997	1218.22	11.07	1207.15

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-14	9/24/1997	1218.22	10.90	1207.32
DM-14	12/29/1997	1218.22	11.13	1207.09
DM-14	3/2/1998	1218.22	10.76	1207.46
DM-14	6/11/1998	1218.22	10.83	1207.39
DM-14	9/2/1998	1218.22	10.98	1207.24
DM-14	12/30/1998	1218.22	10.86	1207.36
DM-14	3/30/1999	1218.22	11.61	1206.61
DM-14	6/16/1999	1218.22	11.52	1206.70
DM-14	9/7/1999	1218.22	11.01	1207.21
DM-14	1/5/2000	1218.22	11.21	1207.01
DM-14	2/28/2000	1218.22	11.70	1206.52
DM-14	6/7/2000	1218.22	11.44	1206.78
DM-14	9/25/2000	1218.22	12.02	1206.20
DM-14	12/19/2000	1218.22	10.95	1207.27
DM-14	3/21/2001	1218.22	10.78	1207.44
DM-14	6/7/2001	1218.22	11.10	1207.12
DM-14	10/23/2001	1218.22	11.28	1206.94
DM-14	1/8/2002	1218.22	11.42	1206.80
DM-14	4/1/2002	1218.22	11.66	1206.56
DM-14	7/8/2002	1218.22	12.33	1205.89
DM-14	10/3/2002	1218.22	11.75	1206.47
DM-14	1/6/2003	1218.22	12.24	1205.98
DM-14	4/2/2003	1218.22	12.10	1206.12
DM-14	7/1/2003	1218.22	14.65	1203.57
DM-14	10/3/2003	1218.22	13.78	1204.44
DM-14	4/1/2004	1218.22	15.46	1202.76
DM-14	10/1/2004	1218.22	16.74	1201.48
DM-14	4/4/2005	1218.22	13.39	1204.83
DM-14	10/3/2005	1218.22	12.95	1205.27
DM-14	4/5/2006	1218.22	16.68	1201.54
DM-14	10/4/2006	1218.22	16.59	1201.63
DM-14	4/2/2007	1218.22	17.61	1200.61
DM-14	10/1/2007	1218.22	18.32	1199.90
DM-14	4/1/2008	1218.22	16.99	1201.23
DM-14	10/1/2008	1218.22	17.39	1200.83
DM-14	4/1/2009	1218.22	17.78	1200.44
DM-14	10/1/2009	1218.22	18.89	1199.33
DM-14	4/1/2010	1218.22	18.36	1199.86
DM-14	10/1/2010	1218.22	19.20	1199.02
DM-14	4/1/2011	1218.22	19.30	1198.92
DM-14	10/3/2011	1218.22	20.78	1197.44
DM-14	4/4/2012	1218.22	20.66	1197.56
DM-14	10/1/2012	1218.22	20.08	1198.14
DM-14	4/1/2013	1218.22	20.77	1197.45
DM-14	10/1/2013	1218.22	21.73	1196.49
DM-14	4/1/2014	1218.22	22.04	1196.18
DM-14	10/10/2014	1218.22	20.61	1197.61
DM-14	4/1/2015	1218.22	20.98	1197.24
DM-14	10/14/2015	1218.22	22.51	1195.71
DM-14	4/11/2016	1218.22	22.64	1195.58
DM-14	10/3/2016	1218.22	23.04	1195.18
DM-15-018	1/15/1993	1219.62	14.85	1204.77
DM-15-018	1/21/1993	1219.62	13.80	1205.82
DM-15-018	10/4/1993	1219.62	14.32	1205.30
DM-15-018	1/4/1994	1219.62	12.45	1207.17
DM-15-018	4/7/1994	1219.62	11.38	1208.24
DM-15-018	6/17/1994	1219.62	14.25	1205.37
DM-15-018	10/4/1994	1219.62	12.54	1207.08
DM-15-018	11/30/1994	1219.62	14.31	1205.31
DM-15-018	12/27/1994	1219.62	14.13	1205.49
DM-15-018	2/28/1995	1219.62	14.01	1205.61
DM-15-018	3/13/1995	1219.62	13.92	1205.70
DM-15-018	3/24/1995	1219.62	14.02	1205.60
DM-15-018	5/24/1995	1219.62	14.81	1204.81
DM-15-018	6/15/1995	1219.62	14.04	1205.58
DM-15-018	6/30/1995	1219.62	15.22	1204.40
DM-15-018	9/15/1995	1219.62	13.90	1205.72
DM-15-018	1/16/1996	1219.62	16.90	1202.72
DM-15-018	3/5/1996	1219.62	16.22	1203.40
DM-15-018	3/25/1996	1219.62	16.06	1203.56
DM-15-018	6/5/1996	1219.62	17.10	1202.52
DM-15-018	6/14/1996	1219.62	16.78	1202.84
DM-15-018	9/5/1996	1219.62	13.58	1206.04
DM-15-018	9/25/1996	1219.62	16.38	1203.24
DM-15-018	12/6/1996	1219.62	16.41	1203.21
DM-15-018	12/26/1996	1219.62	16.41	1203.21
DM-15-018	3/5/1997	1219.62	17.13	1202.49
DM-15-018	3/17/1997	1219.62	16.89	1202.73
DM-15-018	6/19/1997	1219.62	17.12	1202.50
DM-15-018	7/22/1997	1219.62	17.06	1202.56
DM-15-018	9/4/1997	1219.62	17.03	1202.59
DM-15-018	10/7/1997	1219.62	17.01	1202.61
DM-15-018	10/8/1997	1219.62	17.03	1202.59
DM-15-018	1/5/1998	1219.62	16.25	1203.37
DM-15-018	3/4/1998	1219.62	16.95	1202.67
DM-15-018	3/12/1998	1219.62	16.41	1203.21
DM-15-018	6/12/1998	1219.62	17.13	1202.49
DM-15-018	9/2/1998	1219.62	12.26	1207.36
DM-15-018	12/4/1998	1219.62	17.12	1202.50
DM-15-018	3/15/1999	1219.62	16.06	1203.56
DM-15-018	6/17/1999	1219.62	17.13	1202.49
DM-15-018	9/2/1999	1219.62	16.89	1202.73
DM-15-018	1/20/2000	1219.62	17.14	1202.48
DM-15-018	3/1/2000	1219.62	17.13	1202.49
DM-15-018	6/8/2000	1219.62	17.24	1202.38
DM-15-018	10/3/2000	1219.62	17.09	1202.53
DM-15-018	12/20/2000	1219.62	15.74	1203.88
DM-15-018	3/22/2001	1219.62	16.76	1202.86
DM-15-018	7/8/2002	1219.62	Dry	Dry
DM-15-018	10/2/2002	1219.62	Dry	Dry
DM-15-018	1/7/2003	1219.62	Dry	Dry
DM-15-018	4/7/2003	1219.62	16.99	1202.63
DM-15-018	4/2/2004	1219.62	Dry	Dry
DM-15-018	10/12/2004	1219.62	Dry	Dry
DM-15-018	4/5/2005	1219.62	Dry	Dry
DM-15-018	4/4/2006	1219.62	Dry	Dry

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-15-018	4/3/2007	1219.62	Dry	Dry
DM-15-018	10/3/2007	1219.62	Dry	Dry
DM-15-018	4/2/2008	1219.62	Dry	Dry
DM-15-018	10/3/2008	1219.62	Dry	Dry
DM-15-018	4/6/2009	1219.62	Dry	Dry
DM-15-018	10/5/2009	1219.62	Dry	Dry
DM-15-018	4/2/2010	1219.62	Dry	Dry
DM-15-018	10/5/2010	1219.62	Dry	Dry
DM-15-018	4/4/2011	1219.62	17.37	1202.25
DM-15-018	10/5/2011	1219.62	Dry	Dry
DM-15-018	4/5/2012	1219.62	Dry	Dry
DM-15-018	10/4/2012	1219.62	Dry	Dry
DM-15-018	4/2/2013	1219.62	Dry	Dry
DM-15-018	10/3/2013	1219.62	Dry	Dry
DM-15-018	4/1/2014	1219.62	Dry	Dry
DM-15-018	10/13/2014	1219.62	Dry	Dry
DM-15-018	4/2/2015	1219.62	Dry	Dry
DM-15-018	10/16/2015	1219.62	Dry	Dry
DM-15-018	4/13/2016	1219.62	Dry	Dry
DM-15-018	10/5/2016	1219.62	Dry	Dry
DM-15-038	1/15/1993	1219.62	14.87	1204.75
DM-15-038	1/21/1993	1219.62	13.81	1205.81
DM-15-038	1/29/1993	1219.62	14.08	1205.54
DM-15-038	4/19/1993	1219.62	12.92	1206.70
DM-15-038	7/15/1993	1219.62	14.02	1205.60
DM-15-038	10/4/1993	1219.62	13.81	1205.81
DM-15-038	1/4/1994	1219.62	12.71	1206.91
DM-15-038	4/7/1994	1219.62	13.62	1206.00
DM-15-038	6/17/1994	1219.62	14.28	1205.34
DM-15-038	10/4/1994	1219.62	12.20	1207.42
DM-15-038	11/30/1994	1219.62	14.34	1205.28
DM-15-038	12/27/1994	1219.62	14.06	1205.56
DM-15-038	2/28/1995	1219.62	14.07	1205.55
DM-15-038	3/13/1995	1219.62	14.01	1205.61
DM-15-038	3/24/1995	1219.62	14.05	1205.57
DM-15-038	5/24/1995	1219.62	14.86	1204.76
DM-15-038	6/15/1995	1219.62	14.10	1205.52
DM-15-038	6/30/1995	1219.62	15.15	1204.47
DM-15-038	9/15/1995	1219.62	13.91	1205.71
DM-15-038	10/5/1995	1219.62	14.99	1204.63
DM-15-038	12/18/1995	1219.62	14.29	1205.33
DM-15-038	1/16/1996	1219.62	16.14	1203.48
DM-15-038	3/5/1996	1219.62	16.18	1203.44
DM-15-038	3/25/1996	1219.62	16.06	1203.56
DM-15-038	6/5/1996	1219.62	17.08	1202.54
DM-15-038	6/14/1996	1219.62	16.82	1202.80
DM-15-038	9/5/1996	1219.62	13.63	1205.99
DM-15-038	9/25/1996	1219.62	16.34	1203.28
DM-15-038	12/6/1996	1219.62	16.50	1203.12
DM-15-038	12/26/1996	1219.62	16.50	1203.12
DM-15-038	3/5/1997	1219.62	16.97	1202.65
DM-15-038	3/17/1997	1219.62	17.04	1202.58
DM-15-038	6/19/1997	1219.62	18.17	1201.45
DM-15-038	9/19/1997	1219.62	18.60	1201.02
DM-15-038	10/7/1997	1219.62	18.74	1200.88
DM-15-038	10/8/1997	1219.62	18.74	1200.88
DM-15-038	1/5/1998	1219.62	18.43	1201.19
DM-15-038	3/4/1998	1219.62	17.67	1201.95
DM-15-038	3/12/1998	1219.62	17.62	1202.00
DM-15-038	6/12/1998	1219.62	18.19	1201.43
DM-15-038	9/2/1998	1219.62	18.69	1200.93
DM-15-038	12/4/1998	1219.62	17.97	1201.65
DM-15-038	3/15/1999	1219.62	17.81	1201.81
DM-15-038	6/17/1999	1219.62	19.14	1200.48
DM-15-038	9/2/1999	1219.62	18.71	1200.91
DM-15-038	9/2/1999	1219.62	18.71	1200.91
DM-15-038	1/20/2000	1219.62	19.62	1200.00
DM-15-038	3/1/2000	1219.62	19.70	1199.92
DM-15-038	6/8/2000	1219.62	20.52	1199.10
DM-15-038	10/3/2000	1219.62	20.62	1199.00
DM-15-038	12/20/2000	1219.62	19.34	1200.28
DM-15-038	3/22/2001	1219.62	19.59	1200.03
DM-15-038	6/8/2001	1219.62	19.68	1199.94
DM-15-038	10/24/2001	1219.62	20.91	1198.71
DM-15-038	1/9/2002	1219.62	20.58	1199.04
DM-15-038	4/4/2002	1219.62	21.26	1198.36
DM-15-038	7/8/2002	1219.62	22.15	1197.47
DM-15-038	10/2/2002	1219.62	22.19	1197.43
DM-15-038	1/7/2003	1219.62	22.36	1197.26
DM-15-038	4/7/2003	1219.62	22.32	1197.30
DM-15-038	7/2/2003	1219.62	23.36	1196.26
DM-15-038	10/7/2003	1219.62	23.79	1195.83
DM-15-038	4/2/2004	1219.62	24.29	1195.33
DM-15-038	10/12/2004	1219.62	25.18	1194.44
DM-15-038	4/5/2005	1219.62	24.38	1195.24
DM-15-038	10/5/2005	1219.62	25.02	1194.60
DM-15-038	4/4/2006	1219.62	25.23	1194.39
DM-15-038	10/10/2006	1219.62	25.60	1194.02
DM-15-038	4/3/2007	1219.62	26.05	1193.57
DM-15-038	10/3/2007	1219.62	27.67	1191.95
DM-15-038	4/2/2008	1219.62	25.97	1193.65
DM-15-038	10/3/2008	1219.62	25.95	1193.67
DM-15-038	4/6/2009	1219.62	26.50	1193.12
DM-15-038	10/5/2009	1219.62	27.26	1192.36
DM-15-038	4/2/2010	1219.62	26.91	1192.71
DM-15-038	10/5/2010	1219.62	26.14	1193.48
DM-15-038	4/4/2011	1219.62	27.26	1192.36
DM-15-038	10/5/2011	1219.62	28.25	1191.37
DM-15-038	4/5/2012	1219.62	28.41	1191.21
DM-15-038	10/4/2012	1219.62	29.02	1190.60
DM-15-038	4/2/2013	1219.62	29.10	1190.52
DM-15-038	10/3/2013	1219.62	29.39	1190.23
DM-15-038	4/1/2014	1219.62	29.37	1190.25
DM-15-038	10/13/2014	1219.62	28.64	1190.98
DM-15-038	4/2/2015	1219.62	29.36	1190.26
DM-15-038	10/16/2015	1219.62	28.79	1190.83

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-15-038	10/5/2016	1219.62	29.47	1190.15
DM-15-070	5/23/1991	1219.62	14.44	1205.18
DM-15-070	1/15/1993	1219.62	14.86	1204.76
DM-15-070	1/21/1993	1219.62	13.79	1205.83
DM-15-070	1/29/1993	1219.62	14.08	1205.54
DM-15-070	7/15/1993	1219.62	13.97	1205.65
DM-15-070	10/4/1993	1219.62	13.81	1205.81
DM-15-070	1/4/1994	1219.62	12.93	1206.69
DM-15-070	4/8/1994	1219.62	13.76	1205.86
DM-15-070	6/17/1994	1219.62	14.29	1205.33
DM-15-070	10/4/1994	1219.62	11.38	1208.24
DM-15-070	11/30/1994	1219.62	14.32	1205.30
DM-15-070	12/27/1994	1219.62	14.04	1205.58
DM-15-070	2/28/1995	1219.62	14.11	1205.51
DM-15-070	3/13/1995	1219.62	13.95	1205.67
DM-15-070	3/24/1995	1219.62	13.99	1205.63
DM-15-070	5/24/1995	1219.62	14.88	1204.74
DM-15-070	6/15/1995	1219.62	14.00	1205.62
DM-15-070	6/30/1995	1219.62	15.19	1204.43
DM-15-070	9/15/1995	1219.62	13.84	1205.78
DM-15-070	10/5/1995	1219.62	15.01	1204.61
DM-15-070	12/18/1995	1219.62	14.34	1205.28
DM-15-070	1/16/1996	1219.62	16.11	1203.51
DM-15-070	3/5/1996	1219.62	16.17	1203.45
DM-15-070	3/25/1996	1219.62	16.06	1203.56
DM-15-070	6/5/1996	1219.62	17.06	1202.56
DM-15-070	6/14/1996	1219.62	16.83	1202.79
DM-15-070	9/5/1996	1219.62	14.49	1205.13
DM-15-070	12/6/1996	1219.62	16.44	1203.18
DM-15-070	12/26/1996	1219.62	16.44	1203.18
DM-15-070	3/5/1997	1219.62	16.95	1202.67
DM-15-070	3/17/1997	1219.62	16.94	1202.68
DM-15-070	6/19/1997	1219.62	18.13	1201.49
DM-15-070	7/22/1997	1219.62	18.32	1201.30
DM-15-070	9/19/1997	1219.62	18.55	1201.07
DM-15-070	10/7/1997	1219.62	18.58	1201.04
DM-15-070	10/8/1997	1219.62	18.69	1200.93
DM-15-070	1/5/1998	1219.62	18.36	1201.26
DM-15-070	3/4/1998	1219.62	17.60	1202.02
DM-15-070	3/12/1998	1219.62	17.58	1202.04
DM-15-070	6/12/1998	1219.62	18.12	1201.50
DM-15-070	9/2/1998	1219.62	18.65	1200.97
DM-15-070	12/4/1998	1219.62	17.93	1201.69
DM-15-070	3/15/1999	1219.62	17.73	1201.89
DM-15-070	6/17/1999	1219.62	19.05	1200.57
DM-15-070	9/2/1999	1219.62	18.59	1201.03
DM-15-070	1/20/2000	1219.62	19.66	1199.96
DM-15-070	3/1/2000	1219.62	19.94	1199.68
DM-15-070	6/8/2000	1219.62	20.44	1199.18
DM-15-070	10/3/2000	1219.62	20.59	1199.03
DM-15-070	12/20/2000	1219.62	19.28	1200.34
DM-15-070	3/22/2001	1219.62	19.19	1200.43
DM-15-070	6/8/2001	1219.62	20.73	1198.89
DM-15-070	1/9/2002	1219.62	20.54	1199.08
DM-15-070	4/4/2002	1219.62	21.21	1198.41
DM-15-070	7/8/2002	1219.62	22.07	1197.55
DM-15-070	10/2/2002	1219.62	22.18	1197.44
DM-15-070	1/7/2003	1219.62	22.32	1197.30
DM-15-070	4/7/2003	1219.62	22.30	1197.32
DM-15-070	7/2/2003	1219.62	23.30	1196.32
DM-15-070	10/7/2003	1219.62	23.72	1195.90
DM-15-070	4/2/2004	1219.62	24.26	1195.36
DM-15-070	10/12/2004	1219.62	25.08	1194.54
DM-15-070	4/5/2005	1219.62	24.29	1195.33
DM-15-070	10/5/2005	1219.62	24.92	1194.70
DM-15-070	10/10/2006	1219.62	25.54	1194.08
DM-15-070	4/3/2007	1219.62	25.98	1193.64
DM-15-070	10/3/2007	1219.62	27.58	1192.04
DM-15-070	4/2/2008	1219.62	25.14	1194.48
DM-15-070	10/3/2008	1219.62	25.88	1193.74
DM-15-070	4/6/2009	1219.62	26.36	1193.26
DM-15-070	10/5/2009	1219.62	27.27	1192.35
DM-15-070	4/2/2010	1219.62	26.81	1192.81
DM-15-070	10/5/2010	1219.62	27.08	1192.54
DM-15-070	4/4/2011	1219.62	27.20	1192.42
DM-15-070	10/5/2011	1219.62	28.09	1191.53
DM-15-070	4/5/2012	1219.62	28.36	1191.26
DM-15-070	10/4/2012	1219.62	28.80	1190.82
DM-15-070	4/2/2013	1219.62	28.77	1190.85
DM-15-070	10/3/2013	1219.62	29.30	1190.32
DM-15-070	4/1/2014	1219.62	29.19	1190.43
DM-15-070	10/13/2014	1219.62	28.58	1191.04
DM-15-070	4/2/2015	1219.62	29.25	1190.37
DM-15-070	10/16/2015	1219.62	28.73	1190.89
DM-15-070	4/13/2016	1219.62	29.41	1190.21
DM-15-070	10/5/2016	1219.62	29.32	1190.30
DM-15-105	1/15/1993	1219.62	14.75	1204.87
DM-15-105	1/21/1993	1219.62	13.64	1205.98
DM-15-105	1/29/1993	1219.62	13.95	1205.67
DM-15-105	4/19/1993	1219.62	12.70	1206.92
DM-15-105	7/15/1993	1219.62	13.79	1205.83
DM-15-105	10/4/1993	1219.62	13.65	1205.97
DM-15-105	1/4/1994	1219.62	12.67	1206.95
DM-15-105	4/7/1994	1219.62	13.41	1206.21
DM-15-105	6/17/1994	1219.62	14.12	1205.50
DM-15-105	10/4/1994	1219.62	10.91	1208.71
DM-15-105	11/30/1994	1219.62	14.14	1205.48
DM-15-105	12/27/1994	1219.62	13.89	1205.73
DM-15-105	2/28/1995	1219.62	13.88	1205.74
DM-15-105	3/13/1995	1219.62	13.87	1205.75
DM-15-105	3/24/1995	1219.62	13.84	1205.78
DM-15-105	5/24/1995	1219.62	14.66	1204.96
DM-15-105	6/15/1995	1219.62	13.87	1205.75
DM-15-105	6/30/1995	1219.62	14.88	1204.74
DM-15-105	9/15/1995	1219.62	13.82	1205.80
DM-15-105	10/5/1995	1219.62	14.82	1204.80

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-15-105	1/16/1996	1219.62	15.87	1203.75
DM-15-105	3/5/1996	1219.62	16.02	1203.60
DM-15-105	3/25/1996	1219.62	15.79	1203.83
DM-15-105	6/5/1996	1219.62	16.91	1202.71
DM-15-105	6/14/1996	1219.62	16.67	1202.95
DM-15-105	9/5/1996	1219.62	14.37	1205.25
DM-15-105	9/25/1996	1219.62	16.18	1203.44
DM-15-105	12/6/1996	1219.62	16.22	1203.40
DM-15-105	12/26/1996	1219.62	16.22	1203.40
DM-15-105	3/5/1997	1219.62	16.86	1202.76
DM-15-105	3/17/1997	1219.62	16.78	1202.84
DM-15-105	6/19/1997	1219.62	17.98	1201.64
DM-15-105	7/22/1997	1219.62	18.13	1201.49
DM-15-105	9/19/1997	1219.62	18.25	1201.37
DM-15-105	10/7/1997	1219.62	18.41	1201.21
DM-15-105	10/8/1997	1219.62	18.53	1201.09
DM-15-105	1/5/1998	1219.62	18.19	1201.43
DM-15-105	3/4/1998	1219.62	17.37	1202.25
DM-15-105	3/12/1998	1219.62	17.40	1202.22
DM-15-105	6/12/1998	1219.62	17.88	1201.74
DM-15-105	9/2/1998	1219.62	18.39	1201.23
DM-15-105	12/4/1998	1219.62	17.72	1201.90
DM-15-105	3/15/1999	1219.62	17.49	1202.13
DM-15-105	6/17/1999	1219.62	18.85	1200.77
DM-15-105	9/2/1999	1219.62	18.49	1201.13
DM-15-105	1/20/2000	1219.62	18.92	1200.70
DM-15-105	3/1/2000	1219.62	19.67	1199.95
DM-15-105	6/8/2000	1219.62	20.13	1199.49
DM-15-105	10/3/2000	1219.62	20.34	1199.28
DM-15-105	12/20/2000	1219.62	18.96	1200.66
DM-15-105	3/22/2001	1219.62	18.90	1200.72
DM-15-105	6/8/2001	1219.62	19.47	1200.15
DM-15-105	10/24/2001	1219.62	20.61	1199.01
DM-15-105	1/9/2002	1219.62	20.43	1199.19
DM-15-105	4/4/2002	1219.62	21.00	1198.62
DM-15-105	7/8/2002	1219.62	21.80	1197.82
DM-15-105	10/2/2002	1219.62	21.94	1197.68
DM-15-105	1/7/2003	1219.62	22.06	1197.56
DM-15-105	4/7/2003	1219.62	22.07	1197.55
DM-15-105	7/2/2003	1219.62	23.13	1196.49
DM-15-105	10/7/2003	1219.62	23.45	1196.17
DM-15-105	4/2/2004	1219.62	23.98	1195.64
DM-15-105	10/12/2004	1219.62	25.04	1194.58
DM-15-105	4/5/2005	1219.62	24.04	1195.58
DM-15-105	10/5/2005	1219.62	24.63	1194.99
DM-15-105	4/4/2006	1219.62	24.81	1194.81
DM-15-105	10/10/2006	1219.62	25.26	1194.36
DM-15-105	4/3/2007	1219.62	25.71	1193.91
DM-15-105	10/3/2007	1219.62	27.22	1192.40
DM-15-105	4/2/2008	1219.62	25.62	1194.00
DM-15-105	10/3/2008	1219.62	25.55	1194.07
DM-15-105	4/6/2009	1219.62	26.12	1193.50
DM-15-105	10/5/2009	1219.62	27.02	1192.60
DM-15-105	10/5/2010	1219.62	26.83	1192.79
DM-15-105	4/4/2011	1219.62	26.97	1192.65
DM-15-105	10/5/2011	1219.62	27.84	1191.78
DM-15-105	4/5/2012	1219.62	28.08	1191.54
DM-15-105	10/4/2012	1219.62	18.62	1191.00
DM-15-105	10/17/2012	1219.62	30.26	1189.36
DM-15-105	4/2/2013	1219.62	28.64	1190.98
DM-15-105	10/3/2013	1219.62	29.01	1190.61
DM-15-105	4/1/2014	1219.62	28.97	1190.65
DM-15-105	10/13/2014	1219.62	28.26	1191.36
DM-15-105	4/2/2015	1219.62	28.99	1190.63
DM-15-105	10/16/2015	1219.62	28.46	1191.16
DM-15-105	4/13/2016	1219.62	29.15	1190.47
DM-15-105	10/5/2016	1219.62	29.04	1190.58
DM-15-135	1/15/1993	1219.62	14.68	1204.94
DM-15-135	1/21/1993	1219.62	13.57	1206.05
DM-15-135	1/29/1993	1219.62	13.96	1205.66
DM-15-135	4/19/1993	1219.62	12.72	1206.90
DM-15-135	7/15/1993	1219.62	14.21	1205.41
DM-15-135	10/4/1993	1219.62	13.92	1205.70
DM-15-135	1/4/1994	1219.62	12.67	1206.95
DM-15-135	4/7/1994	1219.62	13.42	1206.20
DM-15-135	6/17/1994	1219.62	14.15	1205.47
DM-15-135	10/4/1994	1219.62	9.08	1210.54
DM-15-135	11/30/1994	1219.62	14.13	1205.49
DM-15-135	12/27/1994	1219.62	13.88	1205.74
DM-15-135	2/28/1995	1219.62	13.88	1205.74
DM-15-135	3/13/1995	1219.62	13.82	1205.80
DM-15-135	3/24/1995	1219.62	13.85	1205.77
DM-15-135	5/24/1995	1219.62	14.71	1204.91
DM-15-135	6/15/1995	1219.62	13.87	1205.75
DM-15-135	6/30/1995	1219.62	15.01	1204.61
DM-15-135	9/15/1995	1219.62	13.79	1205.83
DM-15-135	10/5/1995	1219.62	14.84	1204.78
DM-15-135	12/18/1995	1219.62	14.12	1205.50
DM-15-135	1/16/1996	1219.62	16.17	1203.45
DM-15-135	3/5/1996	1219.62	16.04	1203.58
DM-15-135	6/5/1996	1219.62	16.71	1202.91
DM-15-135	6/14/1996	1219.62	16.62	1203.00
DM-15-135	9/5/1996	1219.62	14.44	1205.18
DM-15-135	9/25/1996	1219.62	16.20	1203.42
DM-15-135	12/6/1996	1219.62	16.22	1203.40
DM-15-135	12/26/1996	1219.62	16.22	1203.40
DM-15-135	3/5/1997	1219.62	16.90	1202.72
DM-15-135	3/17/1997	1219.62	16.83	1202.79
DM-15-135	6/19/1997	1219.62	17.96	1201.66
DM-15-135	9/19/1997	1219.62	18.24	1201.38
DM-15-135	10/7/1997	1219.62	18.38	1201.24
DM-15-135	10/8/1997	1219.62	18.50	1201.12
DM-15-135	1/5/1998	1219.62	18.17	1201.45
DM-15-135	3/4/1998	1219.62	17.34	1202.28
DM-15-135	3/12/1998	1219.62	17.34	1202.28
DM-15-135	6/12/1998	1219.62	17.88	1201.74

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-15-135	12/4/1998	1219.62	17.73	1201.89
DM-15-135	3/15/1999	1219.62	17.51	1202.11
DM-15-135	6/17/1999	1219.62	18.85	1200.77
DM-15-135	9/2/1999	1219.62	18.52	1201.10
DM-15-135	1/20/2000	1219.62	19.51	1200.11
DM-15-135	3/1/2000	1219.62	19.68	1199.94
DM-15-135	6/8/2000	1219.62	20.14	1199.48
DM-15-135	10/3/2000	1219.62	20.30	1199.32
DM-15-135	12/20/2000	1219.62	19.00	1200.62
DM-15-135	3/22/2001	1219.62	18.93	1200.69
DM-15-135	6/8/2001	1219.62	19.49	1200.13
DM-15-135	10/24/2001	1219.62	20.60	1199.02
DM-15-135	1/9/2002	1219.62	20.24	1199.38
DM-15-135	4/4/2002	1219.62	20.95	1198.67
DM-15-135	7/8/2002	1219.62	21.80	1197.82
DM-15-135	10/2/2002	1219.62	21.95	1197.67
DM-15-135	1/7/2003	1219.62	21.84	1197.78
DM-15-135	4/7/2003	1219.62	21.99	1197.63
DM-15-135	7/2/2003	1219.62	23.09	1196.53
DM-15-135	10/7/2003	1219.62	23.44	1196.18
DM-15-135	4/2/2004	1219.62	23.95	1195.67
DM-15-135	10/12/2004	1219.62	24.99	1194.63
DM-15-135	4/5/2005	1219.62	23.98	1195.64
DM-15-135	10/5/2005	1219.62	25.25	1194.37
DM-15-135	4/4/2006	1219.62	24.77	1194.85
DM-15-135	10/10/2006	1219.62	25.26	1194.36
DM-15-135	4/3/2007	1219.62	25.72	1193.90
DM-15-135	10/3/2007	1219.62	26.99	1192.63
DM-15-135	4/2/2008	1219.62	25.56	1194.06
DM-15-135	10/3/2008	1219.62	25.57	1194.05
DM-15-135	4/6/2009	1219.62	26.06	1193.56
DM-15-135	10/5/2009	1219.62	26.96	1192.66
DM-15-135	4/2/2010	1219.62	26.51	1193.11
DM-15-135	10/5/2010	1219.62	26.79	1192.83
DM-15-135	4/4/2011	1219.62	26.92	1192.70
DM-15-135	10/5/2011	1219.62	27.80	1191.82
DM-15-135	4/5/2012	1219.62	28.06	1191.56
DM-15-135	10/4/2012	1219.62	28.60	1191.02
DM-15-135	4/2/2013	1219.62	28.60	1191.02
DM-15-135	10/3/2013	1219.62	29.03	1190.59
DM-15-135	4/1/2014	1219.62	28.63	1190.99
DM-15-135	10/13/2014	1219.62	28.06	1191.56
DM-15-135	4/2/2015	1219.62	28.89	1190.73
DM-15-135	10/16/2015	1219.62	28.38	1191.24
DM-15-135	4/13/2016	1219.62	29.10	1190.52
DM-15-135	10/5/2016	1219.62	28.98	1190.64
DM-15-165	1/15/1993	1219.62	15.53	1204.09
DM-15-165	1/21/1993	1219.62	14.47	1205.15
DM-15-165	1/29/1993	1219.62	14.71	1204.91
DM-15-165	4/19/1993	1219.62	13.33	1206.29
DM-15-165	7/15/1993	1219.62	14.71	1204.91
DM-15-165	10/4/1993	1219.62	14.40	1205.22
DM-15-165	1/4/1994	1219.62	13.35	1206.27
DM-15-165	6/17/1994	1219.62	14.75	1204.87
DM-15-165	10/4/1994	1219.62	8.58	1211.04
DM-15-165	11/30/1994	1219.62	14.81	1204.81
DM-15-165	12/27/1994	1219.62	14.58	1205.04
DM-15-165	2/28/1995	1219.62	14.61	1205.01
DM-15-165	3/13/1995	1219.62	14.55	1205.07
DM-15-165	3/24/1995	1219.62	14.55	1205.07
DM-15-165	5/24/1995	1219.62	15.24	1204.38
DM-15-165	6/15/1995	1219.62	14.65	1204.97
DM-15-165	6/30/1995	1219.62	15.75	1203.87
DM-15-165	9/15/1995	1219.62	14.55	1205.07
DM-15-165	10/5/1995	1219.62	15.58	1204.04
DM-15-165	12/18/1995	1219.62	14.77	1204.85
DM-15-165	1/16/1996	1219.62	16.53	1203.09
DM-15-165	3/5/1996	1219.62	15.93	1203.69
DM-15-165	3/25/1996	1219.62	16.61	1203.01
DM-15-165	6/5/1996	1219.62	17.52	1202.10
DM-15-165	6/14/1996	1219.62	17.43	1202.19
DM-15-165	9/5/1996	1219.62	15.30	1204.32
DM-15-165	9/25/1996	1219.62	16.85	1202.77
DM-15-165	12/6/1996	1219.62	17.05	1202.57
DM-15-165	12/26/1996	1219.62	17.05	1202.57
DM-15-165	3/5/1997	1219.62	17.65	1201.97
DM-15-165	3/17/1997	1219.62	17.63	1201.99
DM-15-165	6/19/1997	1219.62	18.80	1200.82
DM-15-165	7/22/1997	1219.62	24.01	1195.61
DM-15-165	9/19/1997	1219.62	19.06	1200.56
DM-15-165	10/7/1997	1219.62	19.19	1200.43
DM-15-165	10/8/1997	1219.62	19.32	1200.30
DM-15-165	1/5/1998	1219.62	19.13	1200.49
DM-15-165	3/4/1998	1219.62	18.27	1201.35
DM-15-165	3/12/1998	1219.62	18.27	1201.35
DM-15-165	6/12/1998	1219.62	18.76	1200.86
DM-15-165	9/2/1998	1219.62	19.23	1200.39
DM-15-165	12/4/1998	1219.62	18.55	1201.07
DM-15-165	3/15/1999	1219.62	18.36	1201.26
DM-15-165	6/17/1999	1219.62	19.64	1199.98
DM-15-165	9/2/1999	1219.62	19.39	1200.23
DM-15-165	1/20/2000	1219.62	20.35	1199.27
DM-15-165	3/1/2000	1219.62	20.52	1199.10
DM-15-165	6/8/2000	1219.62	21.05	1198.57
DM-15-165	10/3/2000	1219.62	21.25	1198.37
DM-15-165	12/20/2000	1219.62	19.89	1199.73
DM-15-165	3/22/2001	1219.62	19.93	1199.69
DM-15-165	6/8/2001	1219.62	20.66	1198.96
DM-15-165	10/24/2001	1219.62	21.47	1198.15
DM-15-165	1/9/2002	1219.62	21.15	1198.47
DM-15-165	4/4/2002	1219.62	21.92	1197.70
DM-15-165	7/8/2002	1219.62	22.73	1196.89
DM-15-165	10/2/2002	1219.62	23.06	1196.56
DM-15-165	1/7/2003	1219.62	22.98	1196.64
DM-15-165	4/7/2003	1219.62	23.17	1196.45
DM-15-165	7/2/2003	1219.62	24.12	1195.50

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-15-165	4/2/2004	1219.62	25.17	1194.45
DM-15-165	10/12/2004	1219.62	26.15	1193.47
DM-15-165	4/5/2005	1219.62	25.32	1194.30
DM-15-165	10/5/2005	1219.62	25.79	1193.83
DM-15-165	4/4/2006	1219.62	26.05	1193.57
DM-15-165	10/10/2006	1219.62	26.32	1193.30
DM-15-165	4/3/2007	1219.62	26.95	1192.67
DM-15-165	10/3/2007	1219.62	28.14	1191.48
DM-15-165	4/2/2008	1219.62	26.75	1192.87
DM-15-165	10/3/2008	1219.62	26.63	1192.99
DM-15-165	4/6/2009	1219.62	27.33	1192.29
DM-15-165	10/5/2009	1219.62	28.17	1191.45
DM-15-165	4/2/2010	1219.62	27.81	1191.81
DM-15-165	10/5/2010	1219.62	28.06	1191.56
DM-15-165	4/4/2011	1219.62	28.25	1191.37
DM-15-165	10/5/2011	1219.62	28.99	1190.63
DM-15-165	4/5/2012	1219.62	29.19	1190.43
DM-15-165	10/4/2012	1219.62	29.70	1189.92
DM-15-165	4/2/2013	1219.62	29.84	1189.78
DM-15-165	10/3/2013	1219.62	30.19	1189.43
DM-15-165	4/1/2014	1219.62	29.96	1189.66
DM-15-165	10/13/2014	1219.62	29.50	1190.12
DM-15-165	4/2/2015	1219.62	30.10	1189.52
DM-15-165	10/16/2015	1219.62	29.60	1190.02
DM-15-165	4/13/2016	1219.62	30.36	1189.26
DM-15-165	10/5/2016	1219.62	30.23	1189.39
DM-15-207	1/15/1993	1219.62	15.59	1204.03
DM-15-207	1/21/1993	1219.62	14.41	1205.21
DM-15-207	1/29/1993	1219.62	14.88	1204.74
DM-15-207	4/19/1993	1219.62	13.56	1206.06
DM-15-207	7/15/1993	1219.62	14.59	1205.03
DM-15-207	10/4/1993	1219.62	14.93	1204.69
DM-15-207	1/4/1994	1219.62	13.41	1206.21
DM-15-207	4/7/1994	1219.62	14.24	1205.38
DM-15-207	6/17/1994	1219.62	14.90	1204.72
DM-15-207	10/4/1994	1219.62	7.91	1211.71
DM-15-207	11/30/1994	1219.62	14.95	1204.67
DM-15-207	12/27/1994	1219.62	14.74	1204.88
DM-15-207	2/28/1995	1219.62	14.71	1204.91
DM-15-207	3/13/1995	1219.62	14.67	1204.95
DM-15-207	3/24/1995	1219.62	14.64	1204.98
DM-15-207	5/24/1995	1219.62	15.46	1204.16
DM-15-207	6/15/1995	1219.62	14.85	1204.77
DM-15-207	6/30/1995	1219.62	15.92	1203.70
DM-15-207	9/15/1995	1219.62	14.64	1204.98
DM-15-207	10/5/1995	1219.62	15.69	1203.93
DM-15-207	12/18/1995	1219.62	14.94	1204.68
DM-15-207	1/16/1996	1219.62	16.59	1203.03
DM-15-207	3/5/1996	1219.62	16.81	1202.81
DM-15-207	6/5/1996	1219.62	17.88	1201.74
DM-15-207	6/14/1996	1219.62	17.60	1202.02
DM-15-207	9/5/1996	1219.62	19.51	1200.11
DM-15-207	9/25/1996	1219.62	17.18	1202.44
DM-15-207	12/26/1996	1219.62	17.28	1202.34
DM-15-207	3/5/1997	1219.62	17.81	1201.81
DM-15-207	3/17/1997	1219.62	17.75	1201.87
DM-15-207	6/19/1997	1219.62	19.01	1200.61
DM-15-207	7/22/1997	1219.62	19.02	1200.60
DM-15-207	9/19/1997	1219.62	19.18	1200.44
DM-15-207	10/7/1997	1219.62	19.24	1200.38
DM-15-207	10/8/1997	1219.62	18.46	1201.16
DM-15-207	1/5/1998	1219.62	19.24	1200.38
DM-15-207	3/4/1998	1219.62	18.42	1201.20
DM-15-207	3/12/1998	1219.62	18.36	1201.26
DM-15-207	6/12/1998	1219.62	18.94	1200.68
DM-15-207	9/2/1998	1219.62	19.35	1200.27
DM-15-207	12/4/1998	1219.62	18.64	1200.98
DM-15-207	3/15/1999	1219.62	18.49	1201.13
DM-15-207	6/17/1999	1219.62	19.87	1199.75
DM-15-207	9/2/1999	1219.62	19.57	1200.05
DM-15-207	1/20/2000	1219.62	20.55	1199.07
DM-15-207	3/1/2000	1219.62	20.67	1198.96
DM-15-207	6/8/2000	1219.62	21.19	1198.43
DM-15-207	10/3/2000	1219.62	21.42	1198.20
DM-15-207	12/20/2000	1219.62	19.98	1199.64
DM-15-207	3/22/2001	1219.62	20.05	1199.57
DM-15-207	6/8/2001	1219.62	20.51	1199.11
DM-15-207	10/24/2001	1219.62	21.61	1198.01
DM-15-207	1/9/2002	1219.62	21.24	1198.38
DM-15-207	4/4/2002	1219.62	22.12	1197.50
DM-15-207	7/8/2002	1219.62	22.89	1196.73
DM-15-207	10/2/2002	1219.62	23.27	1196.35
DM-15-207	1/7/2003	1219.62	23.26	1196.36
DM-15-207	4/7/2003	1219.62	23.24	1196.38
DM-15-207	7/2/2003	1219.62	24.22	1195.40
DM-15-207	10/7/2003	1219.62	24.69	1194.93
DM-15-207	4/2/2004	1219.62	25.35	1194.27
DM-15-207	10/12/2004	1219.62	26.31	1193.31
DM-15-207	4/5/2005	1219.62	25.50	1194.12
DM-15-207	10/5/2005	1219.62	25.90	1193.72
DM-15-207	4/4/2006	1219.62	26.22	1193.40
DM-15-207	10/10/2006	1219.62	26.45	1193.17
DM-15-207	4/3/2007	1219.62	27.11	1192.51
DM-15-207	10/3/2007	1219.62	28.59	1191.03
DM-15-207	4/2/2008	1219.62	26.97	1192.65
DM-15-207	10/3/2008	1219.62	25.41	1194.21
DM-15-207	4/6/2009	1219.62	27.48	1192.14
DM-15-207	10/5/2009	1219.62	28.31	1191.31
DM-15-207	4/2/2010	1219.62	27.95	1191.67
DM-15-207	10/5/2010	1219.62	28.19	1191.43
DM-15-207	4/4/2011	1219.62	28.39	1191.23
DM-15-207	10/5/2011	1219.62	19.16	1200.46
DM-15-207	4/5/2012	1219.62	29.40	1190.22
DM-15-207	10/4/2012	1219.62	30.05	1189.57
DM-15-207	4/2/2013	1219.62	29.94	1189.68
DM-15-207	10/3/2013	1219.62	30.14	1189.48

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-15-207	10/13/2014	1219.62	29.82	1189.80
DM-15-207	4/2/2015	1219.62	30.31	1189.31
DM-15-207	10/16/2015	1219.62	29.73	1189.89
DM-15-207	4/13/2016	1219.62	30.55	1189.07
DM-15-207	10/5/2016	1219.62	30.41	1189.21
DM-16	4/11/1991	1209.94	13.55	1196.39
DM-16	5/23/1991	1209.94	13.79	1196.15
DM-16	6/21/1991	1209.94	13.86	1196.08
DM-16	12/4/1991	1209.94	13.17	1196.77
DM-16	3/25/1992	1209.94	12.78	1197.16
DM-16	6/24/1992	1209.94	12.62	1197.32
DM-16	6/26/1992	1209.94	12.51	1197.43
DM-16	9/4/1992	1209.94	11.87	1198.07
DM-16	11/10/1992	1209.94	12.25	1197.69
DM-16	1/20/1993	1209.94	10.49	1199.45
DM-16	4/13/1993	1209.94	10.52	1199.42
DM-16	5/21/1993	1209.94	10.73	1199.21
DM-16	6/22/1993	1209.94	12.11	1197.83
DM-16	7/12/1993	1209.94	12.22	1197.72
DM-16	8/17/1993	1209.94	2.42	1207.52
DM-16	9/15/1993	1209.94	12.23	1197.71
DM-16	10/11/1993	1209.94	11.78	1198.16
DM-16	12/18/1993	1209.94	10.04	1199.90
DM-16	1/18/1994	1209.94	11.54	1198.40
DM-16	2/16/1994	1209.94	12.23	1197.71
DM-16	3/9/1994	1209.94	12.11	1197.83
DM-16	4/12/1994	1209.94	12.44	1197.50
DM-16	5/16/1994	1209.94	12.55	1197.39
DM-16	6/24/1994	1209.94	12.89	1197.05
DM-16	7/9/1994	1209.94	13.11	1196.83
DM-16	9/7/1994	1209.94	12.72	1197.22
DM-16	9/22/1994	1209.94	13.81	1196.13
DM-16	9/28/1994	1209.94	13.98	1195.96
DM-16	11/23/1994	1209.94	12.87	1197.07
DM-16	12/15/1994	1209.94	12.26	1197.68
DM-16	3/1/1995	1209.94	11.67	1198.27
DM-16	3/22/1995	1209.94	12.52	1197.42
DM-16	5/15/1995	1209.94	13.13	1196.81
DM-16	6/14/1995	1209.94	13.30	1196.64
DM-16	6/27/1995	1209.94	13.48	1196.46
DM-16	9/14/1995	1209.94	12.85	1197.09
DM-16	9/28/1995	1209.94	13.56	1196.38
DM-16	12/12/1995	1209.94	14.96	1194.98
DM-16	1/16/1996	1209.94	15.28	1194.66
DM-16	3/4/1996	1209.94	15.48	1194.46
DM-16	3/21/1996	1209.94	15.31	1194.63
DM-16	6/4/1996	1209.94	15.65	1194.29
DM-16	6/13/1996	1209.94	15.75	1194.19
DM-16	9/3/1996	1209.94	15.21	1194.73
DM-16	9/24/1996	1209.94	14.65	1195.29
DM-16	12/5/1996	1209.94	15.26	1194.68
DM-16	12/18/1996	1209.94	14.37	1195.57
DM-16	3/3/1997	1209.94	15.69	1194.25
DM-16	6/20/1997	1209.94	17.98	1191.96
DM-16	7/16/1997	1209.94	18.03	1191.91
DM-16	9/4/1997	1209.94	18.14	1191.80
DM-16	9/26/1997	1209.94	18.02	1191.92
DM-16	12/29/1997	1209.94	18.21	1191.73
DM-16	3/3/1998	1209.94	17.79	1192.15
DM-16	6/11/1998	1209.94	17.77	1192.17
DM-16	9/3/1998	1209.94	18.36	1191.58
DM-16	9/16/1998	1209.94	18.27	1191.67
DM-16	1/7/1999	1209.94	18.05	1191.89
DM-16	3/30/1999	1209.94	18.70	1191.24
DM-16	6/16/1999	1209.94	18.78	1191.16
DM-16	9/7/1999	1209.94	18.95	1190.99
DM-16	9/14/1999	1209.94	18.95	1190.99
DM-16	1/6/2000	1209.94	19.10	1190.84
DM-16	2/28/2000	1209.94	19.73	1190.21
DM-16	6/7/2000	1209.94	22.50	1187.44
DM-16	9/25/2000	1209.94	20.87	1189.07
DM-16	10/3/2000	1209.94	21.03	1188.91
DM-16	12/19/2000	1209.94	19.50	1190.44
DM-16	3/20/2001	1209.94	19.47	1190.47
DM-16	6/7/2001	1209.94	19.79	1190.15
DM-16	10/23/2001	1209.94	21.08	1188.86
DM-16	11/13/2001	1209.94	21.25	1188.69
DM-16	1/7/2002	1209.94	20.53	1189.41
DM-16	4/1/2002	1209.94	21.69	1188.25
DM-16	7/8/2002	1209.94	22.70	1187.24
DM-16	10/3/2002	1209.94	23.15	1186.79
DM-16	10/17/2002	1209.94	23.16	1186.78
DM-16	1/6/2003	1209.94	23.06	1186.88
DM-16	4/1/2003	1209.94	23.11	1186.83
DM-16	7/1/2003	1209.94	24.54	1185.40
DM-16	10/3/2003	1209.94	24.93	1185.01
DM-16	10/10/2003	1209.94	23.89	1186.05
DM-16	4/1/2004	1209.94	25.94	1184.00
DM-16	10/1/2004	1209.94	26.88	1183.06
DM-16	10/8/2004	1209.94	26.95	1182.99
DM-16	4/4/2005	1209.94	26.13	1183.81
DM-16	10/3/2005	1209.94	25.97	1183.97
DM-16	10/12/2005	1209.94	25.98	1183.96
DM-16	4/5/2006	1209.94	27.05	1182.89
DM-16	10/4/2006	1209.94	26.36	1183.58
DM-16	10/16/2006	1209.94	26.26	1183.68
DM-16	4/2/2007	1209.94	27.54	1182.40
DM-16	10/1/2007	1209.94	27.60	1182.34
DM-16	4/1/2008	1209.94	27.81	1182.13
DM-16	10/1/2008	1209.94	26.90	1183.04
DM-16	10/10/2008	1209.94	26.84	1183.10
DM-16	4/1/2009	1209.94	27.92	1182.02
DM-16	10/1/2009	1209.94	28.21	1181.73
DM-16	10/15/2009	1209.94	27.98	1181.96
DM-16	4/1/2010	1209.94	28.28	1181.66
DM-16	10/1/2010	1209.94	28.19	1181.75

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-16	4/1/2011	1209.94	28.90	1181.04
DM-16	10/3/2011	1209.94	29.59	1180.35
DM-16	4/4/2012	1209.94	30.13	1179.81
DM-16	10/1/2012	1209.94	30.25	1179.69
DM-16	4/1/2013	1209.94	30.51	1179.43
DM-16	10/1/2013	1209.94	30.36	1179.58
DM-16	4/1/2014	1209.94	31.02	1178.92
DM-16	10/10/2014	1209.94	30.15	1179.79
DM-16	4/1/2015	1209.94	30.16	1179.78
DM-16	10/14/2015	1209.94	30.27	1179.67
DM-16	4/11/2016	1209.94	31.28	1178.66
DM-16	10/3/2016	1209.94	31.32	1178.62
DM-17	2/27/1991	1214.17	13.79	1200.38
DM-17	4/10/1991	1214.17	13.72	1200.45
DM-17	5/23/1991	1214.17	13.83	1200.34
DM-17	6/20/1991	1214.17	14.18	1199.99
DM-17	12/4/1991	1214.17	13.81	1200.36
DM-17	3/23/1992	1214.17	13.12	1201.05
DM-17	6/24/1992	1214.17	12.92	1201.25
DM-17	6/25/1992	1214.17	12.96	1201.21
DM-17	9/4/1992	1214.17	12.56	1201.61
DM-17	11/10/1992	1214.17	12.50	1201.67
DM-17	1/19/1993	1214.17	11.60	1202.57
DM-17	4/9/1993	1214.17	11.87	1202.30
DM-17	5/21/1993	1214.17	11.55	1202.62
DM-17	6/22/1993	1214.17	12.71	1201.46
DM-17	7/12/1993	1214.17	13.15	1201.02
DM-17	8/17/1993	1214.17	13.26	1200.91
DM-17	9/15/1993	1214.17	12.64	1201.53
DM-17	10/6/1993	1214.17	12.86	1201.31
DM-17	12/18/1993	1214.17	10.93	1203.24
DM-17	1/18/1994	1214.17	12.19	1201.98
DM-17	2/16/1994	1214.17	12.75	1201.42
DM-17	3/9/1994	1214.17	11.48	1202.69
DM-17	4/12/1994	1214.17	12.84	1201.33
DM-17	5/16/1994	1214.17	13.11	1201.06
DM-17	6/21/1994	1214.17	13.36	1200.81
DM-17	7/9/1994	1214.17	13.52	1200.65
DM-17	9/7/1994	1214.17	13.06	1201.11
DM-17	9/22/1994	1214.17	14.41	1199.76
DM-17	9/28/1994	1214.17	14.02	1200.15
DM-17	11/23/1994	1214.17	12.79	1201.38
DM-17	12/14/1994	1214.17	12.42	1201.75
DM-17	3/1/1995	1214.17	11.67	1202.50
DM-17	5/15/1995	1214.17	13.42	1200.75
DM-17	6/14/1995	1214.17	13.62	1200.55
DM-17	9/14/1995	1214.17	12.83	1201.34
DM-17	9/26/1995	1214.17	13.83	1200.34
DM-17	12/12/1995	1214.17	15.11	1199.06
DM-17	3/4/1996	1214.17	15.73	1198.44
DM-17	6/4/1996	1214.17	15.77	1198.40
DM-17	9/3/1996	1214.17	15.55	1198.62
DM-17	9/18/1996	1214.17	15.45	1198.72
DM-17	3/3/1997	1214.17	15.60	1198.57
DM-17	6/20/1997	1214.17	16.72	1197.45
DM-17	9/4/1997	1214.17	18.36	1195.81
DM-17	9/24/1997	1214.17	18.53	1195.64
DM-17	12/29/1997	1214.17	18.11	1196.06
DM-17	3/3/1998	1214.17	17.30	1196.87
DM-17	6/11/1998	1214.17	17.04	1197.13
DM-17	9/3/1998	1214.17	17.84	1196.33
DM-17	9/16/1998	1214.17	17.92	1196.25
DM-17	12/30/1998	1214.17	17.54	1196.63
DM-17	3/30/1999	1214.17	18.19	1195.98
DM-17	6/16/1999	1214.17	18.73	1195.44
DM-17	9/7/1999	1214.17	18.71	1195.46
DM-17	9/14/1999	1214.17	18.71	1195.46
DM-17	1/5/2000	1214.17	17.86	1196.31
DM-17	2/28/2000	1214.17	19.09	1195.08
DM-17	6/7/2000	1214.17	19.45	1194.72
DM-17	9/25/2000	1214.17	19.66	1194.51
DM-17	10/5/2000	1214.17	19.86	1194.31
DM-17	12/19/2000	1214.17	18.07	1196.10
DM-17	3/20/2001	1214.17	18.27	1195.90
DM-17	6/7/2001	1214.17	18.24	1195.93
DM-17	10/23/2001	1214.17	20.10	1194.07
DM-17	10/26/2001	1214.17	20.13	1194.04
DM-17	1/8/2002	1214.17	19.58	1194.59
DM-17	4/1/2002	1214.17	19.79	1194.38
DM-17	7/8/2002	1214.17	21.42	1192.75
DM-17	10/3/2002	1214.17	21.74	1192.43
DM-17	10/15/2002	1214.17	21.65	1192.52
DM-17	1/6/2003	1214.17	21.29	1192.88
DM-17	4/1/2003	1214.17	21.34	1192.83
DM-17	7/1/2003	1214.17	22.99	1191.18
DM-17	10/3/2003	1214.17	24.11	1190.06
DM-17	10/8/2003	1214.17	24.08	1190.09
DM-17	4/1/2004	1214.17	24.35	1189.82
DM-17	10/1/2004	1214.17	25.93	1188.24
DM-17	10/5/2004	1214.17	25.99	1188.18
DM-17	4/4/2005	1214.17	23.79	1190.38
DM-17	10/3/2005	1214.17	23.94	1190.23
DM-17	10/6/2005	1214.17	23.93	1190.24
DM-17	4/5/2006	1214.17	25.04	1189.13
DM-17	10/4/2006	1214.17	25.25	1188.92
DM-17	10/11/2006	1214.17	25.16	1189.01
DM-17	4/2/2007	1214.17	25.84	1188.33
DM-17	10/1/2007	1214.17	26.88	1187.29
DM-17	4/1/2008	1214.17	25.74	1188.43
DM-17	10/1/2008	1214.17	25.90	1188.27
DM-17	10/6/2008	1214.17	25.88	1188.29
DM-17	4/1/2009	1214.17	26.13	1188.04
DM-17	10/1/2009	1214.17	27.35	1186.82
DM-17	10/14/2009	1214.17	27.18	1186.99
DM-17	4/1/2010	1214.17	26.64	1187.53
DM-17	10/1/2010	1214.17	27.48	1186.69

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-17	4/1/2011	1214.17	27.67	1186.50
DM-17	10/3/2011	1214.17	28.71	1185.46
DM-17	4/4/2012	1214.17	29.05	1185.12
DM-17	10/1/2012	1214.17	29.45	1184.72
DM-17	4/1/2013	1214.17	29.38	1184.79
DM-17	10/2/2013	1214.17	29.98	1184.19
DM-17	4/1/2014	1214.17	30.11	1184.06
DM-17	10/10/2014	1214.17	29.20	1184.97
DM-17	4/1/2015	1214.17	28.98	1185.19
DM-17	10/14/2015	1214.17	30.09	1184.08
DM-17	4/11/2016	1214.17	30.47	1183.70
DM-17	10/3/2016	1214.17	31.05	1183.12
DM-18	4/9/1991	1242.41	9.70	1232.71
DM-18	5/23/1991	1242.41	10.33	1232.08
DM-18	6/19/1991	1242.41	10.60	1231.81
DM-18	12/4/1991	1242.41	9.94	1232.47
DM-18	3/23/1992	1242.41	8.56	1233.85
DM-18	6/24/1992	1242.41	9.94	1232.47
DM-18	6/25/1992	1242.41	9.97	1232.44
DM-18	9/4/1992	1242.41	8.42	1233.99
DM-18	11/11/1992	1242.41	9.80	1232.61
DM-18	1/18/1993	1242.41	5.89	1236.52
DM-18	4/8/1993	1242.41	7.23	1235.18
DM-18	5/21/1993	1242.41	7.91	1234.50
DM-18	6/22/1993	1242.41	9.13	1233.28
DM-18	7/12/1993	1242.41	9.49	1232.92
DM-18	8/17/1993	1242.41	10.14	1232.27
DM-18	9/15/1993	1242.41	10.45	1231.96
DM-18	10/5/1993	1242.41	10.53	1231.88
DM-18	12/18/1993	1242.41	8.77	1233.64
DM-18	1/18/1994	1242.41	9.10	1233.31
DM-18	2/16/1994	1242.41	9.75	1232.66
DM-18	3/9/1994	1242.41	10.14	1232.27
DM-18	4/12/1994	1242.41	10.27	1232.14
DM-18	5/16/1994	1242.41	10.46	1231.95
DM-18	6/21/1994	1242.41	10.37	1232.04
DM-18	7/9/1994	1242.41	10.64	1231.77
DM-18	9/7/1994	1242.41	10.20	1232.21
DM-18	9/19/1994	1242.41	11.16	1231.25
DM-18	9/28/1994	1242.41	11.14	1231.27
DM-18	11/23/1994	1242.41	9.27	1233.14
DM-18	12/14/1994	1242.41	9.11	1233.30
DM-18	3/1/1995	1242.41	9.22	1233.19
DM-18	3/21/1995	1242.41	8.57	1233.84
DM-18	5/15/1995	1242.41	9.50	1232.91
DM-18	6/14/1995	1242.41	9.83	1232.58
DM-18	9/14/1995	1242.41	8.76	1233.65
DM-18	9/27/1995	1242.41	10.03	1232.38
DM-18	12/11/1995	1242.41	8.27	1234.14
DM-18	3/4/1996	1242.41	9.78	1232.63
DM-18	3/13/1996	1242.41	9.88	1232.53
DM-18	6/4/1996	1242.41	10.42	1231.99
DM-18	9/3/1996	1242.41	9.66	1232.75
DM-18	12/5/1996	1242.41	9.46	1232.95
DM-18	3/3/1997	1242.41	9.61	1232.80
DM-18	3/6/1997	1242.41	9.65	1232.76
DM-18	6/19/1997	1242.41	11.13	1231.28
DM-18	9/4/1997	1242.41	11.23	1231.18
DM-18	10/1/1997	1242.41	10.18	1232.23
DM-18	12/29/1997	1242.41	9.14	1233.27
DM-18	3/2/1998	1242.41	7.06	1235.35
DM-18	6/11/1998	1242.41	8.98	1233.43
DM-18	9/3/1998	1242.41	10.15	1232.26
DM-18	9/17/1998	1242.41	10.10	1232.31
DM-18	12/30/1998	1242.41	9.59	1232.82
DM-18	3/30/1999	1242.41	10.53	1231.88
DM-18	6/16/1999	1242.41	10.86	1231.55
DM-18	9/7/1999	1242.41	9.73	1232.68
DM-18	9/22/1999	1242.41	9.73	1232.68
DM-18	1/6/2000	1242.41	10.16	1232.25
DM-18	2/28/2000	1242.41	10.85	1231.56
DM-18	6/7/2000	1242.41	10.50	1231.91
DM-18	9/25/2000	1242.41	10.49	1231.92
DM-18	10/4/2000	1242.41	10.49	1231.92
DM-18	12/20/2000	1242.41	8.92	1233.49
DM-18	3/20/2001	1242.41	8.49	1233.92
DM-18	6/7/2001	1242.41	9.42	1232.99
DM-18	10/23/2001	1242.41	9.27	1233.14
DM-18	1/8/2002	1242.41	9.48	1232.93
DM-18	4/1/2002	1242.41	10.33	1232.08
DM-18	7/8/2002	1242.41	11.54	1230.87
DM-18	10/3/2002	1242.41	10.73	1231.68
DM-18	10/10/2002	1242.41	10.69	1231.72
DM-18	1/7/2003	1242.41	10.47	1231.94
DM-18	4/1/2003	1242.41	9.65	1232.76
DM-18	7/1/2003	1242.41	10.60	1231.81
DM-18	10/3/2003	1242.41	11.04	1231.37
DM-18	10/8/2003	1242.41	11.64	1230.77
DM-18	4/1/2004	1242.41	11.35	1231.06
DM-18	10/1/2004	1242.41	13.39	1229.02
DM-18	10/7/2004	1242.41	13.42	1228.99
DM-18	4/4/2005	1242.41	10.11	1232.30
DM-18	10/3/2005	1242.41	12.80	1229.61
DM-18	10/6/2005	1242.41	12.85	1229.56
DM-18	4/5/2006	1242.41	13.36	1229.05
DM-18	10/4/2006	1242.41	14.19	1228.22
DM-18	10/11/2006	1242.41	14.30	1228.11
DM-18	4/2/2007	1242.41	13.64	1228.77
DM-18	10/1/2007	1242.41	17.15	1225.26
DM-18	4/1/2008	1242.41	13.01	1229.40
DM-18	10/1/2008	1242.41	13.33	1229.08
DM-18	10/6/2008	1242.41	13.82	1228.59
DM-18	4/1/2009	1242.41	13.32	1229.09
DM-18	10/1/2009	1242.41	16.29	1226.12
DM-18	10/12/2009	1242.41	17.24	1225.17
DM-18	1/14/2010	1242.41	16.36	1226.05

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-18	10/1/2010	1242.41	15.69	1226.72
DM-18	10/6/2010	1242.41	16.77	1225.64
DM-18	4/1/2011	1242.41	16.23	1226.18
DM-18	10/3/2011	1242.41	17.25	1225.16
DM-18	4/4/2012	1242.41	17.92	1224.49
DM-18	10/1/2012	1242.41	16.48	1225.93
DM-18	4/1/2013	1242.41	15.49	1226.92
DM-18	10/1/2013	1242.41	18.23	1224.18
DM-18	4/1/2014	1242.41	17.87	1224.54
DM-18	10/10/2014	1242.41	14.09	1228.32
DM-18	4/1/2015	1242.41	15.61	1226.80
DM-18	10/19/2015	1242.41	17.13	1225.28
DM-18	4/11/2016	1242.41	18.12	1224.29
DM-18	10/3/2016	1242.41	18.70	1223.71
DM-19	5/11/1995	1179.81	19.34	1160.47
DM-19	9/25/1995	1179.81	18.73	1161.08
DM-19	9/29/1995	1179.81	18.80	1161.01
DM-19	12/12/1995	1179.81	19.55	1160.26
DM-19	1/3/1996	1179.81	20.87	1158.94
DM-19	3/4/1996	1179.81	20.90	1158.91
DM-19	3/14/1996	1179.81	21.00	1158.81
DM-19	6/4/1996	1179.81	21.55	1158.26
DM-19	6/10/1996	1179.81	21.60	1158.21
DM-19	9/4/1996	1179.81	20.72	1159.09
DM-19	9/18/1996	1179.81	21.35	1158.46
DM-19	12/6/1996	1179.81	21.76	1158.05
DM-19	3/4/1997	1179.81	22.45	1157.36
DM-19	3/7/1997	1179.81	22.51	1157.30
DM-19	6/23/1997	1179.81	22.76	1157.05
DM-19	7/9/1997	1179.81	22.72	1157.09
DM-19	9/5/1997	1179.81	22.31	1157.50
DM-19	9/24/1997	1179.81	21.80	1158.01
DM-19	12/29/1997	1179.81	22.96	1156.85
DM-19	1/16/1998	1179.81	22.28	1157.53
DM-19	3/3/1998	1179.81	23.11	1156.70
DM-19	3/10/1998	1179.81	22.70	1157.11
DM-19	6/11/1998	1179.81	22.33	1157.48
DM-19	6/16/1998	1179.81	22.26	1157.55
DM-19	9/2/1998	1179.81	22.84	1156.97
DM-19	12/30/1998	1179.81	22.91	1156.90
DM-19	1/7/1999	1179.81	23.04	1156.77
DM-19	3/24/1999	1179.81	23.73	1156.08
DM-19	6/16/1999	1179.81	25.46	1154.35
DM-19	7/29/1999	1179.81	25.68	1154.13
DM-19	9/8/1999	1179.81	26.53	1153.28
DM-19	9/20/1999	1179.81	26.53	1153.28
DM-19	1/5/2000	1179.81	25.81	1154.00
DM-19	1/20/2000	1179.81	26.16	1153.65
DM-19	3/2/2000	1179.81	27.03	1152.78
DM-19	6/7/2000	1179.81	27.83	1151.98
DM-19	6/23/2000	1179.81	28.30	1151.51
DM-19	9/27/2000	1179.81	30.18	1149.63
DM-19	10/12/2000	1179.81	29.65	1150.16
DM-19	3/20/2001	1179.81	27.70	1152.11
DM-19	6/6/2001	1179.81	29.02	1150.79
DM-19	6/13/2001	1179.81	29.37	1150.44
DM-19	10/23/2001	1179.81	29.51	1150.30
DM-19	10/29/2001	1179.81	29.79	1150.02
DM-19	1/7/2002	1179.81	28.88	1150.93
DM-19	4/1/2002	1179.81	30.16	1149.65
DM-19	4/5/2002	1179.81	30.18	1149.63
DM-19	7/8/2002	1179.81	31.81	1148.00
DM-19	7/9/2002	1179.81	31.79	1148.02
DM-19	10/11/2002	1179.81	31.71	1148.10
DM-19	1/6/2003	1179.81	32.25	1147.56
DM-19	1/8/2003	1179.81	32.31	1147.50
DM-19	4/7/2003	1179.81	32.07	1147.74
DM-19	7/1/2003	1179.81	33.32	1146.49
DM-19	7/3/2003	1179.81	33.48	1146.33
DM-19	10/3/2003	1179.81	34.35	1145.46
DM-19	10/9/2003	1179.81	34.45	1145.36
DM-19	4/1/2004	1179.81	35.94	1143.87
DM-19	4/5/2004	1179.81	35.97	1143.84
DM-19	10/1/2004	1179.81	35.98	1143.83
DM-19	10/7/2004	1179.81	36.05	1143.76
DM-19	4/4/2005	1179.81	35.72	1144.09
DM-19	4/5/2005	1179.81	35.74	1144.07
DM-19	10/3/2005	1179.81	33.68	1146.13
DM-19	10/7/2005	1179.81	33.52	1146.29
DM-19	4/5/2006	1179.81	35.74	1144.07
DM-19	4/7/2006	1179.81	35.77	1144.04
DM-19	10/4/2006	1179.81	33.93	1145.88
DM-19	10/11/2006	1179.81	33.90	1145.91
DM-19	4/2/2007	1179.81	36.21	1143.60
DM-19	4/5/2007	1179.81	36.31	1143.50
DM-19	10/1/2007	1179.81	36.00	1143.81
DM-19	4/1/2008	1179.81	36.81	1143.00
DM-19	4/4/2008	1179.81	36.84	1142.97
DM-19	10/1/2008	1179.81	34.73	1145.08
DM-19	10/6/2008	1179.81	34.72	1145.09
DM-19	4/1/2009	1179.81	36.64	1143.17
DM-19	4/8/2009	1179.81	36.74	1143.07
DM-19	10/1/2009	1179.81	35.42	1144.39
DM-19	10/9/2009	1179.81	35.35	1144.46
DM-19	4/1/2010	1179.81	37.06	1142.75
DM-19	4/5/2010	1179.81	37.02	1142.79
DM-19	10/1/2010	1179.81	35.24	1144.57
DM-19	10/6/2010	1179.81	35.27	1144.54
DM-19	4/1/2011	1179.81	37.07	1142.74
DM-19	10/3/2011	1179.81	36.15	1143.66
DM-19	4/4/2012	1179.81	37.78	1142.03
DM-19	4/6/2012	1179.81	37.82	1141.99
DM-19	10/1/2012	1179.81	36.31	1143.50
DM-19	10/5/2012	1179.81	36.36	1143.45
DM-19	4/1/2013	1179.81	38.12	1141.69
DM-19	10/1/2013	1179.81	37.02	1142.79

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-19	4/1/2014	1179.81	38.64	1141.17
DM-19	10/10/2014	1179.81	36.53	1143.28
DM-19	4/1/2015	1179.81	38.83	1140.98
DM-19	10/14/2015	1179.81	37.78	1142.03
DM-19	4/11/2016	1179.81	39.72	1140.09
DM-19	10/3/2016	1179.81	38.48	1141.33
DM-20-022	5/18/1993	1207.60	11.23	1196.37
DM-20-022	5/28/1993	1207.60	11.35	1196.25
DM-20-022	6/14/1993	1207.60	11.58	1196.02
DM-20-022	7/14/1993	1207.60	11.10	1196.50
DM-20-022	9/29/1993	1207.60	11.70	1195.90
DM-20-022	1/3/1994	1207.60	10.07	1197.53
DM-20-022	4/4/1994	1207.60	11.55	1196.05
DM-20-022	6/16/1994	1207.60	12.28	1195.32
DM-20-022	9/23/1994	1207.60	12.39	1195.21
DM-20-022	11/30/1994	1207.60	12.91	1194.69
DM-20-022	3/1/1995	1207.60	10.48	1197.12
DM-20-022	3/13/1995	1207.60	11.24	1196.36
DM-20-022	3/27/1995	1207.60	12.32	1195.28
DM-20-022	5/24/1995	1207.60	12.79	1194.81
DM-20-022	6/15/1995	1207.60	12.52	1195.08
DM-20-022	6/30/1995	1207.60	12.91	1194.69
DM-20-022	9/15/1995	1207.60	12.25	1195.35
DM-20-022	12/16/1995	1207.60	15.61	1191.99
DM-20-022	1/17/1996	1207.60	15.66	1191.94
DM-20-022	3/5/1996	1207.60	15.17	1192.43
DM-20-022	3/26/1996	1207.60	15.14	1192.46
DM-20-022	6/5/1996	1207.60	13.73	1193.87
DM-20-022	6/21/1996	1207.60	13.74	1193.86
DM-20-022	9/5/1996	1207.60	13.82	1193.78
DM-20-022	9/17/1996	1207.60	15.95	1191.65
DM-20-022	12/6/1996	1207.60	14.11	1193.49
DM-20-022	3/5/1997	1207.60	14.02	1193.58
DM-20-022	3/17/1997	1207.60	16.70	1190.90
DM-20-022	6/20/1997	1207.60	17.53	1190.07
DM-20-022	7/21/1997	1207.60	17.61	1189.99
DM-20-022	9/4/1997	1207.60	17.62	1189.98
DM-20-022	10/2/1997	1207.60	17.03	1190.57
DM-20-022	1/5/1998	1207.60	17.45	1190.15
DM-20-022	3/4/1998	1207.60	16.96	1190.64
DM-20-022	3/13/1998	1207.60	16.86	1190.74
DM-20-022	7/24/1998	1207.60	17.37	1190.23
DM-20-022	9/1/1998	1207.60	17.52	1190.08
DM-20-022	12/4/1998	1207.60	16.92	1190.68
DM-20-022	3/15/1999	1207.60	17.55	1190.05
DM-20-022	6/17/1999	1207.60	18.14	1189.46
DM-20-022	9/2/1999	1207.60	18.40	1189.20
DM-20-022	1/28/2000	1207.60	18.61	1188.99
DM-20-022	3/1/2000	1207.60	18.92	1188.68
DM-20-022	6/8/2000	1207.60	19.35	1188.25
DM-20-022	10/3/2000	1207.60	20.49	1187.11
DM-20-022	12/21/2000	1207.60	17.96	1189.64
DM-20-022	3/21/2001	1207.60	18.65	1188.95
DM-20-022	10/25/2001	1207.60	20.68	1186.92
DM-20-022	1/9/2002	1207.60	19.64	1187.96
DM-20-022	4/2/2002	1207.60	20.94	1186.66
DM-20-022	7/8/2002	1207.60	Dry	Dry
DM-20-022	10/1/2002	1207.60	Dry	Dry
DM-20-022	1/7/2003	1207.60	Dry	Dry
DM-20-022	4/3/2003	1207.60	20.98	1186.62
DM-20-022	4/2/2004	1207.60	Dry	Dry
DM-20-022	10/11/2004	1207.60	Dry	Dry
DM-20-022	4/5/2005	1207.60	Dry	Dry
DM-20-022	4/4/2006	1207.60	Dry	Dry
DM-20-022	10/9/2006	1207.60	Dry	Dry
DM-20-022	4/3/2007	1207.60	Dry	Dry
DM-20-022	10/2/2007	1207.60	Dry	Dry
DM-20-022	4/2/2008	1207.60	Dry	Dry
DM-20-022	10/2/2008	1207.60	Dry	Dry
DM-20-022	4/6/2009	1207.60	Dry	Dry
DM-20-022	10/2/2009	1207.60	Dry	Dry
DM-20-022	4/2/2010	1207.60	Dry	Dry
DM-20-022	10/4/2010	1207.60	Dry	Dry
DM-20-022	4/4/2011	1207.60	Dry	Dry
DM-20-022	10/4/2011	1207.60	Dry	Dry
DM-20-022	4/5/2012	1207.60	Dry	Dry
DM-20-022	10/2/2012	1207.60	Dry	Dry
DM-20-022	4/2/2013	1207.60	Dry	Dry
DM-20-022	10/2/2013	1207.60	Dry	Dry
DM-20-022	4/2/2014	1207.60	Dry	Dry
DM-20-022	10/13/2014	1207.60	Dry	Dry
DM-20-022	4/2/2015	1207.60	Dry	Dry
DM-20-022	10/15/2015	1207.60	Dry	Dry
DM-20-022	4/12/2016	1207.60	Dry	Dry
DM-20-022	10/4/2016	1207.60	Dry	Dry
DM-20-059	5/18/1993	1207.60	11.15	1196.45
DM-20-059	5/28/1993	1207.60	11.34	1196.26
DM-20-059	6/14/1993	1207.60	11.56	1196.04
DM-20-059	7/14/1993	1207.60	11.81	1195.79
DM-20-059	9/29/1993	1207.60	11.69	1195.91
DM-20-059	1/3/1994	1207.60	10.11	1197.49
DM-20-059	4/4/1994	1207.60	11.61	1195.99
DM-20-059	6/16/1994	1207.60	12.27	1195.33
DM-20-059	9/23/1994	1207.60	13.33	1194.27
DM-20-059	11/30/1994	1207.60	12.16	1195.44
DM-20-059	12/20/1994	1207.60	11.99	1195.61
DM-20-059	3/1/1995	1207.60	10.52	1197.08
DM-20-059	3/13/1995	1207.60	11.30	1196.30
DM-20-059	3/27/1995	1207.60	12.34	1195.26
DM-20-059	5/24/1995	1207.60	12.67	1194.93
DM-20-059	6/15/1995	1207.60	12.71	1194.89
DM-20-059	6/30/1995	1207.60	12.94	1194.66
DM-20-059	9/15/1995	1207.60	12.46	1195.14
DM-20-059	12/16/1995	1207.60	15.49	1192.11
DM-20-059	1/17/1996	1207.60	15.77	1191.83
DM-20-059	3/5/1996	1207.60	15.23	1192.37

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-059	6/5/1996	1207.60	13.65	1193.95
DM-20-059	6/21/1996	1207.60	13.67	1193.93
DM-20-059	9/5/1996	1207.60	13.74	1193.86
DM-20-059	9/17/1996	1207.60	16.01	1191.59
DM-20-059	12/6/1996	1207.60	14.19	1193.41
DM-20-059	3/5/1997	1207.60	14.17	1193.43
DM-20-059	3/17/1997	1207.60	16.51	1191.09
DM-20-059	6/20/1997	1207.60	17.50	1190.10
DM-20-059	7/21/1997	1207.60	17.64	1189.96
DM-20-059	9/4/1997	1207.60	17.64	1189.96
DM-20-059	10/2/1997	1207.60	17.10	1190.50
DM-20-059	1/5/1998	1207.60	17.49	1190.11
DM-20-059	3/4/1998	1207.60	16.95	1190.65
DM-20-059	3/13/1998	1207.60	16.82	1190.78
DM-20-059	7/24/1998	1207.60	17.30	1190.30
DM-20-059	9/1/1998	1207.60	17.57	1190.03
DM-20-059	12/4/1998	1207.60	16.91	1190.69
DM-20-059	3/15/1999	1207.60	17.63	1189.97
DM-20-059	6/17/1999	1207.60	18.07	1189.53
DM-20-059	9/2/1999	1207.60	18.44	1189.16
DM-20-059	1/28/2000	1207.60	18.69	1188.91
DM-20-059	3/1/2000	1207.60	18.97	1188.63
DM-20-059	6/8/2000	1207.60	19.39	1188.21
DM-20-059	10/3/2000	1207.60	20.45	1187.15
DM-20-059	12/21/2000	1207.60	18.72	1188.88
DM-20-059	3/21/2001	1207.60	18.78	1188.82
DM-20-059	6/8/2001	1207.60	18.94	1188.66
DM-20-059	10/25/2001	1207.60	20.67	1186.93
DM-20-059	1/9/2002	1207.60	19.71	1187.89
DM-20-059	4/2/2002	1207.60	21.07	1186.53
DM-20-059	7/8/2002	1207.60	22.34	1185.26
DM-20-059	10/1/2002	1207.60	22.44	1185.16
DM-20-059	1/7/2003	1207.60	22.34	1185.26
DM-20-059	4/3/2003	1207.60	22.39	1185.21
DM-20-059	7/2/2003	1207.60	24.12	1183.48
DM-20-059	10/6/2003	1207.60	24.02	1183.58
DM-20-059	4/2/2004	1207.60	25.80	1181.80
DM-20-059	10/11/2004	1207.60	27.06	1180.54
DM-20-059	4/5/2005	1207.60	25.78	1181.82
DM-20-059	10/4/2005	1207.60	25.21	1182.39
DM-20-059	4/4/2006	1207.60	26.56	1181.04
DM-20-059	10/9/2006	1207.60	25.75	1181.85
DM-20-059	4/3/2007	1207.60	27.27	1180.33
DM-20-059	10/2/2007	1207.60	28.22	1179.38
DM-20-059	4/2/2008	1207.60	27.23	1180.37
DM-20-059	10/2/2008	1207.60	26.39	1181.21
DM-20-059	4/6/2009	1207.60	27.49	1180.11
DM-20-059	10/2/2009	1207.60	27.55	1180.05
DM-20-059	4/2/2010	1207.60	27.78	1179.82
DM-20-059	10/4/2010	1207.60	27.53	1180.07
DM-20-059	4/4/2011	1207.60	28.43	1179.17
DM-20-059	10/4/2011	1207.60	29.04	1178.56
DM-20-059	4/5/2012	1207.60	29.75	1177.85
DM-20-059	4/2/2013	1207.60	30.29	1177.31
DM-20-059	10/2/2013	1207.60	29.93	1177.67
DM-20-059	4/2/2014	1207.60	30.72	1176.88
DM-20-059	10/13/2014	1207.60	29.45	1178.15
DM-20-059	4/2/2015	1207.60	29.82	1177.78
DM-20-059	10/15/2015	1207.60	29.87	1177.73
DM-20-059	4/12/2016	1207.60	31.07	1176.53
DM-20-059	10/4/2016	1207.60	30.99	1176.61
DM-20-090	5/18/1993	1207.60	11.21	1196.39
DM-20-090	5/28/1993	1207.60	11.37	1196.23
DM-20-090	6/14/1993	1207.60	11.56	1196.04
DM-20-090	7/14/1993	1207.60	11.77	1195.83
DM-20-090	9/29/1993	1207.60	11.66	1195.94
DM-20-090	1/3/1994	1207.60	10.17	1197.43
DM-20-090	4/4/1994	1207.60	11.57	1196.03
DM-20-090	6/16/1994	1207.60	12.30	1195.30
DM-20-090	9/23/1994	1207.60	13.44	1194.16
DM-20-090	11/30/1994	1207.60	12.22	1195.38
DM-20-090	12/20/1994	1207.60	12.07	1195.53
DM-20-090	3/1/1995	1207.60	10.61	1196.99
DM-20-090	3/13/1995	1207.60	11.38	1196.22
DM-20-090	3/27/1995	1207.60	12.38	1195.22
DM-20-090	5/24/1995	1207.60	12.74	1194.86
DM-20-090	6/15/1995	1207.60	12.45	1195.15
DM-20-090	6/30/1995	1207.60	13.14	1194.46
DM-20-090	9/15/1995	1207.60	12.49	1195.11
DM-20-090	12/16/1995	1207.60	15.44	1192.16
DM-20-090	1/17/1996	1207.60	15.64	1191.96
DM-20-090	3/26/1996	1207.60	15.19	1192.41
DM-20-090	6/5/1996	1207.60	13.65	1193.95
DM-20-090	6/21/1996	1207.60	13.65	1193.95
DM-20-090	9/5/1996	1207.60	13.67	1193.93
DM-20-090	9/17/1996	1207.60	15.90	1191.70
DM-20-090	12/6/1996	1207.60	14.27	1193.33
DM-20-090	3/5/1997	1207.60	14.34	1193.26
DM-20-090	3/17/1997	1207.60	16.50	1191.10
DM-20-090	6/20/1997	1207.60	17.51	1190.09
DM-20-090	7/21/1997	1207.60	17.59	1190.01
DM-20-090	9/4/1997	1207.60	17.64	1189.96
DM-20-090	10/2/1997	1207.60	17.12	1190.48
DM-20-090	1/5/1998	1207.60	17.53	1190.07
DM-20-090	3/4/1998	1207.60	16.97	1190.63
DM-20-090	3/13/1998	1207.60	16.93	1190.67
DM-20-090	7/24/1998	1207.60	17.34	1190.26
DM-20-090	9/1/1998	1207.60	17.61	1189.99
DM-20-090	12/4/1998	1207.60	16.94	1190.66
DM-20-090	3/15/1999	1207.60	17.68	1189.92
DM-20-090	6/17/1999	1207.60	18.11	1189.49
DM-20-090	9/2/1999	1207.60	18.52	1189.08
DM-20-090	1/28/2000	1207.60	18.75	1188.85
DM-20-090	3/1/2000	1207.60	19.03	1188.57
DM-20-090	6/8/2000	1207.60	19.63	1187.97
DM-20-090	12/21/2000	1207.60	18.78	1188.73

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-090	6/8/2001	1207.60	19.02	1188.58
DM-20-090	10/25/2001	1207.60	20.63	1186.97
DM-20-090	1/9/2002	1207.60	19.72	1187.88
DM-20-090	4/2/2002	1207.60	21.07	1186.53
DM-20-090	7/8/2002	1207.60	22.32	1185.28
DM-20-090	10/1/2002	1207.60	22.48	1185.12
DM-20-090	1/7/2003	1207.60	22.44	1185.16
DM-20-090	4/3/2003	1207.60	22.11	1185.49
DM-20-090	7/2/2003	1207.60	24.07	1183.53
DM-20-090	10/6/2003	1207.60	24.84	1182.76
DM-20-090	4/2/2004	1207.60	25.76	1181.84
DM-20-090	10/11/2004	1207.60	27.08	1180.52
DM-20-090	4/5/2005	1207.60	25.79	1181.81
DM-20-090	10/4/2005	1207.60	25.23	1182.37
DM-20-090	4/4/2006	1207.60	26.53	1181.07
DM-20-090	10/9/2006	1207.60	25.79	1181.81
DM-20-090	4/3/2007	1207.60	27.21	1180.39
DM-20-090	10/2/2007	1207.60	28.20	1179.40
DM-20-090	4/2/2008	1207.60	27.35	1180.25
DM-20-090	10/2/2008	1207.60	26.44	1181.16
DM-20-090	4/6/2009	1207.60	27.50	1180.10
DM-20-090	10/2/2009	1207.60	27.60	1180.00
DM-20-090	4/2/2010	1207.60	27.86	1179.74
DM-20-090	10/4/2010	1207.60	27.53	1180.07
DM-20-090	4/4/2011	1207.60	28.46	1179.14
DM-20-090	10/4/2011	1207.60	29.09	1178.51
DM-20-090	4/5/2012	1207.60	29.84	1177.76
DM-20-090	10/2/2012	1207.60	29.61	1177.99
DM-20-090	4/2/2013	1207.60	30.29	1177.31
DM-20-090	10/2/2013	1207.60	29.93	1177.67
DM-20-090	4/2/2014	1207.60	30.75	1176.85
DM-20-090	10/13/2014	1207.60	29.38	1178.22
DM-20-090	4/2/2015	1207.60	29.86	1177.74
DM-20-090	10/15/2015	1207.60	29.89	1177.71
DM-20-090	4/12/2016	1207.60	31.13	1176.47
DM-20-090	10/4/2016	1207.60	31.04	1176.56
DM-20-120	5/18/1993	1207.60	11.25	1196.35
DM-20-120	5/28/1993	1207.60	11.36	1196.24
DM-20-120	6/14/1993	1207.60	11.51	1196.09
DM-20-120	7/14/1993	1207.60	11.91	1195.69
DM-20-120	9/29/1993	1207.60	11.69	1195.91
DM-20-120	1/3/1994	1207.60	10.27	1197.33
DM-20-120	4/4/1994	1207.60	11.62	1195.98
DM-20-120	6/16/1994	1207.60	12.33	1195.27
DM-20-120	9/23/1994	1207.60	13.56	1194.04
DM-20-120	11/30/1994	1207.60	12.22	1195.38
DM-20-120	12/20/1994	1207.60	12.12	1195.48
DM-20-120	3/1/1995	1207.60	10.68	1196.92
DM-20-120	3/13/1995	1207.60	11.44	1196.16
DM-20-120	3/27/1995	1207.60	12.45	1195.15
DM-20-120	5/24/1995	1207.60	12.79	1194.81
DM-20-120	6/15/1995	1207.60	12.59	1195.01
DM-20-120	6/30/1995	1207.60	12.30	1195.30

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-120	12/16/1995	1207.60	15.45	1192.15
DM-20-120	1/17/1996	1207.60	15.54	1192.06
DM-20-120	3/5/1996	1207.60	15.31	1192.29
DM-20-120	3/26/1996	1207.60	15.26	1192.34
DM-20-120	6/5/1996	1207.60	13.57	1194.03
DM-20-120	6/21/1996	1207.60	13.60	1194.00
DM-20-120	9/5/1996	1207.60	13.64	1193.96
DM-20-120	9/17/1996	1207.60	15.98	1191.62
DM-20-120	12/6/1996	1207.60	14.28	1193.32
DM-20-120	3/5/1997	1207.60	14.54	1193.06
DM-20-120	3/17/1997	1207.60	16.74	1190.86
DM-20-120	6/20/1997	1207.60	17.54	1190.06
DM-20-120	7/21/1997	1207.60	17.76	1189.84
DM-20-120	9/4/1997	1207.60	17.66	1189.94
DM-20-120	10/2/1997	1207.60	17.20	1190.40
DM-20-120	1/5/1998	1207.60	17.62	1189.98
DM-20-120	3/4/1998	1207.60	17.03	1190.57
DM-20-120	3/13/1998	1207.60	16.93	1190.67
DM-20-120	7/24/1998	1207.60	17.42	1190.18
DM-20-120	9/1/1998	1207.60	17.66	1189.94
DM-20-120	12/4/1998	1207.60	17.04	1190.56
DM-20-120	3/15/1999	1207.60	17.73	1189.87
DM-20-120	6/17/1999	1207.60	18.20	1189.40
DM-20-120	9/2/1999	1207.60	18.62	1188.98
DM-20-120	1/28/2000	1207.60	18.85	1188.75
DM-20-120	3/1/2000	1207.60	19.15	1188.45
DM-20-120	6/8/2000	1207.60	19.72	1187.88
DM-20-120	10/3/2000	1207.60	20.55	1187.05
DM-20-120	12/21/2000	1207.60	18.87	1188.73
DM-20-120	3/21/2001	1207.60	18.90	1188.70
DM-20-120	6/8/2001	1207.60	19.14	1188.46
DM-20-120	10/25/2001	1207.60	20.73	1186.87
DM-20-120	1/9/2002	1207.60	19.88	1187.72
DM-20-120	4/2/2002	1207.60	21.19	1186.41
DM-20-120	7/8/2002	1207.60	22.46	1185.14
DM-20-120	10/1/2002	1207.60	22.62	1184.98
DM-20-120	1/7/2003	1207.60	22.59	1185.01
DM-20-120	4/3/2003	1207.60	22.58	1185.02
DM-20-120	7/2/2003	1207.60	24.22	1183.38
DM-20-120	10/6/2003	1207.60	24.07	1183.53
DM-20-120	4/2/2004	1207.60	25.89	1181.71
DM-20-120	10/11/2004	1207.60	27.16	1180.44
DM-20-120	4/5/2005	1207.60	25.88	1181.72
DM-20-120	10/4/2005	1207.60	25.21	1182.39
DM-20-120	4/4/2006	1207.60	26.70	1180.90
DM-20-120	10/9/2006	1207.60	25.84	1181.76
DM-20-120	4/3/2007	1207.60	27.45	1180.15
DM-20-120	10/2/2007	1207.60	28.29	1179.31
DM-20-120	4/2/2008	1207.60	27.42	1180.18
DM-20-120	10/2/2008	1207.60	26.52	1181.08
DM-20-120	4/6/2009	1207.60	27.58	1180.02
DM-20-120	10/2/2009	1207.60	27.72	1179.88
DM-20-120	4/2/2010	1207.60	27.93	1179.67

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-120	4/4/2011	1207.60	28.55	1179.05
DM-20-120	10/4/2011	1207.60	29.17	1178.43
DM-20-120	4/5/2012	1207.60	29.87	1177.73
DM-20-120	10/2/2012	1207.60	29.79	1177.81
DM-20-120	4/2/2013	1207.60	30.37	1177.23
DM-20-120	10/2/2013	1207.60	30.00	1177.60
DM-20-120	4/2/2014	1207.60	30.83	1176.77
DM-20-120	10/13/2014	1207.60	29.45	1178.15
DM-20-120	4/2/2015	1207.60	29.94	1177.66
DM-20-120	10/15/2015	1207.60	29.92	1177.68
DM-20-120	4/12/2016	1207.60	31.17	1176.43
DM-20-120	10/4/2016	1207.60	31.10	1176.50
DM-20-170	5/18/1993	1207.60	11.34	1196.26
DM-20-170	5/28/1993	1207.60	11.35	1196.25
DM-20-170	6/14/1993	1207.60	11.66	1195.94
DM-20-170	7/14/1993	1207.60	12.09	1195.51
DM-20-170	9/29/1993	1207.60	11.87	1195.73
DM-20-170	1/3/1994	1207.60	10.16	1197.44
DM-20-170	4/4/1994	1207.60	11.34	1196.26
DM-20-170	6/16/1994	1207.60	12.14	1195.46
DM-20-170	9/23/1994	1207.60	13.31	1194.29
DM-20-170	11/30/1994	1207.60	12.04	1195.56
DM-20-170	12/20/1994	1207.60	11.90	1195.70
DM-20-170	3/1/1995	1207.60	10.52	1197.08
DM-20-170	3/13/1995	1207.60	10.89	1196.71
DM-20-170	3/27/1995	1207.60	12.14	1195.46
DM-20-170	5/24/1995	1207.60	12.44	1195.16
DM-20-170	6/15/1995	1207.60	12.39	1195.21
DM-20-170	6/30/1995	1207.60	12.71	1194.89
DM-20-170	9/15/1995	1207.60	12.33	1195.27
DM-20-170	12/16/1995	1207.60	15.05	1192.55
DM-20-170	1/17/1996	1207.60	14.74	1192.86
DM-20-170	3/5/1996	1207.60	15.01	1192.59
DM-20-170	3/26/1996	1207.60	14.95	1192.65
DM-20-170	6/5/1996	1207.60	13.44	1194.16
DM-20-170	6/21/1996	1207.60	13.45	1194.15
DM-20-170	9/5/1996	1207.60	13.54	1194.06
DM-20-170	9/17/1996	1207.60	15.77	1191.83
DM-20-170	12/6/1996	1207.60	14.06	1193.54
DM-20-170	3/5/1997	1207.60	14.32	1193.28
DM-20-170	3/17/1997	1207.60	16.18	1191.42
DM-20-170	6/20/1997	1207.60	17.31	1190.29
DM-20-170	7/21/1997	1207.60	17.32	1190.28
DM-20-170	9/4/1997	1207.60	17.34	1190.26
DM-20-170	10/2/1997	1207.60	16.95	1190.65
DM-20-170	1/5/1998	1207.60	17.38	1190.22
DM-20-170	3/4/1998	1207.60	16.77	1190.83
DM-20-170	3/13/1998	1207.60	16.60	1191.00
DM-20-170	7/24/1998	1207.60	17.13	1190.47
DM-20-170	9/1/1998	1207.60	17.47	1190.13
DM-20-170	12/4/1998	1207.60	16.70	1190.90
DM-20-170	3/15/1999	1207.60	17.16	1190.44
DM-20-170	6/17/1999	1207.60	17.88	1189.72

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-170	1/28/2000	1207.60	18.73	1188.87
DM-20-170	3/1/2000	1207.60	19.14	1188.46
DM-20-170	6/8/2000	1207.60	19.38	1188.22
DM-20-170	10/3/2000	1207.60	20.43	1187.17
DM-20-170	12/21/2000	1207.60	18.54	1189.06
DM-20-170	3/21/2001	1207.60	17.41	1190.19
DM-20-170	6/8/2001	1207.60	18.83	1188.77
DM-20-170	10/25/2001	1207.60	20.42	1187.18
DM-20-170	1/9/2002	1207.60	19.54	1188.06
DM-20-170	4/2/2002	1207.60	20.81	1186.79
DM-20-170	7/8/2002	1207.60	22.08	1185.52
DM-20-170	10/1/2002	1207.60	22.26	1185.34
DM-20-170	1/7/2003	1207.60	22.23	1185.37
DM-20-170	4/3/2003	1207.60	22.25	1185.35
DM-20-170	7/2/2003	1207.60	24.00	1183.60
DM-20-170	10/6/2003	1207.60	24.60	1183.00
DM-20-170	4/2/2004	1207.60	25.60	1182.00
DM-20-170	10/11/2004	1207.60	26.84	1180.76
DM-20-170	4/5/2005	1207.60	25.62	1181.98
DM-20-170	10/4/2005	1207.60	25.00	1182.60
DM-20-170	4/4/2006	1207.60	26.35	1181.25
DM-20-170	10/9/2006	1207.60	25.51	1182.09
DM-20-170	4/3/2007	1207.60	27.05	1180.55
DM-20-170	10/2/2007	1207.60	28.01	1179.59
DM-20-170	4/2/2008	1207.60	27.09	1180.51
DM-20-170	10/2/2008	1207.60	26.17	1181.43
DM-20-170	4/6/2009	1207.60	27.31	1180.29
DM-20-170	10/2/2009	1207.60	27.43	1180.17
DM-20-170	4/2/2010	1207.60	27.58	1180.02
DM-20-170	10/4/2010	1207.60	27.39	1180.21
DM-20-170	4/4/2011	1207.60	28.32	1179.28
DM-20-170	10/4/2011	1207.60	28.77	1178.83
DM-20-170	4/5/2012	1207.60	29.53	1178.07
DM-20-170	10/2/2012	1207.60	29.49	1178.11
DM-20-170	4/2/2013	1207.60	30.05	1177.55
DM-20-170	10/2/2013	1207.60	29.72	1177.88
DM-20-170	4/2/2014	1207.60	30.36	1177.24
DM-20-170	10/13/2014	1207.60	29.03	1178.57
DM-20-170	4/2/2015	1207.60	29.44	1178.16
DM-20-170	10/15/2015	1207.60	29.62	1177.98
DM-20-170	4/12/2016	1207.60	30.63	1176.97
DM-20-170	10/4/2016	1207.60	30.77	1176.83
DM-20-200	5/18/1993	1207.60	11.02	1196.58
DM-20-200	5/28/1993	1207.60	10.68	1196.92
DM-20-200	6/14/1993	1207.60	11.23	1196.37
DM-20-200	7/14/1993	1207.60	11.70	1195.90
DM-20-200	9/29/1993	1207.60	11.86	1195.74
DM-20-200	1/3/1994	1207.60	9.65	1197.95
DM-20-200	4/4/1994	1207.60	10.78	1196.82
DM-20-200	6/16/1994	1207.60	11.55	1196.05
DM-20-200	9/23/1994	1207.60	12.77	1194.83
DM-20-200	11/30/1994	1207.60	11.45	1196.15
DM-20-200	12/20/1994	1207.60	11.22	1196.38

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-200	3/13/1995	1207.60	11.79	1195.81
DM-20-200	3/27/1995	1207.60	11.46	1196.14
DM-20-200	5/24/1995	1207.60	11.94	1195.66
DM-20-200	6/15/1995	1207.60	11.60	1196.00
DM-20-200	6/30/1995	1207.60	12.18	1195.42
DM-20-200	9/15/1995	1207.60	11.66	1195.94
DM-20-200	12/16/1995	1207.60	14.54	1193.06
DM-20-200	1/17/1996	1207.60	14.49	1193.11
DM-20-200	3/5/1996	1207.60	14.45	1193.15
DM-20-200	3/26/1996	1207.60	14.41	1193.19
DM-20-200	6/5/1996	1207.60	12.81	1194.79
DM-20-200	6/21/1996	1207.60	12.84	1194.76
DM-20-200	9/5/1996	1207.60	12.90	1194.70
DM-20-200	9/17/1996	1207.60	15.14	1192.46
DM-20-200	12/6/1996	1207.60	13.51	1194.09
DM-20-200	3/5/1997	1207.60	13.61	1193.99
DM-20-200	3/17/1997	1207.60	15.77	1191.83
DM-20-200	6/20/1997	1207.60	16.71	1190.89
DM-20-200	7/21/1997	1207.60	16.88	1190.72
DM-20-200	9/4/1997	1207.60	16.88	1190.72
DM-20-200	10/2/1997	1207.60	16.50	1191.10
DM-20-200	1/5/1998	1207.60	16.78	1190.82
DM-20-200	3/4/1998	1207.60	16.22	1191.38
DM-20-200	3/13/1998	1207.60	16.13	1191.47
DM-20-200	7/24/1998	1207.60	16.64	1190.96
DM-20-200	9/1/1998	1207.60	16.75	1190.85
DM-20-200	12/4/1998	1207.60	16.01	1191.59
DM-20-200	3/15/1999	1207.60	16.73	1190.87
DM-20-200	6/17/1999	1207.60	17.31	1190.29
DM-20-200	9/2/1999	1207.60	17.33	1190.27
DM-20-200	1/28/2000	1207.60	17.89	1189.71
DM-20-200	3/1/2000	1207.60	18.20	1189.40
DM-20-200	6/8/2000	1207.60	18.68	1188.92
DM-20-200	10/3/2000	1207.60	18.89	1188.71
DM-20-200	12/21/2000	1207.60	17.85	1189.75
DM-20-200	3/21/2001	1207.60	17.97	1189.63
DM-20-200	6/8/2001	1207.60	18.25	1189.35
DM-20-200	10/25/2001	1207.60	19.63	1187.97
DM-20-200	1/9/2002	1207.60	18.78	1188.82
DM-20-200	4/2/2002	1207.60	20.04	1187.56
DM-20-200	7/8/2002	1207.60	21.38	1186.22
DM-20-200	10/1/2002	1207.60	21.57	1186.03
DM-20-200	1/7/2003	1207.60	21.37	1186.23
DM-20-200	4/3/2003	1207.60	21.53	1186.07
DM-20-200	10/6/2003	1207.60	23.91	1183.69
DM-20-200	4/2/2004	1207.60	24.82	1182.78
DM-20-200	10/11/2004	1207.60	26.04	1181.56
DM-20-200	4/5/2005	1207.60	24.88	1182.72
DM-20-200	10/4/2005	1207.60	24.35	1183.25
DM-20-200	4/4/2006	1207.60	25.55	1182.05
DM-20-200	10/9/2006	1207.60	24.94	1182.66
DM-20-200	4/3/2007	1207.60	26.32	1181.28
DM-20-200	10/2/2007	1207.60	27.42	1180.18
DM-20-200	10/2/2008	1207.60	25.57	1182.03
DM-20-200	4/6/2009	1207.60	26.52	1181.08
DM-20-200	10/2/2009	1207.60	26.78	1180.82
DM-20-200	4/2/2010	1207.60	26.88	1180.72
DM-20-200	10/4/2010	1207.60	26.75	1180.85
DM-20-200	4/4/2011	1207.60	27.57	1180.03
DM-20-200	10/4/2011	1207.60	28.23	1179.37
DM-20-200	4/5/2012	1207.60	28.81	1178.79
DM-20-200	10/2/2012	1207.60	22.04	1185.56
DM-20-200	4/2/2013	1207.60	29.32	1178.28
DM-20-200	10/2/2013	1207.60	29.11	1178.49
DM-20-200	4/2/2014	1207.60	29.71	1177.89
DM-20-200	10/13/2014	1207.60	28.53	1179.07
DM-20-200	4/2/2015	1207.60	28.22	1179.38
DM-20-200	10/15/2015	1207.60	29.01	1178.59
DM-20-200	4/12/2016	1207.60	30.02	1177.58
DM-20-200	10/4/2016	1207.60	30.18	1177.42
DM-20-235	5/18/1993	1207.60	10.87	1196.73
DM-20-235	5/28/1993	1207.60	11.03	1196.57
DM-20-235	6/14/1993	1207.60	11.35	1196.25
DM-20-235	7/14/1993	1207.60	11.61	1195.99
DM-20-235	9/29/1993	1207.60	11.48	1196.12
DM-20-235	1/3/1994	1207.60	10.17	1197.43
DM-20-235	4/4/1994	1207.60	11.30	1196.30
DM-20-235	6/16/1994	1207.60	12.02	1195.58
DM-20-235	9/23/1994	1207.60	13.26	1194.34
DM-20-235	12/20/1994	1207.60	11.83	1195.77
DM-20-235	3/1/1995	1207.60	10.64	1196.96
DM-20-235	3/13/1995	1207.60	12.46	1195.14
DM-20-235	3/27/1995	1207.60	12.12	1195.48
DM-20-235	5/24/1995	1207.60	12.49	1195.11
DM-20-235	6/15/1995	1207.60	12.28	1195.32
DM-20-235	6/30/1995	1207.60	12.76	1194.84
DM-20-235	9/15/1995	1207.60	12.32	1195.28
DM-20-235	12/16/1995	1207.60	14.58	1193.02
DM-20-235	1/17/1996	1207.60	14.91	1192.69
DM-20-235	3/5/1996	1207.60	14.84	1192.76
DM-20-235	3/26/1996	1207.60	14.80	1192.80
DM-20-235	6/5/1996	1207.60	13.29	1194.31
DM-20-235	6/21/1996	1207.60	13.30	1194.30
DM-20-235	9/5/1996	1207.60	13.36	1194.24
DM-20-235	9/17/1996	1207.60	15.52	1192.08
DM-20-235	12/6/1996	1207.60	13.98	1193.62
DM-20-235	3/5/1997	1207.60	14.67	1192.93
DM-20-235	3/17/1997	1207.60	16.53	1191.07
DM-20-235	6/20/1997	1207.60	17.31	1190.29
DM-20-235	7/21/1997	1207.60	17.44	1190.16
DM-20-235	9/4/1997	1207.60	17.37	1190.23
DM-20-235	10/2/1997	1207.60	17.04	1190.56
DM-20-235	1/5/1998	1207.60	17.49	1190.11
DM-20-235	3/4/1998	1207.60	16.90	1190.70
DM-20-235	3/13/1998	1207.60	16.86	1190.74
DM-20-235	7/24/1998	1207.60	17.32	1190.28

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-235	12/4/1998	1207.60	16.82	1190.78
DM-20-235	3/15/1999	1207.60	17.58	1190.02
DM-20-235	6/17/1999	1207.60	18.00	1189.60
DM-20-235	9/2/1999	1207.60	18.29	1189.31
DM-20-235	1/28/2000	1207.60	18.72	1188.88
DM-20-235	3/1/2000	1207.60	18.93	1188.67
DM-20-235	6/8/2000	1207.60	19.54	1188.06
DM-20-235	10/3/2000	1207.60	20.30	1187.30
DM-20-235	12/21/2000	1207.60	18.72	1188.88
DM-20-235	3/21/2001	1207.60	18.79	1188.81
DM-20-235	6/8/2001	1207.60	19.08	1188.52
DM-20-235	10/25/2001	1207.60	20.49	1187.11
DM-20-235	1/9/2002	1207.60	19.68	1187.92
DM-20-235	4/2/2002	1207.60	21.01	1186.59
DM-20-235	7/8/2002	1207.60	22.20	1185.40
DM-20-235	10/1/2002	1207.60	22.35	1185.25
DM-20-235	1/7/2003	1207.60	22.46	1185.14
DM-20-235	4/3/2003	1207.60	22.41	1185.19
DM-20-235	7/2/2003	1207.60	24.08	1183.52
DM-20-235	10/6/2003	1207.60	24.67	1182.93
DM-20-235	4/2/2004	1207.60	25.63	1181.97
DM-20-235	10/11/2004	1207.60	26.88	1180.72
DM-20-235	4/5/2005	1207.60	25.79	1181.81
DM-20-235	10/4/2005	1207.60	25.28	1182.32
DM-20-235	4/4/2006	1207.60	26.40	1181.20
DM-20-235	10/9/2006	1207.60	25.72	1181.88
DM-20-235	4/3/2007	1207.60	27.34	1180.26
DM-20-235	10/2/2007	1207.60	27.92	1179.68
DM-20-235	4/2/2008	1207.60	27.27	1180.33
DM-20-235	10/2/2008	1207.60	26.37	1181.23
DM-20-235	4/6/2009	1207.60	27.54	1180.06
DM-20-235	10/2/2009	1207.60	27.57	1180.03
DM-20-235	4/2/2010	1207.60	27.79	1179.81
DM-20-235	10/4/2010	1207.60	27.57	1180.03
DM-20-235	4/4/2011	1207.60	28.51	1179.09
DM-20-235	10/4/2011	1207.60	28.94	1178.66
DM-20-235	4/5/2012	1207.60	29.70	1177.90
DM-20-235	10/2/2012	1207.60	28.80	1178.80
DM-20-235	4/2/2013	1207.60	30.25	1177.35
DM-20-235	10/2/2013	1207.60	29.89	1177.71
DM-20-235	4/2/2014	1207.60	30.78	1176.82
DM-20-235	10/13/2014	1207.60	29.44	1178.16
DM-20-235	4/2/2015	1207.60	29.88	1177.72
DM-20-235	10/15/2015	1207.60	29.80	1177.80
DM-20-235	4/12/2016	1207.60	30.95	1176.65
DM-20-235	10/4/2016	1207.60	31.01	1176.59
DM-20-265	5/18/1993	1207.60	11.03	1196.57
DM-20-265	5/28/1993	1207.60	11.21	1196.39
DM-20-265	6/14/1993	1207.60	11.44	1196.16
DM-20-265	7/14/1993	1207.60	11.91	1195.69
DM-20-265	9/29/1993	1207.60	11.76	1195.84
DM-20-265	1/3/1994	1207.60	10.28	1197.32
DM-20-265	4/4/1994	1207.60	11.42	1196.18
DM-20-265	9/23/1994	1207.60	13.42	1194.18
DM-20-265	11/30/1994	1207.60	12.11	1195.49
DM-20-265	12/20/1994	1207.60	11.95	1195.65
DM-20-265	3/1/1995	1207.60	10.76	1196.84
DM-20-265	3/13/1995	1207.60	12.59	1195.01
DM-20-265	3/27/1995	1207.60	12.23	1195.37
DM-20-265	5/24/1995	1207.60	12.60	1195.00
DM-20-265	6/15/1995	1207.60	12.80	1194.80
DM-20-265	6/30/1995	1207.60	12.92	1194.68
DM-20-265	9/15/1995	1207.60	12.32	1195.28
DM-20-265	12/16/1995	1207.60	14.68	1192.92
DM-20-265	1/17/1996	1207.60	14.82	1192.78
DM-20-265	3/5/1996	1207.60	14.94	1192.66
DM-20-265	6/5/1996	1207.60	14.52	1193.08
DM-20-265	6/21/1996	1207.60	14.54	1193.06
DM-20-265	9/5/1996	1207.60	14.57	1193.03
DM-20-265	9/17/1996	1207.60	15.57	1192.03
DM-20-265	3/5/1997	1207.60	14.78	1192.82
DM-20-265	3/17/1997	1207.60	16.62	1190.98
DM-20-265	6/20/1997	1207.60	17.40	1190.20
DM-20-265	7/21/1997	1207.60	17.57	1190.03
DM-20-265	9/4/1997	1207.60	17.47	1190.13
DM-20-265	10/2/1997	1207.60	17.15	1190.45
DM-20-265	1/5/1998	1207.60	17.61	1189.99
DM-20-265	3/4/1998	1207.60	17.05	1190.55
DM-20-265	3/13/1998	1207.60	16.98	1190.62
DM-20-265	7/24/1998	1207.60	17.45	1190.15
DM-20-265	9/1/1998	1207.60	17.55	1190.05
DM-20-265	12/4/1998	1207.60	16.92	1190.68
DM-20-265	3/15/1999	1207.60	17.66	1189.94
DM-20-265	6/17/1999	1207.60	18.40	1189.20
DM-20-265	9/2/1999	1207.60	18.37	1189.23
DM-20-265	1/28/2000	1207.60	18.81	1188.79
DM-20-265	3/1/2000	1207.60	19.07	1188.53
DM-20-265	6/8/2000	1207.60	19.62	1187.98
DM-20-265	10/3/2000	1207.60	20.39	1187.21
DM-20-265	12/21/2000	1207.60	18.83	1188.77
DM-20-265	3/21/2001	1207.60	18.93	1188.67
DM-20-265	6/8/2001	1207.60	19.27	1188.33
DM-20-265	10/25/2001	1207.60	20.65	1186.95
DM-20-265	1/9/2002	1207.60	19.85	1187.75
DM-20-265	4/2/2002	1207.60	21.20	1186.40
DM-20-265	7/8/2002	1207.60	22.30	1185.30
DM-20-265	10/1/2002	1207.60	22.45	1185.15
DM-20-265	1/7/2003	1207.60	22.59	1185.01
DM-20-265	4/3/2003	1207.60	22.58	1185.02
DM-20-265	7/2/2003	1207.60	24.21	1183.39
DM-20-265	10/6/2003	1207.60	24.73	1182.87
DM-20-265	4/2/2004	1207.60	25.76	1181.84
DM-20-265	10/11/2004	1207.60	26.90	1180.70
DM-20-265	4/5/2005	1207.60	25.94	1181.66
DM-20-265	10/4/2005	1207.60	25.31	1182.29
DM-20-265	4/4/2006	1207.60	26.59	1181.01

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-20-265	4/3/2007	1207.60	27.31	1180.29
DM-20-265	10/2/2007	1207.60	28.25	1179.35
DM-20-265	4/2/2008	1207.60	27.42	1180.18
DM-20-265	10/2/2008	1207.60	26.49	1181.11
DM-20-265	4/6/2009	1207.60	27.64	1179.96
DM-20-265	10/2/2009	1207.60	27.67	1179.93
DM-20-265	4/2/2010	1207.60	27.89	1179.71
DM-20-265	10/4/2010	1207.60	27.69	1179.91
DM-20-265	4/4/2011	1207.60	26.61	1180.99
DM-20-265	10/4/2011	1207.60	29.09	1178.51
DM-20-265	4/5/2012	1207.60	29.85	1177.75
DM-20-265	10/2/2012	1207.60	26.07	1181.53
DM-20-265	4/2/2013	1207.60	30.37	1177.23
DM-20-265	10/2/2013	1207.60	30.05	1177.55
DM-20-265	4/2/2014	1207.60	30.70	1176.90
DM-20-265	10/13/2014	1207.60	29.59	1178.01
DM-20-265	4/2/2015	1207.60	29.99	1177.61
DM-20-265	10/15/2015	1207.60	29.93	1177.67
DM-20-265	4/12/2016	1207.60	31.06	1176.54
DM-20-265	10/4/2016	1207.60	31.10	1176.50
DM-21	5/10/1995	1172.66	22.57	1150.09
DM-21	9/25/1995	1172.66	22.19	1150.47
DM-21	10/2/1995	1172.66	22.30	1150.36
DM-21	12/12/1995	1172.66	22.17	1150.49
DM-21	1/3/1996	1172.66	22.68	1149.98
DM-21	3/5/1996	1172.66	23.30	1149.36
DM-21	3/15/1996	1172.66	23.30	1149.36
DM-21	6/11/1996	1172.66	24.30	1148.36
DM-21	9/4/1996	1172.66	24.58	1148.08
DM-21	3/4/1997	1172.66	24.86	1147.80
DM-21	6/23/1997	1172.66	25.34	1147.32
DM-21	9/5/1997	1172.66	25.42	1147.24
DM-21	12/29/1997	1172.66	24.96	1147.70
DM-21	3/3/1998	1172.66	25.74	1146.92
DM-21	6/11/1998	1172.66	25.33	1147.33
DM-21	9/2/1998	1172.66	25.58	1147.08
DM-21	12/30/1998	1172.66	25.12	1147.54
DM-21	3/30/1999	1172.66	27.00	1145.66
DM-21	6/16/1999	1172.66	28.61	1144.05
DM-21	9/8/1999	1172.66	29.78	1142.88
DM-21	1/5/2000	1172.66	28.67	1143.99
DM-21	2/28/2000	1172.66	29.62	1143.04
DM-21	6/7/2000	1172.66	30.10	1142.56
DM-21	9/27/2000	1172.66	33.63	1139.03
DM-21	12/20/2000	1172.66	31.37	1141.29
DM-21	3/20/2001	1172.66	31.04	1141.62
DM-21	6/6/2001	1172.66	33.67	1138.99
DM-21	10/23/2001	1172.66	33.44	1139.22
DM-21	1/7/2002	1172.66	32.22	1140.44
DM-21	4/1/2002	1172.66	33.02	1139.64
DM-21	7/8/2002	1172.66	35.02	1137.64
DM-21	10/3/2002	1172.66	35.70	1136.96
DM-21	1/6/2003	1172.66	35.64	1137.02

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-21	7/1/2003	1172.66	36.25	1136.41
DM-21	10/3/2003	1172.66	38.29	1134.37
DM-21	4/1/2004	1172.66	39.60	1133.06
DM-21	10/1/2004	1172.66	39.60	1133.06
DM-21	4/4/2005	1172.66	39.44	1133.22
DM-21	4/8/2005	1172.66	39.43	1133.23
DM-21	10/3/2005	1172.66	38.14	1134.52
DM-21	4/5/2006	1172.66	38.91	1133.75
DM-21	10/4/2006	1172.66	37.78	1134.88
DM-21	4/2/2007	1172.66	39.67	1132.99
DM-21	10/1/2007	1172.66	40.12	1132.54
DM-21	4/1/2008	1172.66	39.97	1132.69
DM-21	10/1/2008	1172.66	38.75	1133.91
DM-21	4/1/2009	1172.66	39.55	1133.11
DM-21	10/1/2009	1172.66	39.31	1133.35
DM-21	4/1/2010	1172.66	40.09	1132.57
DM-21	10/1/2010	1172.66	39.23	1133.43
DM-21	10/11/2010	1172.66	39.05	1133.61
DM-21	4/1/2011	1172.66	40.02	1132.64
DM-21	10/3/2011	1172.66	39.89	1132.77
DM-21	4/4/2012	1172.66	40.66	1132.00
DM-21	10/1/2012	1172.66	40.33	1132.33
DM-21	4/1/2013	1172.66	41.22	1131.44
DM-21	10/1/2013	1172.66	41.15	1131.51
DM-21	4/1/2014	1172.66	41.93	1130.73
DM-21	10/10/2014	1172.66	41.34	1131.32
DM-21	4/1/2015	1172.66	42.42	1130.24
DM-21	10/14/2015	1172.66	42.24	1130.42
DM-21	4/11/2016	1172.66	43.31	1129.35
DM-21	10/3/2016	1172.66	42.79	1129.87
DM-22-018	6/10/1993	1233.15	13.09	1220.06
DM-22-018	7/16/1993	1233.15	14.77	1218.38
DM-22-018	9/27/1993	1233.15	14.59	1218.56
DM-22-018	3/29/1994	1233.15	12.93	1220.22
DM-22-018	6/16/1994	1233.15	14.27	1218.88
DM-22-018	9/29/1994	1233.15	13.51	1219.64
DM-22-018	11/30/1994	1233.15	13.66	1219.49
DM-22-018	12/21/1994	1233.15	13.29	1219.86
DM-22-018	3/1/1995	1233.15	13.25	1219.90
DM-22-018	3/13/1995	1233.15	13.34	1219.81
DM-22-018	3/27/1995	1233.15	12.65	1220.50
DM-22-018	5/24/1995	1233.15	13.62	1219.53
DM-22-018	6/15/1995	1233.15	13.80	1219.35
DM-22-018	1/17/1996	1233.15	13.26	1219.89
DM-22-018	3/5/1996	1233.15	13.34	1219.81
DM-22-018	3/26/1996	1233.15	13.48	1219.67
DM-22-018	6/5/1996	1233.15	13.93	1219.22
DM-22-018	6/21/1996	1233.15	13.98	1219.17
DM-22-018	9/5/1996	1233.15	14.00	1219.15
DM-22-018	9/16/1996	1233.15	13.81	1219.34
DM-22-018	12/8/1996	1233.15	14.28	1218.87
DM-22-018	12/23/1996	1233.15	14.28	1218.87
DM-22-018	3/4/1997	1233.15	13.70	1219.45

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-018	7/21/1997	1233.15	14.29	1218.86
DM-22-018	9/4/1997	1233.15	13.93	1219.22
DM-22-018	10/3/1997	1233.15	13.57	1219.58
DM-22-018	1/5/1998	1233.15	13.49	1219.66
DM-22-018	3/11/1998	1233.15	12.78	1220.37
DM-22-018	6/12/1998	1233.15	12.99	1220.16
DM-22-018	9/3/1998	1233.15	13.33	1219.82
DM-22-018	12/4/1998	1233.15	Dry	Dry
DM-22-018	3/11/1999	1233.15	14.90	1218.25
DM-22-018	6/17/1999	1233.15	14.16	1218.99
DM-22-018	9/2/1999	1233.15	12.65	1220.50
DM-22-018	3/12/2000	1233.15	14.76	1218.39
DM-22-018	6/8/2000	1233.15	15.16	1217.99
DM-22-018	10/3/2000	1233.15	14.34	1218.81
DM-22-018	12/21/2000	1233.15	13.07	1220.08
DM-22-018	3/22/2001	1233.15	13.35	1219.80
DM-22-018	6/8/2001	1233.15	13.42	1219.73
DM-22-018	10/25/2001	1233.15	14.12	1219.03
DM-22-018	1/9/2002	1233.15	13.91	1219.24
DM-22-018	4/2/2002	1233.15	14.48	1218.67
DM-22-018	7/8/2002	1233.15	14.97	1218.18
DM-22-018	10/1/2002	1233.15	14.75	1218.40
DM-22-018	1/7/2003	1233.15	14.85	1218.30
DM-22-018	4/4/2003	1233.15	14.65	1218.50
DM-22-018	10/7/2003	1233.15	15.53	1217.62
DM-22-018	4/2/2004	1233.15	Dry	Dry
DM-22-018	10/12/2004	1233.15	16.91	1216.24
DM-22-018	4/5/2005	1233.15	17.20	1215.95
DM-22-018	10/4/2005	1233.15	16.16	1216.99
DM-22-018	4/4/2006	1233.15	Dry	Dry
DM-22-018	10/9/2006	1233.15	17.30	1215.85
DM-22-018	4/3/2007	1233.15	Dry	Dry
DM-22-018	10/3/2007	1233.15	17.39	1215.76
DM-22-018	4/2/2008	1233.15	17.16	1215.99
DM-22-018	10/2/2008	1233.15	Dry	Dry
DM-22-018	4/6/2009	1233.15	17.12	1216.03
DM-22-018	10/1/2009	1233.15	Dry	Dry
DM-22-018	4/2/2010	1233.15	Dry	Dry
DM-22-018	10/4/2010	1233.15	Dry	Dry
DM-22-018	4/4/2011	1233.15	Dry	Dry
DM-22-018	10/5/2011	1233.15	Dry	Dry
DM-22-018	4/5/2012	1233.15	Dry	Dry
DM-22-018	10/2/2012	1233.15	Dry	Dry
DM-22-018	4/2/2013	1233.15	Dry	Dry
DM-22-018	10/3/2013	1233.15	Dry	Dry
DM-22-018	4/1/2014	1233.15	Dry	Dry
DM-22-018	10/14/2014	1233.15	Dry	Dry
DM-22-018	4/2/2015	1233.15	Dry	Dry
DM-22-018	10/15/2015	1233.15	Dry	Dry
DM-22-045	6/10/1993	1233.15	11.89	1221.26
DM-22-045	6/28/1993	1233.15	12.88	1220.27
DM-22-045	7/16/1993	1233.15	12.42	1220.73
DM-22-045	9/27/1993	1233.15	12.88	1220.27

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-045	3/29/1994	1233.15	12.97	1220.18
DM-22-045	6/16/1994	1233.15	13.36	1219.79
DM-22-045	9/29/1994	1233.15	13.45	1219.70
DM-22-045	11/30/1994	1233.15	13.17	1219.98
DM-22-045	12/21/1994	1233.15	12.93	1220.22
DM-22-045	3/1/1995	1233.15	12.82	1220.33
DM-22-045	3/13/1995	1233.15	12.73	1220.42
DM-22-045	3/27/1995	1233.15	12.94	1220.21
DM-22-045	5/24/1995	1233.15	13.12	1220.03
DM-22-045	6/15/1995	1233.15	13.46	1219.69
DM-22-045	6/29/1995	1233.15	13.68	1219.47
DM-22-045	9/14/1995	1233.15	12.72	1220.43
DM-22-045	10/4/1995	1233.15	14.01	1219.14
DM-22-045	1/17/1996	1233.15	13.51	1219.64
DM-22-045	3/5/1996	1233.15	13.40	1219.75
DM-22-045	3/26/1996	1233.15	13.48	1219.67
DM-22-045	6/5/1996	1233.15	14.15	1219.00
DM-22-045	6/21/1996	1233.15	14.18	1218.97
DM-22-045	9/5/1996	1233.15	14.20	1218.95
DM-22-045	9/16/1996	1233.15	13.73	1219.42
DM-22-045	12/8/1996	1233.15	14.37	1218.78
DM-22-045	12/23/1996	1233.15	14.37	1218.78
DM-22-045	3/4/1997	1233.15	13.71	1219.44
DM-22-045	6/19/1997	1233.15	14.19	1218.96
DM-22-045	9/4/1997	1233.15	13.88	1219.27
DM-22-045	10/3/1997	1233.15	13.57	1219.58
DM-22-045	1/5/1998	1233.15	13.49	1219.66
DM-22-045	3/11/1998	1233.15	12.73	1220.42
DM-22-045	6/12/1998	1233.15	13.12	1220.03
DM-22-045	9/3/1998	1233.15	13.33	1219.82
DM-22-045	12/4/1998	1233.15	12.60	1220.55
DM-22-045	3/11/1999	1233.15	14.81	1218.34
DM-22-045	6/17/1999	1233.15	14.10	1219.05
DM-22-045	9/2/1999	1233.15	12.64	1220.51
DM-22-045	3/12/2000	1233.15	14.73	1218.42
DM-22-045	6/8/2000	1233.15	15.24	1217.91
DM-22-045	12/21/2000	1233.15	13.11	1220.04
DM-22-045	3/22/2001	1233.15	13.26	1219.89
DM-22-045	6/8/2001	1233.15	13.49	1219.66
DM-22-045	10/25/2001	1233.15	14.07	1219.08
DM-22-045	1/9/2002	1233.15	13.79	1219.36
DM-22-045	4/2/2002	1233.15	14.45	1218.70
DM-22-045	7/8/2002	1233.15	15.02	1218.13
DM-22-045	10/1/2002	1233.15	14.65	1218.50
DM-22-045	1/7/2003	1233.15	14.87	1218.28
DM-22-045	4/4/2003	1233.15	14.59	1218.56
DM-22-045	7/2/2003	1233.15	15.09	1218.06
DM-22-045	10/7/2003	1233.15	15.52	1217.63
DM-22-045	4/2/2004	1233.15	15.94	1217.21
DM-22-045	10/12/2004	1233.15	16.91	1216.24
DM-22-045	4/5/2005	1233.15	15.68	1217.47
DM-22-045	10/4/2005	1233.15	16.17	1216.98
DM-22-045	4/4/2006	1233.15	16.94	1216.21

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-045	4/3/2007	1233.15	17.59	1215.56
DM-22-045	10/3/2007	1233.15	17.71	1215.44
DM-22-045	4/2/2008	1233.15	17.04	1216.11
DM-22-045	10/2/2008	1233.15	16.87	1216.28
DM-22-045	4/6/2009	1233.15	17.09	1216.06
DM-22-045	10/2/2009	1233.15	17.90	1215.25
DM-22-045	4/2/2010	1233.15	17.41	1215.74
DM-22-045	10/4/2010	1233.15	17.92	1215.23
DM-22-045	4/4/2011	1233.15	18.15	1215.00
DM-22-045	10/5/2011	1233.15	18.40	1214.75
DM-22-045	4/5/2012	1233.15	19.04	1214.11
DM-22-045	10/2/2012	1233.15	18.85	1214.30
DM-22-045	4/2/2013	1233.15	19.26	1213.89
DM-22-045	10/3/2013	1233.15	19.57	1213.58
DM-22-045	4/1/2014	1233.15	20.00	1213.15
DM-22-045	10/14/2014	1233.15	18.84	1214.31
DM-22-045	4/2/2015	1233.15	19.45	1213.70
DM-22-045	10/15/2015	1233.15	19.93	1213.22
DM-22-045	4/13/2016	1233.15	20.54	1212.61
DM-22-045	10/4/2016	1233.15	20.24	1212.91
DM-22-081	6/10/1993	1233.15	11.95	1221.20
DM-22-081	6/28/1993	1233.15	12.84	1220.31
DM-22-081	7/16/1993	1233.15	12.38	1220.77
DM-22-081	9/27/1993	1233.15	12.84	1220.31
DM-22-081	12/30/1993	1233.15	12.13	1221.02
DM-22-081	3/29/1994	1233.15	12.97	1220.18
DM-22-081	6/16/1994	1233.15	13.32	1219.83
DM-22-081	9/29/1994	1233.15	13.33	1219.82
DM-22-081	11/30/1994	1233.15	13.17	1219.98
DM-22-081	12/21/1994	1233.15	12.92	1220.23
DM-22-081	3/1/1995	1233.15	12.78	1220.37
DM-22-081	3/13/1995	1233.15	12.62	1220.53
DM-22-081	3/27/1995	1233.15	0.77	1232.38
DM-22-081	5/24/1995	1233.15	13.14	1220.01
DM-22-081	6/15/1995	1233.15	13.42	1219.73
DM-22-081	6/29/1995	1233.15	13.78	1219.37
DM-22-081	9/14/1995	1233.15	12.69	1220.46
DM-22-081	10/4/1995	1233.15	13.96	1219.19
DM-22-081	1/17/1996	1233.15	13.48	1219.67
DM-22-081	3/26/1996	1233.15	13.51	1219.64
DM-22-081	6/5/1996	1233.15	14.11	1219.04
DM-22-081	6/21/1996	1233.15	14.18	1218.97
DM-22-081	9/5/1996	1233.15	14.18	1218.97
DM-22-081	9/16/1996	1233.15	13.80	1219.35
DM-22-081	12/8/1996	1233.15	14.32	1218.83
DM-22-081	12/23/1996	1233.15	14.32	1218.83
DM-22-081	3/4/1997	1233.15	13.79	1219.36
DM-22-081	6/19/1997	1233.15	14.17	1218.98
DM-22-081	7/21/1997	1233.15	14.26	1218.89
DM-22-081	9/4/1997	1233.15	13.88	1219.27
DM-22-081	10/3/1997	1233.15	13.56	1219.59
DM-22-081	1/5/1998	1233.15	13.49	1219.66
DM-22-081	3/11/1998	1233.15	12.73	1220.42
DM-22-081	9/3/1998	1233.15	13.31	1219.84
DM-22-081	12/4/1998	1233.15	12.58	1220.57
DM-22-081	3/11/1999	1233.15	14.79	1218.36
DM-22-081	6/17/1999	1233.15	14.07	1219.08
DM-22-081	9/2/1999	1233.15	12.64	1220.51
DM-22-081	3/12/2000	1233.15	14.68	1218.47
DM-22-081	6/8/2000	1233.15	15.19	1217.96
DM-22-081	10/3/2000	1233.15	14.33	1218.82
DM-22-081	12/21/2000	1233.15	13.10	1220.05
DM-22-081	3/22/2001	1233.15	13.78	1219.37
DM-22-081	6/8/2001	1233.15	13.51	1219.64
DM-22-081	10/25/2001	1233.15	14.05	1219.10
DM-22-081	1/9/2002	1233.15	13.79	1219.36
DM-22-081	4/2/2002	1233.15	14.40	1218.75
DM-22-081	7/8/2002	1233.15	14.95	1218.20
DM-22-081	10/1/2002	1233.15	14.63	1218.52
DM-22-081	1/7/2003	1233.15	14.82	1218.33
DM-22-081	4/4/2003	1233.15	14.57	1218.58
DM-22-081	7/2/2003	1233.15	15.62	1217.53
DM-22-081	10/7/2003	1233.15	15.51	1217.64
DM-22-081	4/2/2004	1233.15	15.92	1217.23
DM-22-081	10/12/2004	1233.15	16.92	1216.23
DM-22-081	4/5/2005	1233.15	15.65	1217.50
DM-22-081	10/4/2005	1233.15	16.08	1217.07
DM-22-081	4/4/2006	1233.15	16.95	1216.20
DM-22-081	10/9/2006	1233.15	17.21	1215.94
DM-22-081	4/3/2007	1233.15	17.51	1215.64
DM-22-081	10/3/2007	1233.15	17.68	1215.47
DM-22-081	4/2/2008	1233.15	17.04	1216.11
DM-22-081	10/2/2008	1233.15	16.85	1216.30
DM-22-081	4/6/2009	1233.15	17.06	1216.09
DM-22-081	10/2/2009	1233.15	17.88	1215.27
DM-22-081	4/2/2010	1233.15	17.39	1215.76
DM-22-081	10/4/2010	1233.15	17.92	1215.23
DM-22-081	4/4/2011	1233.15	18.13	1215.02
DM-22-081	10/5/2011	1233.15	18.34	1214.81
DM-22-081	4/5/2012	1233.15	19.01	1214.14
DM-22-081	10/2/2012	1233.15	18.85	1214.30
DM-22-081	4/2/2013	1233.15	19.27	1213.88
DM-22-081	10/3/2013	1233.15	19.58	1213.57
DM-22-081	4/1/2014	1233.15	19.97	1213.18
DM-22-081	10/14/2014	1233.15	18.80	1214.35
DM-22-081	4/2/2015	1233.15	18.89	1214.26
DM-22-081	10/15/2015	1233.15	19.87	1213.28
DM-22-081	4/13/2016	1233.15	20.53	1212.62
DM-22-081	10/4/2016	1233.15	20.32	1212.83
DM-22-098	6/10/1993	1233.15	11.91	1221.24
DM-22-098	6/28/1993	1233.15	12.76	1220.39
DM-22-098	7/16/1993	1233.15	12.30	1220.85
DM-22-098	9/27/1993	1233.15	12.81	1220.34
DM-22-098	12/30/1993	1233.15	12.18	1220.97
DM-22-098	3/29/1994	1233.15	12.95	1220.20
DM-22-098	6/16/1994	1233.15	13.33	1219.82

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-098	11/30/1994	1233.15	13.12	1220.03
DM-22-098	3/1/1995	1233.15	12.72	1220.43
DM-22-098	3/13/1995	1233.15	12.71	1220.44
DM-22-098	3/27/1995	1233.15	12.92	1220.23
DM-22-098	5/24/1995	1233.15	13.11	1220.04
DM-22-098	6/15/1995	1233.15	13.41	1219.74
DM-22-098	6/29/1995	1233.15	13.72	1219.43
DM-22-098	9/14/1995	1233.15	12.70	1220.45
DM-22-098	10/4/1995	1233.15	13.89	1219.26
DM-22-098	1/17/1996	1233.15	13.41	1219.74
DM-22-098	3/5/1996	1233.15	13.43	1219.72
DM-22-098	3/26/1996	1233.15	13.52	1219.63
DM-22-098	6/5/1996	1233.15	14.73	1218.42
DM-22-098	6/21/1996	1233.15	14.16	1218.99
DM-22-098	9/5/1996	1233.15	14.16	1218.99
DM-22-098	9/16/1996	1233.15	13.81	1219.34
DM-22-098	12/8/1996	1233.15	14.33	1218.82
DM-22-098	12/23/1996	1233.15	14.33	1218.82
DM-22-098	3/4/1997	1233.15	13.73	1219.42
DM-22-098	9/4/1997	1233.15	13.88	1219.27
DM-22-098	10/3/1997	1233.15	13.57	1219.58
DM-22-098	1/5/1998	1233.15	13.52	1219.63
DM-22-098	6/12/1998	1233.15	13.07	1220.08
DM-22-098	9/3/1998	1233.15	13.29	1219.86
DM-22-098	12/4/1998	1233.15	12.56	1220.59
DM-22-098	3/11/1999	1233.15	14.80	1218.35
DM-22-098	6/17/1999	1233.15	14.07	1219.08
DM-22-098	9/2/1999	1233.15	12.64	1220.51
DM-22-098	3/12/2000	1233.15	14.67	1218.48
DM-22-098	6/8/2000	1233.15	15.22	1217.93
DM-22-098	10/3/2000	1233.15	14.30	1218.85
DM-22-098	12/21/2000	1233.15	13.12	1220.03
DM-22-098	3/22/2001	1233.15	13.62	1219.53
DM-22-098	6/8/2001	1233.15	13.52	1219.63
DM-22-098	10/25/2001	1233.15	14.05	1219.10
DM-22-098	1/9/2002	1233.15	13.80	1219.35
DM-22-098	4/2/2002	1233.15	14.42	1218.73
DM-22-098	7/8/2002	1233.15	15.03	1218.12
DM-22-098	10/1/2002	1233.15	14.68	1218.47
DM-22-098	1/7/2003	1233.15	14.78	1218.37
DM-22-098	4/4/2003	1233.15	14.50	1218.65
DM-22-098	7/2/2003	1233.15	15.59	1217.56
DM-22-098	10/7/2003	1233.15	15.51	1217.64
DM-22-098	4/2/2004	1233.15	15.91	1217.24
DM-22-098	10/12/2004	1233.15	16.91	1216.24
DM-22-098	4/5/2005	1233.15	15.62	1217.53
DM-22-098	10/4/2005	1233.15	16.11	1217.04
DM-22-098	4/4/2006	1233.15	16.93	1216.22
DM-22-098	10/9/2006	1233.15	17.20	1215.95
DM-22-098	4/3/2007	1233.15	17.53	1215.62
DM-22-098	10/3/2007	1233.15	17.66	1215.49
DM-22-098	4/2/2008	1233.15	17.04	1216.11
DM-22-098	10/2/2008	1233.15	16.84	1216.31
DM-22-098	10/2/2009	1233.15	17.86	1215.29
DM-22-098	4/2/2010	1233.15	17.36	1215.79
DM-22-098	10/4/2010	1233.15	17.95	1215.20
DM-22-098	4/4/2011	1233.15	18.13	1215.02
DM-22-098	10/5/2011	1233.15	18.37	1214.78
DM-22-098	4/5/2012	1233.15	19.02	1214.13
DM-22-098	10/2/2012	1233.15	18.86	1214.29
DM-22-098	4/2/2013	1233.15	19.29	1213.86
DM-22-098	10/3/2013	1233.15	19.56	1213.59
DM-22-098	4/1/2014	1233.15	19.99	1213.16
DM-22-098	10/14/2014	1233.15	18.83	1214.32
DM-22-098	4/2/2015	1233.15	Dry	Dry
DM-22-098	10/15/2015	1233.15	19.87	1213.28
DM-22-098	4/13/2016	1233.15	20.51	1212.64
DM-22-098	10/4/2016	1233.15	21.41	1211.74
DM-22-138	6/10/1993	1233.15	12.36	1220.79
DM-22-138	6/28/1993	1233.15	13.27	1219.88
DM-22-138	7/16/1993	1233.15	12.81	1220.34
DM-22-138	9/27/1993	1233.15	13.21	1219.94
DM-22-138	12/30/1993	1233.15	12.61	1220.54
DM-22-138	3/29/1994	1233.15	13.37	1219.78
DM-22-138	6/16/1994	1233.15	13.75	1219.40
DM-22-138	9/29/1994	1233.15	13.92	1219.23
DM-22-138	11/30/1994	1233.15	13.32	1219.83
DM-22-138	12/21/1994	1233.15	13.17	1219.98
DM-22-138	3/1/1995	1233.15	13.16	1219.99
DM-22-138	3/13/1995	1233.15	13.07	1220.08
DM-22-138	3/27/1995	1233.15	13.30	1219.85
DM-22-138	5/24/1995	1233.15	14.63	1218.52
DM-22-138	6/15/1995	1233.15	13.77	1219.38
DM-22-138	6/29/1995	1233.15	14.10	1219.05
DM-22-138	9/14/1995	1233.15	12.53	1220.62
DM-22-138	10/4/1995	1233.15	14.30	1218.85
DM-22-138	1/17/1996	1233.15	10.41	1222.74
DM-22-138	3/5/1996	1233.15	13.60	1219.55
DM-22-138	3/26/1996	1233.15	14.05	1219.10
DM-22-138	6/5/1996	1233.15	14.47	1218.68
DM-22-138	6/21/1996	1233.15	14.46	1218.69
DM-22-138	9/5/1996	1233.15	14.44	1218.71
DM-22-138	9/16/1996	1233.15	14.11	1219.04
DM-22-138	12/8/1996	1233.15	14.73	1218.42
DM-22-138	12/23/1996	1233.15	14.73	1218.42
DM-22-138	3/4/1997	1233.15	14.19	1218.96
DM-22-138	6/19/1997	1233.15	14.58	1218.57
DM-22-138	7/21/1997	1233.15	14.68	1218.47
DM-22-138	9/4/1997	1233.15	14.23	1218.92
DM-22-138	10/3/1997	1233.15	13.92	1219.23
DM-22-138	1/5/1998	1233.15	13.91	1219.24
DM-22-138	3/11/1998	1233.15	13.12	1220.03
DM-22-138	6/12/1998	1233.15	13.46	1219.69
DM-22-138	9/3/1998	1233.15	13.62	1219.53
DM-22-138	12/4/1998	1233.15	13.02	1220.13
DM-22-138	3/11/1999	1233.15	15.16	1217.99

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-138	9/2/1999	1233.15	12.97	1220.18
DM-22-138	3/12/2000	1233.15	15.12	1218.03
DM-22-138	6/8/2000	1233.15	15.52	1217.63
DM-22-138	10/3/2000	1233.15	14.67	1218.48
DM-22-138	12/21/2000	1233.15	13.50	1219.65
DM-22-138	3/22/2001	1233.15	14.32	1218.83
DM-22-138	6/8/2001	1233.15	13.90	1219.25
DM-22-138	10/25/2001	1233.15	14.43	1218.72
DM-22-138	1/9/2002	1233.15	14.20	1218.95
DM-22-138	4/2/2002	1233.15	14.85	1218.30
DM-22-138	7/8/2002	1233.15	15.22	1217.93
DM-22-138	10/1/2002	1233.15	14.94	1218.21
DM-22-138	1/7/2003	1233.15	15.23	1217.92
DM-22-138	4/4/2003	1233.15	14.99	1218.16
DM-22-138	7/2/2003	1233.15	15.09	1218.06
DM-22-138	10/7/2003	1233.15	15.91	1217.24
DM-22-138	4/2/2004	1233.15	16.30	1216.85
DM-22-138	10/12/2004	1233.15	17.31	1215.84
DM-22-138	4/5/2005	1233.15	16.08	1217.07
DM-22-138	10/4/2005	1233.15	16.41	1216.74
DM-22-138	4/4/2006	1233.15	17.28	1215.87
DM-22-138	10/9/2006	1233.15	17.49	1215.66
DM-22-138	4/3/2007	1233.15	17.90	1215.25
DM-22-138	10/3/2007	1233.15	18.00	1215.15
DM-22-138	4/2/2008	1233.15	14.14	1219.01
DM-22-138	10/2/2008	1233.15	17.20	1215.95
DM-22-138	4/6/2009	1233.15	17.45	1215.70
DM-22-138	10/2/2009	1233.15	18.18	1214.97
DM-22-138	4/2/2010	1233.15	17.79	1215.36
DM-22-138	10/4/2010	1233.15	18.26	1214.89
DM-22-138	4/4/2011	1233.15	18.52	1214.63
DM-22-138	10/5/2011	1233.15	18.66	1214.49
DM-22-138	4/5/2012	1233.15	19.38	1213.77
DM-22-138	10/2/2012	1233.15	19.13	1214.02
DM-22-138	4/2/2013	1233.15	19.60	1213.55
DM-22-138	10/3/2013	1233.15	19.83	1213.32
DM-22-138	4/1/2014	1233.15	20.26	1212.89
DM-22-138	10/14/2014	1233.15	19.09	1214.06
DM-22-138	4/2/2015	1233.15	19.48	1213.67
DM-22-138	10/15/2015	1233.15	20.15	1213.00
DM-22-138	4/13/2016	1233.15	20.84	1212.31
DM-22-138	10/4/2016	1233.15	20.63	1212.52
DM-22-175	6/28/1993	1233.15	13.51	1219.64
DM-22-175	7/16/1993	1233.15	13.05	1220.10
DM-22-175	9/27/1993	1233.15	13.48	1219.67
DM-22-175	12/30/1993	1233.15	12.84	1220.31
DM-22-175	3/29/1994	1233.15	13.60	1219.55
DM-22-175	6/16/1994	1233.15	13.87	1219.28
DM-22-175	9/29/1994	1233.15	14.04	1219.11
DM-22-175	11/30/1994	1233.15	16.68	1216.47
DM-22-175	12/21/1994	1233.15	13.44	1219.71
DM-22-175	3/1/1995	1233.15	13.39	1219.76
DM-22-175	3/13/1995	1233.15	13.35	1219.80

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-175	5/24/1995	1233.15	13.73	1219.42
DM-22-175	6/15/1995	1233.15	13.99	1219.16
DM-22-175	6/29/1995	1233.15	14.22	1218.93
DM-22-175	9/14/1995	1233.15	13.36	1219.79
DM-22-175	10/4/1995	1233.15	14.49	1218.66
DM-22-175	1/17/1996	1233.15	13.95	1219.20
DM-22-175	3/5/1996	1233.15	14.03	1219.12
DM-22-175	3/26/1996	1233.15	14.25	1218.90
DM-22-175	6/5/1996	1233.15	14.56	1218.59
DM-22-175	6/21/1996	1233.15	14.62	1218.53
DM-22-175	9/5/1996	1233.15	14.63	1218.52
DM-22-175	9/16/1996	1233.15	14.28	1218.87
DM-22-175	12/8/1996	1233.15	14.97	1218.18
DM-22-175	12/23/1996	1233.15	14.97	1218.18
DM-22-175	3/4/1997	1233.15	14.35	1218.80
DM-22-175	6/19/1997	1233.15	14.77	1218.38
DM-22-175	9/4/1997	1233.15	14.39	1218.76
DM-22-175	10/3/1997	1233.15	14.08	1219.07
DM-22-175	1/5/1998	1233.15	14.10	1219.05
DM-22-175	3/11/1998	1233.15	13.31	1219.84
DM-22-175	6/12/1998	1233.15	13.64	1219.51
DM-22-175	9/3/1998	1233.15	13.82	1219.33
DM-22-175	12/4/1998	1233.15	13.13	1220.02
DM-22-175	3/11/1999	1233.15	15.36	1217.79
DM-22-175	6/17/1999	1233.15	14.66	1218.49
DM-22-175	9/2/1999	1233.15	13.14	1220.01
DM-22-175	3/12/2000	1233.15	15.29	1217.86
DM-22-175	6/8/2000	1233.15	15.70	1217.45
DM-22-175	10/3/2000	1233.15	14.85	1218.30
DM-22-175	12/21/2000	1233.15	13.70	1219.45
DM-22-175	3/22/2001	1233.15	14.64	1218.51
DM-22-175	6/8/2001	1233.15	14.16	1218.99
DM-22-175	10/25/2001	1233.15	14.64	1218.51
DM-22-175	1/9/2002	1233.15	14.35	1218.80
DM-22-175	4/2/2002	1233.15	14.98	1218.17
DM-22-175	7/8/2002	1233.15	15.44	1217.71
DM-22-175	10/1/2002	1233.15	15.16	1217.99
DM-22-175	1/7/2003	1233.15	15.42	1217.73
DM-22-175	4/4/2003	1233.15	15.17	1217.98
DM-22-175	7/2/2003	1233.15	16.33	1216.82
DM-22-175	10/7/2003	1233.15	16.05	1217.10
DM-22-175	4/2/2004	1233.15	16.50	1216.65
DM-22-175	10/12/2004	1233.15	17.51	1215.64
DM-22-175	4/5/2005	1233.15	16.36	1216.79
DM-22-175	10/4/2005	1233.15	16.67	1216.48
DM-22-175	4/4/2006	1233.15	17.41	1215.74
DM-22-175	10/9/2006	1233.15	17.65	1215.50
DM-22-175	4/3/2007	1233.15	18.08	1215.07
DM-22-175	10/3/2007	1233.15	18.20	1214.95
DM-22-175	4/2/2008	1233.15	17.58	1215.57
DM-22-175	10/2/2008	1233.15	17.37	1215.78
DM-22-175	4/6/2009	1233.15	17.57	1215.58
DM-22-175	10/2/2009	1233.15	18.38	1214.77

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-175	10/4/2010	1233.15	18.44	1214.71
DM-22-175	4/4/2011	1233.15	18.68	1214.47
DM-22-175	10/5/2011	1233.15	18.77	1214.38
DM-22-175	4/5/2012	1233.15	19.52	1213.63
DM-22-175	10/2/2012	1233.15	19.24	1213.91
DM-22-175	4/2/2013	1233.15	19.68	1213.47
DM-22-175	10/3/2013	1233.15	19.93	1213.22
DM-22-175	4/1/2014	1233.15	19.92	1213.23
DM-22-175	10/14/2014	1233.15	19.08	1214.07
DM-22-175	4/2/2015	1233.15	19.53	1213.62
DM-22-175	10/15/2015	1233.15	20.22	1212.93
DM-22-175	4/13/2016	1233.15	20.90	1212.25
DM-22-175	10/4/2016	1233.15	20.42	1212.73
DM-22-220	6/10/1993	1233.15	15.47	1217.68
DM-22-220	6/28/1993	1233.15	13.66	1219.49
DM-22-220	7/16/1993	1233.15	13.89	1219.26
DM-22-220	9/27/1993	1233.15	13.77	1219.38
DM-22-220	12/30/1993	1233.15	13.09	1220.06
DM-22-220	3/29/1994	1233.15	13.94	1219.21
DM-22-220	6/16/1994	1233.15	14.21	1218.94
DM-22-220	9/29/1994	1233.15	14.56	1218.59
DM-22-220	11/30/1994	1233.15	14.10	1219.05
DM-22-220	12/21/1994	1233.15	11.69	1221.46
DM-22-220	3/1/1995	1233.15	13.74	1219.41
DM-22-220	3/13/1995	1233.15	13.86	1219.29
DM-22-220	3/27/1995	1233.15	13.90	1219.25
DM-22-220	5/24/1995	1233.15	14.26	1218.89
DM-22-220	6/15/1995	1233.15	14.28	1218.87
DM-22-220	6/29/1995	1233.15	14.58	1218.57
DM-22-220	9/14/1995	1233.15	13.79	1219.36
DM-22-220	10/4/1995	1233.15	14.91	1218.24
DM-22-220	1/17/1996	1233.15	14.31	1218.84
DM-22-220	3/26/1996	1233.15	14.47	1218.68
DM-22-220	6/5/1996	1233.15	15.19	1217.96
DM-22-220	6/21/1996	1233.15	15.13	1218.02
DM-22-220	9/5/1996	1233.15	15.15	1218.00
DM-22-220	9/16/1996	1233.15	14.82	1218.33
DM-22-220	12/8/1996	1233.15	15.52	1217.63
DM-22-220	12/23/1996	1233.15	15.45	1217.70
DM-22-220	3/4/1997	1233.15	14.84	1218.31
DM-22-220	6/19/1997	1233.15	15.37	1217.78
DM-22-220	7/21/1997	1233.15	15.03	1218.12
DM-22-220	9/4/1997	1233.15	14.89	1218.26
DM-22-220	10/3/1997	1233.15	15.53	1217.62
DM-22-220	1/5/1998	1233.15	14.57	1218.58
DM-22-220	3/11/1998	1233.15	14.01	1219.14
DM-22-220	6/12/1998	1233.15	14.15	1219.00
DM-22-220	9/3/1998	1233.15	14.15	1219.00
DM-22-220	12/4/1998	1233.15	13.47	1219.68
DM-22-220	3/11/1999	1233.15	15.96	1217.19
DM-22-220	6/17/1999	1233.15	15.35	1217.80
DM-22-220	9/2/1999	1233.15	13.76	1219.39
DM-22-220	3/12/2000	1233.15	16.05	1217.10
DM-22-220	10/3/2000	1233.15	15.40	1217.75
DM-22-220	12/21/2000	1233.15	14.36	1218.79
DM-22-220	3/22/2001	1233.15	15.06	1218.09
DM-22-220	6/8/2001	1233.15	14.78	1218.37
DM-22-220	10/25/2001	1233.15	15.20	1217.95
DM-22-220	1/9/2002	1233.15	14.89	1218.26
DM-22-220	4/2/2002	1233.15	15.65	1217.50
DM-22-220	7/8/2002	1233.15	16.11	1217.04
DM-22-220	10/1/2002	1233.15	16.05	1217.10
DM-22-220	1/7/2003	1233.15	16.03	1217.12
DM-22-220	4/4/2003	1233.15	15.74	1217.41
DM-22-220	7/2/2003	1233.15	16.80	1216.35
DM-22-220	10/7/2003	1233.15	16.67	1216.48
DM-22-220	4/2/2004	1233.15	17.01	1216.14
DM-22-220	10/12/2004	1233.15	18.12	1215.03
DM-22-220	4/5/2005	1233.15	16.87	1216.28
DM-22-220	10/4/2005	1233.15	17.38	1215.77
DM-22-220	4/4/2006	1233.15	17.96	1215.19
DM-22-220	10/9/2006	1233.15	18.25	1214.90
DM-22-220	4/3/2007	1233.15	18.72	1214.43
DM-22-220	10/3/2007	1233.15	18.81	1214.34
DM-22-220	4/2/2008	1233.15	18.14	1215.01
DM-22-220	10/2/2008	1233.15	17.92	1215.23
DM-22-220	4/6/2009	1233.15	18.19	1214.96
DM-22-220	10/2/2009	1233.15	18.96	1214.19
DM-22-220	4/2/2010	1233.15	18.29	1214.86
DM-22-220	10/4/2010	1233.15	18.86	1214.29
DM-22-220	4/4/2011	1233.15	19.01	1214.14
DM-22-220	10/5/2011	1233.15	19.06	1214.09
DM-22-220	4/5/2012	1233.15	19.72	1213.43
DM-22-220	10/2/2012	1233.15	19.59	1213.56
DM-22-220	4/2/2013	1233.15	19.78	1213.37
DM-22-220	10/3/2013	1233.15	20.28	1212.87
DM-22-220	4/1/2014	1233.15	20.27	1212.88
DM-22-220	10/14/2014	1233.15	19.56	1213.59
DM-22-220	4/2/2015	1233.15	19.58	1213.57
DM-22-220	10/15/2015	1233.15	20.49	1212.66
DM-22-220	4/13/2016	1233.15	21.09	1212.06
DM-22-220	10/4/2016	1233.15	20.80	1212.35
DM-22-265	6/10/1993	1233.15	15.48	1217.67
DM-22-265	6/28/1993	1233.15	13.59	1219.56
DM-22-265	7/16/1993	1233.15	13.87	1219.28
DM-22-265	9/27/1993	1233.15	13.77	1219.38
DM-22-265	12/30/1993	1233.15	13.13	1220.02
DM-22-265	3/29/1994	1233.15	13.95	1219.20
DM-22-265	6/16/1994	1233.15	14.26	1218.89
DM-22-265	9/29/1994	1233.15	14.64	1218.51
DM-22-265	11/30/1994	1233.15	14.12	1219.03
DM-22-265	12/21/1994	1233.15	13.80	1219.35
DM-22-265	3/1/1995	1233.15	13.70	1219.45
DM-22-265	3/13/1995	1233.15	13.85	1219.30
DM-22-265	3/27/1995	1233.15	13.91	1219.24
DM-22-265	5/24/1995	1233.15	14.22	1218.93

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-265	6/29/1995	1233.15	14.60	1218.55
DM-22-265	9/14/1995	1233.15	13.77	1219.38
DM-22-265	10/4/1995	1233.15	14.96	1218.19
DM-22-265	1/17/1996	1233.15	14.37	1218.78
DM-22-265	3/5/1996	1233.15	14.49	1218.66
DM-22-265	3/26/1996	1233.15	14.47	1218.68
DM-22-265	6/5/1996	1233.15	15.08	1218.07
DM-22-265	6/21/1996	1233.15	15.12	1218.03
DM-22-265	9/5/1996	1233.15	15.13	1218.02
DM-22-265	9/16/1996	1233.15	14.78	1218.37
DM-22-265	12/8/1996	1233.15	15.43	1217.72
DM-22-265	12/23/1996	1233.15	15.43	1217.72
DM-22-265	3/4/1997	1233.15	14.81	1218.34
DM-22-265	6/19/1997	1233.15	15.47	1217.68
DM-22-265	7/21/1997	1233.15	15.27	1217.88
DM-22-265	9/4/1997	1233.15	14.92	1218.23
DM-22-265	10/3/1997	1233.15	14.52	1218.63
DM-22-265	1/5/1998	1233.15	14.62	1218.53
DM-22-265	3/11/1998	1233.15	13.99	1219.16
DM-22-265	6/12/1998	1233.15	14.15	1219.00
DM-22-265	9/3/1998	1233.15	14.14	1219.01
DM-22-265	12/4/1998	1233.15	13.46	1219.69
DM-22-265	3/11/1999	1233.15	15.95	1217.20
DM-22-265	6/17/1999	1233.15	15.46	1217.69
DM-22-265	9/2/1999	1233.15	13.73	1219.42
DM-22-265	3/12/2000	1233.15	16.09	1217.06
DM-22-265	6/8/2000	1233.15	16.21	1216.94
DM-22-265	10/3/2000	1233.15	15.42	1217.73
DM-22-265	12/21/2000	1233.15	14.35	1218.80
DM-22-265	3/22/2001	1233.15	15.44	1217.71
DM-22-265	6/8/2001	1233.15	14.78	1218.37
DM-22-265	10/25/2001	1233.15	15.19	1217.96
DM-22-265	1/9/2002	1233.15	14.87	1218.28
DM-22-265	4/2/2002	1233.15	15.68	1217.47
DM-22-265	7/8/2002	1233.15	16.36	1216.79
DM-22-265	10/1/2002	1233.15	16.04	1217.11
DM-22-265	1/7/2003	1233.15	15.85	1217.30
DM-22-265	4/4/2003	1233.15	15.79	1217.36
DM-22-265	7/2/2003	1233.15	15.38	1217.77
DM-22-265	10/7/2003	1233.15	16.66	1216.49
DM-22-265	4/2/2004	1233.15	17.11	1216.04
DM-22-265	10/12/2004	1233.15	19.14	1214.01
DM-22-265	4/5/2005	1233.15	16.89	1216.26
DM-22-265	10/4/2005	1233.15	17.40	1215.75
DM-22-265	4/4/2006	1233.15	18.04	1215.11
DM-22-265	10/9/2006	1233.15	18.25	1214.90
DM-22-265	4/3/2007	1233.15	18.69	1214.46
DM-22-265	10/3/2007	1233.15	18.83	1214.32
DM-22-265	4/2/2008	1233.15	18.08	1215.07
DM-22-265	10/2/2008	1233.15	17.94	1215.21
DM-22-265	4/6/2009	1233.15	18.23	1214.92
DM-22-265	10/2/2009	1233.15	18.98	1214.17
DM-22-265	4/2/2010	1233.15	18.28	1214.87
DM-22-265	4/4/2011	1233.15	19.02	1214.13
DM-22-265	10/5/2011	1233.15	19.10	1214.05
DM-22-265	4/5/2012	1233.15	19.71	1213.44
DM-22-265	10/2/2012	1233.15	19.59	1213.56
DM-22-265	4/2/2013	1233.15	19.79	1213.36
DM-22-265	10/3/2013	1233.15	20.29	1212.86
DM-22-265	4/1/2014	1233.15	20.49	1212.66
DM-22-265	10/14/2014	1233.15	19.56	1213.59
DM-22-265	4/2/2015	1233.15	19.56	1213.59
DM-22-265	10/15/2015	1233.15	20.51	1212.64
DM-22-265	4/13/2016	1233.15	21.07	1212.08
DM-22-265	10/4/2016	1233.15	20.79	1212.36
DM-22-305	6/10/1993	1233.15	15.48	1217.67
DM-22-305	6/28/1993	1233.15	13.93	1219.22
DM-22-305	9/27/1993	1233.15	14.09	1219.06
DM-22-305	12/30/1993	1233.15	13.48	1219.67
DM-22-305	3/29/1994	1233.15	13.92	1219.23
DM-22-305	6/16/1994	1233.15	14.32	1218.83
DM-22-305	9/29/1994	1233.15	14.76	1218.39
DM-22-305	11/30/1994	1233.15	14.10	1219.05
DM-22-305	12/21/1994	1233.15	13.81	1219.34
DM-22-305	3/1/1995	1233.15	13.70	1219.45
DM-22-305	3/13/1995	1233.15	13.63	1219.52
DM-22-305	3/27/1995	1233.15	13.70	1219.45
DM-22-305	5/24/1995	1233.15	13.97	1219.18
DM-22-305	6/15/1995	1233.15	14.11	1219.04
DM-22-305	6/29/1995	1233.15	14.40	1218.75
DM-22-305	9/14/1995	1233.15	13.64	1219.51
DM-22-305	10/4/1995	1233.15	14.79	1218.36
DM-22-305	1/17/1996	1233.15	14.17	1218.98
DM-22-305	3/5/1996	1233.15	14.35	1218.80
DM-22-305	3/26/1996	1233.15	14.43	1218.72
DM-22-305	6/5/1996	1233.15	14.90	1218.25
DM-22-305	6/21/1996	1233.15	14.90	1218.25
DM-22-305	9/5/1996	1233.15	14.74	1218.41
DM-22-305	9/16/1996	1233.15	14.72	1218.43
DM-22-305	12/8/1996	1233.15	15.41	1217.74
DM-22-305	12/23/1996	1233.15	15.41	1217.74
DM-22-305	3/4/1997	1233.15	14.67	1218.48
DM-22-305	6/19/1997	1233.15	15.38	1217.77
DM-22-305	7/21/1997	1233.15	15.11	1218.04
DM-22-305	9/4/1997	1233.15	14.91	1218.24
DM-22-305	10/3/1997	1233.15	14.45	1218.70
DM-22-305	1/5/1998	1233.15	14.52	1218.63
DM-22-305	3/11/1998	1233.15	13.97	1219.18
DM-22-305	6/12/1998	1233.15	14.07	1219.08
DM-22-305	9/3/1998	1233.15	14.10	1219.05
DM-22-305	12/4/1998	1233.15	13.34	1219.81
DM-22-305	3/11/1999	1233.15	15.94	1217.21
DM-22-305	6/17/1999	1233.15	15.55	1217.60
DM-22-305	9/2/1999	1233.15	13.67	1219.48
DM-22-305	3/12/2000	1233.15	16.07	1217.08
DM-22-305	6/8/2000	1233.15	16.23	1216.92

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-22-305	12/21/2000	1233.15	14.31	1218.84
DM-22-305	3/22/2001	1233.15	15.30	1217.85
DM-22-305	6/8/2001	1233.15	14.73	1218.42
DM-22-305	10/25/2001	1233.15	15.06	1218.09
DM-22-305	1/9/2002	1233.15	14.95	1218.20
DM-22-305	4/2/2002	1233.15	15.64	1217.51
DM-22-305	7/8/2002	1233.15	16.14	1217.01
DM-22-305	10/1/2002	1233.15	15.81	1217.34
DM-22-305	1/7/2003	1233.15	15.75	1217.40
DM-22-305	4/4/2003	1233.15	15.56	1217.59
DM-22-305	7/2/2003	1233.15	16.69	1216.46
DM-22-305	10/7/2003	1233.15	16.53	1216.62
DM-22-305	4/2/2004	1233.15	17.06	1216.09
DM-22-305	10/12/2004	1233.15	18.04	1215.11
DM-22-305	4/5/2005	1233.15	16.84	1216.31
DM-22-305	10/4/2005	1233.15	17.33	1215.82
DM-22-305	4/4/2006	1233.15	17.90	1215.25
DM-22-305	10/9/2006	1233.15	18.30	1214.85
DM-22-305	4/3/2007	1233.15	18.63	1214.52
DM-22-305	10/3/2007	1233.15	18.78	1214.37
DM-22-305	4/2/2008	1233.15	18.18	1214.97
DM-22-305	10/2/2008	1233.15	17.97	1215.18
DM-22-305	4/6/2009	1233.15	18.26	1214.89
DM-22-305	10/2/2009	1233.15	19.07	1214.08
DM-22-305	4/2/2010	1233.15	18.37	1214.78
DM-22-305	10/4/2010	1233.15	18.90	1214.25
DM-22-305	4/4/2011	1233.15	19.06	1214.09
DM-22-305	10/5/2011	1233.15	10.04	1223.11
DM-22-305	4/5/2012	1233.15	19.77	1213.38
DM-22-305	10/2/2012	1233.15	19.66	1213.49
DM-22-305	4/2/2013	1233.15	19.84	1213.31
DM-22-305	10/3/2013	1233.15	20.35	1212.80
DM-22-305	4/1/2014	1233.15	20.53	1212.62
DM-22-305	10/14/2014	1233.15	19.60	1213.55
DM-22-305	4/2/2015	1233.15	19.99	1213.16
DM-22-305	10/15/2015	1233.15	20.59	1212.56
DM-22-305	4/13/2016	1233.15	21.15	1212.00
DM-22-305	10/4/2016	1233.15	20.86	1212.29
DM-23	7/20/1995	1181.65	25.00	1156.65
DM-23	10/2/1995	1181.65	26.92	1154.73
DM-23	12/12/1995	1181.65	27.53	1154.12
DM-23	1/4/1996	1181.65	27.96	1153.69
DM-23	3/4/1996	1181.65	28.68	1152.97
DM-23	3/15/1996	1181.65	28.84	1152.81
DM-23	6/11/1996	1181.65	28.86	1152.79
DM-23	9/4/1996	1181.65	29.78	1151.87
DM-23	12/6/1996	1181.65	29.89	1151.76
DM-23	12/16/1996	1181.65	29.98	1151.67
DM-23	3/4/1997	1181.65	30.55	1151.10
DM-23	3/10/1997	1181.65	30.57	1151.08
DM-23	6/23/1997	1181.65	31.16	1150.49
DM-23	7/14/1997	1181.65	31.30	1150.35
DM-23	9/5/1997	1181.65	31.12	1150.53

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-23	12/29/1997	1181.65	31.40	1150.25
DM-23	1/16/1998	1181.65	31.24	1150.41
DM-23	3/3/1998	1181.65	31.52	1150.13
DM-23	3/9/1998	1181.65	31.62	1150.03
DM-23	6/11/1998	1181.65	31.57	1150.08
DM-23	6/16/1998	1181.65	31.54	1150.11
DM-23	9/2/1998	1181.65	31.73	1149.92
DM-23	12/30/1998	1181.65	31.44	1150.21
DM-23	1/7/1999	1181.65	31.74	1149.91
DM-23	3/24/1999	1181.65	32.28	1149.37
DM-23	6/16/1999	1181.65	32.95	1148.70
DM-23	7/29/1999	1181.65	33.39	1148.26
DM-23	9/8/1999	1181.65	33.68	1147.97
DM-23	9/14/1999	1181.65	33.68	1147.97
DM-23	1/5/2000	1181.65	33.99	1147.66
DM-23	1/19/2000	1181.65	34.18	1147.47
DM-23	2/28/2000	1181.65	34.63	1147.02
DM-23	3/2/2000	1181.65	34.62	1147.03
DM-23	6/7/2000	1181.65	35.38	1146.27
DM-23	6/23/2000	1181.65	35.47	1146.18
DM-23	9/27/2000	1181.65	36.52	1145.13
DM-23	10/12/2000	1181.65	36.39	1145.26
DM-23	12/19/2000	1181.65	37.94	1143.71
DM-23	3/20/2001	1181.65	35.93	1145.72
DM-23	6/7/2001	1181.65	36.13	1145.52
DM-23	6/14/2001	1181.65	36.22	1145.43
DM-23	10/23/2001	1181.65	36.91	1144.74
DM-23	11/7/2001	1181.65	36.77	1144.88
DM-23	1/7/2002	1181.65	36.96	1144.69
DM-23	4/1/2002	1181.65	37.72	1143.93
DM-23	4/8/2002	1181.65	37.73	1143.92
DM-23	7/8/2002	1181.65	38.38	1143.27
DM-23	7/9/2002	1181.65	38.21	1143.44
DM-23	10/3/2002	1181.65	38.73	1142.92
DM-23	10/18/2002	1181.65	38.78	1142.87
DM-23	1/6/2003	1181.65	39.31	1142.34
DM-23	1/9/2003	1181.65	39.31	1142.34
DM-23	4/1/2003	1181.65	39.42	1142.23
DM-23	7/1/2003	1181.65	40.38	1141.27
DM-23	7/2/2003	1181.65	40.35	1141.30
DM-23	10/3/2003	1181.65	40.72	1140.93
DM-23	10/9/2003	1181.65	40.66	1140.99
DM-23	4/1/2004	1181.65	42.25	1139.40
DM-23	5/13/2004	1181.65	42.72	1138.93
DM-23	10/1/2004	1181.65	43.15	1138.50
DM-23	10/11/2004	1181.65	43.30	1138.35
DM-23	4/4/2005	1181.65	43.60	1138.05
DM-23	4/7/2005	1181.65	43.58	1138.07
DM-23	10/3/2005	1181.65	42.26	1139.39
DM-23	10/12/2005	1181.65	42.17	1139.48
DM-23	4/5/2006	1181.65	43.73	1137.92
DM-23	4/12/2006	1181.65	43.74	1137.91
DM-23	10/4/2006	1181.65	42.68	1138.97

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-23	4/2/2007	1181.65	43.79	1137.86
DM-23	10/1/2007	1181.65	44.20	1137.45
DM-23	4/1/2008	1181.65	44.58	1137.07
DM-23	4/8/2008	1181.65	44.63	1137.02
DM-23	10/1/2008	1181.65	43.38	1138.27
DM-23	10/13/2008	1181.65	43.31	1138.34
DM-23	4/1/2009	1181.65	44.62	1137.03
DM-23	4/10/2009	1181.65	44.66	1136.99
DM-23	10/1/2009	1181.65	44.10	1137.55
DM-23	10/15/2009	1181.65	43.87	1137.78
DM-23	4/1/2010	1181.65	44.97	1136.68
DM-23	4/8/2010	1181.65	44.92	1136.73
DM-23	10/1/2010	1181.65	43.82	1137.83
DM-23	10/11/2010	1181.65	43.68	1137.97
DM-23	4/1/2011	1181.65	44.90	1136.75
DM-23	10/3/2011	1181.65	44.52	1137.13
DM-23	4/4/2012	1181.65	45.51	1136.14
DM-23	4/11/2012	1181.65	45.55	1136.10
DM-23	10/1/2012	1181.65	44.94	1136.71
DM-23	10/10/2012	1181.65	44.80	1136.85
DM-23	4/1/2013	1181.65	46.02	1135.63
DM-23	4/8/2013	1181.65	46.05	1135.60
DM-23	10/1/2013	1181.65	45.59	1136.06
DM-23	10/8/2013	1181.65	45.53	1136.12
DM-23	4/1/2014	1181.65	46.51	1135.14
DM-23	10/10/2014	1181.65	45.43	1136.22
DM-23	4/1/2015	1181.65	46.57	1135.08
DM-23	10/14/2015	1181.65	46.49	1135.16
DM-23	4/11/2016	1181.65	47.66	1133.99
DM-23	10/3/2016	1181.65	47.48	1134.17
DM-24	7/27/1995	1185.42	8.00	1177.42
DM-24	9/14/1995	1185.42	19.77	1165.65
DM-24	10/2/1995	1185.42	19.25	1166.17
DM-24	12/12/1995	1185.42	19.85	1165.57
DM-24	3/4/1996	1185.42	21.20	1164.22
DM-24	3/21/1996	1185.42	21.26	1164.16
DM-24	6/12/1996	1185.42	22.00	1163.42
DM-24	9/4/1996	1185.42	21.95	1163.47
DM-24	9/24/1996	1185.42	21.60	1163.82
DM-24	12/6/1996	1185.42	21.85	1163.57
DM-24	3/4/1997	1185.42	22.43	1162.99
DM-24	3/12/1997	1185.42	22.53	1162.89
DM-24	6/23/1997	1185.42	23.19	1162.23
DM-24	7/16/1997	1185.42	23.03	1162.39
DM-24	9/5/1997	1185.42	23.05	1162.37
DM-24	9/26/1997	1185.42	22.72	1162.70
DM-24	12/29/1997	1185.42	23.17	1162.25
DM-24	3/10/1998	1185.42	23.23	1162.19
DM-24	6/11/1998	1185.42	23.04	1162.38
DM-24	9/2/1998	1185.42	23.46	1161.96
DM-24	9/15/1998	1185.42	23.46	1161.96
DM-24	12/30/1998	1185.42	23.14	1162.28
DM-24	1/8/1999	1185.42	23.44	1161.98
DM-24	6/16/1999	1185.42	25.71	1159.71
DM-24	9/8/1999	1185.42	26.52	1158.90
DM-24	9/15/1999	1185.42	26.52	1158.90
DM-24	1/5/2000	1185.42	26.07	1159.35
DM-24	2/28/2000	1185.42	26.92	1158.50
DM-24	3/3/2000	1185.42	26.86	1158.56
DM-24	6/7/2000	1185.42	28.52	1156.90
DM-24	9/26/2000	1185.42	30.01	1155.41
DM-24	10/12/2000	1185.42	29.48	1155.94
DM-24	12/28/2000	1185.42	28.08	1157.34
DM-24	3/20/2001	1185.42	27.61	1157.81
DM-24	6/6/2001	1185.42	28.30	1157.12
DM-24	10/23/2001	1185.42	29.07	1156.35
DM-24	11/9/2001	1185.42	29.12	1156.30
DM-24	1/7/2002	1185.42	28.88	1156.54
DM-24	4/1/2002	1185.42	29.81	1155.61
DM-24	4/8/2002	1185.42	29.91	1155.51
DM-24	7/8/2002	1185.42	31.62	1153.80
DM-24	10/3/2002	1185.42	31.76	1153.66
DM-24	10/18/2002	1185.42	31.82	1153.60
DM-24	1/6/2003	1185.42	31.85	1153.57
DM-24	4/1/2003	1185.42	31.80	1153.62
DM-24	7/1/2003	1185.42	33.40	1152.02
DM-24	10/3/2003	1185.42	34.22	1151.20
DM-24	10/12/2003	1185.42	34.20	1151.22
DM-24	4/1/2004	1185.42	35.11	1150.31
DM-24	4/6/2004	1185.42	35.18	1150.24
DM-24	10/1/2004	1185.42	35.07	1150.35
DM-24	10/7/2004	1185.42	35.99	1149.43
DM-24	4/4/2005	1185.42	35.11	1150.31
DM-24	4/7/2005	1185.42	35.18	1150.24
DM-24	10/3/2005	1185.42	33.51	1151.91
DM-24	10/11/2005	1185.42	33.39	1152.03
DM-24	4/5/2006	1185.42	35.26	1150.16
DM-24	10/4/2006	1185.42	33.97	1151.45
DM-24	10/17/2006	1185.42	33.88	1151.54
DM-24	4/2/2007	1185.42	35.70	1149.72
DM-24	4/10/2007	1185.42	35.90	1149.52
DM-24	10/1/2007	1185.42	35.68	1149.74
DM-24	4/1/2008	1185.42	36.19	1149.23
DM-24	4/8/2008	1185.42	36.15	1149.27
DM-24	10/1/2008	1185.42	34.63	1150.79
DM-24	10/13/2008	1185.42	34.60	1150.82
DM-24	4/1/2009	1185.42	36.01	1149.41
DM-24	4/13/2009	1185.42	36.07	1149.35
DM-24	10/1/2009	1185.42	35.44	1149.98
DM-24	10/13/2009	1185.42	35.23	1150.19
DM-24	4/1/2010	1185.42	36.42	1149.00
DM-24	10/1/2010	1185.42	35.35	1150.07
DM-24	10/8/2010	1185.42	35.18	1150.24
DM-24	4/1/2011	1185.42	36.51	1148.91
DM-24	10/3/2011	1185.42	36.21	1149.21
DM-24	4/4/2012	1185.42	37.19	1148.23

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-24	10/5/2012	1185.42	36.33	1149.09
DM-24	4/1/2013	1185.42	37.56	1147.86
DM-24	10/1/2013	1185.42	36.90	1148.52
DM-24	10/4/2013	1185.42	36.96	1148.46
DM-24	4/1/2014	1185.42	37.97	1147.45
DM-24	10/10/2014	1185.42	36.21	1149.21
DM-24	4/1/2015	1185.42	37.64	1147.78
DM-24	10/14/2015	1185.42	37.44	1147.98
DM-24	4/11/2016	1185.42	38.92	1146.50
DM-24	10/3/2016	1185.42	38.15	1147.27
DM-25	8/2/1995	1200.32	16.00	1184.32
DM-25	9/14/1995	1200.32	13.97	1186.35
DM-25	9/29/1995	1200.32	15.60	1184.72
DM-25	12/12/1995	1200.32	15.58	1184.74
DM-25	3/4/1996	1200.32	16.69	1183.63
DM-25	3/22/1996	1200.32	16.44	1183.88
DM-25	6/4/1996	1200.32	16.69	1183.63
DM-25	6/13/1996	1200.32	16.70	1183.62
DM-25	9/24/1996	1200.32	15.72	1184.60
DM-25	12/6/1996	1200.32	16.67	1183.65
DM-25	12/17/1996	1200.32	10.05	1190.27
DM-25	3/4/1997	1200.32	17.58	1182.74
DM-25	3/12/1997	1200.32	17.18	1183.14
DM-25	6/23/1997	1200.32	18.15	1182.17
DM-25	7/16/1997	1200.32	17.99	1182.33
DM-25	9/5/1997	1200.32	17.80	1182.52
DM-25	9/29/1997	1200.32	18.07	1182.25
DM-25	12/29/1997	1200.32	18.71	1181.61
DM-25	3/3/1998	1200.32	18.38	1181.94
DM-25	3/9/1998	1200.32	17.81	1182.51
DM-25	7/27/1998	1200.32	18.02	1182.30
DM-25	9/2/1998	1200.32	18.68	1181.64
DM-25	9/16/1998	1200.32	18.56	1181.76
DM-25	12/30/1998	1200.32	18.60	1181.72
DM-25	3/24/1999	1200.32	19.15	1181.17
DM-25	6/16/1999	1200.32	20.98	1179.34
DM-25	9/8/1999	1200.32	20.92	1179.40
DM-25	9/15/1999	1200.32	20.92	1179.40
DM-25	1/5/2000	1200.32	20.54	1179.78
DM-25	2/28/2000	1200.32	21.35	1178.97
DM-25	3/2/2000	1200.32	21.47	1178.85
DM-25	6/7/2000	1200.32	22.89	1177.43
DM-25	9/26/2000	1200.32	23.59	1176.73
DM-25	10/11/2000	1200.32	23.51	1176.81
DM-25	12/19/2000	1200.32	27.23	1173.09
DM-25	3/20/2001	1200.32	21.52	1178.80
DM-25	6/7/2001	1200.32	21.91	1178.41
DM-25	10/23/2001	1200.32	23.00	1177.32
DM-25	11/12/2001	1200.32	23.08	1177.24
DM-25	1/7/2002	1200.32	22.72	1177.60
DM-25	4/1/2002	1200.32	23.65	1176.67
DM-25	4/9/2002	1200.32	23.93	1176.39
DM-25	7/8/2002	1200.32	25.59	1174.73
DM-25	10/18/2002	1200.32	25.79	1174.53
DM-25	1/6/2003	1200.32	25.67	1174.65
DM-25	4/1/2003	1200.32	25.10	1175.22
DM-25	7/1/2003	1200.32	27.23	1173.09
DM-25	10/3/2003	1200.32	28.28	1172.04
DM-25	10/10/2003	1200.32	28.35	1171.97
DM-25	4/1/2004	1200.32	28.72	1171.60
DM-25	4/6/2004	1200.32	28.85	1171.47
DM-25	10/1/2004	1200.32	30.02	1170.30
DM-25	10/8/2004	1200.32	30.11	1170.21
DM-25	4/4/2005	1200.32	28.51	1171.81
DM-25	4/7/2005	1200.32	28.49	1171.83
DM-25	10/3/2005	1200.32	27.50	1172.82
DM-25	10/10/2005	1200.32	27.65	1172.67
DM-25	4/5/2006	1200.32	28.78	1171.54
DM-25	4/13/2006	1200.32	28.83	1171.49
DM-25	10/4/2006	1200.32	27.72	1172.60
DM-25	10/17/2006	1200.32	27.56	1172.76
DM-25	4/2/2007	1200.32	29.58	1170.74
DM-25	4/10/2007	1200.32	29.56	1170.76
DM-25	10/1/2007	1200.32	29.55	1170.77
DM-25	4/1/2008	1200.32	29.96	1170.36
DM-25	4/8/2008	1200.32	29.63	1170.69
DM-25	10/1/2008	1200.32	28.49	1171.83
DM-25	10/9/2008	1200.32	28.18	1172.14
DM-25	4/1/2009	1200.32	29.65	1170.67
DM-25	4/13/2009	1200.32	29.60	1170.72
DM-25	10/1/2009	1200.32	29.41	1170.91
DM-25	10/13/2009	1200.32	29.03	1171.29
DM-25	4/1/2010	1200.32	30.04	1170.28
DM-25	10/1/2010	1200.32	29.23	1171.09
DM-25	10/7/2010	1200.32	29.25	1171.07
DM-25	4/1/2011	1200.32	30.55	1169.77
DM-25	10/3/2011	1200.32	30.87	1169.45
DM-25	4/4/2012	1200.32	31.72	1168.60
DM-25	10/1/2012	1200.32	31.02	1169.30
DM-25	10/8/2012	1200.32	30.96	1169.36
DM-25	4/1/2013	1200.32	32.04	1168.28
DM-25	10/1/2013	1200.32	31.51	1168.81
DM-25	10/4/2013	1200.32	31.53	1168.79
DM-25	4/1/2014	1200.32	32.52	1167.80
DM-25	10/10/2014	1200.32	30.88	1169.44
DM-25	4/1/2015	1200.32	32.18	1168.14
DM-25	10/14/2015	1200.32	31.61	1168.71
DM-25	4/11/2016	1200.32	33.13	1167.19
DM-25	10/3/2016	1200.32	32.92	1167.40
DM-26	8/8/1995	1193.77	20.60	1173.17
DM-26	9/14/1995	1193.77	19.05	1174.72
DM-26	9/29/1995	1193.77	16.80	1176.97
DM-26	12/12/1995	1193.77	20.18	1173.59
DM-26	1/5/1996	1193.77	20.70	1173.07
DM-26	3/4/1996	1193.77	21.22	1172.55
DM-26	3/20/1996	1193.77	21.07	1172.70

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-26	6/11/1996	1193.77	21.85	1171.92
DM-26	9/4/1996	1193.77	20.96	1172.81
DM-26	9/19/1996	1193.77	21.03	1172.74
DM-26	12/6/1996	1193.77	21.77	1172.00
DM-26	12/16/1996	1193.77	21.74	1172.03
DM-26	3/4/1997	1193.77	23.11	1170.66
DM-26	3/10/1997	1193.77	23.00	1170.77
DM-26	6/23/1997	1193.77	23.49	1170.28
DM-26	7/11/1997	1193.77	23.24	1170.53
DM-26	9/5/1997	1193.77	23.24	1170.53
DM-26	9/25/1997	1193.77	22.98	1170.79
DM-26	12/29/1997	1193.77	23.90	1169.87
DM-26	3/3/1998	1193.77	24.33	1169.44
DM-26	3/9/1998	1193.77	23.76	1170.01
DM-26	6/11/1998	1193.77	23.73	1170.04
DM-26	9/2/1998	1193.77	23.82	1169.95
DM-26	9/16/1998	1193.77	23.63	1170.14
DM-26	12/30/1998	1193.77	24.10	1169.67
DM-26	3/24/1999	1193.77	24.78	1168.99
DM-26	6/16/1999	1193.77	25.18	1168.59
DM-26	9/8/1999	1193.77	25.65	1168.12
DM-26	9/15/1999	1193.77	25.65	1168.12
DM-26	1/5/2000	1193.77	26.21	1167.56
DM-26	2/28/2000	1193.77	26.92	1166.85
DM-26	3/2/2000	1193.77	27.01	1166.76
DM-26	6/7/2000	1193.77	27.69	1166.08
DM-26	9/26/2000	1193.77	28.31	1165.46
DM-26	10/11/2000	1193.77	28.04	1165.73
DM-26	12/19/2000	1193.77	27.50	1166.27
DM-26	3/20/2001	1193.77	27.49	1166.28
DM-26	6/6/2001	1193.77	27.67	1166.10
DM-26	10/23/2001	1193.77	28.67	1165.10
DM-26	11/2/2001	1193.77	27.86	1165.91
DM-26	1/7/2002	1193.77	28.62	1165.15
DM-26	4/1/2002	1193.77	29.61	1164.16
DM-26	4/5/2002	1193.77	29.71	1164.06
DM-26	7/8/2002	1193.77	30.35	1163.42
DM-26	7/10/2002	1193.77	30.38	1163.39
DM-26	10/3/2002	1193.77	30.36	1163.41
DM-26	10/16/2002	1193.77	30.38	1163.39
DM-26	1/6/2003	1193.77	30.93	1162.84
DM-26	4/1/2003	1193.77	31.05	1162.72
DM-26	7/1/2003	1193.77	32.28	1161.49
DM-26	10/3/2003	1193.77	32.08	1161.69
DM-26	10/9/2003	1193.77	32.27	1161.50
DM-26	4/1/2004	1193.77	33.59	1160.18
DM-26	4/6/2004	1193.77	33.43	1160.34
DM-26	10/1/2004	1193.77	34.33	1159.44
DM-26	10/8/2004	1193.77	34.50	1159.27
DM-26	4/4/2005	1193.77	34.54	1159.23
DM-26	4/6/2005	1193.77	34.51	1159.26
DM-26	10/3/2005	1193.77	33.36	1160.41
DM-26	10/12/2005	1193.77	33.32	1160.45
DM-26	4/11/2006	1193.77	34.89	1158.88
DM-26	10/4/2006	1193.77	33.76	1160.01
DM-26	10/13/2006	1193.77	33.75	1160.02
DM-26	4/2/2007	1193.89	35.32	1158.57
DM-26	10/8/2007	1193.89	34.65	1159.24
DM-26	4/1/2008	1193.89	35.99	1157.90
DM-26	4/7/2008	1193.89	35.87	1158.02
DM-26	10/1/2008	1193.89	34.27	1159.62
DM-26	10/7/2008	1193.89	34.30	1159.59
DM-26	4/1/2009	1193.89	35.95	1157.94
DM-26	4/9/2009	1193.89	35.96	1157.93
DM-26	10/1/2009	1193.89	34.92	1158.97
DM-26	10/12/2009	1193.89	34.67	1159.22
DM-26	4/1/2010	1193.89	36.17	1157.72
DM-26	4/7/2010	1193.89	36.21	1157.68
DM-26	10/1/2010	1193.89	34.92	1158.97
DM-26	10/8/2010	1193.89	34.88	1159.01
DM-26	4/1/2011	1193.89	36.48	1157.41
DM-26	10/3/2011	1193.89	36.17	1157.72
DM-26	4/4/2012	1193.89	37.31	1156.58
DM-26	4/10/2012	1193.89	37.32	1156.57
DM-26	10/1/2012	1193.89	36.48	1157.41
DM-26	10/8/2012	1193.89	36.44	1157.45
DM-26	4/1/2013	1193.89	37.90	1155.99
DM-26	4/8/2013	1193.89	37.98	1155.91
DM-26	10/1/2013	1193.89	36.99	1156.90
DM-26	10/10/2013	1193.89	36.99	1156.90
DM-26	4/1/2014	1193.89	38.34	1155.55
DM-26	10/10/2014	1193.89	36.62	1157.27
DM-26	4/1/2015	1193.89	38.01	1155.88
DM-26	10/14/2015	1193.89	37.29	1156.60
DM-26	4/11/2016	1193.89	38.95	1154.94
DM-26	10/3/2016	1193.89	38.31	1155.58
DM-27	8/14/1995	1171.43	20.10	1151.33
DM-27	9/14/1995	1171.43	29.51	1141.92
DM-27	9/29/1995	1171.43	17.15	1154.28
DM-27	12/12/1995	1171.43	29.31	1142.12
DM-27	1/5/1996	1171.43	29.87	1141.56
DM-27	3/21/1996	1171.43	30.67	1140.76
DM-27	6/4/1996	1171.43	31.05	1140.38
DM-27	6/12/1996	1171.43	31.00	1140.43
DM-27	9/4/1996	1171.43	31.29	1140.14
DM-27	9/23/1996	1171.43	31.18	1140.25
DM-27	12/6/1996	1171.43	31.22	1140.21
DM-27	12/19/1996	1171.43	31.55	1139.88
DM-27	3/4/1997	1171.43	32.26	1139.17
DM-27	3/11/1997	1171.43	32.37	1139.06
DM-27	6/23/1997	1171.43	32.92	1138.51
DM-27	7/14/1997	1171.43	32.50	1138.93
DM-27	9/5/1997	1171.43	32.68	1138.75
DM-27	9/26/1997	1171.43	32.45	1138.98
DM-27	12/29/1997	1171.43	33.18	1138.25
DM-27	1/16/1998	1171.43	37.97	1133.46

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-27	3/10/1998	1171.43	33.51	1137.92
DM-27	6/11/1998	1171.43	33.10	1138.33
DM-27	6/16/1998	1171.43	32.96	1138.47
DM-27	9/2/1998	1171.43	33.37	1138.06
DM-27	9/15/1998	1171.43	33.25	1138.18
DM-27	12/30/1998	1171.43	33.16	1138.27
DM-27	1/7/1999	1171.43	33.38	1138.05
DM-27	3/24/1999	1171.43	33.92	1137.51
DM-27	6/16/1999	1171.43	34.50	1136.93
DM-27	7/29/1999	1171.43	34.95	1136.48
DM-27	9/8/1999	1171.43	35.22	1136.21
DM-27	9/15/1999	1171.43	35.22	1136.21
DM-27	1/5/2000	1171.43	35.79	1135.64
DM-27	1/20/2000	1171.43	35.92	1135.51
DM-27	2/28/2000	1171.43	36.47	1134.96
DM-27	3/3/2000	1171.43	36.58	1134.85
DM-27	6/7/2000	1171.43	36.70	1134.73
DM-27	6/23/2000	1171.43	36.81	1134.62
DM-27	9/27/2000	1171.43	37.99	1133.44
DM-27	10/12/2000	1171.43	38.00	1133.43
DM-27	12/19/2000	1171.43	37.72	1133.71
DM-27	3/20/2001	1171.43	37.87	1133.56
DM-27	6/6/2001	1171.43	38.27	1133.16
DM-27	6/13/2001	1171.43	38.28	1133.15
DM-27	10/23/2001	1171.43	38.44	1132.99
DM-27	11/9/2001	1171.43	38.78	1132.65
DM-27	1/7/2002	1171.43	38.68	1132.75
DM-27	4/1/2002	1171.43	39.75	1131.68
DM-27	4/10/2002	1171.43	39.79	1131.64
DM-27	7/8/2002	1171.43	40.37	1131.06
DM-27	7/10/2002	1171.43	40.37	1131.06
DM-27	10/3/2002	1171.43	40.66	1130.77
DM-27	10/18/2002	1171.43	40.54	1130.89
DM-27	1/6/2003	1171.43	41.29	1130.14
DM-27	1/9/2003	1171.43	41.31	1130.12
DM-27	4/1/2003	1171.43	42.10	1129.33
DM-27	7/1/2003	1171.43	42.33	1129.10
DM-27	7/2/2003	1171.43	42.38	1129.05
DM-27	10/3/2003	1171.43	42.75	1128.68
DM-27	10/10/2003	1171.43	44.12	1127.31
DM-27	4/1/2004	1171.43	44.95	1126.48
DM-27	5/13/2004	1171.43	45.41	1126.02
DM-27	10/1/2004	1171.43	45.41	1126.02
DM-27	10/11/2004	1171.43	45.68	1125.75
DM-27	4/4/2005	1171.43	46.55	1124.88
DM-27	4/7/2005	1171.43	46.53	1124.90
DM-27	10/3/2005	1171.43	44.70	1126.73
DM-27	10/12/2005	1171.43	44.55	1126.88
DM-27	4/5/2006	1171.43	46.28	1125.15
DM-27	4/12/2006	1171.43	46.31	1125.12
DM-27	10/4/2006	1171.43	44.54	1126.89
DM-27	10/17/2006	1171.43	44.43	1127.00
DM-27	4/2/2007	1171.43	46.11	1125.32
DM-27	10/1/2007	1171.43	46.10	1125.33
DM-27	4/1/2008	1171.43	47.08	1124.35
DM-27	4/8/2008	1171.43	47.15	1124.28
DM-27	10/1/2008	1171.43	45.36	1126.07
DM-27	10/13/2008	1171.43	45.32	1126.11
DM-27	4/1/2009	1171.43	46.90	1124.53
DM-27	4/10/2009	1171.43	47.02	1124.41
DM-27	10/1/2009	1171.43	46.02	1125.41
DM-27	10/15/2009	1171.43	46.02	1125.41
DM-27	4/1/2010	1171.43	47.35	1124.08
DM-27	4/8/2010	1171.43	47.33	1124.10
DM-27	10/1/2010	1171.43	46.01	1125.42
DM-27	10/11/2010	1171.43	45.82	1125.61
DM-27	4/1/2011	1171.43	47.24	1124.19
DM-27	10/3/2011	1171.43	46.53	1124.90
DM-27	4/4/2012	1171.43	47.77	1123.66
DM-27	4/11/2012	1171.43	47.87	1123.56
DM-27	10/1/2012	1171.43	46.98	1124.45
DM-27	10/10/2012	1171.43	46.82	1124.61
DM-27	4/1/2013	1171.43	48.33	1123.10
DM-27	4/8/2013	1171.43	48.36	1123.07
DM-27	10/1/2013	1171.43	47.97	1123.46
DM-27	10/8/2013	1171.43	47.98	1123.45
DM-27	4/1/2014	1171.43	49.13	1122.30
DM-27	10/10/2014	1171.43	47.67	1123.76
DM-27	4/1/2015	1171.43	49.55	1121.88
DM-27	10/14/2015	1171.43	49.34	1122.09
DM-27	4/11/2016	1171.43	50.63	1120.80
DM-27	10/3/2016	1171.43	50.08	1121.35
DM-27	11/3/2016	1171.43	49.80	1121.63
DM-28	12/19/1995	1161.06	40.05	1121.01
DM-28	1/4/1996	1161.06	40.45	1120.61
DM-28	1/9/1996	1161.06	40.56	1120.50
DM-28	1/22/1996	1161.06	40.73	1120.33
DM-28	3/5/1996	1161.06	41.08	1119.98
DM-28	3/20/1996	1161.06	41.11	1119.95
DM-28	6/11/1996	1161.06	41.55	1119.51
DM-28	9/4/1996	1161.06	42.06	1119.00
DM-28	9/19/1996	1161.06	42.09	1118.97
DM-28	12/6/1996	1161.06	31.78	1129.28
DM-28	12/16/1996	1161.06	41.62	1119.44
DM-28	3/4/1997	1161.06	43.21	1117.85
DM-28	3/7/1997	1161.06	43.30	1117.76
DM-28	6/23/1997	1161.06	44.07	1116.99
DM-28	7/9/1997	1161.06	44.20	1116.86
DM-28	9/5/1997	1161.06	44.38	1116.68
DM-28	9/25/1997	1161.06	44.30	1116.76
DM-28	12/29/1997	1161.06	44.52	1116.54
DM-28	1/19/1998	1161.06	44.59	1116.47
DM-28	3/3/1998	1161.06	44.91	1116.15
DM-28	3/10/1998	1161.06	44.98	1116.08
DM-28	7/29/1998	1161.06	34.73	1126.33
DM-28	9/2/1998	1161.06	44.51	1116.55

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-28	12/30/1998	1161.06	44.22	1116.84
DM-28	1/7/1999	1161.06	44.33	1116.73
DM-28	3/25/1999	1161.06	45.46	1115.60
DM-28	6/16/1999	1161.06	46.01	1115.05
DM-28	7/29/1999	1161.06	46.24	1114.82
DM-28	9/8/1999	1161.06	46.83	1114.23
DM-28	9/20/1999	1161.06	46.83	1114.23
DM-28	1/5/2000	1161.06	45.96	1115.10
DM-28	1/19/2000	1161.06	42.14	1118.92
DM-28	2/28/2000	1161.06	47.52	1113.54
DM-28	3/3/2000	1161.06	47.55	1113.51
DM-28	6/7/2000	1161.06	48.15	1112.91
DM-28	6/30/2000	1161.06	47.22	1113.84
DM-28	9/27/2000	1161.06	48.50	1112.56
DM-28	10/13/2000	1161.06	48.45	1112.61
DM-28	12/20/2000	1161.06	48.62	1112.44
DM-28	3/20/2001	1161.06	49.28	1111.78
DM-28	6/6/2001	1161.06	49.33	1111.73
DM-28	6/14/2001	1161.06	49.46	1111.60
DM-28	10/23/2001	1161.06	49.65	1111.41
DM-28	11/5/2001	1161.06	49.82	1111.24
DM-28	1/7/2002	1161.06	49.99	1111.07
DM-28	4/1/2002	1161.06	50.76	1110.30
DM-28	4/8/2002	1161.06	50.76	1110.30
DM-28	7/8/2002	1161.06	51.26	1109.80
DM-28	7/9/2002	1161.06	51.32	1109.74
DM-28	10/3/2002	1161.06	51.66	1109.40
DM-28	10/17/2002	1161.06	51.65	1109.41
DM-28	1/6/2003	1161.06	52.12	1108.94
DM-28	1/9/2003	1161.06	52.21	1108.85
DM-28	4/1/2003	1161.06	53.19	1107.87
DM-28	7/1/2003	1161.06	54.08	1106.98
DM-28	7/3/2003	1161.06	54.08	1106.98
DM-28	10/3/2003	1161.06	54.72	1106.34
DM-28	10/9/2003	1161.06	54.74	1106.32
DM-28	4/1/2004	1161.06	57.11	1103.95
DM-28	4/6/2004	1161.06	57.15	1103.91
DM-28	10/1/2004	1161.06	57.64	1103.42
DM-28	10/6/2004	1161.06	57.61	1103.45
DM-28	4/4/2005	1161.06	58.64	1102.42
DM-28	4/8/2005	1161.06	58.61	1102.45
DM-28	10/3/2005	1161.06	56.75	1104.31
DM-28	10/10/2005	1161.06	56.74	1104.32
DM-28	4/5/2006	1161.06	57.94	1103.12
DM-28	4/13/2006	1161.06	57.85	1103.21
DM-28	10/5/2006	1161.06	56.28	1104.78
DM-28	10/12/2006	1161.06	56.20	1104.86
DM-28	4/2/2007	1161.06	67.65	1093.41
DM-28	4/6/2007	1161.06	57.65	1103.41
DM-28	4/12/2007	1161.06	57.65	1103.41
DM-28	10/1/2007	1161.06	57.96	1103.10
DM-28	4/1/2008	1161.06	58.52	1102.54
DM-28	4/7/2008	1161.06	58.47	1102.59
DM-28	10/7/2008	1161.06	56.81	1104.25
DM-28	4/1/2009	1161.06	58.29	1102.77
DM-28	4/10/2009	1161.06	58.34	1102.72
DM-28	10/1/2009	1161.06	57.87	1103.19
DM-28	10/13/2009	1161.06	57.58	1103.48
DM-28	4/1/2010	1161.06	58.83	1102.23
DM-28	4/7/2010	1161.06	58.82	1102.24
DM-28	10/1/2010	1161.06	57.43	1103.63
DM-28	10/7/2010	1161.06	57.39	1103.67
DM-28	4/1/2011	1161.06	58.64	1102.42
DM-28	10/3/2011	1161.06	57.98	1103.08
DM-28	4/4/2012	1161.06	59.14	1101.92
DM-28	4/9/2012	1161.06	59.15	1101.91
DM-28	10/1/2012	1161.06	58.58	1102.48
DM-28	10/9/2012	1161.06	58.73	1102.33
DM-28	4/1/2013	1161.06	59.94	1101.12
DM-28	4/4/2013	1161.06	55.95	1105.11
DM-28	10/1/2013	1161.06	60.32	1100.74
DM-28	10/6/2013	1161.06	60.33	1100.73
DM-28	4/1/2014	1161.06	61.07	1099.99
DM-28	10/10/2014	1161.06	61.57	1099.49
DM-28	4/1/2015	1161.06	62.48	1098.58
DM-28	10/14/2015	1161.06	62.63	1098.43
DM-28	4/11/2016	1161.06	63.57	1097.49
DM-28	10/3/2016	1161.06	63.44	1097.62
DM-28	4/3/2017	1161.06	64.34	1096.72
DM-29	10/3/2005	1139.25	74.86	1064.39
DM-29	10/13/2005	1139.25	74.71	1064.54
DM-29	12/20/2005	1139.25	76.16	1063.09
DM-29	1/23/2006	1139.25	75.06	1064.19
DM-29	4/5/2006	1139.25	74.57	1064.68
DM-29	4/6/2006	1139.25	74.53	1064.72
DM-29	7/3/2006	1139.25	73.86	1065.39
DM-29	7/10/2006	1139.25	73.84	1065.41
DM-29	10/4/2006	1139.25	74.65	1064.60
DM-29	10/19/2006	1139.25	74.02	1065.23
DM-29	4/2/2007	1139.25	77.47	1061.78
DM-29	4/5/2007	1139.25	75.60	1063.65
DM-29	4/12/2007	1139.25	77.93	1061.32
DM-29	10/10/2007	1139.25	75.48	1063.77
DM-29	4/1/2008	1139.25	74.83	1064.42
DM-29	4/4/2008	1139.25	74.80	1064.45
DM-29	10/1/2008	1139.25	73.58	1065.67
DM-29	10/10/2008	1139.25	73.51	1065.74
DM-29	4/1/2009	1139.25	73.59	1065.66
DM-29	4/7/2009	1139.25	73.64	1065.61
DM-29	10/1/2009	1139.25	73.91	1065.34
DM-29	10/14/2009	1139.25	74.21	1065.04
DM-29	4/1/2010	1139.25	74.06	1065.19
DM-29	4/5/2010	1139.25	74.12	1065.13
DM-29	10/1/2010	1139.25	72.88	1066.37
DM-29	10/12/2010	1139.25	72.79	1066.46
DM-29	4/1/2011	1139.25	73.92	1065.33

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-29	4/4/2012	1139.25	75.56	1063.69
DM-29	4/6/2012	1139.25	76.37	1062.88
DM-29	10/1/2012	1139.25	75.27	1063.98
DM-29	10/9/2012	1139.25	75.19	1064.06
DM-29	4/1/2013	1139.25	78.58	1060.67
DM-29	4/3/2013	1139.25	78.31	1060.94
DM-29	10/1/2013	1139.25	80.25	1059.00
DM-29	12/27/2013	1139.25	81.80	1057.45
DM-29	4/1/2014	1139.25	83.75	1055.50
DM-29	10/10/2014	1139.25	85.18	1054.07
DM-29	4/1/2015	1139.25	84.91	1054.34
DM-29	10/14/2015	1139.25	84.23	1055.02
DM-29	4/11/2016	1139.25	84.96	1054.29
DM-29	10/3/2016	1139.25	85.30	1053.95
DM-29	4/3/2017	1139.25	83.32	1055.93
DM-30	10/3/2005	1158.95	60.39	1098.56
DM-30	10/13/2005	1158.95	60.28	1098.67
DM-30	12/22/2005	1158.95	60.50	1098.45
DM-30	1/24/2006	1158.95	60.80	1098.15
DM-30	4/5/2006	1158.95	61.38	1097.57
DM-30	7/3/2006	1158.95	60.09	1098.86
DM-30	7/18/2006	1158.95	59.64	1099.31
DM-30	10/4/2006	1158.95	59.77	1099.18
DM-30	10/20/2006	1158.95	59.64	1099.31
DM-30	4/2/2007	1158.95	61.05	1097.90
DM-30	4/10/2007	1158.95	61.15	1097.80
DM-30	10/10/2007	1158.95	61.20	1097.75
DM-30	4/1/2008	1158.95	67.10	1091.85
DM-30	4/7/2008	1158.95	61.85	1097.10
DM-30	10/1/2008	1158.95	60.18	1098.77
DM-30	4/1/2009	1158.95	61.55	1097.40
DM-30	4/13/2009	1158.95	61.56	1097.39
DM-30	10/1/2009	1158.95	61.11	1097.84
DM-30	10/19/2009	1158.95	61.03	1097.92
DM-30	4/1/2010	1158.95	62.08	1096.87
DM-30	4/9/2010	1158.95	62.08	1096.87
DM-30	10/1/2010	1158.95	60.65	1098.30
DM-30	10/12/2010	1158.95	60.56	1098.39
DM-30	4/1/2011	1158.95	61.88	1097.07
DM-30	10/3/2011	1158.95	61.45	1097.50
DM-30	4/4/2012	1158.95	62.59	1096.36
DM-30	4/11/2012	1158.95	62.62	1096.33
DM-30	10/1/2012	1158.95	62.09	1096.86
DM-30	10/10/2012	1158.95	62.05	1096.90
DM-30	4/1/2013	1158.95	63.45	1095.50
DM-30	4/8/2013	1158.95	63.50	1095.45
DM-30	10/1/2013	1158.95	63.79	1095.16
DM-30	10/9/2013	1158.95	63.85	1095.10
DM-30	4/1/2014	1158.95	65.29	1093.66
DM-30	10/10/2014	1158.95	65.33	1093.62
DM-30	4/1/2015	1158.95	66.41	1092.54
DM-30	10/15/2015	1158.95	66.44	1092.51
DM-30	4/11/2016	1158.95	67.34	1091.61
DM-30	11/3/2016	1158.95	67.35	1091.60
DM-30	4/3/2017	1158.95	68.01	1090.94
DM-31	10/3/2005	1141.39	70.05	1071.34
DM-31	10/13/2005	1141.39	69.84	1071.55
DM-31	12/20/2005	1141.39	69.91	1071.48
DM-31	1/23/2006	1141.39	69.94	1071.45
DM-31	4/5/2006	1141.39	69.77	1071.62
DM-31	4/10/2006	1141.39	69.81	1071.58
DM-31	7/3/2006	1141.39	68.96	1072.43
DM-31	7/17/2006	1141.39	68.85	1072.54
DM-31	10/4/2006	1141.39	68.74	1072.65
DM-31	10/19/2006	1141.39	68.80	1072.59
DM-31	4/2/2007	1141.39	70.50	1070.89
DM-31	4/11/2007	1141.39	70.78	1070.61
DM-31	10/10/2007	1141.39	70.18	1071.21
DM-31	4/1/2008	1141.39	69.97	1071.42
DM-31	10/1/2008	1141.39	68.85	1072.54
DM-31	1/6/2009	1141.39	69.25	1072.14
DM-31	4/1/2009	1141.39	69.19	1072.20
DM-31	4/9/2009	1141.39	69.18	1072.21
DM-31	10/1/2009	1141.39	69.48	1071.91
DM-31	10/15/2009	1141.39	69.55	1071.84
DM-31	4/1/2010	1141.39	69.75	1071.64
DM-31	4/7/2010	1141.39	69.72	1071.67
DM-31	10/1/2010	1141.39	68.64	1072.75
DM-31	10/12/2010	1141.39	68.54	1072.85
DM-31	4/1/2011	1141.39	69.58	1071.81
DM-31	10/3/2011	1141.39	69.73	1071.66
DM-31	4/4/2012	1141.39	70.89	1070.50
DM-31	10/1/2012	1141.39	70.79	1070.60
DM-31	10/10/2012	1141.39	70.76	1070.63
DM-31	4/1/2013	1141.39	72.68	1068.71
DM-31	4/5/2013	1141.39	72.72	1068.67
DM-31	10/1/2013	1141.39	74.46	1066.93
DM-31	10/9/2013	1141.39	74.33	1067.06
DM-31	4/1/2014	1141.39	77.26	1064.13
DM-31	10/10/2014	1141.39	78.37	1063.02
DM-31	4/1/2015	1141.39	78.48	1062.91
DM-31	10/14/2015	1141.39	78.74	1062.65
DM-31	4/11/2016	1141.39	78.99	1062.40
DM-31	10/3/2016	1141.39	79.47	1061.92
DM-31	4/3/2017	1141.39	78.27	1063.12
DM-32	10/3/2005	1149.56	64.33	1085.23
DM-32	10/17/2005	1149.56	64.18	1085.38
DM-32	12/21/2005	1149.56	64.12	1085.44
DM-32	1/24/2006	1149.56	64.36	1085.20
DM-32	4/5/2006	1149.56	64.54	1085.02
DM-32	4/11/2006	1149.56	64.64	1084.92
DM-32	7/3/2006	1149.56	63.76	1085.80
DM-32	7/10/2006	1149.56	63.65	1085.91
DM-32	10/4/2006	1149.56	63.40	1086.16
DM-32	10/18/2006	1149.56	63.38	1086.18
DM-32	4/2/2007	1149.56	64.77	1084.79

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-32	4/1/2008	1149.56	75.15	1074.41
DM-32	10/1/2008	1149.56	63.71	1085.85
DM-32	10/14/2008	1149.56	63.67	1085.89
DM-32	4/1/2009	1149.56	64.31	1085.25
DM-32	4/9/2009	1149.56	64.36	1085.20
DM-32	10/1/2009	1149.56	64.33	1085.23
DM-32	10/16/2009	1149.56	64.28	1085.28
DM-32	4/1/2010	1149.56	64.83	1084.73
DM-32	4/7/2010	1149.56	64.85	1084.71
DM-32	10/1/2010	1149.56	63.82	1085.74
DM-32	10/12/2010	1149.56	63.74	1085.82
DM-32	4/1/2011	1149.56	64.67	1084.89
DM-32	10/3/2011	1149.56	64.59	1084.97
DM-32	4/4/2012	1149.56	65.61	1083.95
DM-32	4/9/2012	1149.56	65.65	1083.91
DM-32	10/1/2012	1149.56	65.58	1083.98
DM-32	10/9/2012	1149.56	65.38	1084.18
DM-32	4/1/2013	1149.56	66.85	1082.71
DM-32	4/4/2013	1149.56	66.87	1082.69
DM-32	10/1/2013	1149.56	67.98	1081.58
DM-32	10/6/2013	1149.56	68.01	1081.55
DM-32	4/1/2014	1149.56	69.54	1080.02
DM-32	10/10/2014	1149.56	70.49	1079.07
DM-32	4/1/2015	1149.56	70.86	1078.70
DM-32	10/15/2015	1149.56	71.26	1078.30
DM-32	4/11/2016	1149.56	71.51	1078.05
DM-32	10/3/2016	1149.56	71.65	1077.91
DM-32	4/3/2017	1149.56	71.61	1077.95
DM-33	10/3/2005	1143.57	66.65	1076.92
DM-33	10/14/2005	1143.57	66.49	1077.08
DM-33	12/21/2005	1143.57	66.33	1077.24
DM-33	1/23/2006	1143.57	66.43	1077.14
DM-33	4/5/2006	1143.57	66.46	1077.11
DM-33	4/10/2006	1143.57	66.56	1077.01
DM-33	7/3/2006	1143.57	65.77	1077.80
DM-33	7/18/2006	1143.57	65.74	1077.83
DM-33	10/4/2006	1143.57	65.28	1078.29
DM-33	10/18/2006	1143.57	65.24	1078.33
DM-33	4/2/2007	1143.57	66.39	1077.18
DM-33	4/5/2007	1143.57	66.43	1077.14
DM-33	10/11/2007	1143.57	Dry	Dry
DM-33	4/1/2008	1143.57	67.67	1075.90
DM-33	4/4/2008	1143.57	66.66	1076.91
DM-33	10/1/2008	1143.57	65.74	1077.83
DM-33	4/1/2009	1143.57	66.30	1077.27
DM-33	4/7/2009	1143.57	66.30	1077.27
DM-33	10/1/2009	1143.57	66.64	1076.93
DM-33	10/16/2009	1143.57	66.61	1076.96
DM-33	4/1/2010	1143.57	67.00	1076.57
DM-33	4/6/2010	1143.57	66.93	1076.64
DM-33	10/1/2010	1143.57	65.89	1077.68
DM-33	10/13/2010	1143.57	65.78	1077.79
DM-33	4/1/2011	1143.57	66.60	1076.97

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-33	4/4/2012	1143.57	67.76	1075.81
DM-33	10/1/2012	1143.57	67.84	1075.73
DM-33	10/10/2012	1143.57	67.83	1075.74
DM-33	4/1/2013	1143.57	69.08	1074.49
DM-33	4/5/2013	1143.57	69.11	1074.46
DM-33	10/1/2013	1143.57	70.68	1072.89
DM-33	10/10/2013	1143.57	70.58	1072.99
DM-33	4/1/2014	1143.57	72.67	1070.90
DM-33	10/10/2014	1143.57	73.82	1069.75
DM-33	4/1/2015	1143.57	74.22	1069.35
DM-33	10/14/2015	1143.57	74.87	1068.70
DM-33	4/12/2016	1143.57	75.11	1068.46
DM-33	10/3/2016	1143.57	75.56	1068.01
DM-33	4/3/2017	1143.57	74.91	1068.66
DM-34	10/3/2005	1177.51	41.46	1136.05
DM-34	10/13/2005	1177.51	41.32	1136.19
DM-34	12/21/2005	1177.51	41.52	1135.99
DM-34	1/24/2006	1177.51	42.07	1135.44
DM-34	4/5/2006	1177.51	43.22	1134.29
DM-34	4/7/2006	1177.51	43.30	1134.21
DM-34	7/3/2006	1177.51	42.35	1135.16
DM-34	7/10/2006	1177.51	42.31	1135.20
DM-34	10/4/2006	1177.51	41.71	1135.80
DM-34	10/18/2006	1177.51	41.58	1135.93
DM-34	4/2/2007	1177.51	43.33	1134.18
DM-34	4/4/2007	1177.51	43.34	1134.17
DM-34	10/11/2007	1177.51	43.17	1134.34
DM-34	4/1/2008	1177.51	49.90	1127.61
DM-34	10/1/2008	1177.51	42.50	1135.01
DM-34	10/14/2008	1177.51	42.40	1135.11
DM-34	4/1/2009	1177.51	43.98	1133.53
DM-34	4/7/2009	1177.51	45.03	1132.48
DM-34	10/1/2009	1177.51	43.04	1134.47
DM-34	10/19/2009	1177.51	42.88	1134.63
DM-34	4/1/2010	1177.51	44.42	1133.09
DM-34	4/5/2010	1177.51	44.45	1133.06
DM-34	10/1/2010	1177.51	42.87	1134.64
DM-34	10/27/2010	1177.51	42.62	1134.89
DM-34	4/1/2011	1177.51	44.40	1133.11
DM-34	10/3/2011	1177.51	43.64	1133.87
DM-34	4/4/2012	1177.51	44.99	1132.52
DM-34	4/6/2012	1177.51	45.01	1132.50
DM-34	10/1/2012	1177.51	44.02	1133.49
DM-34	10/11/2012	1177.51	43.81	1133.70
DM-34	4/1/2013	1177.51	45.49	1132.02
DM-34	4/3/2013	1177.51	45.51	1132.00
DM-34	10/1/2013	1177.51	44.70	1132.81
DM-34	10/11/2013	1177.51	44.51	1133.00
DM-34	4/1/2014	1177.51	45.99	1131.52
DM-34	10/10/2014	1177.51	44.80	1132.71
DM-34	4/1/2015	1177.51	46.22	1131.29
DM-34	10/15/2015	1177.51	45.63	1131.88
DM-34	4/11/2016	1177.51	47.23	1130.28

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-35	10/3/2005	1238.71	17.85	1220.86
DM-35	10/17/2005	1238.71	17.72	1220.99
DM-35	12/21/2005	1238.71	18.15	1220.56
DM-35	4/6/2006	1238.71	19.28	1219.43
DM-35	10/4/2006	1238.71	19.70	1219.01
DM-35	10/19/2006	1238.71	19.58	1219.13
DM-35	4/2/2007	1238.71	20.67	1218.04
DM-35	4/4/2007	1238.71	19.72	1218.99
DM-35	4/12/2007	1238.71	19.70	1219.01
DM-35	10/1/2007	1238.71	20.03	1218.68
DM-35	4/1/2008	1238.71	19.25	1219.46
DM-35	10/1/2008	1238.71	19.00	1219.71
DM-35	10/15/2008	1238.71	18.95	1219.76
DM-35	4/1/2009	1238.71	19.14	1219.57
DM-35	4/8/2009	1238.71	19.84	1218.87
DM-35	10/1/2009	1238.71	20.59	1218.12
DM-35	10/19/2009	1238.71	20.10	1218.61
DM-35	4/1/2010	1238.71	20.08	1218.63
DM-35	4/6/2010	1238.71	20.20	1218.51
DM-35	10/1/2010	1238.71	20.56	1218.15
DM-35	4/1/2011	1238.71	20.98	1217.73
DM-35	10/3/2011	1238.71	20.99	1217.72
DM-35	4/4/2012	1238.71	21.94	1216.77
DM-35	10/1/2012	1238.71	21.80	1216.91
DM-35	4/1/2013	1238.71	22.08	1216.63
DM-35	10/1/2013	1238.71	22.54	1216.17
DM-35	4/1/2014	1238.71	22.90	1215.81
DM-35	10/10/2014	1238.71	21.98	1216.73
DM-35	4/1/2015	1238.71	22.34	1216.37
DM-35	10/14/2015	1238.71	22.85	1215.86
DM-35	4/12/2016	1238.71	23.52	1215.19
DM-35	10/3/2016	1238.71	23.50	1215.21
DM-36	10/3/2005	1238.50	17.69	1220.81
DM-36	10/17/2005	1238.50	17.67	1220.83
DM-36	12/21/2005	1238.50	18.00	1220.50
DM-36	4/5/2006	1238.50	19.14	1219.36
DM-36	4/7/2006	1238.50	19.19	1219.31
DM-36	10/4/2006	1238.50	19.53	1218.97
DM-36	10/19/2006	1238.50	19.65	1218.85
DM-36	4/2/2007	1238.50	19.44	1219.06
DM-36	4/6/2007	1238.50	19.55	1218.95
DM-36	4/12/2007	1238.50	19.53	1218.97
DM-36	10/1/2007	1238.50	19.95	1218.55
DM-36	4/1/2008	1238.50	19.02	1219.48
DM-36	4/4/2008	1238.50	22.08	1216.42
DM-36	10/1/2008	1238.50	18.86	1219.64
DM-36	4/1/2009	1238.50	19.22	1219.28
DM-36	4/8/2009	1238.50	20.10	1218.40
DM-36	10/1/2009	1238.50	20.48	1218.02
DM-36	10/19/2009	1238.50	20.39	1218.11
DM-36	4/1/2010	1238.50	19.95	1218.55
DM-36	4/6/2010	1238.50	20.09	1218.41
DM-36	10/1/2010	1238.50	20.46	1218.04
DM-36	10/3/2011	1238.50	20.85	1217.65
DM-36	4/4/2012	1238.50	21.71	1216.79
DM-36	10/1/2012	1238.50	21.67	1216.83
DM-36	4/1/2013	1238.50	21.89	1216.61
DM-36	10/1/2013	1238.50	22.38	1216.12
DM-36	4/1/2014	1238.50	22.66	1215.84
DM-36	10/10/2014	1238.50	21.85	1216.65
DM-36	4/1/2015	1238.50	22.01	1216.49
DM-36	10/15/2015	1238.50	22.70	1215.80
DM-36	4/12/2016	1238.50	23.42	1215.08
DM-36	10/3/2016	1238.50	23.60	1214.90
DM-37	1/8/2010	1135.36	79.30	1056.06
DM-37	4/1/2010	1135.36	78.97	1056.39
DM-37	4/8/2010	1135.36	78.86	1056.50
DM-37	7/13/2010	1135.97	78.11	1056.86
DM-37	10/1/2010	1135.97	77.35	1058.62
DM-37	10/14/2010	1135.97	77.20	1058.77
DM-37	4/1/2011	1135.97	48.49	1087.48
DM-37	10/3/2011	1135.97	78.65	1057.32
DM-37	4/4/2012	1135.97	80.09	1055.88
DM-37	4/10/2012	1135.97	80.94	1055.03
DM-37	10/1/2012	1135.97	80.28	1055.69
DM-37	10/12/2012	1135.97	80.26	1055.71
DM-37	4/1/2013	1135.97	83.70	1052.27
DM-37	4/5/2013	1135.97	83.86	1052.11
DM-37	10/1/2013	1135.97	85.57	1050.40
DM-37	10/14/2013	1135.97	85.71	1050.26
DM-37	4/1/2014	1135.97	92.58	1043.39
DM-37	10/10/2014	1135.97	93.47	1042.50
DM-37	4/1/2015	1135.97	93.24	1042.73
DM-37	10/26/2015	1135.97	92.28	1043.69
DM-37	4/11/2016	1135.97	92.64	1043.33
DM-37	10/3/2016	1135.97	93.07	1042.90
DM-37	4/3/2017	1135.97	89.59	1046.38
DM-38	1/8/2010	1136.36	78.07	1058.29
DM-38	4/1/2010	1136.36	77.80	1058.56
DM-38	4/8/2010	1136.36	77.70	1058.66
DM-38	7/13/2010	1136.66	76.92	1059.74
DM-38	10/1/2010	1136.66	76.14	1060.52
DM-38	10/14/2010	1136.66	76.02	1060.64
DM-38	4/1/2011	1136.66	77.27	1059.39
DM-38	10/3/2011	1136.66	77.62	1059.04
DM-38	4/4/2012	1136.66	78.81	1057.85
DM-38	4/10/2012	1136.66	79.18	1057.48
DM-38	10/1/2012	1136.66	79.08	1057.58
DM-38	10/12/2012	1136.66	79.15	1057.51
DM-38	4/1/2013	1136.66	81.60	1055.06
DM-38	4/5/2013	1136.66	81.73	1054.93
DM-38	10/1/2013	1136.66	83.56	1053.10
DM-38	10/15/2013	1136.66	83.64	1053.02
DM-38	4/1/2014	1136.66	94.96	1041.70
DM-38	10/10/2014	1136.66	95.61	1041.05
DM-38	4/1/2015	1136.66	94.83	1041.83

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM-38	4/11/2016	1136.66	94.41	1042.25
DM-38	10/3/2016	1136.66	94.90	1041.76
DM-38	4/3/2017	1136.66	87.78	1048.88
DM-39	4/1/2010	1136.10	79.01	1057.09
DM-39	10/1/2010	1136.43	77.02	1059.41
DM-39	4/1/2011	1136.43	78.20	1058.23
DM-39	10/3/2011	1136.43	78.42	1058.01
DM-39	4/4/2012	1136.43	79.76	1056.67
DM-39	10/1/2012	1136.43	80.91	1055.52
DM-39	4/1/2013	1136.43	82.98	1053.45
DM-39	10/2/2013	1136.43	86.04	1050.39
DM-39	4/1/2014	1136.55	119.82	1016.73
DM-39	10/10/2014	1136.55	117.28	1019.27
DM-39	4/1/2015	1136.55	117.11	1019.44
DM-39	10/26/2015	1136.55	117.60	1018.95
DM-39	4/11/2016	1136.55	118.31	1018.24
DM-39	10/3/2016	1136.55	117.45	1019.10
DM-39	4/3/2017	1136.55	112.41	1024.14
DM-40	4/1/2010	1136.21	78.01	1058.20
DM-40	10/1/2010	1136.50	76.38	1060.12
DM-40	4/1/2011	1136.50	77.46	1059.04
DM-40	10/3/2011	1136.50	77.74	1058.76
DM-40	4/4/2012	1136.50	78.98	1057.52
DM-40	10/1/2012	1136.50	79.27	1057.23
DM-40	4/1/2013	1136.50	82.00	1054.50
DM-40	10/2/2013	1136.50	84.52	1051.98
DM-40	4/1/2014	1136.50	157.82	978.68
DM-40	10/10/2014	1136.50	160.14	976.36
DM-40	4/1/2015	1136.50	154.82	981.68
DM-40	10/26/2015	1136.50	142.84	993.66
DM-40	4/11/2016	1136.50	151.33	985.17
DM-40	10/3/2016	1136.50	148.14	988.36
DM-40	4/3/2017	1136.50	88.81	1047.69
DM-41	7/23/2012	1127.63	77.06	1050.57
DM-41	10/1/2012	1127.63	76.81	1050.82
DM-41	10/12/2012	1127.63	76.82	1050.98
DM-41	1/15/2013	1127.63	79.53	1048.10
DM-41	4/1/2013	1127.63	80.49	1047.14
DM-41	4/9/2013	1127.63	80.60	1047.03
DM-41	10/1/2013	1127.63	82.36	1045.27
DM-41	10/11/2013	1127.63	82.02	1045.61
DM-41	4/1/2014	1127.63	85.79	1041.84
DM-41	10/10/2014	1127.63	87.42	1040.21
DM-41	4/1/2015	1127.63	86.77	1040.86
DM-41	10/15/2015	1127.63	86.75	1040.88
DM-41	4/11/2016	1127.63	86.83	1040.80
DM-41	10/3/2016	1127.63	87.34	1040.29
DM-41	4/3/2017	1127.63	84.86	1042.77
DM-42	7/23/2012	1120.95	78.47	1042.48
DM-42	10/1/2012	1120.95	78.48	1042.47
DM-42	10/11/2012	1120.95	78.41	1042.54
DM-42	1/15/2013	1120.95	79.25	1041.70
DM-42	4/1/2013	1120.95	81.24	1039.71
DM-42	10/1/2013	1120.95	83.24	1037.71
DM-42	10/11/2013	1120.95	83.29	1037.66
DM-42	4/1/2014	1120.95	85.23	1035.72
DM-42	10/10/2014	1120.95	86.53	1034.42
DM-42	4/1/2015	1120.95	86.25	1034.70
DM-42	10/15/2015	1120.95	88.56	1032.39
DM-42	4/11/2016	1120.95	86.49	1034.46
DM-42	10/3/2016	1120.95	87.08	1033.87
DM-42	4/3/2017	1120.95	85.68	1035.27
DM-43A	12/29/2016	1121.24	89.56	1031.68
DM-43A	4/3/2017	1121.24	88.43	1032.81
DM-43B	12/29/2016	1121.19	86.59	1034.60
DM-43B	4/3/2017	1121.19	85.93	1035.26
DM-44A	12/29/2016	1117.58	90.20	1027.38
DM-44A	4/3/2017	1117.58	89.16	1028.42
DM-44B	12/29/2016	1117.56	90.44	1027.12
DM-44B	4/3/2017	1117.56	89.36	1028.20
DM505	1/14/1991	1137.87	62.22	1075.65
DM505	6/13/1991	1137.87	63.57	1074.30
DM505	6/27/1991	1137.87	63.08	1074.79
DM505	7/3/1991	1137.87	63.04	1074.83
DM505	7/5/1991	1137.87	63.02	1074.85
DM505	4/2/1992	1137.87	62.52	1075.35
DM505	11/12/1992	1137.87	57.74	1080.13
DM505	4/21/1993	1137.87	56.11	1081.76
DM505	10/5/1993	1137.87	54.59	1083.28
DM505	4/4/1994	1137.87	56.44	1081.43
DM505	8/2/1994	1137.87	60.55	1077.32
DM505	10/4/1994	1137.87	59.27	1078.60
DM505	11/1/1994	1137.87	59.40	1078.47
DM505	1/12/1995	1137.87	59.77	1078.10
DM505	4/10/1995	1137.87	59.61	1078.26
DM505	5/3/1995	1137.87	59.25	1078.62
DM505	7/10/1995	1137.87	58.38	1079.49
DM505	10/16/1995	1137.87	58.29	1079.58
DM505	1/19/1996	1137.87	58.95	1078.92
DM505	4/10/1996	1137.87	58.74	1079.13
DM505	7/1/1996	1137.87	61.47	1076.40
DM505	10/3/1996	1137.87	61.49	1076.38
DM505	10/17/1996	1137.87	64.35	1073.52
DM505	1/9/1997	1137.87	61.51	1076.36
DM505	4/2/1997	1137.87	63.92	1073.95
DM505	7/24/1997	1137.87	66.21	1071.66
DM505	9/18/2001	1137.87	69.18	1068.69
DM505	10/3/2002	1137.87	71.97	1065.90
DM505	4/23/2003	1137.87	75.60	1062.27
DM505	5/8/2003	1137.87	76.09	1061.78
DM505	5/21/2003	1137.87	76.15	1061.72
DM505	5/28/2003	1137.87	76.12	1061.75
DM505	6/4/2003	1137.87	76.24	1061.63
DM505	6/12/2003	1137.87	76.10	1061.77
DM505	6/18/2003	1137.87	76.20	1061.67
DM505	7/3/2003	1137.87	76.67	1061.20

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
DM505	7/29/2003	1137.87	77.45	1060.42
DM505	8/13/2003	1137.87	77.69	1060.18
DM505	9/3/2003	1137.87	78.05	1059.82
DM505	10/14/2003	1137.87	78.63	1059.24
DM505	11/5/2003	1137.87	79.01	1058.86
DM505	12/2/2003	1137.87	79.05	1058.82
DM505	9/2/2004	1137.87	78.21	1059.66
DM505	9/6/2005	1137.87	76.42	1061.45
DM505	7/17/2006	1137.87	75.00	1062.90
DM505	9/7/2006	1137.87	74.59	1063.28
DM505	10/20/2006	1137.87	74.32	1063.55
DM505	4/2/2007	1137.87	75.95	1061.92
DM505	4/4/2007	1137.87	75.98	1061.89
DM505	9/6/2007	1137.87	76.13	1061.74
DM505	10/1/2007	1137.87	76.13	1061.74
DM505	4/1/2008	1137.87	75.52	1062.35
DM505	4/3/2008	1137.87	75.57	1062.30
DM505	9/3/2008	1137.87	74.91	1062.96
DM505	10/15/2008	1137.87	74.56	1063.31
DM505	4/1/2009	1137.87	75.08	1062.79
DM505	4/7/2009	1137.87	75.04	1062.83
DM505	10/1/2009	1137.87	75.59	1062.28
DM505	10/20/2009	1137.87	75.68	1062.19
DM505	4/1/2010	1137.87	75.84	1062.03
DM505	4/5/2010	1137.87	75.84	1062.03
DM505	9/2/2010	1137.87	74.53	1063.34
DM505	10/1/2010	1137.87	74.24	1063.63
DM505	10/13/2010	1137.87	74.04	1063.83
DM505	4/1/2011	1137.87	75.26	1062.61
DM505	9/1/2011	1137.87	75.63	1062.24
DM505	10/3/2011	1137.87	75.77	1062.10
DM505	4/4/2012	1137.87	76.68	1061.19
DM505	4/9/2012	1137.87	76.73	1061.14
DM505	9/5/2012	1137.87	77.02	1060.85
DM505	10/1/2012	1137.87	77.17	1060.70
DM505	10/5/2012	1137.87	77.21	1060.66
DM505	4/1/2013	1137.87	78.83	1059.04
DM505	4/4/2013	1137.87	78.87	1059.00
DM505	10/1/2013	1137.87	80.83	1057.04
DM505	10/15/2013	1137.87	80.86	1057.01
DM505	4/1/2014	1137.87	84.14	1053.73
DM505	10/17/2014	1137.87	85.64	1052.23
DM505	4/1/2015	1137.87	85.36	1052.51
DM505	10/22/2015	1137.87	85.81	1052.06
DM505	4/11/2016	1137.87	85.84	1052.03
DM505	10/14/2016	1137.87	86.45	1051.42
DM505	4/3/2017	1137.87	84.76	1053.11
GM-01	12/5/1996	1232.00	13.88	1218.12
GM-01	12/18/1996	1232.00	13.75	1218.25
GM-01	3/4/1997	1232.00	13.71	1218.29
GM-01	3/13/1997	1232.00	13.47	1218.53
GM-01	6/20/1997	1232.00	14.05	1217.95
GM-01	7/17/1997	1232.00	14.22	1217.78
GM-01	10/1/1997	1232.00	13.61	1218.39
GM-01	12/29/1997	1232.00	13.72	1218.28
GM-01	3/2/1998	1232.00	12.68	1219.32
GM-01	3/9/1998	1232.00	12.79	1219.21
GM-01	6/11/1998	1232.00	13.14	1218.86
GM-01	9/3/1998	1232.00	13.40	1218.60
GM-01	9/17/1998	1232.00	13.31	1218.69
GM-01	12/30/1998	1232.00	13.47	1218.53
GM-01	3/25/1999	1232.00	14.17	1217.83
GM-01	6/16/1999	1232.00	14.39	1217.61
GM-01	9/21/1999	1232.00	14.07	1217.93
GM-01	1/5/2000	1232.00	14.36	1217.64
GM-01	3/2/2000	1232.00	14.61	1217.39
GM-01	6/7/2000	1232.00	14.47	1217.53
GM-01	9/27/2000	1232.00	14.73	1217.27
GM-01	10/5/2000	1232.00	14.71	1217.29
GM-01	6/7/2001	1232.00	13.81	1218.19
GM-01	10/23/2001	1232.00	14.44	1217.56
GM-01	11/8/2001	1232.00	14.65	1217.35
GM-01	1/8/2002	1232.00	14.19	1217.81
GM-01	4/1/2002	1232.00	14.61	1217.39
GM-01	4/9/2002	1232.00	14.79	1217.21
GM-01	7/8/2002	1232.00	15.19	1216.81
GM-01	10/3/2002	1232.00	15.12	1216.88
GM-01	10/16/2002	1232.00	14.97	1217.03
GM-01	1/6/2003	1232.00	15.26	1216.74
GM-01	4/2/2003	1232.00	14.81	1217.19
GM-01	7/1/2003	1232.00	15.71	1216.29
GM-01	10/3/2003	1232.00	15.67	1216.33
GM-01	10/10/2003	1232.00	15.81	1216.19
GM-01	4/1/2004	1232.00	15.90	1216.10
GM-01	4/6/2004	1232.00	15.69	1216.31
GM-01	10/1/2004	1232.00	16.61	1215.39
GM-01	10/6/2004	1232.00	16.74	1215.26
GM-01	4/4/2005	1232.00	15.24	1216.76
GM-01	10/3/2005	1232.00	16.14	1215.86
GM-01	10/11/2005	1232.00	15.94	1216.06
GM-01	4/5/2006	1232.00	16.49	1215.51
GM-01	10/5/2006	1232.00	16.90	1215.10
GM-01	10/13/2006	1232.00	16.94	1215.06
GM-01	4/3/2007	1232.00	17.02	1214.98
GM-01	10/1/2007	1232.00	17.38	1214.62
GM-01	4/1/2008	1232.00	16.57	1215.43

bgs: below ground surface
MSL: Mean Sea Level

Table 2
Historic Groundwater Level Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
GM-01	10/1/2008	1232.00	16.45	1215.55
GM-01	10/9/2008	1232.00	16.53	1215.47
GM-01	4/1/2009	1232.00	16.44	1215.56
GM-01	10/1/2009	1232.00	17.48	1214.52
GM-01	10/16/2009	1232.00	17.45	1214.55
GM-01	4/1/2010	1232.00	16.29	1215.71
GM-01	10/1/2010	1232.00	17.00	1215.00
GM-01	10/8/2010	1232.00	17.00	1215.00
GM-01	4/1/2011	1232.00	16.58	1215.42
GM-01	10/3/2011	1232.00	17.18	1214.82
GM-01	10/1/2012	1232.00	17.34	1214.66

Well Name	Date Measured	Measuring Point Elevation (feet above MSL)	Depth to Water (feet bgs)	Water Level Elevation (feet above MSL)
GM-01	10/4/2012	1232.00	17.38	1214.62
GM-01	4/3/2013	1232.00	17.36	1214.64
GM-01	10/1/2013	1232.00	17.94	1214.06
GM-01	4/1/2014	1232.00	18.04	1213.96
GM-01	10/10/2014	1232.00	17.06	1214.94
GM-01	4/1/2015	1232.00	17.41	1214.59
GM-01	10/20/2015	1232.00	17.98	1214.02
GM-01	4/12/2016	1232.00	18.52	1213.48
GM-01	10/3/2016	1232.00	18.37	1213.63
GM-01	11/3/2016	1232.00	18.20	1213.80

bgs: below ground surface
MSL: Mean Sea Level

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
COP-52	10/26/1988	P0	88Q4	<0.03	<0.07	<0.13	<0.03		2.3		12	<0.18
COP-52	11/13/1989	P0	89Q4	<0.2	1.8	1.1	<0.2		100		440	<0.2
COP-52	1/16/1991	P0	91Q1	<0.2	0.6	0.8	0.2		370		710	<0.2
COP-52	2/28/1991	P0	91Q1	<5	<5	<5	<5		320		760	<5
COP-52	4/11/1991	P0	91Q2	30	<10	<10	<10		210		580	<10
COP-52	6/24/1991	P0	91Q2	<0.2	0.7	1	<0.2		280		730	<0.2
COP-52	9/25/1991	P0	91Q3	<2	<2	<2	<2		350		650	<2
COP-52	12/6/1991	P0	91Q4	<0.2	1.7	0.9	<0.2		220		650	<0.2
COP-52	3/27/1992	P0	92Q1	<4	<4	<4	<4		300		890	<4
COP-52	7/2/1992	P0	92Q3	<5	<5	<5	<5		400		840	<5
COP-52	10/28/1992	P0	92Q4	<2	<2	<2	<2	3	630	<2	810	<2
COP-52	10/28/1992	D1	92Q4	<2	<2	<2	<2	<2	410	<2	730	<2
COP-52	10/6/1994	P0	94Q4	<12.5	<12.5	<12.5	<12.5	<12.5	180	<12.5	610	<12.5
COP-52	12/19/1994	P0	95Q1	<12.5	<12.5	<12.5	<12.5	<12.5	200	<12.5	840	<12.5
COP-52	12/19/1994	D1	95Q1	<12.5	<12.5	<12.5	<12.5	<12.5	210	<12.5	860	<12.5
COP-52	3/23/1995	P0	95Q2	<25	<25	<25	<25	<25	290	<25	1200	<25
COP-52	6/27/1995	P0	95Q3	<25	<25	<25	<25	<25	260	<25	1800	<25
COP-52	6/27/1995	D1	95Q3	<25	<25	<25	<25	<25	230	<25	1600	<25
COP-52	10/3/1995	P0	95Q4	<25	<25	<25	<25	<25	100	<25	790	<25
COP-52	1/8/1996	P0	96Q1	<25	<25	<25	<25	<25	54	<25	940	<25
COP-52	3/22/1996	P0	96Q2	<25	<25	<25	<25	<25	160	<25	1600	<25
COP-52	6/13/1996	P0	96Q3	<25	<25	<25	<25	<25	150	<25	1800	<25
COP-52	9/24/1996	P0	96Q3	<25	<25	<25	<25	<25	200	<25	1900	<25
COP-52	12/18/1996	P0	97Q1	<25	<25	<25	<25	<25	150	<25	1600	<25
COP-52	3/13/1997	P0	97Q2	<10	<10	<10	<10	<10	170	<10	1400	<10
COP-52	7/18/1997	P0	97Q3	<50	<50	<50	<50	<50	82	<50	1200	<50
COP-52	10/1/1997	P0	97Q4	<25	<25	<25	<25	25	90	<25	2000	<25
COP-52	3/9/1998	P0	98Q2	<25		<25	<25	<25	47	<25	1000	<25
COP-52	9/17/1998	P0	98Q4	<12		<12	<12	<12	30	<12	710	<12
COP-52	3/25/1999	P0	99Q2	<25		<25	<25	<25	30	<25	660	<25
COP-52	9/23/1999	P0	99Q4	<12		<12	<12	<12	27	<12	430	<12
COP-52	3/2/2000	P0	00Q2	<5		<5	<5	5	30	<5	330	<5
COP-52	10/6/2000	P0	00Q4	<2.5		<2.5	<2.5	2.9	21	<2.5	140	<2.5
COP-52	4/12/2001	P0	01Q2	<0.5		<0.5	<0.5	2.4	23	<0.5	110	<0.5
COP-52	11/9/2001	P0	01Q4	<0.5		<0.5	<0.5	2.1	26	<0.5	91	<0.5
COP-52	11/9/2001	D1	01Q4	<0.5		<0.5	<0.5	2	24	<0.5	89	<0.5
COP-52	4/9/2002	P0	02Q2	<0.5		<0.5	<0.5	1.4	22	<0.5	54	<0.5
COP-52	10/16/2002	P0	02Q4	<0.5		<0.5	<0.5	1.2	21	<0.5	46	<0.5
COP-52	4/9/2003	P0	03Q2	<0.5		<0.5	<0.5	0.67	11	<0.5	27	<0.5
COP-52	10/10/2003	P0	03Q4	<0.5		<0.5	<0.5	0.83	12	<0.5	27	<0.5
COP-52	4/6/2004	P0	04Q2	<0.5		<0.5	<0.5	<0.5	3.8	<0.5	8.6	<0.5
COP-52	10/6/2004	P0	04Q4	<0.5		<0.5	<0.5	0.57	7.5	<0.5	17	<0.5
COP-52	10/11/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	3.6	<0.5	12	<0.5
COP-52	10/13/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	0.93	<0.5	4.5	<0.5
COP-52	10/8/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	2.3	<0.5
COP-52	10/9/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	9.1	<0.5
COP-52	10/16/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
COP-52	10/8/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5
COP-52	10/7/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5
COP-52	10/4/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
COP-52	10/9/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
COP-52	10/17/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
COP-52	10/23/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
COP-52	10/10/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	6/5/1985	P0	85Q3	8.9	<5	<5	<5		<5	<5	99	<10

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-01	6/5/1985	D1	85Q3	5.8	<5	<5	<5		<5	<5	73	<10
DM-01	7/11/1985	P0	85Q3	<0.5	<0.5	<0.5	<0.5		<0.5		7.5	
DM-01	8/8/1985	P0	85Q3	4.7	<1	<1	<1		2.8		29	
DM-01	10/23/1985	P0	85Q4	24	<0.5	5.4	<0.5		13		37	<1
DM-01	11/26/1985	P0	85Q4	38	<0.5	8.7	<0.5		30		59	<1
DM-01	5/6/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		0.9	<1
DM-01	6/11/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<1
DM-01	11/2/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		1.2	<0.2
DM-01	11/9/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		1.4	<0.2
DM-01	1/15/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-01	4/9/1991	P0	91Q2	58	<1	6	<1		9		<1	<1
DM-01	6/20/1991	P0	91Q2	<0.2	<0.2	0.8	<0.2		<0.2		<0.2	<0.2
DM-01	9/20/1991	P0	91Q3	<0.2	<0.2	<0.2	<0.2		<0.2		0.4	<0.2
DM-01	3/24/1992	P0	92Q1	3.6	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-01	6/29/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-01	10/29/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-01	1/15/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-01	4/9/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
DM-01	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-01	9/7/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-01	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-01	12/22/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	4/13/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	6/27/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	6/27/1994	D1	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	9/19/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	12/12/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	9/20/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	3/13/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	6/3/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	6/3/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	9/9/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	3/7/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	7/8/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-01	9/22/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02A	6/5/1985	P0	85Q3	13	<5	8.2	<5		6.6	14	150	<10
DM-02A	7/11/1985	P0	85Q3	<0.5	<0.5	<0.5	<0.5		<0.5		4	
DM-02A	8/8/1985	P0	85Q3	<5	<5	<5	<5		<5		14	
DM-02A	8/8/1985	D1	85Q3	<5	<5	<5	<5		<5		9.1	
DM-02A	10/23/1985	P0	85Q4	31	<0.5	7.9	<0.5		33		69	<1
DM-02A	11/26/1985	P0	85Q4	37	<0.5	9.8	<0.5		42		78	<1
DM-02A	5/5/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		1.7		13	<1
DM-02A	6/11/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		0.8		9.3	<1
DM-02A	10/26/1988	P0	88Q4	<0.03	<0.07	<0.13	<0.03		1.4		11	<0.18
DM-02A	11/2/1989	P0	89Q4	<0.2	<0.2	0.2	<0.2		5.5		160	<0.2
DM-02A	11/8/1989	P0	89Q4	<0.2	<0.2	<0.2	0.5		4.8		230	<0.2
DM-02A	1/14/1991	P0	91Q1	0.6	<0.2	<0.2	<0.2		1.2		21.2	<0.2
DM-02A	6/20/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		0.4		14.9	<0.2
DM-02A	9/23/1991	P0	91Q3	0.9	<0.2	<0.2	<0.2		1.4		21.4	<0.2
DM-02A	12/5/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		2.2		17	<0.2
DM-02A	3/26/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		2.3		17	<0.2
DM-02A	7/1/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		2.9		26	<0.2
DM-02A	7/1/1992	D1	92Q3	<0.2	<0.2	<0.2	<0.2		2.1		21	<0.2
DM-02A	10/15/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	1.7	2.7	<0.2	19.2	<0.2
DM-02A	1/20/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	8	<0.2

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-02A	4/13/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	2	<0.2
DM-02A	4/13/1993	D1	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	1.6	<0.2
DM-02A	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-02A	9/7/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	2.2	<0.2
DM-02A	10/11/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	3.4	<0.2	<0.2	<0.2
DM-02A	12/22/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02A	4/13/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-02A	6/22/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5
DM-02A	9/20/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	6.2	<0.5
DM-02A	9/20/1994	D1	94Q4	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	4.2	<0.5
DM-02A	12/15/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	5.8	<0.5
DM-02A	3/21/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	4.7	<0.5
DM-02A	3/21/1995	D1	95Q2	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	3.8	<0.5
DM-02A	9/21/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	2	0.9	<0.5	7.5	<0.5
DM-02A	3/19/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	5.5	1.5	<0.5	19	<0.5
DM-02A	3/19/1996	D1	96Q2	<0.5	<0.5	<0.5	<0.5	5.5	1.4	<0.5	21	<0.5
DM-02A	6/3/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	7.4	2.6	<0.5	31	<0.5
DM-02A	9/23/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	2.1	1.5	<0.5	5	<0.5
DM-02A	3/10/1997	P0	97Q2	<0.5	<0.5	<0.5 UJ	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02A	7/16/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
DM-02A	9/24/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-02A	9/17/1998	P0	98Q4	<0.5		<0.5	<0.5	0.59	<0.5	<0.5	2.5	<0.5
DM-02A	9/22/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.75	<0.5
DM-02A	10/4/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-02A	11/6/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02A	10/10/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02A	10/8/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02A	10/4/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
DM-02B	6/5/1985	P0	85Q3	9.5	<5	<5	<5		5.1	<5	110	<10
DM-02B	7/11/1985	P0	85Q3	<0.5	<0.5	<0.5	<0.5		<0.5		4.2	
DM-02B	8/8/1985	P0	85Q3	3.4	<1	<1	<1		3		30	
DM-02B	10/23/1985	P0	85Q4	42	<0.5	12	<0.5		33		70	<1
DM-02B	11/26/1985	P0	85Q4	33	<0.5	8.9	<0.5		40		70	<1
DM-02B	5/5/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		2.5	<1
DM-02B	6/11/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		1.6	<1
DM-02B	1/13/1987	P0	87Q1	<0.5	<0.5	<0.5	<0.5		<0.5		14	<1
DM-02B	2/4/1987	P0	87Q1	<0.5	<0.5	<0.5	<0.5		<0.5		5.6	<1
DM-02B	7/13/1989	P0	89Q3	<0.2	<0.2	1.2	<0.2		0.2		3.3	<0.2
DM-02B	11/1/1989	P0	89Q4	<0.2	<0.2	0.6	<0.2		0.3		6	<0.2
DM-02B	11/9/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		2	<0.2
DM-02B	1/15/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		0.4		2.8	<0.2
DM-02B	3/25/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-02B	6/30/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		0.9	<0.2
DM-02B	10/30/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2
DM-02B	1/19/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2
DM-02B	4/12/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2
DM-02B	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	<0.2
DM-02B	10/8/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2
DM-02B	12/22/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	12/22/1993	D1	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	4/13/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	6/21/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	9/20/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-02B	12/15/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-02B	3/21/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-02B	9/20/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	3/19/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	6/3/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	9/19/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	3/7/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
DM-02B	7/9/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	9/22/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	9/17/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	9/22/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-02B	10/13/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	14 J	<0.5
DM-02B	10/13/2000	D1	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 UJ	<0.5
DM-02B	11/6/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	10/11/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	10/8/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-02B	10/4/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	6/5/1985	P0	85Q3	14	<5	<5	<5		5.1	<5	140	<10
DM-03	7/11/1985	P0	85Q3	0.7	<0.5	<0.5	<0.5		<0.5		15	
DM-03	8/8/1985	P0	85Q3	2.5	<1	<1	<1		2.3		21	
DM-03	10/23/1985	P0	85Q4	52	<0.5	16	<0.5		21		39	<1
DM-03	10/23/1985	D1	85Q4	41	<0.5	11	<0.5		22		39	<1
DM-03	11/26/1985	P0	85Q4	48	<0.5	17	<0.5		43		84	<1
DM-03	5/6/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<1
DM-03	6/11/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<1
DM-03	11/2/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		3	<0.2
DM-03	11/9/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		0.9	<0.2
DM-03	1/15/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		0.4		1.6	<0.2
DM-03	3/25/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-03	6/30/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-03	10/27/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-03	1/15/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-03	4/8/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-03	7/13/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-03	9/7/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-03	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-03	12/21/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	4/12/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	6/21/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	9/19/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	12/12/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	3/21/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	9/21/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	3/13/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	6/3/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	9/9/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	3/6/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	3/6/1997	D1	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	7/8/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	9/23/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	9/17/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	9/22/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	10/4/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	10/4/2000	D1	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	11/2/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	10/10/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	10/8/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-03	10/4/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-03	10/4/2004	D1	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	6/5/1985	P0	85Q3	<5	<5	<5	<5		<5	<5	100	<10
DM-04	7/11/1985	P0	85Q3	<0.5	<0.5	<0.5	<0.5		<0.5		2.8	
DM-04	7/11/1985	D1	85Q3	1.2	<0.5	<0.5	<0.5		<0.5		7.4	
DM-04	8/8/1985	P0	85Q3	<5	<5	<5	<5		<5		27	
DM-04	10/23/1985	P0	85Q4	21	<0.5	5.5	<0.5		19		34	<1
DM-04	11/26/1985	P0	85Q4	23	<0.5	9.6	<0.5		33		49	<1
DM-04	5/5/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		1.1	<1
DM-04	6/12/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<1
DM-04	11/2/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		2.4	<0.2
DM-04	11/9/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		0.9	<0.2
DM-04	1/15/1991	P0	91Q1	0.3	<0.2	<0.2	<0.2		1		3.7	<0.2
DM-04	4/10/1991	P0	91Q2	33	<1	2	<1		7		<1	<1
DM-04	6/20/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		0.3	<0.2
DM-04	9/23/1991	P0	91Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-04	3/24/1992	P0	92Q1	1.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-04	6/30/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-04	10/27/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-04	1/15/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-04	4/12/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-04	7/13/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-04	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-04	12/21/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	4/14/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	6/22/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	9/20/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	12/15/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	9/28/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	9/10/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-04	10/1/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	5/6/1986	P0	86Q2	<50	<50	<50	<50		<50	<50	2400	<100
DM-05	5/6/1986	D1	86Q2	<50	<50	<50	<50		<50	<50	2600	<100
DM-05	6/12/1986	P0	86Q2	<20	<20	<20	<20		<20		1300	<40
DM-05	6/12/1986	D1	86Q2	<20	<20	<20	<20		<20		1000	<40
DM-05	1/13/1987	P0	87Q1	<5	<5	<5	<5		<5		440	<10
DM-05	2/4/1987	P0	87Q1	<20	<20	<20	<20		<20		700	<100
DM-05	10/27/1988	P0	88Q4	<0.3	<0.7	<1.3	<0.3		3.1		57	<1.8
DM-05	7/13/1989	P0	89Q3	<10	<10	140	<10		10		60	<10
DM-05	7/13/1989	D1	89Q3	<10	<10	140	<10		<10		60	<10
DM-05	11/1/1989	P0	89Q4	<2	11	100	<2		1		55	<2
DM-05	11/1/1989	D1	89Q4	<5	5	90	<5		1.2		60	<5
DM-05	11/10/1989	P0	89Q4	<0.2	6.5	85	<0.2		0.6		37.3	<0.2
DM-05	11/10/1989	D1	89Q4	<0.2	7	67	<0.2		0.8		45	<0.2
DM-05	1/16/1991	P0	91Q1	<0.2	0.9	<0.2	<0.2		1		12.2	<0.2
DM-05	1/16/1991	D1	91Q1	<0.2	0.8	<0.2	<0.2		0.7		7.8	<0.2
DM-05	2/28/1991	P0	91Q1	1.1	<0.2	<0.2	<0.2		1.9		3.8	<0.2
DM-05	4/11/1991	P0	91Q2	28	0.5	3.4	<0.2		13		20	<0.2
DM-05	6/21/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		1	<0.2
DM-05	9/24/1991	P0	91Q3	<0.2	<0.2	0.6	<0.2		0.3		2.5	<0.2
DM-05	12/6/1991	P0	91Q4	<0.2	<0.2	0.9	<0.2		<0.2		2.2	<0.2
DM-05	3/26/1992	P0	92Q1	<0.2	<0.2	1.6	<0.2		0.3		3.7	<0.2
DM-05	7/1/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-05	9/8/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2
DM-05	10/29/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.6	<0.2

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-05	1/19/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1	<0.2
DM-05	4/12/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2
DM-05	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-05	7/14/1993	D1	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-05	10/8/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2
DM-05	12/21/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-05	4/15/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
DM-05	6/22/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	9/20/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
DM-05	12/16/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-05	3/21/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
DM-05	9/21/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	9/21/1995	D1	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	3/18/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	9/10/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	3/6/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-05	9/25/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5
DM-05	9/16/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	9/21/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	10/5/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5
DM-05	11/1/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-05	10/11/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-05	10/8/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-05	10/5/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-05	10/6/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-05	10/13/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.87	<0.5
DM-05	10/4/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	1.4	<0.5
DM-05	10/7/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-05	10/12/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.71	<0.5
DM-05	10/6/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.94	<0.5
DM-05	10/6/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5
DM-05	10/8/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-05	10/8/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.87	<0.5
DM-06	5/6/1986	P0	86Q2	<5	<5	<5	<5		1.6	20	140	<10
DM-06	6/12/1986	P0	86Q2	<2	<2	<2	<2		<2		140	<4
DM-06	1/13/1987	P0	87Q1	<5	<5	<5	<5		<5		270	<10
DM-06	2/4/1987	P0	87Q1	<10	<10	<10	<10		<10		560	<20
DM-06	10/26/1988	P0	88Q4	<0.3	<0.7	<1.3	<0.3		2.3		130	<1.8
DM-06	7/13/1989	P0	89Q3	<10	<10	<10	<10		10		490	<10
DM-06	11/2/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		7		420	<0.2
DM-06	11/8/1989	P0	89Q4	<0.2	0.7	0.5	<0.2		9.9		500	<0.2
DM-06	1/16/1991	P0	91Q1	<0.2	0.3	<0.2	<0.2		16.8		320	<0.2
DM-06	2/28/1991	P0	91Q1	<5	<5	<5	<5		13		250	<5
DM-06	4/11/1991	P0	91Q2	1.9	<2	0.2	<2		2.4		28	<2
DM-06	6/24/1991	P0	91Q2	<0.2	0.4	<0.2	0.2		22.8		290	<0.2
DM-06	9/25/1991	P0	91Q3	<0.2	0.3	<0.2	0.3		45.3		310	<0.2
DM-06	12/6/1991	P0	91Q4	<0.2	0.4	0.3	<0.2		39		300	<0.2
DM-06	3/27/1992	P0	92Q1	<4	<4	<4	<4		55		440	<4
DM-06	7/2/1992	P0	92Q3	<2	<2	<2	<2		110		550	<2
DM-06	7/2/1992	D1	92Q3	<2	<2	<2	<2		84		500	<2
DM-06	10/28/1992	P0	92Q4	<2	<2	<2	<2	10	190	<2	690	<2
DM-06	10/6/1994	P0	94Q4	<0.5	<0.5	0.8	<0.5	9.8	96	<0.5	810	<0.5
DM-06	12/19/1994	P0	95Q1	<12.5	<12.5	<12.5	<12.5	21	82	<12.5	1000	<12.5
DM-06	3/23/1995	P0	95Q2	<25	<25	<25	<25	<25	94	<25	1100	<25
DM-06	6/27/1995	P0	95Q3	<25	<25	<25	<25	<25	140	<25	1100	<25

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-06	10/3/1995	P0	95Q4	<25	<25	<25	<25	<25	110	<25	570	<25
DM-06	1/8/1996	P0	96Q1	<5	<5	<5	<5	<5	64	<5	340	<5
DM-06	3/22/1996	P0	96Q2	<10	<10	<10	<10	<10	140	<10	510	<10
DM-06	6/13/1996	P0	96Q3	<10	<10	<10	<10	<10	120	<10	470	<10
DM-06	9/24/1996	P0	96Q3	<5	<5	<5	<5	<5	140	<5	440	<5
DM-06	12/18/1996	P0	97Q1	<5	<5	<5	<5	<5	180	<5	500	<5
DM-06	3/12/1997	P0	97Q2	<5	<5	<5	<5	<5	150	<5	420	<5
DM-06	3/12/1997	D1	97Q2	<5	<5	<5	<5	<5	160	<5	430	<5
DM-06	7/17/1997	P0	97Q3	<25	<25	<25	<25	<25	210	<25	730	<25
DM-06	7/17/1997	D1	97Q3	<25	<25	<25	<25	<25	180	<25	580	<25
DM-06	9/29/1997	P0	97Q4	<25	<25	<25	<25	<25	170 J	<25	720 J	<25
DM-06	3/9/1998	P0	98Q2	<12		<12	<12	<12	130	<12	910	<12
DM-06	9/17/1998	P0	98Q4	<12		<12	<12	<12	54	<12	590	<12
DM-06	3/25/1999	P0	99Q2	<25		<25	<25	<25	55	<25	990	<25
DM-06	9/21/1999	P0	99Q4	<25		<25	<25	<25	47	<25	1100	<25
DM-06	3/2/2000	P0	00Q2	<25		<25	<25	<25	40	<25	1100	<25
DM-06	10/2/2000	P0	00Q4	<12		<12	<12	<12	<12	<12	560	<12
DM-06	3/27/2001	P0	01Q2	<0.5		1.2	<0.5	1.3	4.5	<0.5	95	<0.5
DM-06	11/8/2001	P0	01Q4	<0.5		<0.5	<0.5	0.83	1.8	<0.5	55	<0.5
DM-06	4/9/2002	P0	02Q2	<0.5		0.66	<0.5	1.4	2.5	<0.5	90	<0.5
DM-06	10/16/2002	P0	02Q4	<0.5		0.53	<0.5	1.4	2.6	<0.5	75	<0.5
DM-06	10/16/2002	D1	02Q4	<0.5		0.53	<0.5	1.5	2.6	<0.5	76	<0.5
DM-06	4/9/2003	P0	03Q2	<0.5		<0.5	<0.5	1.6	4	<0.5	56	<0.5
DM-06	10/10/2003	P0	03Q4	<0.5		<0.5	<0.5	1	2.5	<0.5	31	<0.5
DM-06	10/6/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	9.2	<0.5
DM-06	10/11/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.4	<0.5
DM-06	10/13/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	4.9	<0.5
DM-06	10/8/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	3.7	<0.5
DM-06	10/9/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5
DM-06	10/9/2008	D1	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5
DM-06	10/16/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-06	10/8/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-06	10/7/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-06	10/4/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-06	10/4/2012	D1	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-06	10/9/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-06	10/9/2013	D1	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	5/6/1986	P0	86Q2	<5	<5	<5	<5		<5	<5	<5	<10
DM-07	6/12/1986	P0	86Q2	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<1
DM-07	1/12/1987	P0	87Q1	<0.5	<0.5	<0.5	<0.5		<0.5		3	<1
DM-07	2/4/1987	P0	87Q1	<0.5	<0.5	<0.5	<0.5		<0.5		1.3	<1
DM-07	10/26/1988	P0	88Q4	<0.03	<0.07	<0.13	<0.03		<0.03		6.9	<0.18
DM-07	7/12/1989	P0	89Q3	<0.2	<0.2	<0.2	<0.2		<0.2		0.5	<0.2
DM-07	10/31/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-07	11/7/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		0.6	<0.2
DM-07	1/11/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		0.6		2.4	<0.2
DM-07	12/4/1991	P0	91Q4	<0.2	0.6	<0.2	<0.2		<0.2		<0.2	<0.2
DM-07	3/25/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		0.3	<0.2
DM-07	6/30/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-07	10/28/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	<0.2
DM-07	1/19/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-07	4/9/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-07	7/13/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-07	10/6/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-07	12/20/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-07	4/14/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	6/20/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	9/20/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	12/15/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	9/22/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	3/14/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	9/10/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	9/10/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-07	9/23/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-08	1/12/1987	P0	87Q1	1.6	<0.5	<0.5	<0.5		1		8.7	<1
DM-08	2/3/1987	P0	87Q1	<50	<50	<50	<50		<50		<50	<100
DM-08	10/25/1988	P0	88Q4	<0.03	<0.07	<0.13	<0.03		<0.03		<0.12	<0.18
DM-08	7/12/1989	P0	89Q3	<0.2	<0.2	<0.2	<0.2		<0.2		0.8	<0.2
DM-08	10/31/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-08	11/7/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		0.6	<0.2
DM-08	1/10/1991	P0	91Q1	<0.2	0.9	<0.2	<0.2		0.5		2.5	<0.2
DM-08	1/14/1991	P0	91Q1	0.5	<0.2	<0.2	<0.2		1.2		5.1	<0.2
DM-08	12/5/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-08	12/5/1991	D1	91Q4	<0.2	<0.2	<0.2	<0.2		1.8		15	<0.2
DM-08	3/26/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-08	7/1/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		0.6	<0.2
DM-08	10/14/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-08	1/19/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-08	4/9/1993	P0	93Q2	<0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-08	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
DM-08	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-08	12/22/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-08	4/14/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
DM-08	6/23/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5
DM-08	9/21/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-08	12/12/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-08	9/26/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-08	9/19/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-08	9/23/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
DM-08	2/9/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-09	1/12/1987	P0	87Q1	4.4	<0.5	<0.5	<0.5		1.4		18	<1
DM-09	1/12/1987	D1	87Q1	2.6	<0.5	<0.5	<0.5		1		13	<1
DM-09	2/3/1987	P0	87Q1	0.6	<0.5	<0.5	<0.5		<0.5		3.1	<1
DM-09	10/25/1988	P0	88Q4	<0.03	<0.07	<0.13	<0.03		<0.03		5.9	<0.18
DM-09	7/12/1989	P0	89Q3	<0.2	<0.2	<0.2	<0.2		<0.2		4.4	<0.2
DM-09	10/31/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		5	<0.2
DM-09	11/7/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		3.3	<0.2
DM-09	1/10/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		0.7		4.4	<0.2
DM-09	1/14/1991	P0	91Q1	0.6	<0.2	<0.2	<0.2		1.5		7.3	<0.2
DM-09	12/4/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		2.7	<0.2
DM-09	3/25/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		2	<0.2
DM-09	7/1/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		3.5	<0.2
DM-09	10/14/1992	P0	92Q4	0.2	<0.2	<0.2	<0.2	1	<0.2	<0.2	1.9	<0.2
DM-09	1/20/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2	<0.2
DM-09	1/20/1993	D1	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2	<0.2
DM-09	4/13/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	0.8	<0.2	<0.2	1.9	<0.2
DM-09	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	1.3	<0.2
DM-09	10/8/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2
DM-09	10/8/1993	D1	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1	<0.2
DM-09	12/23/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	1.9	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-09	4/15/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	2.6	<0.5
DM-09	6/23/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	3.4	<0.5
DM-09	9/21/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	2.7	<0.5
DM-09	9/21/1994	D1	94Q4	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	2.8	<0.5
DM-09	12/15/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	2.3	<0.5
DM-09	3/22/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	3	<0.5
DM-09	3/22/1995	D1	95Q2	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	3.3	<0.5
DM-09	6/26/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	3.6	<0.5
DM-09	9/27/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	3.6	<0.5
DM-09	9/27/1995	D1	95Q4	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	3.7	<0.5
DM-09	1/4/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	5.2	<0.5
DM-09	3/19/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	3	<0.5
DM-09	6/11/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	3.9	<0.5
DM-09	9/20/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	4.5	<0.5
DM-09	12/16/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	3.2	<0.5
DM-09	12/16/1996	D1	97Q1	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	3.1	<0.5
DM-09	3/10/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	2.8	<0.5
DM-09	7/14/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	3.5	<0.5
DM-09	9/25/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	3.5	<0.5
DM-09	9/14/1998	P0	98Q4	<0.5		<0.5	<0.5	1.4	<0.5	<0.5	2.9	<0.5
DM-09	9/21/1999	P0	99Q4	<0.5		<0.5	<0.5	1.3	<0.5	<0.5	3.5	<0.5
DM-09	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	1.2	<0.5	<0.5	3.4	<0.5
DM-09	11/2/2001	P0	01Q4	<0.5		<0.5	<0.5	1.5	<0.5	<0.5	4.2	<0.5
DM-09	10/15/2002	P0	02Q4	<0.5		<0.5	<0.5	1.6	<0.5	<0.5	6	<0.5
DM-09	10/9/2003	P0	03Q4	<0.5		<0.5	<0.5	1.7	<0.5	<0.5	7.9	<0.5
DM-09	4/5/2004	P0	04Q2	<0.5		<0.5	<0.5	2.2	<0.5	<0.5	10	<0.5
DM-09	4/5/2004	D1	04Q2	<0.5		<0.5	<0.5	2.3	<0.5	<0.5	10	<0.5
DM-09	10/5/2004	P0	04Q4	<0.5		<0.5	<0.5	2.3	<0.5	<0.5	11	<0.5
DM-09	4/6/2005	P0	05Q2	<0.5		<0.5	<0.5	2.8	<0.5	<0.5	12	<0.5
DM-09	10/10/2005	P0	05Q4	<0.5		<0.5	<0.5	3.1	<0.5	<0.5	13	<0.5
DM-09	4/10/2006	P0	06Q2	<0.5		<0.5	<0.5	4.1	<0.5	<0.5	17	<0.5
DM-09	10/12/2006	P0	06Q4	<0.5		<0.5	<0.5	2.7	<0.5	<0.5	12	<0.5
DM-09	4/5/2007	P0	07Q2	<0.5		<0.5	<0.5	3.3	<0.5	<0.5	14	<0.5
DM-09	10/5/2007	P0	07Q4	<0.5		0.53	<1	3	<0.5	<0.5	13	<0.5
DM-09	10/5/2007	D1	07Q4	<0.5		<0.5	<1	3.1	<0.5	<0.5	13	<0.5
DM-09	4/7/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	2.8	0.61	<0.5	13	<0.5
DM-09	4/7/2008	D1	08Q2	<0.5	<0.5	<0.5	<0.5	2.4	0.56	<0.5	12	<0.5
DM-09	10/7/2008	P0	08Q4	<0.5	<0.5	0.88	<0.5	2.2	0.78	<0.5	11	<0.5
DM-09	4/8/2009	P0	09Q2	<0.5	<0.5	1.3	<0.5	2	1.2	<0.5	10	<0.5
DM-09	10/12/2009	P0	09Q4	<0.5	<0.5	1.2	<0.5	1.6	1.7	<0.5	11	<0.5
DM-09	4/6/2010	P0	10Q2	<0.5	<0.5	1.5	<0.5	2	2.6	<0.5	13	<0.5
DM-09	10/7/2010	P0	10Q4	<0.5	0.53	<0.5	<0.5	2.3	2.7	<0.5	16	<0.5
DM-09	4/6/2011	P0	11Q2	<0.5	<0.5	2.2	<0.5	2.5	3.9	<0.5	19	<0.5
DM-09	10/6/2011	P0	11Q4	<0.5	0.57	2.2	<0.5	3	3.7	<0.5	22	<0.5
DM-09	4/11/2012	P0	12Q2	<0.5	0.64	2.9	<0.5	3.7	4.7	<0.5	25.9	<0.5
DM-09	10/8/2012	P0	12Q4	<0.5	<0.5	1.9	<0.5	2.1	2.6	<0.5	14.1	<0.5
DM-09	10/8/2012	D1	12Q4	<0.5	<0.5	2.2	<0.5	2.2	3.4	<0.5	17.1	<0.5
DM-09	4/4/2013	P0	13Q2	<0.5	<0.5	1.9	<0.5	1.6	2.3	<0.5	11.7	<0.5
DM-09	10/4/2013	P0	13Q4	<0.5	<0.5	0.65	<0.5	0.54	1.6	<0.5	45.1	<0.5
DM-09	4/4/2014	P0	14Q2	<0.5	<0.5	1.1	<0.5	0.99	1.3	<0.5	7.9	<0.5
DM-09	10/16/2014	P0	14Q4	<0.5	<0.5	1	<0.5	1	0.87	<0.5	7.1	<0.5
DM-09	4/6/2015	P0	15Q2	<0.5	<0.5	0.7	<0.5	0.92	0.55	<0.5	5.8	<0.5
DM-09	10/20/2015	P0	15Q4	<0.5	<0.5	0.55	<0.5	0.77	<0.5	<0.5	5	<0.5
DM-09	4/18/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-09	10/10/2016	D1	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1 J	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-09	10/10/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.98	<0.5
DM-10	1/13/1987	P0	87Q1	0.7	<0.5	<0.5	<0.5		1.9		80	<1
DM-10	2/3/1987	P0	87Q1	<5	<5	<5	<5		<5		120	<10
DM-10	2/3/1987	D1	87Q1	<5	<5	<5	<5		<5		130	<10
DM-10	10/26/1988	P0	88Q4	<0.3	<0.7	<1.3	<0.3		16		110	<1.8
DM-10	10/26/1988	D1	88Q4	<0.3	<0.7	<1.3	<0.3		6.6		89	<1.8
DM-10	7/13/1989	P0	89Q3	<0.2	<0.2	<0.2	<0.2		1.8		100	<0.2
DM-10	11/1/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		0.5		23.2	<0.2
DM-10	11/8/1989	P0	89Q4	2	<2	<2	<2		5		110	<2
DM-10	1/16/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		5.1		110	<0.2
DM-10	6/21/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		1.4		130	<0.2
DM-10	9/24/1991	P0	91Q3	<0.2	0.8	<0.2	0.3		7.3		210	<0.2
DM-10	12/6/1991	P0	91Q4	<0.2	0.3	0.2	0.2		3.1		95	<0.2
DM-10	3/27/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		2.5		26	<0.2
DM-10	7/2/1992	P0	92Q3	<0.2	<0.2	<0.2	0.3		1.4		70	<0.2
DM-10	10/15/1992	P0	92Q4	1.6	<0.4	0.5	<0.4	<0.4	2.8	<0.4	81	<0.4
DM-10	1/20/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	2	<0.2	104	<0.2
DM-10	1/20/1993	D1	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	2	<0.2	103	<0.2
DM-10	4/14/1993	P0	93Q2	<0.4	<0.4	<0.4	<0.4	<0.4	1	<0.4	53	<0.4
DM-10	7/15/1993	P0	93Q3	<1	<1	<1	<1	<1	1	<1	66	<1
DM-10	10/11/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	68	<0.2
DM-10	12/23/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	1.3	4.1	<0.5	150	<0.5
DM-10	4/15/1994	P0	94Q2	<1	<1	<1	<1	<1	1.9	<1	70	<1
DM-10	4/15/1994	D1	94Q2	<1	<1	<1	<1	<1	1.9	<1	79	<1
DM-10	6/24/1994	P0	94Q3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	190	<2.5
DM-10	9/21/1994	P0	94Q4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	120	<2.5
DM-10	12/19/1994	P0	95Q1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	54	<2.5
DM-10	12/19/1994	D1	95Q1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	58	<2.5
DM-10	3/22/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	60	<0.5
DM-10	6/26/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	30	<0.5
DM-10	6/26/1995	D1	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	26	<0.5
DM-10	9/27/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	28	<0.5
DM-10	1/5/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	28	<0.5
DM-10	3/22/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	20	<0.5
DM-10	6/12/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	20	<0.5
DM-10	9/20/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	21	<0.5
DM-10	12/17/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5
DM-10	3/11/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	43	<0.5
DM-10	7/14/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-10	7/14/1997	D1	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.5
DM-10	9/25/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	14	<0.5
DM-10	9/14/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	8.2	<0.5
DM-10	9/14/1998	D1	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.8	<0.5
DM-10	9/22/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5
DM-10	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5
DM-10	11/8/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	0.52	<0.5	22	<0.5
DM-10	11/8/2001	D1	01Q4	<0.5		<0.5	<0.5	<0.5	0.51	<0.5	22	<0.5
DM-10	10/17/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5
DM-10	10/9/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	8	<0.5
DM-10	10/9/2003	D1	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	8.5	<0.5
DM-10	10/5/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5
DM-10	10/10/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-10	10/13/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.87	<0.5
DM-10	10/5/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	0.81	<0.5
DM-10	10/7/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.71	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-10	10/20/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	<0.5
DM-10	10/7/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5
DM-10	10/7/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-10	10/9/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.52	<0.5
DM-10	10/7/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.57	<0.5
DM-11	10/30/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-11	11/10/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-11	1/14/1991	P0	91Q1	<0.2	<0.2	<0.2	<0.2		0.4		1.3	<0.2
DM-11	9/27/1991	P0	91Q3	<0.2	<0.2	<0.2	<0.2		<0.2		0.4	<0.2
DM-11	3/24/1992	P0	92Q1	880	2.3	62	0.4		38		2.9	<0.2
DM-11	4/22/1992	P0	92Q2	11	<0.2	0.6	<0.2		0.4		<0.2	<0.2
DM-11	5/18/1992	P0	92Q2	1.3	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-11	6/29/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-11	10/29/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-11	1/18/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-11	4/12/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-11	7/13/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-11	10/7/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-11	12/21/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	4/13/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	6/22/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	9/21/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	12/28/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	9/28/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	6/10/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	9/11/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	7/18/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-11	9/29/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-12	6/21/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		24.9	<0.2
DM-12	11/15/1996	P0	97Q1	<0.5	<0.5	0.5	<0.5	10	<0.5	<0.5	32	<0.5
DM-12	3/11/1997	P0	97Q2	<1	<1	<1	<1	8	<1	<1	38	<1
DM-12OW1	9/1/1989	P0	89Q3	<0.2	<0.2	<0.2	<0.2		<0.2		12.1	<0.2
DM-12OW1	9/5/1989	P0	89Q3	<0.2	<0.2	<0.2	<0.2		0.4		22.6	<0.2
DM-12OW1	11/1/1989	P0	89Q4	<0.2	<0.2	<0.2	0.3		0.2		11.7	<0.2
DM-12OW1	11/8/1989	P0	89Q4	<0.2	<0.2	<0.2	<0.2		<0.2		10.9	<0.2
DM-12OW1	1/11/1991	P0	91Q1	<0.2	<0.2	<0.2	0.3		0.4		12.8	<0.2
DM-12OW1	4/10/1991	P0	91Q2	45	<1	5	<1		11		32	<1
DM-12OW1	9/24/1991	P0	91Q3	<0.2	<0.2	<0.2	0.3		<0.2		18.9	<0.2
DM-12OW1	12/6/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		22	<0.2
DM-12OW1	3/27/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		0.2		15	<0.2
DM-12OW1	7/2/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		12.3	<0.2
DM-12OW1	10/30/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	3.9	<0.2	<0.2	10.8	<0.2
DM-12OW1	1/20/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	11	<0.2
DM-12OW1	4/13/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	3.6	<0.2	<0.2	12	<0.2
DM-12OW1	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	4.1	<0.2	<0.2	16	<0.2
DM-12OW1	10/8/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	4.3	<0.2	<0.2	18	<0.2
DM-12OW1	12/23/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	6.2	<0.5	<0.5	24	<0.5
DM-12OW1	4/15/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	8.4	<0.5	<0.5	31	<0.5
DM-12OW1	4/15/1994	D1	94Q2	<0.5	<0.5	<0.5	<0.5	9.3	<0.5	<0.5	33	<0.5
DM-12OW1	6/24/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	10	<0.5	<0.5	37	<0.5
DM-12OW1	9/22/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	12	<0.5	<0.5	35	<0.5
DM-12OW1	12/27/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	17	<0.5	<0.5	42	<0.5
DM-12OW1	3/22/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	18	<0.5	<0.5	40	<0.5
DM-12OW1	6/26/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	43	<0.5
DM-12OW1	10/3/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	8.6	<0.5	<0.5	27	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-12OW1	1/9/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	5.9	<0.5	<0.5	22	<0.5
DM-12OW1	3/19/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	7.8	<0.5	<0.5	25	<0.5
DM-12OW1	6/12/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	<0.5	25	<0.5
DM-12OW1	9/20/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	8	<0.5	<0.5	28	<0.5
DM-12OW1	12/17/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	9.1	<0.5	<0.5	33	<0.5
DM-12OW1	3/11/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	7.3	<0.5	<0.5	31	<0.5
DM-12OW1	7/14/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	7.3	<0.5	<0.5	30	<0.5
DM-12OW1	9/26/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	6.3	<0.5	<0.5	27	<0.5
DM-12OW1	9/26/1997	D1	97Q4	<0.5	<0.5	0.5	<0.5	5.9	<0.5	<0.5	25	<0.5
DM-12OW1	9/14/1998	P0	98Q4	<1		<1	<1	17	<1	<1	42	<1
DM-12OW1	9/23/1999	P0	99Q4	<1		<1	<1	21	1.2	<1	58	<1
DM-12OW1	10/3/2000	P0	00Q4	<1.2		<1.2	<1.2	17	2.9	<1.2	67	<1.2
DM-12OW1	11/13/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
DM-12OW1	10/15/2002	P0	02Q4	<0.5		0.52	<0.5	13	11	<0.5	230	<0.5
DM-12OW1	10/12/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	4.3	<0.5
DM-12OW1	10/8/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5
DM-12OW1	10/11/2005	P0	05Q4	<0.5		<0.5	<0.5	0.72	<0.5	<0.5	6.7	<0.5
DM-12OW1	10/17/2006	P0	06Q4	<0.5		<0.5	<0.5	1.9	8.7	<0.5	190	<0.5
DM-12OW1	10/9/2007	P0	07Q4	<0.5		<0.5	<1	2	7.1	<0.5	120	<0.5
DM-12OW1	10/13/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	2	6.7	<0.5	87	<0.5
DM-12OW1	10/13/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	1.6	4.6	<0.5	60	<0.5
DM-12OW1	10/27/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	6.5	<0.5	<0.5	0.53	<0.5
DM-12OW1	10/17/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	5.5	<0.5	<0.5	<0.5	<0.5
DM-12OW1	10/17/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	4.6	<0.5	<0.5	<0.5	<0.5
DM-12OW1	10/10/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5
DM-12OW1	10/22/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	0.99	<0.5	<0.5	<0.5	<0.5
DM-12OW2	10/28/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	0.5	<0.2	<0.2	4.5	<0.2
DM-12OW2	1/21/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	5.3	<0.2
DM-12OW2	11/15/1996	P0	97Q1	<5	<5	<5	<5	12	<5	<5	45	<5
DM-12OW2	3/11/1997	P0	97Q2	<1	<1	<1	<1	6.2	<1	<1	39	<1
DM-13	4/11/1991	P0	91Q2	43	<10	<10	<10		106		2025	<10
DM-13	4/11/1991	D1	91Q2	20	<10	<10	<10		90		1740	<10
DM-13	4/18/1991	P0	91Q2	110	3.6	21	1		130		2300	<0.2
DM-13	6/24/1991	P0	91Q2	<0.2	4.2	4.8	0.6		170		3630	<0.2
DM-13	9/25/1991	P0	91Q3	<5	<5	<5	<5		170		2200	<5
DM-13	12/6/1991	P0	91Q4	<0.2	3.5	4.7	0.5		140		2300	<0.2
DM-13	3/27/1992	P0	92Q1	<5	<5	<5	<5		63		1300	<5
DM-13	3/27/1992	D1	92Q1	<10	<10	<10	<10		73		1300	<10
DM-13	7/6/1992	P0	92Q3	<5	<5	<5	<5		150		2400	<5
DM-13	10/30/1992	P0	92Q4	<0.2	3.1	4.6	0.5	16.4	210	1.4	2600	<0.2
DM-13	10/30/1992	D1	92Q4	<0.2	3	5.2	0.4	17.1	190	1.6	2500	<0.2
DM-13	1/21/1993	P0	93Q1	<10	<10	<10	<10	<10	120	<10	2200	<10
DM-13	4/14/1993	P0	93Q2	<20	<20	<20	<20	<20	90	<20	1700	<20
DM-13	7/15/1993	P0	93Q3	<10	<10	<10	<10	<10	180	<10	2800	<10
DM-13	10/11/1993	P0	93Q4	<20	<20	<20	<20	<20	130	<20	2800	<20
DM-13	12/23/1993	P0	94Q1	<25	<25	<25	<25	<25	180	<25	2300	<25
DM-13	4/15/1994	P0	94Q2	<50	<50	<50	<50	<50	140	<50	2200	<50
DM-13	6/24/1994	P0	94Q3	<50	<50	<50	<50	<50	62	<50	2500	<50
DM-13	6/24/1994	D1	94Q3	<50	<50	<50	<50	<50	71	<50	2500	<50
DM-13	9/22/1994	P0	94Q4	<50	<50	<50	<50	<50	84	<50	1900	<50
DM-13	12/16/1994	P0	95Q1	<50	<50	<50	<50	<50	110	<50	1800	<50
DM-13	3/24/1995	P0	95Q2	<25	<25	<25	<25	<25	81	<25	2200	<25
DM-13	10/2/1995	P0	95Q4	<25	<25	<25	<25	<25	92	<25	1300	<25
DM-13	3/25/1996	P0	96Q2	<10	<10	<10	<10	<10	79	<10	1200	<10
DM-13	9/24/1996	P0	96Q3	<50	<50	<50	<50	<50	53	<50	970	<50

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-13	3/13/1997	P0	97Q2	<10	<10	<10	<10	<10	<10	<10	1000	<10
DM-13	9/29/1997	P0	97Q4	<10	<10	<10	<10	<10	84 J	<10	1200	<10
DM-13	9/17/1998	P0	98Q4	<12		<12	<12	<12	36	<12	570	<12
DM-13	9/17/1998	D1	98Q4	<12		<12	<12	<12	35	<12	570	<12
DM-13	9/23/1999	P0	99Q4	<12		<12	<12	<12	34	<12	540	<12
DM-13	9/23/1999	D1	99Q4	<12		<12	<12	<12	34	<12	520	<12
DM-13	10/6/2000	P0	00Q4	<12		<12	<12	<12	19	<12	300	<12
DM-13	10/6/2000	D1	00Q4	<12		<12	<12	<12	18	<12	290	<12
DM-13	11/12/2001	P0	01Q4	<0.5		<0.5	<0.5	1.7	14	<0.5	310	<0.5
DM-13	10/21/2002	P0	02Q4	<0.5		<0.5	<0.5	2	15	<0.5	250	<0.5
DM-13	10/10/2003	P0	03Q4	<1		<1	<1	1.8	13	<1	210	<1
DM-13	10/10/2003	D1	03Q4	<1		<1	<1	1.5	12	<1	190	<1
DM-13	10/7/2004	P0	04Q4	<0.5		<0.5	<0.5	1.3	11	<0.5	170	<0.5
DM-13	10/11/2005	P0	05Q4	<0.5		<0.5	<0.5	1.2	7.9	<0.5	150	<0.5
DM-13	10/16/2006	P0	06Q4	<0.5		<0.5	<0.5	0.52	7.2	<0.5	150	<0.5
DM-13	10/16/2006	D1	06Q4	<0.5		<0.5	<0.5	0.59	6	<0.5	150	<0.5
DM-13	10/5/2007	P0	07Q4	<0.5		<0.5	<1	1.1	5.2	<0.5	120	<0.5
DM-13	10/10/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.84	5.2	<0.5	97	<0.5
DM-13	10/14/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	0.75	4.4	<0.5	75	<0.5
DM-13	10/13/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.74	4.3	<0.5	89	<0.5
DM-13	10/12/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	0.62	3.6	<0.5	67	<0.5
DM-13	10/15/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	0.53	3.4	<0.5	60.7	<0.5
DM-13	10/10/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5	55.7	<0.5
DM-13	10/22/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	61.8	<0.5
DM-13	10/23/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	56.7	<0.5
DM-13	10/13/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	39.9	<0.5
DM-14	2/27/1991	P0	91Q1	8.7	<0.2	3.1	<0.2		8.2		3.6	<0.2
DM-14	2/27/1991	D1	91Q1	11	<0.2	5.2	<0.2		9.1		3.8	<0.2
DM-14	4/10/1991	P0	91Q2	35	<1	2	<1		6		<1	<1
DM-14	4/17/1991	P0	91Q2	96	0.3	36	<0.2		19		6.1	<1
DM-14	6/20/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-14	12/4/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-14	3/23/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-14	3/23/1992	D1	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-14	6/25/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-14	10/29/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	0.7	<0.2
DM-14	1/19/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-14	4/9/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-14	7/13/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-14	10/7/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-14	12/20/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	4/14/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	6/21/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	9/22/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	12/14/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	9/26/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	9/10/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	9/24/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-14	4/8/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-018	1/15/1993	P0	93Q1	<2	<2	<2	<2	<2	20	<2	270	<2
DM-15-018	1/22/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	1.2	4.6	<0.2	55	<0.2
DM-15-018	1/29/1993	P0	93Q1	<2	<2	<2	<2	<2	11	<2	90	<2
DM-15-018	4/22/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-15-018	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	1.3	<0.2
DM-15-018	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-15-018	1/4/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5
DM-15-018	4/7/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
DM-15-018	6/17/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-018	10/5/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-15-018	12/27/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	1/15/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	0.2	7	<0.2	59	<0.2
DM-15-038	1/22/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	0.3	2.9	<0.2	23	<0.2
DM-15-038	1/29/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	4.2	<0.2	28	<0.2
DM-15-038	4/22/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	0.8	<0.2	2.9	<0.2
DM-15-038	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	3.1	<0.2
DM-15-038	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.8	<0.2
DM-15-038	10/5/1993	D1	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2
DM-15-038	1/4/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	22	<0.5
DM-15-038	4/7/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	6/17/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/5/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-15-038	12/27/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	3/24/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	6/30/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/5/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	1/16/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	4	<0.5	<0.5	<0.5	1.5
DM-15-038	3/25/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	6/14/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-15-038	9/25/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5
DM-15-038	12/26/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.2	<0.5
DM-15-038	12/26/1996	D1	97Q1	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	6.1	<0.5
DM-15-038	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	4.6	1.1	<0.5	18	<0.5
DM-15-038	7/22/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	5.6	<0.5	<0.5	2.3	<0.5
DM-15-038	10/7/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	<0.5	5.1	<0.5
DM-15-038	10/7/1997	P0	97Q4									
DM-15-038	3/12/1998	P0	98Q2	<0.5		<0.5	<0.5	11	1	<0.5	21	<0.5
DM-15-038	9/2/1998	P0	98Q4	<0.5		<0.5	<0.5	19	1.3	<0.5	28	6.5
DM-15-038	3/15/1999	P0	99Q2	<1		<1	<1	40	<1	<1	8.4	11 J
DM-15-038	3/15/1999	D1	99Q2	<1		<1	<1	32	<1	<1	5.9	3.5 J
DM-15-038	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	12	<0.5	<0.5	3.2	<0.5
DM-15-038	3/1/2000	P0	00Q2	<0.5		<0.5	<0.5	7.2	<0.5	<0.5	1.8	<0.5
DM-15-038	3/1/2000	D1	00Q2	<0.5		<0.5	<0.5	11	<0.5	<0.5	2.7	<0.5
DM-15-038	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	3.4	<0.5	<0.5	1.5	<0.5
DM-15-038	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	3.1	<0.5	<0.5	2	<0.5
DM-15-038	10/24/2001	P0	01Q4	<0.5		<0.5	<0.5	1.8	<0.5	<0.5	0.5	1
DM-15-038	4/4/2002	P0	02Q2	<0.5		<0.5	<0.5	1.5	<0.5	<0.5	0.78	0.97
DM-15-038	10/2/2002	P0	02Q4	<0.5		<0.5	<0.5	2.4	<0.5	<0.5	1.6	0.93
DM-15-038	4/7/2003	P0	03Q2	<0.5		<0.5	<0.5	3.4	<0.5	<0.5	1	<0.5
DM-15-038	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	1.9	<0.5	<0.5	0.51	1
DM-15-038	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	1.2	<0.5	<0.5	0.63	0.85
DM-15-038	10/5/2005	P0	05Q4	<0.5		<0.5	<0.5	1.4	<0.5	<0.5	<0.5	0.69
DM-15-038	10/10/2006	P0	06Q4	<0.5		<0.5	<0.5	1	<0.5	<0.5	<0.5	0.5
DM-15-038	10/3/2007	P0	07Q4	<0.5		<0.5	<1	0.72	<0.5	<0.5	0.65	<0.5
DM-15-038	10/3/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.52	<0.5	<0.5	0.54	<0.5
DM-15-038	10/5/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/5/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/5/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/4/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
DM-15-038	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	0.63

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-15-038	10/16/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-038	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-15-070	1/15/1993	P0	93Q1	<40	<40	<40	<40	<40	230	<40	4600	<40
DM-15-070	1/15/1993	D1	93Q1	<40	<40	<40	<40	<40	220	<40	4600	<40
DM-15-070	1/22/1993	P0	93Q1	<2	<2	<2	<2	10	94	<2	2500	<2
DM-15-070	1/29/1993	P0	93Q1	<40	<40	<40	<40	<40	230	<40	4700	<40
DM-15-070	4/21/1993	P0	93Q2	<20	<20	<20	<20	<20	260	<20	4800	<20
DM-15-070	7/15/1993	P0	93Q3	<20	<20	<20	<20	<20	260	<20	5200	<20
DM-15-070	10/6/1993	P0	93Q4	<10	<10	<10	<10	<10	190	<10	4300	<10
DM-15-070	1/4/1994	P0	94Q1	<50	<50	<50	<50	<50	320	<50	4400	<50
DM-15-070	4/8/1994	P0	94Q2	<100	<100	<100	<100	<100	<100	<100	2600	<100
DM-15-070	6/17/1994	P0	94Q3	<50	<50	<50	<50	<50	180	<50	4700	<50
DM-15-070	6/17/1994	D1	94Q3	<50	<50	<50	<50	<50	180	<50	5100	<50
DM-15-070	10/4/1994	P0	94Q4	<50	<50	<50	<50	<50	120	<50	3200	<50
DM-15-070	12/27/1994	P0	95Q1	<50	<50	<50	<50	<50	220	<50	3800	<50
DM-15-070	3/24/1995	P0	95Q2	<50	<50	<50	<50	<50	240	<50	6200	<50
DM-15-070	6/30/1995	P0	95Q3	<100	<100	<100	<100	120	180	<100	2600	<100
DM-15-070	6/30/1995	D1	95Q3	<100	<100	<100	<100	150	110	<100	2400	<100
DM-15-070	10/5/1995	P0	95Q4	<50	<50	<50	<50	<50	100	<50	3000	<50
DM-15-070	1/16/1996	P0	96Q1	<50	<50	<50	<50	<50	190	<50	5300	<50
DM-15-070	3/25/1996	P0	96Q2	<25	<25	<25	<25	<25	200	<25	4500	<25
DM-15-070	3/25/1996	D1	96Q2	<25	<25	<25	<25	<25	210	<25	4200	<25
DM-15-070	6/14/1996	P0	96Q3	<25	<25	<25	<25	<25	200	<25	4100	<25
DM-15-070	9/25/1996	P0	96Q3	<50	<50	<50	<50	<50	150	<50	2400	<50
DM-15-070	12/26/1996	P0	97Q1	<100	<100	<100	<100	<100	140	<100	3800	<100
DM-15-070	3/17/1997	P0	97Q2	<50	<50	<50	<50	<50	130	<50	2700	<50
DM-15-070	7/22/1997	P0	97Q3	<25	<25	<25	<25	<25	93	<25	2400	<25
DM-15-070	10/8/1997	P0	97Q4	<10	<10	10	<10	56	74	<10	920	54
DM-15-070	10/8/1997	D1	97Q4	<10	<10	10	<10	42	74	<10	1100	42
DM-15-070	10/8/1997	P0	97Q4									
DM-15-070	3/12/1998	P0	98Q2	<25		<25	<25	<25	51	<25	1200	<25
DM-15-070	9/2/1998	P0	98Q4	<12		<12	<12	<12	26	<12	620	<12
DM-15-070	3/15/1999	P0	99Q2	<25		<25	<25	<25	31	<25	440	<25
DM-15-070	9/2/1999	P0	99Q4	<10		<10	<10	15	22	<10	470	<10
DM-15-070	3/1/2000	P0	00Q2	<12		<12	<12	<12	21	<12	460	<12
DM-15-070	10/3/2000	P0	00Q4	<25		<25	<25	<25	<25	<25	430	<25
DM-15-070	10/3/2000	D1	00Q4	<25		<25	<25	<25	<25	<25	390	<25
DM-15-070	3/22/2001	P0	01Q2	<0.5		0.65	<0.5	7.6	18	<0.5	360	<0.5
DM-15-070	10/24/2001	P0	01Q4	<0.5		<0.5	1.9	7.2	16	<0.5	250	<0.5
DM-15-070	4/4/2002	P0	02Q2	<0.5		0.64	1.7	9.4	17	<0.5	340	<0.5
DM-15-070	10/2/2002	P0	02Q4	<0.5		0.51	1	8.8	22	<0.5	400	<0.5
DM-15-070	10/2/2002	D1	02Q4	<0.5		<0.5	0.99	7.9	14	<0.5	300	<0.5
DM-15-070	4/7/2003	P0	03Q2	<0.5		<0.5	0.74	8.6	17	<0.5	300	<0.5
DM-15-070	10/7/2003	P0	03Q4	<0.5		<0.5	0.53	6.2	11	<0.5	260	0.56
DM-15-070	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	6.1	11	<0.5	210	0.58
DM-15-070	10/5/2005	P0	05Q4	<0.5		<0.5	<0.5	6.2	11	<0.5	250	<0.5
DM-15-070	10/5/2005	D1	05Q4	<0.5		<0.5	<0.5	5.5	10	<0.5	230	<0.5
DM-15-070	10/10/2006	P0	06Q4	<0.5		<0.5	<0.5	5	9.2	<0.5	230	<0.5
DM-15-070	10/10/2006	D1	06Q4	<0.5		<0.5	<0.5	4.3	6.3	<0.5	170	<0.5
DM-15-070	10/3/2007	P0	07Q4	<2.5		<2.5	<5	5.3	7.5	<2.5	170	<2.5
DM-15-070	10/3/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	3.4	4.1	<0.5	92	<0.5
DM-15-070	10/3/2008	D1	08Q4	<0.5	<0.5	<0.5	<0.5	4.7	9.1	<0.5	130	<0.5
DM-15-070	10/5/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	3.9	7.4	<0.5	140	<0.5
DM-15-070	10/5/2009	D1	09Q4	<0.5	<0.5	<0.5	<0.5	3.9	7.3	<0.5	140	<0.5
DM-15-070	10/5/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	3.6	5.1	<0.5	100	0.53

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-15-070	10/5/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	3.6	4.3	<0.5	85	<0.5
DM-15-070	10/5/2011	D1	11Q4	<0.5	<0.5	<0.5	<0.5	3.6	2.4	<0.5	60	<0.5
DM-15-070	10/4/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	5.6	3.3	<0.5	69.8	<0.5
DM-15-070	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	2.3	2.8 J	<0.5	52.9 J	<0.5
DM-15-070	10/3/2013	D1	13Q4	<0.5	<0.5	<0.5	<0.5	2.4	3.9 J	<0.5	73.6 J	<0.5
DM-15-070	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	2.8	2.9	<0.5	50.6	0.95
DM-15-070	10/16/2015	D1	15Q4	<0.5	<0.5	<0.5	<0.5	3.1	2.4	<0.5	58.4	<0.5
DM-15-070	10/16/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	3.2	4	<0.5	91.1	<0.5
DM-15-070	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	2.5	2.3	<0.5	46.8	<0.5
DM-15-105	1/15/1993	P0	93Q1	<2	<2	<2	<2	<2	9	<2	260	<2
DM-15-105	1/22/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	0.7	2.6	<0.2	100	<0.2
DM-15-105	1/29/1993	P0	93Q1	<1	<1	<1	<1	<1	6.4	<1	160	<1
DM-15-105	4/20/1993	P0	93Q2	<2	<2	<2	<2	<2	<2	<2	86	<2
DM-15-105	7/15/1993	P0	93Q3	<0.4	<0.4	<0.4	<0.4	1.2	1.5	<0.4	100	<0.4
DM-15-105	7/15/1993	D1	93Q3	<0.4	<0.4	<0.4	<0.4	0.9	1.5	<0.4	96	<0.4
DM-15-105	10/6/1993	P0	93Q4	<1	<1	<1	<1	<1	3	<1	220	<1
DM-15-105	1/4/1994	P0	94Q1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	180	<2.5
DM-15-105	4/8/1994	P0	94Q2	<5	<5	<5	<5	<5	<5	<5	190	<5
DM-15-105	6/17/1994	P0	94Q3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	270	<2.5
DM-15-105	10/4/1994	P0	94Q4	<2.5	<2.5	<2.5	<2.5	330	<2.5	<2.5	120	<2.5
DM-15-105	12/27/1994	P0	95Q1	<2.5	<2.5	<2.5	<2.5	5.1	4.6	<2.5	330	<2.5
DM-15-105	3/24/1995	P0	95Q2	<10	<10	<10	<10	<10	<10	<10	510	<10
DM-15-105	6/30/1995	P0	95Q3	<10	<10	<10	<10	<10	12	<10	410	<10
DM-15-105	10/5/1995	P0	95Q4	<10	<10	<10	<10	<10	<10	<10	580	<10
DM-15-105	1/16/1996	P0	96Q1	<2.5	<2.5	<2.5	<2.5	6.2	17	<2.5	880	4.5
DM-15-105	3/25/1996	P0	96Q2	<2.5	<2.5	<2.5	<2.5	3	15	<2.5	460	<2.5
DM-15-105	6/14/1996	P0	96Q3	<2.5	<2.5	<2.5	<2.5	5.1	19	<2.5	670	<2.5
DM-15-105	9/25/1996	P0	96Q3	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	520	<12.5
DM-15-105	9/25/1996	D1	96Q3	<12.5	<12.5	<12.5	<12.5	<12.5	13	<12.5	620	<12.5
DM-15-105	12/26/1996	P0	97Q1	<12.5	<12.5	<12.5	<12.5	<12.5	20	<12.5	800	<12.5
DM-15-105	3/17/1997	P0	97Q2	<5	<5	<5	<5	<5	23	<5	610	<5
DM-15-105	7/22/1997	P0	97Q3	<5	<5	<5	<5	<5	26	<5	370	<5
DM-15-105	10/8/1997	P0	97Q4	<50	<50	<50	<50	<50	<50	<50	770	<50
DM-15-105	3/12/1998	P0	98Q2	<12		<12	<12	<12	28	<12	730	<12
DM-15-105	3/12/1998	D1	98Q2	<12		<12	<12	<12	30	<12	810	<12
DM-15-105	9/2/1998	P0	98Q4	<12		<12	<12	<12	22	<12	560	<12
DM-15-105	3/15/1999	P0	99Q2	<25		<25	<25	<25	29	<25	470	44
DM-15-105	9/2/1999	P0	99Q4	<10		<10	<10	<10	34	<10	590	<10
DM-15-105	3/1/2000	P0	00Q2	<25		<25	<25	<25	40	<25	700	<25
DM-15-105	10/3/2000	P0	00Q4	<50		<50	<50	<50	<50	<50	620	<50
DM-15-105	3/22/2001	P0	01Q2	<0.5		0.86	<0.5	4.7	49	<0.5	600	<0.5
DM-15-105	10/24/2001	P0	01Q4	<0.5		0.65	<0.5	3.8	38	<0.5	500	<0.5
DM-15-105	4/4/2002	P0	02Q2	<2.5		<2.5	<2.5	5.2	48	<2.5	730	<2.5
DM-15-105	10/2/2002	P0	02Q4	<1		<1	<1	4.3	48	<1	570	<1
DM-15-105	4/7/2003	P0	03Q2	<1		<1	<1	3.2	32	<1	410	<1
DM-15-105	10/7/2003	P0	03Q4	<1		<1	<1	4	41	<1	710	<1
DM-15-105	10/7/2003	D1	03Q4	<1		<1	<1	3.3	44	<1	630	<1
DM-15-105	10/12/2004	P0	04Q4	<1		<1	<1	4.1	44	<1	480	<1
DM-15-105	10/5/2005	P0	05Q4	<1		<1	<1	4.2	45	<1	640	<1
DM-15-105	10/10/2006	P0	06Q4	<1		<1	<1	3.9	31	<1	490	<1
DM-15-105	10/3/2007	P0	07Q4	<2.5		<2.5	<5	3.4	23	<2.5	440	<2.5
DM-15-105	10/3/2008	P0	08Q4	<0.5	<0.5	0.68	<0.5	3.2	28	<0.5	290	<0.5
DM-15-105	10/5/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	2.5	24	<0.5	320	0.7
DM-15-105	10/5/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	2	16	<0.5	260	1
DM-15-105	10/5/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	1.7	17	<0.5	230	0.85

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-15-105	10/4/2012	P0	12Q4	<2	<2	<2	<2	<2	14.9	<2	243	<2
DM-15-105	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	0.93	15.6	<0.5	253	<0.5
DM-15-105	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	1.2	13	<0.5	204	1.1
DM-15-105	10/16/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	1.4	12.7	<0.5	180	<0.5
DM-15-105	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	1.6	11.1	<0.5	191	4.4
DM-15-135	1/15/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	3.3	<0.2	56	<0.2
DM-15-135	1/22/1993	P0	93Q1	<2	<2	<2	<2	12	100	<2	1800	<2
DM-15-135	1/22/1993	D1	93Q1	<2	<2	<2	<2	13	130	<2	2000	<2
DM-15-135	1/29/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	26	<0.2
DM-15-135	4/20/1993	P0	93Q2	<2	<2	<2	<2	<2	2	<2	110	<2
DM-15-135	7/15/1993	P0	93Q3	<1	<1	<1	<1	<1	7.7	<1	160	<1
DM-15-135	10/6/1993	P0	93Q4	<1	<1	<1	<1	<1	6	<1	210	<1
DM-15-135	1/4/1994	P0	94Q1	<2.5	<2.5	<2.5	<2.5	<2.5	13	<2.5	230	<2.5
DM-15-135	4/8/1994	P0	94Q2	<5	<5	<5	<5	<5	7.8	<5	180	<5
DM-15-135	6/17/1994	P0	94Q3	<5	<5	<5	<5	<5	15	<5	450	<5
DM-15-135	10/4/1994	P0	94Q4	<2.5	<2.5	<2.5	<2.5	<2.5	7.6	<2.5	250	<2.5
DM-15-135	10/4/1994	D1	94Q4	<2.5	<2.5	<2.5	<2.5	<2.5	7.6	<2.5	270	<2.5
DM-15-135	12/27/1994	P0	95Q1	<2.5	<2.5	<2.5	<2.5	<2.5	16	<2.5	410	<2.5
DM-15-135	3/24/1995	P0	95Q2	<5	<5	<5	<5	<5	12	<5	520	<5
DM-15-135	3/24/1995	D1	95Q2	<5	<5	<5	<5	<5	17	<5	640	<5
DM-15-135	6/30/1995	P0	95Q3	<10	<10	<10	<10	<10	21	<10	410	<10
DM-15-135	10/5/1995	P0	95Q4	<5	<5	<5	<5	<5	18	<5	600	<5
DM-15-135	1/16/1996	P0	96Q1	<5	<5	<5	<5	<5	20	<5	750	18
DM-15-135	3/25/1996	P0	96Q2	<2.5	<2.5	<2.5	<2.5	<2.5	28	<2.5	600	<2.5
DM-15-135	6/14/1996	P0	96Q3	<2.5	<2.5	<2.5	<2.5	<2.5	26	<2.5	720	<2.5
DM-15-135	9/25/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	2.1	4	<0.5	240	<0.5
DM-15-135	12/26/1996	P0	97Q1	<12.5	<12.5	<12.5	<12.5	<12.5	20	<12.5	550	<12.5
DM-15-135	3/17/1997	P0	97Q2	<2.5	<2.5	<2.5	<2.5	4.7	26	<2.5	570 U	<2.5
DM-15-135	3/17/1997	D1	97Q2	<2.5	<2.5	<2.5	<2.5	4.8	27	<2.5	610 U	<2.5
DM-15-135	7/22/1997	P0	97Q3	<10	<10	<10	<10	<10	33	<10	780	<10
DM-15-135	10/8/1997	P0	97Q4	<10	<10	<10	<10	10	66	<10	1900	<10
DM-15-135	3/12/1998	P0	98Q2	<25		<25	<25	<25	33	<25	760	<25
DM-15-135	9/2/1998	P0	98Q4	<12		<12	<12	<12	24	<12	600	<12
DM-15-135	3/15/1999	P0	99Q2	<25		<25	<25	<25	36	<25	670	<25
DM-15-135	9/2/1999	P0	99Q4	<10		<10	<10	<10	38	<10	730	<10
DM-15-135	3/1/2000	P0	00Q2	<25		<25	<25	<25	37	<25	830	<25
DM-15-135	10/3/2000	P0	00Q4	<50		<50	<50	<50	53	<50	1100	<50
DM-15-135	3/22/2001	P0	01Q2	<0.5		1.3	<0.5	6.4	52	0.68	950	0.55
DM-15-135	10/24/2001	P0	01Q4	<0.5		1.2	<0.5	5.9	50	0.54	960	<0.5
DM-15-135	4/4/2002	P0	02Q2	<2.5		<2.5	<2.5	6.2	49	<2.5	900	<2.5
DM-15-135	4/4/2002	D1	02Q2	<2.5		<2.5	<2.5	5.8	45	<2.5	800	<2.5
DM-15-135	10/2/2002	P0	02Q4	<2.5		<2.5	<2.5	8.4	78	<2.5	1100	<2.5
DM-15-135	4/7/2003	P0	03Q2	<2.5		<2.5	<2.5	4.4	35	<2.5	600	<2.5
DM-15-135	10/7/2003	P0	03Q4	<2.5		<2.5	<2.5	5.3	57	<2.5	1200	<2.5
DM-15-135	10/12/2004	P0	04Q4	<2.5		<2.5	<2.5	5.2	48	<2.5	700	<2.5
DM-15-135	10/5/2005	P0	05Q4	<2.5		<2.5	<2.5	5.5	46	<2.5	770	<2.5
DM-15-135	10/10/2006	P0	06Q4	<2.5		<2.5	<2.5	6.4	49	<2.5	920	<2.5
DM-15-135	10/3/2007	P0	07Q4	<10		<10	<10	<10	36	<10	680	<10
DM-15-135	10/3/2008	P0	08Q4	<0.5	<0.5	0.97	<0.5	4.6	41	<0.5	760	0.57
DM-15-135	10/5/2009	P0	09Q4	<0.5	<0.5	0.59	<0.5	3.2	29	<0.5	510	0.86
DM-15-135	10/5/2010	P0	10Q4	<0.5	<0.5	0.76	<0.5	3.6	38	<0.5	620	1.9
DM-15-135	10/5/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	2.6	25	<0.5	470	1.8
DM-15-135	10/4/2012	P0	12Q4	<2.5	<2.5	<2.5	<2.5	3.2	28.2	<2.5	487	<2.5
DM-15-135	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	1.7	24.2	<0.5	386	0.74
DM-15-135	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	2.1	29.1	<0.5	294	1.9

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-15-135	10/16/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	2	25.8	<0.5	371	0.85
DM-15-135	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	1.9	16.3	<0.5	241	0.83
DM-15-165	1/15/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	2.3	<0.2	44	<0.2
DM-15-165	1/21/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	1	<0.2	29	<0.2
DM-15-165	1/29/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	2.7	<0.2	56	<0.2
DM-15-165	4/19/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	0.4	1.8	<0.2	48	<0.2
DM-15-165	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	2.4	<0.2	42	<0.2
DM-15-165	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	1.2	<0.2	48	<0.2
DM-15-165	1/4/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	44	<0.5
DM-15-165	1/4/1994	D1	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	43	<0.5
DM-15-165	4/7/1994	P0	94Q2	<1	<1	<1	<1	<1	1.2	<1	35	<1
DM-15-165	6/17/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	34	<0.5
DM-15-165	10/4/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	0.5	0.6	<0.5	26	<0.5
DM-15-165	12/27/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	29	<0.5
DM-15-207	1/15/1993	P0	93Q1	<1	<1	<1	<1	<1	9	<1	180	<1
DM-15-207	1/21/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	5.4	<0.2	93	<0.2
DM-15-207	1/29/1993	P0	93Q1	<1	<1	<1	<1	<1	7.9	<1	150	<1
DM-15-207	4/19/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	0.9	6.1	<0.2	140	<0.2
DM-15-207	4/19/1993	D1	93Q2	<0.2	<0.2	<0.2	<0.2	0.7	4.3	<0.2	110	<0.2
DM-15-207	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	4.7	<0.2	56	<0.2
DM-15-207	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	2.9	<0.2	87	<0.2
DM-15-207	1/4/1994	P0	94Q1	<2.5	<2.5	<2.5	<2.5	<2.5	7.3	<2.5	56	<2.5
DM-15-207	4/8/1994	P0	94Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	36	<2.5
DM-15-207	6/17/1994	P0	94Q3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	73	<2.5
DM-15-207	10/4/1994	P0	94Q4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	37	<2.5
DM-15-207	12/27/1994	P0	95Q1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	44	<2.5
DM-15-207	12/27/1994	D1	95Q1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	45	<2.5
DM-15-207	3/24/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	1.8	1.4	<0.5	47	<0.5
DM-15-207	6/30/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	1.9	1.7	<0.5	28	<0.5
DM-15-207	10/5/1995	P0	95Q4	<2.5	<2.5	<2.5	<2.5	<2.5	6.6	<2.5	160	<2.5
DM-15-207	1/16/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	37	18
DM-15-207	3/25/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	22	1.6
DM-15-207	6/14/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	21	0.8
DM-15-207	9/25/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	1.1	2.9	<0.5	83	<0.5
DM-15-207	12/26/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	0.7	1	<0.5	24	<0.5
DM-15-207	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	0.9	1.1	<0.5	19	0.5
DM-15-207	7/22/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	0.5	0.9	<0.5	17	<0.5
DM-15-207	10/7/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	0.9	0.6	<0.5	9.6	19
DM-15-207	10/7/1997	P0	97Q4									
DM-15-207	3/12/1998	P0	98Q2	<0.5		<0.5	<0.5	0.7	0.81	<0.5	18	1.3
DM-15-207	9/2/1998	P0	98Q4	<0.5		<0.5	<0.5	0.91	<0.5	<0.5	12	8.6
DM-15-207	3/15/1999	P0	99Q2	<5		<5	<5	<5	<5	<5	9.7	150
DM-15-207	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	0.61	0.69	<0.5	15	2.4
DM-15-207	3/1/2000	P0	00Q2	<0.5		<0.5	<0.5	0.61	0.55	<0.5	13	1.2
DM-15-207	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	0.55	0.51	<0.5	13	0.99
DM-15-207	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	0.59	0.54	<0.5	13	1
DM-15-207	10/24/2001	P0	01Q4	<0.5		<0.5	<0.5	0.57	<0.5	<0.5	10	1
DM-15-207	4/4/2002	P0	02Q2	<0.5		<0.5	<0.5	0.67	<0.5	<0.5	12	6.8
DM-15-207	10/2/2002	P0	02Q4	<0.5		<0.5	<0.5	0.52	0.64	<0.5	15	0.76
DM-15-207	4/7/2003	P0	03Q2	<0.5		<0.5	<0.5	0.5	<0.5	<0.5	10	1.1
DM-15-207	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.8	<0.5
DM-15-207	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	11	0.75
DM-15-207	10/5/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	13	0.91
DM-15-207	10/10/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-15-207	10/3/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	8	0.58

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-15-207	10/3/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9	5.9
DM-15-207	10/5/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.3	<0.5
DM-15-207	10/5/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.8	0.67
DM-15-207	10/5/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.1	0.61
DM-15-207	10/4/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.5
DM-15-207	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.9	1.2
DM-15-207	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.6	1
DM-15-207	10/16/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.8	4
DM-15-207	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.5 J	<0.5
DM-16	4/11/1991	P0	91Q2	20	<0.2	2.5	<0.2		6.4		3	<0.2
DM-16	4/18/1991	P0	91Q2	49	<0.2	3.3	<0.2		15		33	<0.2
DM-16	4/18/1991	D1	91Q2	76	<0.2	18	<0.2		18		36	<0.2
DM-16	5/15/1991	P0	91Q2	0.8	<0.2	0.3	<0.2		<0.2		3.8	<0.2
DM-16	6/21/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		4.1	<0.2
DM-16	9/24/1991	P0	91Q3	<0.2	<0.2	<0.2	<0.2		0.3		4.8	<0.2
DM-16	9/24/1991	D1	91Q3	<0.2	<0.2	<0.2	<0.2		<0.2		4.2	<0.2
DM-16	12/4/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		8.2	<0.2
DM-16	3/25/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		0.2		2.7	<0.2
DM-16	6/26/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		5.3	<0.2
DM-16	10/15/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	0.4	<0.2	<0.2	14.5	<0.2
DM-16	1/20/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	17	<0.2
DM-16	4/13/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	24	<0.2
DM-16	4/13/1993	D1	93Q2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	23	<0.2
DM-16	7/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	<0.2	34	<0.2
DM-16	7/15/1993	D1	93Q3	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	<0.2	32	<0.2
DM-16	10/11/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	13	<0.2
DM-16	12/23/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	60	<0.5
DM-16	4/15/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	6	<0.5	<0.5	62	<0.5
DM-16	6/24/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	8.1	<0.5	<0.5	88	<0.5
DM-16	9/22/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	10	<0.5	<0.5	91	<0.5
DM-16	12/15/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	9.2	<0.5	<0.5	72	<0.5
DM-16	3/22/1995	P0	95Q2	<1	<1	<1	<1	8.2	<1	<1	72	<1
DM-16	6/27/1995	P0	95Q3	<2.5	<2.5	<2.5	<2.5	12	<2.5	<2.5	110	<2.5
DM-16	9/28/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	16	<0.5	<0.5	110	<0.5
DM-16	1/8/1996	P0	96Q1	<2.5	<2.5	<2.5	<2.5	8.1	<2.5	<2.5	99	<2.5
DM-16	3/21/1996	P0	96Q2	<5	<5	<5	<5	9.5	<5	<5	100	<5
DM-16	3/21/1996	D1	96Q2	<5	<5	<5	<5	13	<5	<5	110	<5
DM-16	6/13/1996	P0	96Q3	<2.5	<2.5	<2.5	<2.5	11	<2.5	<2.5	110	<2.5
DM-16	9/24/1996	P0	96Q3	<5	<5	<5	<5	16	<5	<5	110	<5
DM-16	12/18/1996	P0	97Q1	<5	<5	<5	<5	12	<5	<5	90	<5
DM-16	3/12/1997	P0	97Q2	<2.5	<2.5	<2.5	<2.5	8.2	<2.5	<2.5	120	<2.5
DM-16	7/16/1997	P0	97Q3	<5	<5	<5	<5	16	<5	<5	250	<5
DM-16	9/26/1997	P0	97Q4	<5	<5	<5	<5	19	<5	<5	330	<5
DM-16	9/26/1997	D1	97Q4	<5	<5	<5 UJ	<5	20	<5	<5	310	<5
DM-16	9/16/1998	P0	98Q4	<2.5		<2.5	<2.5	8.6	2.8	<2.5	160	<2.5
DM-16	9/14/1999	P0	99Q4	<10		<10	<10	<10	31	<10	660	<10
DM-16	10/3/2000	P0	00Q4	<25		<25	<25	<25	110	<25	1600	<25
DM-16	11/13/2001	P0	01Q4	<0.5		<0.5	<0.5	0.69	6.7	<0.5	100	<0.5
DM-16	10/17/2002	P0	02Q4	<0.5		5.6	<0.5	15	160	1.8	2200	<0.5
DM-16	10/10/2003	P0	03Q4	<0.5		3.5	<0.5	8.6	75	1	1500	<0.5
DM-16	10/8/2004	P0	04Q4	<5		<5	<5	6.8	58	<5	1000	<5
DM-16	10/12/2005	P0	05Q4	<2.5		<2.5	<2.5	5.8	43	<2.5	690	<2.5
DM-16	10/16/2006	P0	06Q4	<2.5		<2.5	<2.5	<2.5	23	<2.5	500	<2.5
DM-16	10/9/2007	P0	07Q4	<0.5		0.6	<1	2.7	21	<0.5	390	<0.5
DM-16	10/9/2007	D1	07Q4	<0.5		0.62	<1	2.7	20	<0.5	390	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-16	10/10/2008	P0	08Q4	<0.5	<0.5	0.57	<0.5	2.7	17	<0.5	360	<0.5
DM-16	10/15/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	2.4	12	<0.5	270	<0.5
DM-16	10/13/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	4.4	12	<0.5	210	<0.5
DM-16	10/13/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	3.7	13	<0.5	210	<0.5
DM-16	10/17/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	52.8	<0.5	<0.5	1.5	<0.5
DM-16	10/11/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	17.3	<0.5	<0.5	1.2	<0.5
DM-16	10/22/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	9.1	<0.5	<0.5	1.9	<0.5
DM-16	10/23/2015	D1	15Q4	<0.5	<0.5	<0.5	<0.5	6	<0.5	<0.5	1.5	<0.5
DM-16	10/23/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	5.8	<0.5	<0.5	1.5	<0.5
DM-16	10/7/2016	D1	16Q4	<0.5	<0.5	<0.5	<0.5	6.2	<0.5	<0.5	1.3	<0.5
DM-16	10/7/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	6.6	<0.5	<0.5	1.3	<0.5
DM-17	2/27/1991	P0	91Q1	0.9	<0.2	0.9	<0.2		1.9		0.7	<0.2
DM-17	4/10/1991	P0	91Q2	53	<1	6	<1		13		<1	<1
DM-17	4/18/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		0.2		1.1	<0.2
DM-17	6/20/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		0.3	<0.2
DM-17	9/23/1991	P0	91Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-17	12/4/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		0.6	<0.2
DM-17	3/23/1992	P0	92Q1	0.4	<0.2	<0.2	<0.2		<0.2		0.7	<0.2
DM-17	6/25/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-17	10/14/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-17	1/19/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-17	4/9/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-17	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-17	10/6/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-17	12/21/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	12/21/1993	D1	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	4/14/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	6/21/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	9/22/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	12/14/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	9/26/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	9/18/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	9/24/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	9/16/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	9/14/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/5/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/26/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/26/2001	D1	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/15/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/8/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/5/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/6/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/11/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/4/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
DM-17	10/6/2008	P0	08Q4	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-17	10/6/2008	D1	08Q4	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-17	10/14/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	4/9/1991	P0	91Q2	28	<1	2	<1		6		<1	<1
DM-18	4/17/1991	P0	91Q2	84	<0.2	32	<0.2		19		2.8	<1
DM-18	5/14/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		0.3		1.2	<0.2
DM-18	6/19/1991	P0	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		0.3	<0.2
DM-18	6/19/1991	D1	91Q2	<0.2	<0.2	<0.2	<0.2		<0.2		0.3	<0.2
DM-18	9/20/1991	P0	91Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-18	12/4/1991	P0	91Q4	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-18	3/23/1992	P0	92Q1	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-18	6/25/1992	P0	92Q3	<0.2	<0.2	<0.2	<0.2		<0.2		<0.2	<0.2
DM-18	10/27/1992	P0	92Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-18	1/18/1993	P0	93Q1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-18	4/8/1993	P0	93Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-18	7/12/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	<0.2
DM-18	10/5/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-18	12/20/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	4/13/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	6/21/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	9/19/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	12/14/1994	P0	95Q1	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	3/21/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	9/27/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	3/13/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	9/18/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	3/6/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/1/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	9/17/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	9/22/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/4/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	11/6/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/10/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/10/2002	D1	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/8/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/7/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/6/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/11/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/4/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/6/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-18	10/12/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.9	<0.5
DM-18	1/14/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.74	<0.5
DM-19	4/21/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	1.2	<0.5
DM-19	5/11/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5
DM-19	5/11/1995	D1	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5
DM-19	9/29/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	9/29/1995	D1	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	1/3/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	1/3/1996	D1	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	3/14/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	6/10/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-19	6/10/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-19	9/18/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
DM-19	3/7/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-19	7/9/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
DM-19	9/24/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.62	<0.5
DM-19	1/16/1998	P0	98Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 UJ
DM-19	3/10/1998	P0	98Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	6/16/1998	P0	98Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	9/14/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	1/7/1999	P0	99Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	3/24/1999	P0	99Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	7/29/1999	P0	99Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	9/20/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	1/20/2000	P0	00Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	1/20/2000	D1	00Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-19	3/2/2000	P0	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	6/23/2000	P0	00Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	6/23/2000	D1	00Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/12/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	3/23/2001	P0	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.82	<0.5
DM-19	6/13/2001	P0	01Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	6/13/2001	D1	01Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/29/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
DM-19	1/17/2002	P0	02Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5
DM-19	4/5/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.87	<0.5
DM-19	7/9/2002	P0	02Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.85	<0.5
DM-19	10/11/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-19	1/8/2003	P0	03Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<0.5
DM-19	4/7/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-19	4/7/2003	D1	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.78	<0.5
DM-19	7/3/2003	P0	03Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.84	<0.5
DM-19	10/9/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-19	4/5/2004	P0	04Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-19	10/7/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-19	4/5/2005	P0	05Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.91	<0.5
DM-19	10/7/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-19	10/7/2005	D1	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.86	<0.5
DM-19	4/7/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.95	<0.5
DM-19	10/12/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-19	10/12/2006	D1	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-19	4/5/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-19	10/4/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	0.86	<0.5
DM-19	4/4/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.81	<0.5
DM-19	10/6/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.75	<0.5
DM-19	4/8/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.71	<0.5
DM-19	10/9/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
DM-19	4/5/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/6/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	4/5/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/5/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	4/6/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/5/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	4/3/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/4/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	4/4/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	4/4/2014	D1	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/15/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	4/3/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/19/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 UJ	<0.5	<0.5	<0.5
DM-19	4/14/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/6/2016	D1	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-19	10/6/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	5/18/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	3.4	<0.2
DM-20-022	5/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	19	<0.2
DM-20-022	6/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	13	<0.2
DM-20-022	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	<0.2	16	<0.2
DM-20-022	10/3/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.1	<0.2
DM-20-022	1/3/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	4/6/1994	P0	94Q2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-20-022	9/23/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	12/20/1994	P0	95Q1	<5	<5	<5	<5	<5	<5	<5	<5	<5
DM-20-022	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	6/21/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	9/17/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-022	12/26/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5
DM-20-022	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1 U	<0.5
DM-20-022	7/21/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-059	5/18/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	4.9	<0.2
DM-20-059	5/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	15	<0.2
DM-20-059	6/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	8.3	<0.2
DM-20-059	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	4.2	<0.2
DM-20-059	9/30/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	<0.2
DM-20-059	1/3/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-20-059	4/4/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
DM-20-059	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-059	9/26/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-059	12/20/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-059	3/26/1996	P0	96Q2	<5	<5	<5	<5	8.6	7.5	<5	230	<5
DM-20-059	6/21/1996	P0	96Q3	<125	<125	<125	<125	<125	<125	<125	720	<125
DM-20-059	9/17/1996	P0	96Q3	<5	<5	<5	<5	20	53	<5	400	<5
DM-20-059	12/26/1996	P0	97Q1	<2.5	<2.5	<2.5	<2.5	27	5	<2.5	110	<2.5
DM-20-059	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	20	<0.5	<0.5	3.4 U	<0.5
DM-20-059	7/21/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	3.3	<0.5	<0.5	0.6	<0.5
DM-20-090	5/18/1993	P0	93Q3	<2	<2	<2	<2	4	14	<2	890	<2
DM-20-090	5/28/1993	P0	93Q3	<5	<5	<5	<5	<5	8	<5	700	<5
DM-20-090	6/16/1993	P0	93Q3	<0.2	0.2	<0.2	<0.2	7.5	11	<0.2	360	<0.2
DM-20-090	7/14/1993	P0	93Q3	<1	<1	<1	<1	4	15	<1	700	<1
DM-20-090	10/3/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	4.3	6.1	<0.2	200	<0.2
DM-20-090	1/3/1994	P0	94Q1	<2.5	<2.5	<2.5	<2.5	<2.5	6.8	<2.5	99	<2.5
DM-20-090	1/3/1994	D1	94Q1	<2.5	<2.5	<2.5	<2.5	<2.5	6.4	<2.5	110	<2.5
DM-20-090	4/5/1994	P0	94Q2	<5	<5	<5	<5	<5	<5	<5	71	<5
DM-20-090	6/16/1994	P0	94Q3	<5	<5	<5	<5	<5	<5	<5	200	<5
DM-20-090	6/16/1994	D1	94Q3	<5	<5	<5	<5	<5	<5	<5	210	<5
DM-20-090	9/27/1994	P0	94Q4	<5	<5	<5	<5	<5	<5	<5	130	<5
DM-20-090	12/20/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	50	<0.5
DM-20-090	12/20/1994	D1	95Q1	<1	<1	<1	<1	<1	<1	<1	44	<1
DM-20-090	3/27/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	21	<0.5
DM-20-090	6/30/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	26	<0.5
DM-20-090	10/11/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	1.6	1.2	<0.5	50	<0.5
DM-20-090	1/17/1996	P0	96Q1	<12.5	<12.5	<12.5	<12.5	<12.5	23	<12.5	1100	<12.5
DM-20-090	3/26/1996	P0	96Q2	<25	<25	<25	<25	<25	<25	<25	1700	<25
DM-20-090	3/26/1996	D1	96Q2	<25	<25	<25	<25	<25	<25	<25	1700	<25
DM-20-090	6/21/1996	P0	96Q3	<25	<25	<25	<25	<25	46	<25	1700	<25
DM-20-090	9/17/1996	P0	96Q3	<25	<25	<25	<25	<25	<25	<25	1900	<25
DM-20-090	12/26/1996	P0	97Q1	<10	<10	<10	<10	11	30	<10	790	<10
DM-20-090	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	4.2	6.3	<0.5	100	<0.5
DM-20-090	7/21/1997	P0	97Q3	<2.5		<2.5	<2.5	4.2	5.4	<2.5	140	<2.5
DM-20-090	10/2/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	1.4	2.9	<0.5	78	<0.5
DM-20-090	3/13/1998	P0	98Q2	<0.5		<0.5	<0.5	0.83	1.7	<0.5	38	<0.5
DM-20-090	9/1/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	0.76	<0.5	13	<0.5
DM-20-090	1/8/1999	P0	99Q1	<0.5 UJ		<0.5 UJ	<0.5 UJ	0.66 J	0.66 J	<0.5 UJ	14 J	<0.5 UJ
DM-20-090	3/15/1999	P0	99Q2	<0.5		<0.5	<0.5	0.74	0.74	<0.5	16	<0.5
DM-20-090	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.6	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-20-090	3/1/2000	P0	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	8.8	<0.5
DM-20-090	3/1/2000	D1	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5
DM-20-090	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	0.69	0.51	<0.5	14	<0.5
DM-20-090	3/21/2001	P0	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5
DM-20-090	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-20-090	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	0.52	<0.5	20	<0.5
DM-20-090	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	0.68	<0.5	24	<0.5
DM-20-090	4/3/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5
DM-20-090	10/6/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-20-090	10/6/2003	D1	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-20-090	10/11/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	9.2	<0.5
DM-20-090	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.2	<0.5
DM-20-090	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.1	<0.5
DM-20-090	10/9/2006	D1	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.4	<0.5
DM-20-090	10/2/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	3.1	<0.5
DM-20-090	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5
DM-20-090	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-20-090	10/2/2009	D1	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-20-090	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.92	<0.5
DM-20-090	10/4/2010	D1	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.78	<0.5
DM-20-090	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-090	10/4/2011	D1	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
DM-20-090	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-090	10/2/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-090	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-090	10/13/2014	D1	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-090	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-090	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5
DM-20-120	5/18/1993	P0	93Q3	<2	<2	<2	<2	3	14	<2	810	<2
DM-20-120	5/28/1993	P0	93Q3	<5	<5	<5	<5	<5	6	<5	600	<5
DM-20-120	6/16/1993	P0	93Q3	<0.2	0.4	<0.2	<0.2	5.2	9.4	<0.2	620	<0.2
DM-20-120	7/14/1993	P0	93Q3	<5	<5	<5	<5	<5	17	<5	800	<5
DM-20-120	10/4/1993	P0	93Q4	<4	<4	<4	<4	4	15	<4	830	<4
DM-20-120	1/3/1994	P0	94Q1	<10	<10	<10	<10	<10	<10	<10	1100	<10
DM-20-120	4/6/1994	P0	94Q2	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	860	<12.5
DM-20-120	4/6/1994	D1	94Q2	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	610	<12.5
DM-20-120	6/16/1994	P0	94Q3	<5	<5	<5	<5	<5	11	<5	660	<5
DM-20-120	9/27/1994	P0	94Q4	<25	<25	<25	<25	<25	<25	<25	940	<25
DM-20-120	9/27/1994	D1	94Q4	<25	<25	<25	<25	<25	<25	<25	960	<25
DM-20-120	12/20/1994	P0	95Q1	37	<25	<25	<25	<25	<25	<25	890	<25
DM-20-120	3/27/1995	P0	95Q2	<25	<25	<25	<25	<25	<25	<25	1200	<25
DM-20-120	3/27/1995	D1	95Q2	<25	<25	<25	<25	<25	<25	<25	1200	<25
DM-20-120	6/30/1995	P0	95Q3	<25	<25	<25	<25	<25	29	<25	670	<25
DM-20-120	6/30/1995	D1	95Q3	<25	<25	<25	<25	<25	30	<25	670	<25
DM-20-120	10/11/1995	P0	95Q4	<25	<25	<25	<25	<25	<25	<25	510	<25
DM-20-120	1/17/1996	P0	96Q1	<25	<25	<25	<25	<25	<25	<25	1600	<25
DM-20-120	1/17/1996	D1	96Q1	<25	<25	<25	<25	<25	28	<25	1500	<25
DM-20-120	3/26/1996	P0	96Q2	<25	<25	<25	<25	<25	52	<25	1900	<25
DM-20-120	6/21/1996	P0	96Q3	<25	<25	<25	<25	<25	<25	<25	1200	<25
DM-20-120	9/17/1996	P0	96Q3	<25	<25	<25	<25	<25	<25	<25	1400	<25
DM-20-120	12/26/1996	P0	97Q1	<10	<10	<10	<10	10	40	<10	1300	<10
DM-20-120	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	0.6	1.9	<0.5	1200	<0.5
DM-20-120	7/21/1997	P0	97Q3	<25	<25	<25	<25	<25	<25 UJ	<25	590	<25
DM-20-120	7/21/1997	D1	97Q3	<25	<25	<25	<25	<25	42 J	<25	780	<25
DM-20-120	10/2/1997	P0	97Q4	<2.5	<2.5	<2.5	<2.5	4	10	<2.5	570	<2.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-20-120	10/2/1997	P0	97Q4									
DM-20-120	3/13/1998	P0	98Q2	<12		<12	<12	<12	15	<12	480	<12
DM-20-120	3/13/1998	D1	98Q2	<12		<12	<12	<12	16	<12	480	<12
DM-20-120	9/1/1998	P0	98Q4	<12		<12	<12	<12	<12	<12	220	<12
DM-20-120	1/8/1999	P0	99Q1	<12 UJ		<12 UJ	<12 UJ	<12 UJ	<12 UJ	<12 UJ	220 J	<12 UJ
DM-20-120	3/15/1999	P0	99Q2	<5		<5	<5	7.3	7.8	<5	180	<5
DM-20-120	9/2/1999	P0	99Q4	<5		<5	<5	<5	15	<5	360	<5
DM-20-120	3/1/2000	P0	00Q2	<5		<5	<5	<5	15	<5	400	<5
DM-20-120	10/3/2000	P0	00Q4	<12		<12	<12	<12	23	<12	460	<12
DM-20-120	3/21/2001	P0	01Q2	<0.5		0.83	<0.5	5.1	24	<0.5	360	<0.5
DM-20-120	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	3.4	17	<0.5	300	<0.5
DM-20-120	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	3.2	14	<0.5	290	<0.5
DM-20-120	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	2.4	12	<0.5	270	<0.5
DM-20-120	4/3/2003	P0	03Q2	<0.5		<0.5	<0.5	2.6	8.4	<0.5	180	0.71
DM-20-120	10/6/2003	P0	03Q4	<0.5		<0.5	<0.5	2.9	14	<0.5	280	<0.5
DM-20-120	10/11/2004	P0	04Q4	<0.5		<0.5	<0.5	3.8	19	<0.5	310	<0.5
DM-20-120	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	3.6	15	<0.5	270	<0.5
DM-20-120	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	4.5	11	<0.5	240	<0.5
DM-20-120	10/2/2007	P0	07Q4	<2.5		<2.5	<1	6.2	16	<2.5	290	<2.5
DM-20-120	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	4.1	10	<0.5	210	<0.5
DM-20-120	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	4.1	8.4	<0.5	150	<0.5
DM-20-120	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	4.8	6	<0.5	130	<0.5
DM-20-120	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	4.2	6.8	<0.5	94	<0.5
DM-20-120	10/2/2012	P0	12Q4	<1	<1	<1	<1	3.7	5.8	<1	105	<1
DM-20-120	10/2/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	3.7 J	6 J	<0.5	96.2	<0.5
DM-20-120	10/2/2013	D1	13Q4	<0.5	<0.5	<0.5	<0.5	2.6 J	3.8 J	<0.5	71.7	<0.5
DM-20-120	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	3.4	3.8	<0.5	82.5	<0.5
DM-20-120	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	2.5	2.4	<0.5	59.8	<0.5
DM-20-120	10/15/2015	D1	15Q4	<0.5	<0.5	<0.5	<0.5	1.7	1.5	<0.5	35	<0.5
DM-20-120	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	1.6	2.1	<0.5	43.1	<0.5
DM-20-170	5/18/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	14	<0.2
DM-20-170	5/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2	13	<0.2
DM-20-170	6/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	9.2	<0.2
DM-20-170	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	3.7	<0.2
DM-20-170	7/14/1993	D1	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	3.9	<0.2
DM-20-170	9/30/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.5	<0.2
DM-20-170	1/3/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.3	<0.5
DM-20-170	4/5/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5
DM-20-170	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-20-170	9/26/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5
DM-20-170	12/20/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-20-170	3/27/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5
DM-20-170	6/30/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5
DM-20-170	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5
DM-20-170	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5
DM-20-170	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
DM-20-170	9/17/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-20-170	12/26/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5
DM-20-170	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.7 U	<0.5
DM-20-170	7/21/1997	P0	97Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5
DM-20-170	10/2/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-20-170	3/13/1998	P0	98Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5
DM-20-170	9/1/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5
DM-20-170	3/15/1999	P0	99Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.9	3
DM-20-170	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	0.82	<0.5	<0.5	15	10

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-20-170	3/1/2000	P0	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5
DM-20-170	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5
DM-20-170	3/21/2001	P0	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	4	<0.5
DM-20-170	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	4.1	<0.5
DM-20-170	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.4	<0.5
DM-20-170	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.1	<0.5
DM-20-170	4/3/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.9	<0.5
DM-20-170	10/6/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.8	<0.5
DM-20-170	10/11/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7	<0.5
DM-20-170	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.1	<0.5
DM-20-170	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.3	<0.5
DM-20-170	10/2/2007	P0	07Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5
DM-20-170	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5
DM-20-170	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.2	<0.5
DM-20-170	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.7	<0.5
DM-20-170	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9	<0.5
DM-20-170	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.5	<0.5
DM-20-170	10/2/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8	<0.5
DM-20-170	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.7	<0.5
DM-20-170	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.4	<0.5
DM-20-170	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.1	<0.5
DM-20-200	5/18/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	11	<0.2
DM-20-200	5/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	8.8	<0.2
DM-20-200	6/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	4.8	<0.2
DM-20-200	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	9.9	<0.2
DM-20-200	10/1/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	7.8	<0.2
DM-20-200	1/3/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.4	<0.5
DM-20-200	4/6/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4	<0.5
DM-20-200	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5
DM-20-200	9/26/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	<0.5
DM-20-200	12/20/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5
DM-20-235	5/18/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	9.1	<0.2
DM-20-235	5/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	11	<0.2
DM-20-235	6/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10	<0.2
DM-20-235	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	8.1	<0.2
DM-20-235	10/1/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	11	<0.2
DM-20-235	10/1/1993	D1	93Q4	<0.2	<0.2	<0.2	<0.2		<0.2		12	<0.2
DM-20-235	1/3/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.7	<0.5
DM-20-235	4/11/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.5	<0.5
DM-20-235	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.3	<0.5
DM-20-235	9/27/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.8	<0.5
DM-20-235	12/20/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.1	<0.5
DM-20-235	3/27/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.6	<0.5
DM-20-235	6/30/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.6	<0.5
DM-20-235	10/11/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.3	<0.5
DM-20-235	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.6	<0.5
DM-20-235	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5
DM-20-235	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.9	<0.5
DM-20-235	9/17/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.7	<0.5
DM-20-235	9/17/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5
DM-20-235	12/26/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.1	<0.5
DM-20-235	3/17/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.8 U	<0.5
DM-20-235	7/21/1997	P0	97Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	4.2	<0.5
DM-20-235	10/2/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.2	0.7
DM-20-235	10/2/1997	P0	97Q4									

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-20-235	3/13/1998	P0	98Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.6	0.67
DM-20-235	9/1/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5
DM-20-235	3/15/1999	P0	99Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.5	2.7
DM-20-235	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	0.81	<0.5	<0.5	16	12
DM-20-235	3/1/2000	P0	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5.2	0.58
DM-20-235	10/3/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.8	0.79
DM-20-235	3/21/2001	P0	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.9	<0.5
DM-20-235	3/21/2001	D1	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.3	<0.5
DM-20-235	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	0.53	<0.5	6.9	<0.5
DM-20-235	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5
DM-20-235	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7	<0.5
DM-20-235	4/3/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.5	<0.5
DM-20-235	4/3/2003	D1	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.5
DM-20-235	10/6/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.3	<0.5
DM-20-235	10/11/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.6	<0.5
DM-20-235	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.2	<0.5
DM-20-235	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.3	<0.5
DM-20-235	10/2/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	10	<0.5
DM-20-235	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.4	<0.5
DM-20-235	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.2	<0.5
DM-20-235	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.3	<0.5
DM-20-235	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-20-235	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10.3	<0.5
DM-20-235	10/2/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11.7	<0.5
DM-20-235	10/13/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	14.2	<0.5
DM-20-235	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	12.8	<0.5
DM-20-235	10/5/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10.3	<0.5
DM-20-265	5/18/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.6	<0.2
DM-20-265	5/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.2	<0.2
DM-20-265	5/28/1993	D1	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.2	<0.2
DM-20-265	6/15/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.2	<0.2
DM-20-265	7/14/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	<0.2
DM-20-265	9/30/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2
DM-20-265	1/3/1994	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-20-265	4/11/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
DM-20-265	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-265	9/26/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
DM-20-265	12/20/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-20-265	12/20/1994	D1	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	4/28/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	4/28/1995	D1	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	5/10/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	5/10/1995	D1	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	10/2/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
DM-21	1/3/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	3/15/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	6/11/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	4/8/2005	P0	05Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-21	10/11/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-018	6/11/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	<0.2	4.9	<0.2
DM-22-018	6/30/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	<0.2
DM-22-018	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2
DM-22-018	9/28/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.4	<0.2
DM-22-018	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5
DM-22-018	3/31/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-22-018	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.5	<0.5
DM-22-018	10/3/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.5	<0.5
DM-22-018	12/21/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.3	<0.5
DM-22-045	6/11/1993	P0	93Q3	<0.2	<0.2	<0.2	2.3	<0.2	<0.2	<0.2	0.4	<0.2
DM-22-045	6/30/1993	P0	93Q3	<0.2	<0.2	<0.2	1.6	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-045	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	2.1	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-045	9/28/1993	P0	93Q4	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-045	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	3.2	<0.5	<0.5	<0.5	0.8	<0.5
DM-22-045	3/30/1994	P0	94Q2	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-045	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-045	9/30/1994	P0	94Q4	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	0.9	<0.5
DM-22-045	12/21/1994	P0	95Q1	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.9	<0.5
DM-22-081	6/11/1993	P0	93Q3	<0.2	<0.2	<0.2	0.7	<0.2	<0.2	<0.2	3.7	<0.2
DM-22-081	6/30/1993	P0	93Q3	<0.2	<0.2	<0.2	0.5	<0.2	<0.2	<0.2	2.9	<0.2
DM-22-081	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	0.5	<0.2	<0.2	<0.2	5	<0.2
DM-22-081	9/29/1993	P0	93Q4	<0.2	<0.2	<0.2	0.8	<0.2	0.3	<0.2	7.1	<0.2
DM-22-081	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	7.4	<0.5
DM-22-081	12/30/1993	D1	94Q1	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	7.9	<0.5
DM-22-081	4/1/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.5	<0.5
DM-22-081	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	9	<0.5
DM-22-081	10/3/1994	P0	94Q4	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	7.6	<0.5
DM-22-081	12/22/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.7	<0.5
DM-22-081	3/28/1995	P0	95Q2	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	6.9	<0.5
DM-22-081	6/29/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	1.1	2.9
DM-22-081	10/4/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.3	<0.5
DM-22-081	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5
DM-22-081	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.1	<0.5
DM-22-081	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.5	<0.5
DM-22-081	9/16/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.1	<0.5
DM-22-081	9/16/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.6	<0.5
DM-22-081	12/23/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-22-081	3/14/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-22-081	7/21/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-22-081	10/3/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.9	<0.5
DM-22-081	3/11/1998	P0	98Q2	<0.5		<0.5	<0.5	3.6	<0.5	<0.5	4.4	<0.5
DM-22-081	9/3/1998	P0	98Q4	<0.5		<0.5	<0.5	3	<0.5	<0.5	0.87	<0.5
DM-22-081	3/11/1999	P0	99Q2	<0.5		<0.5	<0.5	1.8	<0.5	<0.5	0.56	8.5
DM-22-081	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	1.8	<0.5	<0.5	3.5	<0.5
DM-22-081	9/2/1999	D1	99Q4	<0.5		<0.5	<0.5	1.8	<0.5	<0.5	3.5	<0.5
DM-22-081	3/12/2000	P0	00Q2	<0.5		<0.5	<0.5	1.5	<0.5	<0.5	2.9	<0.5
DM-22-081	10/2/2000	P0	00Q4	<0.5		<0.5	<0.5	2	<0.5	<0.5	3.4	<0.5
DM-22-081	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	0.99	<0.5	<0.5	4	<0.5
DM-22-081	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5
DM-22-081	10/25/2001	D1	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5
DM-22-081	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.5	<0.5
DM-22-081	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5
DM-22-081	4/4/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5
DM-22-081	4/4/2003	D1	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5
DM-22-081	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5
DM-22-081	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5
DM-22-081	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	1	<0.5	<0.5	1.1	<0.5
DM-22-081	10/4/2005	D1	05Q4	<0.5		<0.5	<0.5	1	<0.5	<0.5	0.9	<0.5
DM-22-081	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	1.7	<0.5	<0.5	0.53	<0.5
DM-22-081	10/3/2007	P0	07Q4	<0.5		<0.5	<1	1.2	<0.5	<0.5	0.82	<0.5
DM-22-081	10/3/2007	D1	07Q4	<0.5		<0.5	<1	1.1	<0.5	<0.5	0.7	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-22-081	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	0.64	<0.5
DM-22-081	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	0.63
DM-22-081	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-081	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
DM-22-081	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-081	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-081	10/14/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-081	10/14/2014	D1	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-081	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-081	10/4/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-098	6/10/1993	P0	93Q3	<0.2	<0.2	<0.2	0.5	<0.2	<0.2	<0.2	2.6	<0.2
DM-22-098	6/30/1993	P0	93Q3	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	<0.2	0.4	<0.2
DM-22-098	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	<0.2	0.3	<0.2
DM-22-098	9/28/1993	P0	93Q4	<0.2	<0.2	<0.2	0.3	<0.2	<0.2	<0.2	0.4	<0.2
DM-22-098	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	2.9	<0.5
DM-22-098	3/30/1994	P0	94Q2	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	3.8	<0.5
DM-22-098	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.8	<0.5
DM-22-098	9/30/1994	P0	94Q4	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	3.5	<0.5
DM-22-098	9/30/1994	D1	94Q4	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	3.1	<0.5
DM-22-098	12/21/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.6	<0.5
DM-22-098	3/28/1995	P0	95Q2	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	4.5	<0.5
DM-22-098	3/28/1995	D1	95Q2	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	4.3	<0.5
DM-22-098	6/29/1995	P0	95Q3	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	4.1	<0.5
DM-22-098	10/4/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.1	<0.5
DM-22-098	10/4/1995	D1	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.8	<0.5
DM-22-098	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.4	<0.5
DM-22-098	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	5.7	<0.5
DM-22-098	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5
DM-22-098	9/16/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.5	<0.5
DM-22-098	12/23/1996	P0	97Q1	<5	<5	<5	<5	<5	<5	<5	7	<5
DM-22-098	3/14/1997	P0	97Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	7.3 U	<2.5
DM-22-098	7/21/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.9	<0.5
DM-22-098	10/3/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	3	0.5
DM-22-098	10/3/1997	P0	97Q4									
DM-22-098	3/11/1998	P0	98Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	4.7	<2.5
DM-22-098	9/3/1998	P0	98Q4	<0.5		<0.5	<0.5	0.95	<0.5	<0.5	1.3	3.6
DM-22-098	3/11/1999	P0	99Q2	<0.5 UJ		<0.5 UJ	<0.5 UJ	2.1 J	<0.5 UJ	<0.5 UJ	2.9 J	<0.5 UJ
DM-22-098	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	2.2	<0.5	<0.5	3.5	<0.5
DM-22-098	3/12/2000	P0	00Q2	<0.5		<0.5	<0.5	1.9	<0.5	<0.5	3.9	<0.5
DM-22-098	10/2/2000	P0	00Q4	<0.5		<0.5	<0.5	1.5	<0.5	<0.5	3	<0.5
DM-22-098	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	1.8	<0.5	<0.5	4.1	<0.5
DM-22-098	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	1.1	<0.5	<0.5	2.8	<0.5
DM-22-098	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	1.5	<0.5	<0.5	4.2	<0.5
DM-22-098	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	1	<0.5	<0.5	3.7	<0.5
DM-22-098	10/1/2002	D1	02Q4	<0.5		<0.5	<0.5	0.77	<0.5	<0.5	2.5	<0.5
DM-22-098	4/4/2003	P0	03Q2	<0.5		<0.5	<0.5	0.85	<0.5	<0.5	2.6	<0.5
DM-22-098	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	1.1	<0.5	<0.5	2.7	<0.5
DM-22-098	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	1.2	<0.5	<0.5	1.7	<0.5
DM-22-098	10/12/2004	D1	04Q4	<0.5		<0.5	<0.5	1.3	<0.5	<0.5	1.8	<0.5
DM-22-098	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	1.3	<0.5	<0.5	1.2	<0.5
DM-22-098	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	1.6	<0.5	<0.5	1.1	<0.5
DM-22-098	10/3/2007	P0	07Q4	<0.5		<0.5	<1	1.9	<0.5	<0.5	1.3	<0.5
DM-22-098	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	0.89	<0.5
DM-22-098	10/2/2009	P0	09Q4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
DM-22-098	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	<0.5	0.54	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-22-098	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	0.51	<0.5
DM-22-098	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-098	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-098	10/14/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	<0.5	<0.5	1
DM-22-098	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
DM-22-098	10/4/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-138	6/10/1993	P0	93Q3	<1	<1	<1	<1	<1	<1	<1	73	<1
DM-22-138	6/29/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	0.6	1.4	<0.2	75	<0.2
DM-22-138	7/16/1993	P0	93Q3	<1	<1	<1	<1	<1	2	<1	130	<1
DM-22-138	7/16/1993	D1	93Q3	<1	<1	<1	<1	<1	2	<1	170	<1
DM-22-138	9/29/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	2.1	3.2	<0.2	160	<0.2
DM-22-138	12/30/1993	P0	94Q1	<2.5	<2.5	<2.5	<2.5	9.4	8	<2.5	140	<2.5
DM-22-138	4/1/1994	P0	94Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	200	<2.5
DM-22-138	4/1/1994	D1	94Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	180	<2.5
DM-22-138	6/16/1994	P0	94Q3	<2.5	<2.5	<2.5	<2.5	<2.5	3.6	<2.5	230	<2.5
DM-22-138	6/16/1994	D1	94Q3	<2.5	<2.5	<2.5	<2.5	<2.5	4.8	<2.5	270	<2.5
DM-22-138	10/3/1994	P0	94Q4	<2.5	<2.5	<2.5	<2.5	5.3	3.8	<2.5	200	<2.5
DM-22-138	12/22/1994	P0	95Q1	<2.5	<2.5	<2.5	<2.5	4.8	4.3	<2.5	230	<2.5
DM-22-138	3/28/1995	P0	95Q2	<2.5	<2.5	<2.5	<2.5	7.8	8.6	<2.5	310	<2.5
DM-22-138	6/29/1995	P0	95Q3	<10	<10	<10	<10	<10	<10	<10	440	<10
DM-22-138	10/4/1995	P0	95Q4	<2.5	<2.5	<2.5	<2.5	9.1	9.4	<2.5	400	<2.5
DM-22-138	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	26	<0.5
DM-22-138	3/26/1996	P0	96Q2	<2.5	<2.5	<2.5	<2.5	7.3	8.5	<2.5	460	<2.5
DM-22-138	6/21/1996	P0	96Q3	<2.5	<2.5	<2.5	<2.5	9	9.9	<2.5	490	<2.5
DM-22-138	9/16/1996	P0	96Q3	<2.5	<2.5	<2.5	<2.5	7.4	13	<2.5	320	<2.5
DM-22-138	12/23/1996	P0	97Q1	<5	<5	<5	<5	5.7	8.8	<5	440	<5
DM-22-138	3/14/1997	P0	97Q2	<2.5	<2.5	<2.5	<2.5	7.8	10	<2.5	400	<2.5
DM-22-138	7/21/1997	P0	97Q3	<5		<5	<5	18	34	<5	350	<5
DM-22-138	7/21/1997	D1	97Q3	<5		<5	<5	28	32	<5	380	<5
DM-22-138	10/3/1997	P0	97Q4	<25	<25	<25	<25	<25	25	<25	560	<25
DM-22-138	10/3/1997	D1	97Q4	<25	<25	<25	<25	<25	<25	<25	400	<25
DM-22-138	3/11/1998	P0	98Q2	<6.2		<6.2	<6.2	7.9	11	<6.2	410	<6.2
DM-22-138	9/3/1998	P0	98Q4	<12		<12	<12	<12	<12	<12	330	<12
DM-22-138	9/3/1998	D1	98Q4	<12		<12	<12	<12	<12	<12	260	<12
DM-22-138	3/11/1999	P0	99Q2	<10		<10	<10	10	14	<10	360	<10
DM-22-138	9/2/1999	P0	99Q4	<10		<10	<10	<10	11	<10	350	<10
DM-22-138	3/12/2000	P0	00Q2	<12		<12	<12	<12	<12	<12	280	<12
DM-22-138	10/2/2000	P0	00Q4	<5		<5	<5	5.8	7.9	<5	260	<5
DM-22-138	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	8.1	11	<0.5	330	<0.5
DM-22-138	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	5.2	6.2	<0.5	290	<0.5
DM-22-138	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	5.4	5.4	<0.5	180	0.71
DM-22-138	4/2/2002	D1	02Q2	<0.5		<0.5	<0.5	6.7	8.3	<0.5	260	<0.5
DM-22-138	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	6.2	8.4	<0.5	290	<0.5
DM-22-138	4/4/2003	P0	03Q2	<0.5		<0.5	<0.5	5.6	7.4	<0.5	260	<0.5
DM-22-138	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	4.3	5.8	<0.5	270	<0.5
DM-22-138	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	4.2	4.7	<0.5	180	<0.5
DM-22-138	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	4.4	5.5	<0.5	200	<0.5
DM-22-138	10/9/2006	P0	06Q4	<2.5		<2.5	<2.5	6.3	6.8	<2.5	290	<2.5
DM-22-138	10/3/2007	P0	07Q4	<2.5		<2.5	<5	4.4	4.2	<2.5	170	<2.5
DM-22-138	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	4.1	4.9	<0.5	170	<0.5
DM-22-138	10/2/2009	P0	09Q4	<2.5	<2.5	<2.5	<2.5	6	<2.5	<2.5	28	6
DM-22-138	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	3	3.4	<0.5	150	<0.5
DM-22-138	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	3	5	<0.5	150	<0.5
DM-22-138	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	2.2	2.6	<0.5	99.1	<0.5
DM-22-138	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	1.7	3.1	<0.5	96.6	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-22-138	10/14/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	2.8	3.4	<0.5	114	<0.5
DM-22-138	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	2.4	3	<0.5	86.9	<0.5
DM-22-138	10/4/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	2.4	2.2	<0.5	82.6	0.92
DM-22-175	6/29/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-175	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.7	<0.2
DM-22-175	9/28/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1	<0.2
DM-22-175	9/29/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.5	<0.2
DM-22-175	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.1	<0.5
DM-22-175	3/31/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9	<0.5
DM-22-175	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	24	<0.5
DM-22-175	10/3/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	26	<0.5
DM-22-175	12/22/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	31	<0.5
DM-22-175	3/28/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	1.7	0.5	<0.5	29	<0.5
DM-22-175	6/29/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	2.3	0.9	<0.5	67	<0.5
DM-22-175	10/4/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	3.8	0.9	<0.5	41	5.8
DM-22-175	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	2.9	1.3	<0.5	78	<0.5
DM-22-175	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	2.8	1.6	<0.5	68	<0.5
DM-22-175	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	3.1	1.6	<0.5	81	<0.5
DM-22-175	9/16/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	67	<0.5
DM-22-175	12/23/1996	P0	97Q1	<2.5	<2.5	<2.5	<2.5	3.2	<2.5	<2.5	96	<2.5
DM-22-175	3/14/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	3.9	2.3	<0.5	75	<0.5
DM-22-175	3/14/1997	D1	97Q2	<0.5	<0.5	<0.5	<0.5	3.6	2.2	<0.5	83	<0.5
DM-22-175	7/21/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	3.7	2.3	<0.5	92	<0.5
DM-22-175	10/3/1997	P0	97Q4	<1	<1	<1	<1	2.4	2	<1	63	<1
DM-22-175	3/11/1998	P0	98Q2	<2.5		<2.5	<2.5	4.4	2.6	<2.5	98	<2.5
DM-22-175	9/3/1998	P0	98Q4	<2.5		<2.5	<2.5	2.5	<2.5	<2.5	65	<2.5
DM-22-175	3/11/1999	P0	99Q2	<2.5 UJ		<2.5 UJ	<2.5 UJ	5.8 J	3.2 J	<2.5 UJ	96 J	<2.5 UJ
DM-22-175	9/2/1999	P0	99Q4	<5		<5	<5	5.3	<5	<5	110	<5
DM-22-175	3/12/2000	P0	00Q2	<2.5		<2.5	<2.5	5.3	3.7	<2.5	110	<2.5
DM-22-175	10/2/2000	P0	00Q4	<1		<1	<1	4.8	3.3	<1	100 J	<1
DM-22-175	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	6	4	<0.5	120	<0.5
DM-22-175	3/22/2001	D1	01Q2	<0.5		<0.5	<0.5	5.7	3.8	<0.5	120	<0.5
DM-22-175	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	4.7	2.8	<0.5	93	<0.5
DM-22-175	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	7.3	4.3	<0.5	140	<0.5
DM-22-175	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	6	4.2	<0.5	210	<0.5
DM-22-175	4/4/2003	P0	03Q2	<0.5		<0.5	<0.5	6.3	3.8	<0.5	170	<0.5
DM-22-175	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	6	3.4	<0.5	120	<0.5
DM-22-175	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	6.1	3.6	<0.5	150	<0.5
DM-22-175	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	7.4	5.6	<0.5	220	<0.5
DM-22-175	10/9/2006	P0	06Q4	<2.5		<2.5	<2.5	10	7.4	<2.5	280	<2.5
DM-22-175	10/3/2007	P0	07Q4	<2.5		<2.5	<5	8.4	3.8	<2.5	170	<2.5
DM-22-175	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	8.4	6.7	<0.5	300	<0.5
DM-22-175	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	8.7	6.5	<0.5	240 J	<0.5
DM-22-175	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	8	5.6	<0.5	280	<0.5
DM-22-175	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	9.9	10	<0.5	180	<0.5
DM-22-175	10/2/2012	P0	12Q4	<1	<1	<1	<1	6.9	5.4	<1	174	<1
DM-22-175	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	9.6	9.8	<0.5	194	<0.5
DM-22-175	10/14/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	8.8	6.3	<0.5	185	<0.5
DM-22-175	10/15/2015	P0	15Q4	<2.5	<2.5	<2.5	<2.5	7.5	5.2	<2.5	170 J	<2.5
DM-22-175	10/4/2016	P0	16Q4	<1	<1	<1	<1	8.7	5.1	<1	207	<1
DM-22-220	6/10/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2
DM-22-220	6/29/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-220	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-220	9/27/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-220	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-22-220	3/30/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	9/29/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	12/21/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	3/28/1995	P0	95Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	6/29/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/4/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
DM-22-220	1/17/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	3/26/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	6/21/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	9/16/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	12/23/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-22-220	3/14/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3 U	<0.5
DM-22-220	7/21/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/3/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/3/1997	P0	97Q4									
DM-22-220	3/11/1998	P0	98Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<0.5
DM-22-220	9/3/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	3/11/1999	P0	99Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	9/2/1999	P0	99Q4	<0.5		<0.5	<0.5	2.2	<0.5	<0.5	0.53	12
DM-22-220	3/12/2000	P0	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/2/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	3/22/2001	P0	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/25/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	4/2/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/1/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	4/4/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.63	<0.5
DM-22-220	10/7/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/12/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/4/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/9/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-220	10/3/2007	P0	07Q4	<0.5		<0.5	<1	0.69	<0.5	<0.5	1.3	1.3
DM-22-220	10/2/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-22-220	10/2/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<0.5
DM-22-220	10/4/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.78	<0.5
DM-22-220	10/4/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5
DM-22-220	10/2/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<0.5
DM-22-220	10/3/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-22-220	10/14/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.94	<0.5
DM-22-220	10/15/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-22-220	10/4/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-22-265	6/10/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-265	6/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-265	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-265	9/27/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-265	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-265	3/29/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-22-265	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-265	9/29/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-265	12/21/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-305	6/10/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	<0.2
DM-22-305	6/28/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-305	7/16/1993	P0	93Q3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2
DM-22-305	9/28/1993	P0	93Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DM-22-305	12/30/1993	P0	94Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-22-305	3/31/1994	P0	94Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-305	6/16/1994	P0	94Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-22-305	9/30/1994	P0	94Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.5
DM-22-305	12/21/1994	P0	95Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-23	7/20/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
DM-23	7/20/1995	D1	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.8	<0.5
DM-23	8/10/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.9	<0.5
DM-23	8/10/1995	D1	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.9	<0.5
DM-23	10/2/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5
DM-23	1/4/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-23	3/15/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
DM-23	6/11/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-23	9/20/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	13	<0.5
DM-23	12/16/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	19	<0.5
DM-23	3/10/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	1	48	<0.5
DM-23	7/14/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	24	<0.5
DM-23	9/29/1997	P0	97Q4	<1	<1	<1	<1	<1	<1	<1	23	<1
DM-23	1/16/1998	P0	98Q1	<1		<1	<1	1	<1	<1	40	<1 UJ
DM-23	3/9/1998	P0	98Q2	<0.5		<0.5	<0.5	1	0.79	<0.5	40	<0.5
DM-23	6/16/1998	P0	98Q3	<0.5		<0.5	<0.5	0.97	0.93	<0.5	36	<0.5
DM-23	9/14/1998	P0	98Q4	<1		<1	<1	<1	<1	<1	37	<1
DM-23	1/7/1999	P0	99Q1	<0.5		<0.5	<0.5	0.53	0.75	<0.5	28	<0.5
DM-23	3/24/1999	P0	99Q2	<1		<1	<1	<1	1.4	<1	48	<1
DM-23	7/29/1999	P0	99Q3	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	46	<2.5
DM-23	9/14/1999	P0	99Q4	<1		<1	<1	<1	1.4	<1	47	<1
DM-23	1/19/2000	P0	00Q1	<1		<1	<1	<1	1.4	<1	45	<1
DM-23	3/2/2000	P0	00Q2	<1		<1	<1	<1	1.9	<1	63	<1
DM-23	6/23/2000	P0	00Q3	<2.5		<2.5	<2.5	<2.5	2.6	<2.5	77	<2.5
DM-23	10/12/2000	P0	00Q4	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	56	<2.5
DM-23	3/26/2001	P0	01Q2	<0.5		<0.5	<0.5	1	3.3	<0.5	79	<0.5
DM-23	6/14/2001	P0	01Q3	<0.5		<0.5	<0.5	0.79	2.6	<0.5	63	<0.5
DM-23	11/7/2001	P0	01Q4	<0.5		<0.5	<0.5	0.85	3.2	<0.5	76	<0.5
DM-23	1/24/2002	P0	02Q1	<0.5		<0.5	<0.5	1.2	4.3	<0.5	90	<0.5
DM-23	1/24/2002	D1	02Q1	<0.5		<0.5	<0.5	0.91	3.3	<0.5	69	<0.5
DM-23	4/8/2002	P0	02Q2	<0.5		<0.5	<0.5	1	3.9	<0.5	80	<0.5
DM-23	7/9/2002	P0	02Q3	<0.5		<0.5	<0.5	0.68	2.6	<0.5	55	<0.5
DM-23	10/18/2002	P0	02Q4	<0.5		<0.5	<0.5	0.91	3.4	<0.5	71	<0.5
DM-23	1/9/2003	P0	03Q1	<0.5		<0.5	<0.5	0.87	3.3	<0.5	66	<0.5
DM-23	4/8/2003	P0	03Q2	<0.5		<0.5	<0.5	0.63	2.7	<0.5	48	<0.5
DM-23	7/2/2003	P0	03Q3	<0.5		<0.5	<0.5	0.54	2.5	<0.5	43	<0.5
DM-23	10/9/2003	P0	03Q4	<0.5		<0.5	<0.5	0.74	2.8	<0.5	58	<0.5
DM-23	5/13/2004	P0	04Q2	<0.5		<0.5	<0.5	0.64	2.9	<0.5	48	<0.5
DM-23	10/11/2004	P0	04Q4	<0.5		<0.5	<0.5	0.53	1.5	<0.5	35	<0.5
DM-23	4/7/2005	P0	05Q2	<0.5		<0.5	<0.5	0.6	2.8	<0.5	43	<0.5
DM-23	10/12/2005	P0	05Q4	<0.5		<0.5	<0.5	0.97	3.7	<0.5	62	<0.5
DM-23	4/12/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	0.94	4.2	<0.5	65	<0.5
DM-23	10/17/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	2.6	<0.5	45	<0.5
DM-23	4/6/2007	P0	07Q2	<0.5		<0.5	<0.5	0.62	2.4	<0.5	42	<0.5
DM-23	10/9/2007	P0	07Q4	<0.5		<0.5	<1	0.61	1.7	<0.5	28	<0.5
DM-23	4/8/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	0.64	1.5	<0.5	27	<0.5
DM-23	10/13/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.81	<0.5	13	<0.5
DM-23	4/10/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5
DM-23	10/15/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.9	<0.5
DM-23	4/8/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	<0.5
DM-23	10/11/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-23	4/8/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.8	<0.5
DM-23	10/10/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5
DM-23	4/11/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5
DM-23	10/11/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5
DM-23	4/8/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.3	<0.5
DM-23	11/13/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5
DM-23	4/9/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-23	10/20/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.93	<0.5
DM-23	4/8/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-23	10/22/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-23	4/18/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-23	10/11/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.82	<0.5
DM-24	7/27/1995	P0	95Q3	<5	<5	<5	<5	<5	<5	<5	130	<5
DM-24	7/27/1995	D1	95Q3	<5	<5	<5	<5	<5	<5	<5	150	<5
DM-24	8/24/1995	P0	95Q3	<5	<5	<5	<5	<5	<5	<5	170	<5
DM-24	10/2/1995	P0	95Q4	<2.5	<2.5	<2.5	<2.5	<2.5	4.5	<2.5	160	<2.5
DM-24	3/21/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	88	<0.5
DM-24	6/12/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	1.9	2.1	<0.5	170	<0.5
DM-24	9/24/1996	P0	96Q3	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	160	<12.5
DM-24	3/12/1997	P0	97Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	150	<2.5
DM-24	7/16/1997	P0	97Q3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	110	<2.5
DM-24	9/26/1997	P0	97Q4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	79	<2.5
DM-24	3/10/1998	P0	98Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	98	<2.5
DM-24	9/15/1998	P0	98Q4	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	73	<2.5
DM-24	1/8/1999	P0	99Q1	<1.2		<1.2	<1.2	<1.2	1.6	<1.2	74	<1.2
DM-24	3/24/1999	P0	99Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	66	<2.5
DM-24	9/15/1999	P0	99Q4	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	74	<2.5
DM-24	3/3/2000	P0	00Q2	<1.2		<1.2	<1.2	<1.2	2	<1.2	88	<1.2
DM-24	10/12/2000	P0	00Q4	<5		<5	<5	<5	<5	<5	96	<5
DM-24	3/26/2001	P0	01Q2	<0.5		<0.5	<0.5	1.4	3.5	<0.5	140	<0.5
DM-24	11/9/2001	P0	01Q4	<0.5		<0.5	<0.5	1.6	4.2	<0.5	140	<0.5
DM-24	4/8/2002	P0	02Q2	<0.5		<0.5	<0.5	1.7	4.8	<0.5	170	<0.5
DM-24	10/18/2002	P0	02Q4	<0.5		<0.5	<0.5	1.6	4.8	<0.5	180	<0.5
DM-24	4/8/2003	P0	03Q2	<0.5		<0.5	<0.5	1.6	5.5	<0.5	170	<0.5
DM-24	10/12/2003	P0	03Q4	<0.5		<0.5	<0.5	1.6	6.1	<0.5	220	<0.5
DM-24	4/6/2004	P0	04Q2	<0.5		<0.5	<0.5	1.9	8	<0.5	220	<0.5
DM-24	10/7/2004	P0	04Q4	<0.5		<0.5	<0.5	2	8	<0.5	200	<0.5
DM-24	4/7/2005	P0	05Q2	<0.5		<0.5	<0.5	1.8	7.9	<0.5	190	<0.5
DM-24	10/11/2005	P0	05Q4	<0.5		<0.5	<0.5	1.9	7.7	<0.5	180	<0.5
DM-24	4/12/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	1.5	6.6	<0.5	170	<0.5
DM-24	10/17/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	4.5	<0.5	140	<0.5
DM-24	4/10/2007	P0	07Q2	<0.5		<0.5	<0.5	1.1	4	<0.5	86	<0.5
DM-24	10/9/2007	P0	07Q4	<0.5		<0.5	<1	0.71	3.4	<0.5	82	<0.5
DM-24	4/8/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	0.66	3.1	<0.5	82	<0.5
DM-24	10/13/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.65	2.5	<0.5	62	<0.5
DM-24	4/13/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	0.57	2	<0.5	53	<0.5
DM-24	10/13/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	0.74	1.3	<0.5	40	<0.5
DM-24	10/8/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	40	<0.5
DM-24	4/7/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	38	<0.5
DM-24	10/11/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	28	<0.5
DM-24	10/5/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	28.5	<0.5
DM-24	10/4/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.86	<0.5	19.2	<0.5
DM-24	10/15/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.93	<0.5	19.8	<0.5
DM-24	10/21/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	15.8	<0.5
DM-24	10/6/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	12.4	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-25	8/2/1995	P0	95Q3	<10	<10	<10	<10	<10	<10	<10	1200	<10
DM-25	8/2/1995	D1	95Q3	<10	<10	<10	<10	<10	<10	<10	1100	<10
DM-25	8/25/1995	P0	95Q3	<10	<10	<10	<10	<10	21	<10	770	<10
DM-25	9/29/1995	P0	95Q4	<25	<25	<25	<25	<25	45	<25	640	<25
DM-25	3/22/1996	P0	96Q2	<10	<10	<10	<10	<10	<10	<10	570	<10
DM-25	3/22/1996	D1	96Q2	<10	<10	<10	<10	<10	<10	<10	570	<10
DM-25	6/13/1996	P0	96Q3	<10	<10	<10	<10	<10	12	<10	530	<10
DM-25	9/24/1996	P0	96Q3	<50	<50	<50	<50	<50	<50	<50	850	<50
DM-25	12/17/1996	P0	97Q1	<5	<5	<5	<5	9.5	25	<5	660	<5
DM-25	3/12/1997	P0	97Q2	<5	<5	<5	<5	8.3	25	<5	500	<5
DM-25	7/16/1997	P0	97Q3	<25	<25	<25	<25	<25	28	<25	690	<25
DM-25	9/29/1997	P0	97Q4	<25	<25	<25	<25	<25	<25	<25	720 J	<25
DM-25	3/9/1998	P0	98Q2	<12		<12	<12	<12	25	<12	710	<12
DM-25	9/16/1998	P0	98Q4	<12		<12	<12	<12	34	<12	950	<12
DM-25	3/24/1999	P0	99Q2	<25		<25	<25	<25	26	<25	720	<25
DM-25	9/15/1999	P0	99Q4	<10		<10	<10	<10	21	<10	630	<10
DM-25	3/2/2000	P0	00Q2	<10		<10	<10	<10	14	<10	420	<10
DM-25	10/11/2000	P0	00Q4	<12		<12	<12	<12	16	<12	370	<12
DM-25	3/26/2001	S1	01Q2	<0.5		<0.5	<0.5	3.1	11	<0.5	280	<0.5
DM-25	3/26/2001	P0	01Q2	<0.5		<0.5	<0.5	3	11	<0.5	290	<0.5
DM-25	11/12/2001	P0	01Q4	<0.5		<0.5	<0.5	2.5	11	<0.5	290	<0.5
DM-25	4/9/2002	P0	02Q2	<0.5		<0.5	<0.5	2.6	12	<0.5	260	<0.5
DM-25	4/9/2002	D1	02Q2	<0.5		<0.5	<0.5	2.6	12	<0.5	280	<0.5
DM-25	10/18/2002	P0	02Q4	<0.5		<0.5	<0.5	2.2	12	<0.5	260	<0.5
DM-25	10/18/2002	D1	02Q4	<0.5		<0.5	<0.5	2.2	12	<0.5	240	<0.5
DM-25	4/9/2003	P0	03Q2	<0.5		<0.5	<0.5	2.2	14	<0.5	240	<0.5
DM-25	10/10/2003	P0	03Q4	<0.5		<0.5	<0.5	1.7	11	<0.5	210	<0.5
DM-25	4/6/2004	P0	04Q2	<0.5		<0.5	<0.5	1.5	10	<0.5	180	<0.5
DM-25	10/8/2004	P0	04Q4	<0.5		<0.5	<0.5	1.3	8.8	<0.5	160	<0.5
DM-25	10/8/2004	D1	04Q4	<0.5		<0.5	<0.5	1.3	8.9	<0.5	160	<0.5
DM-25	4/7/2005	P0	05Q2	<0.5		<0.5	<0.5	1.2	9.1	<0.5	160	<0.5
DM-25	10/10/2005	P0	05Q4	<0.5		<0.5	<0.5	1.5	9.3	<0.5	190	<0.5
DM-25	4/13/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	1.3	9.4	<0.5	180	<0.5
DM-25	10/17/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	6.6	<0.5	130	<0.5
DM-25	4/10/2007	P0	07Q2	<0.5		<0.5	<0.5	1.1	5.2	<0.5	88	<0.5
DM-25	10/8/2007	P0	07Q4	<0.5		<0.5	<1	0.95	4.1	<0.5	86	<0.5
DM-25	4/8/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	0.77	4.6	<0.5	94	<0.5
DM-25	10/9/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.72	4.2	<0.5	76	<0.5
DM-25	4/13/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	0.68	3.3	<0.5	67	<0.5
DM-25	4/13/2009	D1	09Q2	<0.5	<0.5	<0.5	<0.5	0.67	3.4	<0.5	70	<0.5
DM-25	10/13/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	0.63	2.5	<0.5	51	<0.5
DM-25	10/7/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	50	<0.5
DM-25	4/6/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5	46	<0.5
DM-25	10/7/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	35	<0.5
DM-25	10/7/2011	D1	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	34	<0.5
DM-25	10/8/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.6 J+	<0.5	40.1	<0.5
DM-25	10/4/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	35.8	<0.5
DM-25	10/15/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	35.6	<0.5
DM-25	10/20/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-25	10/6/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.7 J	<0.5	37.1 J	<0.5
DM-26	8/8/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-26	8/8/1995	D1	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-26	8/24/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	2.1	<0.5
DM-26	9/29/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	6.1	<0.5
DM-26	1/5/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-26	1/5/1996	D1	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
DM-26	3/20/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-26	6/11/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-26	9/19/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5
DM-26	9/19/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	2	<0.5
DM-26	12/16/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	1.3	<0.5
DM-26	3/10/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	0.8	<0.5
DM-26	7/11/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-26	9/25/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	0.62	<0.5	<0.5	1.3	0.51
DM-26	3/9/1998	P0	98Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5
DM-26	9/16/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5
DM-26	3/24/1999	P0	99Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.99	<0.5
DM-26	9/15/1999	P0	99Q4	<0.5		<0.5	<0.5	0.65	<0.5	<0.5	1.5	<0.5
DM-26	3/2/2000	P0	00Q2	<0.5		<0.5	<0.5	0.74	<0.5	<0.5	2	<0.5
DM-26	10/11/2000	P0	00Q4	<0.5		<0.5	<0.5	0.8	<0.5	<0.5	2.2	<0.5
DM-26	3/23/2001	P0	01Q2	<0.5		<0.5	<0.5	0.95	<0.5	<0.5	2.8	<0.5
DM-26	11/2/2001	P0	01Q4	<0.5		<0.5	<0.5	2	<0.5	<0.5	6	<0.5
DM-26	4/5/2002	P0	02Q2	<0.5		<0.5	<0.5	3.6	<0.5	<0.5	12	<0.5
DM-26	7/10/2002	P0	02Q3	<0.5		<0.5	<0.5	3.9	<0.5	<0.5	11	<0.5
DM-26	7/10/2002	D1	02Q3	<0.5		<0.5	<0.5	3.9	<0.5	<0.5	12	<0.5
DM-26	10/16/2002	P0	02Q4	<0.5		<0.5	<0.5	4	<0.5	<0.5	12	<0.5
DM-26	4/8/2003	P0	03Q2	<0.5		<0.5	<0.5	4.9	<0.5	<0.5	15	<0.5
DM-26	4/8/2003	D1	03Q2	<0.5		<0.5	<0.5	5	<0.5	<0.5	15	<0.5
DM-26	10/9/2003	P0	03Q4	<0.5		<0.5	<0.5	4.9	<0.5	<0.5	17	<0.5
DM-26	4/6/2004	P0	04Q2	<0.5		<0.5	<0.5	6.2	<0.5	<0.5	21	<0.5
DM-26	10/8/2004	P0	04Q4	<0.5		<0.5	<0.5	6.4	<0.5	<0.5	22	<0.5
DM-26	4/6/2005	P0	05Q2	<0.5		<0.5	<0.5	6.1	<0.5	<0.5	23	<0.5
DM-26	10/12/2005	P0	05Q4	<0.5		<0.5	<0.5	7.7	<0.5	<0.5	25	<0.5
DM-26	10/12/2005	D1	05Q4	<0.5		<0.5	<0.5	7.8	<0.5	<0.5	26	<0.5
DM-26	4/11/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	7.2	<0.5	<0.5	28	<0.5
DM-26	10/13/2006	P0	06Q4	<0.5		<0.5	<0.5	7.2	<0.5	<0.5	28	<0.5
DM-26	4/6/2007	P0	07Q2	<0.5		<0.5	<0.5	9.8	0.66	<0.5	39	<0.5
DM-26	10/8/2007	P0	07Q4	<0.5		<0.5	<1	11	0.99	<0.5	44	<0.5
DM-26	4/7/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	9.8	1.8	<0.5	53	<0.5
DM-26	10/7/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	9	2.7	<0.5	55	<0.5
DM-26	4/9/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	8.1	3.3	<0.5	65	<0.5
DM-26	10/12/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	5.4	3.9	<0.5	55	<0.5
DM-26	10/12/2009	D1	09Q4	<0.5	<0.5	<0.5	<0.5	5.8	3.8	<0.5	60	<0.5
DM-26	4/7/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	6.3	5.8	<0.5	84	<0.5
DM-26	10/8/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	7	6.8	<0.5	110	<0.5
DM-26	10/8/2010	D1	10Q4	<0.5	<0.5	<0.5	<0.5	7.1	7	<0.5	120	<0.5
DM-26	4/7/2011	P0	11Q2	<0.5 UJ-	<0.5 UJ-	<0.5 UJ-	<0.5 J-	6.8 J-	9.6 J-	<0.5 UJ-	140	<0.5 UJ-
DM-26	10/6/2011	P0	11Q4	<0.5	<0.5	0.53	<0.5	7.5	10	<0.5	170	<0.5
DM-26	4/10/2012	P0	12Q2	<1	<1	<1	<1	4.9	7.7	<1	123	<1
DM-26	10/8/2012	P0	12Q4	<1	<1	<1	<1	6	10.7 J+	<1	147	<1
DM-26	4/8/2013	P0	13Q2	<0.5	<0.5	0.61	<0.5	5.6	10.7	<0.5	138	<0.5
DM-26	10/10/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	4.2	7.4	<0.5	115	<0.5
DM-26	4/8/2014	P0	14Q2	<0.5	<0.5	0.57	<0.5	4	7.8	<0.5	103	<0.5
DM-26	10/15/2014	P0	14Q4	<0.5	<0.5	0.6	<0.5	3.4	10.3	<0.5	115	<0.5
DM-26	4/7/2015	P0	15Q2	<0.5	<0.5	0.58 J-	<0.5	3	6.3	<0.5	88.4 J-	<0.5
DM-26	10/19/2015	P0	15Q4	<0.5	<0.5	0.91	<0.5	3.5	7.3 J	<0.5	87.8	<0.5
DM-26	4/20/2016	P0	16Q2	<0.5	<0.5	0.89	<0.5	3.3	6.2	<0.5	91.3	<0.5
DM-26	10/6/2016	P0	16Q4	<0.5	<0.5	0.79	<0.5	2.2	3.8	<0.5	77	<0.5
DM-27	8/14/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	23	<0.5
DM-27	8/14/1995	D1	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	25	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-27	8/24/1995	P0	95Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	24	<0.5
DM-27	9/29/1995	P0	95Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	25	<0.5
DM-27	1/5/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	29	<0.5
DM-27	3/21/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	28	<0.5
DM-27	6/12/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	34	<0.5
DM-27	9/23/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	42	<0.5
DM-27	12/19/1996	P0	97Q1	0.7	<0.5	<0.5	0.6	1.3	0.6	<0.5	79	<0.5
DM-27	12/19/1996	D1	97Q1	<0.5	<0.5	<0.5	<0.5	1.3	0.6	<0.5	56	<0.5
DM-27	3/11/1997	P0	97Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	61	<2.5
DM-27	3/11/1997	D1	97Q2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	55	<2.5
DM-27	7/14/1997	P0	97Q3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	84	<2.5
DM-27	9/26/1997	P0	97Q4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	60	<2.5
DM-27	1/16/1998	P0	98Q1	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	99	<2.5 UJ
DM-27	3/10/1998	P0	98Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	96	<2.5
DM-27	3/10/1998	D1	98Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	94	<2.5
DM-27	6/16/1998	P0	98Q3	<1.2		<1.2	<1.2	1.7	2	<1.2	89	<1.2
DM-27	6/16/1998	D1	98Q3	<1.2		<1.2	<1.2	1.5	1.8	<1.2	94	<1.2
DM-27	9/15/1998	P0	98Q4	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	91	<2.5
DM-27	1/7/1999	P0	99Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5
DM-27	3/24/1999	P0	99Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	91	<2.5
DM-27	3/24/1999	D1	99Q2	<2.5		<2.5	<2.5	<2.5	<2.5	<2.5	98	<2.5
DM-27	7/29/1999	P0	99Q3	<2.5		<2.5	<2.5	<2.5	2.7	<2.5	100	<2.5
DM-27	7/29/1999	D1	99Q3	<2.5		<2.5	<2.5	<2.5	2.7	<2.5	100	<2.5
DM-27	9/15/1999	P0	99Q4	<2.5		<2.5	<2.5	<2.5	2.6	<2.5	110	<2.5
DM-27	1/20/2000	P0	00Q1	<2.5		<2.5	<2.5	<2.5	2.7	<2.5	94	<2.5
DM-27	3/3/2000	P0	00Q2	<2.5		<2.5	<2.5	<2.5	3.4	<2.5	120	<2.5
DM-27	6/23/2000	P0	00Q3	<2.5		<2.5	<2.5	<2.5	3.3	<2.5	120	<2.5
DM-27	10/12/2000	P0	00Q4	<5		<5	<5	<5	<5	<5	100	<5
DM-27	3/26/2001	P0	01Q2	<0.5		<0.5	<0.5	1.7	3.9	<0.5	140	<0.5
DM-27	6/13/2001	P0	01Q3	<0.5		<0.5	<0.5	1.3	3.1	<0.5	95	<0.5
DM-27	11/9/2001	P0	01Q4	<0.5		<0.5	<0.5	1.8	4.8	<0.5	120	<0.5
DM-27	1/11/2002	P0	02Q1	<2.5		<2.5	<2.5	3.5	12	<2.5	290	<2.5
DM-27	4/10/2002	P0	02Q2	<0.5		<0.5	<0.5	2.1	6	<0.5	160	<0.5
DM-27	7/10/2002	P0	02Q3	<0.5		<0.5	<0.5	2.1	5.6	<0.5	170	<0.5
DM-27	10/18/2002	P0	02Q4	<0.5		<0.5	<0.5	2	5.8	<0.5	160	<0.5
DM-27	1/9/2003	P0	03Q1	<0.5		<0.5	<0.5	2	6.1	<0.5	170	<0.5
DM-27	1/9/2003	D1	03Q1	<0.5		<0.5	<0.5	1.9	6	<0.5	180	<0.5
DM-27	4/8/2003	P0	03Q2	<0.5		<0.5	<0.5	2	6.8	<0.5	140	<0.5
DM-27	7/2/2003	P0	03Q3	<0.5		<0.5	<0.5	2	6.8	<0.5	180	<0.5
DM-27	7/2/2003	D1	03Q3	<0.5		<0.5	<0.5	2	7	<0.5	180	<0.5
DM-27	10/10/2003	P0	03Q4	<0.5		<0.5	<0.5	2	6.7	<0.5	180	<0.5
DM-27	5/13/2004	P0	04Q2	<0.5		<0.5	<0.5	2.1	7.6	<0.5	180	<0.5
DM-27	10/11/2004	P0	04Q4	<0.5		<0.5	<0.5	2.1	6.6	<0.5	170	<0.5
DM-27	4/7/2005	P0	05Q2	<0.5		<0.5	<0.5	2	7.4	<0.5	170	<0.5
DM-27	4/7/2005	D1	05Q2	<0.5		<0.5	<0.5	2	7.1	<0.5	160	<0.5
DM-27	10/12/2005	P0	05Q4	<0.5		<0.5	<0.5	2.4	7.8	<0.5	190	<0.5
DM-27	4/12/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	2.2	8.3	<0.5	220	<0.5
DM-27	4/12/2006	D1	06Q2	<0.5	<0.5	<0.5	<0.5	2.1	8.7	<0.5	230	<0.5
DM-27	10/17/2006	P0	06Q4	<0.5		<0.5	<0.5	1.2	7	<0.5	170	<0.5
DM-27	4/11/2007	P0	07Q2	<0.5		<0.5	<0.5	1.8	7.3	<0.5	230	<0.5
DM-27	10/9/2007	P0	07Q4	<0.5		<0.5	<1	1.8	5.4	<0.5	150	<0.5
DM-27	4/8/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	1.5	6.5	<0.5	120	<0.5
DM-27	10/13/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	1.4	5.8	<0.5	140	<0.5
DM-27	4/10/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	1.3	5.3	<0.5	110	<0.5
DM-27	10/15/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	1.1	4.2	<0.5	86	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-27	4/8/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	1.2	5.7	<0.5	89	<0.5
DM-27	10/11/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.9	5.6	<0.5	94	<0.5
DM-27	4/8/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	0.94	5.8	<0.5	100	<0.5
DM-27	10/10/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	0.67	4.1	<0.5	74	<0.5
DM-27	4/11/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	0.96	5.9	<0.5	67.2	<0.5
DM-27	10/11/2012	P0	12Q4	<1	<1	<1	<1	<1	3.9	<1	61	<1
DM-27	4/8/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	0.58	4.2	<0.5	65.7	<0.5
DM-27	10/8/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	0.51	3	<0.5	57.6	<0.5
DM-27	10/8/2013	D1	13Q4	<0.5	<0.5	<0.5	<0.5	0.53	3	<0.5	57.5	<0.5
DM-27	4/9/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5	49.1	<0.5
DM-27	10/20/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	51.6	<0.5
DM-27	4/8/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	41.8	<0.5
DM-27	10/22/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	41.6	<0.5
DM-27	4/18/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	34.2	<0.5
DM-27	10/11/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	29	<0.5
DM-28	12/19/1995	P0	96Q1	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	60	<0.5
DM-28	12/19/1995	D1	96Q1	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	29	<0.5
DM-28	1/4/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
DM-28	1/9/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-28	1/22/1996	P0	96Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-28	3/20/1996	P0	96Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-28	6/11/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-28	6/11/1996	D1	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-28	9/19/1996	P0	96Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-28	12/16/1996	P0	97Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
DM-28	3/7/1997	P0	97Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5
DM-28	7/9/1997	P0	97Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
DM-28	9/25/1997	P0	97Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5
DM-28	1/19/1998	P0	98Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	3.9	<0.5 UJ
DM-28	1/19/1998	D1	98Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	4	<0.5 UJ
DM-28	3/10/1998	P0	98Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	5	<0.5
DM-28	7/29/1998	P0	98Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5
DM-28	9/15/1998	P0	98Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.5
DM-28	1/7/1999	P0	99Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.7	<0.5
DM-28	1/7/1999	D1	99Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	7.9	<0.5
DM-28	3/25/1999	P0	99Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	8.7	<0.5
DM-28	7/29/1999	P0	99Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
DM-28	9/20/1999	P0	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.5
DM-28	9/20/1999	D1	99Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.5
DM-28	1/19/2000	P0	00Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.5
DM-28	3/3/2000	P0	00Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	14	<0.5
DM-28	6/30/2000	P0	00Q3	<0.5 UJ		<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ	11 J	<0.5 UJ
DM-28	10/13/2000	P0	00Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-28	3/23/2001	P0	01Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	13	<0.5
DM-28	6/14/2001	P0	01Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.5
DM-28	11/5/2001	P0	01Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5
DM-28	1/14/2002	P0	02Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5
DM-28	4/8/2002	P0	02Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5
DM-28	7/9/2002	P0	02Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5
DM-28	10/17/2002	P0	02Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5
DM-28	1/9/2003	P0	03Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	20	<0.5
DM-28	4/9/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	0.56	<0.5	21	<0.5
DM-28	7/3/2003	P0	03Q3	<0.5		<0.5	<0.5	<0.5	0.67	<0.5	24	<0.5
DM-28	10/9/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	0.66	<0.5	26	<0.5
DM-28	4/6/2004	P0	04Q2	<0.5		<0.5	<0.5	<0.5	0.97	<0.5	31	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-28	10/6/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	35	<0.5
DM-28	10/6/2004	D1	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	35	<0.5
DM-28	4/8/2005	P0	05Q2	<0.5		<0.5	<0.5	<0.5	1.4	<0.5	38	<0.5
DM-28	10/10/2005	P0	05Q4	<0.5		<0.5	<0.5	0.57	1.5	<0.5	42	<0.5
DM-28	4/13/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	0.59	1.7	<0.5	42	<0.5
DM-28	10/12/2006	P0	06Q4	<0.5		<0.5	<0.5	0.51	1.4	<0.5	41	<0.5
DM-28	4/6/2007	P0	07Q2	<0.5		<0.5	<0.5	0.55	1.8	<0.5	45	<0.5
DM-28	10/5/2007	P0	07Q4	<0.5		<0.5	<1	0.74	1.6	<0.5	50	<0.5
DM-28	4/7/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	0.56	1.7	<0.5	45	<0.5
DM-28	10/7/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.56	1.6	<0.5	41	<0.5
DM-28	4/10/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	0.56	1.4	<0.5	36	<0.5
DM-28	10/13/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	0.64	1.2	<0.5	30	<0.5
DM-28	4/7/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	0.5	1.6	<0.5	35	<0.5
DM-28	10/7/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.5	1.6	<0.5	38	<0.5
DM-28	4/7/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	34	<0.5
DM-28	10/6/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	32	<0.5
DM-28	4/9/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	26.6	<0.5
DM-28	10/9/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	24.2	<0.5
DM-28	4/4/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	23	<0.5
DM-28	10/7/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	20.7	<0.5
DM-28	4/7/2014	P0	14Q2	<0.5	<0.5	<0.5 UJ-	<0.5	<0.5	0.99	<0.5	18.4	<0.5
DM-28	10/16/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	23.8	<0.5
DM-28	10/16/2014	D1	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	24.2	<0.5
DM-28	4/6/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	18.9	<0.5
DM-28	10/19/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1 J	<0.5	17.1	<0.5
DM-28	4/15/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.86	<0.5	15.9	<0.5
DM-28	10/7/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.71	<0.5	12.7	<0.5
DM-29	10/13/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	1/23/2006	P0	06Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	4/6/2006	P0	06Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	7/10/2006	P0	06Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	10/19/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	4/5/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	10/10/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	4/3/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	4/3/2008	D1	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-29	10/10/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5
DM-29	10/10/2008	D1	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.56	<0.5
DM-29	4/7/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.81	<0.5
DM-29	4/7/2009	D1	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<0.5
DM-29	10/14/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<0.5
DM-29	4/5/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.92	<0.5
DM-29	10/12/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5
DM-29	4/6/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5
DM-29	10/11/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-29	4/6/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-29	4/6/2012	D1	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-29	10/9/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5
DM-29	4/3/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5
DM-29	12/27/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5
DM-29	4/3/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
DM-29	10/16/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.7	<0.5
DM-29	4/3/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4	<0.5
DM-29	4/3/2015	D1	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.9	<0.5
DM-29	10/20/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-29	4/14/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.3	<0.5
DM-29	10/7/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5
DM-29	4/4/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.5	<0.5
DM-30	10/14/2005	P0	05Q4	<0.5		<0.5	<0.5	1.2	2.1	<0.5	73	<0.5
DM-30	1/24/2006	P0	06Q1	<0.5		<0.5	<0.5	1.3	2.8	<0.5	87	<0.5
DM-30	4/11/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	1.2	3	<0.5	88	<0.5
DM-30	7/18/2006	P0	06Q3	<0.5		<0.5	<0.5	1.1	3.1	<0.5	85	<0.5
DM-30	7/18/2006	D1	06Q3	<0.5		<0.5	<0.5	1.1	2.8	<0.5	84	<0.5
DM-30	10/20/2006	P0	06Q4	<0.5		<0.5	<0.5	1.2	3.1	<0.5	89	<0.5
DM-30	4/10/2007	P0	07Q2	<0.5		<0.5	<0.5	1.3	2.6	<0.5	75	<0.5
DM-30	10/10/2007	P0	07Q4	<0.5		<0.5	<1	1.4	3.8	<0.5	120	<0.5
DM-30	4/7/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	1.5	4	<0.5	110	<0.5
DM-30	10/14/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	1.6	4.2	<0.5	130	<0.5
DM-30	4/13/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	1.5	3.9	<0.5	110	<0.5
DM-30	10/19/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	1.5	4.6	<0.5	100	<0.5
DM-30	4/9/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	1.3	4.6	<0.5	110	<0.5
DM-30	10/12/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	1.6	4.5	<0.5	120	<0.5
DM-30	4/29/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	1.5	4.9	<0.5	110	<0.5
DM-30	4/29/2011	D1	11Q2	<0.5	<0.5	<0.5	<0.5	1.6	4.8	<0.5	110	<0.5
DM-30	10/12/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	1.2	4.1	<0.5	92	<0.5
DM-30	4/11/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	1.6	6	<0.5	85	<0.5
DM-30	10/10/2012	P0	12Q4	<1	<1	<1	<1	1.2	5	<1	89.3	<1
DM-30	10/10/2012	D1	12Q4	<0.5	<0.5	<0.5	<0.5	1.1	4.7	<0.5	89.2	<0.5
DM-30	4/8/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	1.1	5	<0.5	95.1	<0.5
DM-30	4/8/2013	D1	13Q2	<0.5	<0.5	<0.5	<0.5	1.1	5	<0.5	94.6	<0.5
DM-30	10/9/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	0.91	4.4	<0.5	90.7	<0.5
DM-30	4/8/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	0.86	4.1	<0.5	84.2	<0.5
DM-30	10/17/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	0.95	4.1	<0.5	97.2	<0.5
DM-30	4/8/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	0.91	3.7	<0.5	79.3	<0.5
DM-30	10/21/2015	D1	15Q4	<0.5	<0.5	<0.5	<0.5	0.91	3.5	<0.5	84	<0.5
DM-30	10/21/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	0.83	3.4	<0.5	82.1	<0.5
DM-30	4/15/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	1	3.8	<0.5	71.2	<0.5
DM-30	10/10/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	0.66	2.8	<0.5	57.9	<0.5
DM-31	10/13/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	0.5	<0.5	29	<0.5
DM-31	1/23/2006	P0	06Q1	<0.5	<0.5	<0.5	<0.5	0.71	1	<0.5	47	<0.5
DM-31	4/10/2006	P0	06Q2	<0.5		<0.5	<0.5	0.87	1.2	<0.5	50	<0.5
DM-31	7/17/2006	P0	06Q3	<0.5		<0.5	<0.5	<0.5	1.2	<0.5	46	<0.5
DM-31	10/19/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	1	<0.5	47	<0.5
DM-31	4/11/2007	P0	07Q2	<0.5		<0.5	<0.5	0.93	1.2	<0.5	46	<0.5
DM-31	4/11/2007	D1	07Q2	<0.5		<0.5	<0.5	0.96	1	<0.5	45	<0.5
DM-31	10/10/2007	P0	07Q4	<0.5		<0.5	<1	0.75	1.6	<0.5	58	<0.5
DM-31	4/7/2008	P0	08Q2	<0.5		<0.5	<0.5	0.85	1.9	<0.5	66	<0.5
DM-31	10/10/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.95	2	<0.5	66	<0.5
DM-31	1/6/2009	P0	09Q1	<1	<1	<1	<1	1	2	<1	73	<1
DM-31	4/9/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	0.96	2	<0.5	74	<0.5
DM-31	10/15/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	1.1	2	<0.5	67	<0.5
DM-31	10/15/2009	D1	09Q4	<0.5	<0.5	<0.5	<0.5	1.1	2.1	<0.5	66	<0.5
DM-31	4/7/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	1	2.6	<0.5	79	<0.5
DM-31	10/12/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	1.2	2.9	<0.5	89	<0.5
DM-31	10/12/2010	D1	10Q4	<0.5	<0.5	<0.5	<0.5	1.2	2.8	<0.5	86	<0.5
DM-31	4/7/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	1.2	3.9	<0.5	100	<0.5
DM-31	4/7/2011	D1	11Q2	<0.5	<0.5	<0.5	<0.5	1.2	3.9	<0.5	99	<0.5
DM-31	10/11/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	0.97	3.2	<0.5	80	<0.5
DM-31	4/9/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	1	3.6	<0.5	90.7	<0.5
DM-31	10/10/2012	P0	12Q4	<1	<1	<1	<1	1.1	4.2	<1	87.4	<1

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-31	4/5/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	1.1	4.1	<0.5	99	<0.5
DM-31	10/9/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	0.9	3.8	<0.5	87.6	<0.5
DM-31	4/8/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	0.83	3.4	<0.5	80.6	<0.5
DM-31	10/16/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	1.1	4.1	<0.5	79.6	<0.5
DM-31	4/7/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	0.92	3.4	<0.5	80.4	<0.5
DM-31	10/21/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	0.92	3.4	<0.5	90.5	<0.5
DM-31	4/18/2016	D1	16Q2	<0.5	<0.5	<0.5	<0.5	0.92	3.7	<0.5	75.3	<0.5
DM-31	4/18/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	0.91	3.7	<0.5	75.5	<0.5
DM-31	10/12/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	0.62	2.8	<0.5	64.8	<0.5
DM-32	10/17/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	0.91	<0.5	30	<0.5
DM-32	1/24/2006	P0	06Q1	<0.5		<0.5	<0.5	<0.5	1.1	<0.5	35	<0.5
DM-32	4/11/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	19 J	<0.5
DM-32	7/10/2006	P0	06Q3	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	33	<0.5
DM-32	10/18/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	1.1	<0.5	33	<0.5
DM-32	4/6/2007	P0	07Q2	<0.5		<0.5	<0.5	0.52	1.3	<0.5	38	<0.5
DM-32	4/6/2007	D1	07Q2	<0.5		<0.5	<0.5	<0.5	1.3	<0.5	38	<0.5
DM-32	10/11/2007	P0	07Q4	<0.5		<0.5	<1	0.64	1.2	<0.5	39	<0.5
DM-32	4/7/2008	P0	08Q2	<0.5		<0.5	<0.5	<0.5	1.5	<0.5	40	<0.5
DM-32	10/14/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	0.59	1.6	<0.5	43	<0.5
DM-32	4/9/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	0.66	1.6	<0.5	46	<0.5
DM-32	10/16/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	0.58	1.5	<0.5	39	<0.5
DM-32	4/7/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	48	<0.5
DM-32	10/12/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.66	2	<0.5	51	<0.5
DM-32	4/6/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	0.59	2.4	<0.5	52	<0.5
DM-32	10/12/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	0.53	1.8	<0.5	41	<0.5
DM-32	10/12/2011	D1	11Q4	<0.5	<0.5	<0.5	<0.5	0.56	1.7	<0.5	42	<0.5
DM-32	4/9/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	0.5	2.1	<0.5	45.2	<0.5
DM-32	10/9/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	40.2	<0.5
DM-32	4/4/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	38.5	<0.5
DM-32	4/4/2013	D1	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	39	<0.5
DM-32	10/7/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	32.1	<0.5
DM-32	4/4/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	35	<0.5
DM-32	10/17/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	35.2	<0.5
DM-32	4/3/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	35.5	<0.5
DM-32	10/21/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	28.2	<0.5
DM-32	4/15/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	26.8	<0.5
DM-32	10/11/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	26.7	<0.5
DM-33	10/14/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.5
DM-33	1/23/2006	P0	06Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5
DM-33	4/10/2006	P0	06Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5
DM-33	7/18/2006	P0	06Q3	<0.5 J		<0.5 J	<0.5 J	<0.5 J	<0.5 J	<0.5 J	16 J	<0.5 J
DM-33	10/18/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	17	<0.5
DM-33	4/5/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5
DM-33	10/11/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	18	<0.5
DM-33	4/4/2008	P0	08Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5
DM-33	10/14/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	19	<0.5
DM-33	4/7/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.58	<0.5	20	<0.5
DM-33	10/16/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	20	<0.5
DM-33	4/6/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.92	<0.5	26	<0.5
DM-33	10/13/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	31	<0.5
DM-33	10/13/2010	D1	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.92	<0.5	31	<0.5
DM-33	4/6/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	0.5	1.3	<0.5	33	<0.5
DM-33	4/6/2011	D1	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	33	<0.5
DM-33	10/11/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	30	<0.5
DM-33	4/10/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	24.2	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-33	10/11/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	30.1	<0.5
DM-33	4/5/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	36.3	<0.5
DM-33	10/10/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	27.1	<0.5
DM-33	4/4/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	33.3	<0.5
DM-33	10/20/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	32.2	<0.5
DM-33	4/6/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	26.8	<0.5
DM-33	10/27/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	27.5	<0.5
DM-33	4/15/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	23.5	<0.5
DM-33	10/12/2016	D1	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.94	<0.5	20.1	<0.5
DM-33	10/12/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.91	<0.5	20.4	<0.5
DM-34	10/13/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	1/24/2006	P0	06Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	1/24/2006	D1	06Q1	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/7/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/7/2006	D1	06Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	7/10/2006	P0	06Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/18/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/4/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/11/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/3/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/30/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/7/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/19/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/19/2009	D1	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/5/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/27/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/5/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/12/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/6/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/11/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/3/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/11/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/3/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/20/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/3/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/22/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	4/13/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-34	10/12/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-35	10/17/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-35	4/6/2006	P0	06Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-35	10/19/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
DM-35	4/4/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5
DM-35	10/12/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	0.58	<0.5
DM-35	4/4/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-35	10/15/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-35	4/8/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-35	10/19/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-36	10/17/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-36	4/7/2006	P0	06Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.52	<0.5
DM-36	10/19/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5
DM-36	4/6/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-36	10/12/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	1	<0.5
DM-36	4/4/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
DM-36	10/15/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
DM-36	4/8/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-36	10/19/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5
DM-37	1/8/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	0.58	1.4	<0.5	46	<0.5
DM-37	4/8/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	0.75	1.5	<0.5	44	<0.5
DM-37	7/13/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.7	2.1	<0.5	57	<0.5
DM-37	10/14/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	0.66	1.5	<0.5	52	<0.5
DM-37	4/8/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	0.66	1.8	<0.5	55	<0.5
DM-37	10/13/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	0.86	2.2	<0.5	64	<0.5
DM-37	4/10/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	0.54	1.6	<0.5	43	<0.5
DM-37	4/10/2012	D1	12Q2	<0.5	<0.5	<0.5	<0.5	0.54	1.5	<0.5	41.4	<0.5
DM-37	10/12/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	0.81	2.7	<0.5	68.6 J-	<0.5
DM-37	10/12/2012	D1	12Q4	<0.5	<0.5	<0.5	<0.5	0.79	2.8	<0.5	70.4 J-	<0.5
DM-37	4/5/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	0.75	2.5	<0.5	65.2	<0.5
DM-37	10/14/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	0.72	2.4	<0.5	63.1	<0.5
DM-37	4/7/2014	P0	14Q2	<0.5	<0.5	<0.5 UJ-	<0.5	0.52	1.9	<0.5	44.1	<0.5
DM-37	4/7/2014	D1	14Q2	<0.5	<0.5	<0.5 UJ-	<0.5	0.52	1.9	<0.5	43.7	<0.5
DM-37	10/23/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	39.1	<0.5
DM-37	10/23/2014	D1	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	39.4	<0.5
DM-37	4/7/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	36.3	<0.5
DM-37	10/26/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	38.1	<0.5
DM-37	4/19/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	41.3	<0.5
DM-37	10/12/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	31.3	<0.5
DM-37	4/5/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	38.5	<0.5
DM-38	6/1/2009	P0	00Q4				<0.5					
DM-38	1/8/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	18	<0.5
DM-38	4/8/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.56	<0.5	16	<0.5
DM-38	4/8/2010	D1	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	16	<0.5
DM-38	7/13/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.75	<0.5	20	<0.5
DM-38	7/13/2010	D1	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.85	<0.5	20	<0.5
DM-38	10/14/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.62	<0.5	19	<0.5
DM-38	4/8/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.83	<0.5	23	<0.5
DM-38	10/13/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	24	<0.5
DM-38	4/10/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.72	<0.5	17.5	<0.5
DM-38	10/12/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	27.4	<0.5
DM-38	4/5/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	26.1	<0.5
DM-38	10/15/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	24.2	<0.5
DM-38	4/7/2014	P0	14Q2	<0.5	<0.5	<0.5 UJ-	<0.5	<0.5	0.95	<0.5	20.5	<0.5
DM-38	10/23/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	24.9	<0.5
DM-38	4/7/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.99	<0.5	22.5	<0.5
DM-38	10/26/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	24.2	<0.5
DM-38	4/19/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.99	<0.5	21.6	<0.5
DM-38	10/13/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	18.3	<0.5
DM-38	4/5/2017	D1	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.78	<0.5	18.8	<0.5
DM-38	4/5/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.94	<0.5	19.4	<0.5
DM-39	12/21/2009	P0	09Q4	<0.5	<1	<0.5	<1	0.64	1.7	<0.5	46	<0.5 J
DM-39	11/7/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	0.69	1.5	<0.5	27.8	<0.5
DM-39	4/7/2014	P0	14Q2	<0.5	<0.5	<0.5 UJ-	<0.5	<0.5	1.5	<0.5	35.2	<0.5
DM-39	10/23/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	32.8	<0.5
DM-39	5/12/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	32.4	<0.5
DM-39	10/26/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	42.4	<0.5
DM-39	4/19/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	39.1	<0.5
DM-39	10/11/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	34.5	<0.5
DM-39	4/5/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	40.8	<0.5
DM-40	12/21/2009	P0	09Q4	<0.5	<1	<0.5	<1	<0.5	0.94	<0.5	27	<0.5 J
DM-40	10/22/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	39.7	<0.5
DM-40	4/7/2014	P0	14Q2	<0.5	<0.5	<0.5 UJ-	<0.5	<0.5	0.89	<0.5	21.4	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM-40	10/23/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.77	<0.5	17.3	<0.5
DM-40	5/12/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.96	<0.5	21	<0.5
DM-40	10/26/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	29.3	<0.5
DM-40	4/19/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	27.6	<0.5
DM-40	10/11/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	25.3	<0.5
DM-40	4/14/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	26.8	<0.5
DM-41	7/23/2012	P0	12Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18.1	<0.5
DM-41	10/12/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	23.5	<0.5
DM-41	1/15/2013	P0	13Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16.9	<0.5
DM-41	4/9/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	23.8	<0.5
DM-41	10/11/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	24.2	<0.5
DM-41	10/11/2013	D1	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	24.7	<0.5
DM-41	4/9/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	26.3	<0.5
DM-41	10/24/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<0.5	32.4	<0.5
DM-41	4/8/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	31.3	<0.5
DM-41	10/27/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	36.3	<0.5
DM-41	4/19/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.96	<0.5	32.8	<0.5
DM-41	10/13/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	30.7	<0.5
DM-41	4/4/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	36.2	<0.5
DM-42	7/23/2012	P0	12Q3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.5	<0.5
DM-42	10/11/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.1	<0.5
DM-42	1/15/2013	P0	13Q1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.5
DM-42	4/9/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	6.7	<0.5
DM-42	10/11/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.52	<0.5	6.2	<0.5
DM-42	4/9/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.1	<0.5
DM-42	10/23/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.5	<0.5
DM-42	4/9/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.5
DM-42	10/27/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.6	<0.5
DM-42	4/20/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.4	<0.5
DM-42	10/13/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.1	<0.5
DM-42	4/4/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.7	<0.5
DM-43A	4/3/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<0.5	14.6	<0.5
DM-43A-107	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	11.9	<1
DM-43A-110	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	11.9	<1
DM-43A-113	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	11.7	<1
DM-43B	4/3/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.6	<0.5
DM-43B-167	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	8.5	<1
DM-43B-170	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	8.2	<1
DM-43B-173	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	8.4	<1
DM-44A	4/3/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.9	<0.5
DM-44A-097	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-44A-100	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-44A-103	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-44A-106	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-44A-109	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	6.9	<1
DM-44A-112	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	6.7	<1
DM-44B	4/3/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM-44B-132	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-44B-135	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM-44B-138	1/11/2017	P0	17Q1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DM505	7/17/2006	P0	06Q3	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/20/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/20/2006	D1	06Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/4/2007	P0	07Q2	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/11/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
DM505	10/11/2007	D1	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/3/2008	P0	08Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/15/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/15/2008	D1	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/7/2009	P0	09Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/5/2010	P0	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/5/2010	D1	10Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/13/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/5/2011	P0	11Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/13/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/9/2012	P0	12Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/5/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/5/2012	D1	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/4/2013	P0	13Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/15/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/3/2014	P0	14Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/17/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/6/2015	P0	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/6/2015	D1	15Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	10/22/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/14/2016	D1	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/14/2016	P0	16Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DM505	4/5/2017	P0	17Q2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GM-01	10/6/1994	P0	94Q4	<50	<50	<50	<50	<50	77	<50	1900	<50
GM-01	12/19/1994	P0	95Q1	<25	<25	<25	<25	<25	230	<25	2700	<25
GM-01	3/23/1995	P0	95Q2	<25	<25	<25	<25	<25	140	<25	2300	<25
GM-01	6/27/1995	P0	95Q3	<25	<25	<25	<25	<25	120	<25	1700	<25
GM-01	10/3/1995	P0	95Q4	<25	<25	<25	<25	<25	98	<25	1300	<25
GM-01	10/3/1995	D1	95Q4	<25	<25	<25	<25	<25	100	<25	1400	<25
GM-01	1/8/1996	P0	96Q1	<25	<25	<25	<25	<25	57	<25	1200	<25
GM-01	3/25/1996	P0	96Q2	<25	<25	<25	<25	<25	120	<25	1500	<25
GM-01	6/13/1996	P0	96Q3	<25	<25	<25	<25	<25	150	<25	2000	<25
GM-01	9/24/1996	P0	96Q3	<25	<25	<25	<25	<25	160	<25	1400	<25
GM-01	12/18/1996	P0	97Q1	<25	<25	<25	<25	<25	170	<25	1700	<25
GM-01	3/13/1997	P0	97Q2	<0.5	1.6	<0.5	<0.5	14	170	0.6	990	<0.5
GM-01	7/17/1997	P0	97Q3	<50	<50	<50	<50	<50	180	<50	1800	<50
GM-01	10/1/1997	P0	97Q4	<50	<50	<50	<50	<50	160	<50	1500	<50
GM-01	10/1/1997	D1	97Q4	<50	<50	<50	<50	<50	180	<50	1500	<50
GM-01	3/9/1998	P0	98Q2	<25		<25	<25	<25	120	<25	930	<25
GM-01	9/17/1998	P0	98Q4	<12		<12	<12	<12	110	<12	670	<12
GM-01	3/25/1999	P0	99Q2	<10		<10	<10	<10	53	<10	260	<10
GM-01	9/21/1999	P0	99Q4	<2.5		<2.5	<2.5	<2.5	22	<2.5	130	<2.5
GM-01	3/2/2000	P0	00Q2	<2.5		<2.5	<2.5	2.9	30	<2.5	150	<2.5
GM-01	3/2/2000	D1	00Q2	<2.5		<2.5	<2.5	3.2	32	<2.5	160	<2.5
GM-01	10/5/2000	P0	00Q4	<2.5		<2.5	<2.5	<2.5	15	<2.5	72	<2.5
GM-01	3/27/2001	P0	01Q2	<0.5		<0.5	0.86	1.2	9	<0.5	55	<0.5
GM-01	11/8/2001	P0	01Q4	<0.5		<0.5	1.1	1	7	<0.5	55	<0.5
GM-01	4/9/2002	P0	02Q2	<0.5		<0.5	0.78	0.65	4.3	<0.5	36	<0.5
GM-01	10/16/2002	P0	02Q4	<0.5		<0.5	0.55	<0.5	3	<0.5	30	<0.5
GM-01	4/9/2003	P0	03Q2	<0.5		<0.5	<0.5	<0.5	1.7	<0.5	30	<0.5
GM-01	10/10/2003	P0	03Q4	<0.5		<0.5	<0.5	<0.5	1.4	<0.5	22	<0.5
GM-01	4/6/2004	P0	04Q2	<0.5		<0.5	<0.5	<0.5	1.4	<0.5	20	<0.5
GM-01	10/6/2004	P0	04Q4	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5
GM-01	10/11/2005	P0	05Q4	<0.5		<0.5	<0.5	<0.5	0.85	<0.5	13	<0.5
GM-01	10/13/2006	P0	06Q4	<0.5		<0.5	<0.5	<0.5	0.56	<0.5	7.9	<0.5

Table 3
Historic VOC Concentration Water Quality Data
Groundwater Monitor Wells
56th Street and Earll Drive WQARF Site
(in µg/L)

Well Name	Sample Date	Sample Code	Sample Round	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	cis-1,2-DCE	PCE	t-1,2-DCE	TCE	VC
GM-01	10/8/2007	P0	07Q4	<0.5		<0.5	<1	<0.5	<0.5	<0.5	15	<0.5
GM-01	10/9/2008	P0	08Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	9.6	<0.5
GM-01	10/16/2009	P0	09Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	11	<0.5
GM-01	10/8/2010	P0	10Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	5.6	<0.5
GM-01	10/7/2011	P0	11Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	7.4	<0.5
GM-01	10/4/2012	P0	12Q4	<0.5	<0.5	<0.5	<0.5	<0.5	0.62	<0.5	8.4	<0.5
GM-01	10/9/2013	P0	13Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5
GM-01	10/17/2014	P0	14Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.7	<0.5
GM-01	10/23/2015	P0	15Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
GM-01	10/10/2016	P0	16Q4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5 J	<0.5

Notes:

VOC: Volatile Organic Compound
<0.5 : Not detected at the reported detection limit
All concentrations in micrograms per liter (µg/L)
J : estimated amount
UJ: not detected at reported detection limit; estimated amount
J - : estimated amount, low bias
UJ - : not detected at the reported detection limit; estimated amount, low bias

Sample Codes:
P0: Primary Sample
D1: Field Duplicate
S1: Split Sample

No entry indicates analysis for that constituent was not performed for that sampling round

Analytes :
1,1,1-TCA: 1,1,1-Trichloroethane
1,1-DCA: 1,1-Dichloroethane
1,1-DCE: 1,1-Dichloroethene
1,2-DCA: 1,2-Dichloroethane
c-1,2-DCE: cis-1,2-Dichloroethene
t-1,2-DCE: trans-1,2-Dichloroethene
PCE: Tetrachloroethene
TCE: Trichloroethene
VC: Vinyl Chloride

Table 4

Contaminants of Concern

Parameter	AWQS (µg/L)	No. of Detects/No. of Samples	No. of Samples with Exceedances of AWQS	Comments
Tetrachloroethene (PCE)	5	1072/2497	500	Three exceedances in most recent sample round and all were in bedrock.
Trichloroethene (TCE)	5	1954/2497	1467	The primary plume constituent.

µg/L: micrograms per liter
AWQS: Arizona Water Quality Standards

Table 5
Contaminants of Potential Concern: Compounds Detected

Organic Compounds Detected

Parameter	AWQS (µg/L)	No. of Detects/No. of Samples	No. of Samples with Exceedances of AWQS	Comments
1,1,1-Trichloroethane (TCA)	200	67/2497	1	Only exceedance was in well DM-11 in 1993 and is considered anomolous. Last detection was in 1996.
1,1,2-Trichoroethane	5	3/1214	None	Last detection was 1.3 ug/L in well GM-01 in March 1997
1,1-Dihloroethene (DCE)	7	108/2497	23	Last exceedance was in 1997 in well DM-15-070.
1,2-Dichloroethane (12DCA)	5	59/2497	None	Last detection in 2003.
1,2-Dichloroethene	70	93/236	None	Prior to 1992 cis-1,2-DCE and trans-1,2-DCE were reported together as 1,2-DCE. The MCL for cis-1,2-DCE is lower than trans-1,2-DCE and is used here.
1,2-Dichloropropane	5	2/1214	None	Last detection was 0.3 ug/L in well DM-14 in March 1991.
1,2-Dichlorobenzene	600	3/708	None	Last detection was 1.8 ug/L in well GM-01 in 1997.
1,4-Dichlorobenzene	75	2/708	None	Last detection was 1 ug/L in well DM-02A in 1997.
1,2 & 1,4 Dichlorobenzene	75	15/441	None	From 1989-1993 these two constituents were reported together. The AWQS for 1,4-Dichlorobenzene is shown as it is lower than the AWQS for 1,2-Dichlorobenzene.
Benzene	5	11/111	4	Detections spread over 7 locations (3 at Mobil well at 56th St. and Indian School Rd). Last one in 1996.
Carbon Tetrachloride	5	16/1214	None	Last detection 0.7 ug/L in well DM-22-175 in March 1997.
Chlorobenzene	100	8/1214	None	Last detection 0.8 ug/L in well DM-28 in July 1997.
cis-1,2-Dichloroethene (CDCE)	70	755/2448	3	Last exceedance in well DM-15-070 in June 1995.
Ethyl Benzene	700	15/96	None	Last detection 0.7 ug/L in well DM-20-059 in July 1997.
Methylene Chloride	5	10/1196	4	Four different wells, most recent was 58 ug/L in well COP-52 in March 1997.
Toluene	1000	32/94	1	Only exceedance 2600 ug/l in April 1993 at Mobil well.
Total Xylenes	10000	10/67	None	Last detection was 420 ug/L in Mobil well in October 1993.
m,p-Xylenes	10000	8/29	None	Last detection was 88 ug/L in well DM-20-090 in December 1996.
o-Xylenes	10000	11/29	None	Last detection was 35 ug/L in well DM-20-090 in December 1996.
Bromodichloromethane (TTHM)	80	50/1212	1	Exceedance is from one elevated Chloroform result.
Bromoform (TTHM)	80	6/1214		
Chloroform (TTHM)	80	429/1214		
Dibromochloromethane (TTHM)	80	37/1214		
trans-1,2-Dichlorethene (TDCE)	100	10/2260	None	Last detection in 2003.
Vinyl Chloride (VC)	2	84/2485	27	Detections mostly in bedrock. One exceedance in well DM-15-216 in 2016 and one in well DM-15-207 in 2015. Prior to 2015 the last exeedance was in well DM-22-138 in 2009.
1,1,2,2-Tetrachloroethane	None	3/1214	None	Last detection 0.5 ug/L in well GM-01 March 1997.
1,1,2-Trichloro-1,2,2-trifluoroethane	None	73/946	None	Last detection 180 ug/L in Mobil well in April 1993.
1,1-Dichloroethane (DCA)	None	34/1812	None	Last detection 0.64 ug/L in well DM-09 in April 2012.
1,3-Dichlorobenzene	None	1/1149	None	Only detection 1.3 ug/L in well DM-02A in March 1997.
2-Butanone	None	1/18	None	Only detection 10 ug/L inwell DM-07 in March 1986.
Acetone	None	1/18	None	One detection of 9.2 ug/L in well DM-07 in 1986.
Bromomethane	None	2/1159	None	Only detection was 1 ug/L in well DM-16 in 1991.
Chloroethane	None	1/1161	None	Only detection was 0.2 ug/L in well DM-05 in 1991.
Chloromethane	None	2/1161	None	One detection in DM-08 and one in well DM-16 subsequent nondetections in both wells.
cis-1,3-Dichloropropene	None	1/1205	None	Only detection was 0.3 ug/L in well DM-14 in 1991. Subsequent sampes nondetect.
Dichlorodifluoromethane	None	13/1146	None	Last detection in 1997.
Trichlorofluoromethane	None	31/1161	None	Last detection in 1997.

Table 5
Contaminants of Potential Concern: Compounds Detected

Inorganic Compounds Detected

Parameter	AWQS (mg/L)	No. of Detects/No. of Samples	No. of Samples with Exceedances of AWQS	Comments
Alkalinity, as CaCO3	None	363/363	None	
Alkalinity, Bicarbonate (as CaCO3)	None	357/363	None	
Alkalinity, Carbonate (as CaCO3)	None	131/363	None	
Alkalinity, Hydroxide (as CaCO3)	None	5/363	None	
Ammonia	None	131/367	None	
Arsenic	0.05	383/443	146	See 6.2.2 Inorganics constituents for discussion.
Barium	2	236/261	None	Detected at low levels in most samples. Highest detection is 0.288 mg/L, well below the AWQS.
Beryllium	0.004	1/257	1	Only one detection and exceedence of the AWQS. Beryllium was detected at 0.005 mg/L in well DM20-170 in June 1993. Subsequent samples are all non-detect.
Boron	None	272/272	None	
Cadmium	0.005	10/271	None	Cadmium was detected in 10 of 271 samples with no AWQS (0.005 mg/L) exceedences. The highest result was 0.0028 mg/L observed in well DM15-135 in April 1993. Non-detected results were observed in subsequent samples.
Calcium	None	367/367	None	
Chloride	None	367/367	None	
Chromium	0.1	31/377	3	The three exceedences were 0.11 mg/L and 0.1mg/L at well DM-11 and 0.12 mg/L at well DM-22-098. Both wells have subsequent samples that were non-detect for chromium.
Copper	1.3	23/270	None	
Cyanide	0.2	7/259	1	The one exceedence was just above the AWQS at 0.027 mg/L in well DM-22-098.
Fluoride	4	432/432	394	See 6.2.2 Inorganics constituents for discussion.
Hardness (as CaCO3)	None	246/246	None	
Iron	None	96/367	None	
Lead	0.015	24/271	2	The two exceedences were observed in well DM-04 and well DM-11 at 0.04 mg/L and 0.046 mg/L. Both samples were collected in the 1980s and subsequent observations were non-detect.
Magnesium	None	363/367	None	
Manganese	None	125/368	None	
Mercury	0.002	5/271	None	Five detections and no exceedences. Highest detection in well DM-02A at 0.001 mg/L in 2008.
Nickel	None	13/365	None	
Nitrate (as N)	10	289/335	58	See 6.2.2 Inorganics constituents for discussion.
Nitrate-Nitrite (as N)	10	32/35	5	The five exceedence occurred in five different wells, all in 1997.
Phosphorus (total)	None	123/259	None	
Potassium	None	340/354	None	
Selenium	0.05	89/271	None	There were no exceedences of the AWQS of 0.05 mg/L. The high detection was 0.022 mg/L observed in well DM-07 in 1993.
Silicon	None	246/246	None	
Silver	None	1/271	None	
Sodium	None	367/367	None	
Sulfate	None	367/367	None	
Total Dissolved Solids	None	434/434	None	
Total Kjeldahl Nitrogen (as N)	None	198/237	None	
Zinc	None	56/270	None	

AWQS: Arizona Water Quality Standards
µg/L: micrograms per liter
mg/L: milligrams per liter

Note: Locations of most wells are shown on Figure 3, Monitor Well Network.

Table 6
Constituents Historically Reported But Never Detected

Organic Constituents

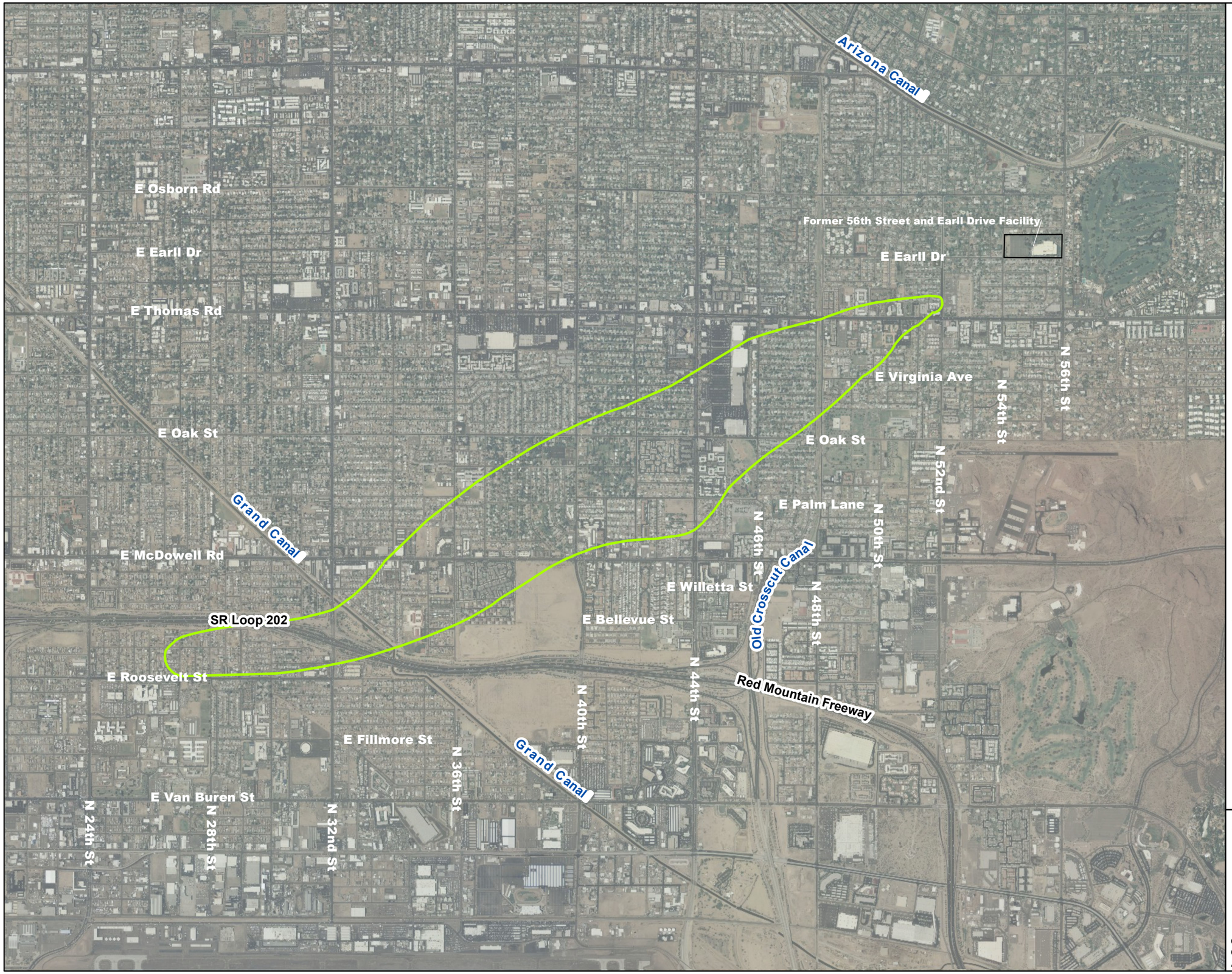
Parameter	AWQS (mg/L)	No. of Detects/ No. of Samples	No. of Samples with Exceedances of AWQS	Comments
1,2-Dibromoethane	0.05	0/57	None	Never detected
1,4-Dioxane	None	0/8	None	Never detected
2-Chloroethyl Vinyl Ether	None	0/1147	None	Never detected
2-Hexanone	None	0/17	None	Never detected
4-Methyl-2-Pentanone	None	0/17	None	Never detected
Carbon Disulfide	None	0/15	None	Never detected
Styrene	100	0/17	None	Never detected
trans-1,3-Dichloropropene	None	0/1205	None	Never detected
Vinyl Acetate	None	0/15	None	Never detected

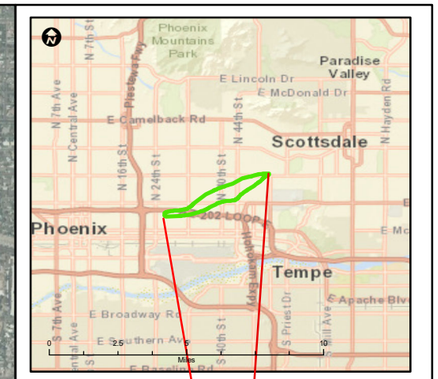
Inorganic Constituents

Parameter	AWQS (mg/L)	No. of Detects/ No. of Samples	No. of Samples with Exceedances of AWQS	Comments
Antimony	0.006	0/257	None	Never detected
Chromium VI	None	0/13	None	Never detected
Thallium	0.002	0/256	None	Never detected

AWQS: Arizona Water Quality Standards
µg/L: micrograms per liter
mg/L: milligrams per liter

FIGURES





LEGEND:

AREA OF TCE CONCENTRATION IN GROUNDWATER ABOVE 5 ug/l IN ALLUVIUM (OCTOBER 2016)

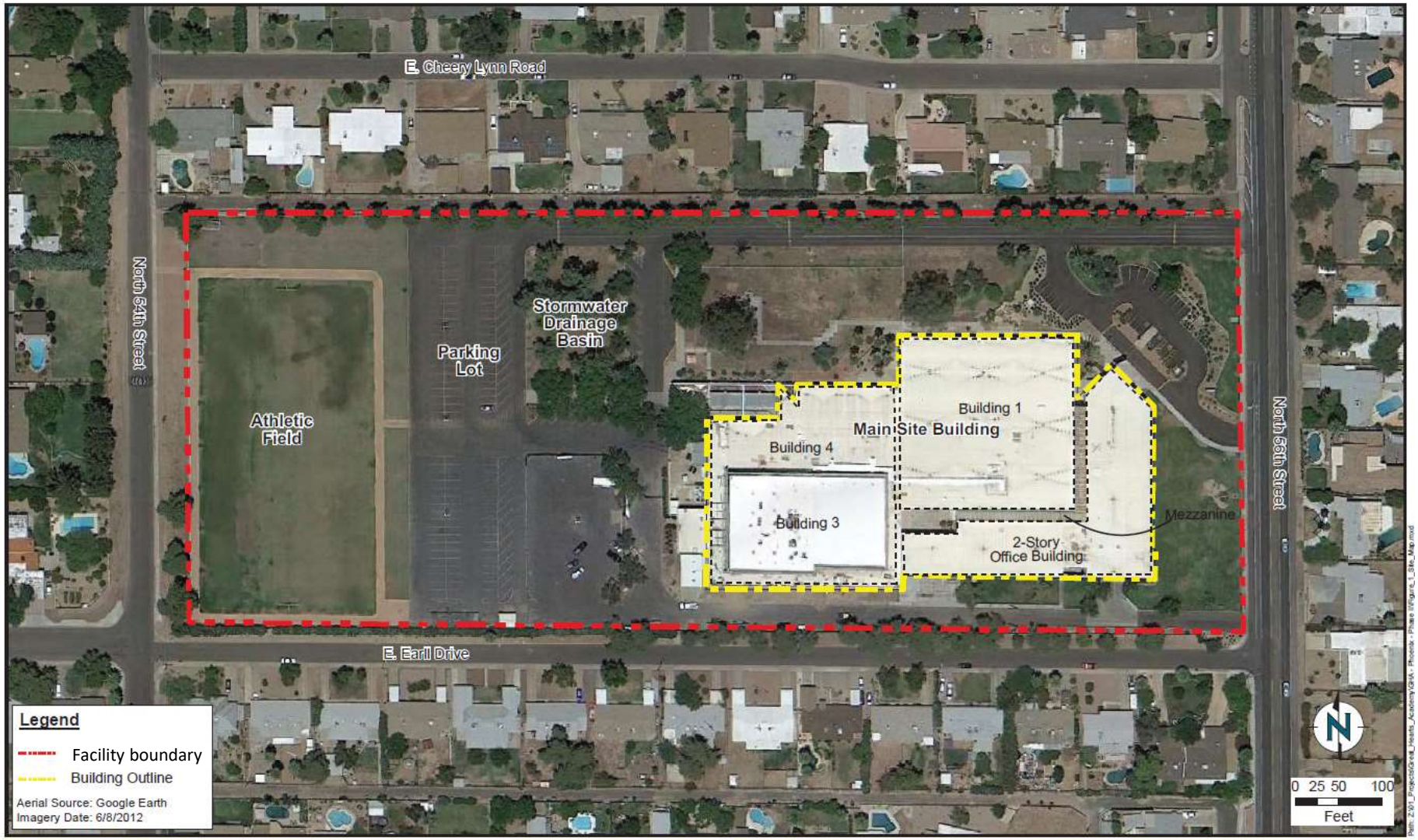
0 1,000 2,000 4,000
Feet

56TH STREET AND EARLL DRIVE WQARF SITE

FIGURE 1

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE



ENVIRON

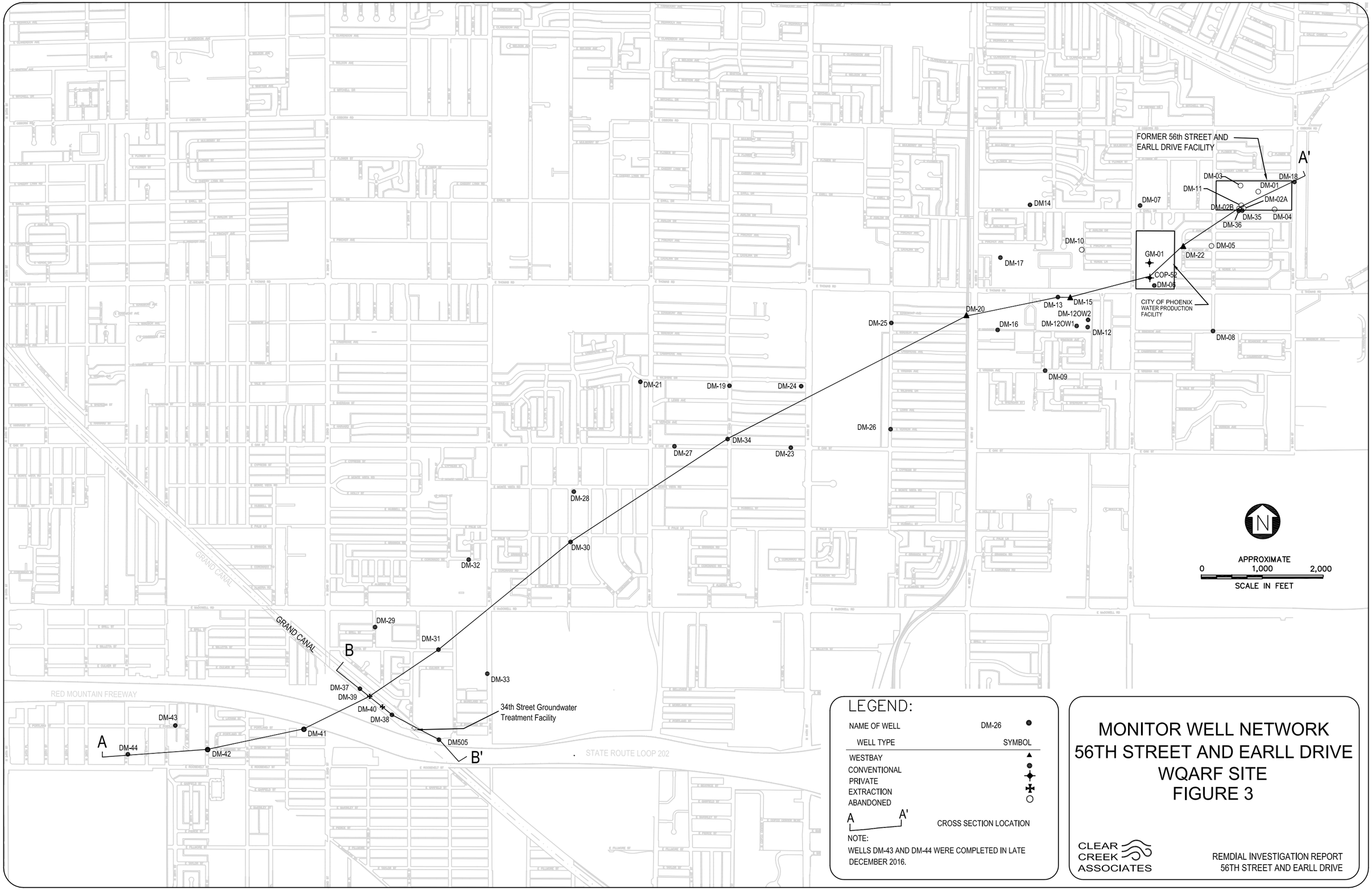
DRAFTED BY: JLV | Date: 5/23/2013

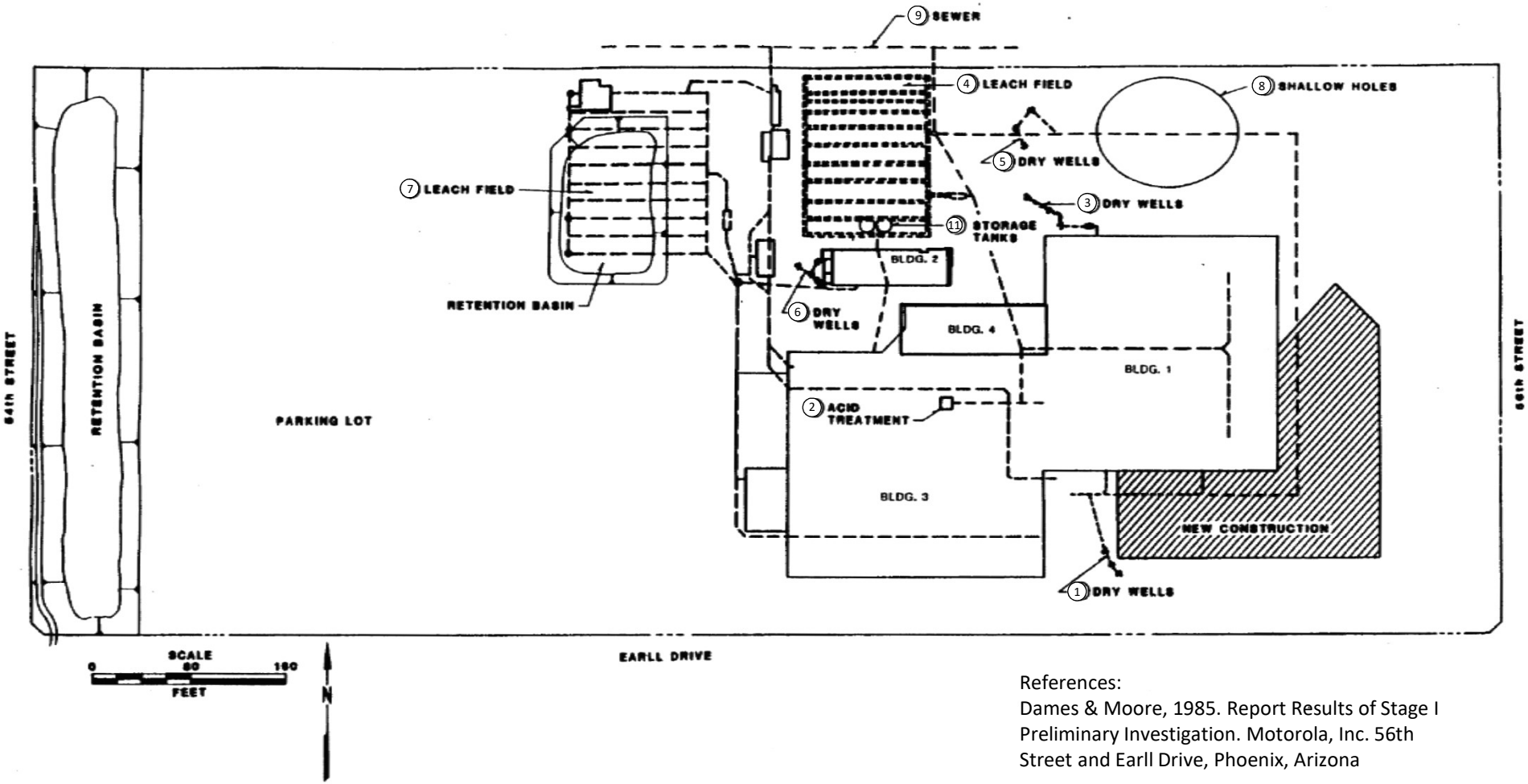
Facility Map

PROJECT: 28-25154E

FIGURE 2

REMEDIAL INVESTIGATION REPORT
56TH ST. AND EARLL DR. WQARF SITE


FORMER 56th STREET AND
EARLL DRIVE FACILITY
A'
DM-03
DM-18
DM-01
DM-11
DM-02A
DM-07
DM-02B
DM-35
DM-04
DM-36
DM14
DM-10
DM-05
GM-01
DM-22
DM-17
COP-52
DM-06
CITY OF PHOENIX
WATER PRODUCTION
FACILITY
DM-13
DM-15
DM-20
DM-12OW2
DM-25
DM-16
DM-12OW1
DM-12
DM-08
DM-09
DM-21
DM-19
DM-24
DM-26
DM-34
DM-27
DM-23
DM-28
DM-30
DM-32
GRAND CANAL
GRAND CANAL
DM-29
DM-31
B
DM-33
RED MOUNTAIN FREEWAY
DM-37
DM-39
DM-40
DM-38
34th Street Groundwater
Treatment Facility
DM-43
DM-41
A
DM-44
DM-42
DM505
B'
STATE ROUTE LOOP 202
N
APPROXIMATE
0
1,000
2,000
SCALE IN FEET
LEGEND:
NAME OF WELL
DM-26
WELL TYPE
SYMBOL
WESTBAY
CONVENTIONAL
PRIVATE
EXTRACTION
ABANDONED
A
A'
CROSS SECTION LOCATION
NOTE:
WELLS DM-43 AND DM-44 WERE COMPLETED IN LATE
DECEMBER 2016.
MONITOR WELL NETWORK
56TH STREET AND EARLL DRIVE
WQARF SITE
FIGURE 3
CLEAR
CREEK
ASSOCIATES
REMDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE



References:
Dames & Moore, 1985. Report Results of Stage I Preliminary Investigation. Motorola, Inc. 56th Street and Earll Drive, Phoenix, Arizona

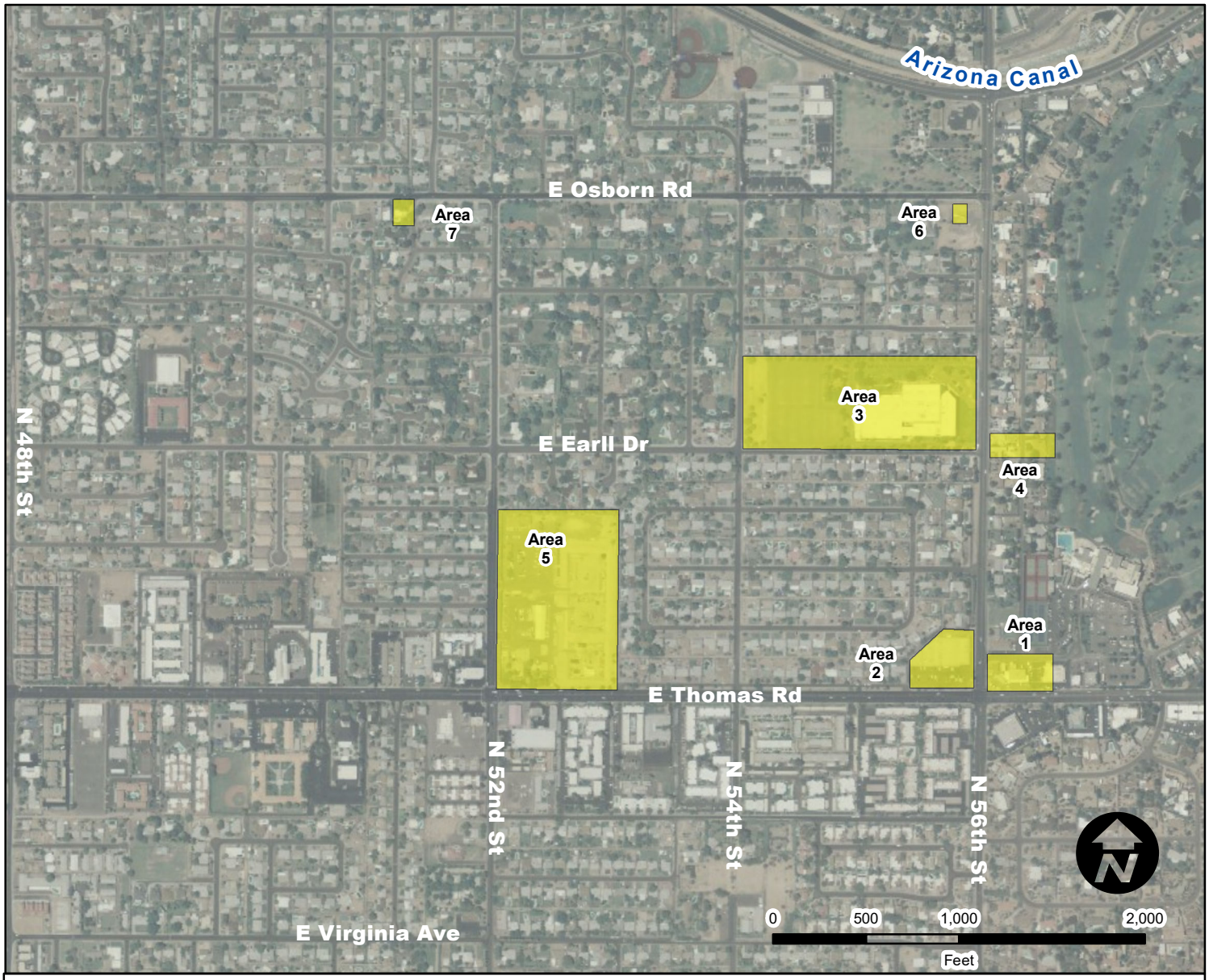
Kary, 1985. Chemical Disposal Methods Report, Motorola Inc., 56th St. Facility, Phoenix, Arizona

Source 1 - Dry wells south of Building #1
Source 2 - Acid treatment discharge west of Building #1
Source 3 - Dry wells/grease pits northwest of Building #1
Source 4 - Sewage leaching field north of Building #2
Source 5 - Dry wells east of leach fields north of Building #1
Source 6 - Dry wells west of Building #2
Source 7 - Sewage leaching field northwest of Building #3
Source 8 - Shallow holes north of Building #1
Source 9 - Sewer connection
Source 10 - Freon reclaim system
Source 11 - Buried waste solvent and acid treatment tanks north of Building #2

LOCATIONS OF DISPOSAL METHODS
FIGURE 4

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE



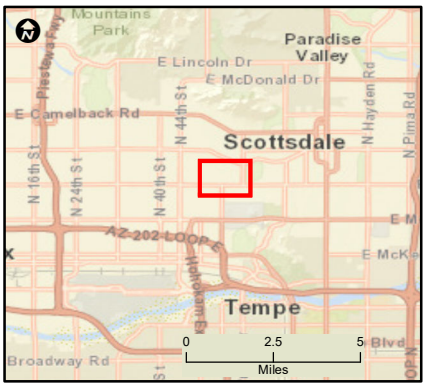
Legend

Potential Source Areas of VOCs

Potential Source Area Locations on Map – refer to number on map

1. Northeast of 56th Street and Thomas Road. Includes asphalt cleaning and/or painting operations and Former One-Hour Martinizing – dry cleaner (1975 – 1990?).
2. Northwest of 56th Street and Thomas Road (commercial strip mall with dry cleaners). Includes Cleaning by George – dry cleaner (1975-1995 and beyond); previously known as Wash-Rite (1960-1975).
3. Motorola 56th Street Facility past uses by others. Several non-Motorola entities leased the facility: Westinghouse (1971 – 1972), Time Piece and Business Systems (1971-1974); Liquid Crystal (1975-1979) and Microsystems (1975-1982).
4. Gordon Unit Systems/Moss-Gordon Lint Cleaning Co. - cotton gin machinery 3101 N. 56th St. (across the street from the 56th St. Facility)(1957-1964).
5. 52nd Street North of Thomas Road (City of Phoenix Water Production facility and maintenance yard or other unknown source) at 5204 E. Thomas Rd.
6. Embry Printing at 51st St. and Osborn Rd. (1980 – 1982)
7. NuWest Painting Contractors, south of Osborn Rd., west of 56th St. (198? - 1995 and beyond)

Note:
Potential source area locations are numbered for identification purposes only;
the numbers are not a ranking of potential source areas.
PRP: Potentially Responsible Parties
VOC: Volatile Organic Compound



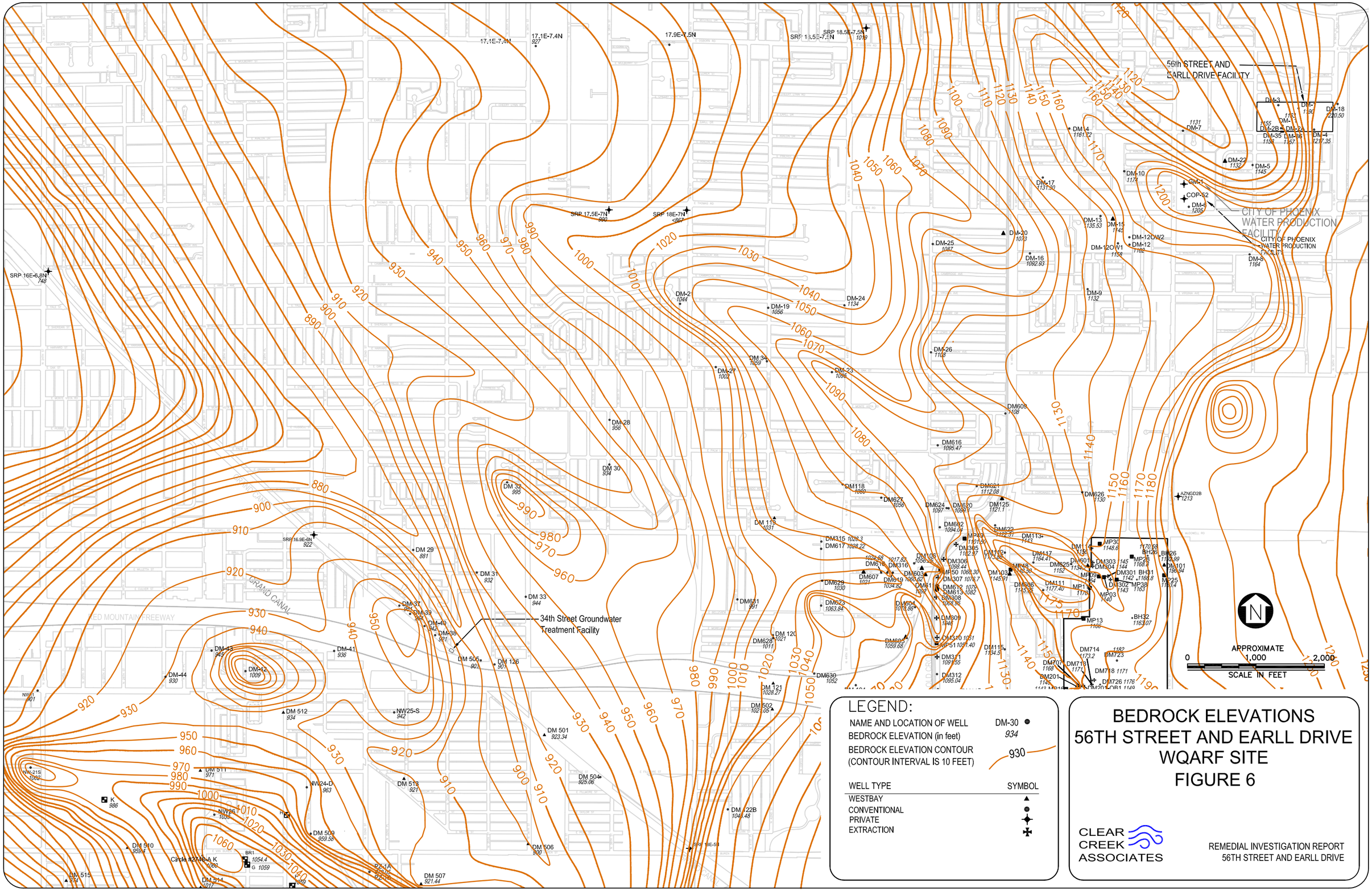
References:
Dames & Moore 1995. Soil-Gas Investigation, Motorola 56th Street Facility, Phoenix, Arizona. May 1995.
Freescale, 2008. Freescale letter, Jenn McCall, to Arizona Dept. of Environmental Quality, Cathy O'Connell re: PRP information for 56th Street and Earll WQARF Site Study Area. Letter dated September 24, 2008.

PRP INFORMATION
POTENTIAL SOURCES
OF CONTAMINATION
56TH STREET AND EARLL DRIVE
WQARF SITE

FIGURE 5

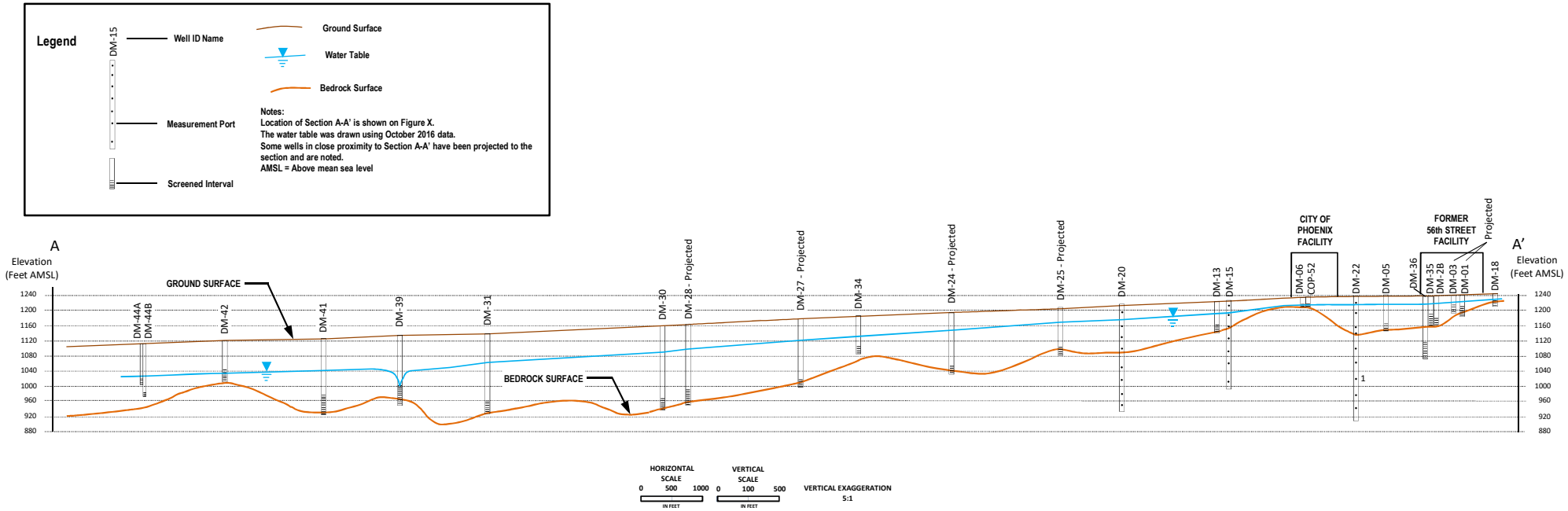
CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE



BEDROCK ELEVATIONS
56TH STREET AND EARLL DRIVE WQARF SITE
FIGURE 6

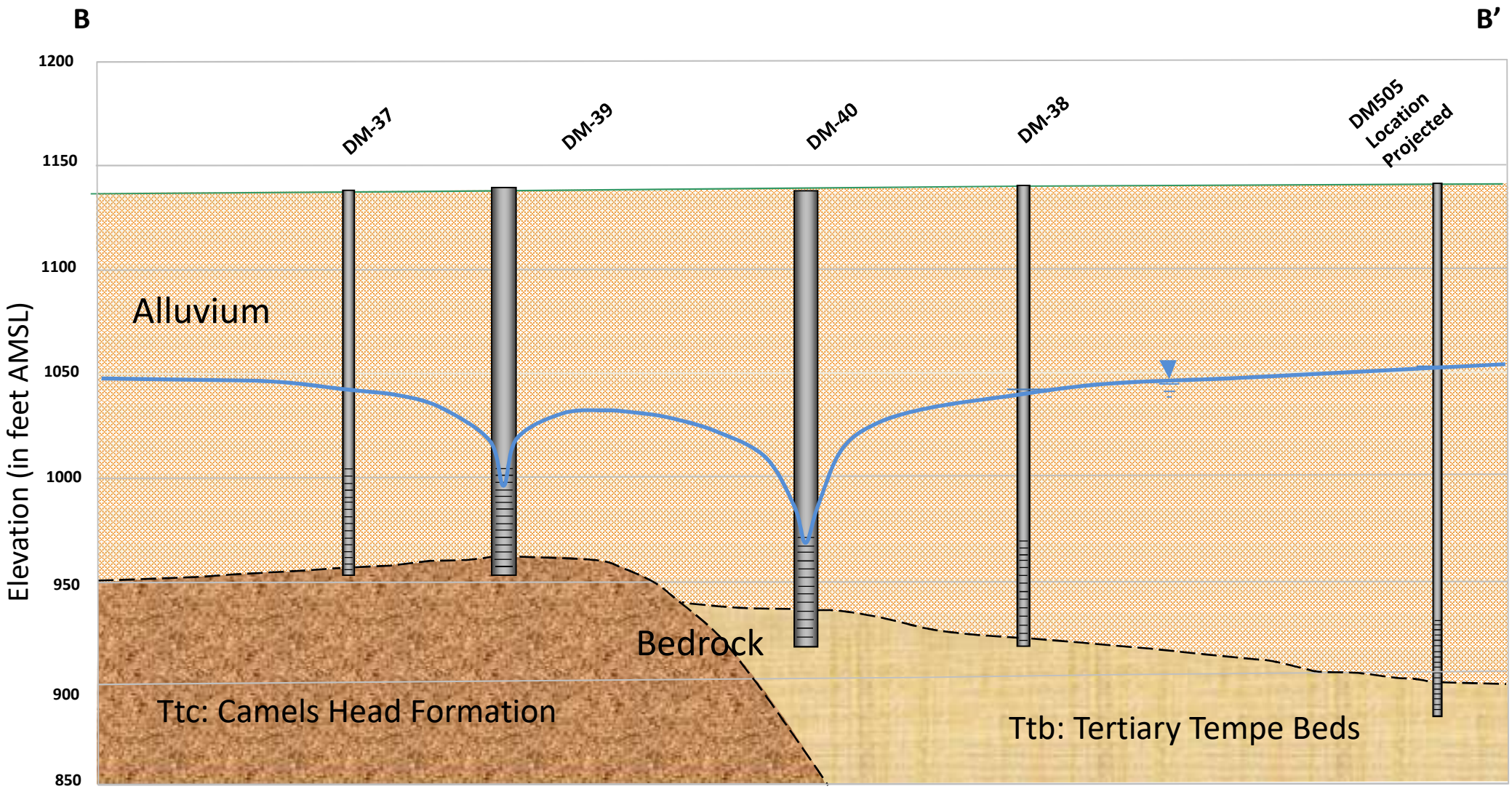
REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE



56th STREET AND EARLL DRIVE WQARF SITE
HYDROGEOLOGIC CROSS SECTION A-A'
LENGTH OF PLUME
FIGURE 7

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE WQARF SITE



Legend

DM-37 — Well ID

— Screened Interval

— Water Table (October 2016 data)

HORIZONTAL SCALE

0 100 200

IN FEET

VERTICAL EXAGGERATION APPROXIMATELY 2X

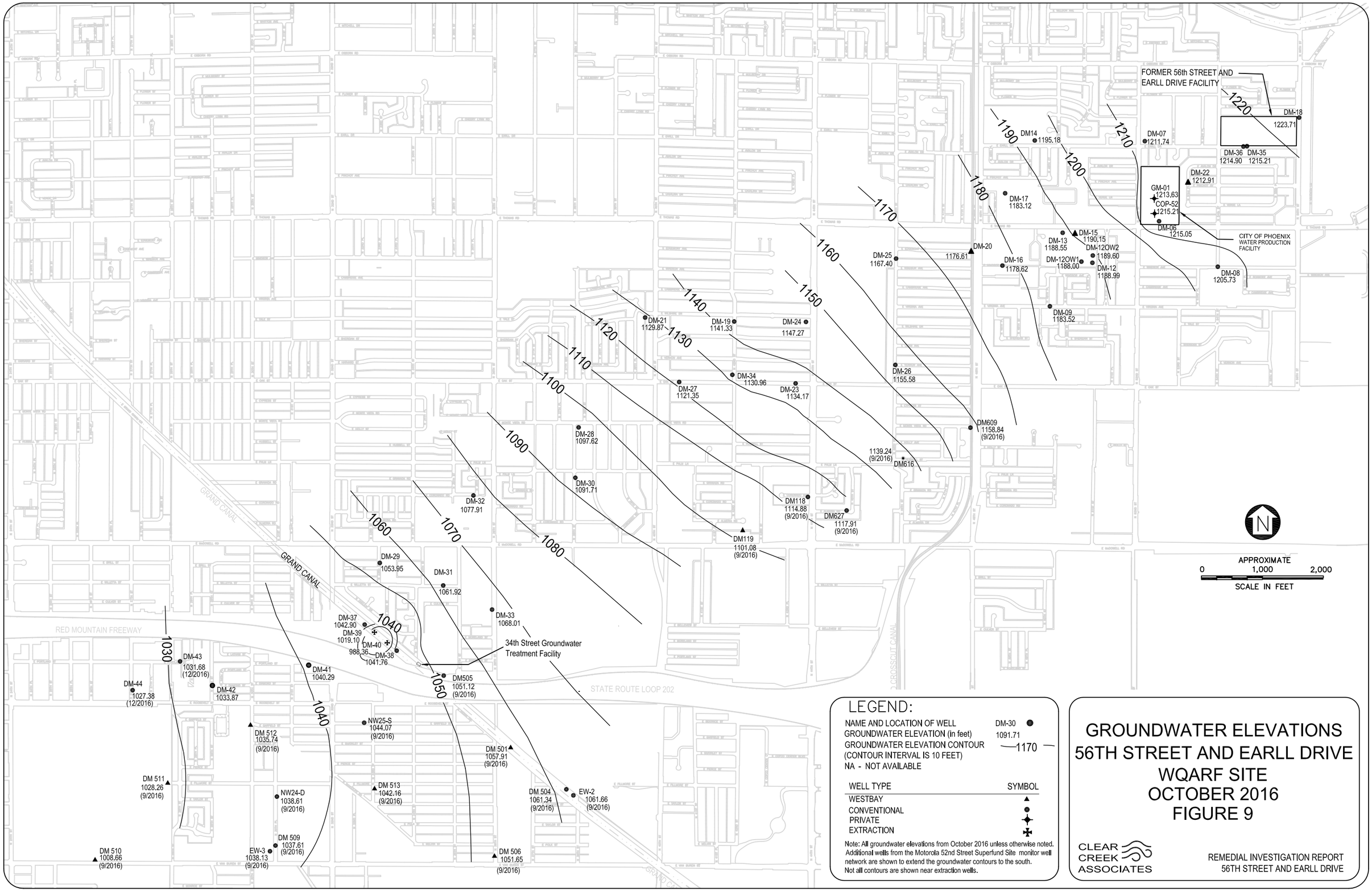
Notes: Location of cross section shown on Figure 3.
Well DM505 is shown for informational purposes only. If plotted to scale, well DM505 would not be shown on this section.
AMSL = Above Mean Sea Level

56th STREET AND EARLL DRIVE WQARF SITE
HYDROGEOLOGIC CROSS SECTION B-B'
WIDTH OF PLUME AT THE GRAND CANAL

FIGURE 8

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE



LEGEND:

NAME AND LOCATION OF WELL	DM-30 ●
GROUNDWATER ELEVATION (in feet)	1091.71
GROUNDWATER ELEVATION CONTOUR (CONTOUR INTERVAL IS 10 FEET)	—1170—
NA - NOT AVAILABLE	

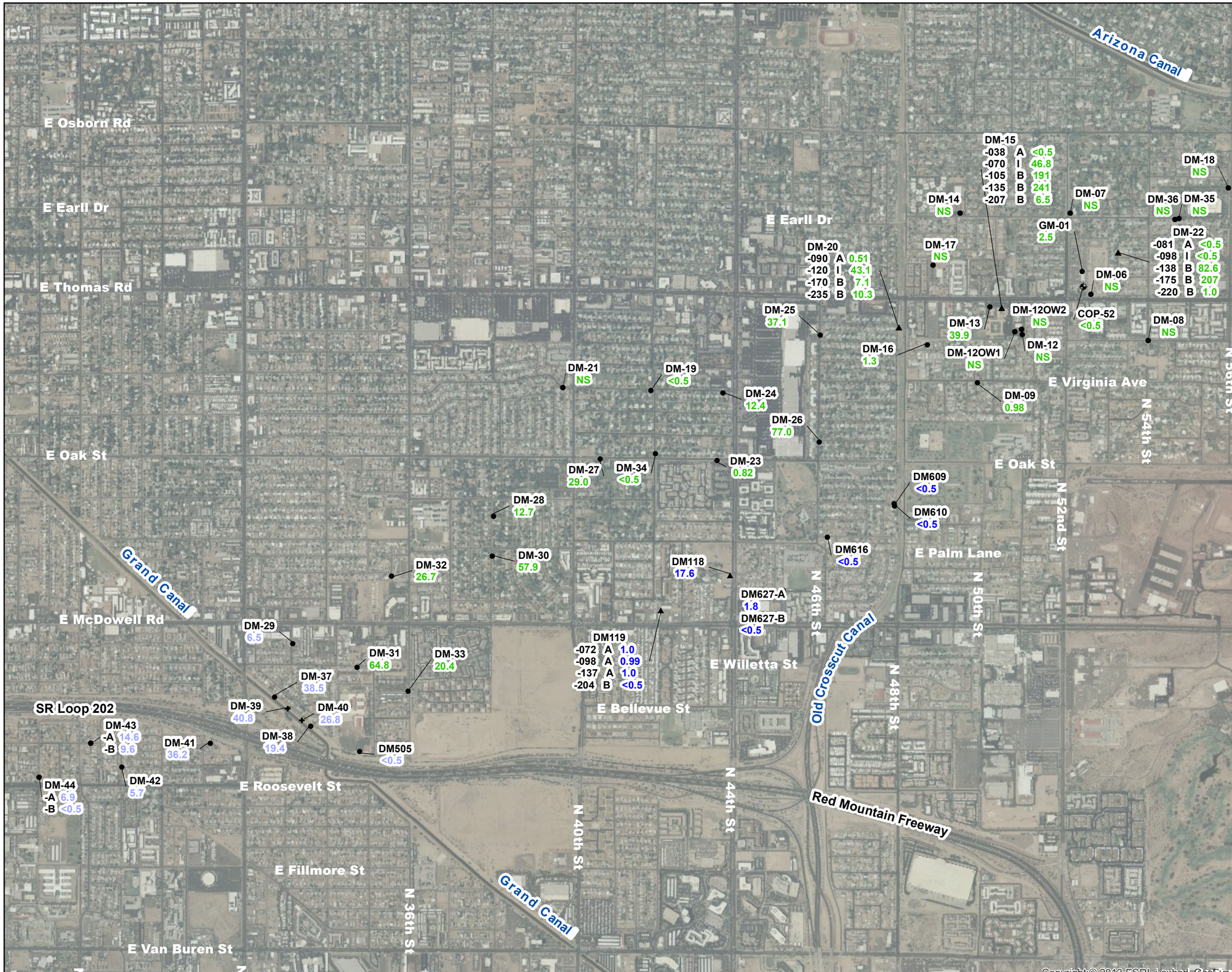
WELL TYPE	SYMBOL
WESTBAY	▲
CONVENTIONAL	●
PRIVATE	✦
EXTRACTION	✠

Note: All groundwater elevations from October 2016 unless otherwise noted. Additional wells from the Motorola 52nd Street Superfund Site monitor well network are shown to extend the groundwater contours to the south. Not all contours are shown near extraction wells.

GROUNDWATER ELEVATIONS
56TH STREET AND EARLL DRIVE
WQARF SITE
OCTOBER 2016
FIGURE 9

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE



LEGEND:

SYMBOL	WELL TYPE
●	Conventional
+	Extraction
●	Conventional
◆	Private
▲	Westbay

TCE CONCENTRATION CONTOUR IN ALLUVIUM
5 ug/L
(2016 AND 2017)

● DM-30 NAME OF WELL
84 TCE CONCENTRATION (ug/L)

DM-20 NAME OF WESTBAY WELL
▲
-090 A 0.51 PORT DEPTH IN FEET; GEOLOGIC UNIT
-120 I 43.1 TCE CONCENTRATION (ug/L)
-170 B 7.1
-235 B 10.3

NS - Not Sampled

1.3 Green data was collected in October 2016
1.8 Blue data was collected in September 2016
5.7 Lavender data was collected in April 2017

NOTE:
Geologic Units:
A = Alluvium
B = Bedrock
I = Alluvium/Bedrock Interface

N

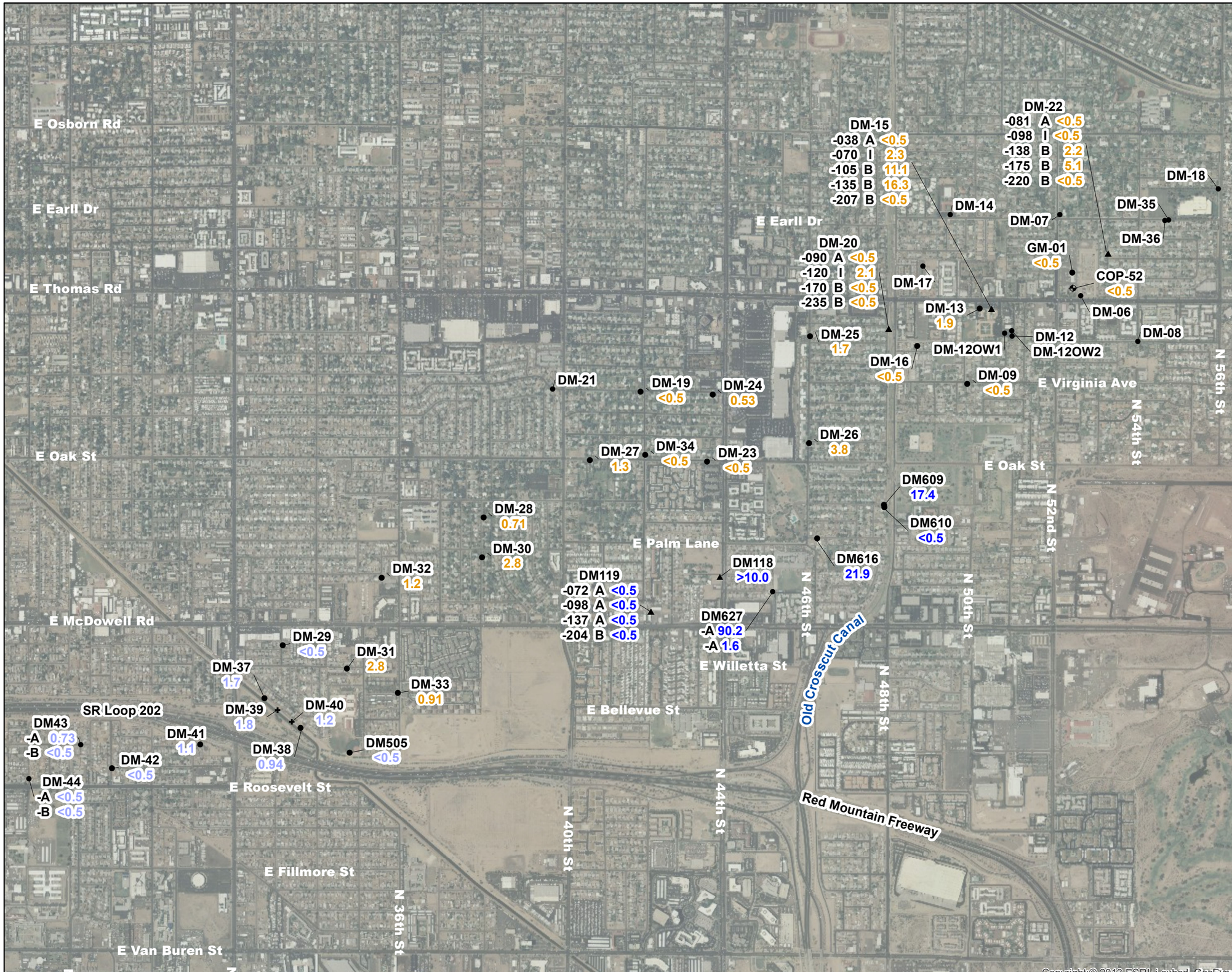
0 1,000 2,000
Feet

TCE IN GROUNDWATER
56TH STREET AND EARLL DRIVE
WQARF SITE
(SEPTEMBER 2016 - APRIL 2017)

FIGURE 10

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56th ST AND EARLL DR WQARF SITE



LEGEND:

SYMBOL	WELL TYPE
●	Conventional
+	Extraction
●	Conventional
◆	Private
▲	Westbay

● DM-30 NAME OF WELL
2.8 PCE CONCENTRATION (ug/L)

DM119 NAME OF WESTBAY WELL
▲
-072 A <0.5 PORT DEPTH IN FEET; GEOLOGIC UNIT
-098 A <0.5 PCE CONCENTRATION (ug/L)
-137 A <0.5
-204 B <0.5

1.3 Orange data was collected in October 2016
1.8 Blue data was collected in September 2016
5.7 Lavender data was collected in April 2017

NOTE:
Geologic Units:
A = Alluvium
B = Bedrock
I = Alluvium/Bedrock Interface

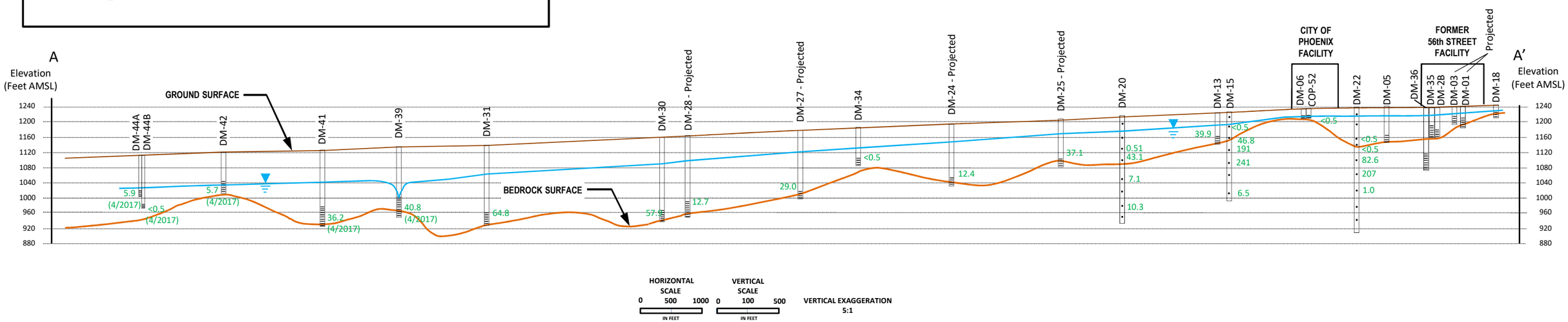
0 1,000 2,000
Feet

PCE IN GROUNDWATER
56TH STREET AND EARLL DRIVE
WQARF SITE
(SEPTEMBER 2016 - APRIL 2017)

FIGURE 11

CLEAR CREEK ASSOCIATES

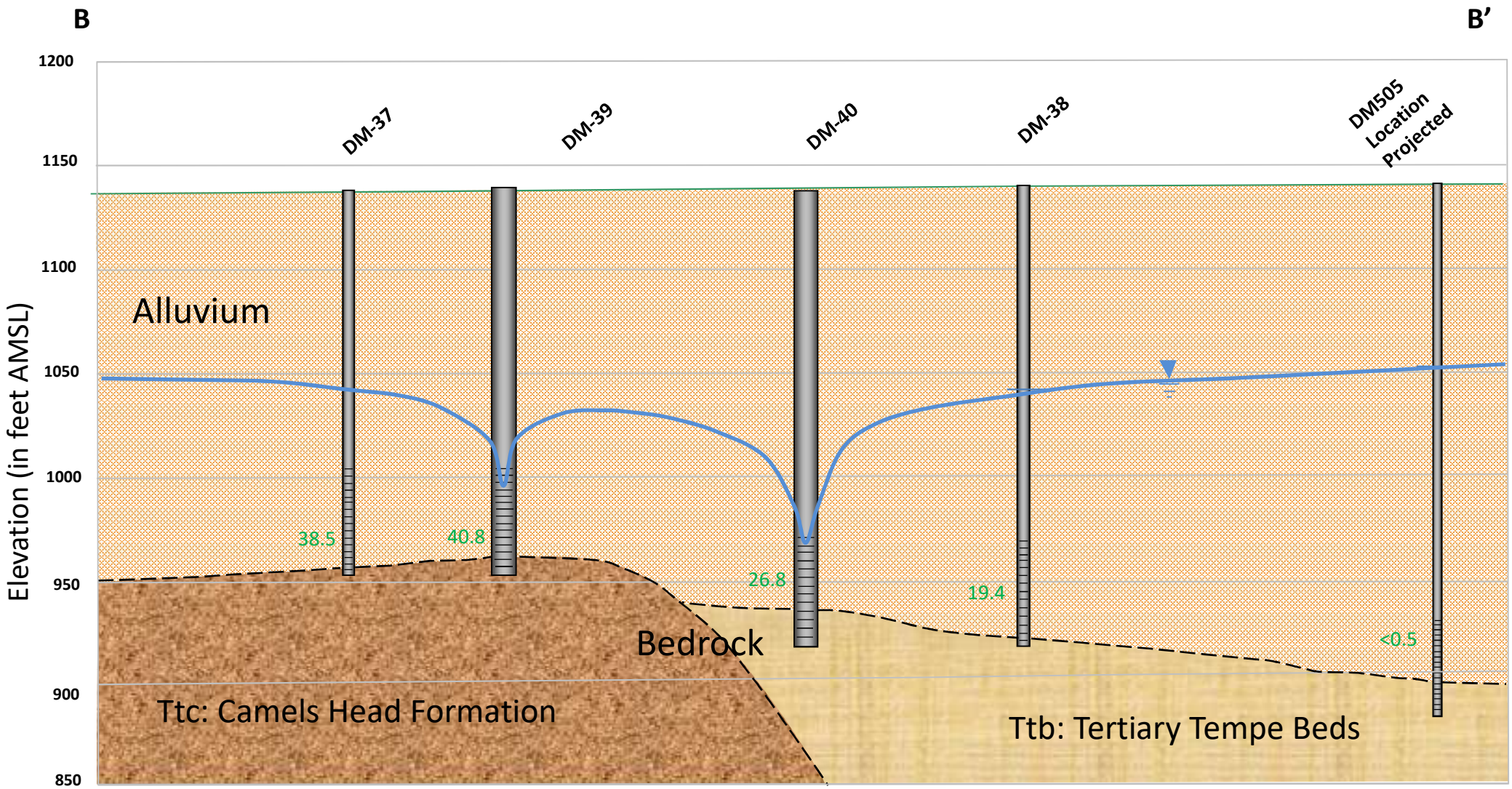
REMEDIAL INVESTIGATION REPORT
56th ST AND EARLL DR WQARF SITE



56th STREET AND EARLL DRIVE WQARF SITE
TCE CONCENTRATION DATA (OCTOBER 2016-APRIL 2017)
CROSS SECTION A-A'
FIGURE 12

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE WQARF SITE



Legend

DM-37 — Well ID

38.5 — TCE Concentration (µg/L)

— Screened Interval

— Water Table (October 2016 data)

HORIZONTAL SCALE

0 100 200

IN FEET

VERTICAL EXAGGERATION APPROXIMATELY 2X

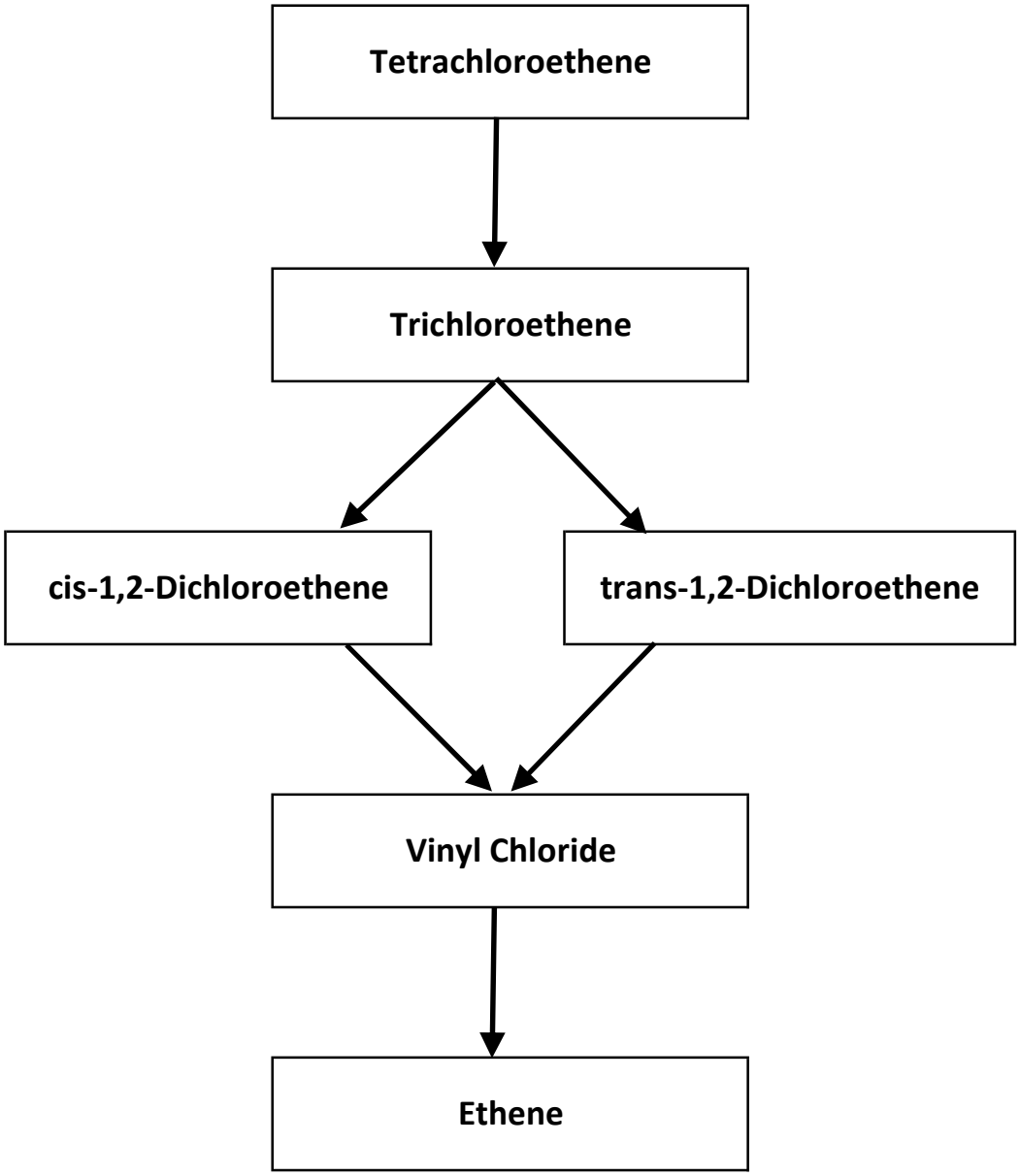
Notes: Location of cross section shown on Figure 3.
TCE concentrations from April 2017
Well DM505 is shown for informational purposes only. If plotted to scale, well DM505 would not be shown on this section.
AMSL = Above Mean Sea Level

56th STREET AND EARLL DRIVE WQARF SITE
TCE CONCENTRATION DATA (APRIL 2017)
CROSS SECTION B-B'

FIGURE 13

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE

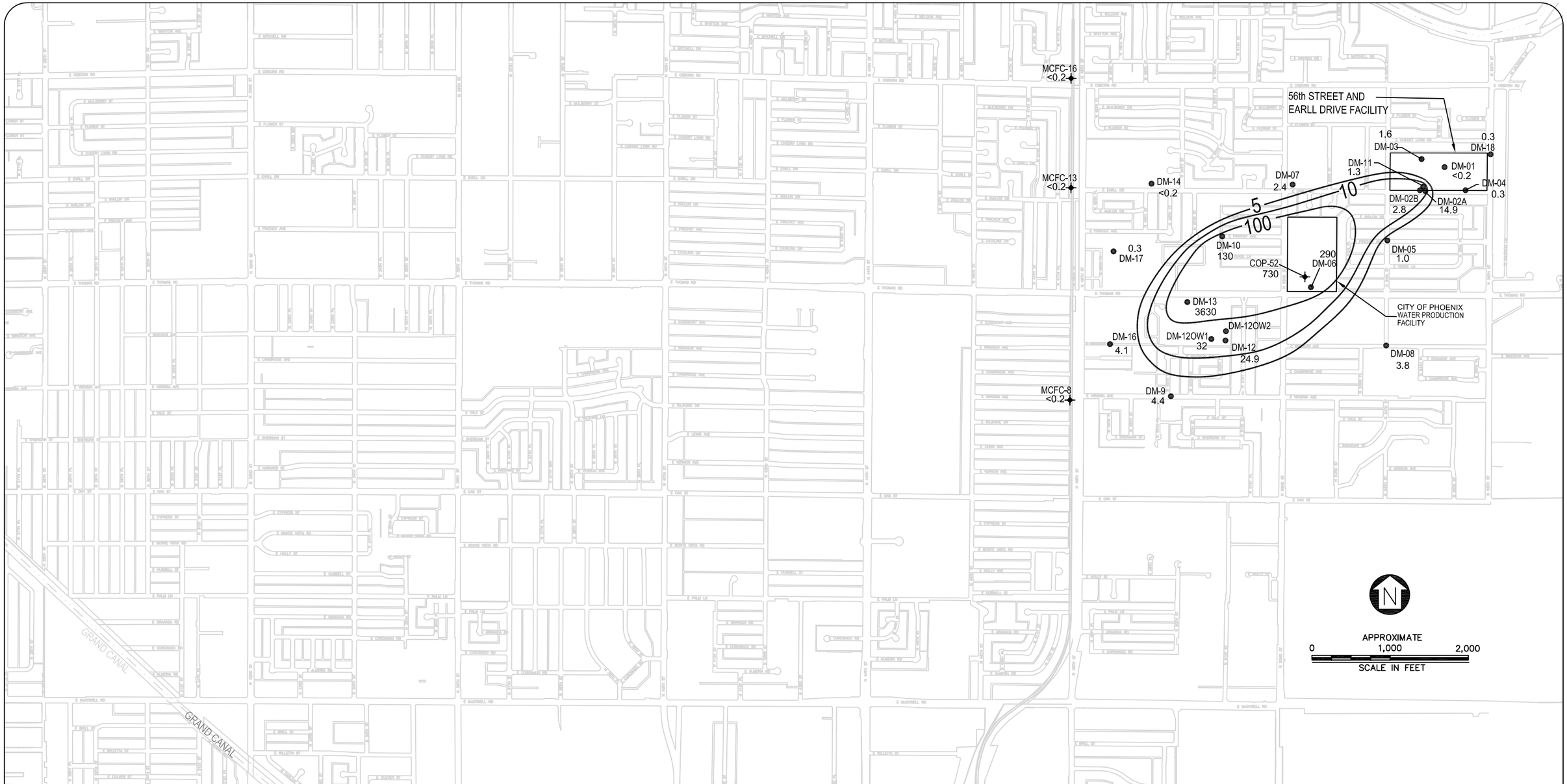


Reductive Dechlorination Degradation Pathways

CLEAR CREEK ASSOCIATES

FIGURE 14

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE



LEGEND:

WELL TYPE	SYMBOL
WESTBAY	▲
CONVENTIONAL	●
PRIVATE	◆
EXTRACTION	✠

TCE CONCENTRATION IN ALLUVIUM CONTOUR (in ug/L) — 5 —

NAME OF WELL DM-17

TCE CONCENTRATION IN ug/L 0.3

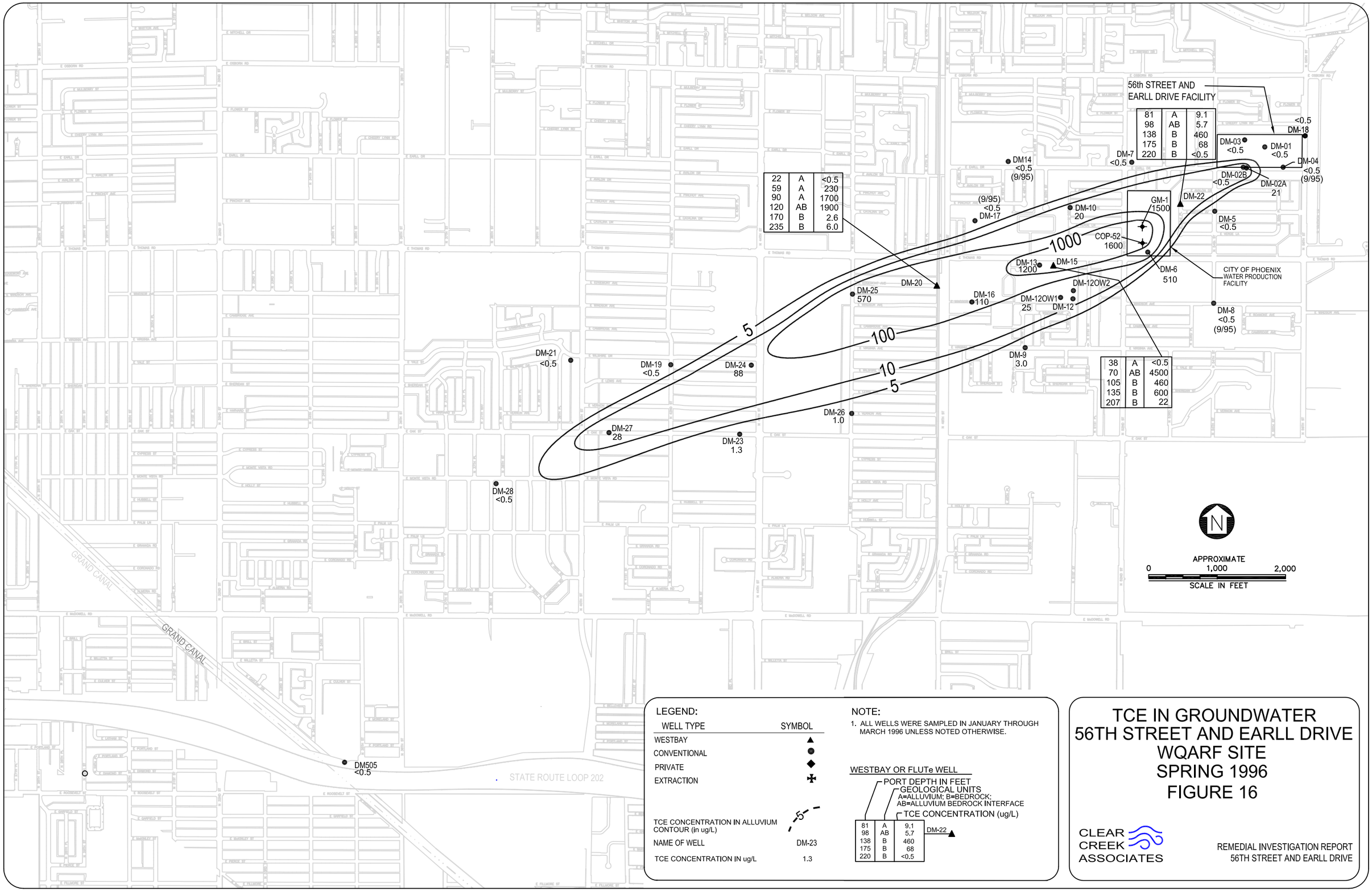
NOTE:

1. ALL WELLS WERE SAMPLED BETWEEN JANUARY AND JUNE 1991 UNLESS NOTED OTHERWISE.

TCE IN GROUNDWATER
56TH STREET AND EARLL DRIVE WQARF SITE
1991
FIGURE 15

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE



LEGEND:

WELL TYPE	SYMBOL
WESTBAY	▲
CONVENTIONAL	●
PRIVATE	◆
EXTRACTION	✠

TCE CONCENTRATION IN ALLUVIUM CONTOUR (in ug/L) — 5 —

NAME OF WELL DM-23

TCE CONCENTRATION IN ug/L 1.3

NOTE:

1. ALL WELLS WERE SAMPLED IN JANUARY THROUGH MARCH 1996 UNLESS NOTED OTHERWISE.

WESTBAY OR FLUTe WELL

PORT DEPTH IN FEET

GEOLOGICAL UNITS
A=ALLUVIUM; B=BEDROCK;
AB=ALLUVIUM BEDROCK INTERFACE

TCE CONCENTRATION (ug/L)

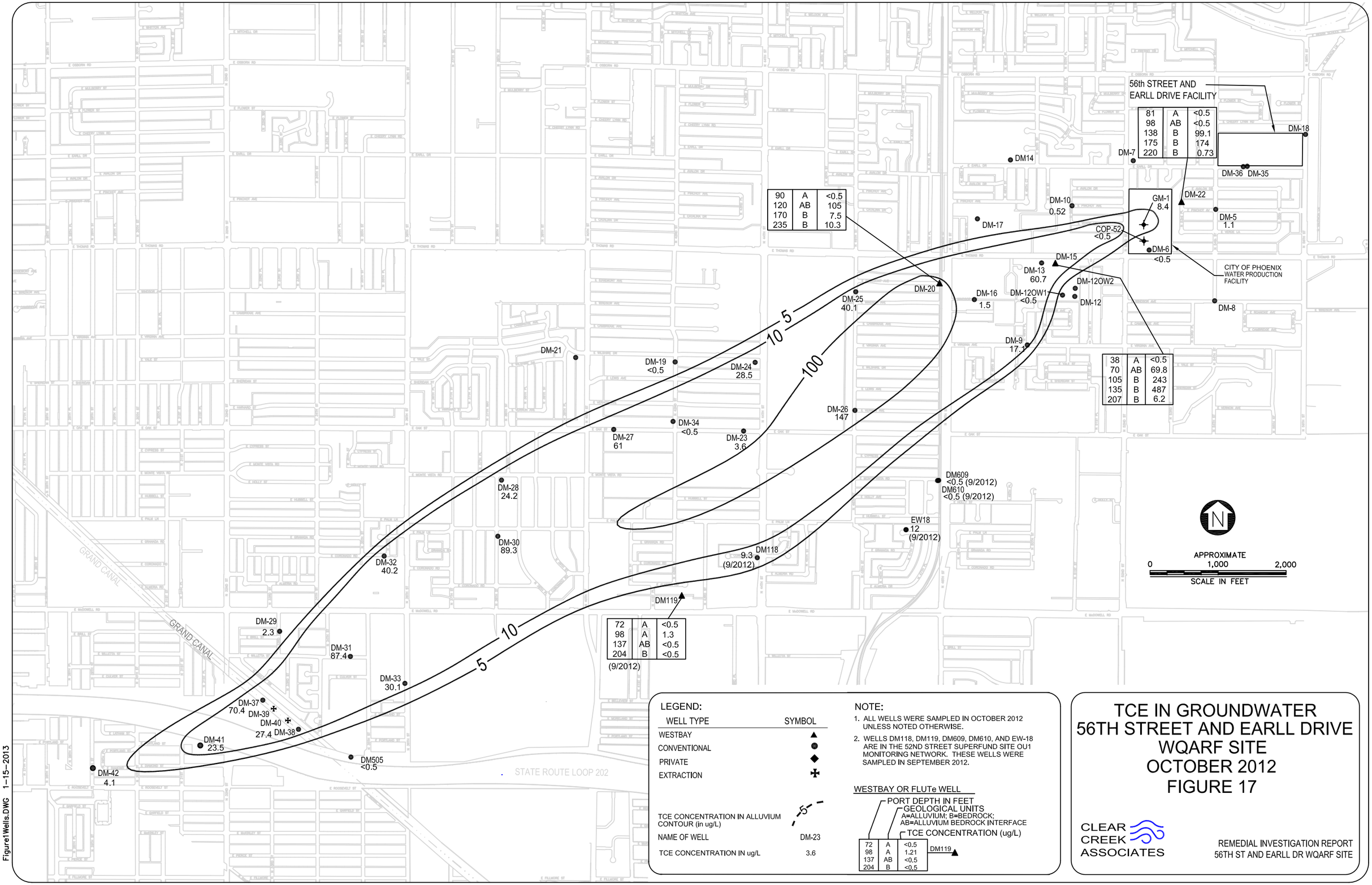
81	A	9.1
98	AB	5.7
138	B	460
175	B	68
220	B	<0.5

DM-22 ▲

TCE IN GROUNDWATER
56TH STREET AND EARLL DRIVE
WQARF SITE
SPRING 1996
FIGURE 16

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE



LEGEND:

WELL TYPE	SYMBOL
WESTBAY	▲
CONVENTIONAL	●
PRIVATE	◆
EXTRACTION	✠

TCE CONCENTRATION IN ALLUVIUM CONTOUR (in ug/L) — 5

NAME OF WELL — DM-23

TCE CONCENTRATION IN ug/L — 3.6

NOTE:

1. ALL WELLS WERE SAMPLED IN OCTOBER 2012 UNLESS NOTED OTHERWISE.
2. WELLS DM118, DM119, DM609, DM610, AND EW-18 ARE IN THE 52ND STREET SUPERFUND SITE OU1 MONITORING NETWORK. THESE WELLS WERE SAMPLED IN SEPTEMBER 2012.

WESTBAY OR FLUTe WELL

PORT DEPTH IN FEET
GEOLOGICAL UNITS
A=ALLUVIUM; B=BEDROCK;
AB=ALLUVIUM BEDROCK INTERFACE
TCE CONCENTRATION (ug/L)

72	A	<0.5
98	A	1.21
137	AB	<0.5
204	B	<0.5

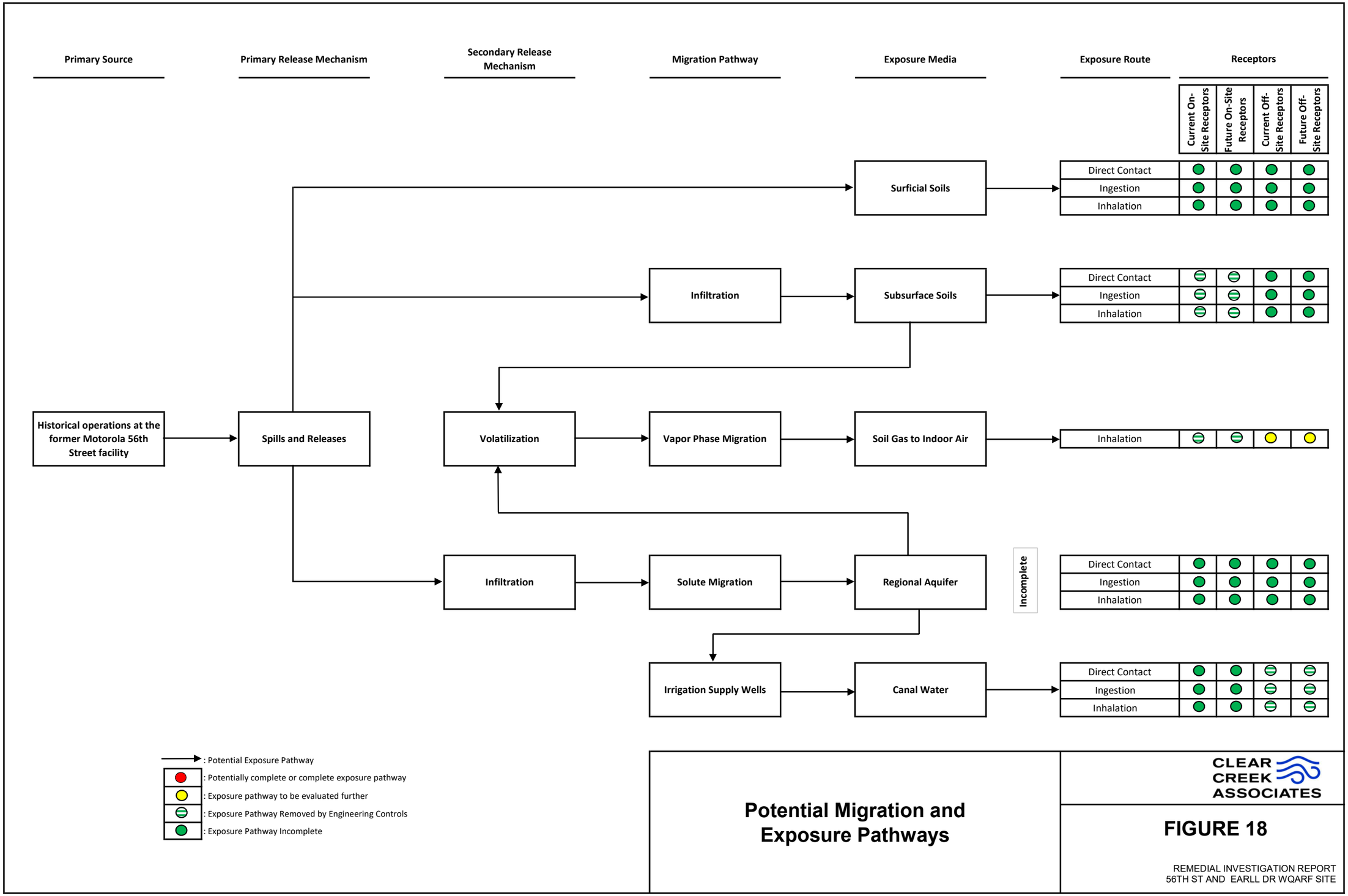
DM119 ▲

TCE IN GROUNDWATER
56TH STREET AND EARLL DRIVE WQARF SITE
OCTOBER 2012
FIGURE 17

CLEAR CREEK ASSOCIATES

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE

Figure1Wells.DWG 1-15-2013



Potential Migration and Exposure Pathways

CLEAR CREEK ASSOCIATES

FIGURE 18

REMEDIAL INVESTIGATION REPORT
56TH ST AND EARLL DR WQARF SITE

ATTACHMENTS

ATTACHMENT A

Stage I Investigation Report

(selected pages of data tables and figures)

REPORT (DRAFT)

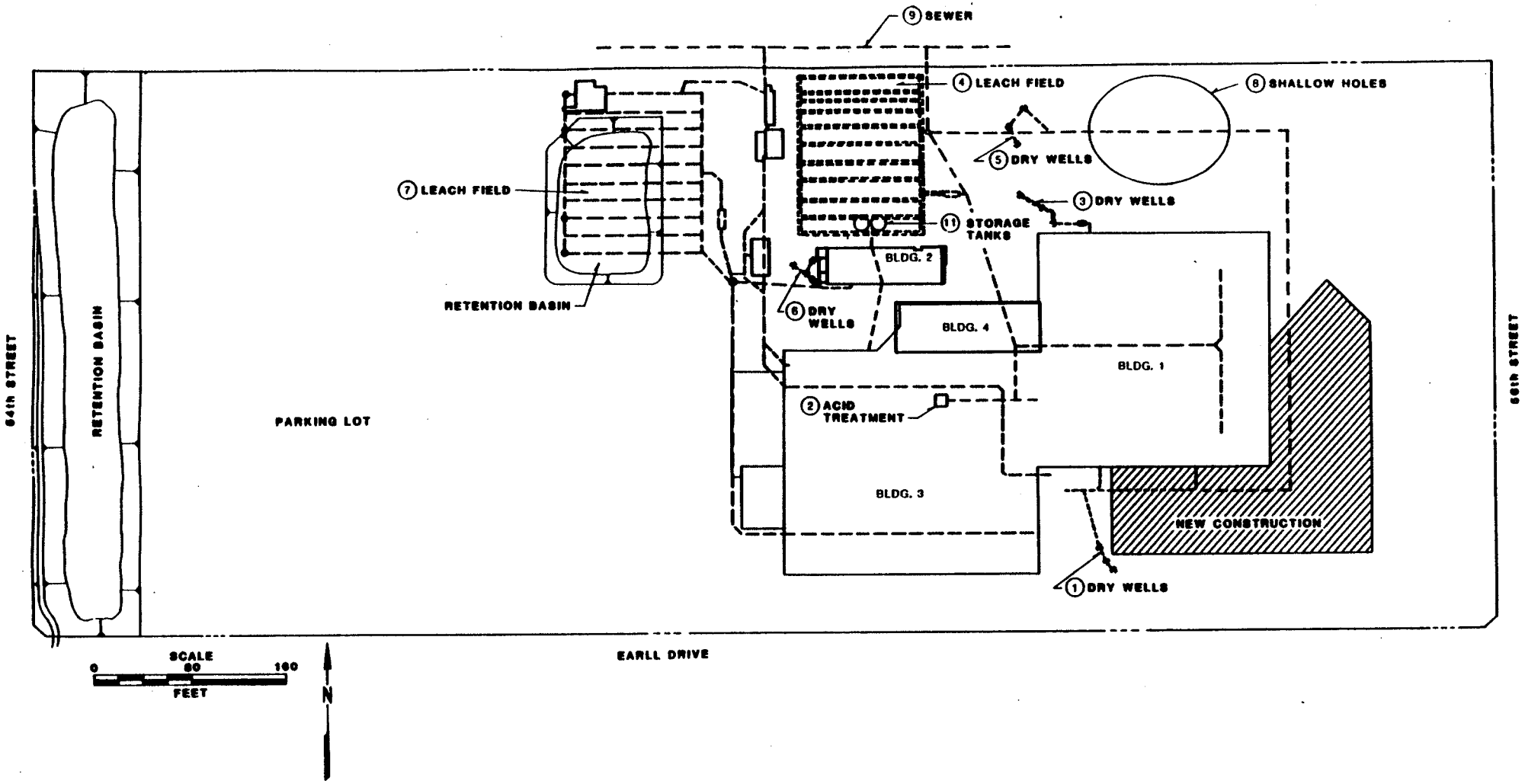
RESULTS OF STAGE I
PRELIMINARY INVESTIGATION

MOTOROLA, INC.
56TH STREET AND EARLL DRIVE
PHOENIX, ARIZONA

26 SEPTEMBER 1985

JOB NO. 09448-013-33

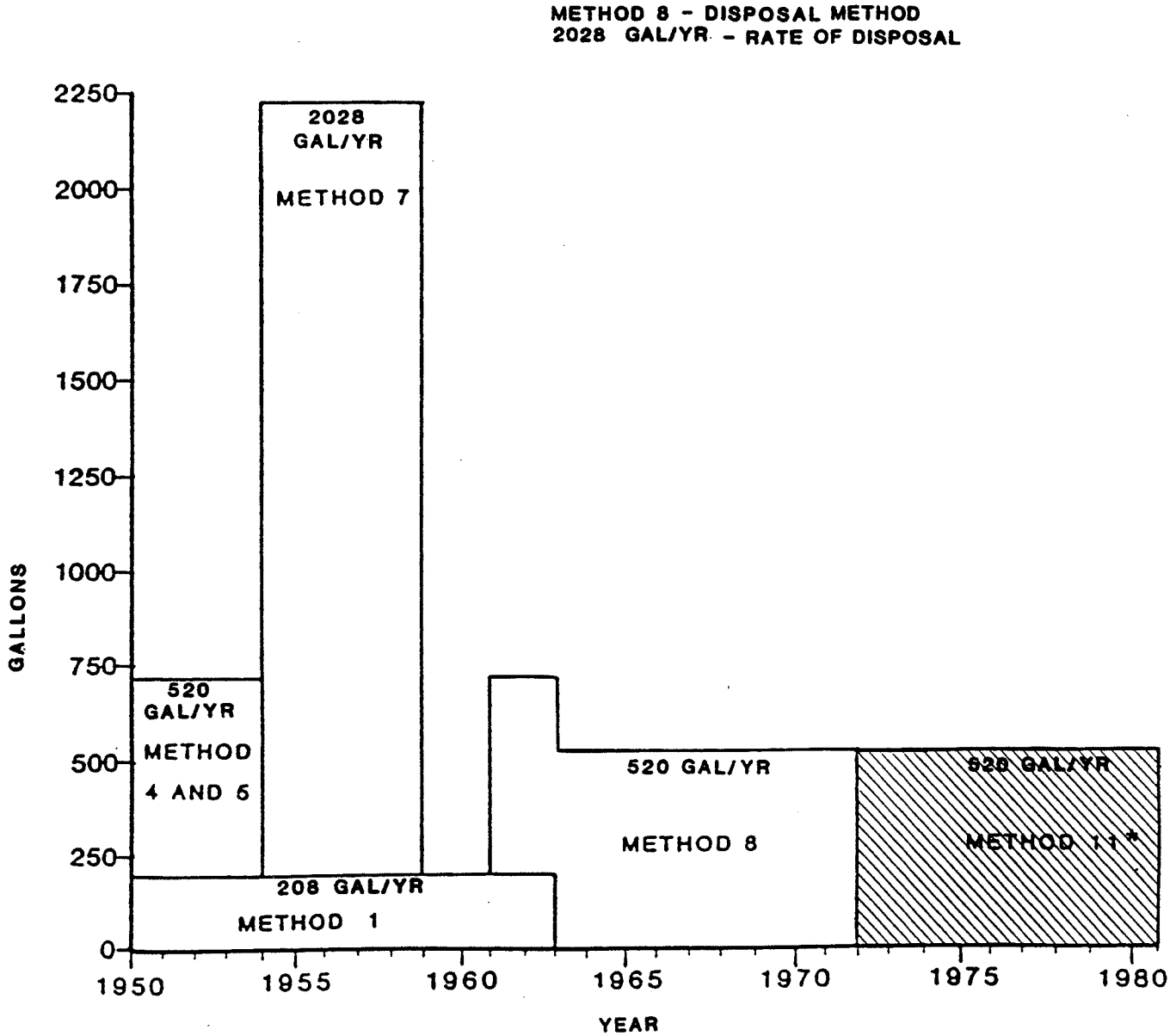
DAMES & MOORE
3737 No. 7th Street, Suite 211
Phoenix, Arizona 85014



REFERENCE: KARY, R.E., 1985, CHEMICAL DISPOSAL METHODS REPORT TO MOTOROLA, INC. 56th ST. FACILITY PHOENIX, ARIZONA.

LOCATIONS OF DISPOSAL METHODS

Figure 2

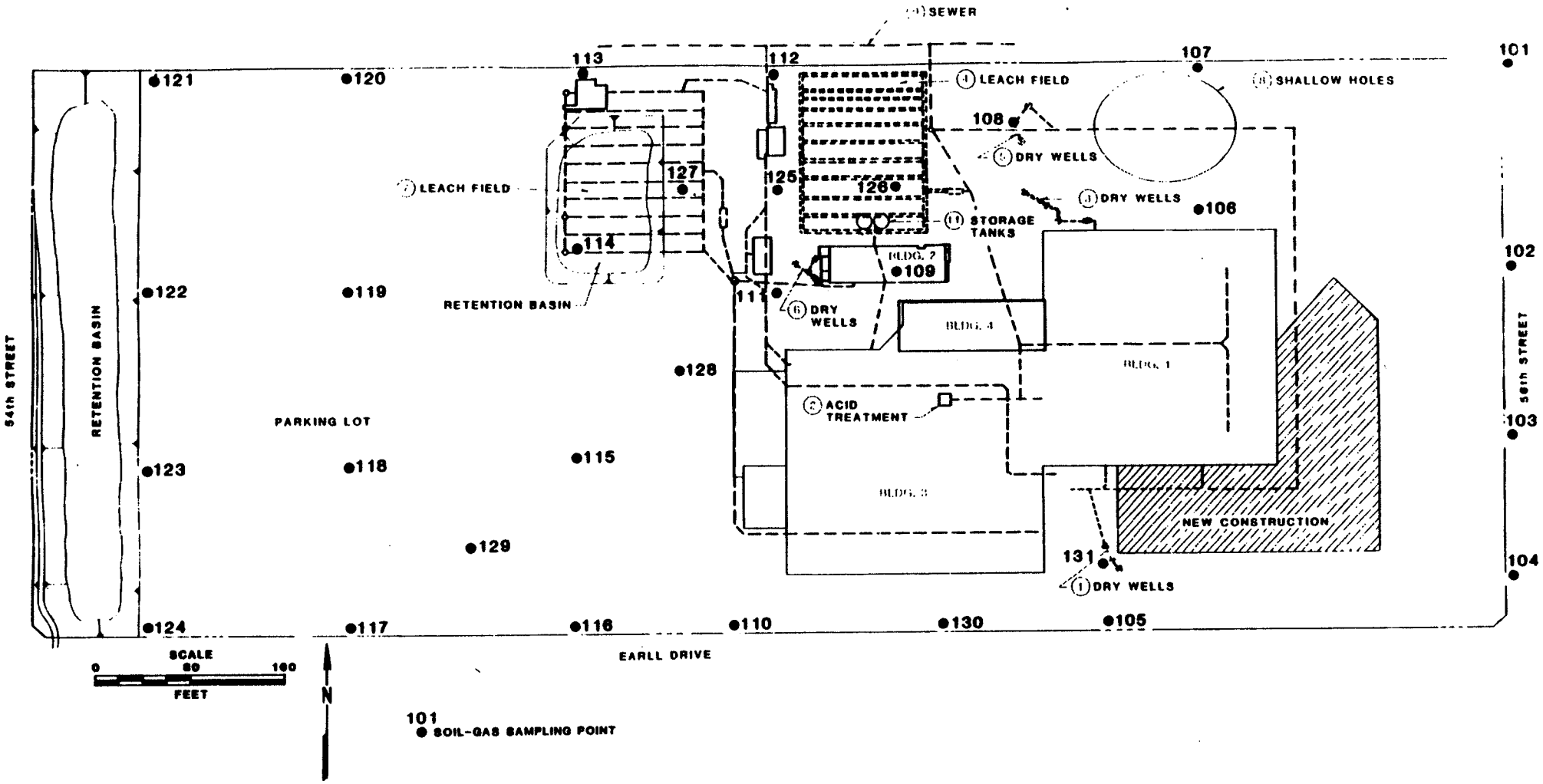


*METHOD 11- Solvent salvage; no reported discharge to environment

Source: (Kary, 1985)

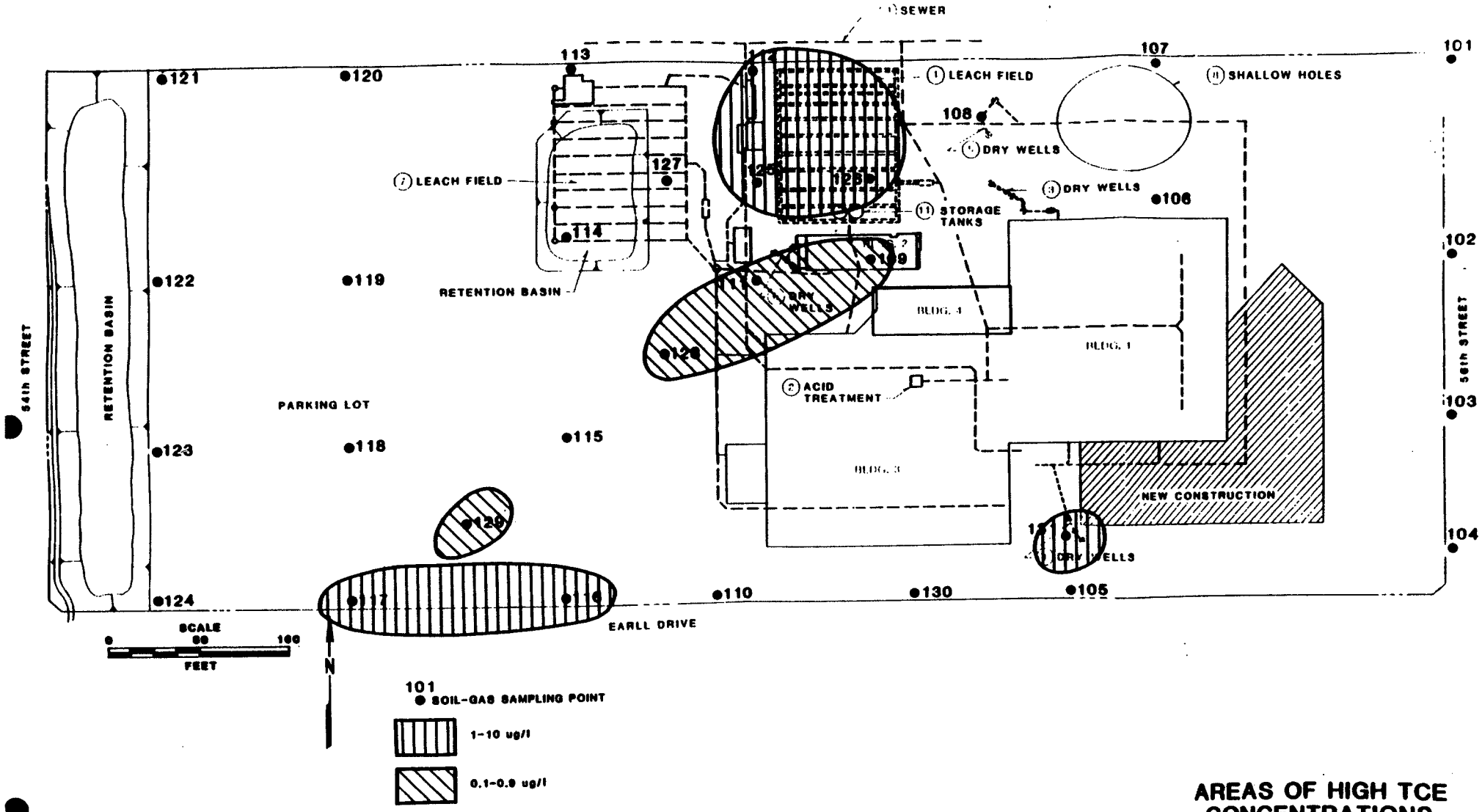
HISTORY OF SOLVENT DISPOSAL AT 56th STREET FACILITY

Figure 3



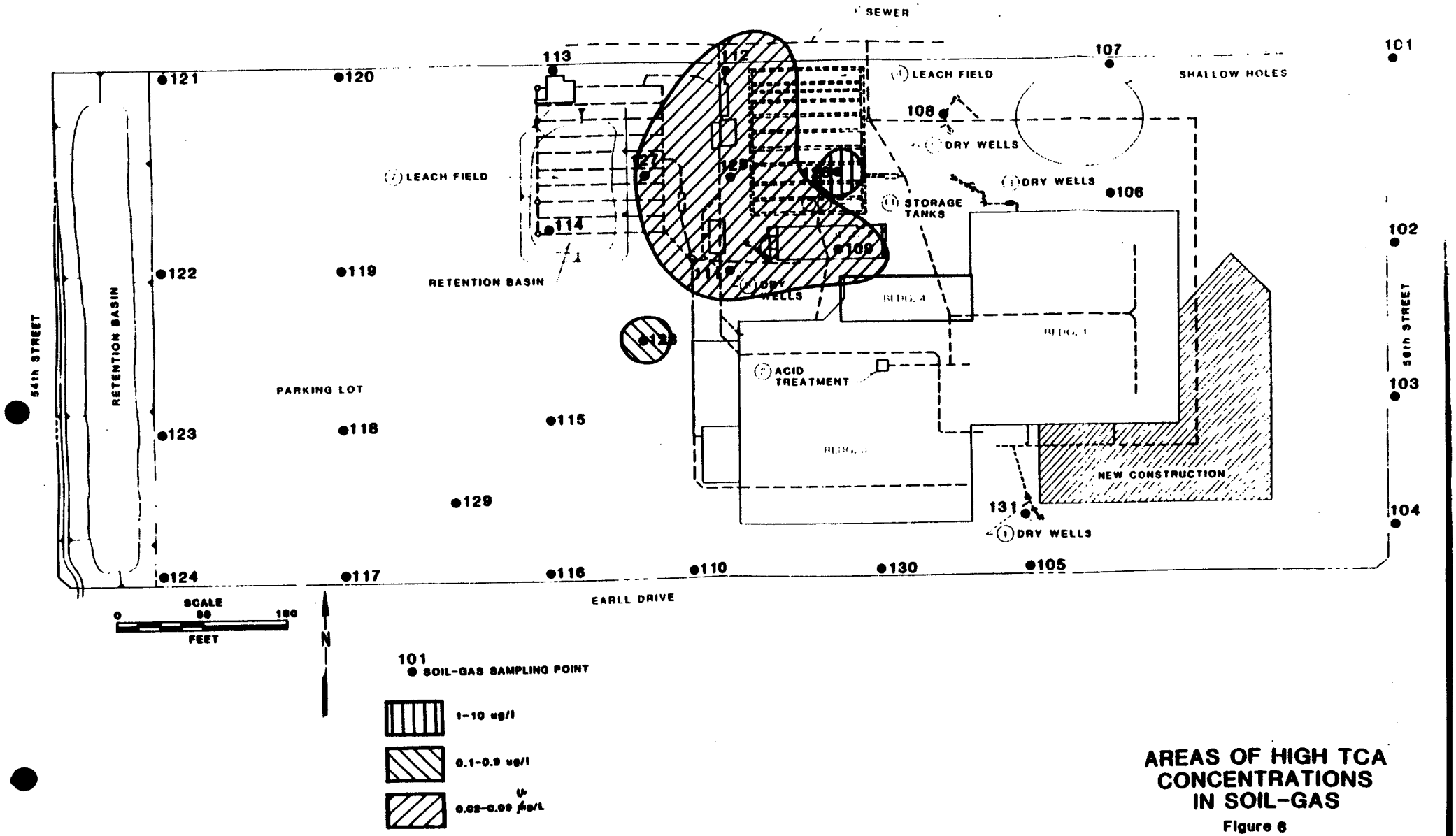
MAP OF SOIL-GAS SAMPLING LOCATIONS

Figure 4



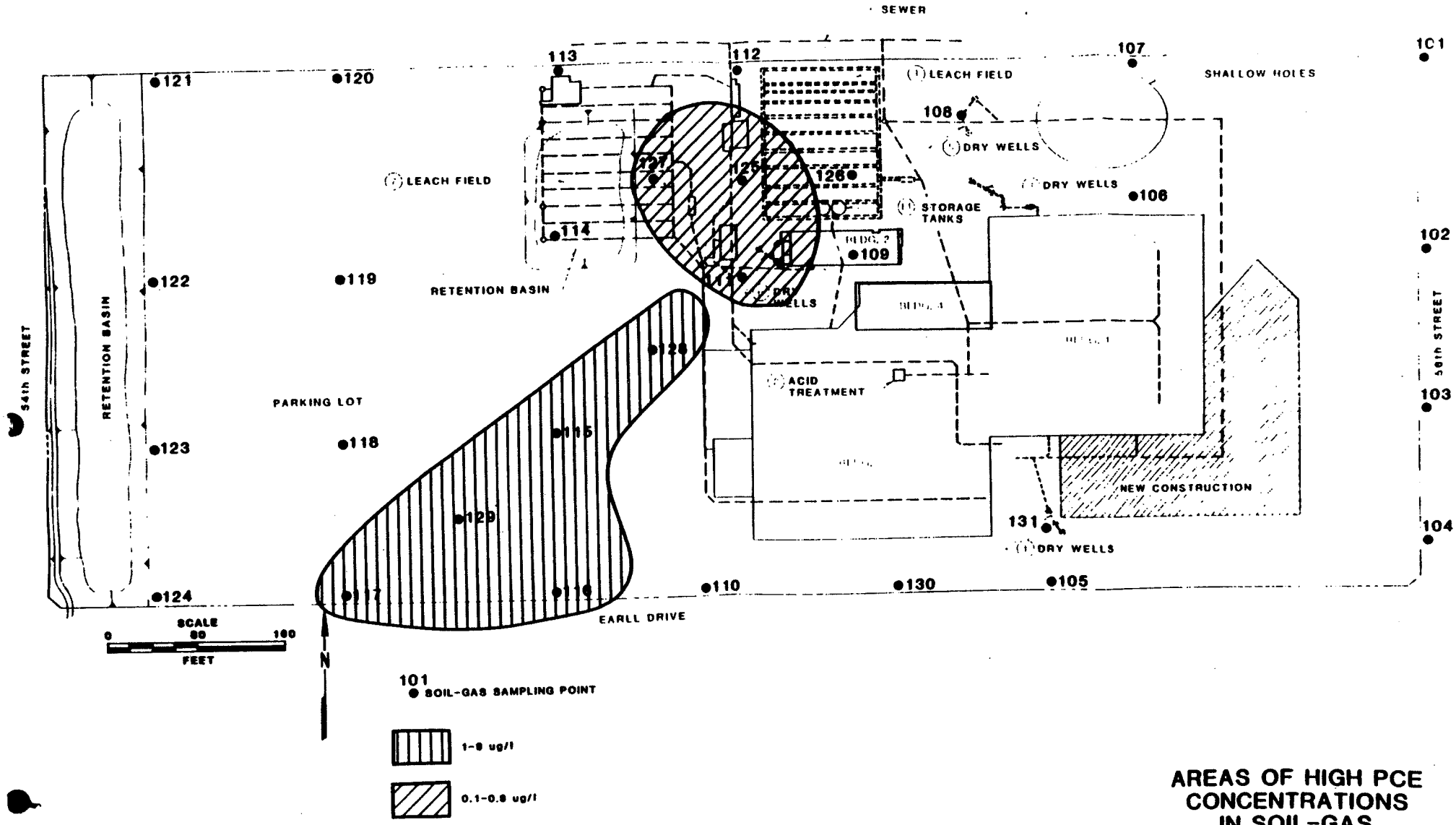
AREAS OF HIGH TCE CONCENTRATIONS IN SOIL-GAS

Figure 5



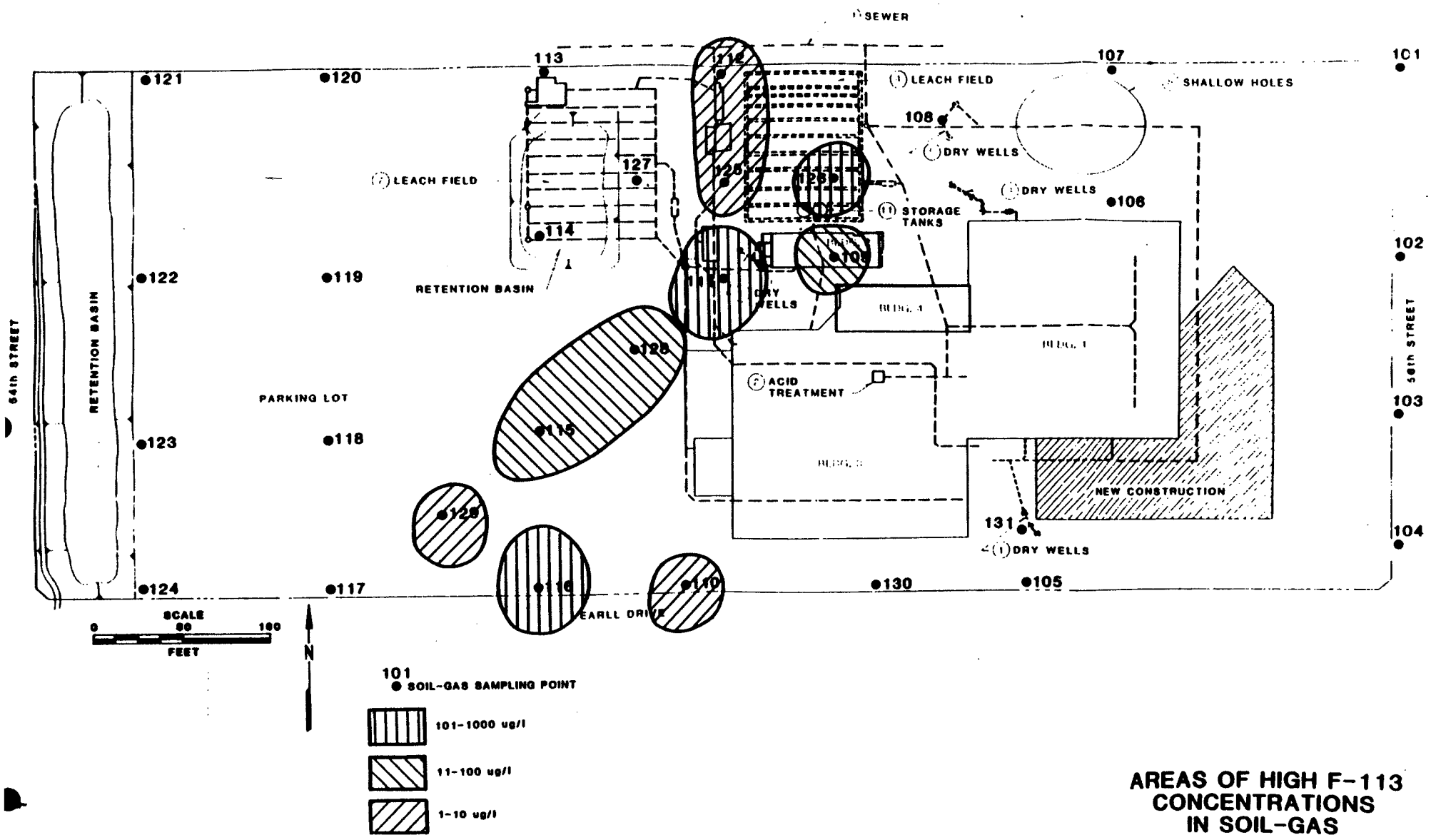
AREAS OF HIGH TCA CONCENTRATIONS IN SOIL-GAS

Figure 6



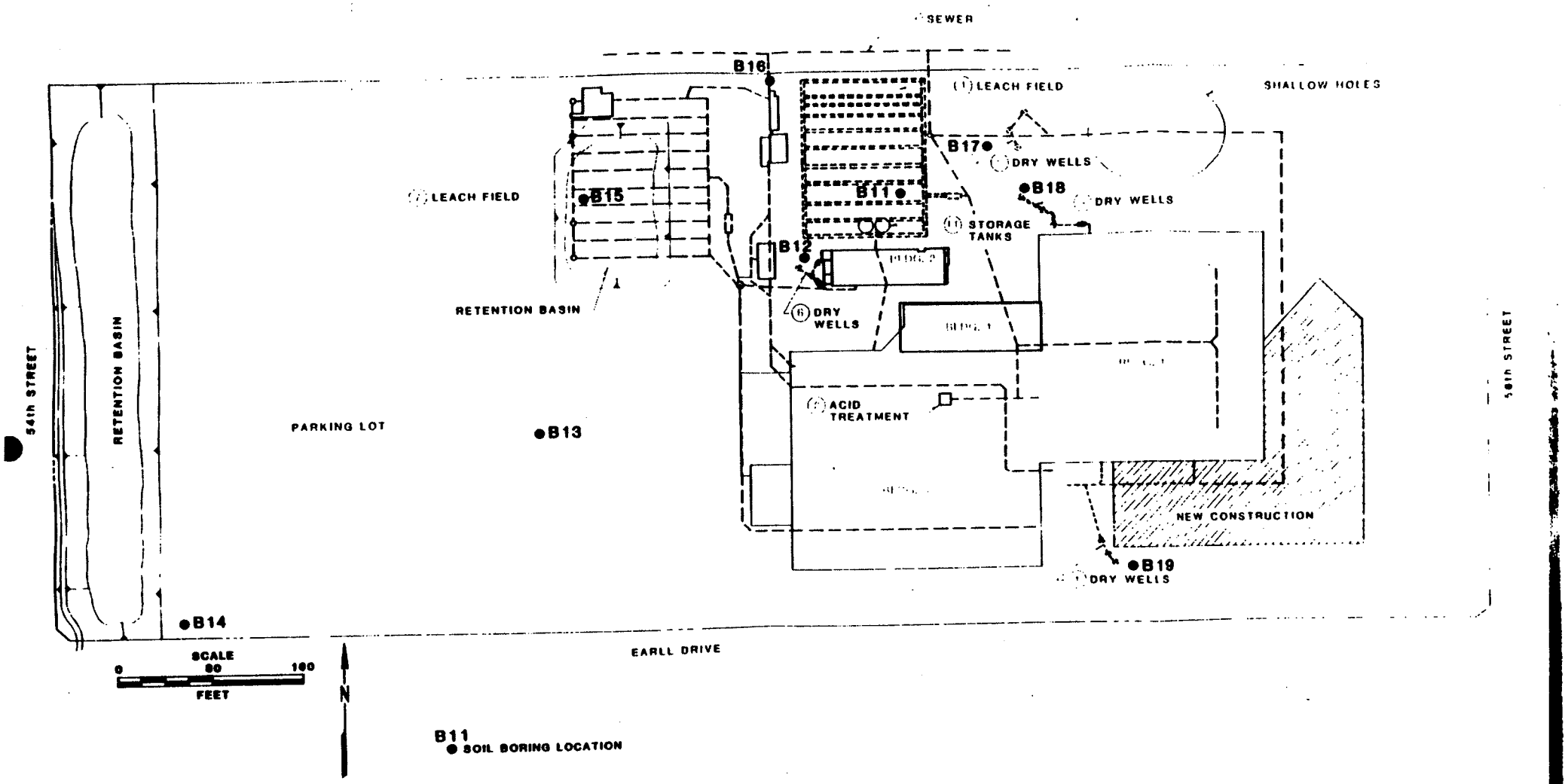
AREAS OF HIGH PCE CONCENTRATIONS IN SOIL-GAS

Figure 7



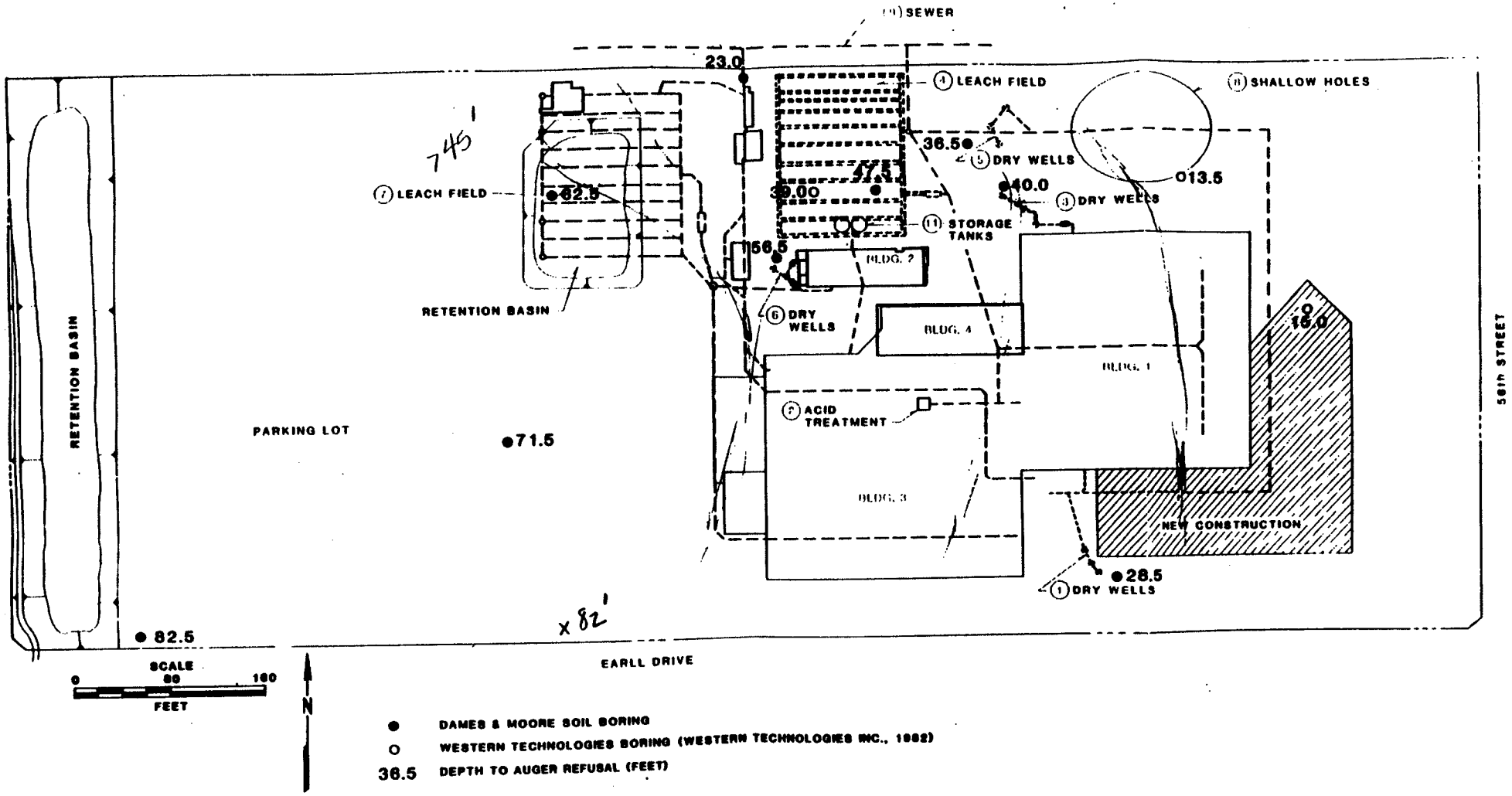
AREAS OF HIGH F-113 CONCENTRATIONS IN SOIL-GAS

Figure 8



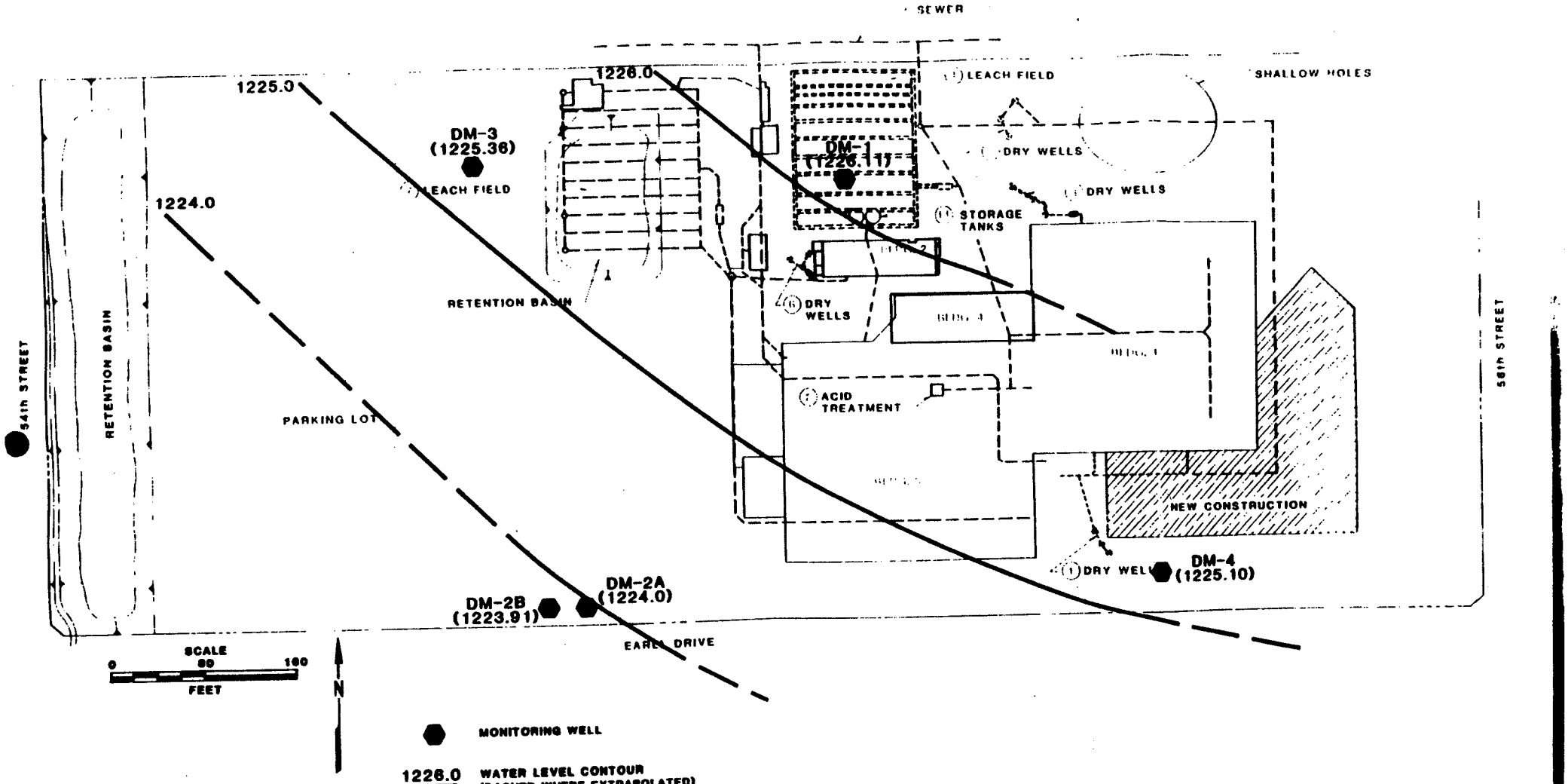
MAP OF SOIL BORING LOCATIONS

Figure 9



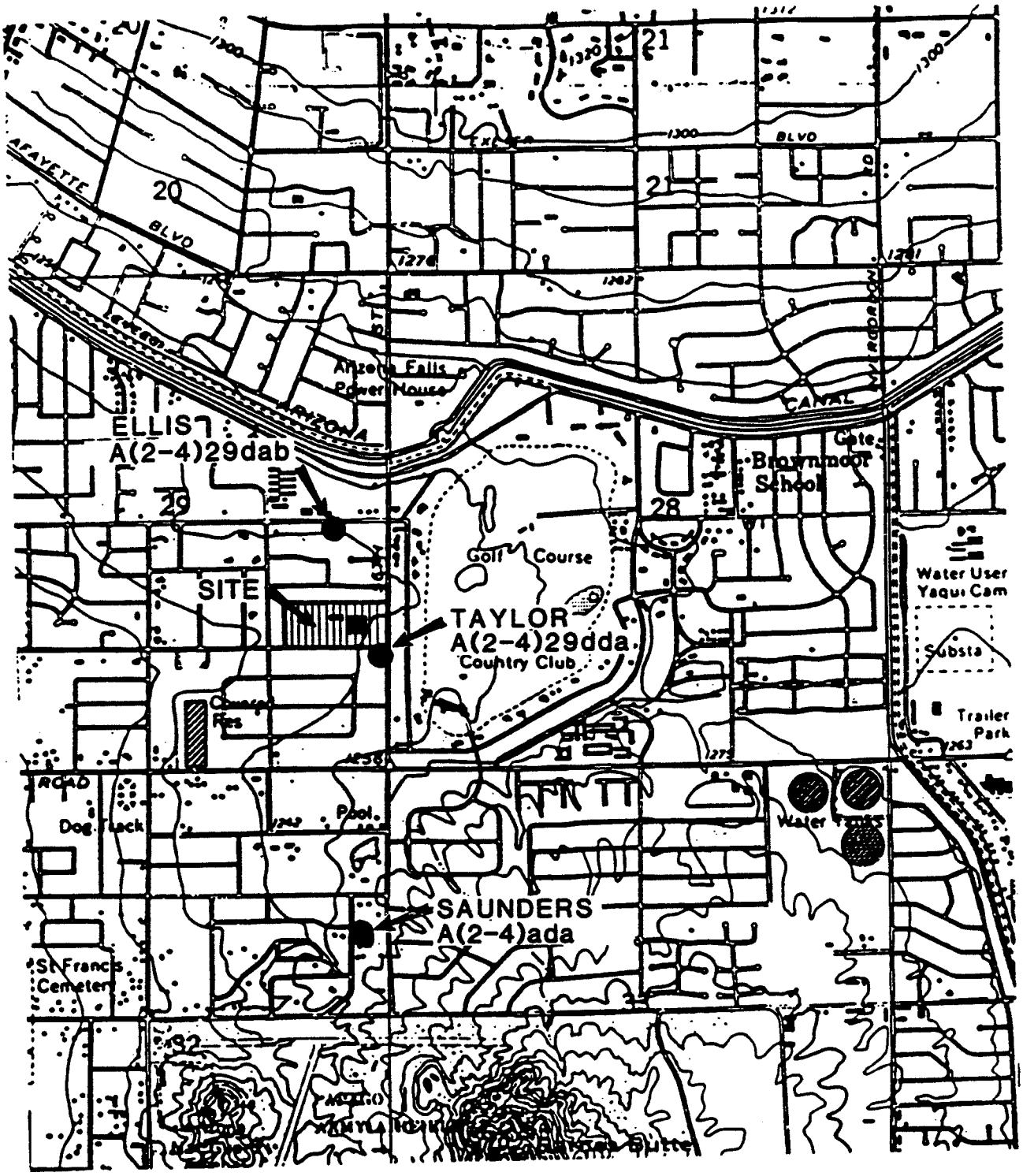
DEPTHS TO AUGER REFUSAL

Figure 10



WATER LEVEL ELEVATION MAP FOR JUNE 5, 1985

Figure 11



SCALE
0 1000 2000
FEET

N

MAP OF OFFSITE WELLS

Figure 12

TABLE 4

SUMMARY OF CONCENTRATIONS OF ORGANIC COMPOUNDS
DETECTED IN SOIL SAMPLES
BY EPA METHODS 624 AND 625

(all concentrations in UG/KG)

BORING NO.	B11	B12	B13	B14	B15	B16	B17	B18	B19
DATE SAMPLED	4/15/85	4/16-4/17/85	4/8-4/10/85	3/28-4/1/85	4/4-4/5/85	4/3/85	4/10-4/11/85	4/18-4/19/85	4/22/85
DATE ANALYZED (EPA 624)	4/26/85	5/4/85	4/26/85	4/19/85	4/26/85	4/19/85	4/26/85	5/4/85	5/4/85
DATE ANALYZED (EPA 625)	4/26/85	5/3/85	4/26/85	4/14/85	4/26/85	4/14/85	4/26/85	5/3/85	5/3/85
BIS (2-ETHYLHEXYL) (EPA 625) PHTHALATE	320	910	780	23	1700	-	590	120	540
DI-N-BUTYL PHTHALATE (EPA 625)	-	-	-	-	66	-	4300	-	-
METHYLENE CHLORIDE (EPA 624)	46	-	88	-	-	-	54	-	-
ACETONE (EPA 624)	-	-	-	-	63	-	-	-	-

\- NOT DETECTED

TABLE 7

METALS DETECTED IN
WATER SAMPLES
(ON-SITE WELLS)

WELL NO.	DM-1	DM-2A	DM-3	DM-4
CONSTITUENT (mg/L)				
Arsenic	0.01	N.D.	0.03	0.12
Copper	N.D.	N.D.	N.D.	0.07
Lead	N.D.	N.D.	N.D.	0.04
Zinc	N.D.	0.05	N.D.	0.10 #
Mercury	N.D.	0.001	N.D.	N.D.

N.D. - Not Detected

TABLE 8

ORGANIC CONSTITUENTS DETECTED

IN MONITOR WELL SAMPLES

WELL NO.	DM-1				DM-2A				DM-2B			DM-3			DM-4				TRAVEL BLANKS	
DATE SAMPLED	6/5/85	6/5/85	7/11/85	8/8/85	6/5/85	7/11/85	8/8/85	8/8/85	6/5/85	7/11/85	8/8/85	6/5/85	7/11/85	8/8/85	6/5/85	7/11/85	7/11/85	8/8/85	6/5/85	7/11/85
DATE ANALYZED	6/17/85	6/17/85	7/15/85	8/19/85	6/17/85	7/15/85	8/19/85	8/19/85	6/17/85	7/15/85	8/19/85	6/17/85	7/15/85	8/19/85	6/17/85	7/15/85	7/16/85	8/19/85	6/17/85	7/16/85
CONSTITUENT (ug/L)																				
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27
1,1,2-Trichloro-2,2,1-trifluoroethane (F-113)	ND	ND	ND	ND	110	6.4	96	130	ND	ND	ND	ND	ND	ND	ND	0.6	1.0	ND	ND	ND
1,1,1-Trichloroethane (TCA) *	8.9	5.8	ND	4.7	13	ND	ND	ND	9.5	ND	3.4	14	0.7	2.5	ND	ND	1.2	ND	ND	ND
1,1-dichloroethene	ND	ND	ND	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
toluene	ND	ND	-	-	ND	-	-	-	—	-	-	5.1	-	-	ND	-	-	-	ND	-
tetrachloroethene (PCE) *	ND	ND	ND	2.8	6.6	ND	ND	ND	5.1	ND	3.0	5.1	ND	2.3	ND	ND	ND	ND	ND	ND
trichloroethene (TCE) *	99	73	7.5	29	150	4.0	14	9.1	110	4.2	30	140	15	21	100	2.8	7.4	27	ND	ND
total xylenes	5.9	3.3	-	-	11	-	-	-	8.1	-	-	16	-	-	ND	-	-	-	ND	-
1,2-dichlorobenzene	18	16	-	-	34	-	-	-	25	-	-	25	-	-	9.7	-	-	-	ND	-
bis(2-ethylhexyl)phthalate	ND	ND	-	-	ND	-	-	-	ND	-	-	ND	-	-	26	-	-	-	ND	-
di-n-butyl phthalate	ND	ND	-	-	ND	-	-	-	ND	-	-	ND	-	-	69	-	-	-	ND	-
fluorene	ND	ND	-	-	ND	-	-	-	ND	-	-	ND	-	-	5.3	-	-	-	ND	-
phenanthrene	ND	ND	-	-	ND	-	-	-	ND	-	-	ND	-	-	15	-	-	-	ND	-

- NOT ANALYZED FOR

CHEMICAL DISPOSAL METHODS

REPORT

TO

MOTOROLA, INC.

56th STREET FACILITY

PHOENIX, ARIZONA

September, 1985

by

Raymond E. Kary, Ph.D.
CONSULTANT
Environmental/Occupational
Safety and Health

MOTOROLA 56TH STREET FACILITY

COMPOSITE LOCATION OF DISPOSAL METHODS

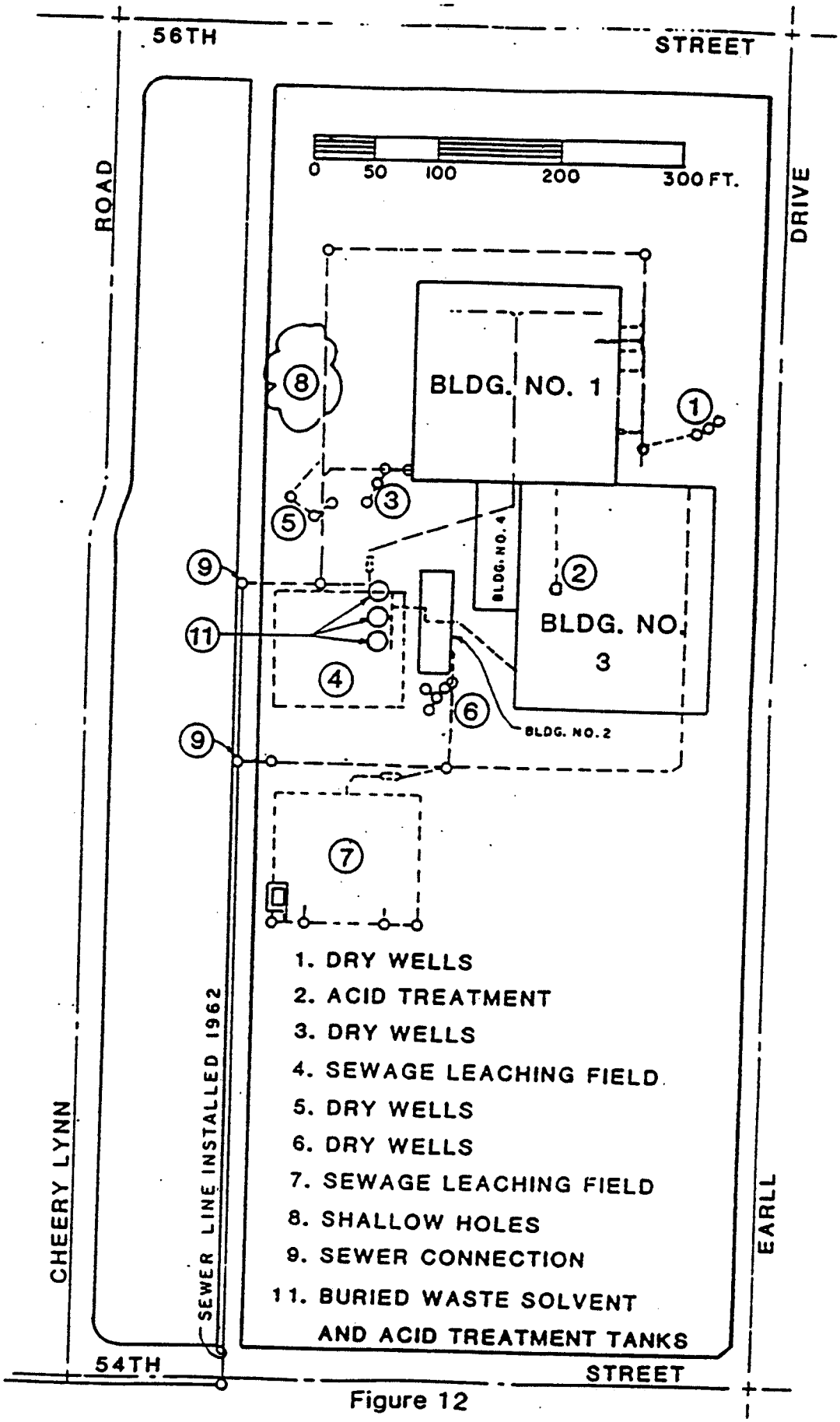


Figure 12

ATTACHMENT B

Stage II Investigation Report

(selected pages of data tables and figures)

Dames & Moore

3737 N. 7th Street
Suite 211
Phoenix, Arizona 85014
(602) 274-5548

December 4, 1985
09448-013-33

Motorola, Inc.
5005 E. McDowell Rd.
MD W104
Phoenix, Arizona 85008

Attention: Robert C. Lee, Manager
Environmental Affairs

Preliminary Results
Stage II Soil-Gas Investigations
Motorola 56th Street Facility
For Motorola, Inc.

Gentlemen:

Enclosed for your information are the results of the Stage II soil-gas investigation. Data on F-113, TCA, TCE, and PCE soil-gas concentrations are presented on four separate maps.

The solid lines on the TCA and F-113 maps encircles area where detection was above ambient air concentrations. The ambient air concentrations for TCA ranged from <0.0003 to 0.0008 ug/l. F-113 was not detected in any air blanks at a detection level of 0.002 ug/l.

The solid lines on the TCE and PCE maps outline those areas where these constituents were detected at a concentration of 0.01 ug/l or above. The dashed lines on the TCE and PCE maps indicate the areas where detection was at a concentration of 0.001 ug/l or greater. Ambient air concentrations of TCE varied from <0.0004 ug/l to 0.01 ug/l. The range of ambient air concentrations for PCE was 0.0006 ug/l to 0.03 ug/l.

The data presented on these maps will be discussed at the December 12, 1985 TSC meeting. These data may be useful in reviewing areas to be considered for installation of off-site wells. A more detailed discussion of the soil-gas results will be presented in the Stage II report.

Dames & Moore

If you have any questions prior to the December 12th meeting, please call.

Yours truly,

DAMES & MOORE

J R Hussey

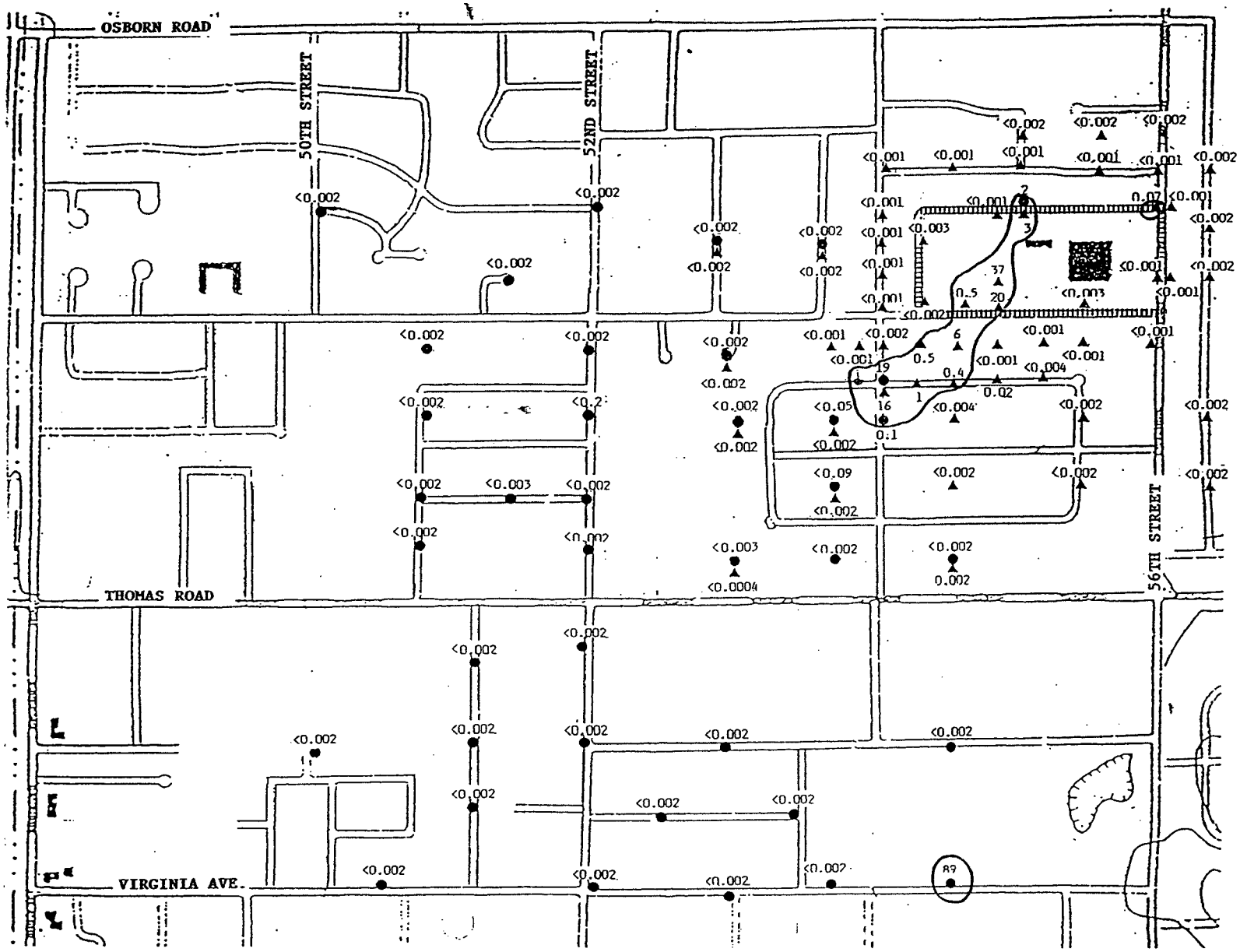
James R. Hussey
Partner

Greg Seifert

Greg Seifert
Project Manager

JRH/GS/pak
Enclosures

DRAFT
12-4-85
09448-013-033



STAGE II
SOIL-GAS RESULTS

F-113
(ug/l)

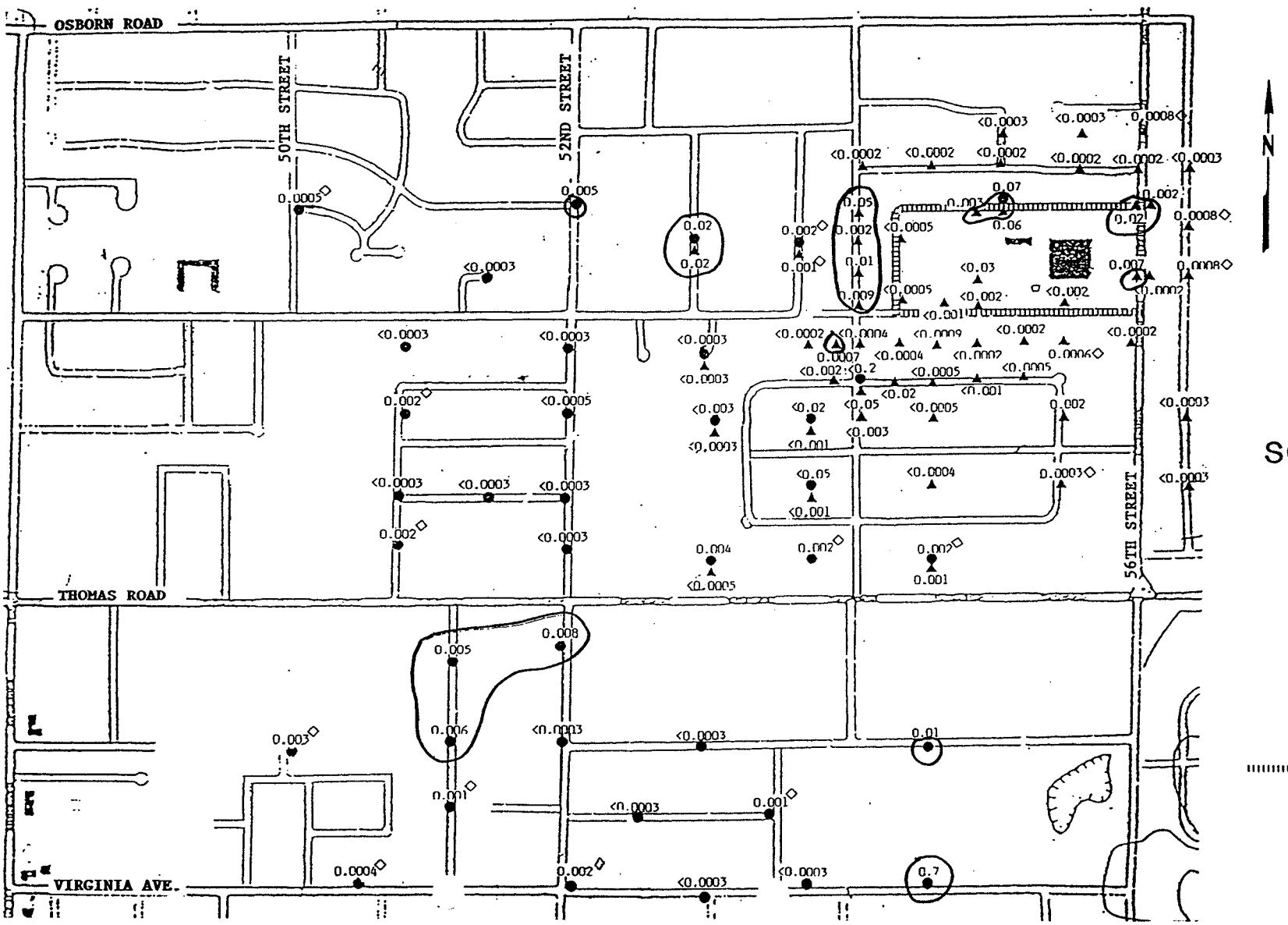
▲ 1st Sampling Episode
10/15 to 10/18/1985

● 2nd Sampling Episode
11/4 to 11/6/1985

56th Street
Facility Boundary

◇DETECTION BELOW AMBIENT
AIR CONCENTRATIONS

DRAFT
12-4-85
09448-013-033



STAGE II
SOIL-GAS RESULTS
TCA
(ug/l)

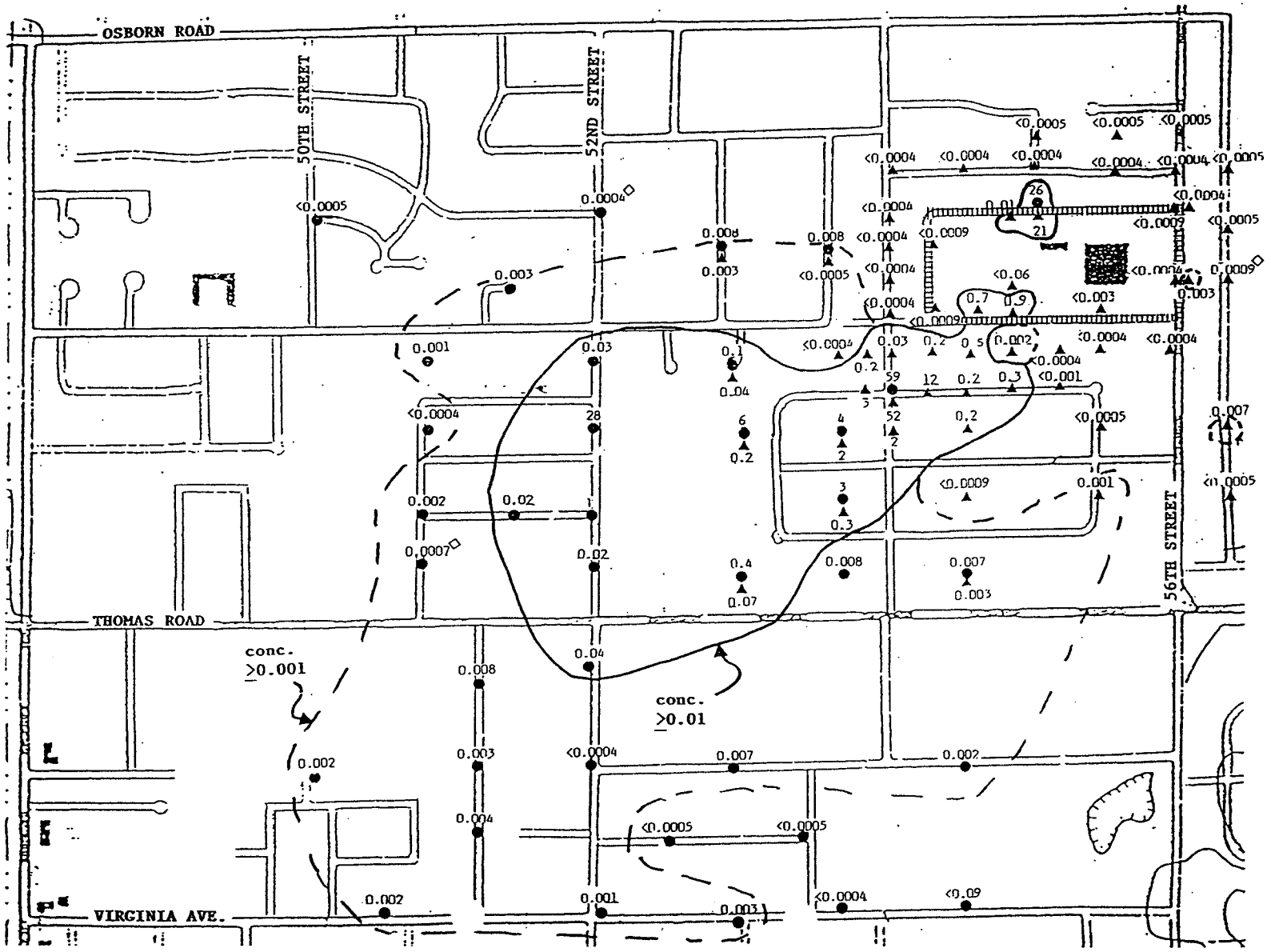
▲ 1st Sampling Episode
10/15 to 10/18/1985

● 2nd Sampling Episode
11/4 to 11/6/1985

56th Street
Facility Boundary

◇ DETECTION BELOW AMBIENT
AIR CONCENTRATIONS

DRAFT
12-4-85
09448-013-033



STAGE II SOIL-GAS RESULTS

TCE (ug/l)

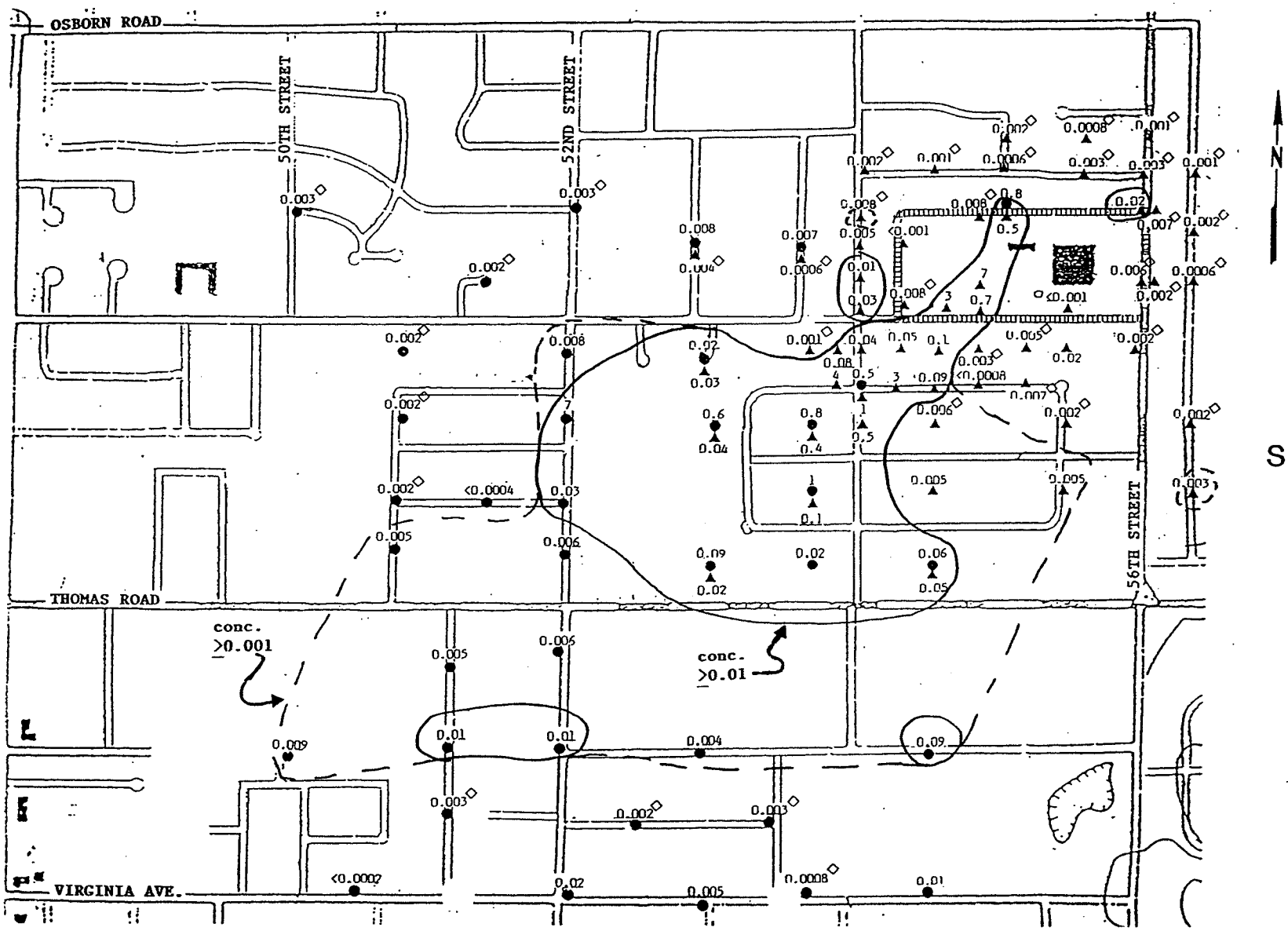
▲ 1st Sampling Episode 10/15 to 10/18/1985

● 2nd Sampling Episode 11/4 to 11/6/1985

56th Street Facility Boundary

◇ DETECTION BELOW AMBIENT AIR CONCENTRATIONS

DRAFT
12-4-85
09448-013-033



STAGE II SOIL-GAS RESULTS

PCE (ug/l)

▲ 1st Sampling Episode 10/15 to 10/18/1985

● 2nd Sampling Episode 11/4 to 11/6/1985

56th Street Facility Boundary

◇ DETECTION BELOW AMBIENT AIR CONCENTRATIONS

MOORE A PROFESSIONAL LIMITED PARTNERSHIP

NTRE, 7500 NORTH DREAMY DRAW DRIVE, SUITE 145
20 (602) 371-1110

December 8, 1988

D&M Job No. 09448-013-033

Department of Environmental Quality
2005 North Central, Suite 400
Phoenix, Arizona 85004

Attention: Mr. Don Atkinson

Transmittal
Stage II Data
Motorola 56th Street Study

Dear Don:

As per your request of December 1, 1988, I have assembled and attached to this letter Stage II data and reports for the Motorola Inc. 56th study. These data include:

- Well construction data.
- Laboratory reports for Method 601 analyses for samples collected during May 1986, June 1986, January 1987, and February 1987.
- Field measurements of pH, specific conductance, and temperature.
- Draft Stage II progress report dated October 3, 1986.
- Maps showing monitor well locations, mean volatile organic concentrations, and water level elevations.
- Summary table listing volatile organic compounds detected during Stage II.

If you have any questions regarding these data, please do not hesitate to call me at 371-1110.

Yours very truly,

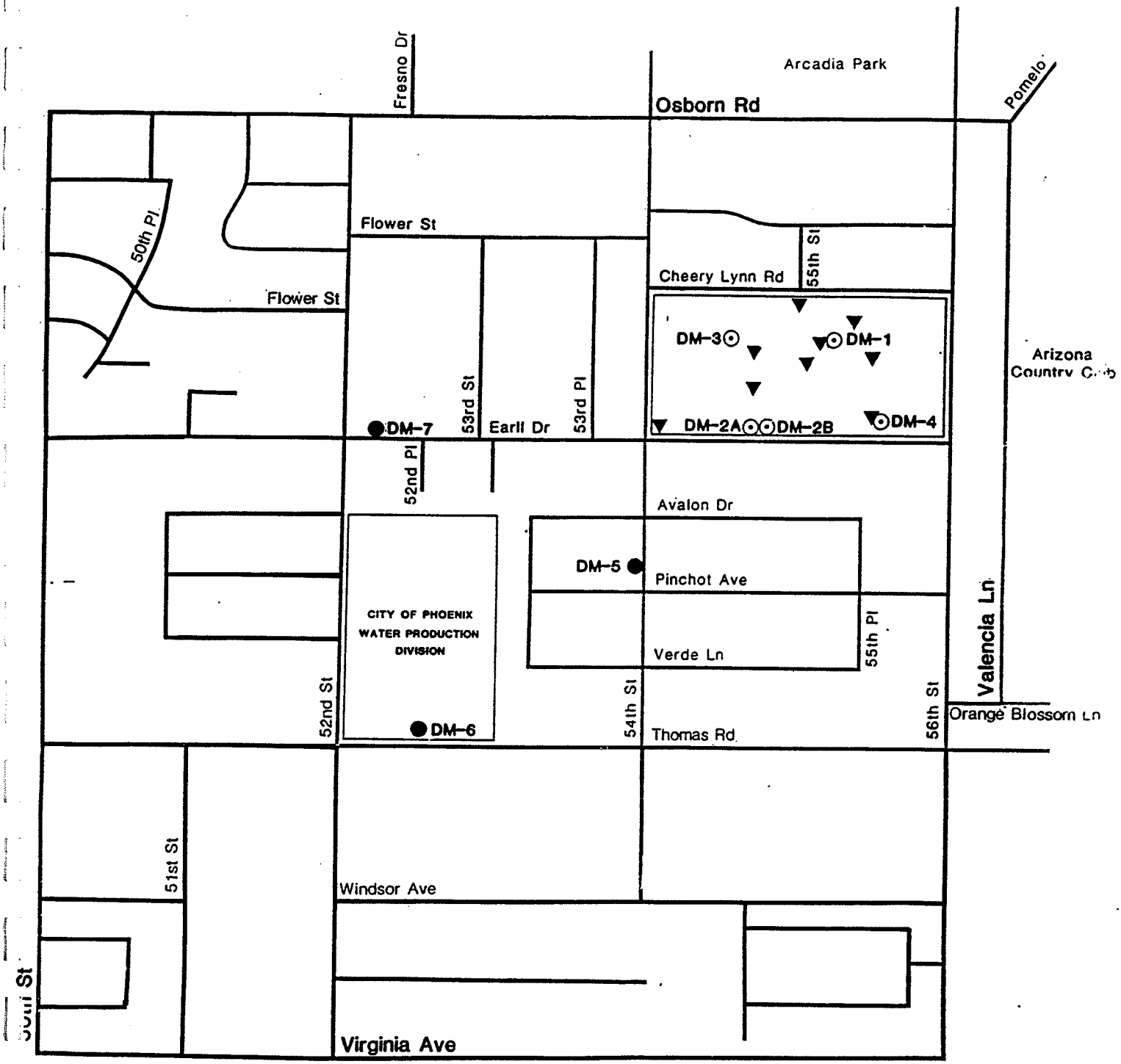
DAMES & MOORE

J.R. Hussey for

William D. Loughlin
Project Manager

WDL/th

cc: R.C. Lee (MI)
J.R. Hussey



LEGEND:

- ● OFF-SITE MONITOR WELL
- ⊙ ON-SITE MONITOR WELL
- ▼ SOIL BORINGS

SCALE
0 600 1200
FEET

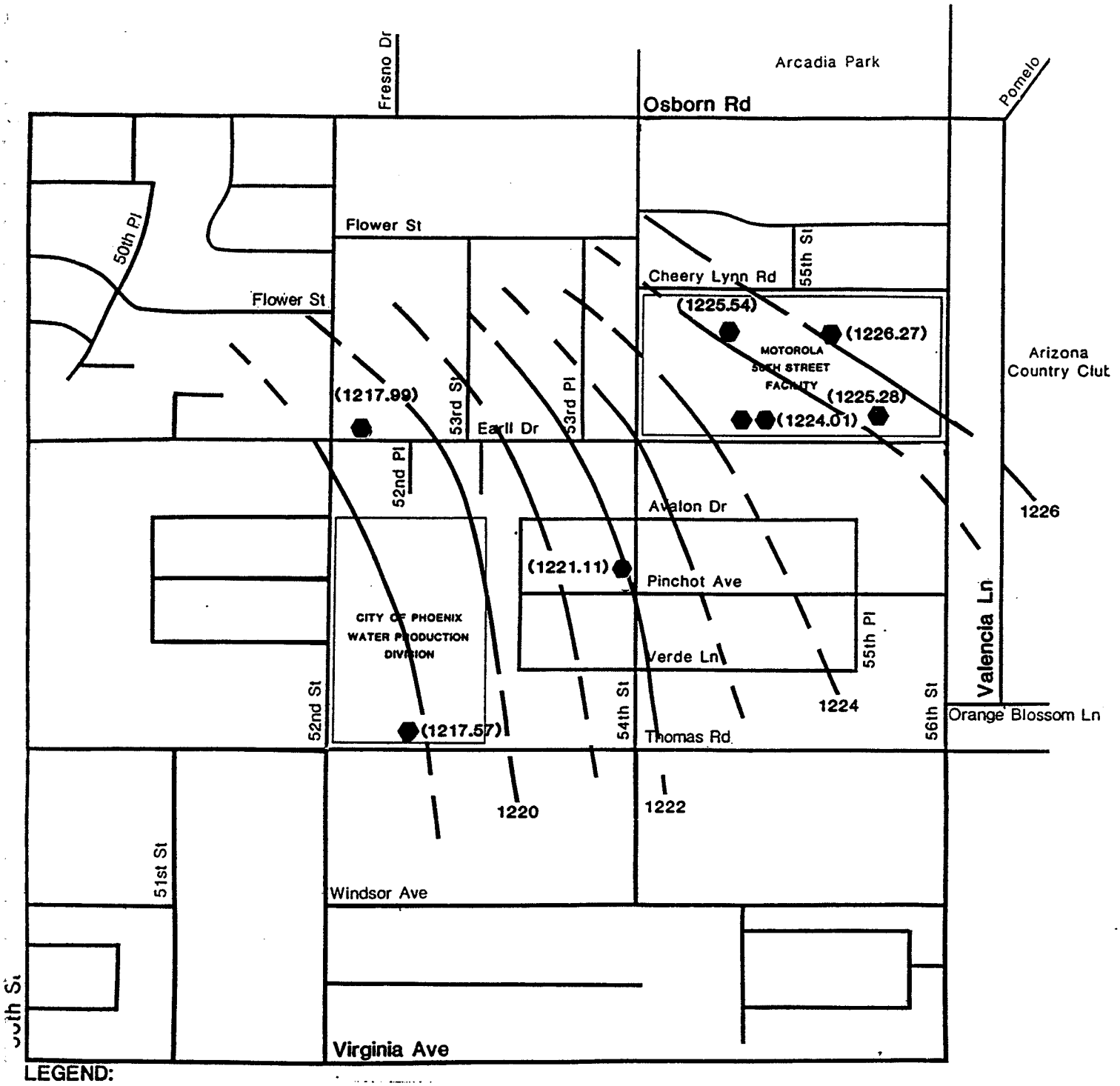
N

DRAFT

OCT - 3 1986

MONITOR WELL LOCATIONS

Figure 3



LEGEND:

- ⬢ MONITOR WELL
- (1221.11) MEASURED WATER LEVEL ELEVATION
- ——— WATER LEVEL CONTOUR (DASHED WHERE EXTRAPOLATED)

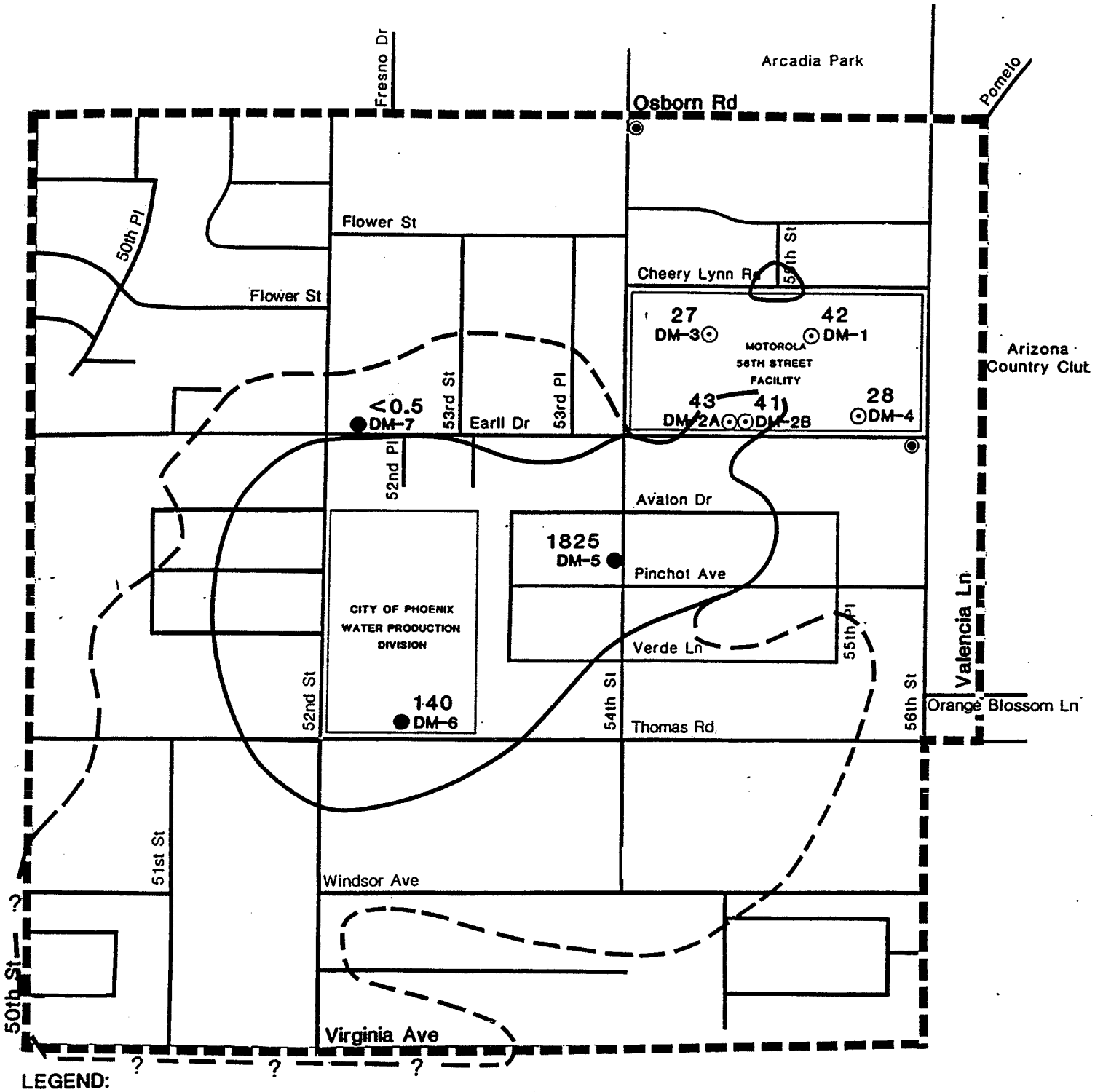
SCALE
0 600 1200
FEET

N

DRAFT
OCT - 3 1986

WATER LEVEL ELEVATION MAP FOR MAY, 1986

Figure 4



LEGEND:

- ● OFF-SITE MONITOR WELL
- ⊙ ON-SITE MONITOR WELL
- ◉ EXISTING PRIVATE WELL
- 140 MEAN TCE CONCENTRATION IN WATER (ppb)
- 0.01 ug/L ISOCON (TCE IN SOIL GAS)
- 0.001 ug/L ISOCON (TCE IN SOIL GAS)
- WELL INVENTORY AREA

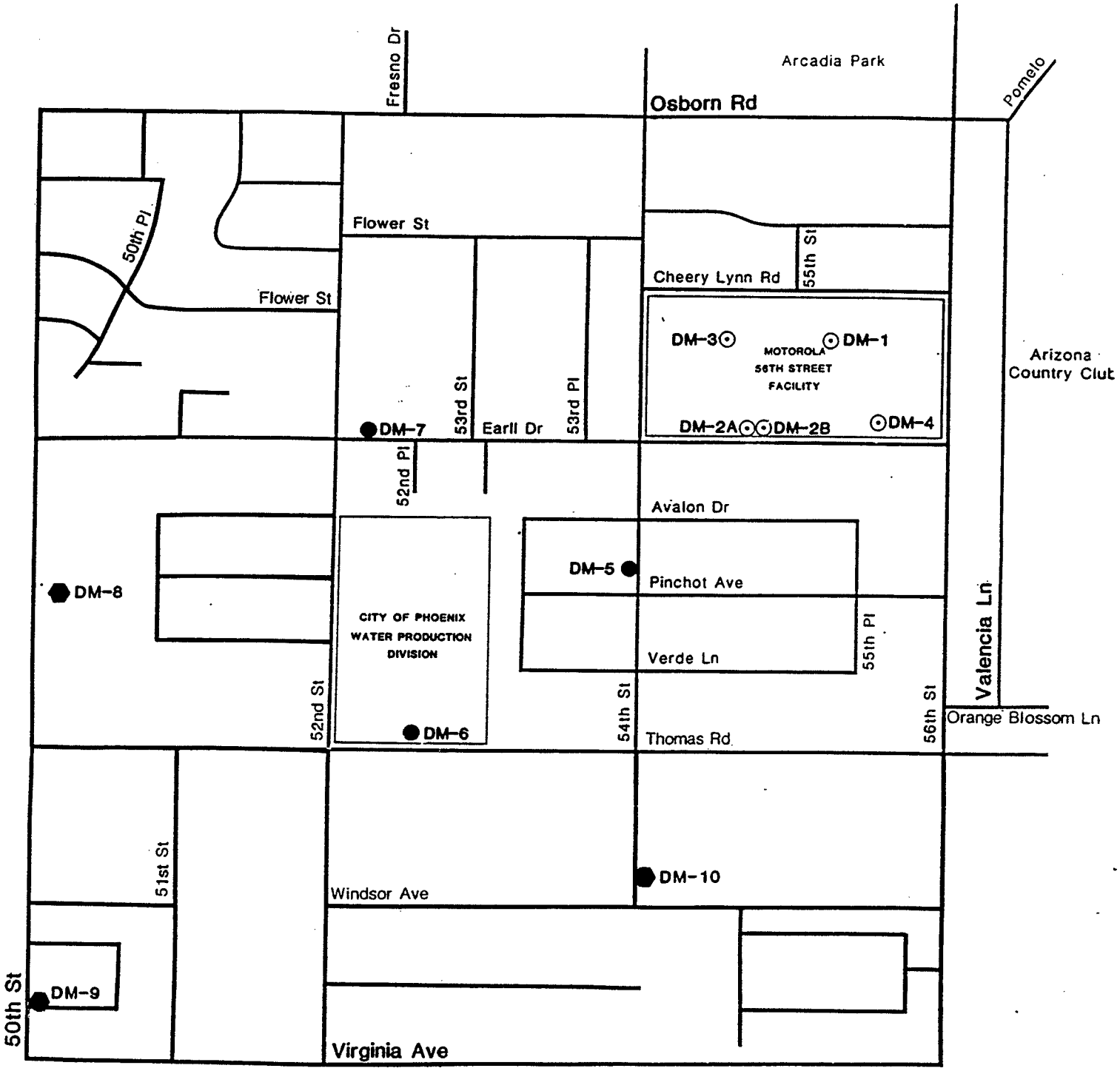
SCALE
0 600 1200
FEET

N

DRAFT
OCT - 3 1986

OFF-SITE MONITOR WELL LOCATIONS

Figure 5



LEGEND:

- ● OFF-SITE MONITOR WELL
- ⊙ ON-SITE MONITOR WELL
- ⬢ PROPOSED WELL

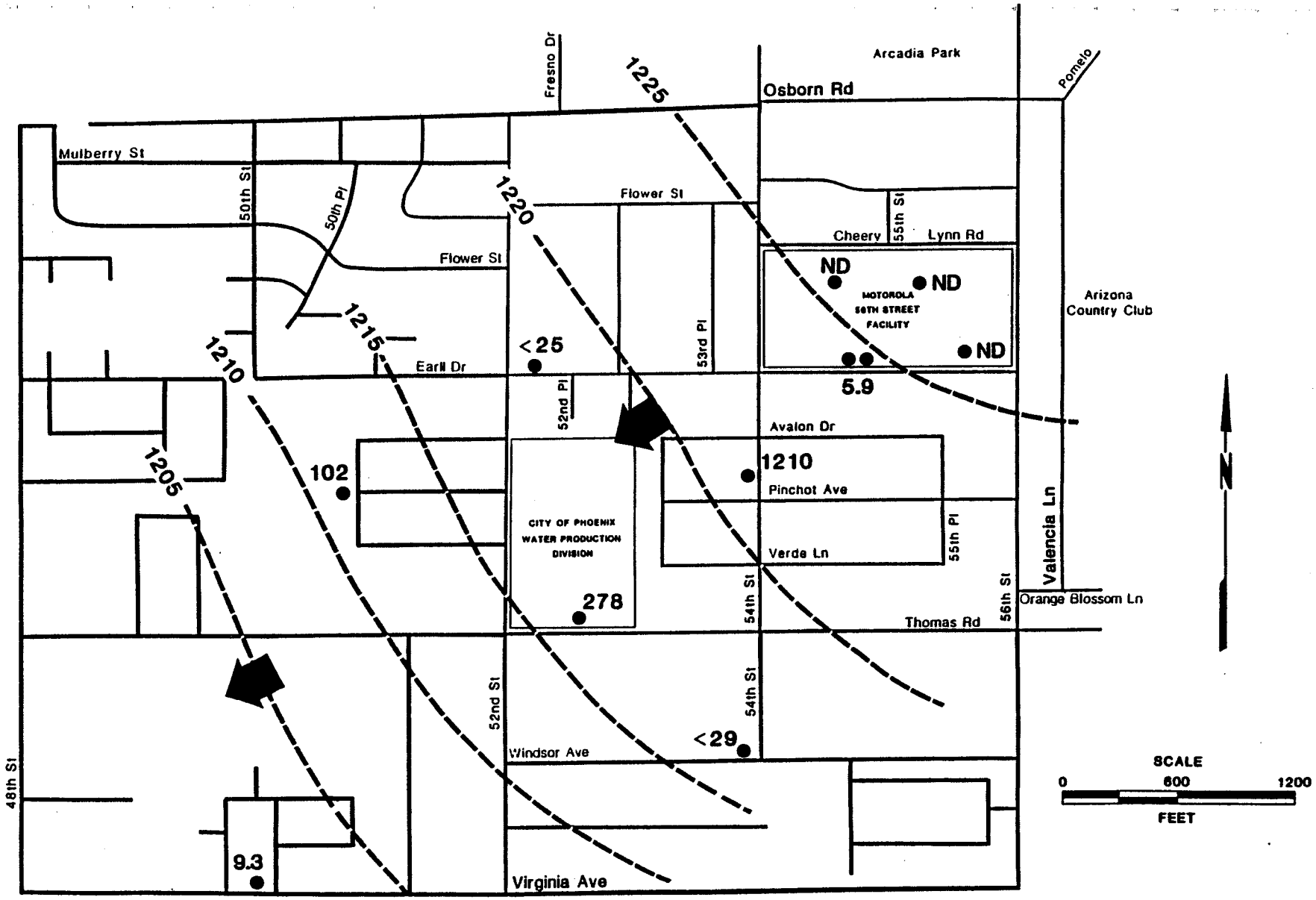
SCALE
0 600 1200
FEET

N

DRAFT
OCT - 3 1986

PROPOSED MONITOR WELL LOCATIONS

Figure 6



LEGEND:

102 MEAN TCE CONCENTRATIONS IN GROUND WATER (PPB) AT EXISTING MONITOR WELLS

WATER LEVEL CONTOURS FOR FEBRUARY 1987

GENERALIZED DIRECTION OF GROUND WATER FLOW

ND NOT DETECTED

GROUND WATER CONTOURS AND MEAN TCE CONCENTRATIONS

Figure 3

TDCE CONCENTRATIONS IN PPB

Well No.	5/86	6/86	1/87	2/87	Mean
2B	<0.5	<0.5	<0.5	<0.5	ND(<0.5)
5	<50(a)(c)	<20(a)	14	<20	<26
6	20	13	<5	27	<16.2
7	<5	<0.5	<0.5	<0.5	ND(<0.5)
8	-	-	<0.5	<50	ND(<0.5)
9	-	-	1.2(a)	1.5	1.35
10	-	-	0.6	<5(a)	<2.8

TCA CONCENTRATIONS IN PPB

Well No.	5/86	6/86	1/87	2/87	Mean
2B	<0.5	<0.5	<0.5	<0.5	ND(<0.5)
5	<50(a)(c)	<20(a)	<5	<20	ND(<5)
6	<5	<2.0	<5	<10	ND(<2)
7	<5	<0.5	<0.5	<0.5	ND(<0.5)
8	-	-	1.6	<50	<25.2
9	-	-	3.5(a)	0.6	2.1
10	-	-	0.7	<5	<2.0

TCE CONCENTRATIONS IN PPB

Well No.	5/86	6/86	1/87	2/87	Mean
2B	2.5	1.6	14	5.6	5.9
5	2500(a)	1200(a)	440	700	1210
6	140	140	270	560	278
7	<5	<0.5	3.0	1.3	<2.5
8	-	-	8.7	<50	<29
9	-	-	15.5(a)	3.1	9.3
10	-	-	80	125(a)	102.5

PCE CONCENTRATIONS IN PPB

Well No.	5/86	6/86	1/87	2/87	Mean
2B	<0.5	<0.5	<0.5	<0.5	ND(<0.5)[b]
5	<50[a]	<20[a]	<5	<20	ND(<5)
6	1.6	<2.0	<5	<10	<1.6
7	<5	<0.5	<0.5	<0.5	ND(<0.5)
8	-	-	1.0	<5.0	<3.0
9	-	-	1.2[a]	<0.5	<0.9
10	-	-	1.9	<5.0	<3.5

F-113 CONCENTRATIONS IN PPB

Well No.	5/86	6/86	1/87	2/87	Mean
2B	<0.5	0.6	<0.5	1.2	<0.7
5	-	23	18	<20	<20
6	-	<2.0	<5	<10	ND(<2.0)
7	-	<0.5	<0.5	<0.5	ND(<0.5)
8	-	-	0.7	3600	1800
9	-	-	1.4[a]	<0.5	<1.0
10	-	-	<0.5	8[a]	<4.3

(a) Average of original and duplicate

(b) Lowest detection limit

(c) EPA method 624

ATTACHMENT C

Stage III Investigation Report

(selected pages of data tables and figures)

STAGE III REPORT
GROUND-WATER QUALITY INVESTIGATION
56TH STREET FACILITY
PHOENIX, ARIZONA
FOR
MOTOROLA INC.

DAMES & MOORE

D&M Job No. 09448-099-033
May 4, 1990

Table 2.1

CHARACTERISTICS OF MONITOR WELLS

Well	Elevation of Ground Surface (ft amsl)	Depth to and Type of Bedrock (feet) Ttb	Pcg	Elevation(a) of Bedrock (ft amsl)	Depth to Water Nov. 1989 (feet)	Saturated[b] Thickness of Alluvial Aquifer (feet)
DM-1	1,238	47.5		1,191	11.07	36
DM-2A	1,238	(c)	(c)	(c)	13.51	(c)
DM-2B	1,238	83		1,155	13.47	70
DM-3	1,237	(c)	(c)	(c)	11.23	(c)
DM-4	1,242		25	1,217	16.40	9
DM-5	1,237	92		1,145	16.15	76
DM-6	1,232		27	1,205	14.85	12
DM-7	1,228	97		1,131	9.30	88
DM-8	1,243	79		1,164	24.19	55
DM-9	1,217	85		1,132	13.67	71
DM-10	1,222	47.5		1,175	10.02	37
DM-11	1,238	75		1,163	13.30(g)	(g)
DM-12	1,215(e)	60		1,155	15.76(f)	44(f)
DM-120W1	1,215(e)	63		1,152	15.05(f)	48(f)
DM-120W2	1,215(e)	57		1,158	16.05(f)	41(f)
COP-52(d)	1,232(e)		24	1,208	12.03	12

(a) = See Table A-1, Appendix A
(b) = November 1989, see Table C-2, Appendix C
(c) = Not drilled to bedrock
(d) = Well installed by City of Phoenix (personal communication, 1989)
(e) = Estimated from Tempe 7.5 Minute Quadrangle (USGS, 1973)
(f) = Water levels measured in October 1989.
(g) = Well completed in bedrock.

Table 2.2

TRANSMISSIVITY AND SPECIFIC YIELD ESTIMATES FROM DM-12 AQUIFER TEST

Observation Well	Radial Distance (ft)	Transmissivity[a] (gpd/ft)	Saturated Thickness (ft)	Hydraulic Conductivity (ft/day)	Specific Yield (dimensionless)
DM-120W1	133.5	14,400	48	40	0.020
DM-120W2	105.5	14,400	41	47	0.017

[a]Bolton (1954, 1962)

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Table 2.3

WELLS SAMPLED AND ANALYTICAL METHODS USED

		Stage I					Stage II				Stage III			
Well No.	Round # / Date	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	#10 10/88	#11 07/89	#12 11/89	#13 11/89
DM-1		B,C	A	A	A	A	A	A	---	---	---	---	A,C,D	A
DM-2A		B,C	A	A	A	A	A	A	---	---	A	---	A,C,D	A
DM-2B		B,C	A	A	A	A	A	A	A	A	---	A	A,C,D	A
DM-3		B,C	A	A	A	A	A	A	---	---	---	---	A,C,D	A
DM-4		B,C	A	A	A,C	A	A	A	---	---	---	---	A,C,D	A
DM-5		---- Not installed ----------					B	A	A	A	A	A	A,C,D	A
DM-6		---- Not installed ----------					B	A	A	A	A	A	A,C,D	A
DM-7		---- Not installed ----------					B	A	A	A	A	A	A,C,D	A
DM-8		---------- Not installed ----------							A	A	A	A	A,C,D	A
DM-9		---------- Not installed ----------							A	A	A	A	A,C,D	A
DM-10		---------- Not installed ----------							A	A	A	A	A,C,D	A
DM-11		---------- Not installed ----------											A,C,D	A
DM-120W1		---------- Not installed ----------											A	A
COP		----------Not sampled by Dames & Moore----------									A	---	---	A

(--) Not sampled
A = EPA Method 601
B = EPA Methods 624 and 625
C = Metals
D = Major Ions and indicators

Table 2.4

EPA METHOD 601 COMPOUNDS

Compound	MCL[b] (ppb)
BROMODICHLOROMETHANE	--
BROMOFORM	--
BROMOMETHANE	--
CARBON TETRACHLORIDE (CCL4)	5
CHLOROBENZENE (CB)	--
CHLOROETHANE	--
CHLOROFORM (CLFM)	100
CHLOROMETHANE	--
DIBROMOCHLOROMETHANE	100
1,3-DICHLOROBENZENE	--
1,4 & 1,2-DICHLOROBENZENE	--
DICHLORODIFLUOROMETHANE	--
1,1-DICHLOROETHANE (DCA)	--
1,2-DICHLOROETHANE (DCA2)	5
1,1-DICHLOROETHYLENE (DCE)	7
TRANS-1,2-DICHLOROETHYLENE (TDCE)[a]	100
1,2-DICHLOROPROPANE	--
CIS-1,3-DICHLOROPROPENE	--
TRANS-1,3-DICHLOROPROPENE	--
METHYLENE CHLORIDE (MEC)	--
1,1,2,2-TETRACHLOROETHANE	--
TETRACHLOROETHYLENE (PCE)	5
1,1,1-TRICHLOROETHANE (TCA)	200
1,1,2-TRICHLOROETHANE (TCA2)	--
TRICHLOROETHYLENE (TCE)	5
TRICHLOROFLUOROMETHANE (F-11)	--
VINYL CHLORIDE	2
TRICHLOROTRIFLUOROETHANE (F-113)	--
2-CHLOROETHYL VINYL ETHER	--

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[a]Also reported as 1,2-dichloroethene (total).

[b]Region IX EPA Drinking Water Standards and Health Advisory Table, Drinking Water Branch, June 1989.

Table 2.5

INORGANIC PARAMETERS ANALYZED DURING ROUND #12

Major Ions

Calcium (Ca)
Magnesium (Mg)
Sodium (Na)
Chloride (Cl)
Sulfate (SO4)
Fluoride (F)
Bicarbonate (HCO3)
Carbonate (CO3)
Nitrate-N (NO3)
Ammonia-N (NH3)
Total Kjeldahl Nitrogen (KN)
Total Phosphorus (P)

Heavy Metals

Arsenic (As)
Barium (Ba)
Boron (B)
Cadmium (Cd)
Chromium Total (Cr)
Chromium Hexavalent (Cr+6)
Iron (Fe)
Lead (Pb)
Manganese (Mn)
Mercury (Hg)
Selenium (Se)
Silver (Ag)
Zinc (Zn)

Indicator Parameters

Cyanide (CN)
Total Dissolved Solids (TDS)
Biological Oxygen Demand (BOD)

Table 2.6

HIGHEST OBSERVED CONCENTRATIONS OF VOCS DURING STAGE III

Compound	Number of Detections/ Number of Analyses	Highest Onsite Concentration (ppb)	Highest Onsite Concentration Well	Highest Offsite Concentration (ppb)	Highest Offsite Concentration Well	MCL (ppb)
Carbon Tetrachloride (CCL^4)	1/42	(a)	(a)	2.5	DM-6	5
Chloroform (CLFM)	17/42	16.4	DM-2B	23	DM-5	100
Chloromethane	1/42	(a)	(a)	3.7	DM-8	-
1,1-Dichloroethane (DCA)	3/42	(a)	(a)	11	DM-5	-
1,2-Dichloroethane (DCA^2)	2/42	0.5	DM-2A	0.3	DM-120W1	5
1,1-Dichloroethylene (DCE)	8/42	0.82	DM-2A	140	DM-5	7
Trans-1,2-Dichloroethylene (TDCE)	12/42	6.5	DM-2A	60	DM-6	100
1,1,1-Trichloroethane (TCA)	1/42	(a)	(a)	2.0	DM-10	200
Trichloroethylene (TCE)	39/42	230	DM-2A	500	DM-6	5
Tetrachloroethylene (PCE)	17/42	4.8	DM-2A	100	COP	5
Trichlorofluoromethane (F-11)	2/42	(a)	(a)	1.2	DM-8	-
Trichlorotrifluoroethane (F-113)	20/42	2.7	DM-4	2000	DM-5	-

(a) none detected

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Table 2.7

TRICHLOROETHYLENE (TCE)
(PPB)

	Stage I					Stage II					Stage III					
Well No.	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	I+II[b] Mean	#10 10/88	#11 07/89	#12 11/89	#13 11/89	III[b] Mean	Total[b] Mean
DM-1	86a	7.5	29	37	64a	0.9	<0.5	-	-	32.1	-	-	1.2	1.4	1.3	25.2
DM-2A	150	4.0	11.5a	69	78	13	9.3	-	-	47.8	11.0	-	160	230	133.7	73.6
DM-2B	110	4.2	30	70	70	2.5	1.6	14	5.6	34.2	-	3.3	6.0	2.0	3.8	26.6
DM-3	140	15	21	39a	84	<0.5	<0.5	-	-	42.7	-	-	3.0	0.9	1.95	33.8
DM-4	100	5.1a	27	34	49	1.1	<0.5	-	-	30.9	-	-	2.4	0.9	1.7	24.4
DM-5	-	-	-	-	-	2500a	1200a	440	700	1210	57	60a	57.5a	41.2a	53.9	632.0
DM-6	-	-	-	-	-	140	140	270	560	277.5	130	490	420	500	385	331.3
DM-7	-	-	-	-	-	<5	<0.5	3.0	1.3	<1.1	6.9	0.5	<0.2	0.6	4	1.5
DM-8	-	-	-	-	-	-	-	8.7	<50	8.7c	<0.12	0.8	<0.2	0.6	0.4	2.0
DM-9	-	-	-	-	-	-	-	15.5a	3.1	9.3	5.9	4.4	5	3.3	4.7	6.2
DM-10	-	-	-	-	-	-	-	80	125a	102.5	99.5a	100	23.2	110	83.2	89.6
DM-11	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	0.8	0.4	0.4
DM-120W1	-	-	-	-	-	-	-	-	-	-	-	-	11.7	10.9	11.3	11.3
COP-52d	-	-	-	-	-	-	-	-	-	-	17.0	-	-	440	226	226

(-) Well not sampled or chemical analysis not performed

a - Average of original and duplicate

b - If a concentration is less than detection, a zero is used to calculate mean

c - Sample round #9 not included because of large detection limit.

d - Permission obtained from City of Phoenix to collecte sample.

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Table 2.8

TOTAL ETHYLENES (TCE, TDCE, DCE)
(PPB)

	Stage I					Stage II					Stage III					
Well No.	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	I+II[b] Mean	#10 10/88	#11 07/89	#12 11/89	#13 11/89	III[b] Mean	Total[b] Mean
DM-1	86a	7.5	29	45	72.7a	0.9	<0.5	-	-	34.1	-	-	1.2	1.4	1.3	27.1
DM-2A	172	4.0	11.5a	78.6	87.8	13	9.3	-	-	53.7	11.0	-	168.4	236.5	138.6	79.2
DM-2B	110	4.2	30	84.4	78.1	2.5	1.6	14	5.6	36.8	-	4.5	6.6	2.0	4.4	38.7
DM-3	140	15	21	53.4	101	<0.5	<0.5	-	-	47.3	-	-	3.0	0.9	1.95	37.3
DM-4	100	5.1a	27	38.9	58.6	1.1	<0.5	-	-	33.0	-	-	2.4	0.9	1.7	26.2
DM-5	-	-	-	-	-	2500a	1200a	454	700	1213	58.1	200a	162a	121.7a	135.5	674.5
DM-6	-	-	-	-	-	160	153	270	587	292.5	130	550	480	542	425.5	359
DM-7	-	-	-	-	-	<5	<0.5	3.0	1.3	2.1	6.9	0.5	<0.2	0.6	4	1.5
DM-8	-	-	-	-	-	-	-	8.7	<50	8.7c	<0.12	0.8	<0.2	0.6	0.4	2.0c
DM-9	-	-	-	-	-	-	-	15.5a	4.6	10.0	5.9	7.6	5	5.7	6.1	7.4
DM-10	-	-	-	-	-	-	-	80.6	125a	103	99.5a	102	24.0	110	83.8	90.1
DM-11	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	0.8	0.4	0.4
DM-120W1	-	-	-	-	-	-	-	-	-	-	-	-	22.9	17.2	20.1	20.1
COP-52d	-	-	-	-	-	-	-	-	-	-	14.3	-	-	555.9	285.1	285.1

(-) Well not sampled or chemical analysis not performed

a - Average of original and duplicate

b - If concentration is reported to be less than detection, a zero is used to calculate mean

c - Sample Round #9 not included because of large detection limit

d - Permission obtained from City of Phoenix to collect sample

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Table 2.9

TETRACHLOROETHANE (PCE)
(PPB)

	Stage I					Stage II					Stage III					
Well No.	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	I+II[b] Mean	#10 10/88	#11 07/89	#12 11/89	#13 11/89	III[b] Mean	Total Mean
DM-1	<5a	<0.5	2.8	13	33.5a	<0.5	<0.5	-	-	7	-	-	<0.2	<0.2	<0.2	<5.5
DM-2A	6.6	<0.5	<5a	33	42	1.7	<0.8	-	-	11.9	1.4	-	5.5	4.8	3.9	9.5
DM-2B	5.1	<0.5	3.0	33	40	<0.5	<0.5	<0.5	<0.5	9.0	-	0.2	0.3	<0.2	0.2	6.8
DM-3	5.1	<0.5	2.3	21.5a	43	<0.5	<0.5	-	-	10.3	-	-	<0.2	<0.2	<0.2	8.0
DM-4	<5	<0.5a	<5.0	19	33	<0.5	<0.5	-	-	7.4	-	-	<0.2	<0.2	<0.2	5.8
DM-5	-	-	-	-	-	<50a	<20a	<5	<20	<5e	3.1	<10a	1.1a	0.7	1.6d	1.2c
DM-6	-	-	-	-	-	1.6	<2	<5	<10	0.4	2.3	10	7	9.9	7.3	3.9
DM-7	-	-	-	-	-	<5	<0.5	<0.5	<0.5	<0.5	<0.03	<0.2	<0.2	<0.2	<0.2	<0.2
DM-8	-	-	-	-	-	-	-	1	<5	0.5	<0.03	<0.2	<0.2	<0.2	<0.2	0.2
DM-9	-	-	-	-	-	-	-	1.2a	<0.5	0.6	<0.03	<0.2	<0.2	<0.2	<0.2	0.2
DM-10	-	-	-	-	-	-	-	1.9	<5a	0.9	11.3a	1.8	0.5	5	4.7	3.4
DM-11	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2
DM-120W1	-	-	-	-	-	-	-	-	-	-	-	-	0.2	<0.2	0.1	0.1
COP-52f	-	-	-	-	-	-	-	-	-	-	2.3	-	-	100.0	51.2	51.2

(-) Well not sampled or chemical analysis not performed
a - Average or original and duplicate
b - If a concentration is less than detection, zero is used to calculate mean
c - Sample Rounds #6, #7, #9, and #11 not included because of large detection limits
d - Sample Round #11 not included because of large detection limit
e - Sample Rounds #6, #7, and #9 not included because of large detection limit
f - Permission obtained from City of Phoenix to collect sample

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Table 2.10

1,1,1-TRICHLOROETHANE (TCA)
(PPB)

	Stage I					Stage II					Stage III					
Well No.	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	I+II[b] Mean	#10 10/88	#11 07/89	#12 11/89	#13 11/89	III[b] Mean	Total[b] Mean
DM-1	7.3a	<0.5	4.7	24	44a	<0.5	<0.5	-	-	11.4	-	-	<0.2	<0.2	<0.2	8.9
DM-2A	13	<0.5	<5a	31	37	<0.5	<0.5	-	-	11.6	<0.03	-	<0.2	<0.2	<0.03	8.1
DM-2B	9.5	<0.5	3.4	42	33	<0.5	<0.5	<0.5	<0.5	9.8	-	<0.2	<0.2	<0.2	<0.2	8.8
DM-3	14	0.7	2.5	47.5a	48	<0.5	<0.5	-	-	16.1	-	-	<0.2	<0.2	<0.2	12.5
DM-4	<5	<1.2a	<5	21	23	<0.5	<0.5	-	-	6.3	-	-	<0.2	<0.2	<0.2	4.9
DM-5	-	-	-	-	-	<50a	<20a	<5	<20	<5	<0.3	<10a	<2a	<0.2	<0.2	<0.2
DM-6	-	-	-	-	-	<5	<2	<5	<10	<2	<0.3	<10	<2	<0.2	<0.2	<0.2
DM-7	-	-	-	-	-	<5	<0.5	<0.5	<0.5	<0.5	<0.03	<0.2	<0.2	<0.2	<0.2	<0.03
DM-8	-	-	-	-	-	-	-	1.6	<50	0.8	<0.03	<0.2	<0.2	<0.2	<0.2	0.3
DM-9	-	-	-	-	-	-	-	3.5a	0.6	2.1	<0.03	<0.2	<0.2	<0.2	<0.2	0.7
DM-10	-	-	-	-	-	-	-	0.7	<5a	0.4	<0.3a	<0.2	<0.2	2	0.5	0.4
DM-11	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2
DM-120W1	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2
COP52	-	-	-	-	-	-	-	-	-	-	<0.03	-	-	<0.2	<0.2	<0.2

(-) Well not sampled or chemical analysis not performed

a - Average of original and duplicate

b - If a concentration is less than detection, zero is used to calculate mean

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Table 2.11

TRICHLOROTRIFLUOROETHANE (F-113)
(PPB)

	Stage I					Stage II					Stage III					
Well No.	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	I+II[b] Mean	#10 10/88	#11 07/89	#12 11/89	#13 11/89	III[b] Mean	Total[b] Mean
DM-1	<5a	<0.5	<1	3.3	5.3a	<0.5	<0.5	-	-	1.2	-	-	2.2	0.6	1.4	1.3
DM-2A	110	6.4	113a	10	4.0	<0.5	<0.5	-	-	34.8	<1	-	9.0	1.1	3.7	25.4
DM-2B	<5	<0.5	<1	7.3	3.9	<0.5	0.6	<0.5	1.2	1.4	-	<0.2	19.4	0.4	6.6	2.7
DM-3	<5	<0.5	<1	6.8a	6.8	<0.5	0.6	-	-	2.0	-	-	3.8	<0.2	1.9	2.0
DM-4	<5	0.8a	<5	4.3	2.8	9.6a	1.9	-	-	2.8	-	-	4.1	2.7	3.4	2.9
DM-5	-	-	-	-	-	-	<23a	18	<20	6	6.2	1950a	1450a	970a	1094	628
DM-6	-	-	-	-	-	-	<2	<5	<10	<10	<10	<10	14	12.2	6.6	3.7
DM-7	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.2	1.5	0.2	<0.5
DM-8	-	-	-	-	-	-	-	0.7	3600	1800	<1	<0.2	<0.2	1.7	0.4	600
DM-9	-	-	-	-	-	-	-	1.4a	<0.5	0.7	<1	<0.2	<0.2	1.3	0.3	<1.4
DM-10	-	-	-	-	-	-	-	<0.5	8a	4	<10a	<0.2	<0.2	<2.0	<2	<3.5
DM-11	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	0.3	0.2	0.2
DM-120W1	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	1.8	0.9	0.9
COP-52d	-	-	-	-	-	-	-	-	-	-	<10	-	-	8.8	4.4	4.4

(-) Well not sampled or chemical analysis not performed

a - Average of original and duplicate

b - If a concentration is less than detection, a zero is used to calculate mean

c - Sample Rounds #7 and #9 not included because of large detection limits

d - Permission obtained from City of Phoenix to collect sample

MOTOROLA 56TH STREET FACILITY
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09448-099-033

Table 2.12

TOTAL VOLATILE ORGANIC COMPOUNDS (VOCs)

	Stage I					Stage II					Stage III					
Well No.	#1 06/85	#2 07/85	#3 08/85	#4 10/85	#5 11/85	#6 05/86	#7 06/86	#8 01/87	#9 02/87	I+II[b] Mean	#10 10/88	#11 07/89	#12 11/89	#13 11/89	III[b] Mean	Total Mean
DM-1	108a	7.5	36.5	85.1	140.2a	0.9	<0.5	-	-	54.1	-	-	3.4	2	2.7	42.7
DM-2A	192	10.4	110.0a	152.6	170.8	14.7	10.1	-	-	94.4	12.4	-	182.9	242.9	146.1	109.9
DM-2B	125	4.2	36.4	167.6	155.8	2.5	2.2	14	6.0	57.2	-	21.1	26.3	2.4	16.6	47.0
DM-3	164	15	25.8	139.9a	198.8	<0.5	0.6	-	-	77.8	-	-	8.8	4.8	6.8	62.0
DM-4	100	6.5a	27	85.2	117.4	10.7	1.9	-	-	49.8	-	-	7.3	4.7	6.0	40.1
DM-5	-	-	-	-	-	2500a	1323a	472	700	1249	84.2	2200a	1621a	1099a	1251	1250
DM-6	-	-	-	-	-	163.3	143	270	687	316	132.3	560	507	570.8	442.5	379
DM-7	-	-	-	-	-	<5	<0.5	3.0	1.3	1.1	6.9	0.5	<0.2	2.1	2.4	2.1
DM-8	-	-	-	-	-	-	-	12	3601	1806	3.5	9	<0.2	4.0	4.2	604.1
DM-9	-	-	-	-	-	-	-	26.6a	5.2	15.9	5.9	8	5	7	6.5	9.6
DM-10	-	-	-	-	-	-	-	84.6	120a	102.3	126a	105.2	24.9	121	94.3	97
DM-11	-	-	-	-	-	-	-	-	-	-	-	-	<.5	1.1	0.6	0.6
DM-120W1	-	-	-	-	-	-	-	-	-	-	-	-	25.2	21.6	23.4	23.4
COP-52	-	-	-	-	-	-	-	-	-	-	14.3	-	-	573.8	294.1	294.1

(-) Well not sampled or chemical analysis not performed

a - Average of original and duplicate

b - If a concentration is less than detection, a zero is used to calculate mean

MOTOROLA 56TH STREET FACILITY
STAGE III REPORT, APRIL 1990
09448-099-033

Table 2.13

VOC CONCENTRATIONS DURING DM-12 AQUIFER TEST

Sample	Since Pumping Started (min)	Pumping Rate (gpm)	Total Gallons Pumped	EPA Method 601 Detected VOCs (ppb)			
				TCE	TDCE	PCE	Total VOCs
DM-12A	100	28	2,800	26.7	14.5	0.8	46.3
DM-12B	732	28	20,496	23.0	13.2	0.6	41.1
DM-12C	1,224	28	34,272	22.4	12.8	0.6	40.1
DM-12D	1,770	28	49,560	23.1	12.2	0.6	39.8
DM-12E	2,334	28	65,352	19.7	10.6	0.6	34.2
DM-12F	2,707	28	75,796	20.7	11.7	0.5	36.9
DM-12G	3,140	28	87,920	17.6	10.7	0.6	32.6

TCE = Trichloroethylene
TDCE = Trans-1,2-Dichloroethylene
PCE = Tetrachlorethylene
VOC = Volatile Organic Compounds

Table 2.14

TEST RESULTS FOR INORGANIC CONSTITUENTS (ROUNDS #1 AND #12)

Constituent	Number of Detections/ Number of Analyses	Highest[c] Alluvial Onsite Concentration (mg/l)	Well	Highest Alluvial Offsite Concentration (mg/l)	Well	Drinking Water Standard (mg/l)
Heavy Metals						
Antimony (Sb)	0/5	a	a	b	b	
Arsenic (As)	17/19	0.073	DM-4	0.290	DM-8	0.05 (P)
Barium (Ba)	13/14	0.124	DM-3	0.244	DM-10	1.0 (P)
Berylium (Be)	0/5	a	a	b	b	
Boron (B)	13/13	1.08	DM-1	7.32	DM-6	
Cadmium (Cd)	0/19	a	a	a	a	0.010 (P)
Chromium Total (Cr)	1/19d	a	a	a	a	0.05 (P)
Chromium Hexavalent (Cr+6)	0/13	a	a	a	a	
Copper (Cu)	1/5	0.07	DM-4	b	b	1.0 (S)
Iron (Fe)	7/13	0.072	DM-2A	0.440	DM-8	0.3 (S)
Lead (Pb)	2/19	0.04	DM-4	a	a	0.05 (P)
Manganese (Mn)	9/13	0.378	DM-2A	0.044	DM-120W1	0.05 (S)
Mercury (Hg)	0/19	0.001	DM-2A	a	a	0.002 (P)
Nickel (Ni)	0/5	a	a	b	b	
Selenium (Se)	4/19	a	a	0.014	DM-7	0.01 (P)
Silver (Ag)	0/19	a	a	a	a	0.05 (P)
Thallium (Th)	0/5	a	a	b	b	
Zinc (Zn)	6/18	0.010	DM-4	0.019	DM-10	5.0 (P)
Major Ions						
Calcium (Ca)	13/13	105	DM-1	122	DM-120W1	
Magnesium (Mg)	13/13	52.1	DM-1	32.3	DM-10	
Sodium (Na)	13/13	490	DM-1	720	DM-120W1	
Chloride (Cl)	13/13	620	DM-1	490	DM-120W1	250 (S)
Sulfate (SO4)	13/13	240	DM-1	1000	DM-120W1	250 (S)
Fluoride (F)	13/13	9.05	DM-2A	32.0	DM-5	4.0 (R)
Bicarbonate (HCO3)	13/13	518	DM-1	724	DM-6	
Carbonate (CO3)	5/13	a	a	40.8	DM-5	
Nitrate-N (NO3)	13/13	10.1	DM-1	18.0	DM-120W1	10.0 (P)
Ammonia-N (NH3)	7/13	2.22	DM-2A	0.25	DM-120W1	0.02 (A)
Total Kjeldahl Nitrogen (KN)	11/13	2.0	DM-2A	0.5	DM-120W1	
Total Phosphorus (P)	13/13	0.20	DM-4	0.62	DM-10	

Continued

Table 2.14 Continued

Constituent	Number of Detections/ Number of Analyses	Highest[c] Alluvial Onsite Concentration (mg/l)	Well	Highest Alluvial Offsite Concentration (mg/l)	Well	Drinking Water Standard (mg/l)
Indicator Parameters						
Cyanide (CN)	0/13	a	a	a	a	0.20 (A)
Total Dissolved Solids (TDS)	13/13	1800	DM-1	2670	DM-8	500 (S)
Biological Oxygen Demand (BOD)	3/13	6	DM-4	9	DM-6	

---

a - not detected

b - not analyzed

c - does not include DM-11 (bedrock well)

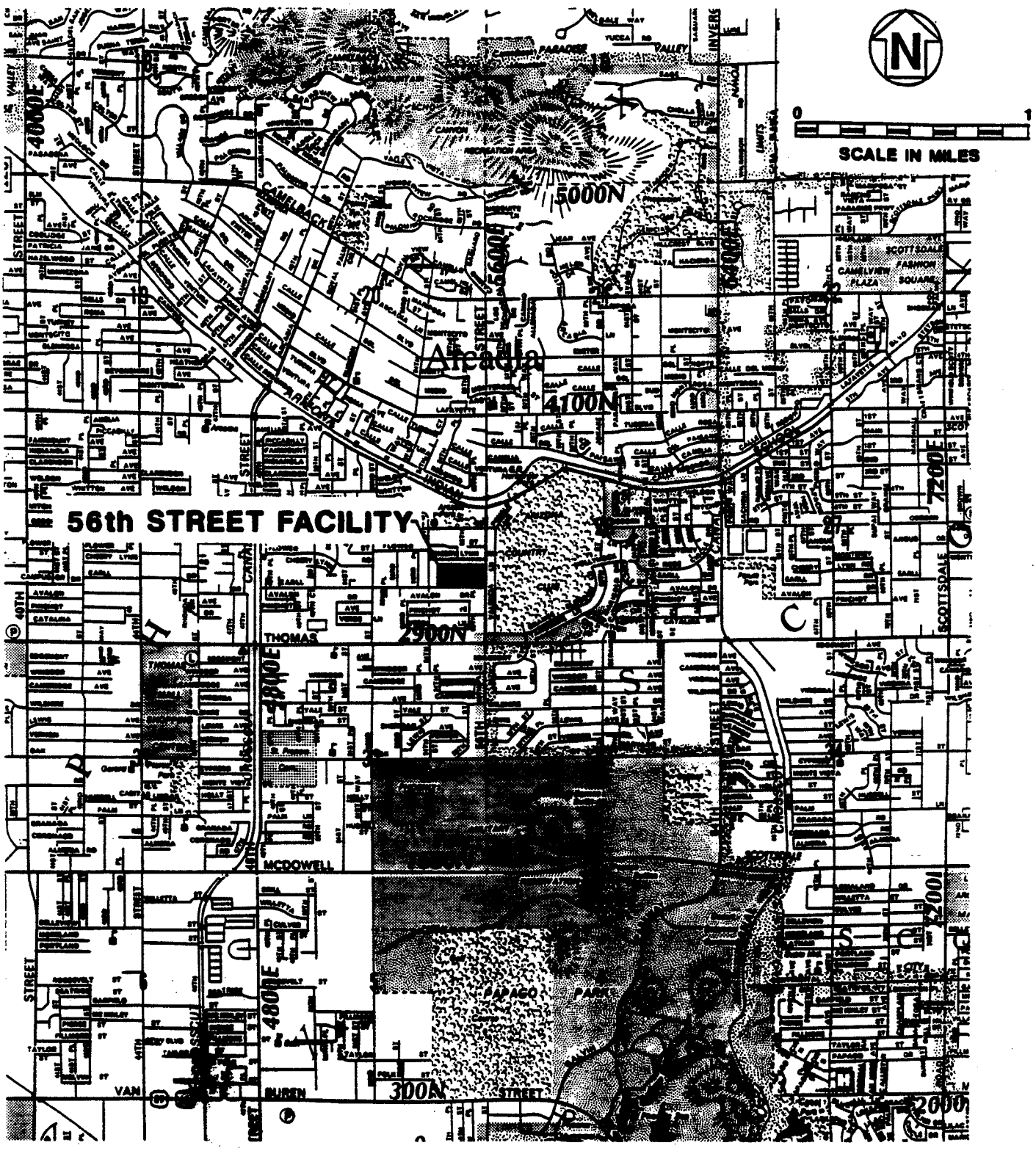
d - detection was in DM-11 (bedrock well)

P = Primary Drinking Water Standard, or MCL (Maximum Contaminant Level), U.S. EPA Primary Drinking Water Regulations, 40 CFR 141, July 3, 1986.

S = Secondary Drinking Water Standard, or Secondary MCL, U.S. EPA National National Secondary Drinking Water Regulations 40 CFR 143, July 3, 1986.

A = Arizona Water Quality Standards, Agricultural Irrigation, R9-21-101 et seq., January 7, 1985. R = Recommended MCL, U.S. EPA National Primary Drinking Water Regulations, 40 CFR 141, July 3, 1986.

Note: Complete results of all inorganic analyses are presented in Appendix C.



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VICINITY MAP

Figure 2.1

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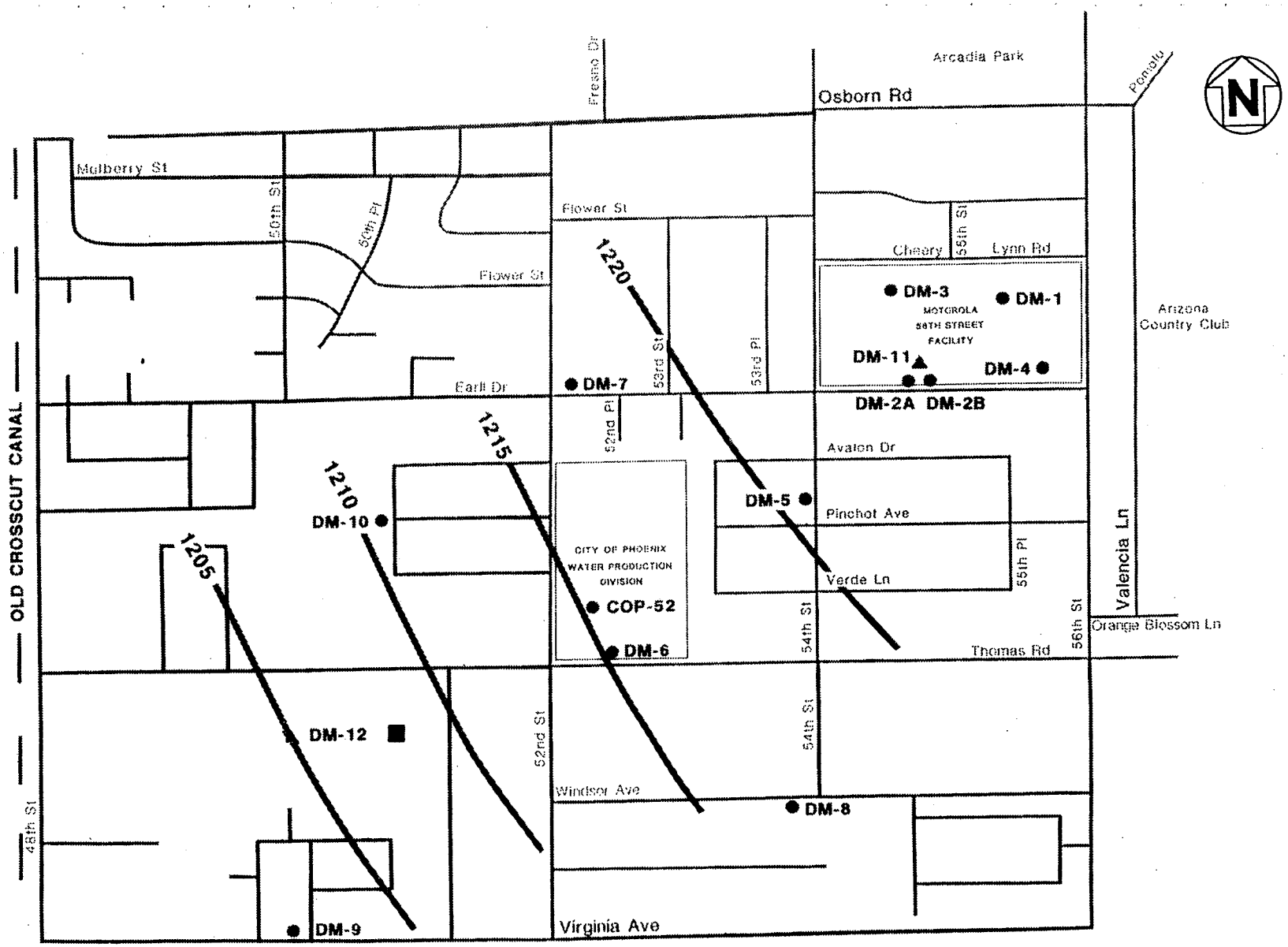
09448-099-033

MOTOROLA 56th STREET FACILITY
STAGE III REPORT, APRIL 1990



● ALLUVIAL MONITOR WELL
▲ BEDROCK MONITOR WELL
■ AQUIFER TEST/MONITOR WELL
—1210— WATER LEVEL CONTOUR FOR JULY 1989

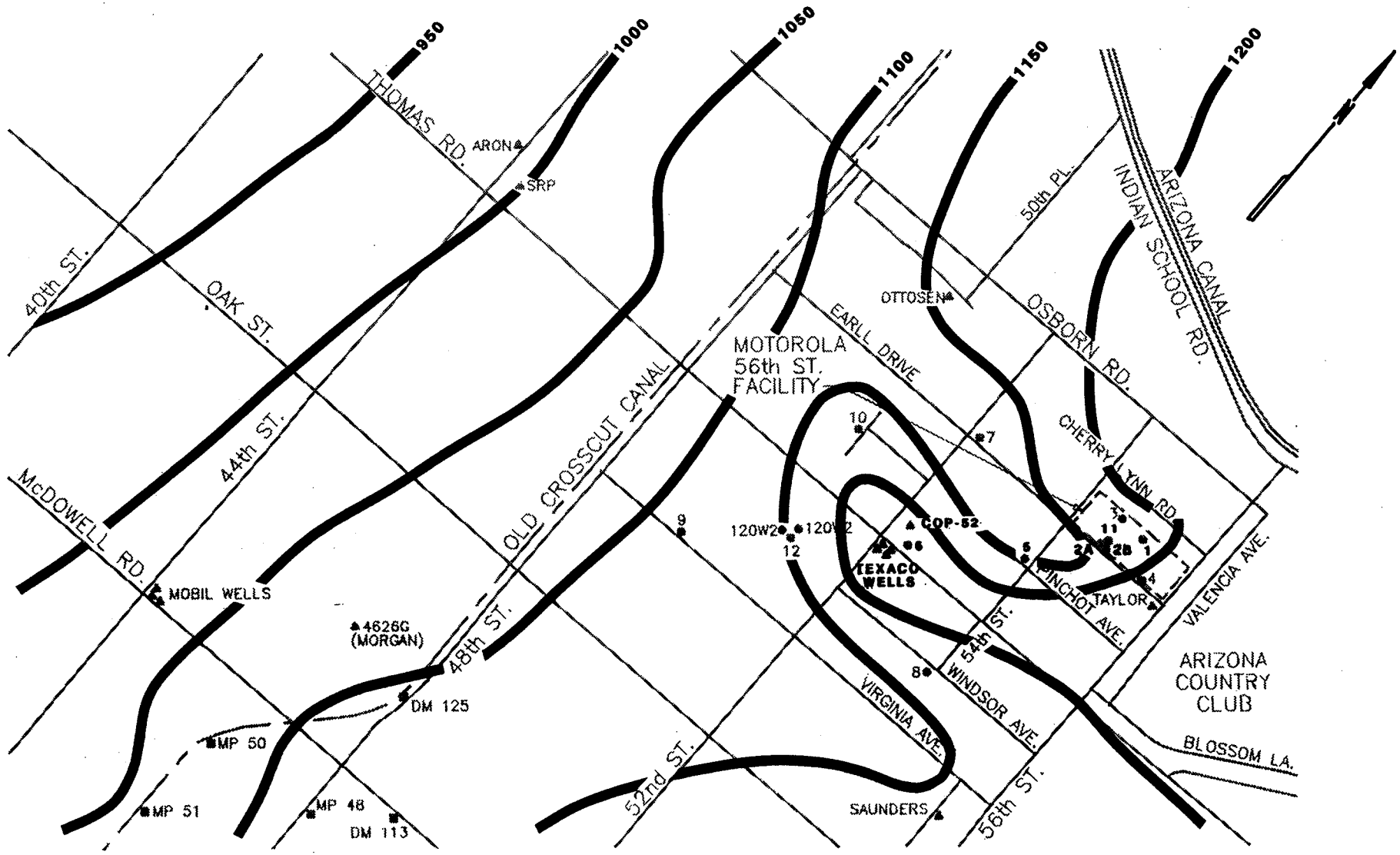
*Approximate Locations

SCALE
0 1000
FEET

MONITOR WELL LOCATIONS

Figure 2.2

Dames & Moore
09448-099-033
MOTOROLA 56th STREET FACILITY
STAGE III REPORT, APRIL 1990



LEGEND:

- ● MI 56th ST. WELL (DM–)
- ■ MI 52nd ST. WELL
- ▲ PRIVATE WELL (DATA USED IN STUDY)
- 1200 APPROXIMATE ELEVATION OF BEDROCK (FEET)

APPROXIMATE SCALE

0 1500 3000

FEET

ESTIMATED BEDROCK ELEVATIONS

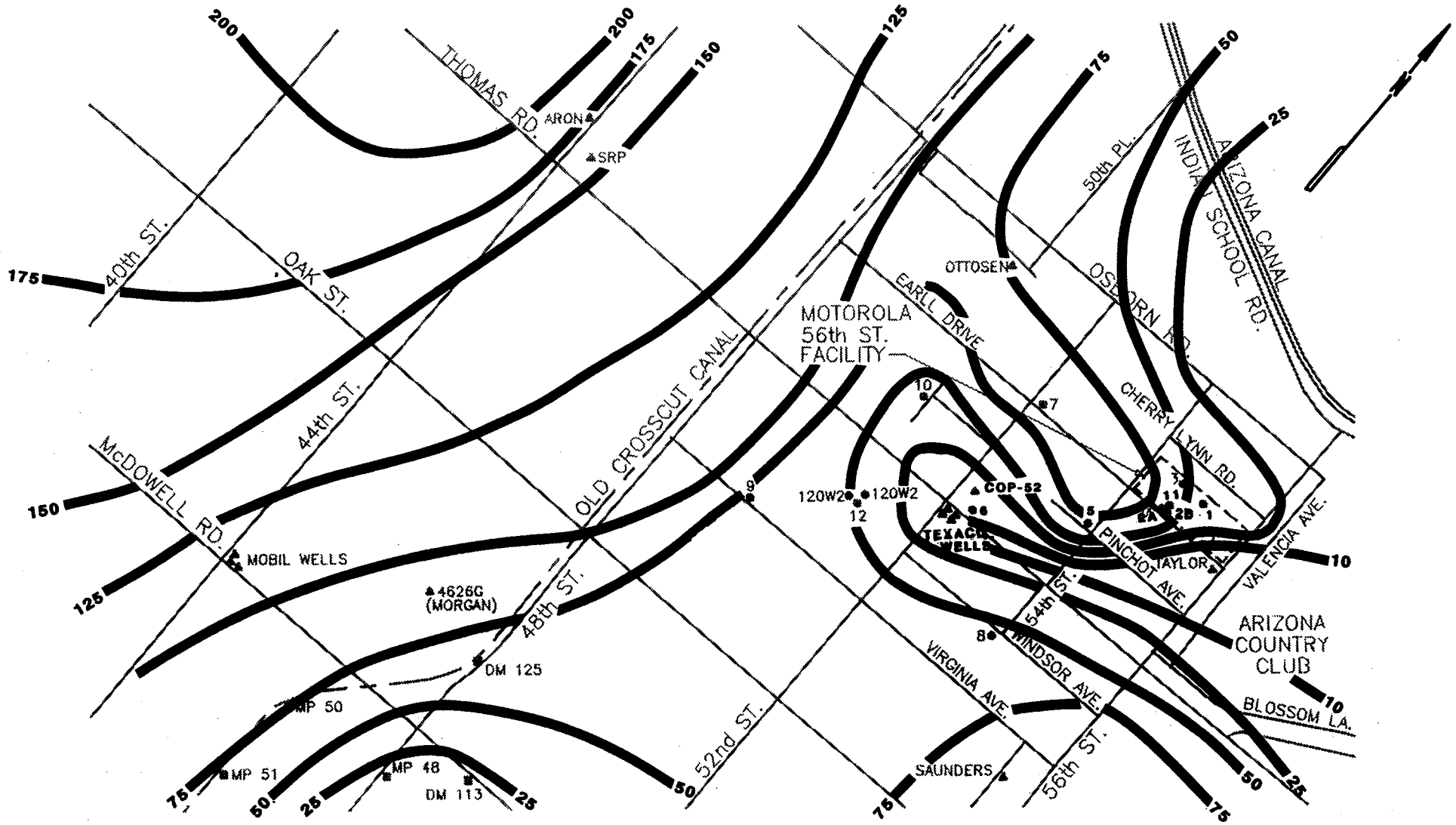
Figure 2.3

Dames & Moore

09448-099-033

MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



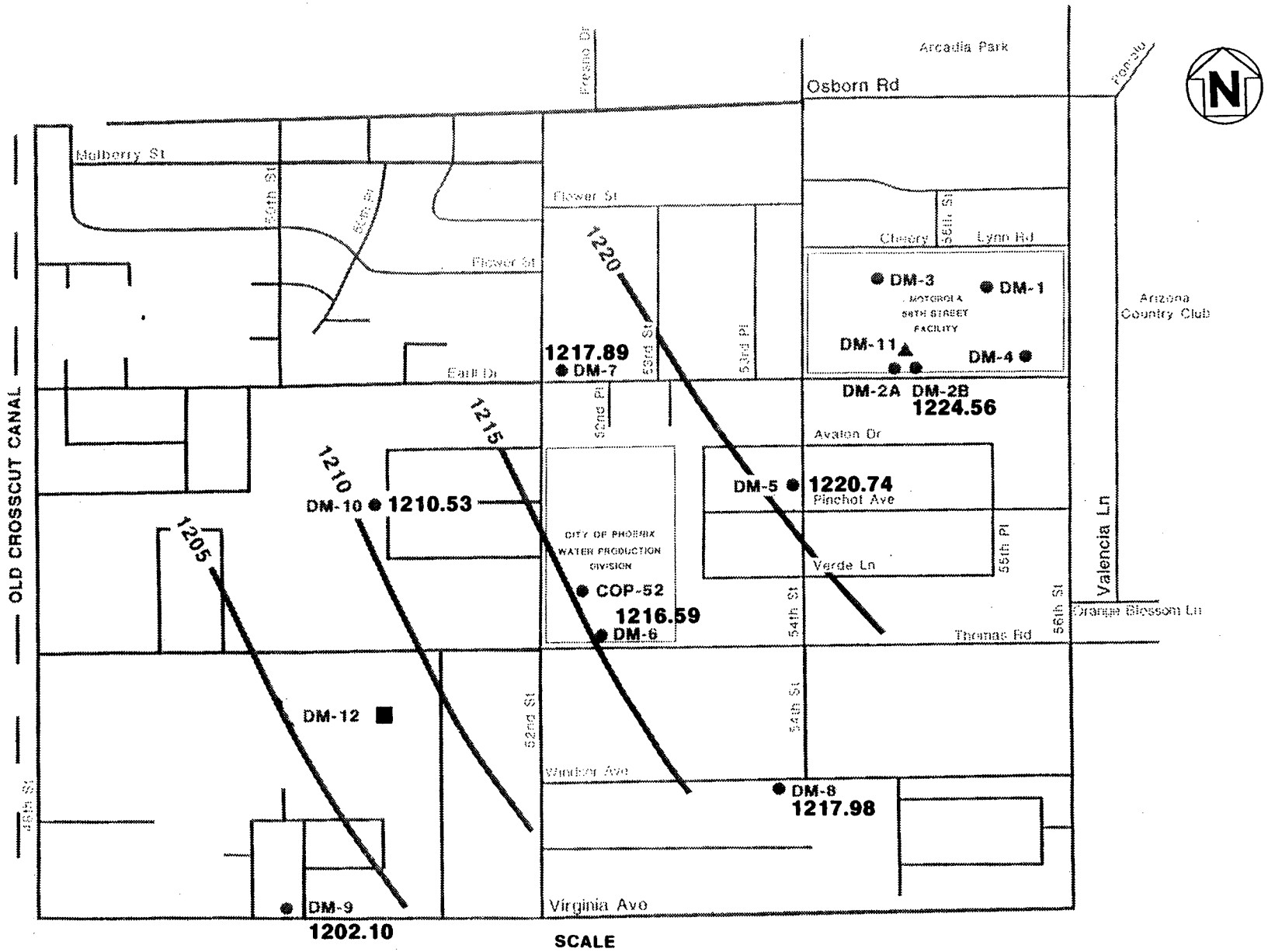
LEGEND:
- ● MI 56th ST. WELL (DM–)
- ■ MI 52nd ST. WELL
- ▲ PRIVATE WELL (DATA USED IN STUDY)
- 150 SATURATED THICKNESS (FEET)

APPROXIMATE SCALE
0 1500 3000
FEET

ESTIMATED ALLUVIAL AQUIFER SATURATED THICKNESS

Figure 2.4

Dames & Moore
09448-099-033
MOTOROLA 56th STREET FACILITY
STAGE III REPORT, APRIL 1990



SCALE

0 1000

FEET

● ALLUVIAL MONITOR WELL

▲ BEDROCK MONITOR WELL

■ AQUIFER TEST/MONITOR WELL

1210 WATER LEVEL CONTOUR FOR JULY 1989

JULY 1989 WATER-LEVEL ELEVATIONS

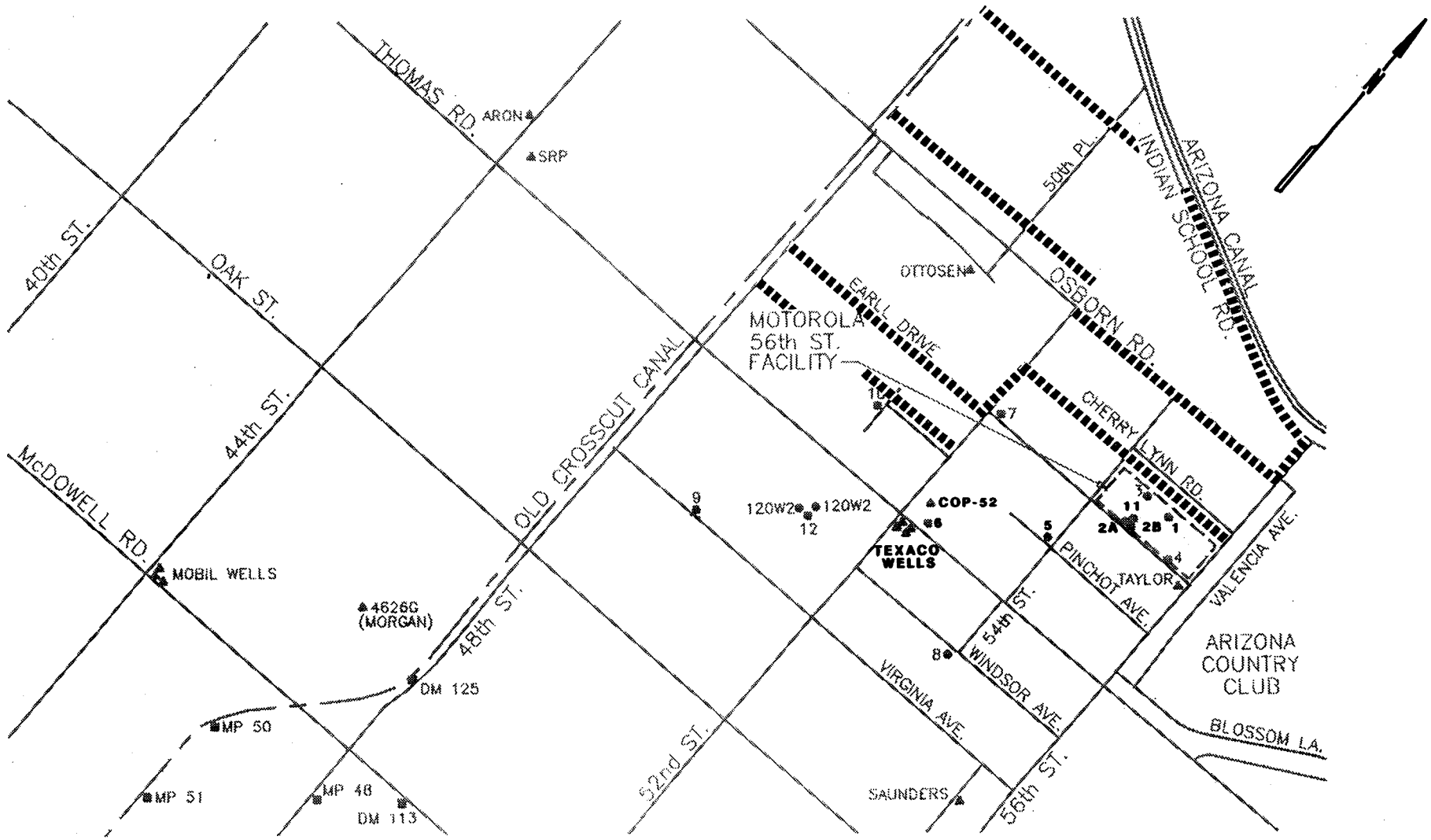
Figure 2.5

Dames & Moore

09448-099-033

MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



LEGEND:

- ● MI 56th ST. WELL (DM–)
- ■ MI 52nd ST. WELL
- ▲ PRIVATE WELL (DATA USED IN STUDY)
- ▬▬▬ APPROXIMATE LOCATION OF PIPED DRAIN FROM SRP MAP: AREA II, PHOENIX IRRIGATION MAY 1, 1989 (SRP 1989)

APPROXIMATE SCALE

0 1500 3000

FEET

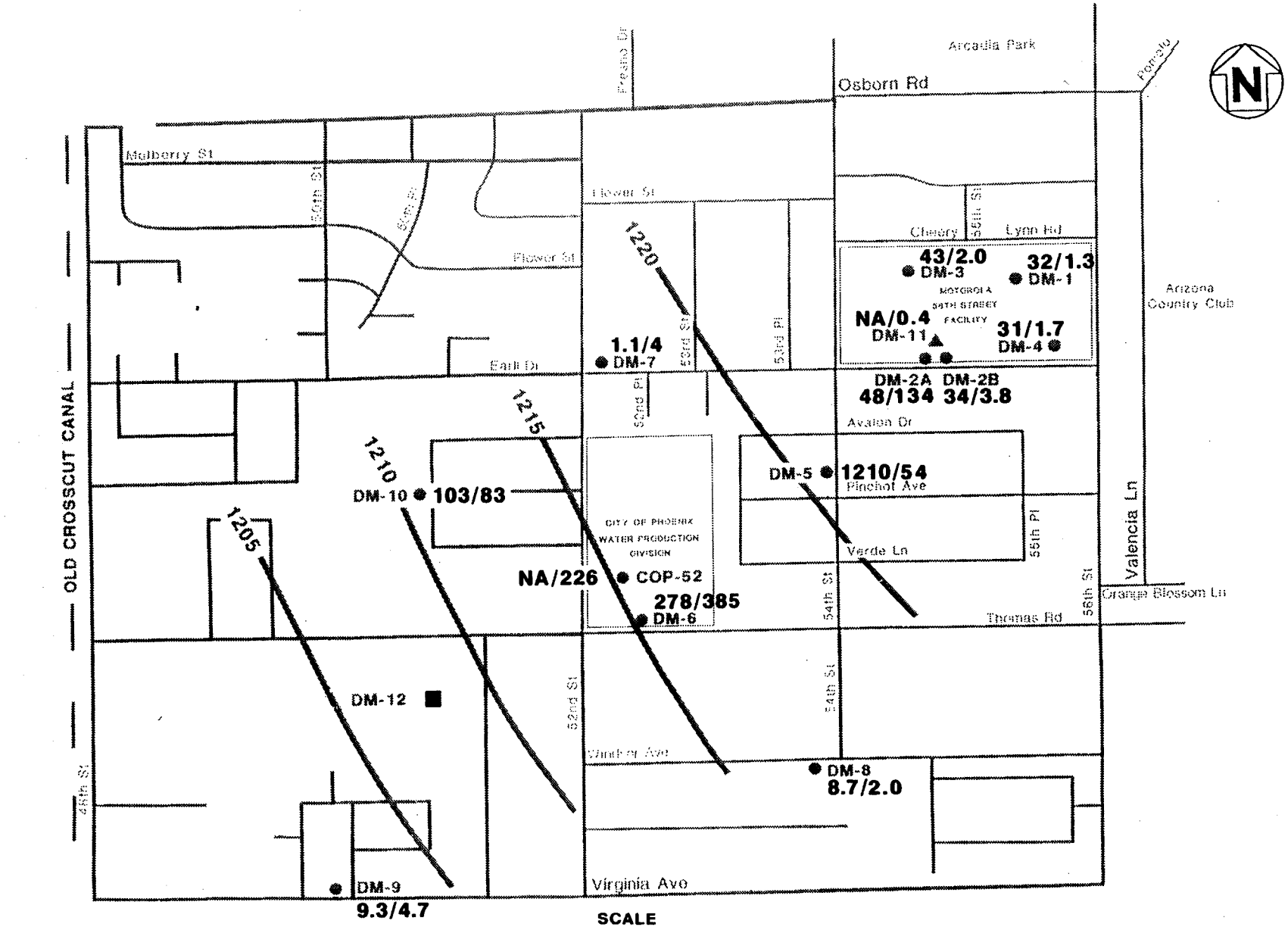
DRAIN FIELD

Figure 2.6

Dames & Moore

09448-099-033

MOTOROLA 56th STREET FACILITY
STAGE III REPORT, APRIL 1990



SCALE

0 1000

FEET

● ALLUVIAL MONITOR WELL

▲ BEDROCK MONITOR WELL

■ AQUIFER TEST/MONITOR WELL

—1210— WATER LEVEL CONTOUR FOR JULY 1989

32/1.3 MEAN STAGE I & II/STAGE III CONCENTRATIONS (ppb)

TCE

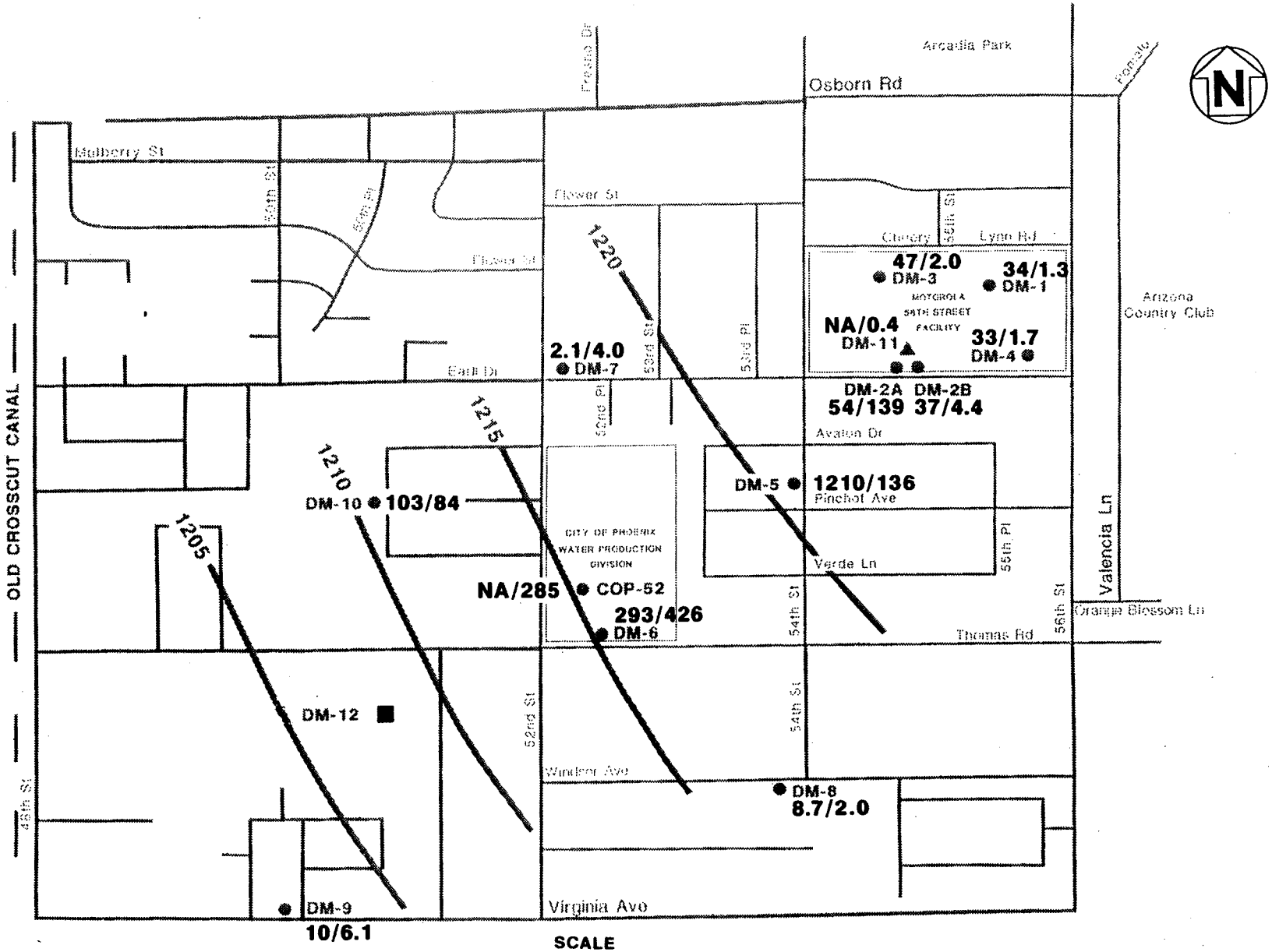
Figure 2.7

Dames & Moore

09448-099-033

MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



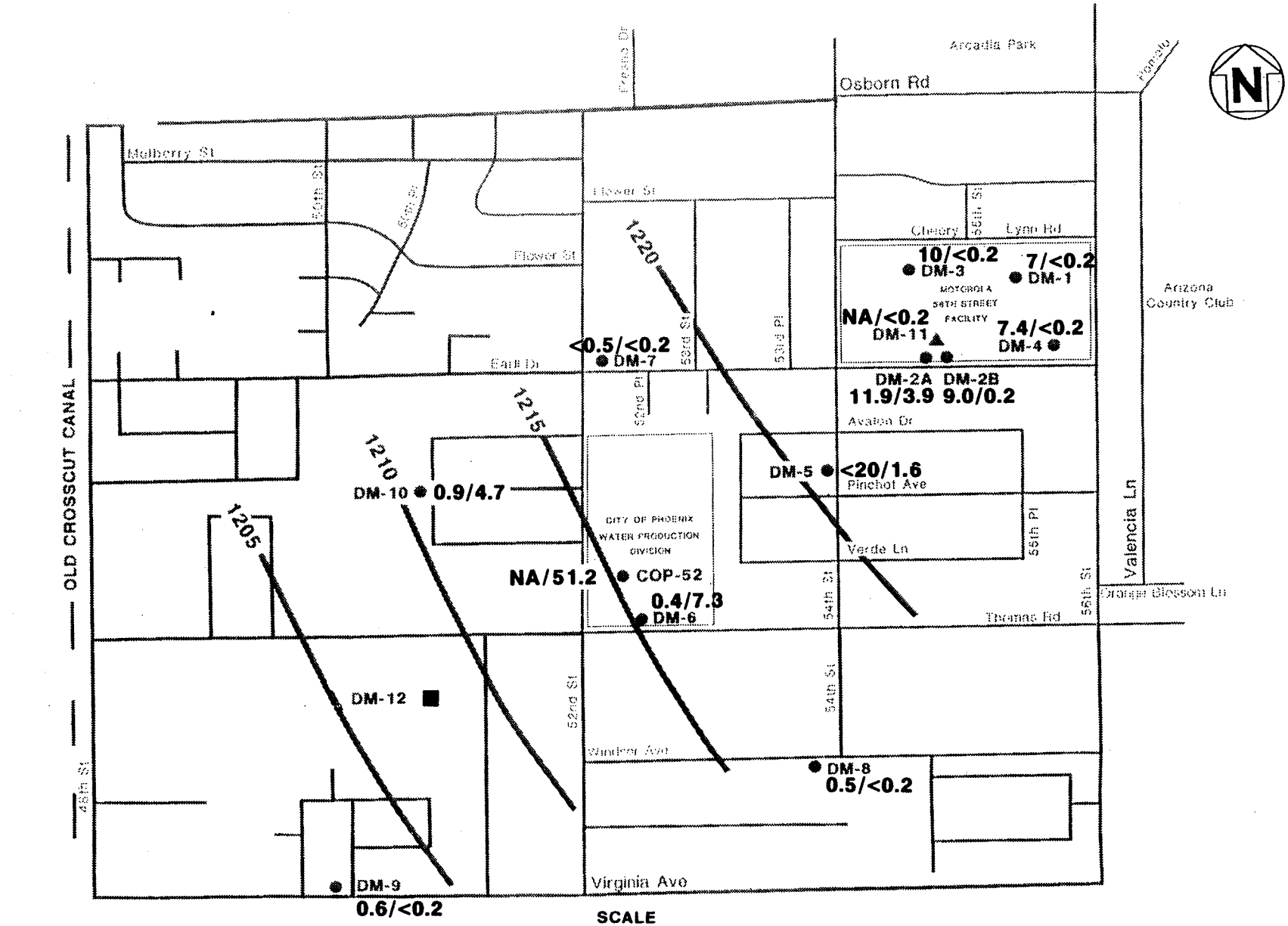
● ALLUVIAL MONITOR WELL
▲ BEDROCK MONITOR WELL
■ AQUIFER TEST/MONITOR WELL
1210 WATER LEVEL CONTOUR FOR JULY 1989
32/1.3 MEAN STAGE I & II/STAGE III CONCENTRATIONS (ppb)

SCALE
0 1000
FEET

TOTAL ETHYLENES (TCE, TDCE, DCE)

Figure 2.8

Dames & Moore
09448-099-033
MOTOROLA 56th STREET FACILITY
STAGE III REPORT, APRIL 1990



● ALLUVIAL MONITOR WELL

▲ BEDROCK MONITOR WELL

■ AQUIFER TEST/MONITOR WELL

—1210— WATER LEVEL CONTOUR FOR JULY 1989

32/1.3 MEAN STAGE I & II/STAGE III MEAN CONCENTRATIONS (ppb)

PCE

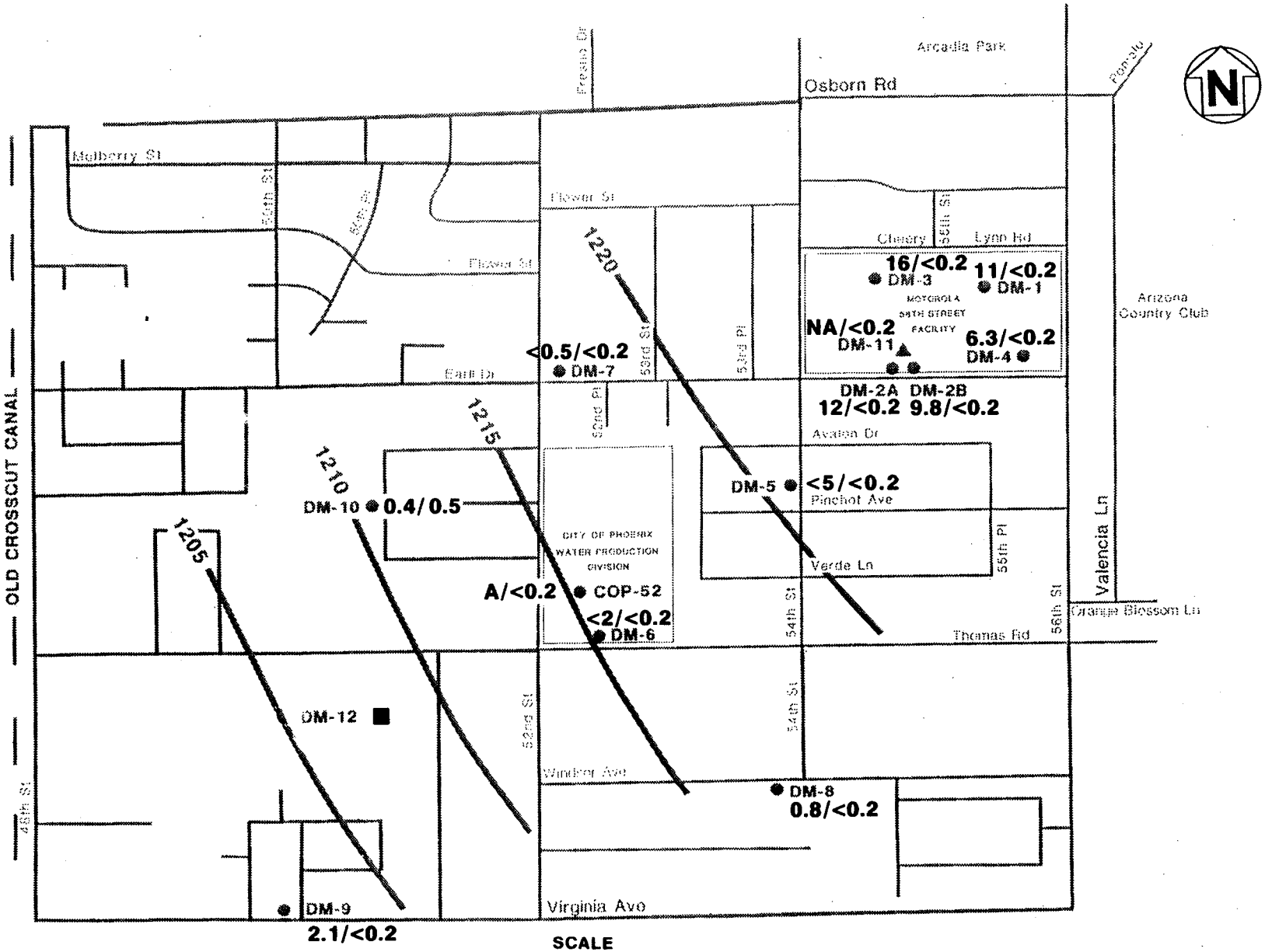
Figure 2.9

Dames & Moore

09448-099-033

MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



SCALE

0 1000

FEET

● ALLUVIAL MONITOR WELL

▲ BEDROCK MONITOR WELL

■ AQUIFER TEST/MONITOR WELL

1210 WATER LEVEL CONTOUR FOR JULY 1989

32/1.3 MEAN STAGE I & II/STAGE III CONCENTRATIONS (ppb)

TCA

Figure 2.10

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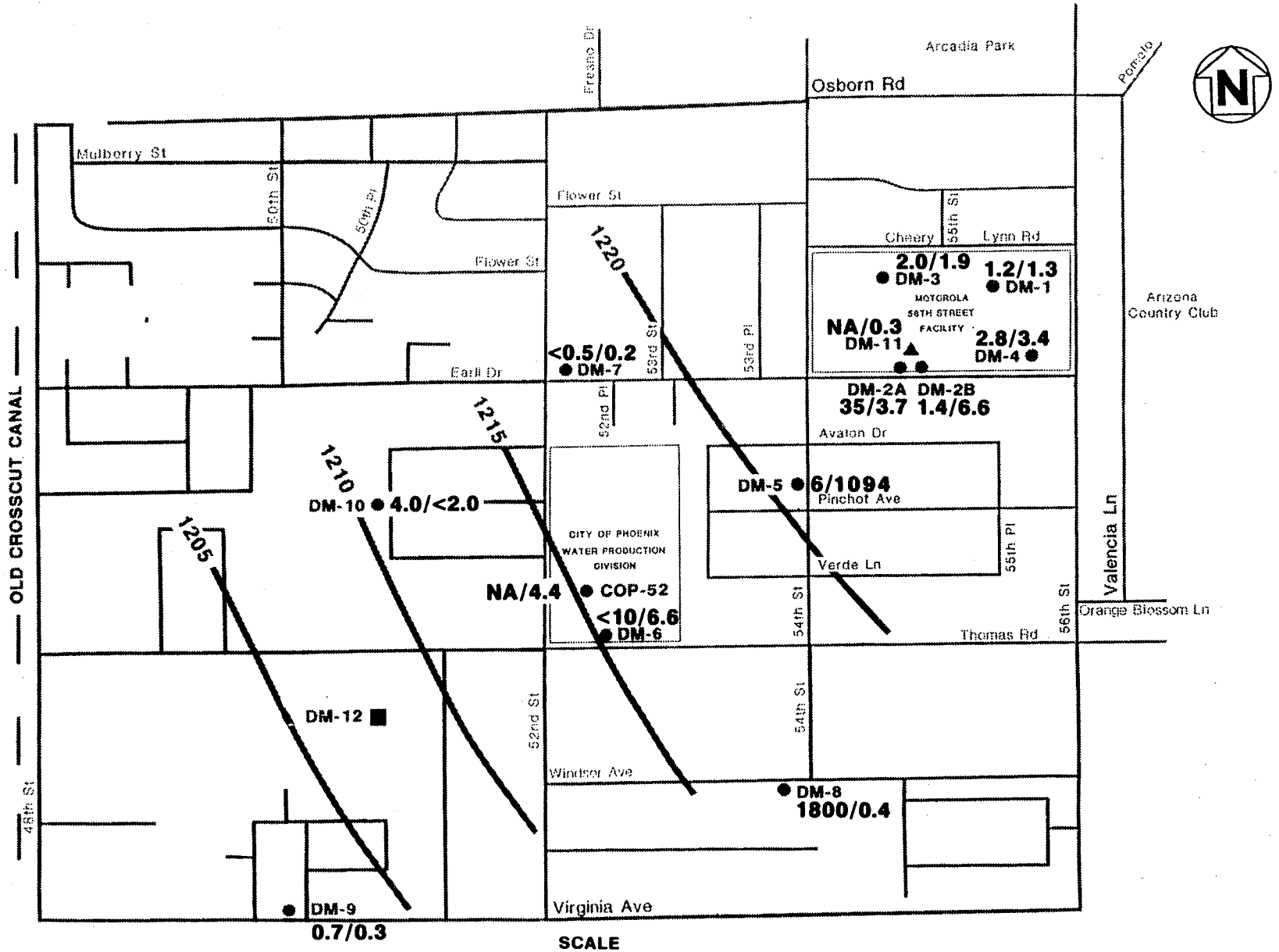
MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



SCALE

0 1000

FEET

● ALLUVIAL MONITOR WELL

▲ BEDROCK MONITOR WELL

■ AQUIFER TEST/MONITOR WELL

1210 WATER LEVEL CONTOUR FOR JULY 1989

32/1.3 MEAN STAGE I & II/STAGE III CONCENTRATIONS (ppb)

F-113

Figure 2.11

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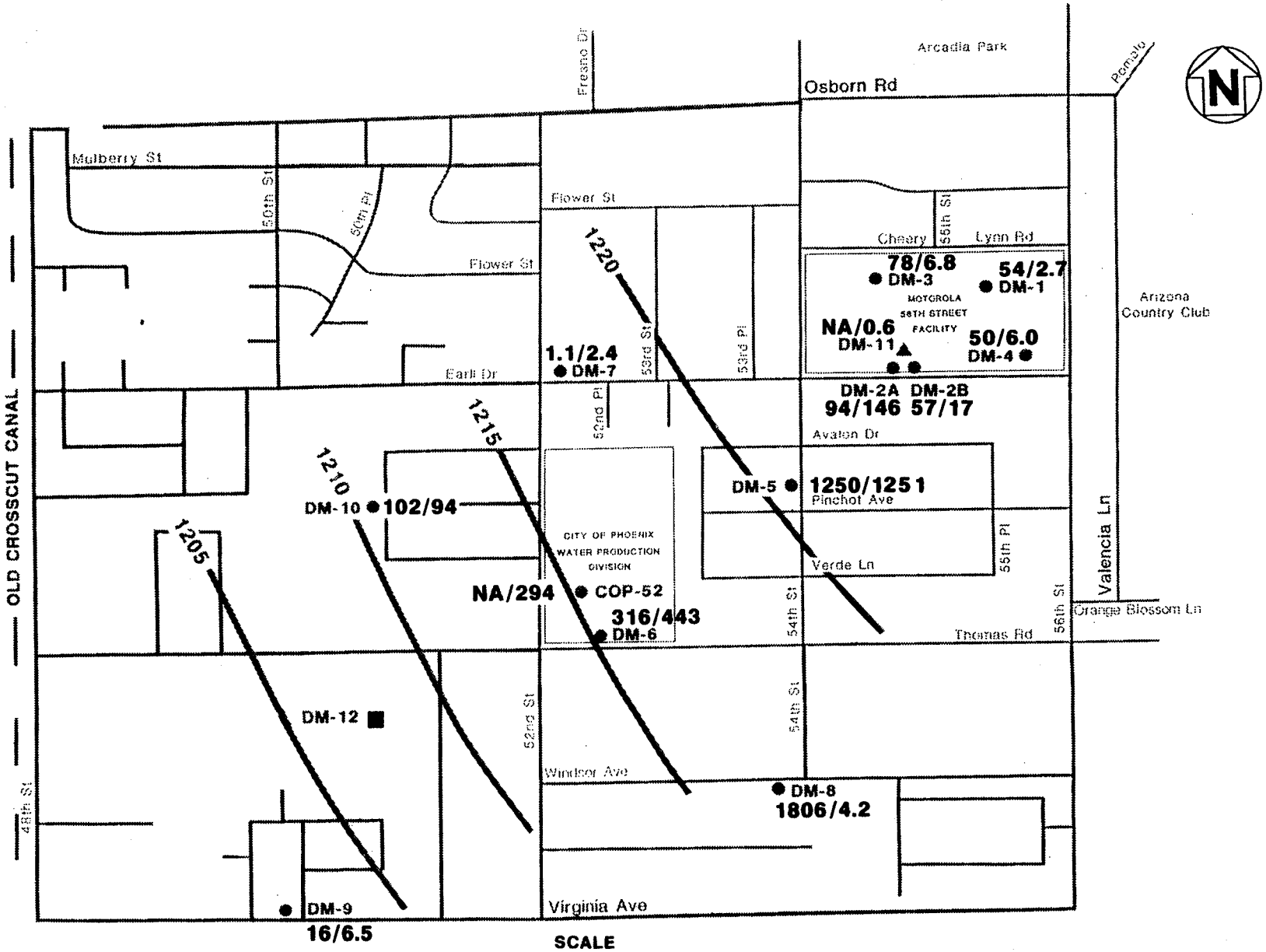
MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



SCALE

0 1000

FEET

● ALLUVIAL MONITOR WELL

▲ BEDROCK MONITOR WELL

■ AQUIFER TEST/MONITOR WELL

1210 WATER LEVEL CONTOUR FOR JULY 1989

32/1.3 MEAN STAGE I & II /STAGE III CONCENTRATIONS (ppb)

TOTAL VOCs

Figure 2.12

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MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990

MI56th St Round 12 Data Piper Diagram

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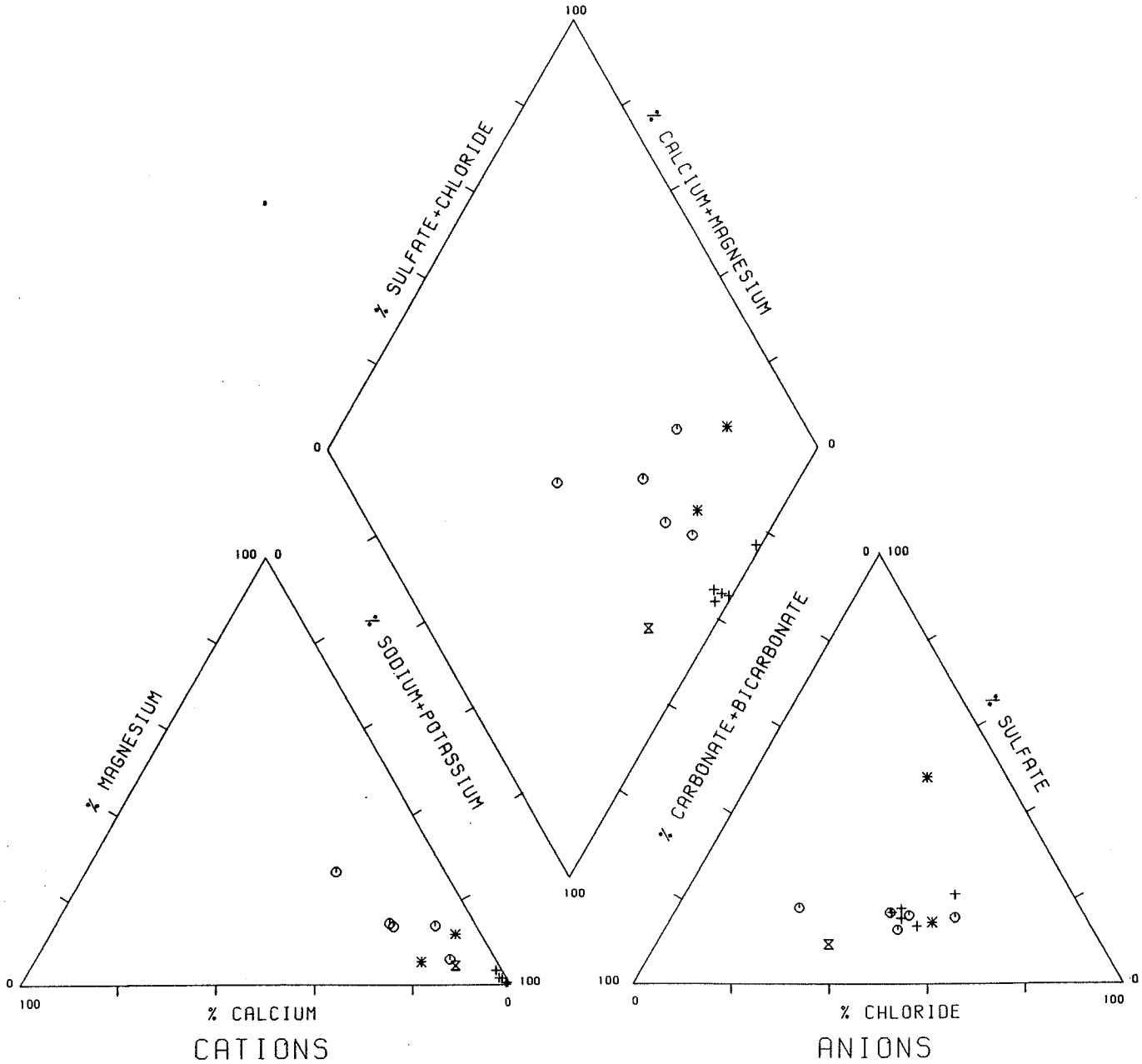

SAMPLES:

⊙	1	DM 1
⊙	2	DM 2A
⊙	3	DM 2B
⊙	4	DM 3
⊙	5	DM 4
+	6	DM 5
+	7	DM 6
+	8	DM 7
+	9	DM 8
+	10	DM 9
✱	11	DM 10
⧖	12	DM 11
✱	13	DM 120W1

PIPER DIAGRAM

Figure 2.13

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09448-099-033

MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990

MI56th St Round 12 Data Piper Diagram

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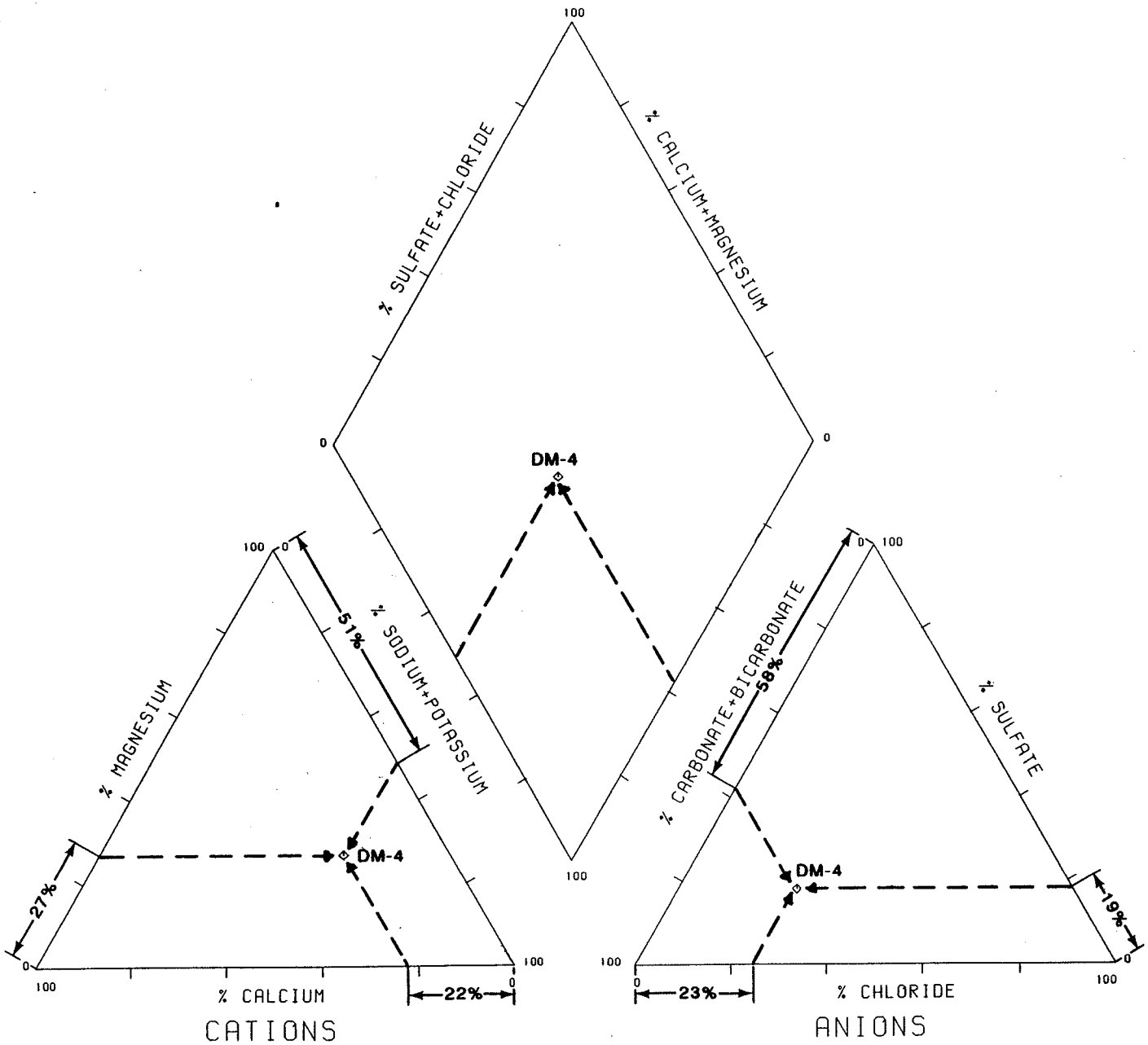

EXPLANATION OF PIPER DIAGRAM

Figure 2.14

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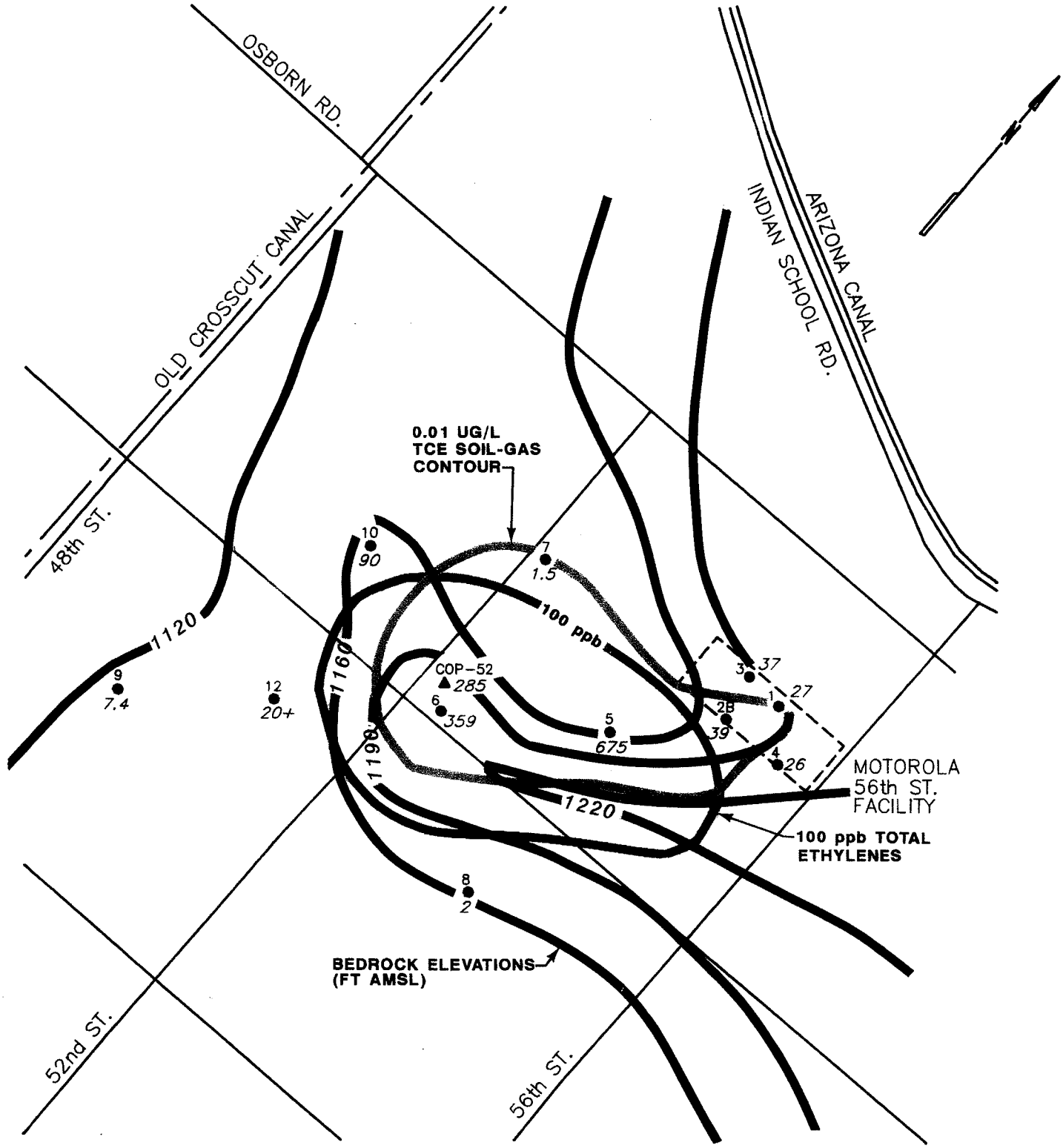
09448-099-033

MOTOROLA 56th STREET FACILITY

STAGE III REPORT, APRIL 1990



APPROXIMATE SCALE

0 1000 2000

FEET

LEGEND:

- ● MI 56th ST. WELL (DM–)
- ▲ PRIVATE WELL (DATA USED IN STUDY)
- *675* MEAN TOTAL ETHYLENES (ppb)

SUPERPOSITION OF SOIL-GAS, BEDROCK AND VOC DATA

Figure 2.15

Dames & Moore

09448-099-033

MOTOROLA 56th STREET FACILITY
STAGE III REPORT, APRIL 1990

Table B-3

AQUIFER TEST RESULTS

Well	Method	Radial Distance (ft)	Saturated Thickness (ft)	Transmissivity (gpd/ft)	Hydraulic Conductivity (ft/day)	Specific Yield (dimensionless)
DM-12	Jacob[a]	-	44	14,780	45	-
DM-120W1	Jacob[a]	133.5	48	15,370	43	0.016
	Boulton[b]	133.5	48	14,400	40	0.013
DM-120W2	Jacob[a]	105.5	41	14,760	48	0.014
	Boulton[b]	105.5	41	14,400	47	0.021

a = Cooper and Jacob (1946)

b = Boulton (1963)

ATTACHMENT D

Stage IV Investigation Report

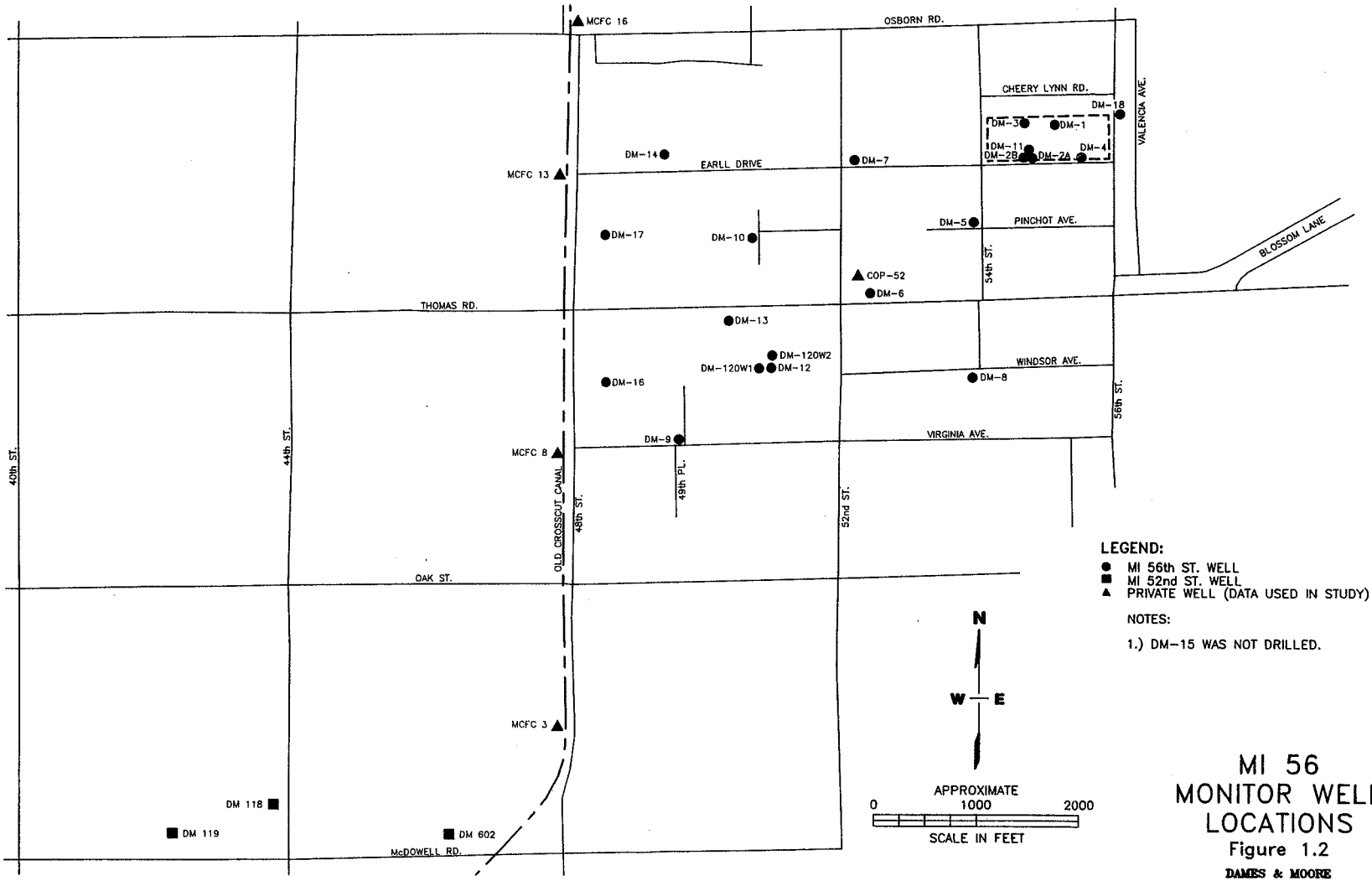
(selected pages of data tables and figures)

MOTOROLA 56TH ST.
DRAFT INTERIM REPORT (OCTOBER 1991)
GROUND-WATER QUALITY INVESTIGATION
FOR
MOTOROLA INC.

DAMES & MOORE

D&M Job No. 09448-146-033
October 1991

DRAFT
10/04/91



MI 56
MONITOR WELL
LOCATIONS
Figure 1.2

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

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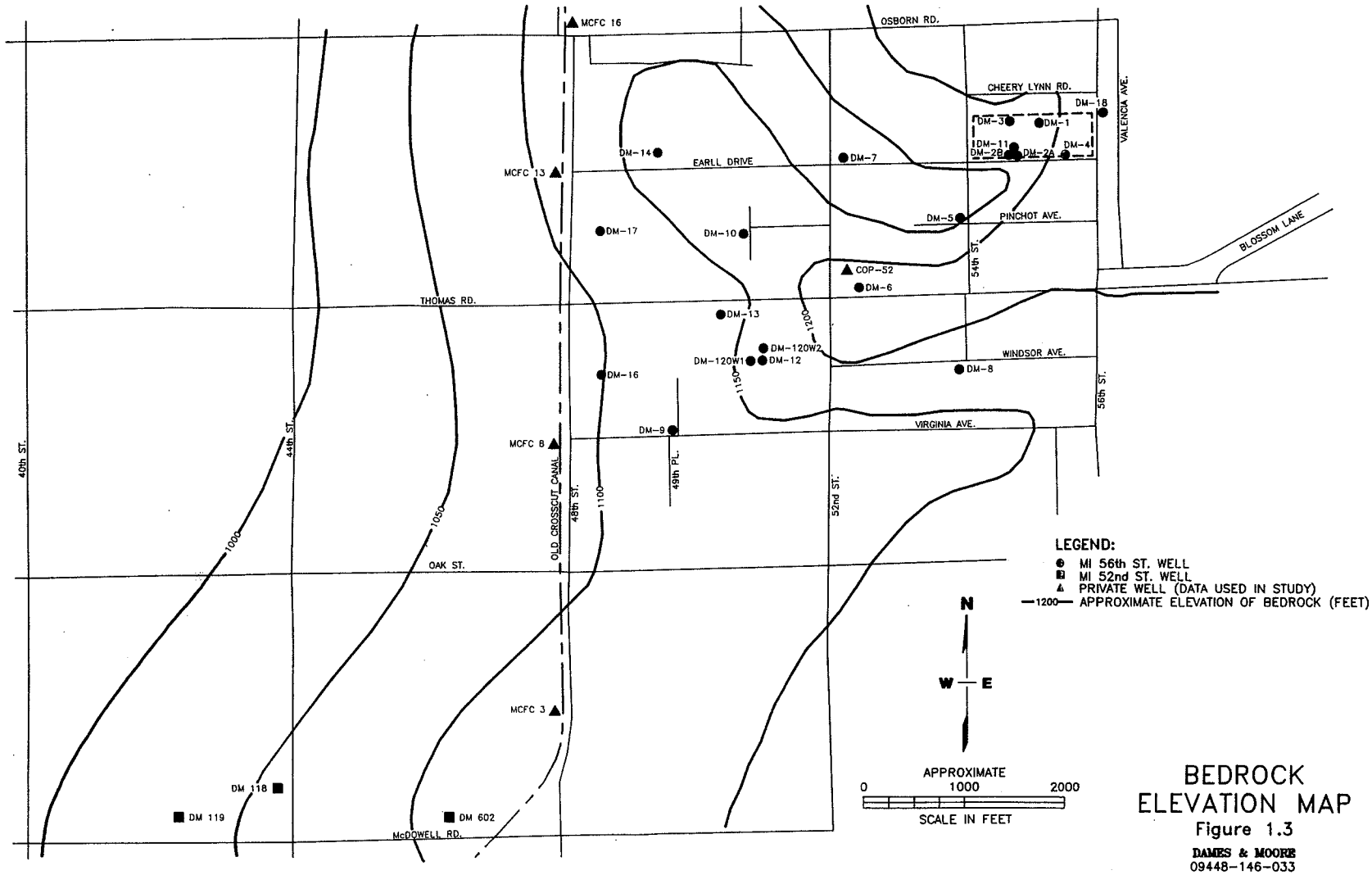
10/04/91

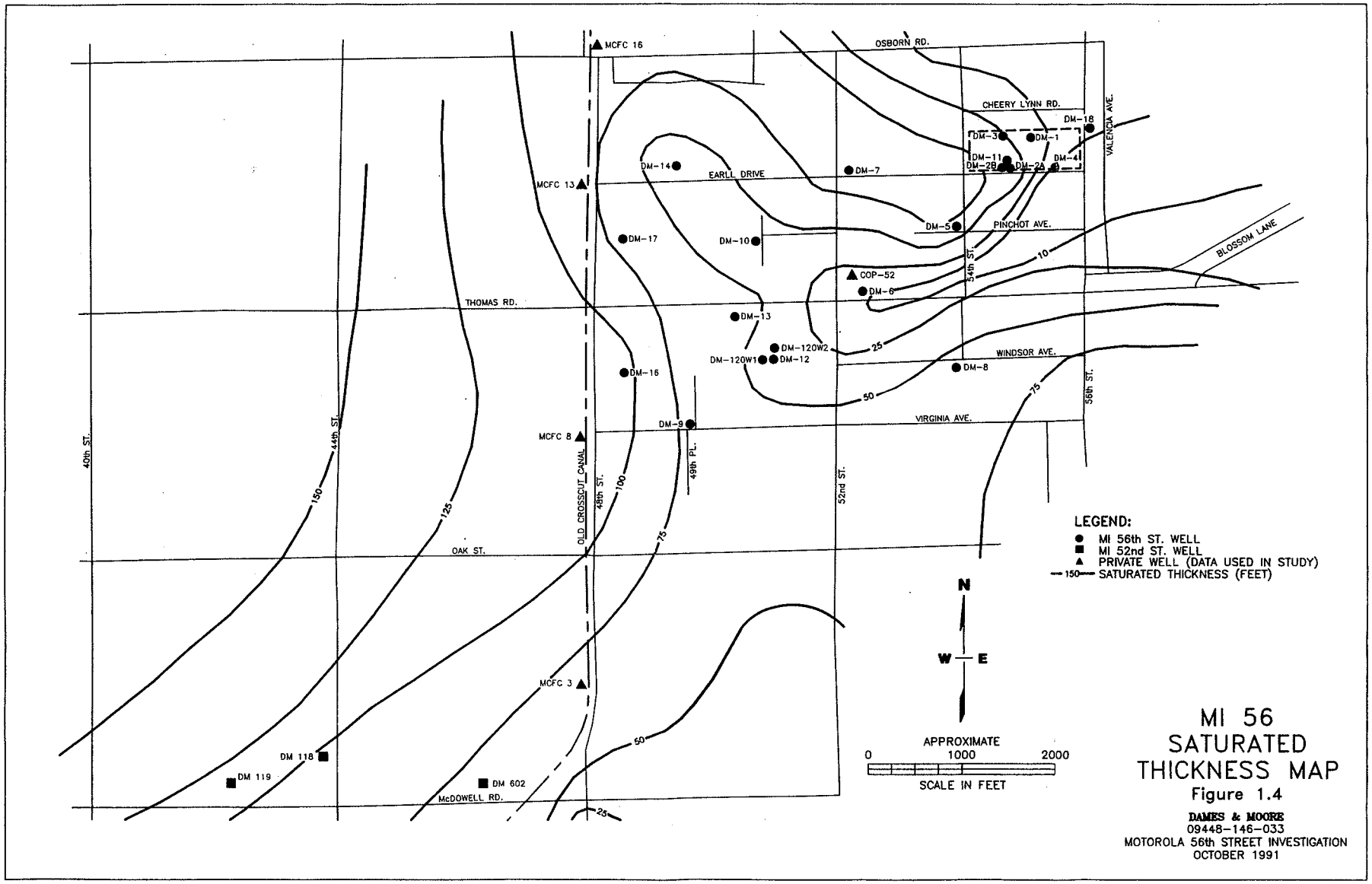


BEDROCK ELEVATION MAP

Figure 1.3

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

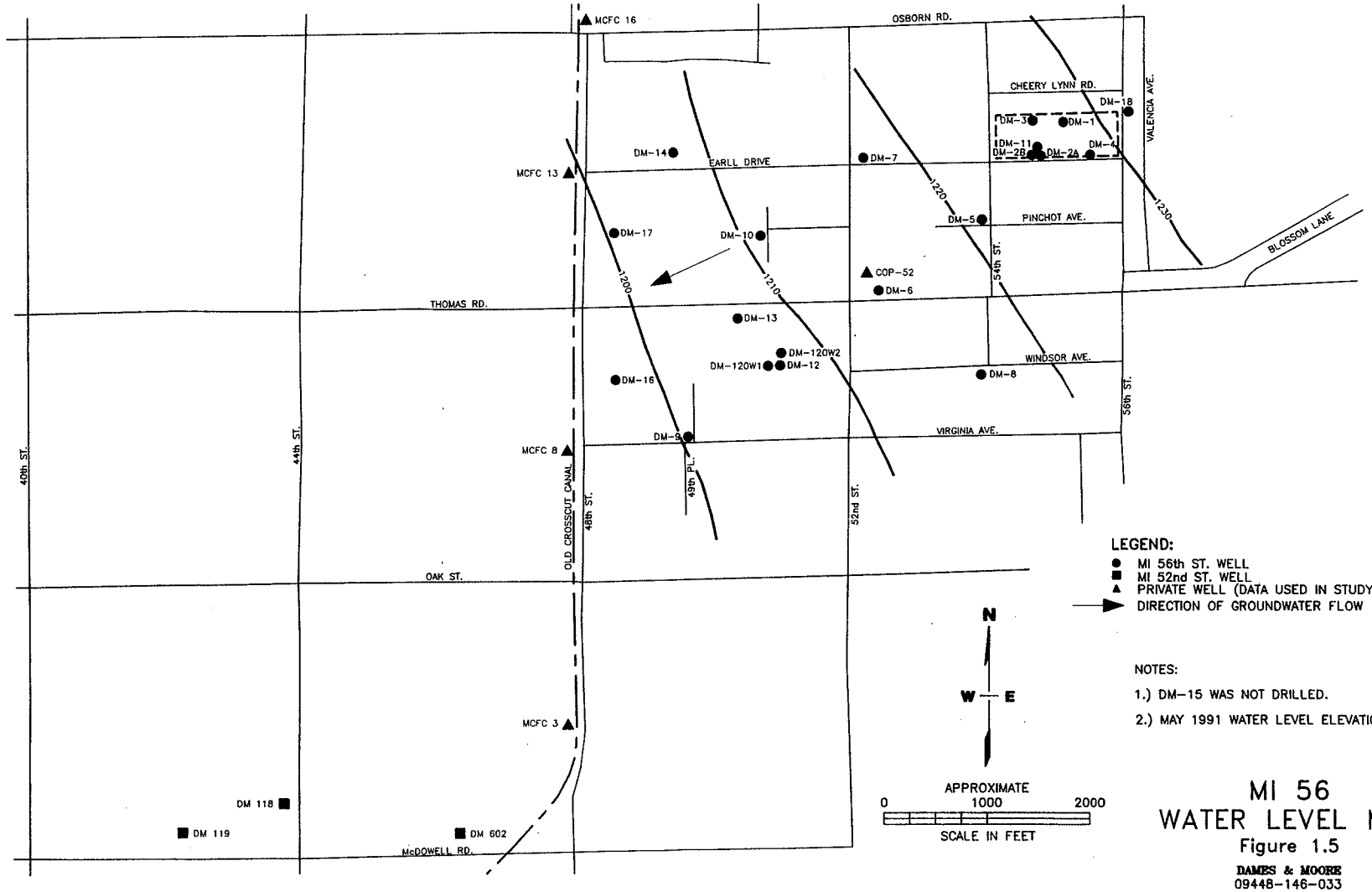
DRAFT
10/04/91



MI 56
SATURATED
THICKNESS MAP
Figure 1.4

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

DRAFT
10/04/91



NOTES:

1.) DM-15 WAS NOT DRILLED.

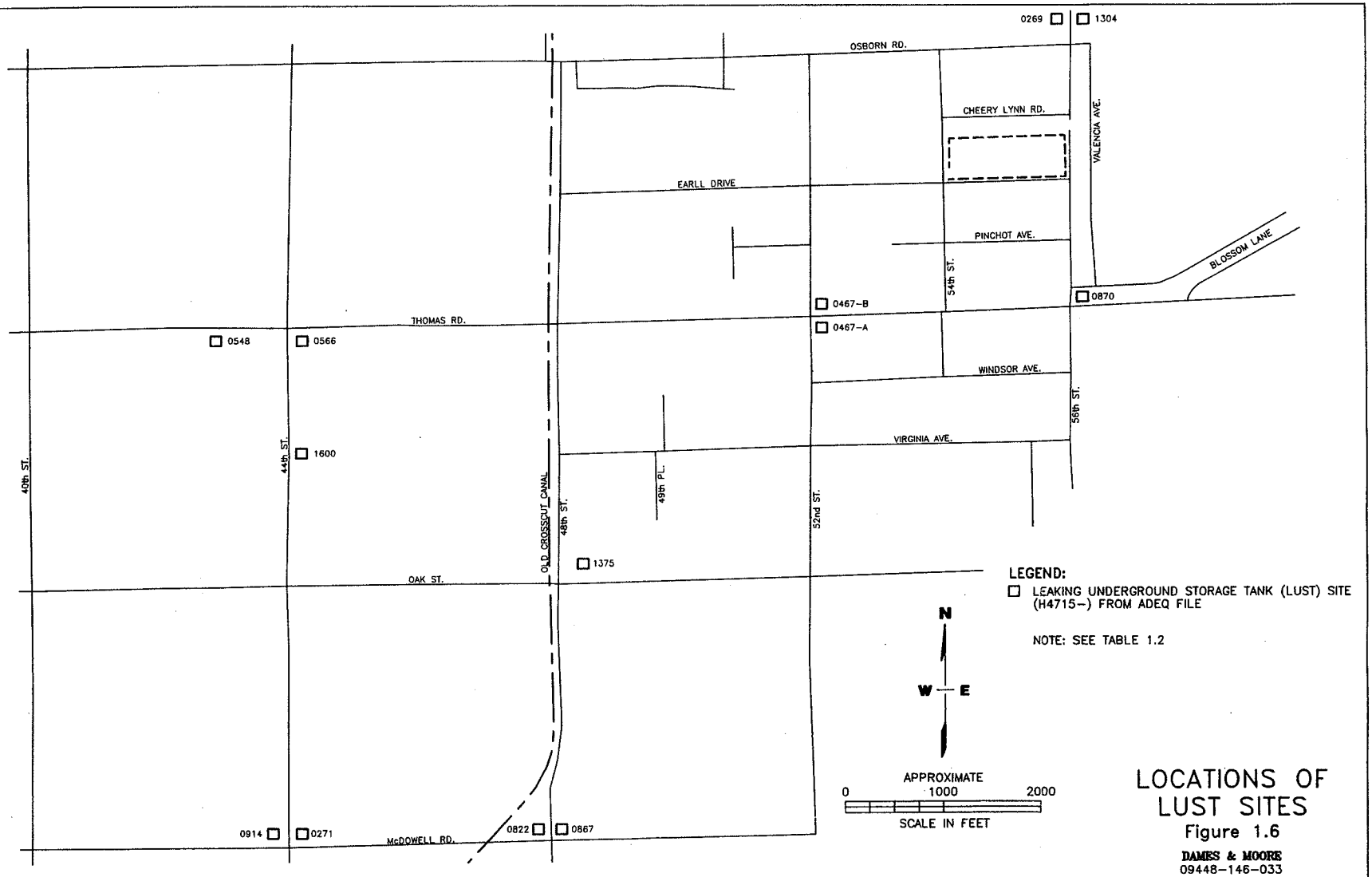
2.) MAY 1991 WATER LEVEL ELEVATIONS.

MI 56
WATER LEVEL MAP

Figure 1.5

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

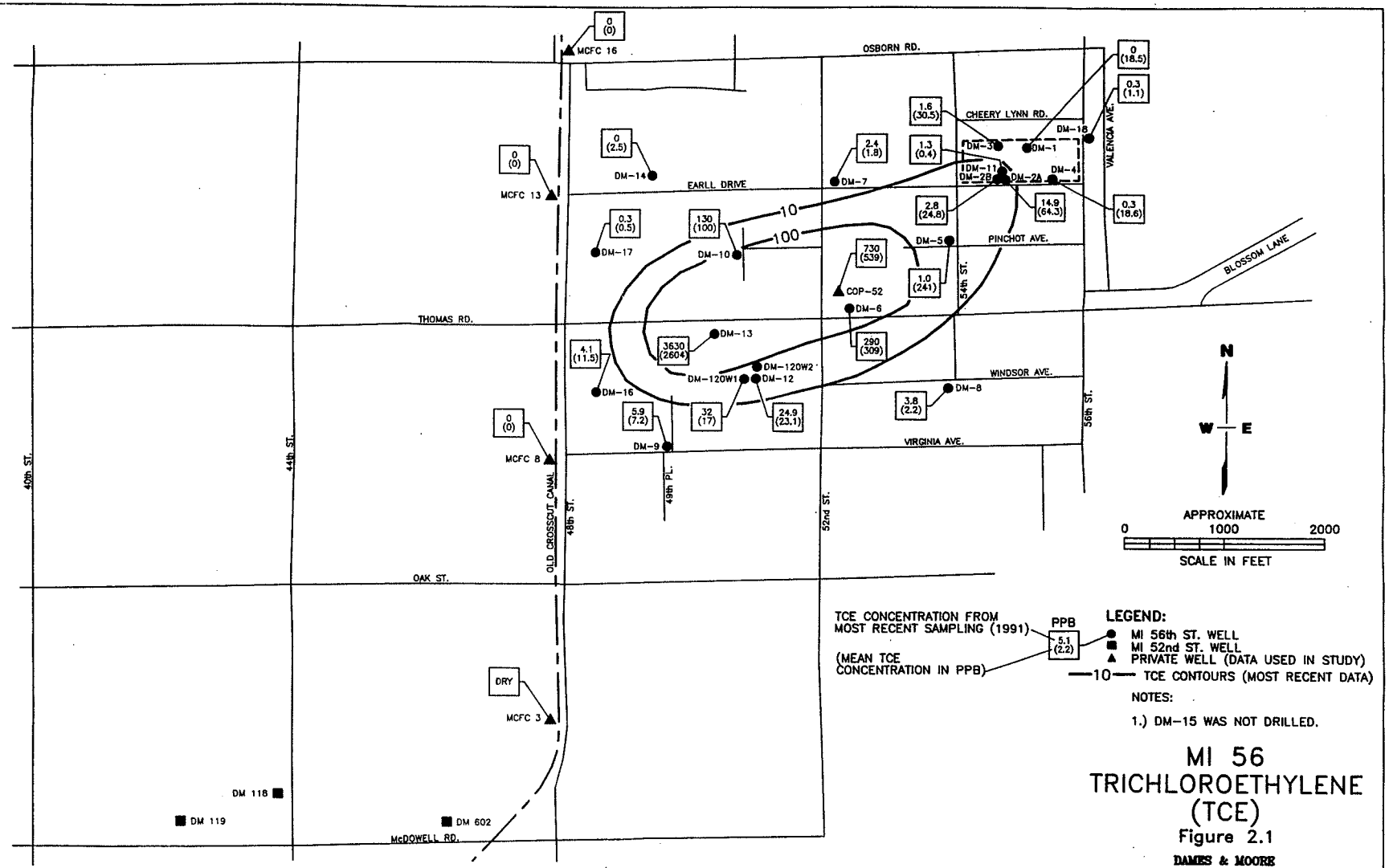
DRAFT
10/04/91



LOCATIONS OF LUST SITES
Figure 1.6

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

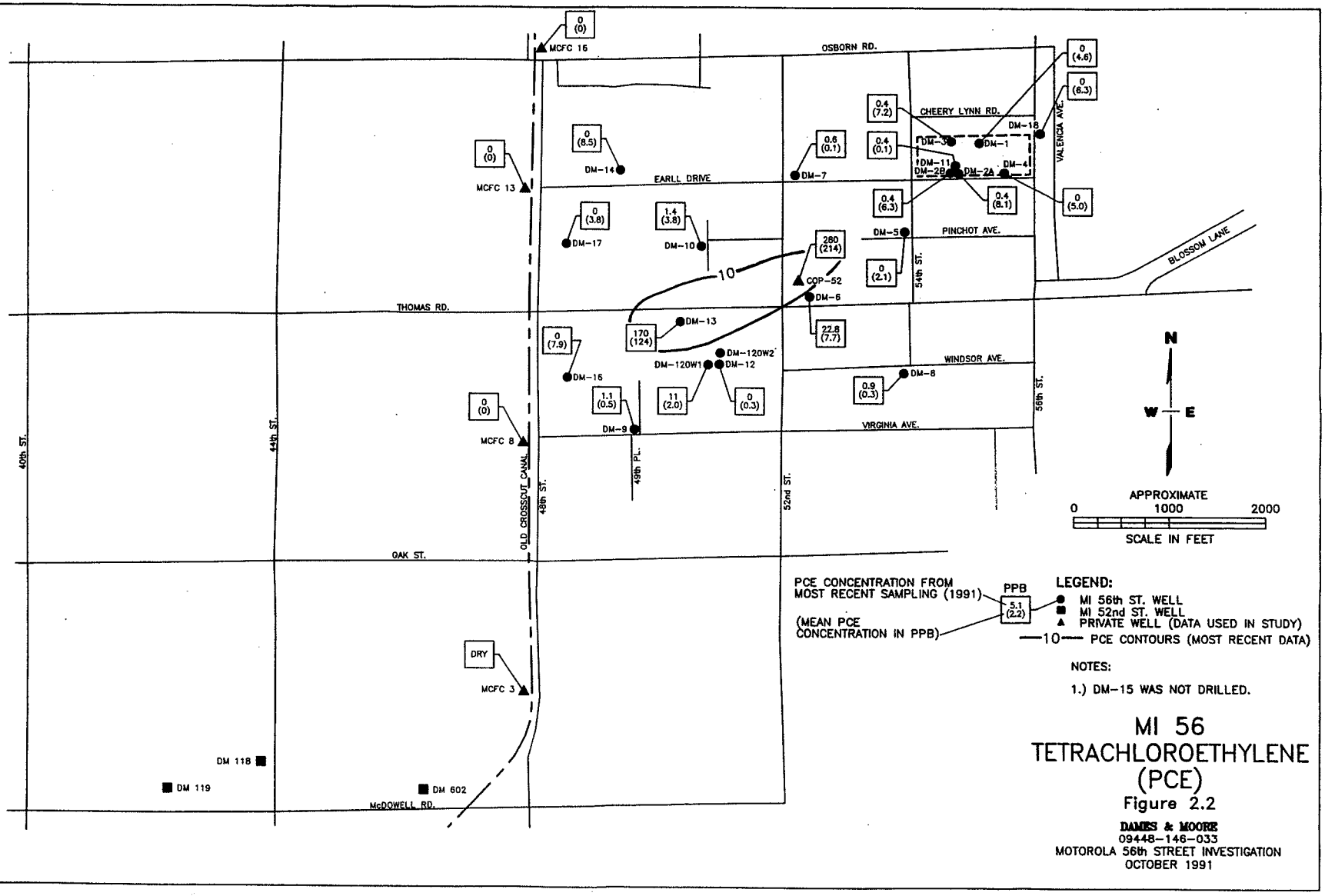
DRAFT
10/04/91



MI 56
TRICHLOROETHYLENE
(TCE)
Figure 2.1

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

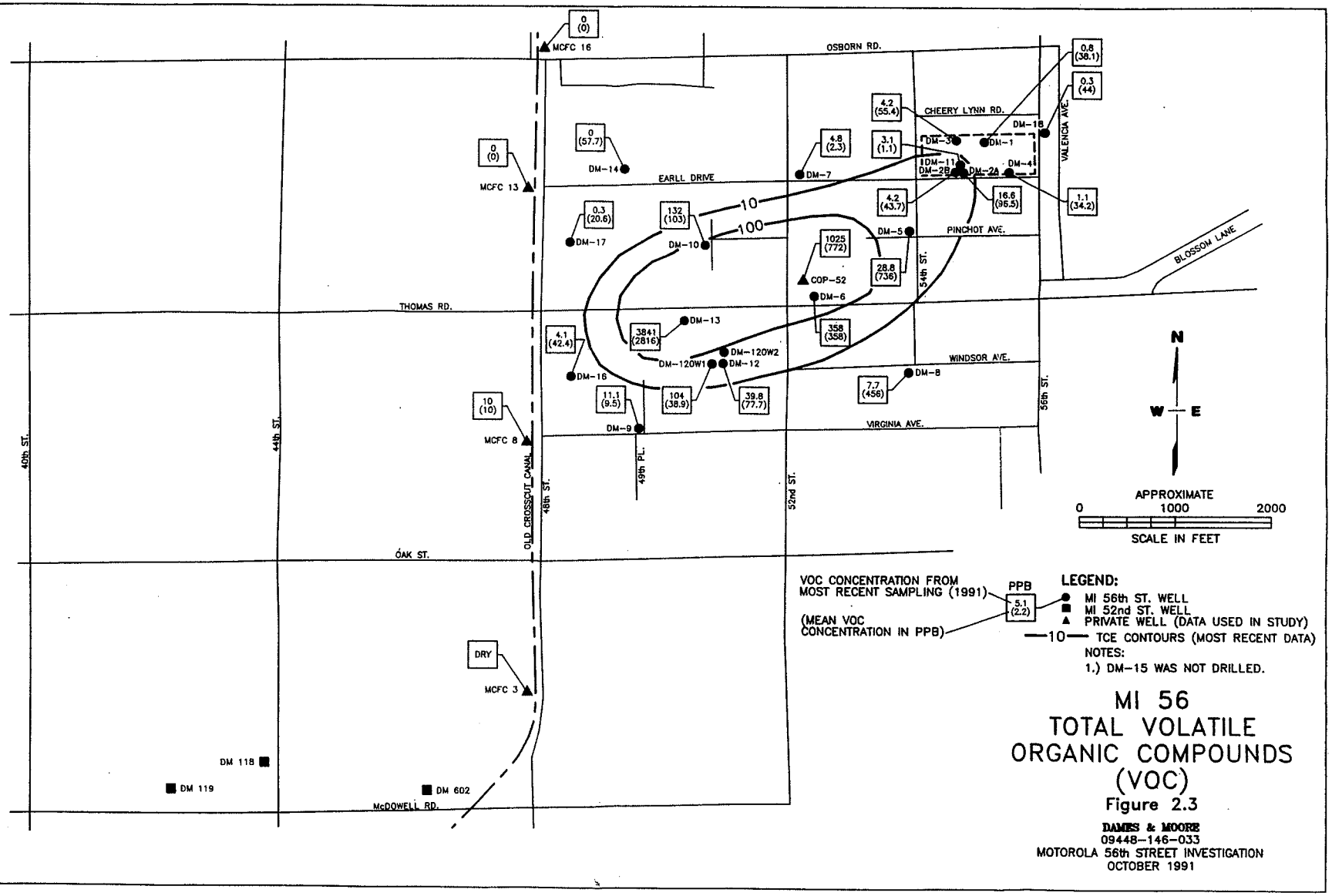
DRAFT
10/04/91



MI 56
TETRACHLOROETHYLENE
(PCE)
Figure 2.2

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

DRAFT
10/04/91

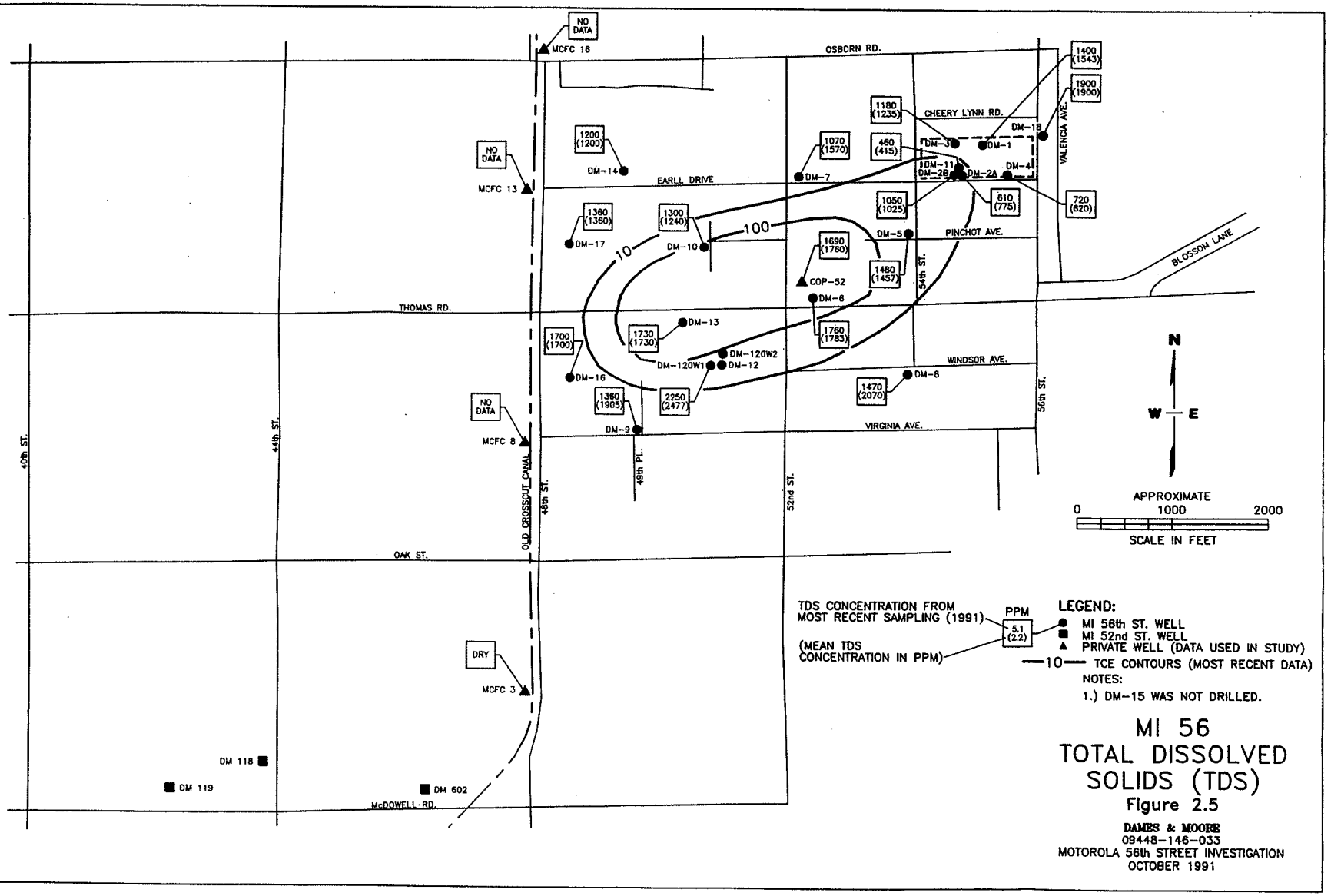


MI 56
TOTAL VOLATILE ORGANIC COMPOUNDS (VOC)

Figure 2.3

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

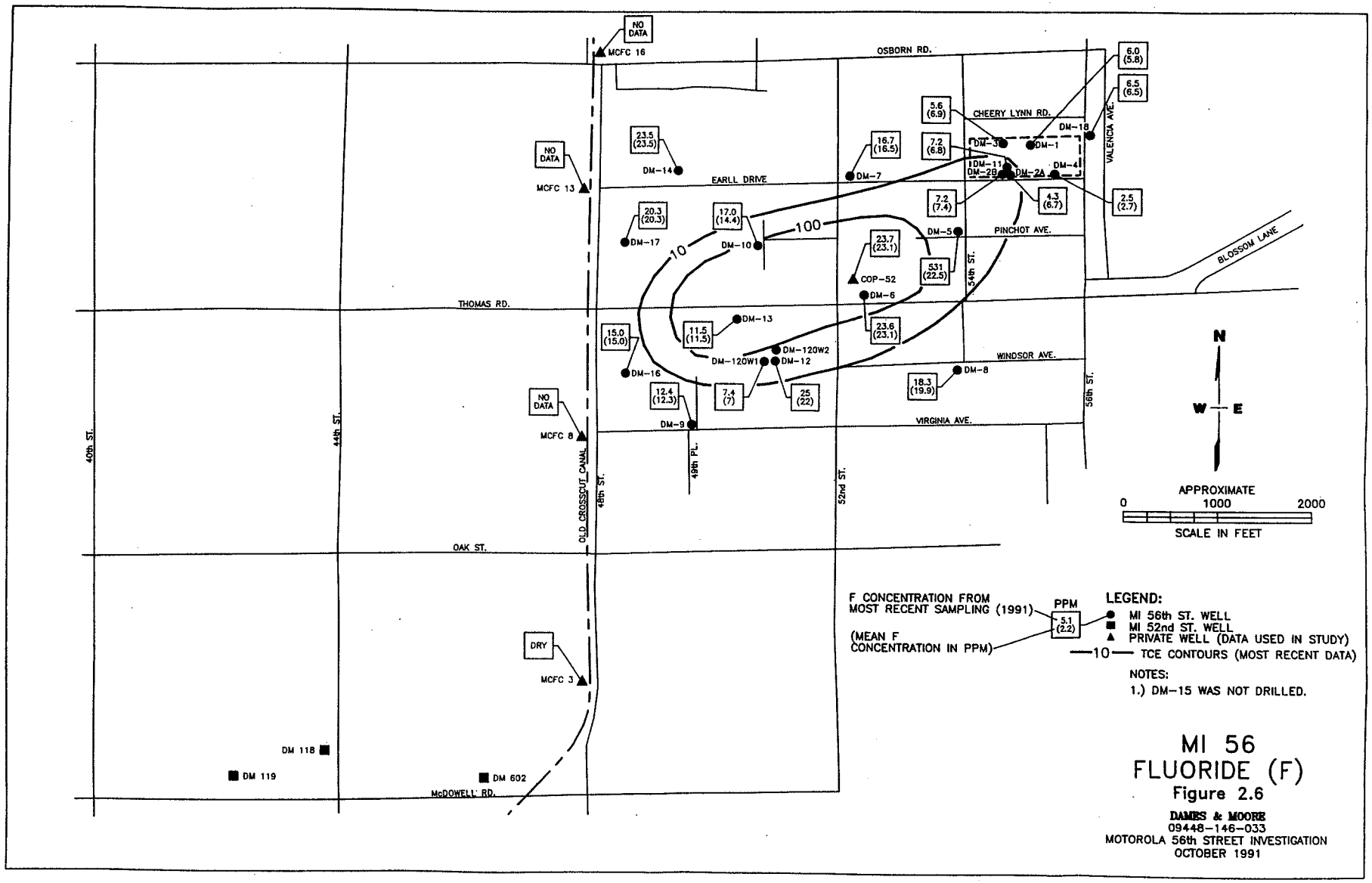
DRAFT
10/04/91



MI 56
TOTAL DISSOLVED SOLIDS (TDS)
Figure 2.5

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

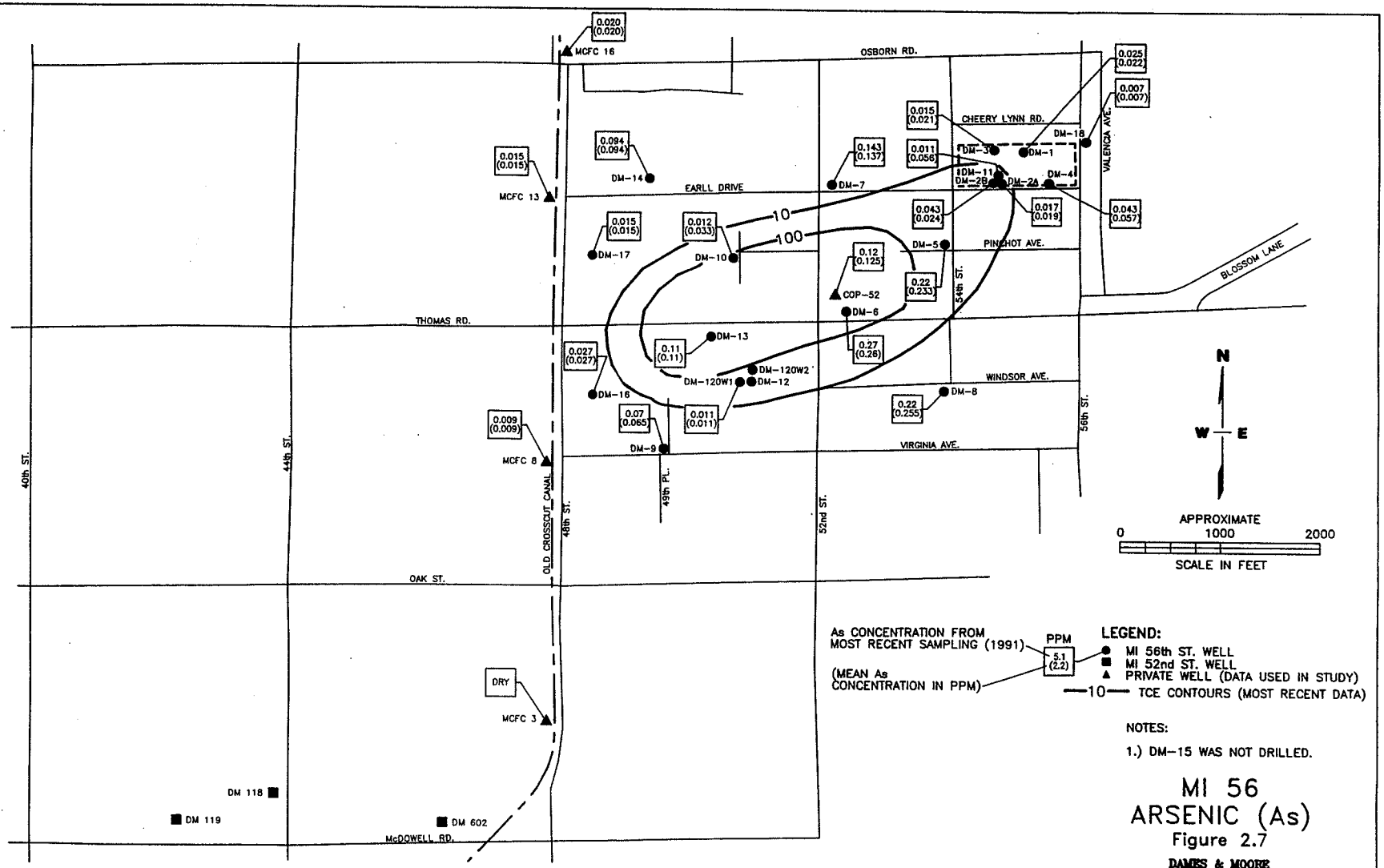
DRAFT
10/04/91



MI 56
FLUORIDE (F)
Figure 2.6

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

DRAFT
10/04/91



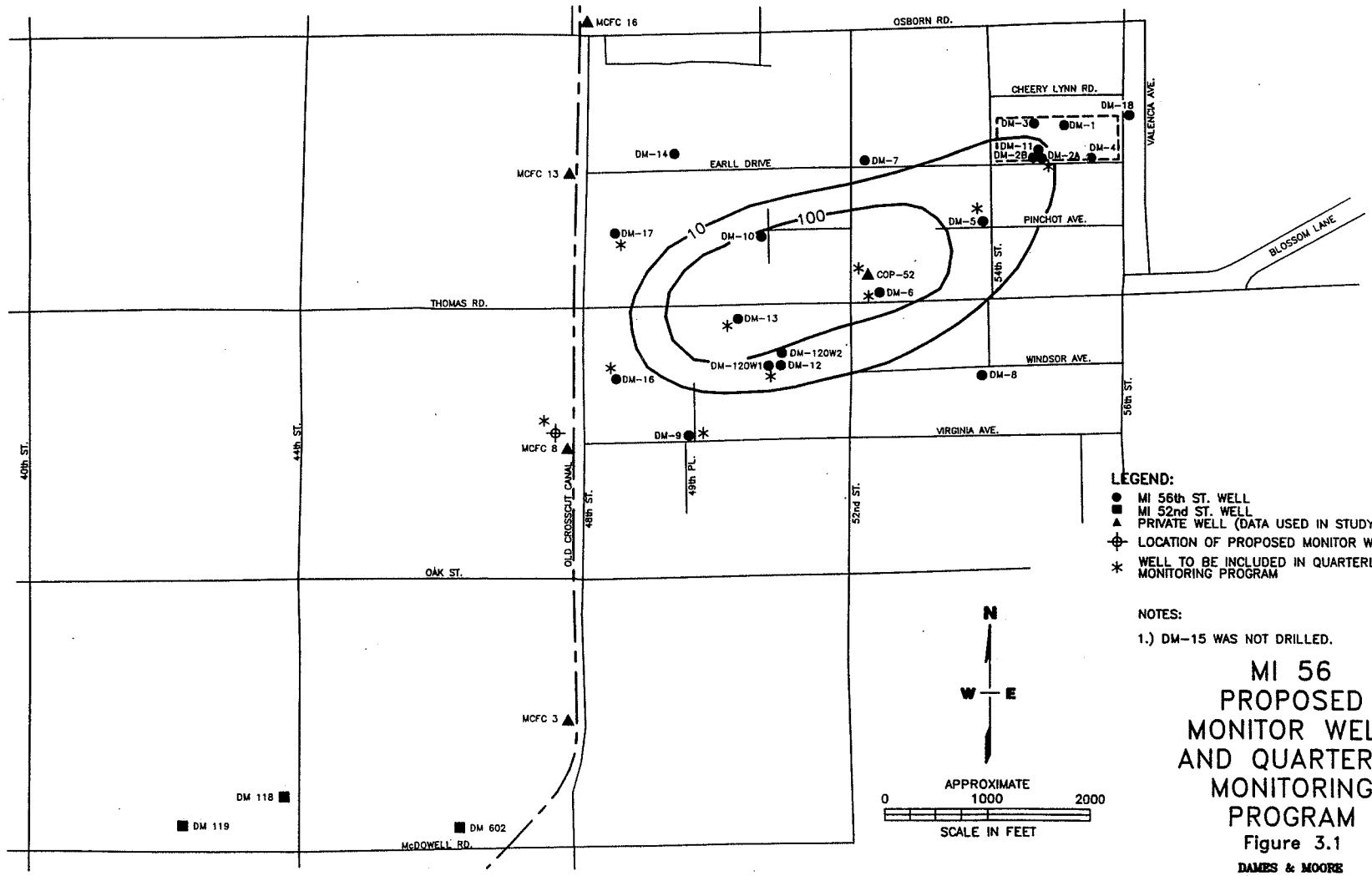
NOTES:

1.) DM-15 WAS NOT DRILLED.

MI 56
ARSENIC (As)
Figure 2.7

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

DRAFT
10/04/91



MI 56
PROPOSED
MONITOR WELL
AND QUARTERLY
MONITORING
PROGRAM
Figure 3.1

DAMES & MOORE
09448-146-033
MOTOROLA 56th STREET INVESTIGATION
OCTOBER 1991

ATTACHMENT E

Supplemental Investigations

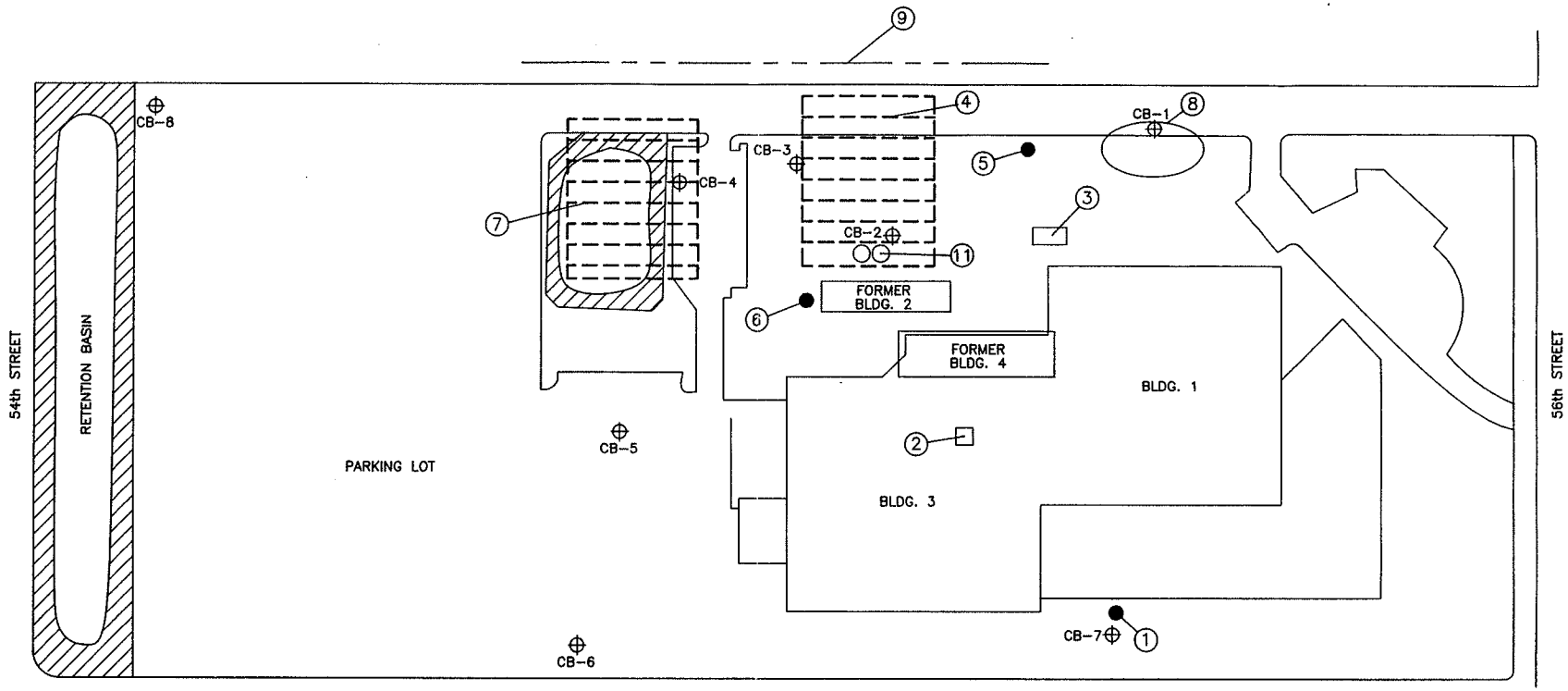
(selected pages of data tables and figures)

Registered Professional Engineer (Civil)
CERTIFICATE NO.
21450
JAMES
HUSSEY
2/24/93
Date Signed
ARIZONA, U.S.A.

DRAFT
ONSITE CONFIRMATION SOIL BORING INVESTIGATION REPORT
MOTOROLA 56TH ST. FACILITY
PHOENIX, ARIZONA
FOR
MOTOROLA INC.

DAMES & MOORE

D&M Job. No. 09448-146-033
February 26, 1993



POTENTIAL SOURCE NUMBER	METHOD OF DISPOSITION/TREATMENT	YEARS OF OPERATION	TYPE OF MATERIAL
1	DRY WELLS SOUTH OF BUILDING 1	1950–1962	SOLVENTS, METALS
2	DISCHARGE FROM ACID TREATMENT WEST OF BUILDING 1	1950–1953	METALS
3	GREASE PITS NORTH OF BUILDING 1	1950–1962	KITCHEN WASTE
4	SEWAGE LEACH FIELDS NORTH OF BUILDING 2	1950–1953	SOLVENTS, METALS
5	DRY WELLS EAST OF LEACH FIELDS	1950–1953	SOLVENTS, METALS
6	DRY WELLS WEST OF BUILDING 2	1954–1962	WASH WATER
7	SEWAGE LEACH FIELDS NORTHWEST OF BUILDING 3	1954–1972	SOLVENTS, METALS
8	SHALLOW HOLES NORTH OF BUILDING 1	1962–1974	SOLVENTS
9	CITY OF PHOENIX SEWER SYSTEM	1962–1982	
10	SOLVENT RECLAIM–FREON	1954–1982	FREON
11	SOLVENT SALVAGE	1972–1982	SOLVENTS

LEGEND:

⊕ SOIL BORING LOCATION
CB–1 BORING DESIGNATION

NOTES:

1. FIGURE ADOPTED FROM KARY (SEPTEMBER 1985) CHEMICAL DISPOSAL METHODS REPORT – MOTOROLA 56TH ST. FACILITY

N

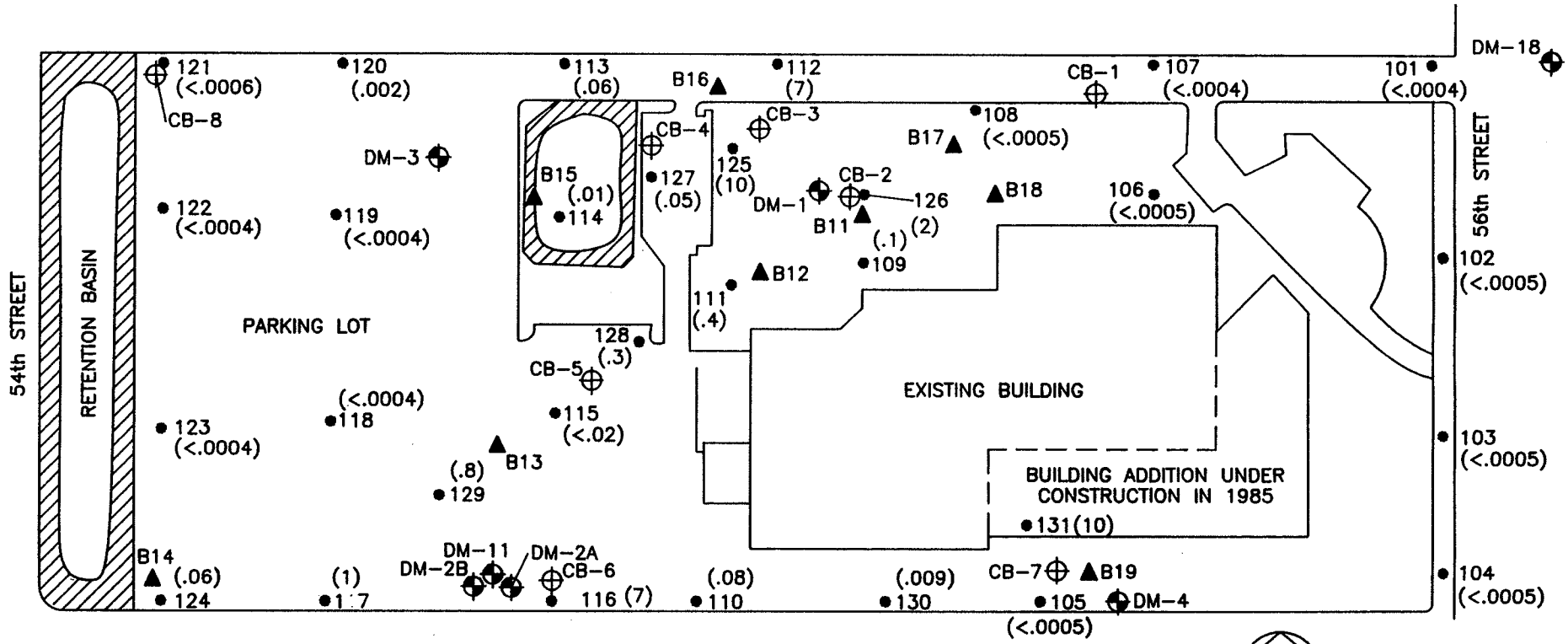
APPROXIMATE
0 100 200
SCALE IN FEET

LOCATIONS OF POSSIBLE DISCHARGE SITES

ONSITE SOIL BORING INVESTIGATION

Figure 1

MI 56TH ST. INVESTIGATION
FEBRUARY 1993



LEGEND:

- ● SOIL GAS PROBE LOCATION
- 128 PROBE DESIGNATION
- (.3) TCE SOIL GAS CONCENTRATION IN MICROGRAMS PER LITER (ug/l)
- ▲ SOIL BORING LOCATION
- B12 BORING DESIGNATION
- ⊕ MONITOR WELL LOCATION
- DM-1 WELL DESIGNATION
- ⊕ SOIL BORING LOCATION
- CB-1 BORING DESIGNATION

NOTES:

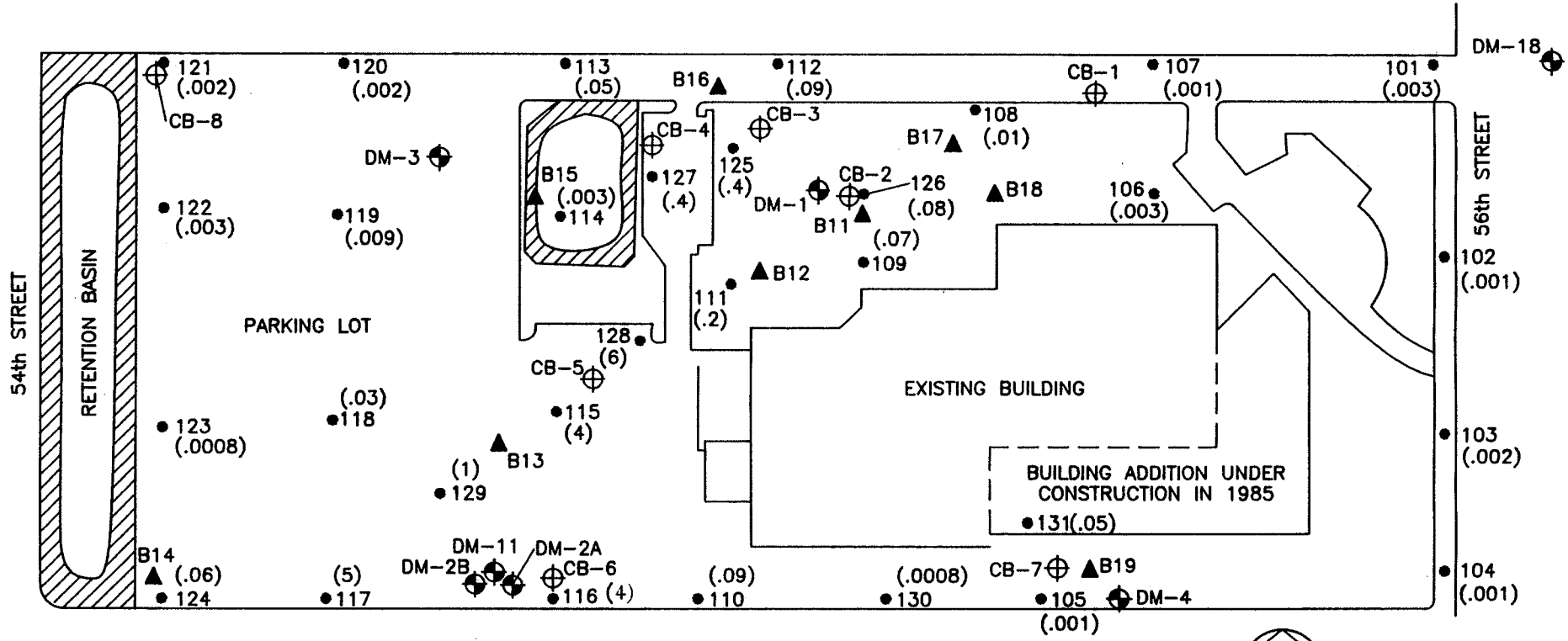
1. SOIL GAS SURVEY CONDUCTED BY TRACER RESEARCH MARCH 6-7, 1985.
2. <.0004 DENOTES SOIL GAS CONCENTRATION LESS THAN DETECTION LIMIT OF .0004 ug/l.
3. SOIL BORINGS DRILLED MARCH 28, 1985 TO APRIL 22, 1985.
4. MONITOR WELLS DM-1 THRU DM-4 INSTALLED MAY 21-31, 1985.
5. MONITOR WELL DM-11 INSTALLED SEPTEMBER 26, 1989.
6. MONITOR WELL DM-18 INSTALLED MARCH 29, 1991.

TCE CONCENTRATIONS IN SOIL GAS (ug/l)

ONSITE SOIL BORING INVESTIGATION

Figure 2

MI 56TH ST. INVESTIGATION
FEBRUARY 1993



LEGEND:

- ● SOIL GAS PROBE LOCATION
- 128 PROBE DESIGNATION
- 6 PCE SOIL GAS CONCENTRATION IN MICROGRAMS PER LITER (ug/l)
- ▲ SOIL BORING LOCATION
- B12 BORING DESIGNATION
- ⊕ MONITOR WELL LOCATION
- DM-1 WELL DESIGNATION
- ⊕ SOIL BORING LOCATION
- CB-1 BORING DESIGNATION

NOTES:

1. SOIL GAS SURVEY CONDUCTED BY TRACER RESEARCH MARCH 6-7, 1985.
2. <.0004 DENOTES SOIL GAS CONCENTRATION LESS THAN DETECTION LIMIT OF .0004 ug/l.
3. SOIL BORINGS DRILLED MARCH 28, 1985 TO APRIL 22, 1985.
4. MONITOR WELLS DM-1 THRU DM-4 INSTALLED MAY 21-31, 1985.
5. MONITOR WELL DM-11 INSTALLED SEPTEMBER 26, 1989.
6. MONITOR WELL DM-18 INSTALLED MARCH 29, 1991.

N

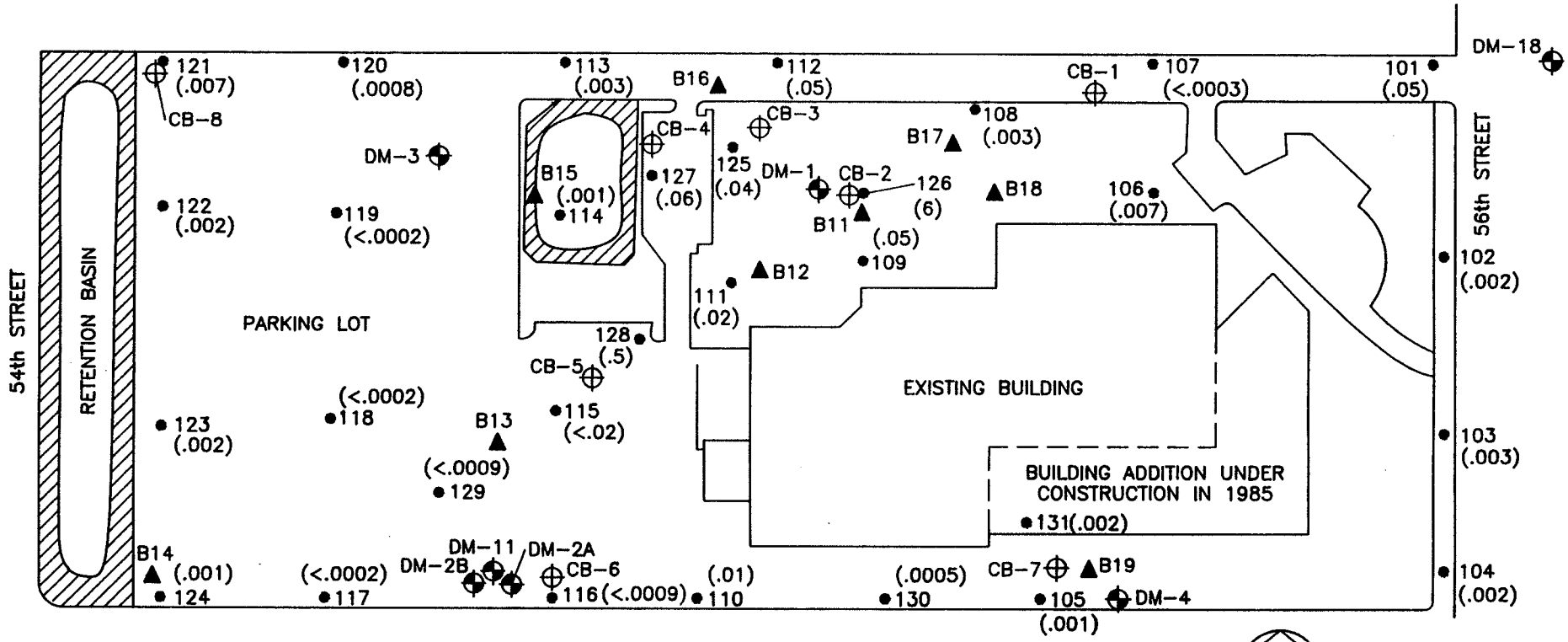
APPROXIMATE
0 150 300
SCALE IN FEET

PCE CONCENTRATIONS IN SOIL GAS (ug/l)

ONSITE SOIL BORING INVESTIGATION

Figure 3

MI 56TH ST. INVESTIGATION
FEBRUARY 1993



LEGEND:

- ● SOIL GAS PROBE LOCATION
- 128 PROBE DESIGNATION
- .5 TCA SOIL GAS CONCENTRATION IN MICROGRAMS PER LITER (ug/l)
- ▲ SOIL BORING LOCATION
- B12 BORING DESIGNATION
- ⊕ MONITOR WELL LOCATION
- DM-1 WELL DESIGNATION
- ⊕ SOIL BORING LOCATION
- CB-1 BORING DESIGNATION

NOTES:

1. SOIL GAS SURVEY CONDUCTED BY TRACER RESEARCH MARCH 6-7, 1985.
2. <.0004 DENOTES SOIL GAS CONCENTRATION LESS THAN DETECTION LIMIT OF .0004 ug/l.
3. SOIL BORINGS DRILLED MARCH 28, 1985 TO APRIL 22, 1985.
4. MONITOR WELLS DM-1 THRU DM-4 INSTALLED MAY 21-31, 1985.
5. MONITOR WELL DM-11 INSTALLED SEPTEMBER 26, 1989.
6. MONITOR WELL DM-18 INSTALLED MARCH 29, 1991.

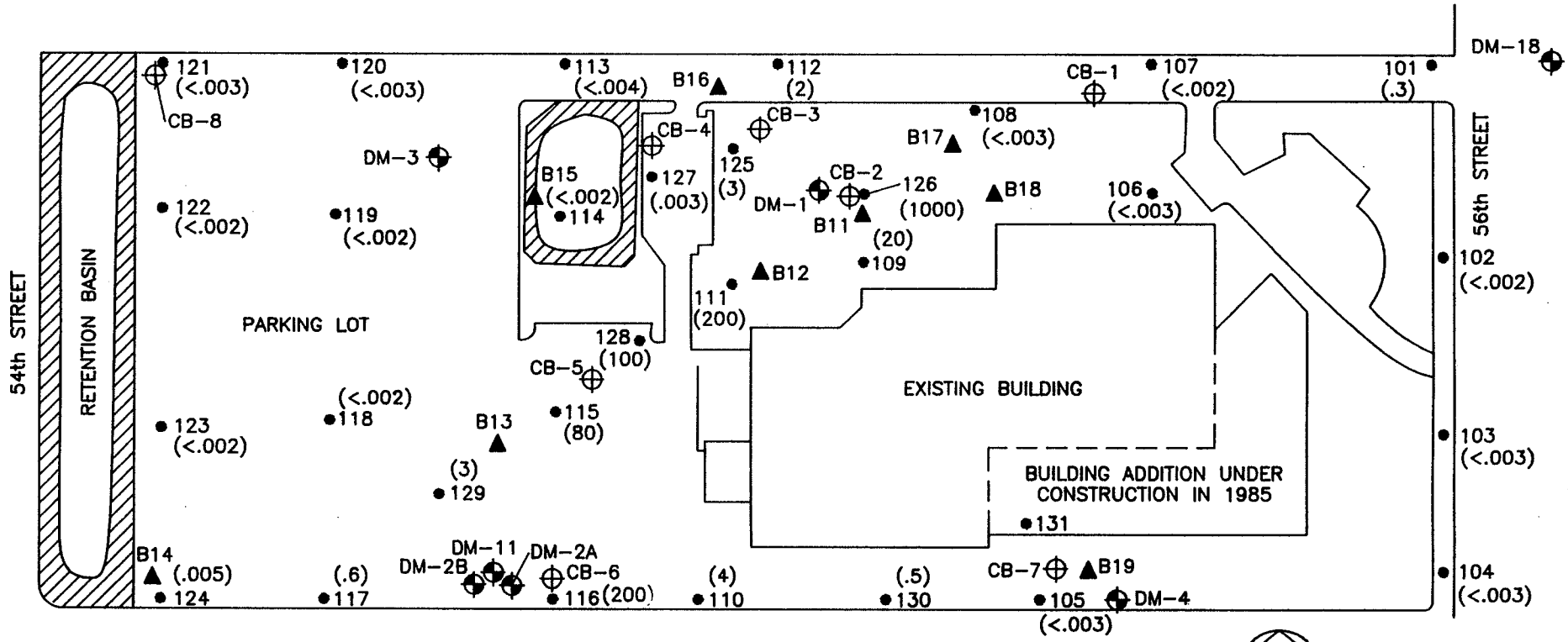
APPROXIMATE
0 150 300
SCALE IN FEET

TCA CONCENTRATIONS IN SOIL GAS (ug/l)

ONSITE SOIL BORING INVESTIGATION

Figure 4

MI 56TH ST. INVESTIGATION
FEBRUARY 1993



LEGEND:

- ● SOIL GAS PROBE LOCATION
- 128 PROBE DESIGNATION
- .5 FREON-113 SOIL GAS CONCENTRATION IN MICROGRAMS PER LITER (ug/l)
- ▲ SOIL BORING LOCATION
- B12 BORING DESIGNATION
- ⊕ MONITOR WELL LOCATION
- DM-1 WELL DESIGNATION
- ⊕ SOIL BORING LOCATION
- CB-1 BORING DESIGNATION

NOTES:

1. SOIL GAS SURVEY CONDUCTED BY TRACER RESEARCH MARCH 6-7, 1985.
2. <.0004 DENOTES SOIL GAS CONCENTRATION LESS THAN DETECTION LIMIT OF .0004 ug/l.
3. SOIL BORINGS DRILLED MARCH 28, 1985 TO APRIL 22, 1985.
4. MONITOR WELLS DM-1 THRU DM-4 INSTALLED MAY 21-31, 1985.
5. MONITOR WELL DM-11 INSTALLED SEPTEMBER 26, 1989.
6. MONITOR WELL DM-18 INSTALLED MARCH 29, 1991.

FREON-113 CONCENTRATIONS IN SOIL GAS (ug/l)

ONSITE SOIL BORING INVESTIGATION

Figure 5

MI 56TH ST. INVESTIGATION
FEBRUARY 1993

Registered Professional Engineer (Civil)
CERTIFICATE NO.
21450
JAMES R.
KUSSEY
Date Signed 5/26/95
ARIZONA, U. S. A.

REPORT
SOIL-GAS INVESTIGATION
MOTOROLA 56TH ST. FACILITY
PHOENIX, ARIZONA

DAMES & MOORE

D&M Job No. 09448-169-033
May 1995

Table 1

VOC CONCENTRATION AND DETECTION LIMIT RANGES

	Maximum Concentrations (µg/l)				Detection Limit Concentration Ranges (µg/l)			
	TCE	PCE	TCA	F-113	TCE	PCE	TCA	F-113
1985 Soil Gas Investigation	59	7	6	1000	0.0004-0.003	0.0001-0.001	0.00002-0.02	0.001-0.005
1993 Soil Gas Investigation	200	120,000	0.2	1	0.008-0.07	0.004-0.04	0.003-0.08	0.0005-0.01

TABLE 2

1993 SOIL-GAS INVESTIGATION RESULTS

Sample ID	Date Sampled in 8/93	TCE	PCE	TCA	F-113	Benzene	Toluene	Ethylbenzene	Xylenes	TVHC
169-1-5'	8/10	<0.01	0.1	<0.004	<0.005	<0.2	<0.3	<0.5	<0.8	1
169-1-5' REP	8/10	<0.01	0.1	<0.004	<0.005	<0.2	<0.3	<0.5	<0.8	1
169-2-5'	8/3	<0.04	<0.02	<0.04	<0.06	<0.1	<0.2	<0.3	<0.4	2
169-3-5'	8/2	1	120000	0.004	0.03	<26	<0.2	<0.3	<0.4	71*
169-4-5'	8/3	<0.04	0.02	<0.04	0.2	<0.2	<0.4	<0.7	<1	3
169-5-5'	8/3	<0.04	<0.02	<0.04	<0.06	<0.2	<0.4	<0.7	<1	3
169-6-5'	8/2	<0.08	0.02	<0.08	<0.1	<0.1	<0.2	<0.3	<0.4	5
169-7-5'	8/5	<0.05	0.03	<0.02	<0.03	<0.2	<0.4	<0.6	<0.8	4
169-8-5'	8/6	<0.02	<0.008	<0.007	<0.01	<0.4	<0.6	<1	<1	<1
169-9-5'	8/6	<0.02	<0.008	<0.007	<0.01	<0.2	<0.3	<0.5	<0.7	<1
169-10-5'	8/10	<0.01	<0.004	<0.004	<0.005	<0.2	<0.3	<0.5	<0.8	0.8
169-11-5'	8/5	<0.05	0.2	<0.02	<0.03	<0.2	<0.4	<0.6	<0.8	4
169-12-5'	8/5	<13000	10000	<4600	<8300	<89	<140	<240	<330	4100*
169-12-5' REP	8/5	520	9100	<180	<330	INT	<140	<240	<330	4400*
169-12A-5'	8/9	<11000	19000	<3900	<7200	<91	<130	<200	<310	3400*
169-12A-10'	8/9	<23000	48000	<7800	<14000	<91	<130	<200	<310	9700*
169-13-5'	8/5	<520	3200	<180	<330	<89	<140	<240	<330	950*
169-13-5' REP	8/5	<260	3200	<91	<160	<44	<72	<120	<160	940*

TABLE 2 (Continued)

Sample ID	Date Sampled in 8/93	TCE	PCE	TCA	F-113	Benzene	Toluene	Ethylbenzene	Xylenes	TVHC
169-13A-5'	8/9	<450	2800	<160	<290	<23	<22	<34	<52	830*
169-14-5'	8/5	<0.05	2	<0.02	<0.03	<0.9	<1	<2	<3	5
169-14A-5'	8/10	<1	6	<0.4	<0.5	<2	<0.3	<0.5	<0.8	2*
169-15-5'	8/12	<0.008	0.05	0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.6
169-15-5' REP	8/12	<0.008	0.04	0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.5
169-16-5'	8/10	<0.01	0.5	0.006	<0.005	<0.2	<0.3	<0.5	<0.8	0.5
169-17-5'	8/6	0.07	6	<0.01	<0.02	<3	<0.3	<0.5	<0.7	4*
169-17A-10'	8/10	<1	15	<0.4	<0.5	<3	<0.3	<0.5	<0.8	4*
169-18-4.5'	8/6	0.02	0.6	0.007	<0.01	<0.2	<0.3	<0.5	<0.7	0.7
169-19-5'	8/6	<0.02	0.01	0.007	<0.01	<0.2	<0.3	<0.5	<0.7	0.9
169-20-5'	8/6	0.4	0.08	0.007	0.05	<0.2	<0.3	<0.5	<0.7	1
169-21-5'	8/10	130	4	<1	<2	<0.9	<1	<2	<3	77*
169-21A-10'	8/11	200	4	<1	<2	<0.9	<1	<2	<3	38*
169-21A-5'	8/11	200	4	<1	<2	<0.9	<1	<2	<3	62*
169-22-5'	8/10	<0.01	<0.004	<0.004	<0.005	<0.2	<0.3	<0.5	<0.8	0.7
169-23-5'	8/10	<0.01	<0.004	<0.004	<0.005	<0.2	<0.3	<0.5	<0.8	0.9
169-24-5'	8/6	0.02	0.008	<0.007	<0.01	<0.2	<0.3	<0.5	<0.7	<1
169-25-5'	8/6	<0.04	0.02	<0.01	0.08	<0.2	<0.3	<0.5	<0.7	1
169-25-5' REP	8/6	<0.02	0.02	<0.007	0.08	<0.2	<0.3	<0.5	<0.7	1

TABLE 2 (Continued)

Sample ID	Date Sampled in 8/93	TCE	PCE	TCA	F-113	Benzene	Toluene	Ethylbenzene	Xylenes	TVHC
169-26-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2
169-27-5'	8/10	<0.02	0.08	0.08	<0.01	<0.2	<0.3	<0.5	<0.8	1
169-28-5'	8/12	<0.008	<0.004	0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.6
169-29-5'	8/9	0.2	0.01	<0.004	<0.007	<0.2	<0.3	<0.5	<0.8	1
169-30-5'	8/6	5	0.5	<0.007	1	<0.2	<0.3	<0.5	<0.7	3*
169-30-5' REP	8/6	5	0.4	<0.1	1	<0.2	<0.3	<0.5	<0.7	3*
169-31-5	8/6	<0.02	0.03	<0.007	<0.01	<0.2	<0.3	<0.5	<0.7	1
169-32-4.5'	8/11	<0.008	0.005	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.8
169-33-5'	8/9	<0.01	0.01	<0.004	<0.007	<0.2	<0.3	<0.5	<0.8	1
169-34-5'	8/9	1	1	<0.004	<0.007	<0.3	<0.3	<0.5	<0.8	2
169-35-5'	8/9	0.01	0.08	<0.004	<0.007	<0.2	<0.3	<0.5	<0.8	1
169-35-5' REP	8/9	0.01	0.08	<0.004	<0.007	<0.2	<0.3	<0.5	<0.8	1
169-36-4.5'	8/9	0.2	0.04	<0.004	0.04	<0.2	<0.3	<0.5	<0.8	0.8
169-37-5'	8/10	<0.01	0.005	0.02	<0.005	<0.2	<0.3	<0.5	<0.8	0.6
169-38-5'	8/12	<0.008	0.005	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.7
169-39-5'	8/10	<0.01	<0.004	<0.004	<0.005	<0.2	<0.3	<0.5	<0.8	1
169-40-5'	8/2	0.08	0.02	<0.08	<0.1	<0.2	<0.4	<0.7	<1	4
169-41-5'	8/9	0.6	0.06	<0.008	<0.01	<0.4	<0.7	<1	<2	4
169-42-5'	8/11	<0.008	0.004	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.8

TABLE 2 (Continued)

Sample ID	Date Sampled in 8/93	TCE	PCE	TCA	F-113	Benzene	Toluene	Ethylbenzene	Xylenes	TVHC
169-43-5'	8/9	<0.01	<0.004	<0.004	<0.007	<0.2	<0.3	<0.5	<0.8	0.4
169-44-5'	8/9	52	6	<0.8	<1	<0.3	<0.3	<0.5	<0.8	4
169-45-5'	8/3	7	4	<0.04	0.1	<0.5	<0.9	<1	<2	6*
169-45-5' REP	8/3	7	4	<4	<6	NA	NA	NA	NA	NA
169-46-5'	8/2	1	0.1	0.08	0.1	<0.2	<0.4	<0.7	<1	4*
169-47-5'	8/3	<0.07	<0.04	<0.07	<0.1	<50	<86	<140	<200	5300
169-47-5' REP	8/3	<0.04	<0.02	<0.04	<0.06	<10	<17	<29	79	5400
169-48-5'	8/3	<0.07	0.04	0.2	<0.1	<1	<2	<3	<4	3
169-48-5' REP	8/3	<0.04	0.04	0.2	<0.06	<0.2	<0.4	<0.7	<1	2
169-49-5'	8/3	<0.04	0.02	<0.04	0.08	<0.2	<0.4	<0.7	<1	4
169-50-4.5'	8/11	0.3	0.01	0.01	<0.004	<0.2	<0.3	<0.5	<0.8	0.6
169-50-4.5' REP	8/11	0.3	0.01	0.01	<0.004	<0.2	<0.3	<0.5	<0.8	#0.7
169-51-5'	8/3	<0.04	0.02	0.06	0.08	<0.2	<0.4	<0.7	<1	3
169-52-5'	8/9	0.4	<0.009	<0.008	<0.01	<0.2	<0.3	<0.5	<0.8	0.8
169-53-5'	8/9	<0.01	<0.004	<0.004	<0.007	<0.2	<0.3	<0.5	<0.8	0.4
169-54-5'	8/12	<0.008	<0.004	0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.9
169-55-4.5'	8/11	0.03	0.02	0.006	<0.004	<0.2	<0.3	<0.5	<0.8	2
169-56-5'	8/11	0.01	0.02	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.8
169-57-5'	8/11	<0.008	<0.004	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.5

TABLE 2 (Continued)

Sample ID	Date Sampled in 8/93	TCE	PCE	TCA	F-113	Benzene	Toluene	Ethylbenzene	Xylenes	TVHC
169-58-5'	8/12	<0.008	0.006	0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.6
169-59-5'	8/11	<0.008	0.01	0.02	<0.004	<0.2	<0.3	<0.5	<0.8	0.8
169-60-5'	8/3	<0.04	0.02	<0.04	0.06	<0.2	<0.4	<0.7	<1	3
169-61-5'	8/11	<0.008	0.02	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.4
169-62-5'	8/12	<0.008	<0.004	0.2	<0.004	<0.2	<0.3	<0.5	<0.8	4
169-63-5'	8/12	<0.008	0.02	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.7
169-64-5'	8/11	<0.008	<0.004	0.004	<0.004	<0.2	<0.3	<0.5	<0.8	0.4
169-64-5' REP	8/11	<0.008	<0.004	0.004	<0.004	<0.2	<0.3	<0.5	<0.8	0.5
169-65-5.5'	8/2	<0.08	0.02	<0.08	<0.1	<0.1	<0.2	<0.3	<0.4	2
169-66-4.5'	8/11	<0.008	<0.004	<0.003	<0.004	<0.2	<0.3	<0.5	<0.8	0.3
169-67-5'	8/12	<0.008	<0.004	0.003	<0.004	<0.2	<0.3	<0.5	<0.8	1
169-68-5'	8/3	<0.04	<0.02	<0.04	<0.06	<0.2	<0.4	<0.7	<1	2
169-69-5'	8/3	<0.04	0.02	<0.04	1	<0.5	<0.9	<1	<2	4
169-70-5'	8/3	<0.04	<0.02	<0.04	<0.06	<0.2	<0.4	<0.7	<1	2
169-71-5'	8/2	<0.08	<0.02	<0.08	<0.1	<0.2	<0.4	<0.7	<1	4
169-72-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2
169-73-5'	8/2	<0.08	0.02	<0.08	<0.1	<0.1	<0.2	<0.3	<0.4	2
168-74-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2
169-75-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2

TABLE 2 (Continued)

Sample ID	Date Sampled in 8/93	TCE	PCE	TCA	F-113	Benzene	Toluene	Ethylbenzene	Xylenes	TVHC
169-76-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2
169-77-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2
169-78-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	1
169-79-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	4
169-79-5' REP	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	5
169-80-5	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	2
169-81-5'	8/2	<0.08	0.03	<0.08	<0.1	<0.1	<0.2	<0.3	<0.4	2
169-82-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	0.9
169-83-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	1
169-84-5'	8/4	<0.04	<0.02	<0.03	<0.06	<0.2	<0.4	<0.7	<1	1
169-85-5'	8/11	<0.02	0.4	0.01	0.009	<0.2	<0.3	<0.5	<0.8	1

* TVHC concentration appears to contain PCE
INT = Interference
NA = Not analyzed
\# = Indicates change from field data
REP = Replicate (or duplicate) obtained every 10 samples, generally. Highest value was plotted.

Table 3

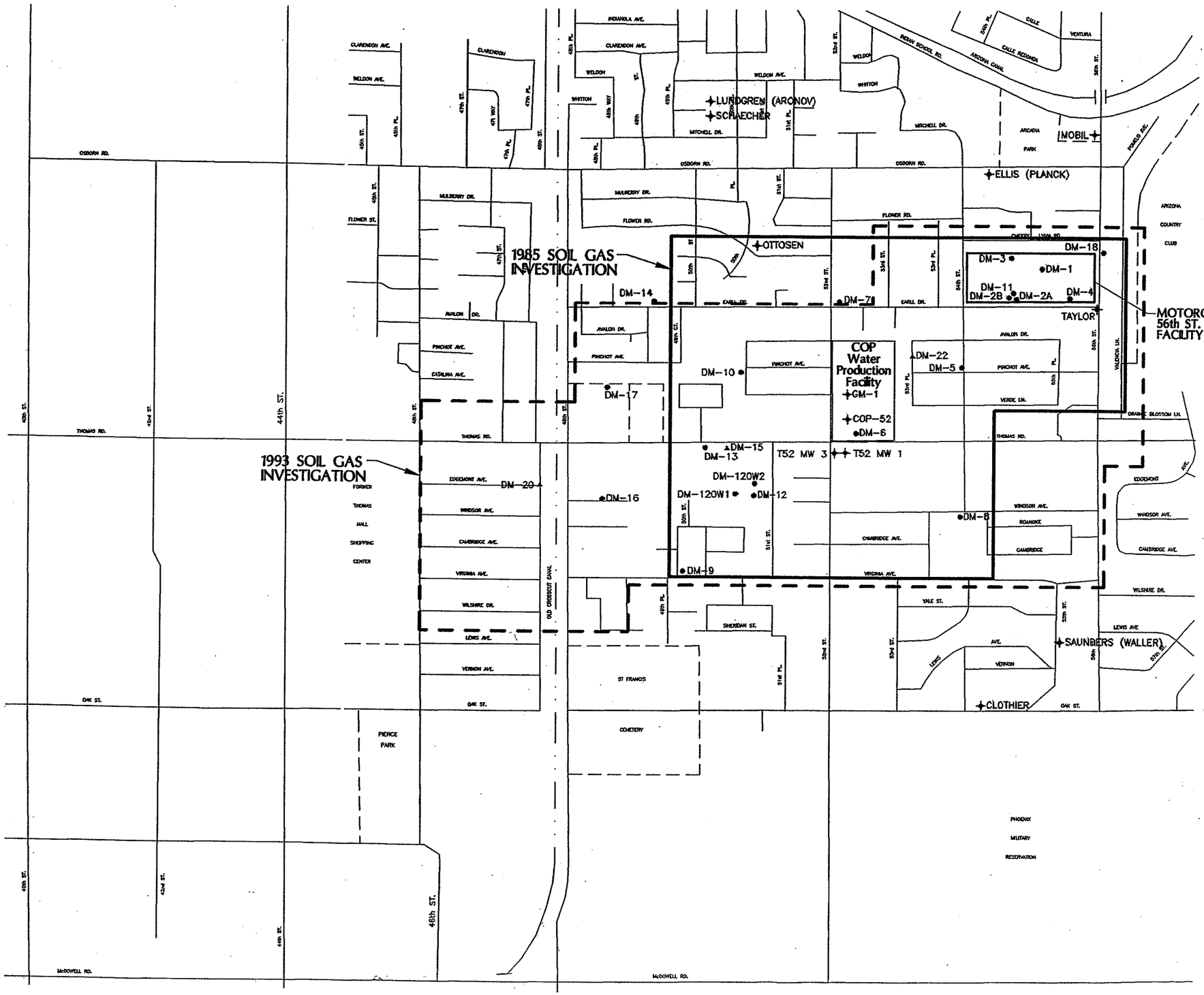
POTENTIAL SOURCE AREA SOIL-GAS DATA

Potential Source Area I.D.	1993 Soil-Gas Investigation			1985 Investigation Cross Reference			Location
	Soil-Gas Point No.	VOC Concentrations[1]		Soil-Gas Point No.	VOC Concentrations[1]		
		TCE	PCE		TCE	PCE	
1	169-3	1	120,000	Outside area of investigation			Northeast of 56th St. and Thomas Road
2	169-12	<13,000	10,000	Outside area of investigation			Northwest of 56th St. and Thomas Road
	169-12A	<11,000	19,000				
	169-12A10	<23,000	48,000				
	169-13	<520	3,200				
	169-13A	<450	2,800				
	169-14A	<1	6				
	169-17	0.07	6				
	169-17A	<1	15				
3	169-21	130	4	217	21	0.5	MI56th St. Site
	169-21A	200	4	217A	26	0.8	
	169-21A10	200	4				
4	Identified above 5 µg/l			246	52	1	Southwest of MI56th St. Site
				246A	59	0.5	
				247	12	3	
				251A	6	0.6	
				251B	5	0.5	

Table 3 (Continued)

Potential Source Area I.D.	1993 Soil-Gas Investigation			1985 Investigation Cross Reference			Location
	Soil-Gas Point No.	VOC Concentrations[1]		Soil-Gas Point No.	VOC Concentrations[1]		
		TCE	PCE		TCE	PCE	
5	169-44	52	6	280	28	7	52nd St. North of Thomas Road
	169-45	7	4				

[1] Concentrations reported as micrograms per liter (µg/l) of soil gas.



N

APPROXIMATE
0 1000 2000
SCALE IN FEET

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE

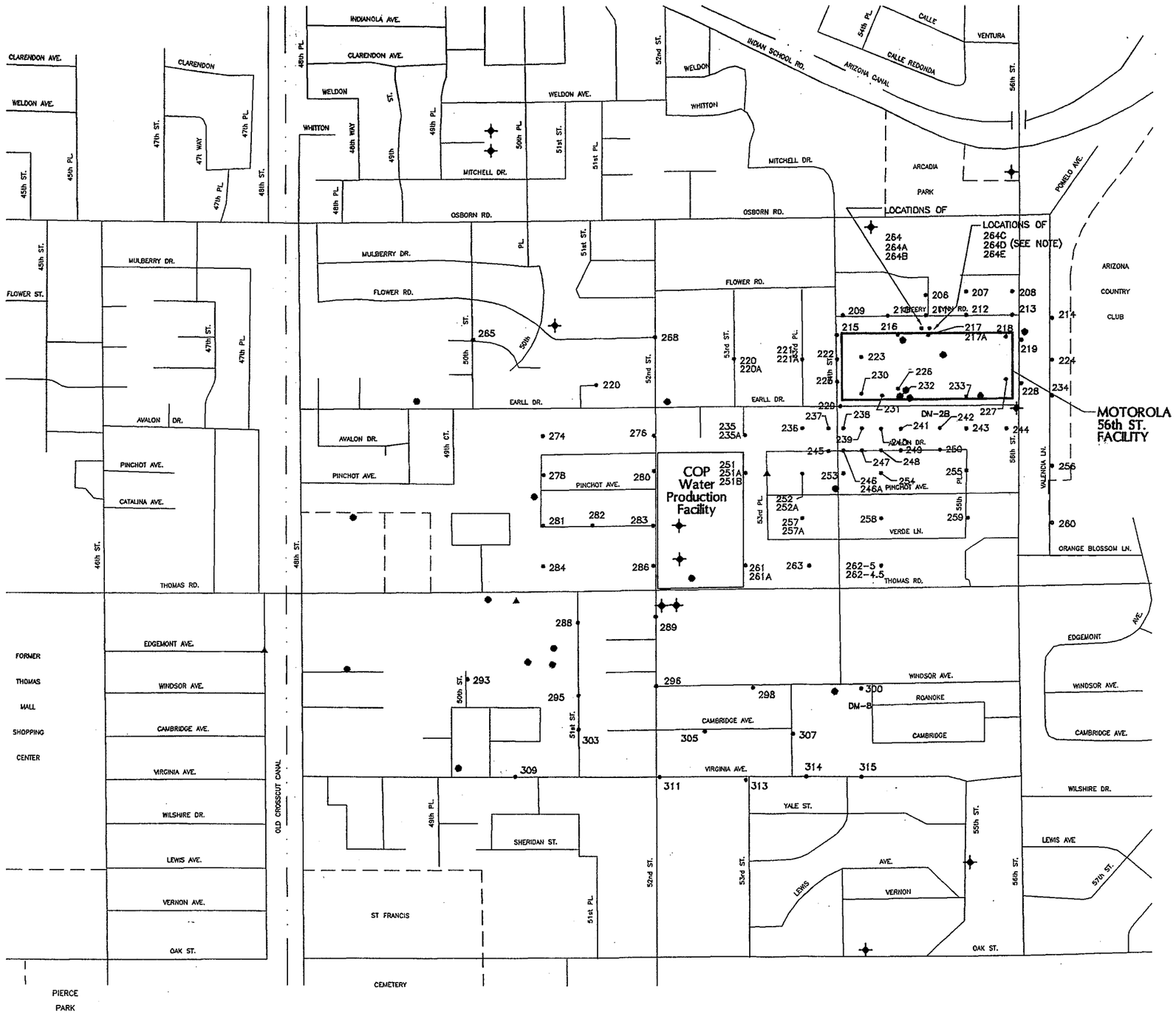
Soil-Gas Investigation Study Areas

Figure 1

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03633-05-25-95



N

APPROXIMATE
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SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
300 •	1985 SOIL-GAS SAMPLE NUMBER AND LOCATION

NOTE:

1) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF THE 264 LOCATION.

2) WELL LOCATIONS ARE CURRENT AS OF 1995.

3) SOIL-GAS DATA POINTS ARE FROM 10/15-18/1985 AND 11/4-6/1985.

4) SOIL-GAS DATA FROM ONSITE AT THE M156 FACILITY ON 3/6-7/1985 ARE PRESENTED IN APPENDIX A1.

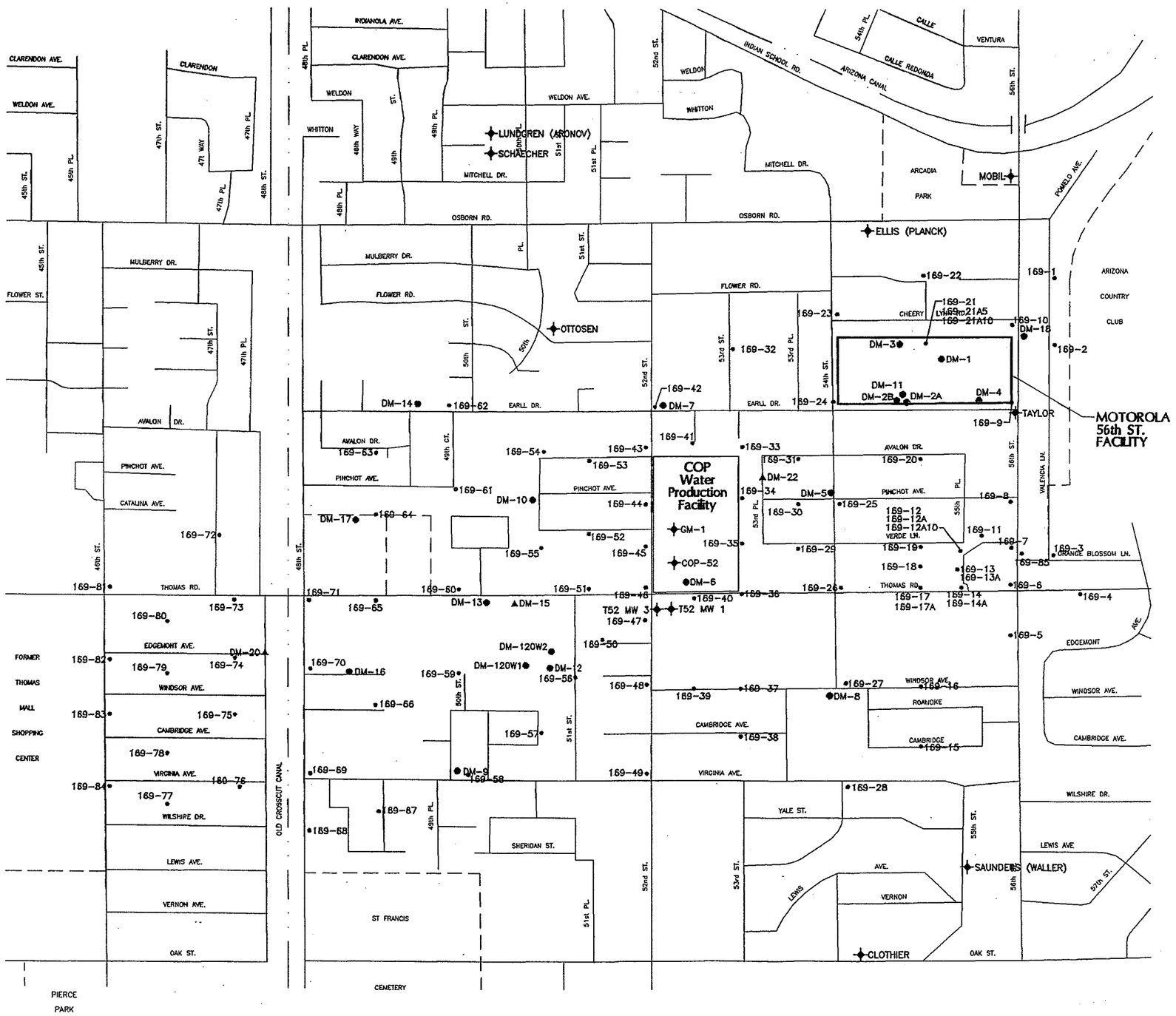
1985 Soil-Gas Sample Point Locations

Figure 2

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03634-05-25-95



APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
169–21 •	1993 SAMPLE LOCATION
169–21A	1993 SAMPLE LOCATION RESAMPLED
169–21A10	1993 SAMPLE LOCATION RESAMPLED AT 10 FEET

NOTES:

1) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF THE 169–21 LOCATION.

2) WELL LOCATIONS ARE CURRENT AS OF 1995.

3) SOIL–GAS DATA POINTS ARE FROM 8/2–12/1993.

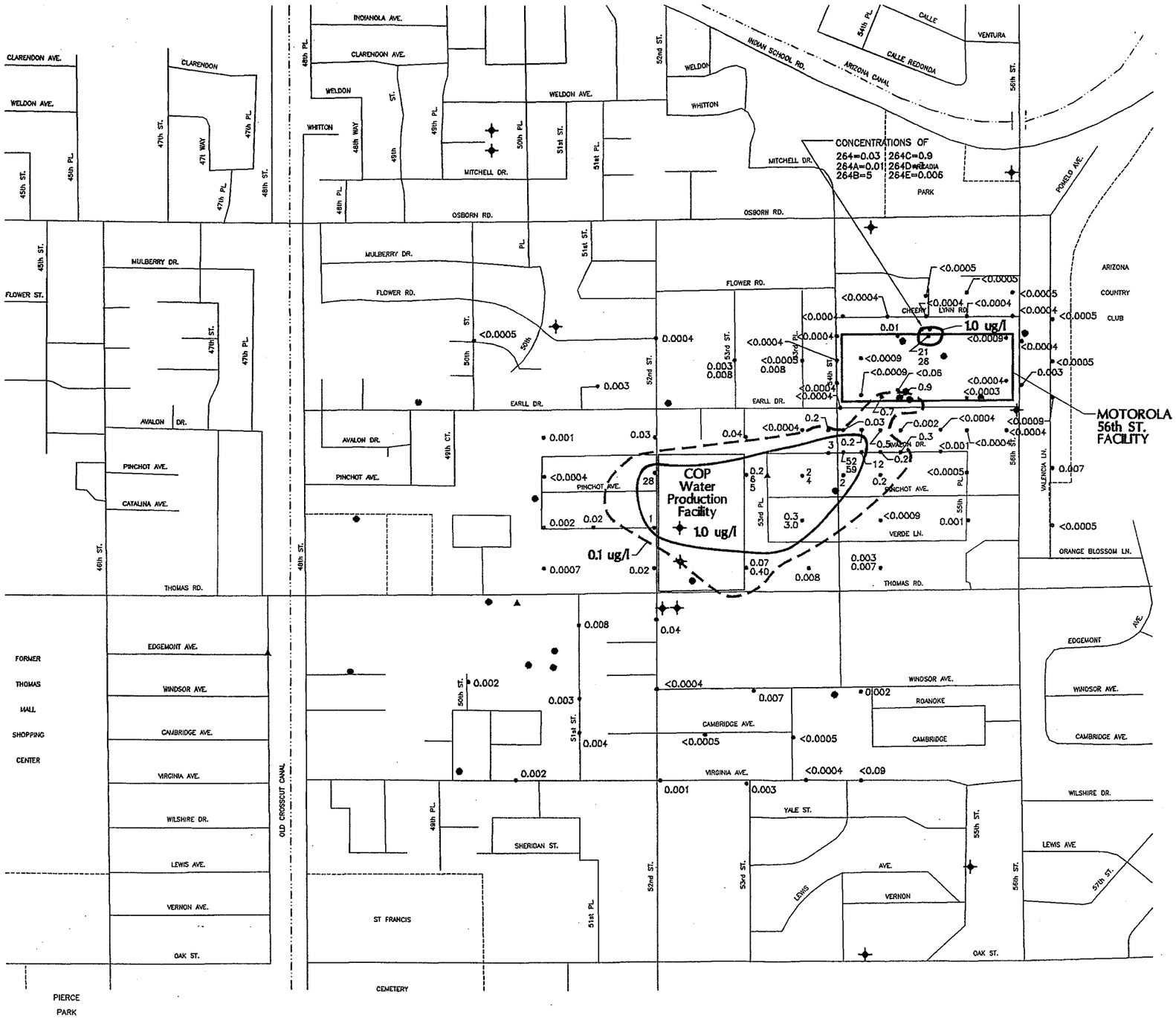
1993 Soil–Gas Sample Point Locations

Figure 3

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL–GAS INVESTIGATION
MAY 1995

A03635-05-25-95



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
0.003•	1985 TCE (ug/l)

NOTE:

1) CONTOURS WERE PLOTTED FOR PURPOSES OF INTERPRETATION AND ONLY REPRESENT ONE POSSIBLE DISTRIBUTION OF SOIL-GAS CONCENTRATIONS.

2) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF VOC SOIL-GAS DISTRIBUTION NEAR POINT 264, LOCATED ON THE MI56 FACILITY. DATA NEAR POINT 264 ARE PLOTTED ON FIGURES 11A THROUGH 11C.

3) SOIL-GAS DATA ARE FROM 10/15-18/1985 AND 11/4-6/1985. ADDITIONAL DATA PLOTTED AT THE SAME POINT ARE REPEAT MEASUREMENTS MADE 11/4-6/1985. THE HIGHEST VALUE WAS USED FOR CONTOURING.

4) ONSITE SOIL-GAS DATA FROM 3/6-7/1985 ARE PRESENTED IN APPENDIX A1.

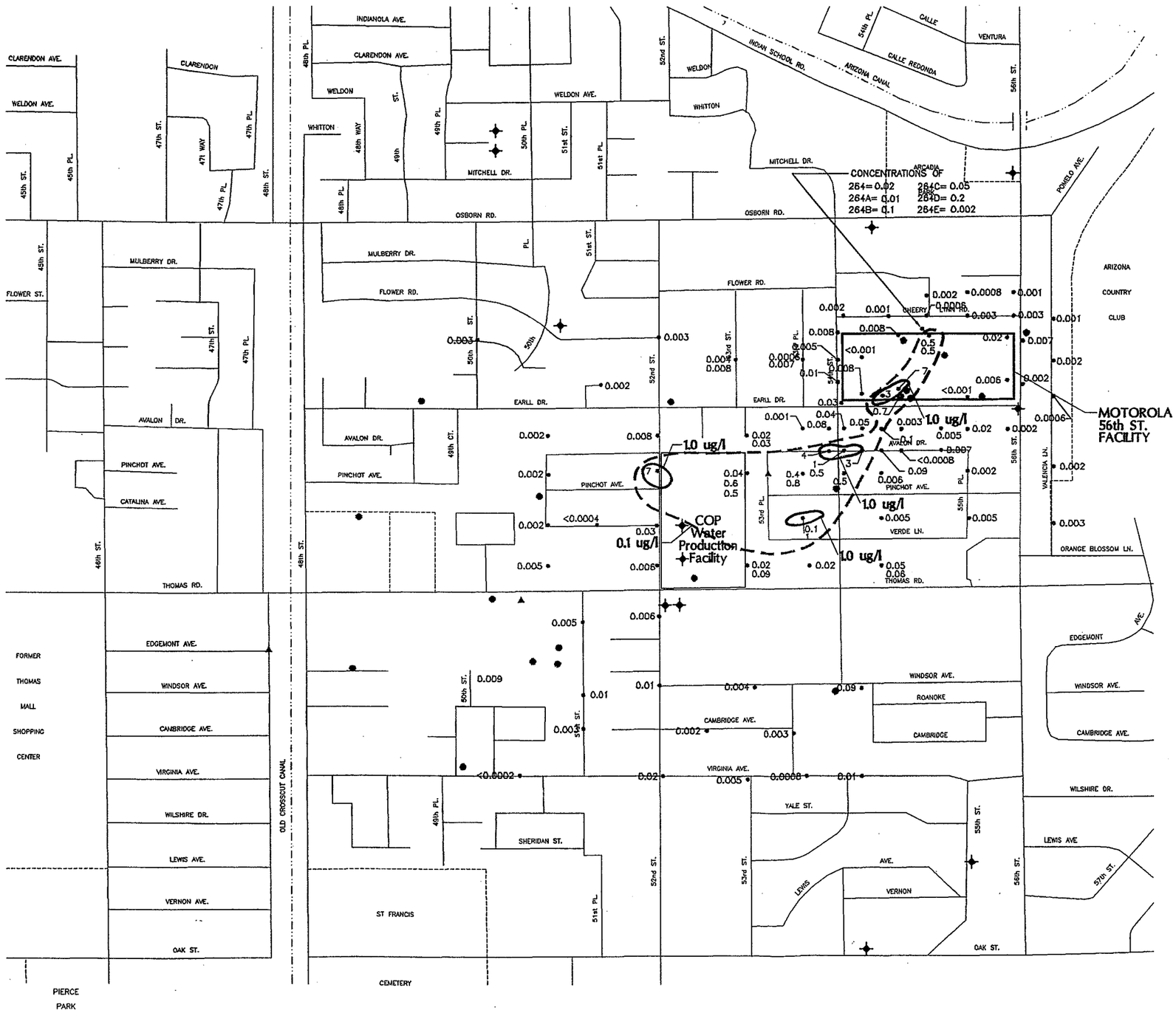
1985 TCE Soil-Gas Concentrations (in ug/liter)

Figure 4

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03627-05-25-95



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
0.005 •	1985 PCE (ug/l)

NOTES:

1) CONTOURS WERE PLOTTED FOR PURPOSES OF INTERPRETATION AND ONLY REPRESENT ONE POSSIBLE DISTRIBUTION OF SOIL-GAS CONCENTRATIONS.

2) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF VOC SOIL-GAS DISTRIBUTION NEAR POINT 264, LOCATED ON THE MI56 FACILITY. DATA NEAR POINT 264 ARE PLOTTED ON FIGURES 11A THROUGH 11C.

3) SOIL-GAS DATA FROM 10/15-18/1985 AND 11/4-6/1985. ADDITIONAL DATA PLOTTED AT THE SAME POINT ARE REPEAT MEASUREMENTS MADE 11/4-6/1985. THE HIGHEST VALUE WAS USED FOR CONTOURING.

4) SOIL-GAS DATA FROM ONSITE AT THE MI56 FACILITY ON 3/6-7/1985 ARE PRESENTED IN APPENDIX A1.

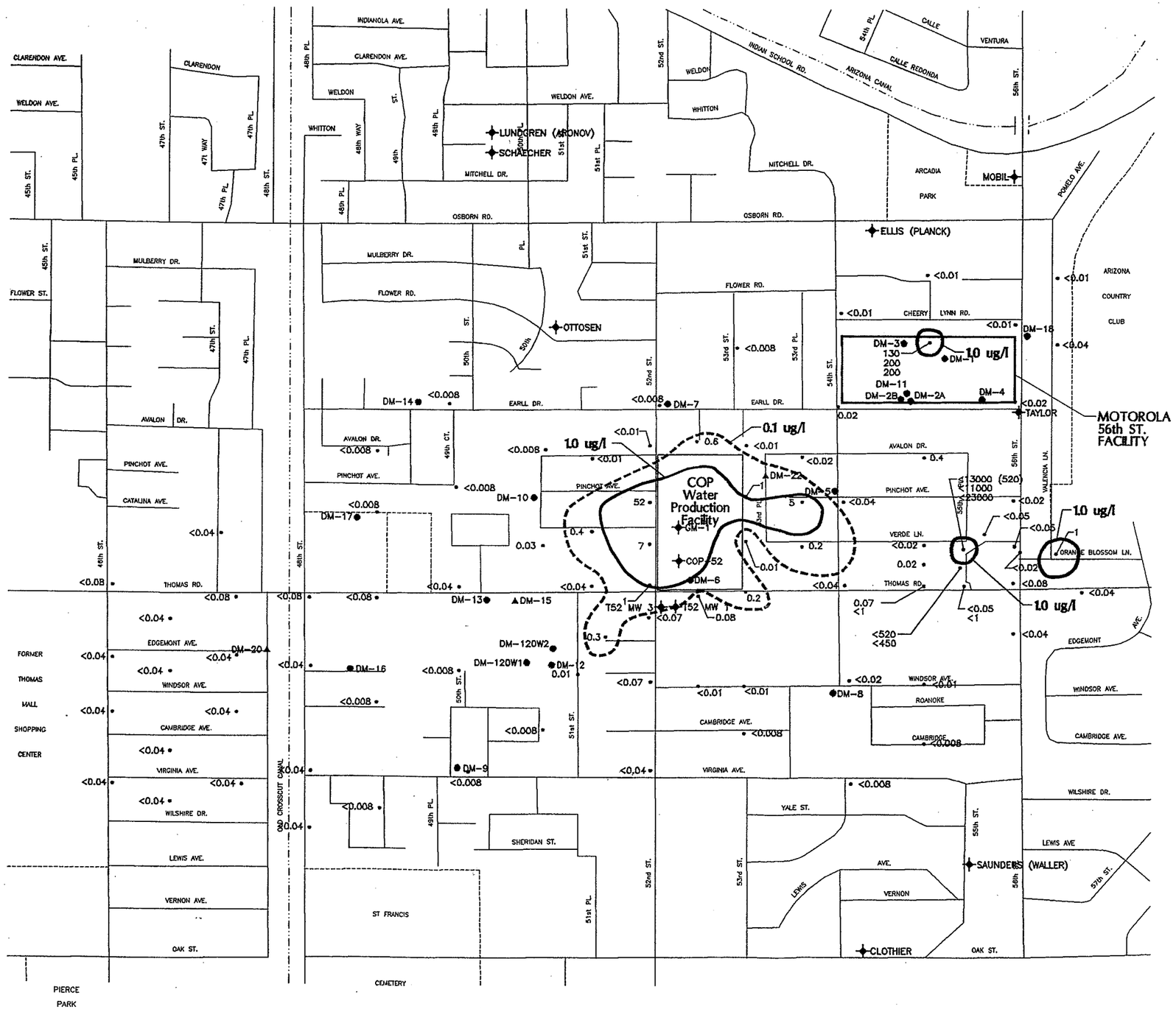
1985 PCE Soil-Gas Concentrations (in ug/liter)

Figure 5

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03630-05-25-95



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
<0.008•	1993 TCE (ug/l)

NOTES:

1) CONTOURS WERE PLOTTED FOR PURPOSES OF INTERPRETATION AND ONLY REPRESENT ONE POSSIBLE DISTRIBUTION OF SOIL-GAS CONCENTRATIONS.

2) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF VOC SOIL-GAS DISTRIBUTION NEAR POINT 169-21, LOCATED ON THE M56 FACILITY. DATA NEAR 169-21 ARE PLOTTED ON FIGURES 11A THROUGH 11C.

3) SOIL-GAS DATA ARE FROM 8/2-12/1993.

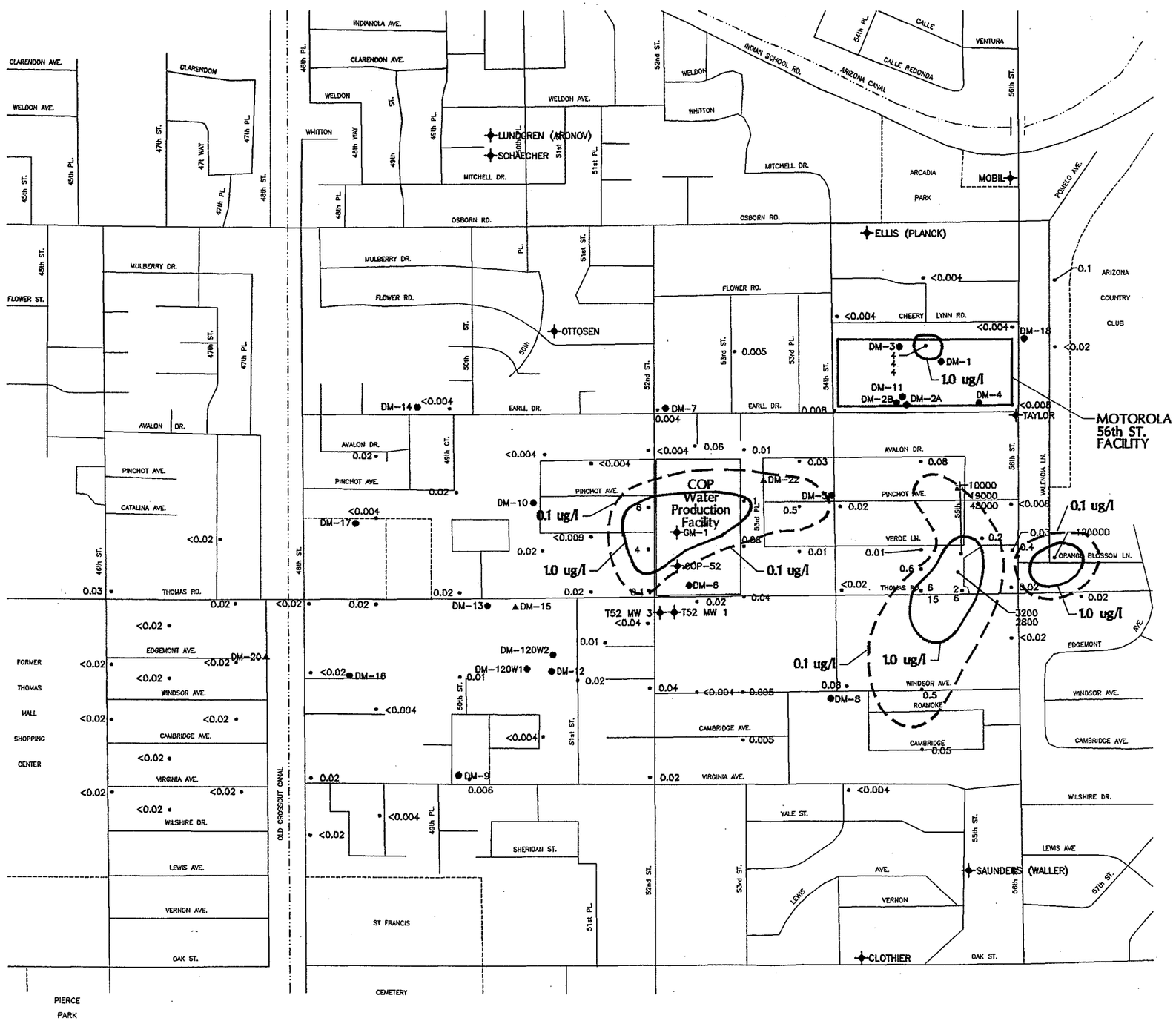
1993 TCE Soil-Gas Concentrations (in ug/liter)

Figure 6

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03631-05-25-95



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
<0.004 •	1993 PCE (ug/l)

NOTES:

1) CONTOURS WERE PLOTTED FOR PURPOSES OF INTERPRETATION AND ONLY REPRESENT ONE POSSIBLE DISTRIBUTION OF SOIL-GAS CONCENTRATIONS.

2) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF VOC SOIL-GAS DISTRIBUTION NEAR POINT 169-21, LOCATED ON THE MI56 FACILITY. DATA NEAR 169-21 ARE PLOTTED ON FIGURES 11A THROUGH 11C.

3) SOIL-GAS DATA ARE FROM 8/2-12/1993.

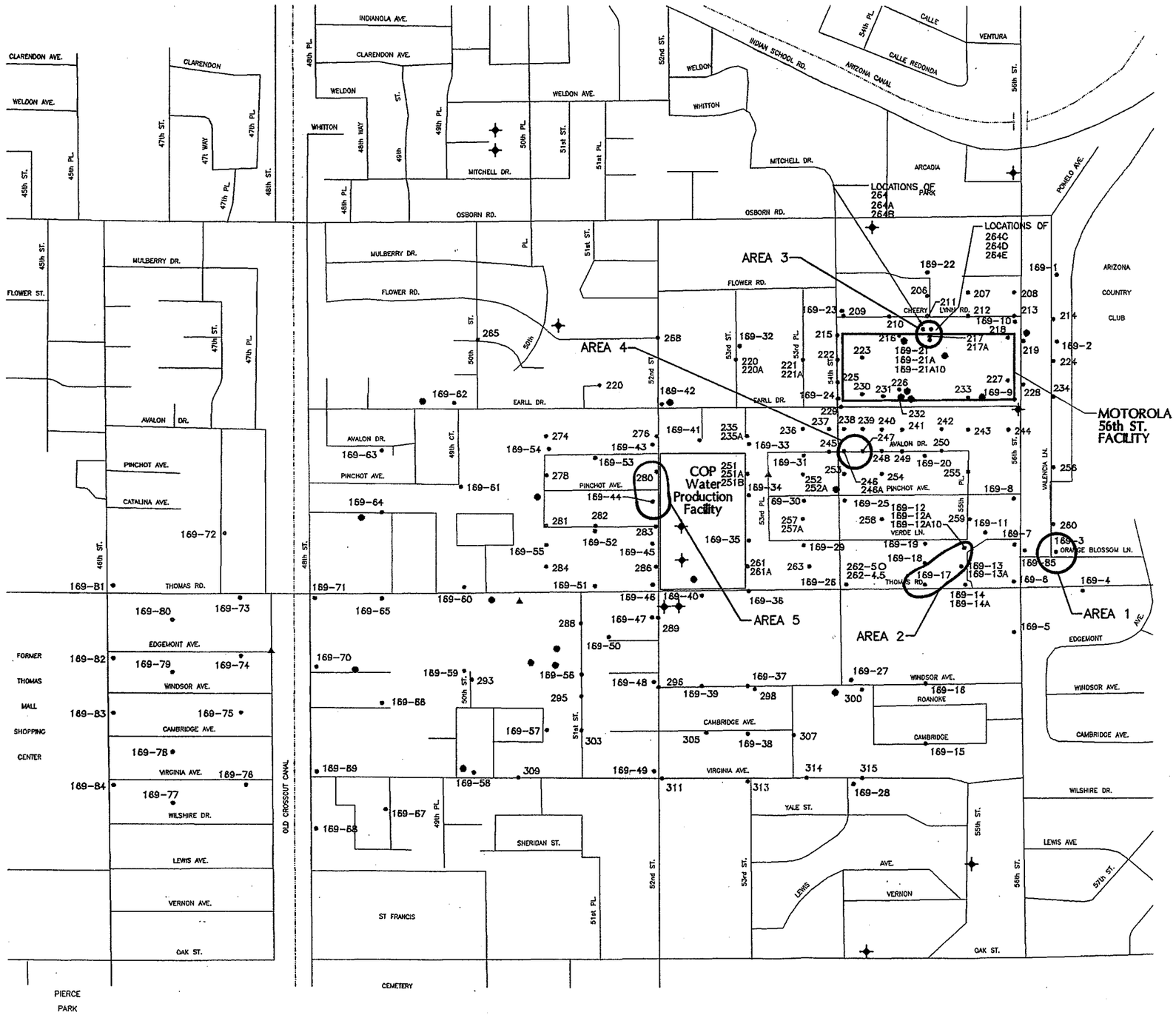
1993 PCE Soil-Gas Concentrations (in ug/liter)

Figure 7

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03632-05-24-95



Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
169-21 •	1993 Sample Location
169-21A	1993 Sample Location Resampled
169-21A10	1993 Sample Location Resampled at 10 feet
300 •	1985 Sample Location
○	Potential VOC Source Areas, (Soil Gas Points Reporting VOC Concentration Above 10 ug/l)

Notes:

1) See Figure 11 for a more detailed description of soil-gas points 169-21 and 264 located on the northern portion of the M156 Facility.

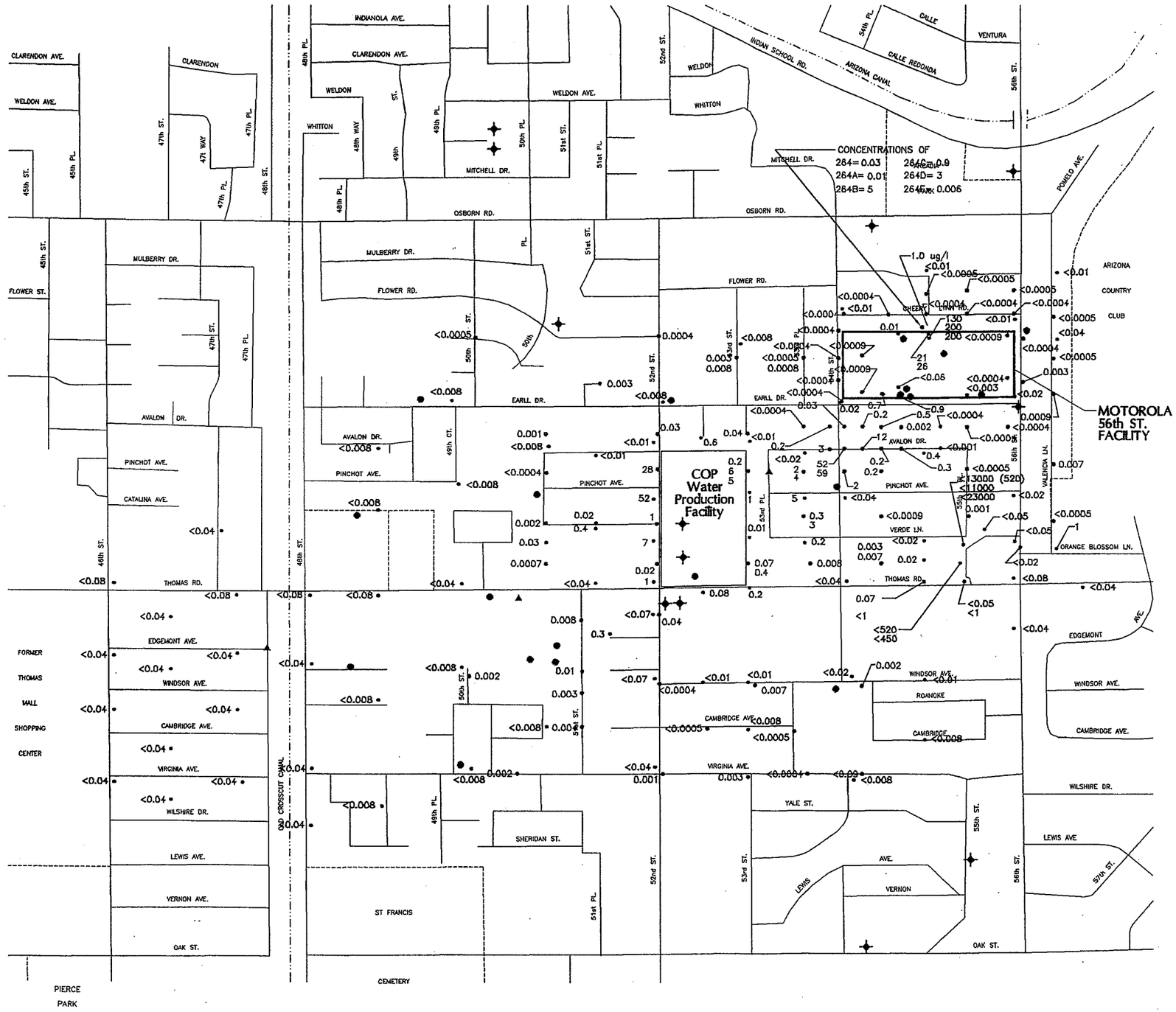
POTENTIAL VOC SOURCE AREAS 1985 AND 1993 SOIL-GAS INVESTIGATIONS

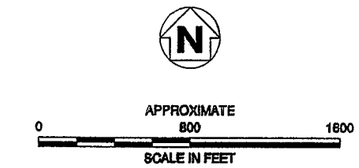
Figure 8

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03636-05-25-95





Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
0.003 •	1985 TCE (ug/l)
<0.008 •	1993 TCE (ug/l)

NOTES:

1) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF VOC SOIL-GAS DISTRIBUTION NEAR POINTS 264 AND 169-21, LOCATED ON THE MI56 FACILITY.

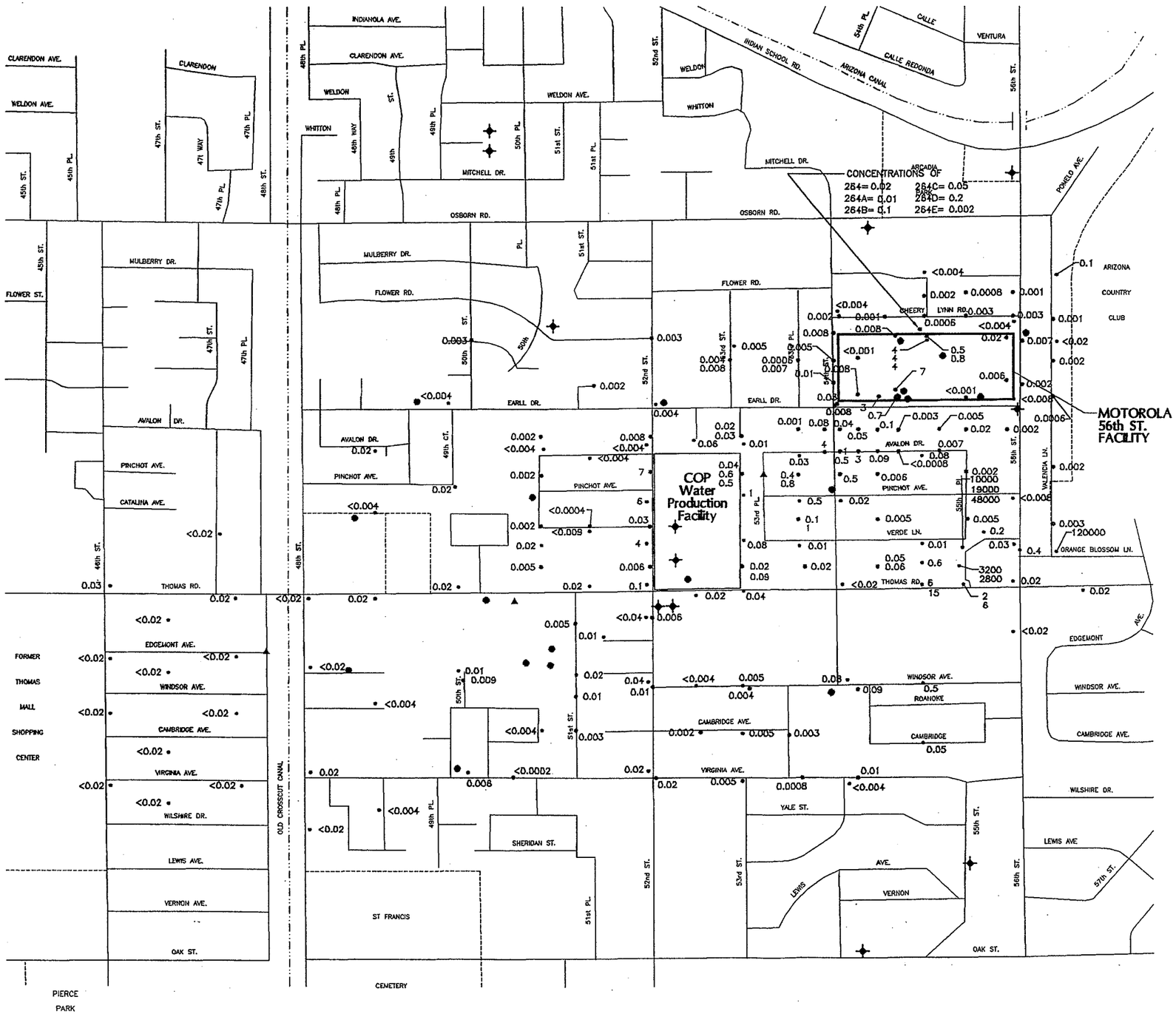
1985 AND 1993 TCE Soil-Gas Concentrations (in ug/liter)

Figure 9

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03639-05-25-95



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	
▲	WESTBAY
•	CONVENTIONAL
✦	PRIVATE
0.005•	1985 PCE (ug/l)
<0.004•	1993 PCE (ug/l)

NOTES:

1) SEE FIGURE 11 FOR A MORE DETAILED DESCRIPTION OF VOC SOIL-GAS DISTRIBUTION NEAR POINTS 264 AND 169-21, LOCATED ON THE M156 FACILITY.

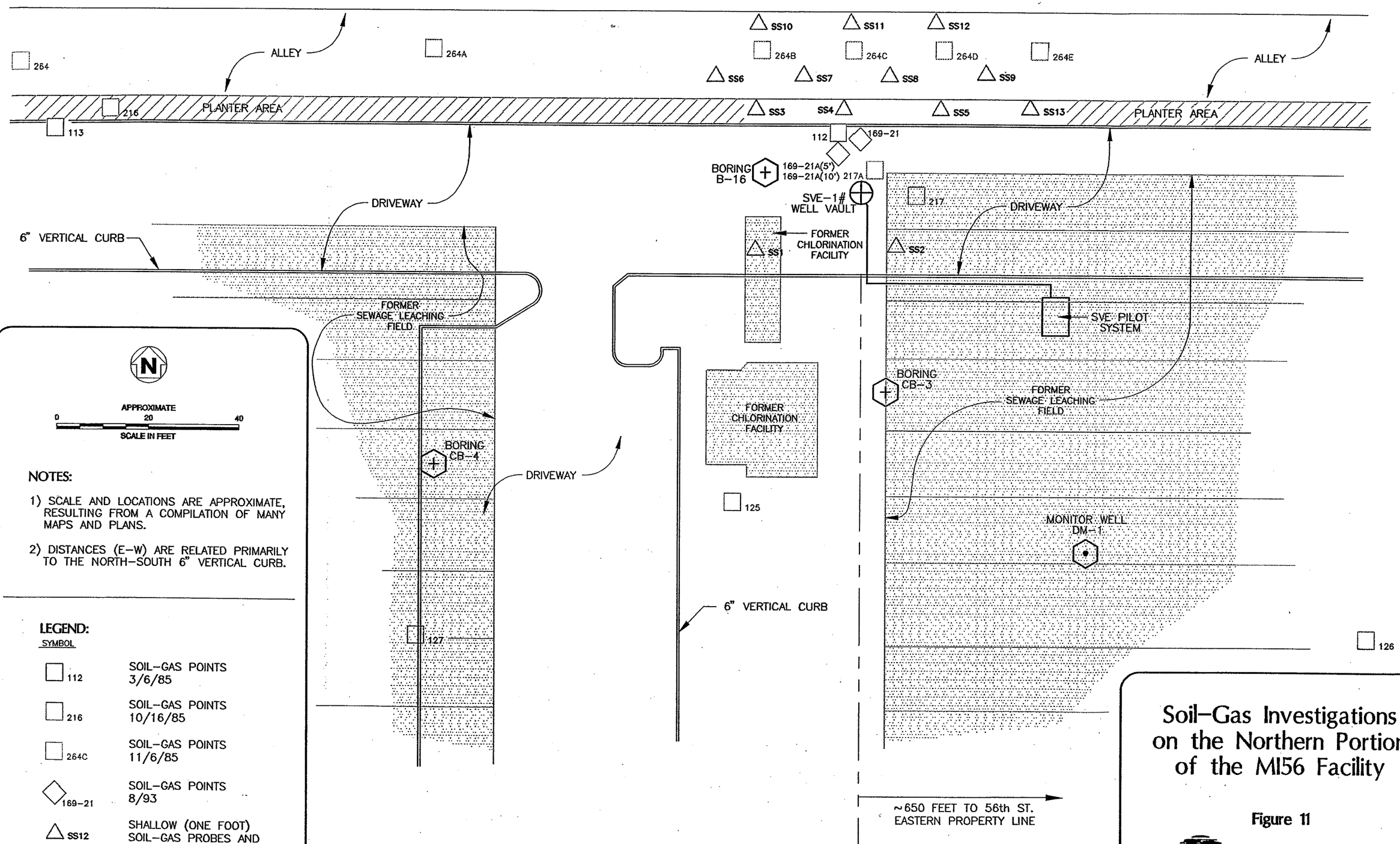
1985 and 1993 PCE Soil-Gas Concentrations (in ug/liter)

Figure 10

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03640-05-25-95



APPROXIMATE
0 20 40
SCALE IN FEET

NOTES:

1) SCALE AND LOCATIONS ARE APPROXIMATE, RESULTING FROM A COMPILATION OF MANY MAPS AND PLANS.

2) DISTANCES (E-W) ARE RELATED PRIMARILY TO THE NORTH-SOUTH 6" VERTICAL CURB.

LEGEND:

SYMBOL	
112	SOIL-GAS POINTS 3/6/85
216	SOIL-GAS POINTS 10/16/85
264C	SOIL-GAS POINTS 11/6/85
169-21	SOIL-GAS POINTS 8/93
SS12	SHALLOW (ONE FOOT) SOIL-GAS PROBES AND SAMPLES 9/17/93

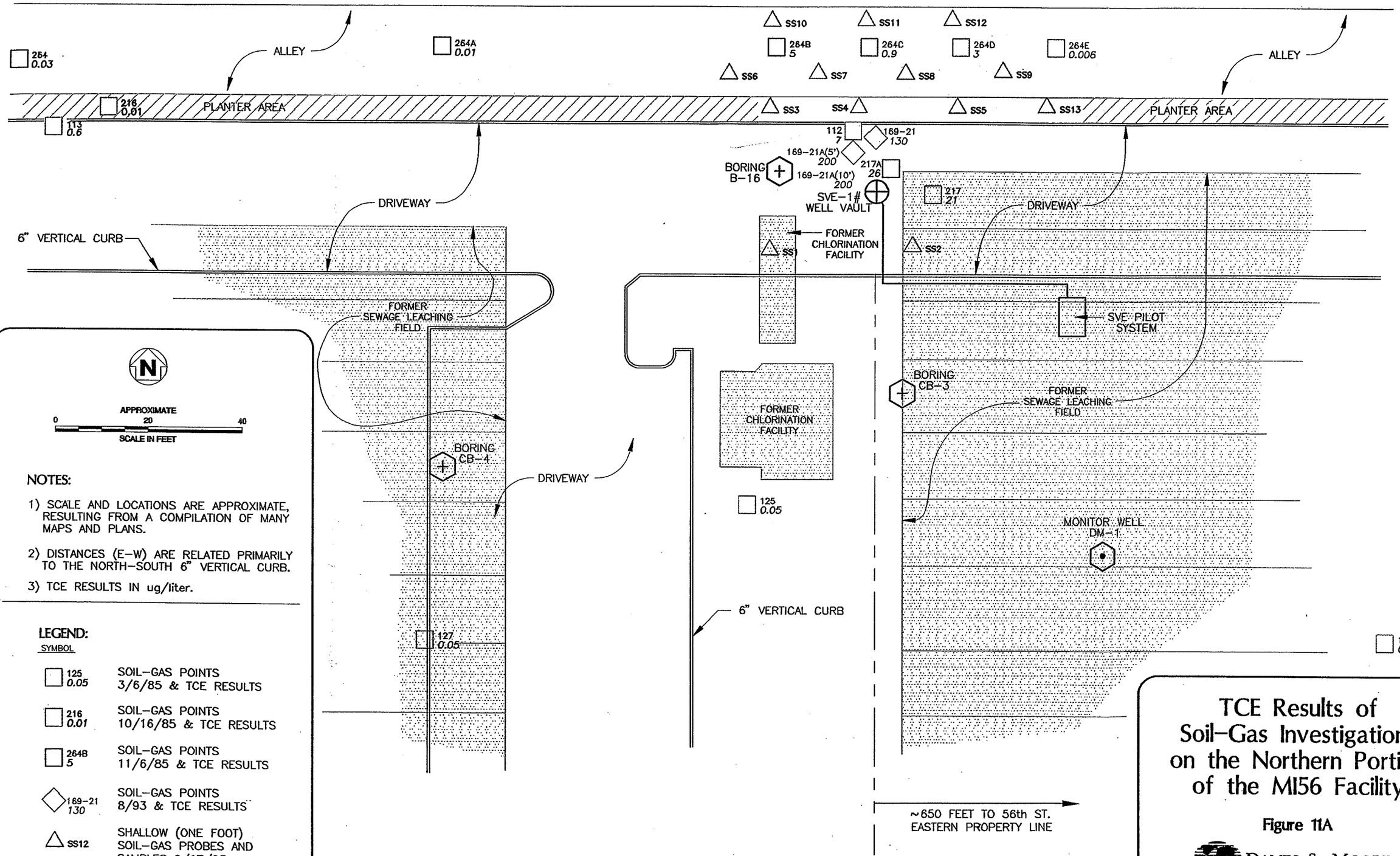
Soil-Gas Investigations on the Northern Portion of the MI56 Facility

Figure 11

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03682-05-25-95



NOTES:

1) SCALE AND LOCATIONS ARE APPROXIMATE, RESULTING FROM A COMPILATION OF MANY MAPS AND PLANS.

2) DISTANCES (E-W) ARE RELATED PRIMARILY TO THE NORTH-SOUTH 6" VERTICAL CURB.

3) TCE RESULTS IN ug/liter.

LEGEND:

SYMBOL	
125 0.05	SOIL-GAS POINTS 3/6/85 & TCE RESULTS
216 0.01	SOIL-GAS POINTS 10/16/85 & TCE RESULTS
264B 5	SOIL-GAS POINTS 11/6/85 & TCE RESULTS
169-21 130	SOIL-GAS POINTS 8/93 & TCE RESULTS
SS12	SHALLOW (ONE FOOT) SOIL-GAS PROBES AND SAMPLES 9/17/93

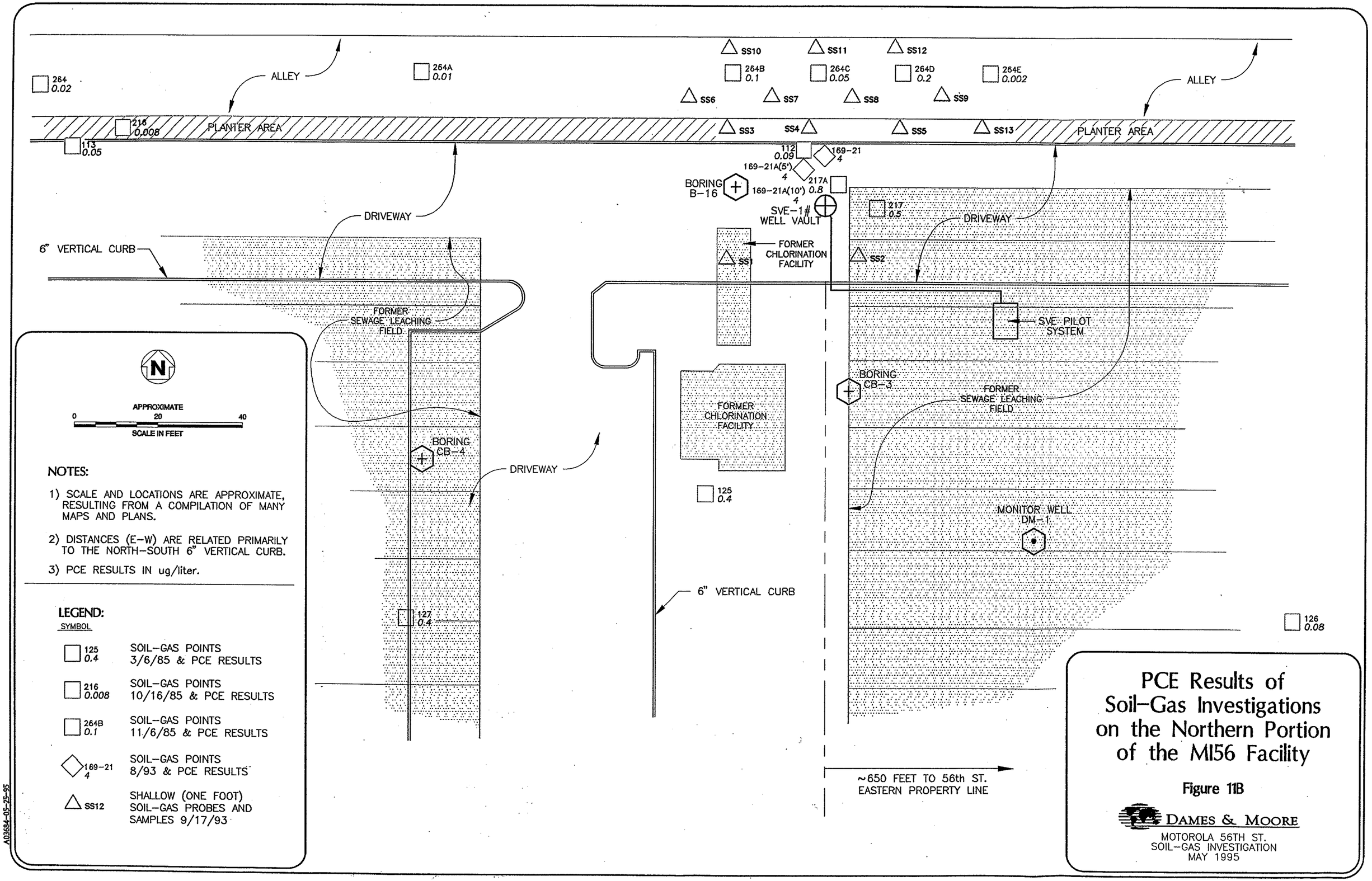
TCE Results of Soil-Gas Investigations on the Northern Portion of the MI56 Facility

Figure 11A

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03683-05-25-95



NOTES:

1) SCALE AND LOCATIONS ARE APPROXIMATE, RESULTING FROM A COMPILATION OF MANY MAPS AND PLANS.

2) DISTANCES (E-W) ARE RELATED PRIMARILY TO THE NORTH-SOUTH 6" VERTICAL CURB.

3) PCE RESULTS IN ug/liter.

LEGEND:

SYMBOL	
125 0.4	SOIL-GAS POINTS 3/6/85 & PCE RESULTS
216 0.008	SOIL-GAS POINTS 10/16/85 & PCE RESULTS
264B 0.1	SOIL-GAS POINTS 11/6/85 & PCE RESULTS
169-21 4	SOIL-GAS POINTS 8/93 & PCE RESULTS
SS12	SHALLOW (ONE FOOT) SOIL-GAS PROBES AND SAMPLES 9/17/93

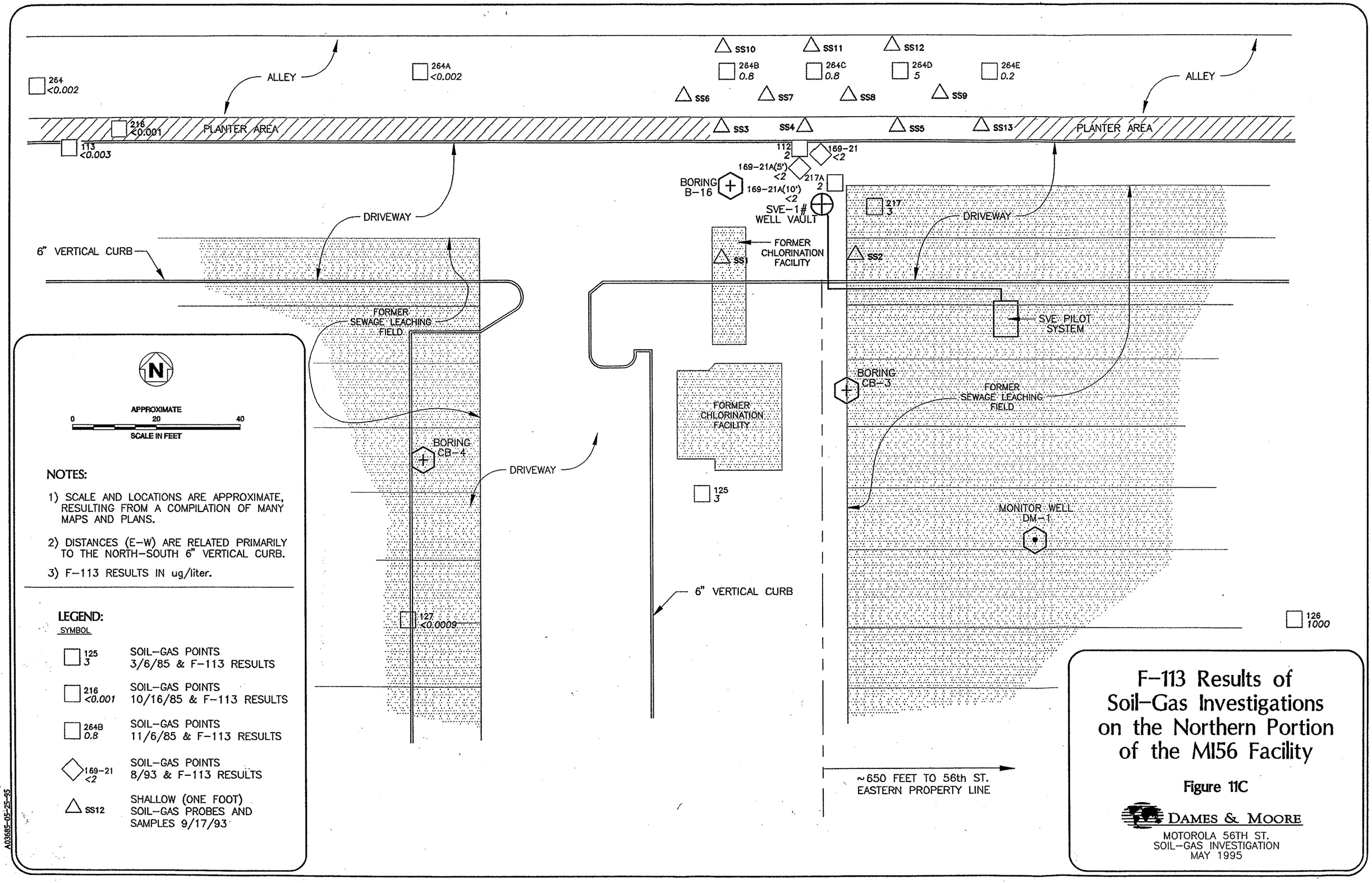
PCE Results of Soil-Gas Investigations on the Northern Portion of the MI56 Facility

Figure 11B

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03684-05-25-95

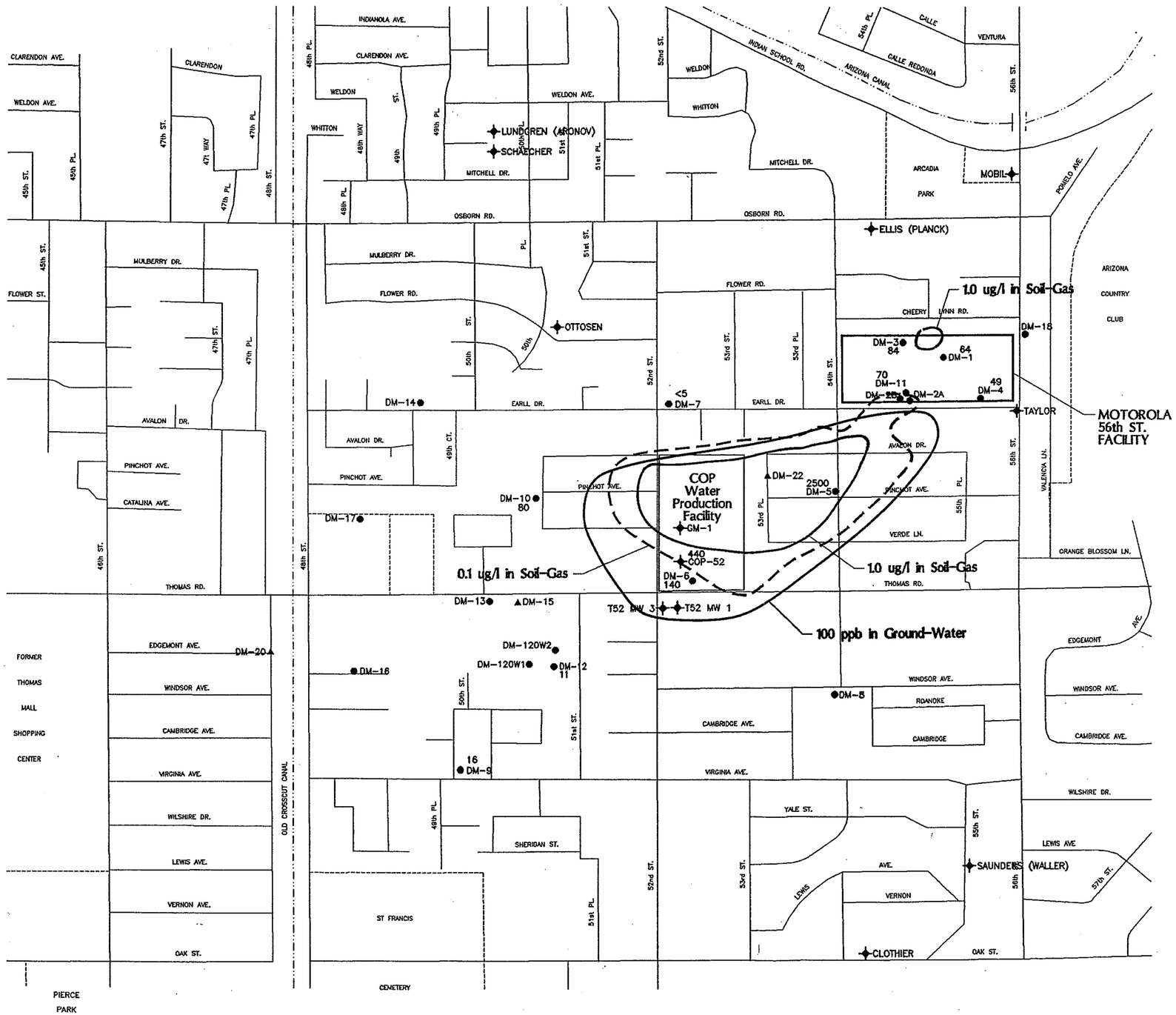


F-113 Results of Soil-Gas Investigations on the Northern Portion of the MI56 Facility

Figure 11C

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
64	TCE (ppb) IN GROUND-WATER (SEE NOTE 3)

NOTES:

1) TCE SOIL-GAS CONTOURS WERE PLOTTED FROM 1985 DATA PRESENTED ON FIGURE 4.

2) THE 100 ppb GROUND-WATER CONTOUR WAS FIRST PLOTTED IN THE STAGE III REPORT (1990) AND REPRESENTS A GENERALIZATION OF THE DISTRIBUTION OF TCE IN GROUND-WATER OVER THE 1985-1989 PERIOD.

3) BECAUSE WELLS WERE INSTALLED AND SAMPLED IN SUBSEQUENT YEARS, WATER QUALITY DATA WAS NOT AVAILABLE FOR WELLS DM-5 THROUGH DM-12 IN 1985. THE EARLIEST DATA OBTAINED FROM WELLS, AS NOTED BELOW, WERE PLOTTED:

WELL NUMBERS:	SAMPLES FROM:
DM-1 TO DM-4	11/85
DM-5 TO DM-7	5/86
DM-8 TO DM-10	1/87
DM-11,-12 TO COP-52	11/89

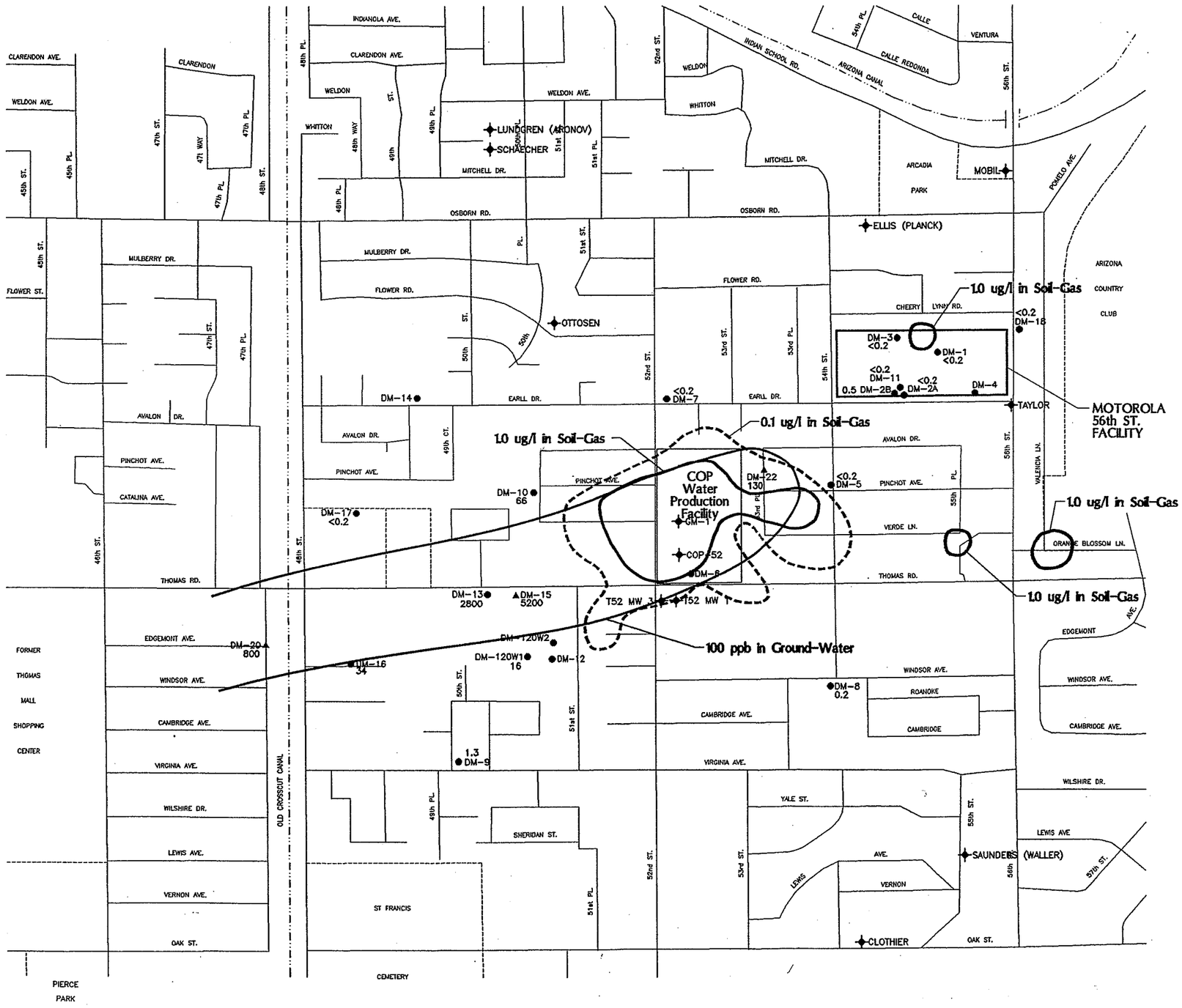
1985 TCE Soil-Gas and 1985-89 Ground-Water Concentrations

Figure 12

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03714-03-25-95



N

APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
1.1	TCE (ppb) IN GROUND-WATER

NOTES:

1) TCE SOIL-GAS CONTOURS WERE PLOTTED FROM FIGURE 6. SOIL-GAS DATA ARE FROM 8/2-12/1993.

2) TCE GROUND-WATER DATA IS THE HIGHEST CONCENTRATION FROM ALLUVIUM OR THE SHALLOWEST BEDROCK PORT IN ppb AND IS FROM JULY 1993, AND IS CONTOURED ONLY FOR COMPARISON WITH SOIL-GAS DATA.

1993 TCE Soil-Gas and Ground-Water Concentrations

Figure 13

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

A03713-03-25-95

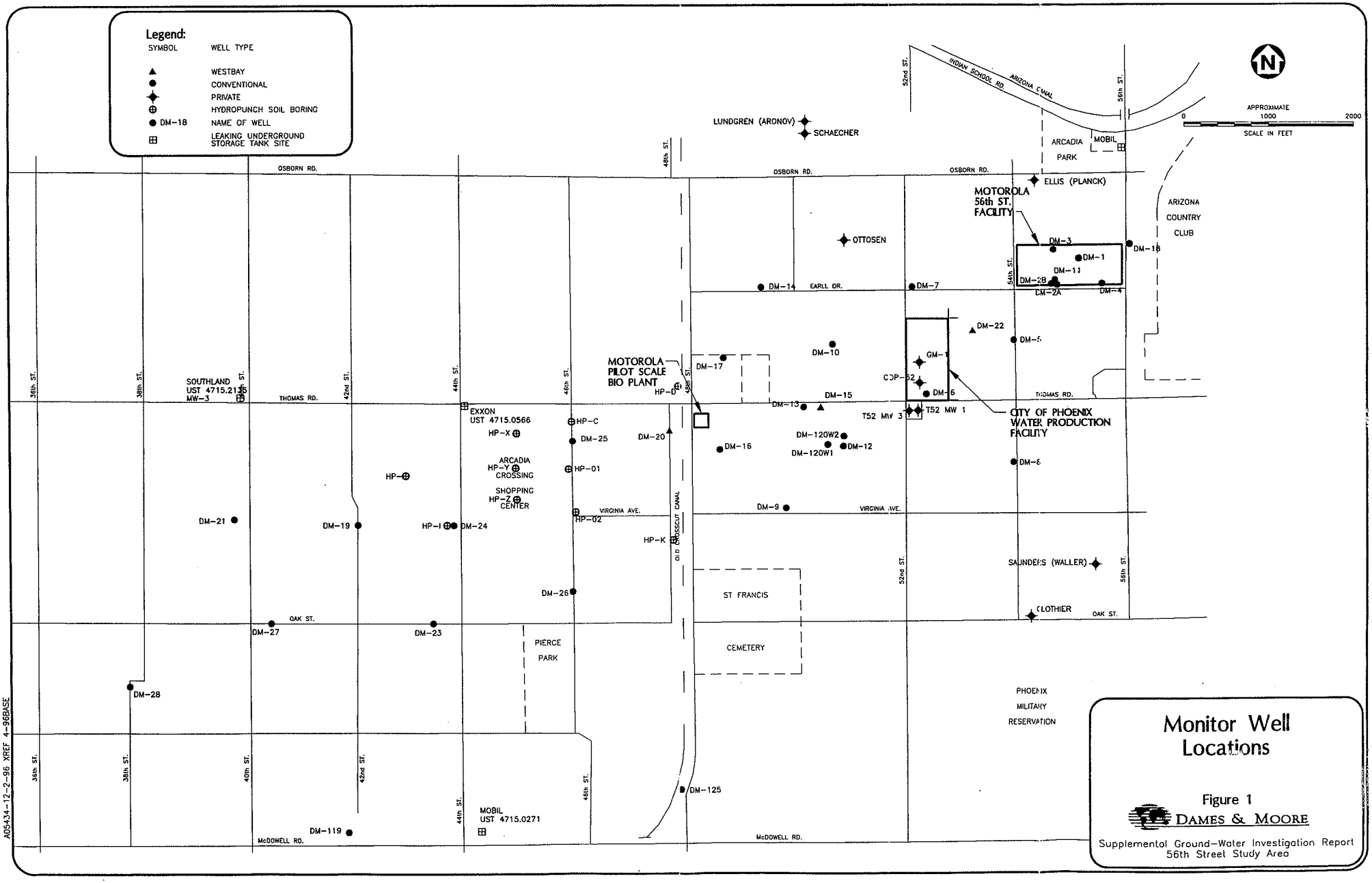
LTC

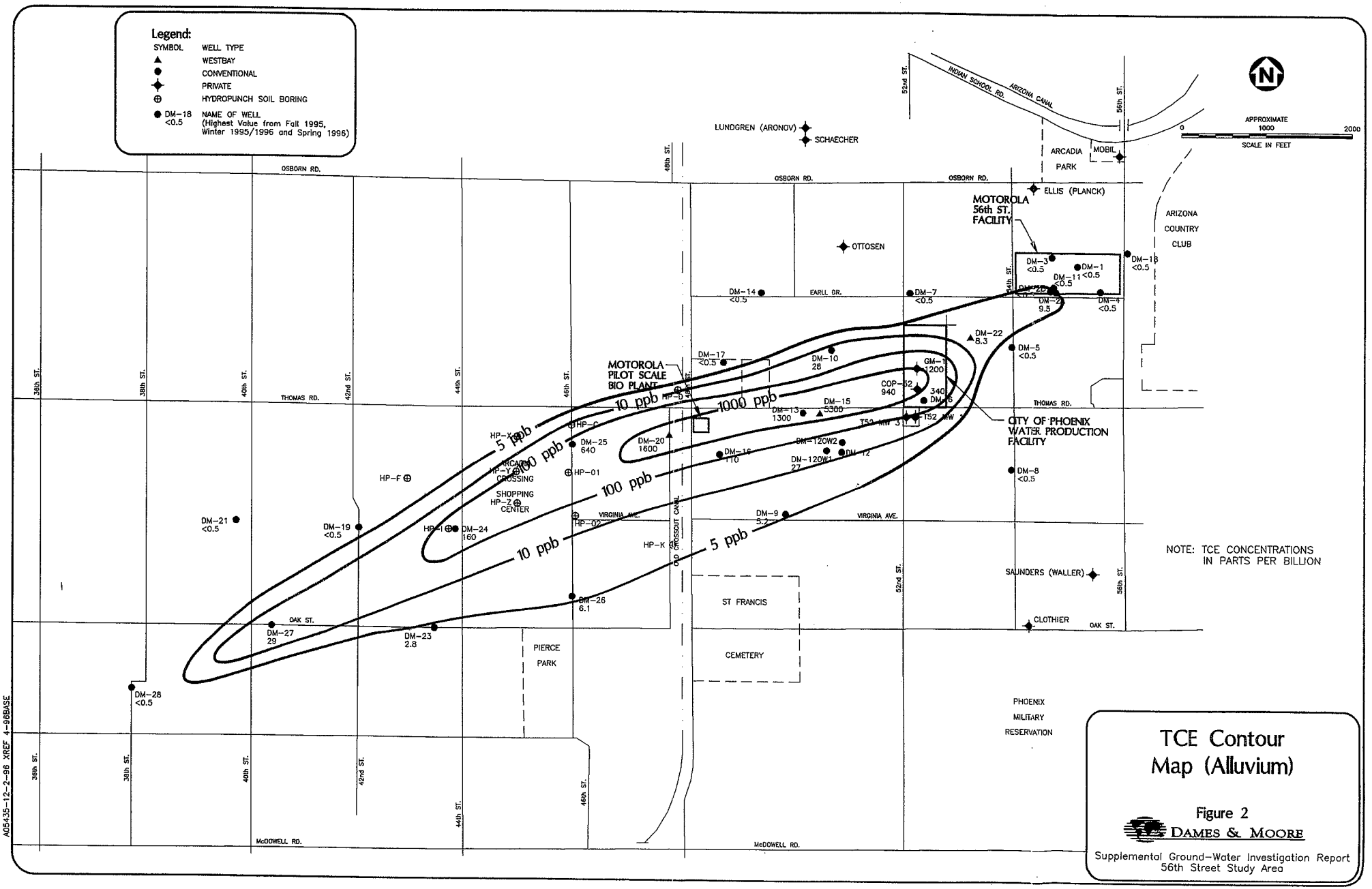
DAMES & MOORE

A DAMES & MOORE GROUP COMPANY

SUPPLEMENTAL GROUNDWATER INVESTIGATION 56TH STREET STUDY AREA FOR MOTOROLA, INC.

D&M Job No. 09448-197-033
December 20, 1996


Legend:
SYMBOL WELL TYPE
WESTBAY
CONVENTIONAL
PRIVATE
HYDROPUNCH SOIL BORING
DM-18 NAME OF WELL
LEAKING UNDERGROUND STORAGE TANK SITE
APPROXIMATE
0 1000 2000
SCALE IN FEET
N
OSBORN RD.
THOMAS RD.
VIRGINIA AVE.
OAK ST.
McDOWELL RD.
EARLL DR.
INDIAN SCHOOL RD.
ARIZONA CANAL
OLD CROSSCUT CANAL
36th ST.
38th ST.
40th ST.
42nd ST.
44th ST.
46th ST.
48th ST.
52nd ST.
54th ST.
56th ST.
LUNDGREN (ARONOV)
SCHAECHER
ARCADIA PARK
MOBIL
ELLIS (PLANCK)
MOTOROLA 56th ST. FACILITY
ARIZONA COUNTRY CLUB
OTTOSEN
DM-3
DM-1
DM-18
DM-11
DM-2B
DM-2A
DM-4
DM-14
DM-7
DM-22
DM-5
DM-10
GM-1
COP-52
DM-6
DM-15
DM-17
DM-13
T52 MW 3
T52 MW 1
CITY OF PHOENIX WATER PRODUCTION FACILITY
MOTOROLA PILOT SCALE BIO PLANT
HP-D
DM-20
DM-16
DM-120W2
DM-120W1
DM-12
DM-8
DM-9
SOUTHLAND UST 4715.2135 MW-3
EXXON UST 4715.0566
HP-X
HP-C
DM-25
HP-01
ARCADIA CROSSING
HP-Y
SHOPPING CENTER
HP-Z
HP-02
HP-K
HP-
DM-21
DM-19
HP-1
DM-24
DM-26
DM-27
DM-23
DM-28
DM-119
DM-125
PIERCE PARK
ST FRANCIS CEMETERY
SAUNDERS (WALLER)
CLOTHIER
PHOENIX MILITARY RESERVATION
MOBIL UST 4715.0271
Monitor Well Locations
Figure 1
DAMES & MOORE
Supplemental Ground-Water Investigation Report
56th Street Study Area
A05434-12-2-96 XREF 4-96BASE

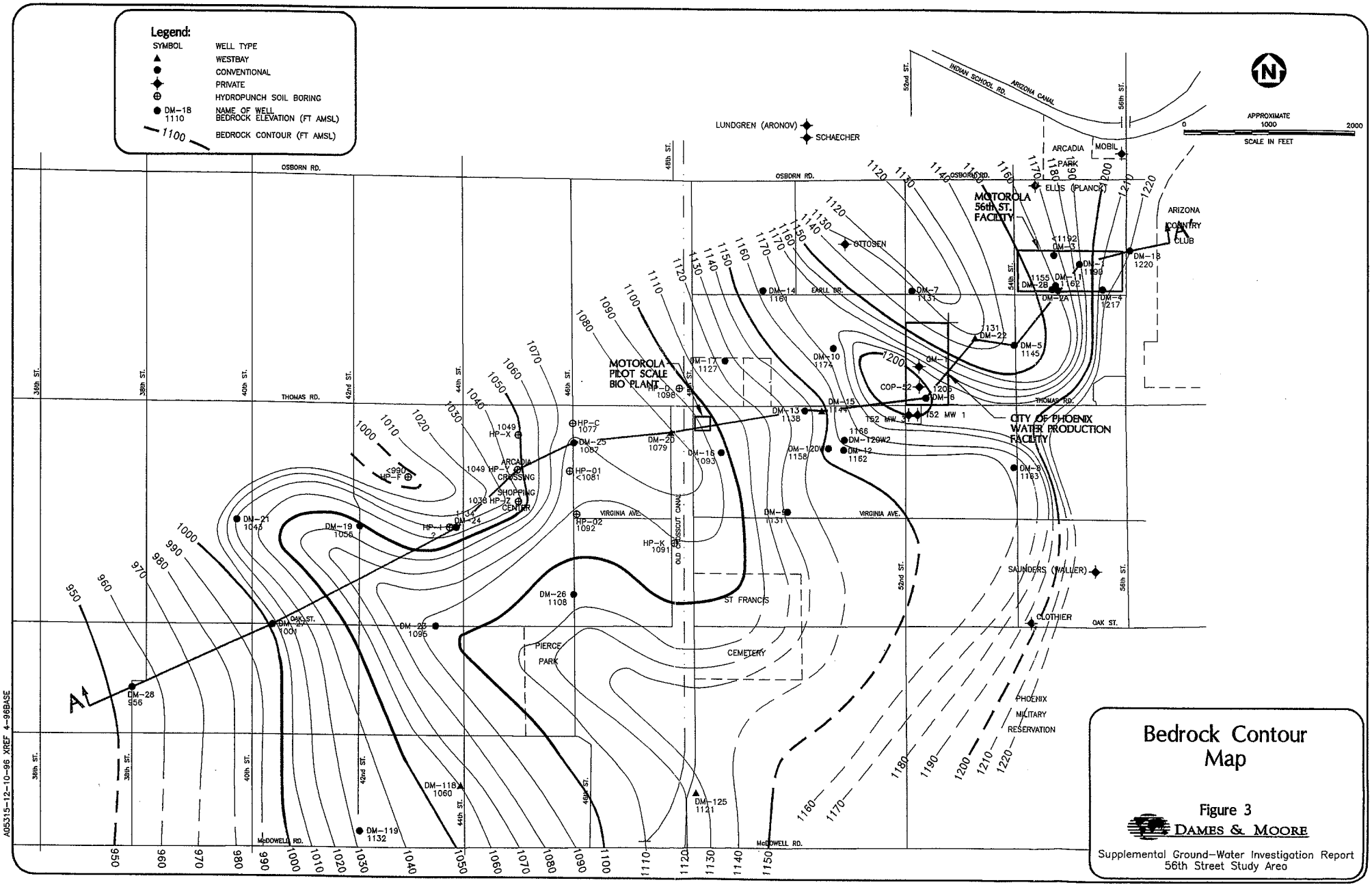


TCE Contour Map (Alluvium)

Figure 2

DAMES & MOORE

Supplemental Ground-Water Investigation Report
56th Street Study Area



Bedrock Contour Map

Figure 3

DAMES & MOORE

Supplemental Ground-Water Investigation Report
56th Street Study Area

A05315-12-10-96 XREF 4-96BASE

ATTACHMENT F

Freescale Letter to ADEQ,
PRP Information for 56th Street and Earll Drive WQARF Site Study Area.
Potential Sources of VOC Contamination, September 24, 2008

Freescale Semiconductor, Inc. 2100 E. Elliot Road, Tempe, AZ 85284

September 24, 2008

Ms. Cathy O'Connell
Arizona Department of Environmental Quality
Mailcode 4415B-1
1110 West Washington Street
Phoenix, AZ 85007

Re: PRP information for 56th Street & Earll WQARF Site Study Area

Dear Ms. O'Connell:

Freescale Semiconductor, Inc. (Freescale) is providing the information you requested regarding potential sources of VOC contamination in the 56th Street and Earll Drive study area.

Soil Gas Investigation Report

In 1993, Motorola conducted a soil gas investigation in the 56th Street study area in order to identify potential sources of VOC contamination. The results of the investigation identified five potential source areas – one on the 56th Street facility and four off-site source areas (Dames & Moore, Soil-Gas Investigation Report, May 1995). The potential source area on the 56th Street facility was subsequently remediated / removed by Motorola through soil vapor extraction and excavation. Confirmation sampling verified that no significant contamination remained and Motorola received a No Further Action Determination from ADEQ. The Dames & Moore Soil-Gas Investigation Report describing the off-site potential source areas should be available in the ADEQ files; however, additional copies can be provided upon request.

Internal PRP Search Summary

In 1995, Motorola conducted an internal PRP search under the direction of legal counsel. Following is a summary of potential facilities that were identified that have handled contaminants of concern in the 56th Street and Earll Drive WQARF site.

- City of Phoenix Yard (Water Production Facility) at 5204 E. Thomas Rd. Elevated TCE and PCE soil gas concentrations were detected on the western side of the

City of Phoenix facility. The facility is a multipurpose administrative and maintenance facility. Operations included a machine shop, electric shop, wood shop, welding shop, transformer storage, drum storage and a dry well. The City of Phoenix reported the storage of hazardous materials and chlorinated solvents on site since the 1950s. A January 1963 aerial photo shows a relatively large "pond" in the west central area of the facility. The ponding may reflect a temporary storm event, but it may have contributed to contaminant migration to the shallow groundwater. Soil sampling conducted by the City of Phoenix detected TCE and PCE in subsurface soils adjacent to on-site drum storage areas (Geraghty & Miller, Site Investigation Report for the City of Phoenix Water Production Facility, February 8, 1995) indicating a release of chlorinated solvents to the environment. Due to the demonstrated release of TCE and PCE to the environment, the City of Phoenix maintenance facility is considered a demonstrated VOC source.

- Gordon Unit Systems/Moss-Gordon Lint Cleaning Co. - cotton gin machinery 3101 N. 56th St. (across the street from the 56th St. Facility). Listed in Phoenix City Directory phone book from 1957-1964; appears to be a residence (from various historical aerial photographs), but it was listed as the address of the company with a warehouse in Chandler. This was the official address of the business with several employees. It was not known what "lint cleaning" involved, but it was known that TCE was used as a cottonseed oil extraction chemical. Because of its apparent residential location, if this firm was involved with machinery at the 56th Street location, it is assumed to have been a small backyard operation or office only. No information is available to indicate if the facility was a potential source.

- Cleaning by George – dry cleaner: Previously known as Wash-Rite (1960-1975) prior to Cleaning by George (1975 – present 1995) (NW corner of 56th St. and Thomas). Known high soil-gas hits indicating the potential for a release of chlorinated solvents to the environment.

- Former One-Hour Martinizing – dry cleaner: 1975 – 1990? (NE corner of 56th St. and Thomas). Known high soil-gas hits indicating the potential for a release of chlorinated solvents to the environment.

Additional potential sources were identified from review of Phoenix Business Directories for 1950 – 1970 era for businesses located within the study area that may have used industrial solvents such as TCE and PCE. These additional locations are identified below:

- Embry Printing:
  51st Street and Osborn Road (1980 – 1982)

- NuWest Painting Contractors:
  South side of Osborn Road and west of 56th Street (198? – present 1995)

The locations for each of the facilities identified above are shown on Figure A (base map is the 1993 TCE Levels in Groundwater and Soil Gas from Dames & Moore's 56th Street Soil-Gas Investigation Report -1995)..

56th Street Facility Historical Operations

The former Motorola 56th Street facility, located on the northwest corner of 56th Street and Earll Drive in Phoenix, was a research and small-scale assembly facility utilized by multiple entities over time. In 1950, Motorola Inc. first developed the site with a single building (Building 1) that was used for bench type electronics and electronic assembly and was known as the Research Lab Western Military and Electronics Center (WMEC). From 1951 through 1956, electronic assembly continued and semiconductor crystal growing started. In 1954, three other building were completed and occupied at the facility.

From 1957 through 1970, the facility was used by Motorola's Government Electronics Division (GED) and Solid State Systems Division for document storage (1959-61), and plating and assembly functions (1962-70). (The GED group has since been sold to General Dynamics.) The facility was connected to the City sewer system in 1962. Prior to that time, dry wells and two leach fields were used at the facility. Two USTs were in use from 1974 to 1978 to store spent solvents.

Several non-Motorola entities leased the facility between 1971 and 1982: Westinghouse (1971 – 1972), Time Piece and Business Systems (1971-74); Liquid Crystal (1975-79) and Microsystems (1975-82). Operations included development and assembly.

In 1982, the facility was converted to office space by Motorola.

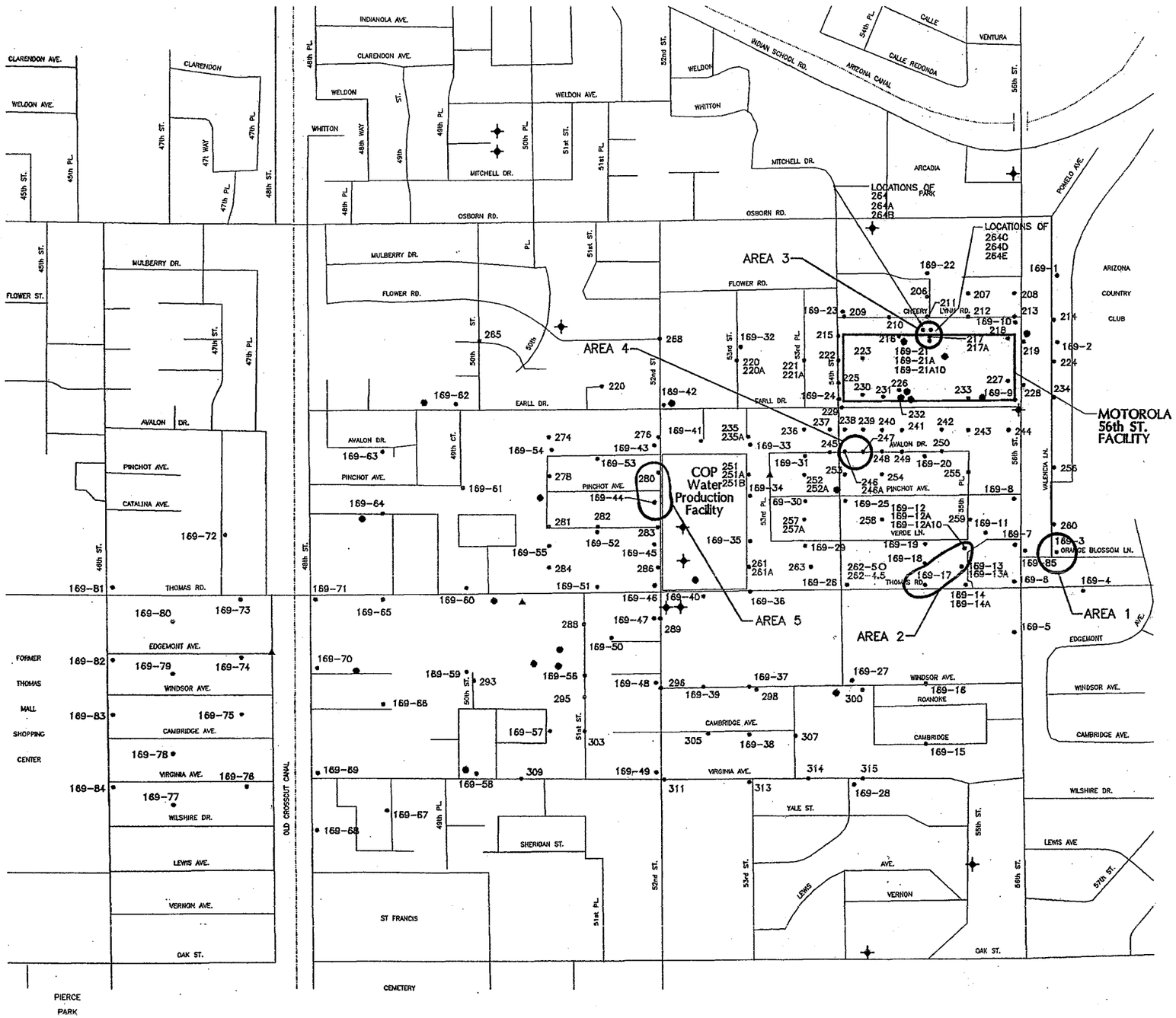
Each type of historical research and manufacturing activity used a number of chemicals unique to its operation. In general, however, most of these systems used cleaners (degreasers), such as trichloroethylene (TCE) prior to 1974 and trichloroethane (TCA) after 1974, Freon or Acetone. TCE, TCA, and PCE were in use at various times, however, no records exist which identify the quantities used.

Freescale hopes that this information will assist ADEQ in its identification of potentially responsible parties in the 56th Street and Earll Drive WQARF area. Please contact me if we can be of further assistance.

Sincerely,

Jenn McCall

Jenn McCall
Strategic Programs Manager



APPROXIMATE
0 800 1600
SCALE IN FEET

Legend:

SYMBOL	WELL TYPE
▲	WESTBAY
●	CONVENTIONAL
✦	PRIVATE
169-21 •	1993 Sample Location
169-21A	1993 Sample Location Resampled
169-21A10	1993 Sample Location Resampled at 10 feet
300 •	1985 Sample Location
○	Potential VOC Source Areas, (Soil Gas Points Reporting VOC Concentration Above 10 ug/l)

Notes:

1) See Figure 11 for a more detailed description of soil-gas points 169-21 and 264 located on the northern portion of the M156 Facility.

POTENTIAL VOC SOURCE AREAS 1985 AND 1993 SOIL-GAS INVESTIGATIONS

Figure 8

DAMES & MOORE

MOTOROLA 56TH ST.
SOIL-GAS INVESTIGATION
MAY 1995

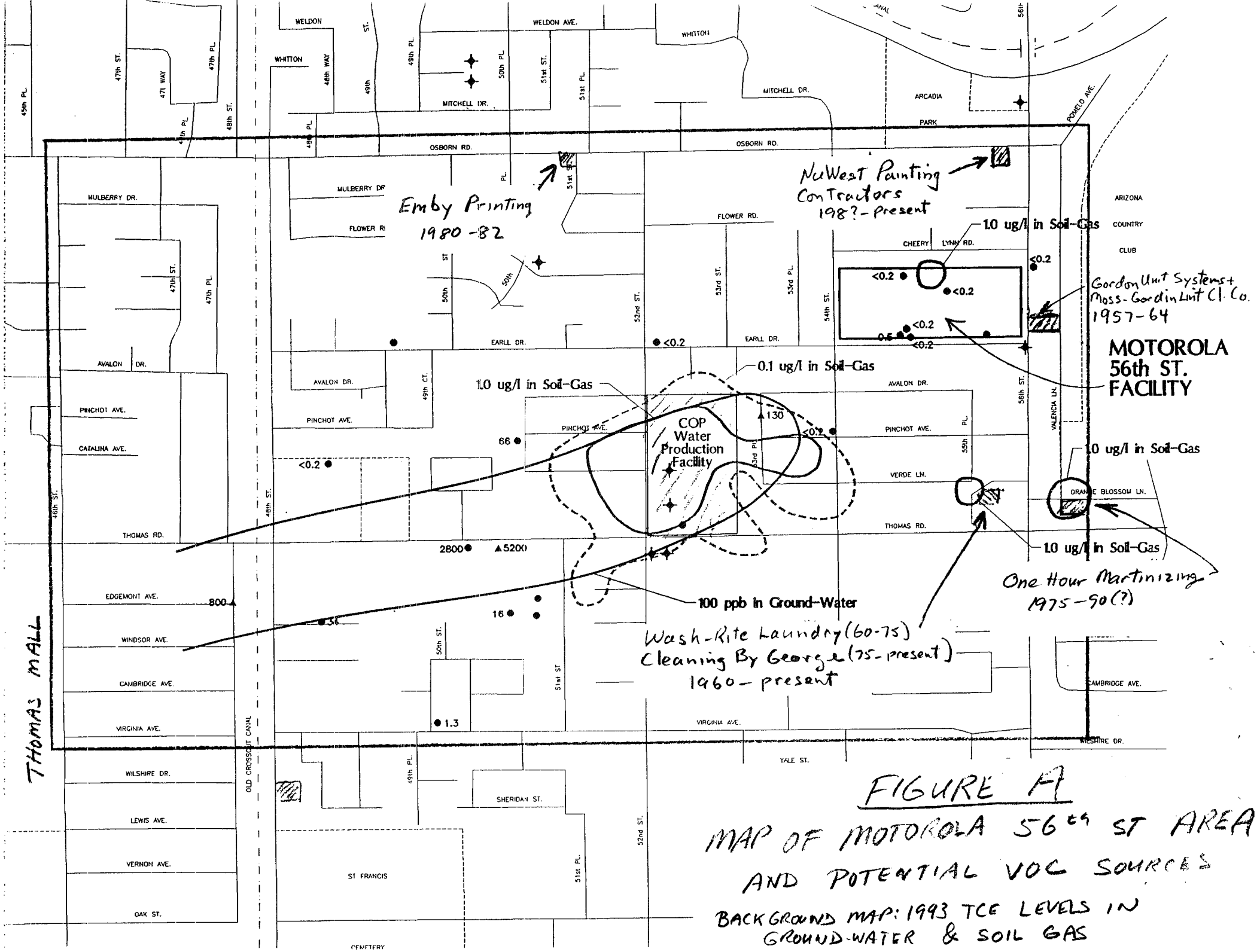


FIGURE A

MAP OF MOTOROLA 56TH ST AREA AND POTENTIAL VOC SOURCES

BACKGROUND MAP: 1993 TCE LEVELS IN GROUND-WATER & SOIL GAS

...rczyca Harry E (Margt J) 2 ® (Gorn Radio TV & Gorn TV & Electronic Serv) h 3333 E Windsor ΔCR 4-1376
Gorczynski Walter J (Anna A) (Walt's Hdw & Shoe Repr) h 4036(r) N 19th Av ΔCR 4-6503
Gordan Tillie Mrs h Apt 1 209 N 8th St
Gordell Al (Lucille R) 4 h 1933 W Cocopah ΔAL 3-4721
Gorden Donald E student r 3421 W Encanto Blvd ΔAP 8-42416
Gorden Nancy L Mrs 2 r 5609 W Heatherbrae Dr (Mvale) ΔAP 8-6073
Gorden Robt ® h 1321 E Culver
Gorden Verna E (wid Emmett) ® clk Woolworth's h 3421 W Encanto Blvd ΔAP 8-2416
Gordin Frank B (Lucy F) 2 mach opr Union Gypsum Co h 742 W Mohave ΔAL 4-3828
Gordin Frank R Jr (Rosie M) 3 ® roll opr Reynolds h 4323 W Clarendon (Mvale)
Gordin Unit Systems V W Hwell v-pres cotton gin machy 3101 N 56th St ΔWH 5-2592
Gordner Carl C (Eleanor) ® dep examiner State Banking Dept h 2346 E Heatherbrae Dr
Gordo Cattle Co (Louis Spitalny & W J Edwurm) Rms 13-14 5001 E Washington ΔBR 5-4455
Gordoa Abelardo M (Laleine J) 1 h 2745(r) W McKinley
Gordoa Alex M (Norma R) carp Canny Constn Co h 1609(r) E Maricopa ΔAL 2-9332
Gordoa Chas M (Minerva) 2 custdn Lowell Sch h 906(r) 1st St
Gordoa Pafnuncio M Jr (Mary W) 3 serv mn Goettl Bros h 918 S 1st St
Gordoa Sara (wid Pafnuncio) ® h 906 S 1st St ΔAL 8-4338
Gordon Albert (Ethel F) 2 ® state mgr Calvert Distillery Co h 4714 E Edgemont ΔWH 5-3428
Gordon Albert M (Helen L) 2 ® chef Pat's Dr Inn h 2324 W Mohave ΔAL 4-5717
Gordon Allan J (Mildred G) 1 ® ptr Imperial Litho h 3816 W Thomas Rd ΔAP 8-5648
Gordon Angus L (Beatrice E) ® stk broker Walston & Co h 902 W Royal Palm Rd ΔWI 3-0408
Gordon B h 3135 Grand
Gordon Ben F (Hazel F) (Fretoni's Italian Restr) h 2813 W Seldon La ΔWI 3-8898
Gordon Bernard L pastor St Gregory's Ch h 3424 N 18th Av ΔAM 5-1252
Gordon Bess B (wid J F) ® h 1615 W Lewis ΔAL 3-3605
Gordon Beverly A Mrs opr Tel Co r 124 N 29th St
Gordon Bobby R (Mary A) 1 ® lab A&S Gravel Co h 2502 E Allen
Gordon Bruce L (La Verne) 2 ® carp H&H Constn h 3215 W Sells Dr ΔAM 6-1143
Gordon Carolyn r 5028 S 21st St ΔBR 6-2139
Gordon Christine Mrs 2 ofc wkr KPOK Aircasting Sta h 3635 N 37th St ΔAM 6-6059
Gordon Clyde A (Mary A) 2 clk Salt River Proj h 930 E Whitton ΔCR 7-3934
GORDON DELMAR A "TINY" (Marjorie M) 4 ® (Arrowhead Sweeping & Striping Serv) h 3625 N 49th Av (Mvale)
Gordon David G (Dorothy M) 2 ® h 5625 N El Camino Del Contento ΔAM 6-6029
Gordon David J (Arlene R) 3 ® carrier PO h 1226 W Meadowbrook ΔAM 5-5569
Gordon Delores A r 5028 S 21st St ΔBR 6-2139
Gordon De Vore B (Harriett S) 4 ® (Gordon's Hobby Lobby) h 3337 N 40th Av ΔAP 8-7886
Gordon Doloers Mrs 3 h Apt B 1640 W Madison
Gordon Dorothy ofc sec Diocese of Ariz h 1915 E Campbell ΔCR 9-7249
Gordon Dorothy I Mrs 2 ® h 3429 N 35th St ΔAM 5-8256
Gordon Dorothy L Mrs tchr Lollipop La Sch r 4202 N 5th Av ΔCR 7-0646
Gordon Edgar L (Beryl) ® retd h 1305 E Coronado Rd ΔAL 8-2579
Gordon Edw J (Ida) h 1307 W Elm ΔCR 9-0445
Gordon Eldie L (Nora E) 2 ® trk dr Hopper Trk Lines h 5 S 31st Av ΔAP 8-6395
Gordon Elliott G (Cleo A) ® mntnce mn 1st Natl Life Ins Co h 814 N 14th St
Gordon Evelyn I Mrs 4 h Apt 109 2019 W Pima
Gordon Floyd G (Ursule C) ® formn John F Long Homes h 2326 W Missouri ΔAM 5-6992
Gordon Francis L (Mildred C) ® (Gordon's Auto Repr) h 2739 W Berridge La ΔAM 5-8201
Gordon Fred B (Charlotte R) 2 ® prodn control mgr Reynolds h 5101 E Osborn Rd ΔWH 5-2494
Gordon Geoffrey T student r 4307 E Vernon ΔAM 5-6649
Gordon Howard F (Ramona L) pres Valley Stationers h Apt F 845 N 3rd Av ΔAL 2-5185
Gordon Inez Mrs r 60 S 3rd St
Gordon J Dubreuil (Lillian M) mgr Food King Mkt res 1044 E MacKenzie (Sctsdl)
Gordon J Paul (Nelle H) ® retd h 509 W Wilshire Dr ΔAL 2-0293
Gordon James A (Inez V) ® supt E L Farmer Constn Co h 3744 E Coronado Rd ΔBR 5-1427
Gordon Jerry M (Joanne F) 2 ® dept mgr Switzer's h 341 W El Caminito Dr ΔWI 3-2969
Gordon Jewel M Mrs ® h 3501 E Yale ΔCR 7-2396
Gordon Joyce S radio TV writer r 4301 E Palo Verde Dr ΔWH 6-6151
Gordon Ladonna M Mrs r 5101 E Osborn Rd ΔWH 5-2494
Gordon Lamar F (Rita C) 1 ® clk Bower Stationery & Ofc Equip Co h 7205 N 22nd Dr ΔWI 3-5942
Gordon Linda Mrs 2 h 1634 E Wood
Gordon Louis (Dorothy M) 1 slsmn Calif Pizza Co h Apt 4 1607 W Highland ΔCR 9-7892
Gordon Louis A (Florence) (Acadian Clnrs) h 2107 W Osborn Rd ΔCR 4-1487
Gordon Louis J (Madeline P) 5 ® electn Associated Elec Co h 3101 E Monte Vista Rd ΔBR 5-4659
Gordon Marguerite Mrs pastor Zion Assembly Ch h 20 N 41st St
Gordon Marilyn emp Park Lee Alice Apts r 1607 W Highland ΔCR 9-7892
Gordon Marion E (wid W C) cook Valley of the Sun Nursing Home h 9016 N 5th St
Gordon Mary J zerox opr AiResearch h 2030 N 23rd Pl ΔAL 4-9568
Gordon Milford (Genevieve) 4 wldr h 368 N 4th Av ΔAL 4-1381
Gordon Milledge A (Francis K) 6 ® trk dr Valley Redi-Mix Co h 404 W Buist ΔBR 6-1466
Gordon Morris (Pauline) (Gordon's Food Mkt) res 6301 Calle Rosa (Sctsdl) ΔWH 5-1180
Gordon Oscar (Celia) retd h Apt 2 6234 N 12th Pl ΔCR 9-6402
Gordon Otis B (Virginia) 1 ® pkr Reynolds h 3139 W Encanto Blvd ΔAP 8-2054
Gordon Pearl M ofc sec Tel Co r 843 N 6th Av ΔAL 2-3373
Gordon Philip L (Louise B) 2 ® dir social serv State Hosp h 5130 N 17th St ΔAM 5-8395
Gordon Ralph L (Lucille H) 4 ® mech Heitel GMC Trk Co h 317 W Piedmont Rd ΔBR 6-2181
Gordon Ramona L (Mrs H F) sec Valley Stationers r Apt F 845 N 3rd Av ΔAL 2-5185
Gordon Raymond E (Betty F) 2 h 3402(r) W Indian Sch Rd
Gordon Raymond M (Bonnie D) ® retd h 3312 E Colter ΔAM 5-4986
Gordon Richd U (Margt M) ® pub relations Charter Oak ... rosa ΔAM 5-6392
Gordon Robt C (Emma O) buyer Am Blind & Linoleum Co ΔAL 3-0619
Gordon Robt E (Pauline V) 2 ® mech Cummins Ariz ... ΔAM 5-1739
Gordon Roland E (Raquel) 1 slsmn Trader's Furn h Apt ...
Gordon Rose (wid Ben) ® h 1508 E Highland ΔCR 4-...
Gordon Ruby D Mrs 1 ® RN h 1823 E Mitchell Dr ΔAM ...
Gordon S C (Gertrude L) civ eng 4301 E Palo Verde Dr ΔW...
Gordon Sherwood R (Marilyn S) pres Greater Phx Broad... Radio Sta res San Francisco Calif
Gordon Stacy C (Olive M) ® retd h 1822 E Willetta ΔAL 4-...
Gordon Stewart M (Helen M) 3 ® mach opr Vernon Tool ... Earll Dr ΔWH 5-8721
Gordon Summerfield M (Lillian) prsr Champion Clothes ... ΔAL 4-9349
Gordon Virgil M (Arlene M) 2 ® claims adj Great Am Ins ... ΔWI 3-2926
Gordon Wendell D (Geraldine H) 2 registrar VA Hosp h ...
Gordon Wilfred (Arlene J) 3 ® (Gordon's Food Mkt) h ... ΔWI 3-1513
Gordon Wm ® h 1522 E Adams ΔAL 4-8564
Gordon Wm M (Evelyn E) mgr Value Cen Dept Store h ...
Gordon Wm M (Lorraine C) 2 ® student h 1902 N 25th St ...
Gordon's Auto Repair (F L Gordon) 1908 W Camelback Rd ...
Gordon's Electric Co (Gordon Demarest) elec mtrs & repair ... Rd ΔAL 3-5574
Gordon's Food Market (Morris & Wilfred Gordon) 301 W ...
Gordon's Hobby Lobby (De Vore Gordon) 6111 N 35th Av ...
Gordon's Jarman Shoe Store Clarence Crigler mgr 115-17 ...
GORDON'S JEWELRY CO Harvey S Baker mgr 5324 W ... ΔBR 2-2501 & Harold Kaufman mgr 3340 W Van Buren Cen) ΔAP 8-5252
Gordy Dorothy D Mrs ® key punch opr Fisher Contg Co h ... ΔBR 5-9138
Gordy Marion E (Jamie J) cabt mkr Albert Stein Decs h ... ΔCR 9-7092
Gore Hubert L (Visie E) ® wldr Salt River Proj h 2327 W ...
Gore James T (Pauline) 2 ® pastor W Thomas Bapt Ch h ... ΔYE 7-5981
Gore Kenneth J (Joan L) 1 ® pts mgr Waukesha Swsta ... h 3301 W Culver ΔBR 2-0179
Gore Maria M Mrs ® h 119 N 32nd Pl ΔBR 5-2775
Gore Raymond P USAF r 2327 W Campbell ΔCR 9-7115
Gore Wm F (Florence) 4 ® dept mgr Reynolds h 2802 W ...
Goree J D chmn State Pr Authority res Coolidge Ariz
Goree Wood W (Marion) ® trk dr Ariz Refg Co h 3033 W ... ΔWI 2-5240
Goreham Aubrey B (Carlene) delmn Automotive Sls Co h ... ΔCR 7-9036
Goreham Harold R (Beverly A) ® mech Bolero Bowling ... (Mvale)
Goreham Judy L student r 4619 N 29th Av ΔCR 7-9036
Goreham Milda M (wid S J) ® h 1333 N 32nd Av
Goreham Robt R (Nancy J) 1 appr diesel electn Crown ... McKinley
Goren Leonard (Jeanne B) pres Aluminum Processors h ... ΔAM 6-9590
Goren Israel (Rose) ® retd h 734 W Portland ΔAL 2-...
Gorgas Stanley M (Helen R) ® h 1402 W Orchid La ΔWI ...
Gorge Wm A (Ruth) ® plstr h 3744 E Amelia ΔCR 4-...
Gorham Floyd G (Marjorie J) 5 ® trk dr Texas Ariz Mfr ...
Gorham Geo P (Alleene T) 3 smelter wkr h 1242 S 20th Pl ...
Gorham Paul W (Thelma J) ® clk PO h 1025 E Medlock ...
Gorham Ray R (Odessa Q) ® retd h 725 E McKinley ΔAL ...
Gori Robt E (Maybelle) ® layout mn Acme Steel h 2138 W ...
Gorican Jos M (Grayce) ® circulation dist advisor Ariz ... La ΔYE 7-6553
Goring Henry (Ann M) 1 ® butcher Bayless h 2809 E Elm ...
Gork Albert (Olive N) 1 ® carp Haskell-Thomas h 915 N ...
Gorman Allen R (Esquire Pkg Serv) r 2518 E Montecito ΔAM ...
Gorman Carolyn L (Mrs K W) sec-treas Gorman's Dairy Clr ... ΔCR 4-6765
Gorman Cecelia health educn dir YWCA h Apt 210 3108 N ...
Gorman Dorothy K (wid J H) entertainer Mustang Cocktail ... Lynwood ΔAP 8-5389
Gorman E Coleman (Edna L) ® right of way agt State Hwy ... Whitton (Mvale) ΔAP 8-3743
Gorman Florence A (wid John) ® RN John C Lincoln Hosp ... ΔWI 4-3901
Gorman Geo F (Clara) ® emp Valely Bk h 3911 E Weldon ...
Gorman James F (Ruth N) ® clk Surety Life Ins Co h ...
Gorman John M (Florence I) 4 ® title examiner State Hwy ... Missouri ΔAM 6-6780
Gorman John T (Florence W) 1 ® trk dr Reliable Trans Co ... ΔWI 3-4581
Gorman Karl W (Carolyn L) 4 pres Gorman's Dairy Clr ... ΔCR 4-6765
Gorman Leonard F (Beulah J) merchandising h 2948 N ...
Gorman Mary student r 2235 N 21st St ΔAL 3-1229
Gorman Mary E Mrs 4 cash Miller's Southside Bkry h ...
Gorman Mary H (wid A P) 1 ® h 2518 E Montecito ΔAM ...
Gorman Mary Kay student r 2518 E Montecito ΔAM ...
Gorman Mickey r 40 W Marshall ΔCR 7-4985
Gorman Paul C (Betty M) 2 ® (Gorman's Furn) h 3012 ...
Gorman Paul R (Florence H) ® retd h 709 W Cheryl Dr ...
Gorman Wm D (Thelma) 3 dist mgr Natl Labys h 3334 ...
Gorman Wm L (Roseline) 1 ® (Gorman's Refrign Serv) ... ΔAL 3-3601
Gorman Wm M (Mary A) 2 ® wire chf SP Co h 2235 N ...
Gorman Wm M Jr student r 2235 N 21st St ΔAL 3-1229
Gorman's Dairy Clipper Karl Gorman pres & Mrs Carolyn ... ofc & whse for ice cream trks 2135 E Indian Sch Rd ...
Gorman's Furniture (P C Gorman) 2020 E Washington ...
Gorman's Refrigeration Service (W L Gorman) 1131 S ...
Gormiak Arth W (Mildred I) ® (Desert Bty Salon) h ... ΔAM 5-6048
Gormley Construction Co (R L Gormley) bldg contrs ...
Gormley Ralph L (Mary E) 1 ® (Gormley Constn Co) ...

1961 Com Survey
Phx City Directory

ATTACHMENT G

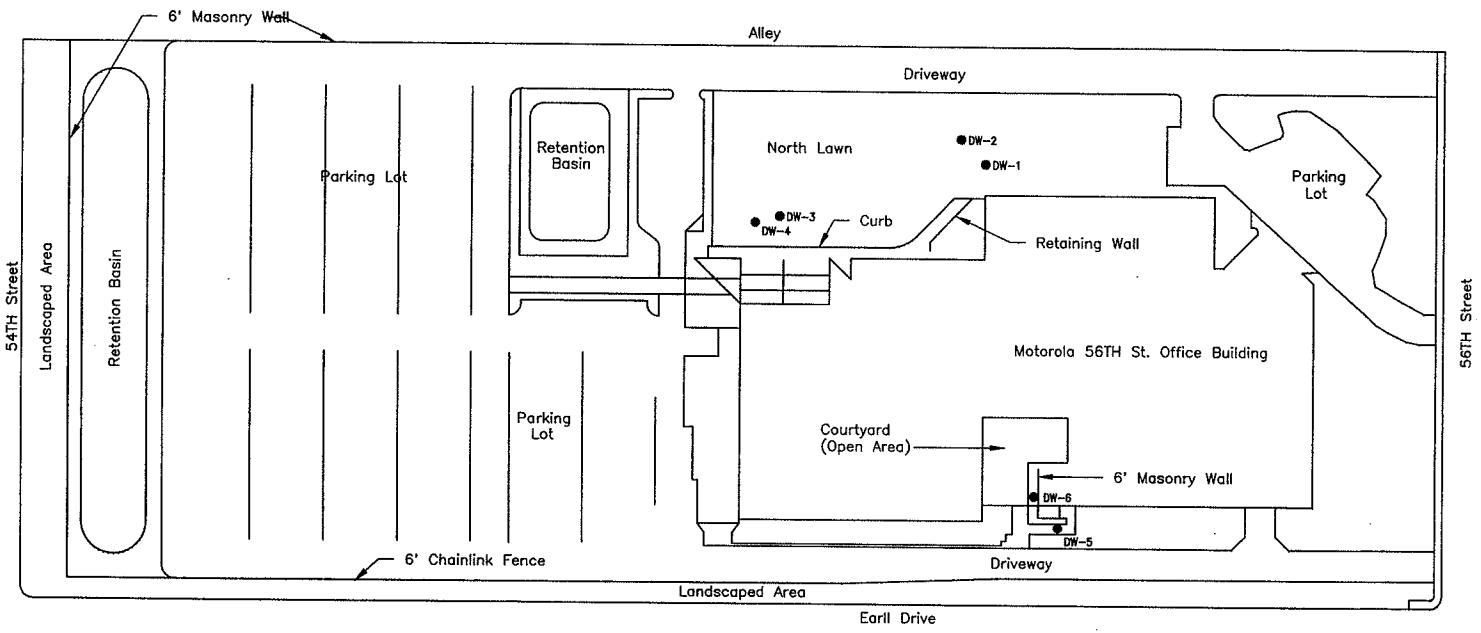
Supplemental Remediation

(selected pages of data tables and figures)

DRAFT
DRY WELL ABANDONMENT REPORT
MOTOROLA 56TH ST. FACILITY
PHOENIX, ARIZONA
FOR
MOTOROLA INC.

DAMES & MOORE

D&M Job. No. 09448-169-033
September 29, 1993



APPROXIMATE
0 100 200
SCALE IN FEET

Legend:

● Dry Well

Note:

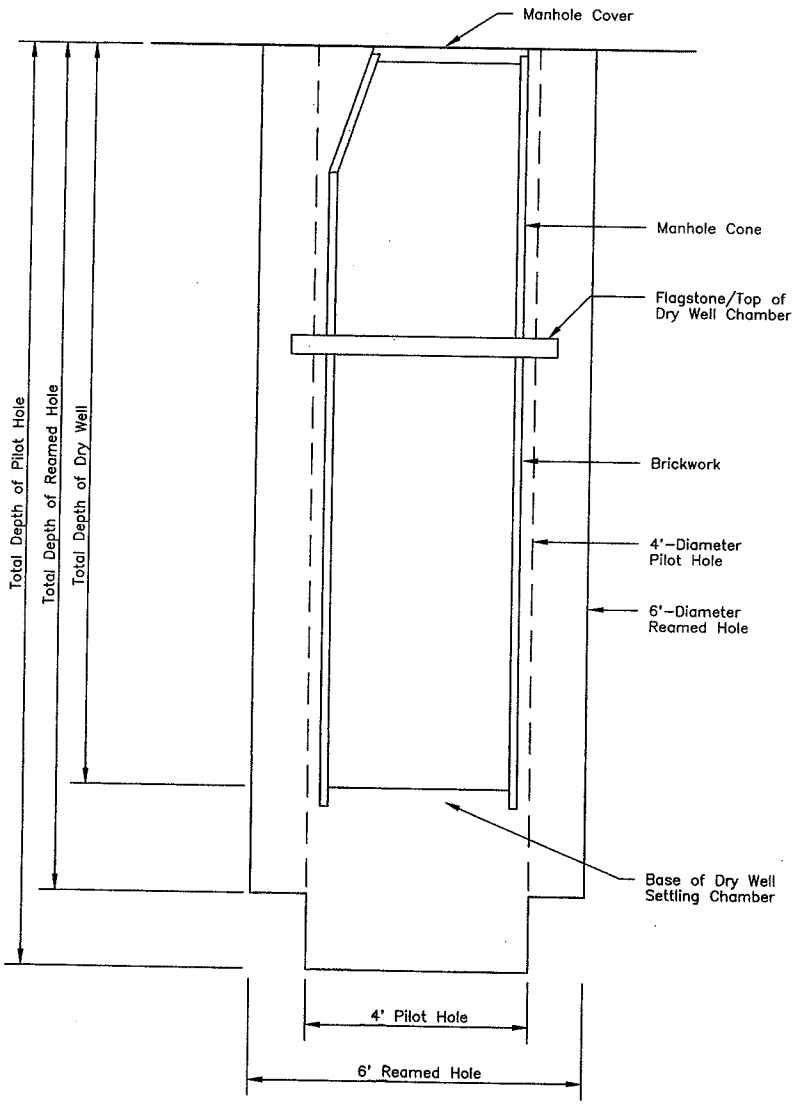
Dry well DW-6 was closed in place due to drill rig inaccessibility.

DRY WELL LOCATION MAP MOTOROLA 56TH ST. FACILITY

Figure 1

DAMES & MOORE
MI56 DRY WELL ABANDONMENT
SEPTEMBER 1993
09448-169-033

A00952-06-30-93



DRY WELL CONSTRUCTION DATA

Dry Well ID	Total Depth of Dry Well (feet)	Depth to Top of Dry Well Chamber (feet)	Water Present in Dry Well
DW-1	13	6	no
DW-2	12.5	4	yes, approx. 1.5 feet
DW-3	9.5	3	no
DW-4	12	3	no
DW-5	15	5.5	no
DW-6	10.25	6.25	no

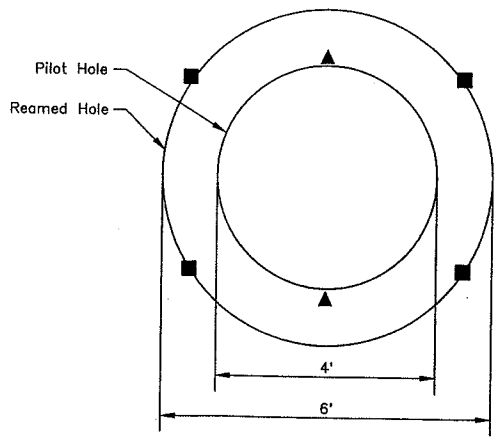
DRY WELL EXCAVATION DATA [a]

Dry Well ID	Total Depth of Dry Well (feet)	Total Depth of 6'-Dia. Reamed Hole (feet)	Total Depth of 4'-Dia. Pilot Hole (feet)	Confirmation Sidewall Sample Collection Depth (feet)	Confirmation Base Sample Collection Depth (feet)
DW-1	13	15	17.5	6	15
DW-2	12.5	13.5	15.5	6.5	13.5
DW-3	9.5	10	12.5	7	10
DW-4	12	11	12.5	7	11
DW-5	15	16	18	8	18
DW-6[b]	10.25	NA	NA	NA	NA

a – Dry Wells backfilled with concrete slurry from base of pilot hole to approximately one foot below ground surface.

b – Dry Well DW-6 was closed in place rather than excavated due to drilling rig inaccessability.

NA – Not applicable to DW-6



PLAN VIEW OF DRY WELL SAMPLE LOCATIONS

Legend:

SYMBOL	SAMPLE TYPE
■	Confirmation Sidewall Sample
▲	Confirmation Base Sample

TYPICAL DRY WELL DIAGRAM, EXCAVATION DATA, AND SAMPLE LOCATIONS

Figure 2

DAMES & MOORE
MI56 DRY WELL ABANDONMENT
SEPTEMBER 1993
09448-169-033

A00951-06-30-93

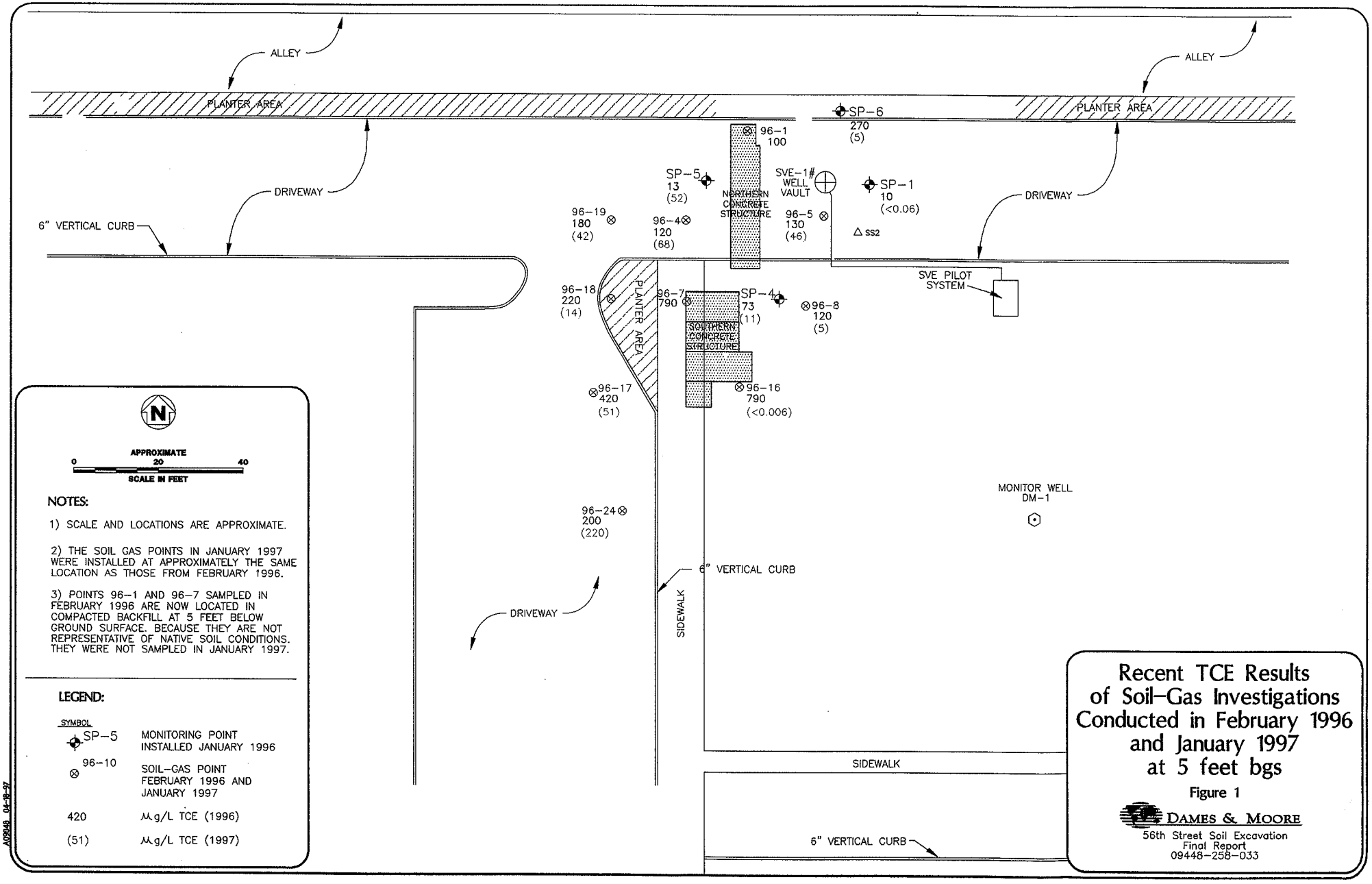
DAMES & MOORE

A DAMES & MOORE GROUP COMPANY

56TH STREET SOIL EXCAVATION
FINAL REPORT
FOR
MOTOROLA INC.
PHOENIX, ARIZONA

D&M Job No. 09448-258-033
April 18, 1997

Registered Professional Engineer (Chemical)
CERTIFICATE NO. 28824
PETER J. STORCH
Date Signed 4-18-97
ARIZONA, U.S.A.


ALLEY
PLANTER AREA
DRIVEWAY
6" VERTICAL CURB
SP-6
270
(5)
96-1
100
SP-5
13
(52)
SVE-1#
WELL
VAULT
SP-1
10
(<0.06)
NORTHERN
CONCRETE
STRUCTURE
96-19
180
(42)
96-4
120
(68)
96-5
130
(46)
SS2
SVE PILOT
SYSTEM
96-18
220
(14)
96-7
790
SP-4
73
(11)
96-8
120
(5)
SOUTHERN
CONCRETE
STRUCTURE
96-17
420
(51)
96-16
790
(<0.006)
MONITOR WELL
DM-1
96-24
200
(220)
SIDEWALK
N
APPROXIMATE
0
20
40
SCALE IN FEET
NOTES:
1) SCALE AND LOCATIONS ARE APPROXIMATE.
2) THE SOIL GAS POINTS IN JANUARY 1997 WERE INSTALLED AT APPROXIMATELY THE SAME LOCATION AS THOSE FROM FEBRUARY 1996.
3) POINTS 96-1 AND 96-7 SAMPLED IN FEBRUARY 1996 ARE NOW LOCATED IN COMPACTED BACKFILL AT 5 FEET BELOW GROUND SURFACE. BECAUSE THEY ARE NOT REPRESENTATIVE OF NATIVE SOIL CONDITIONS. THEY WERE NOT SAMPLED IN JANUARY 1997.
LEGEND:
SYMBOL
SP-5 MONITORING POINT INSTALLED JANUARY 1996
96-10 SOIL-GAS POINT FEBRUARY 1996 AND JANUARY 1997
420 µg/L TCE (1996)
(51) µg/L TCE (1997)
Recent TCE Results of Soil-Gas Investigations Conducted in February 1996 and January 1997 at 5 feet bgs
Figure 1
DAMES & MOORE
56th Street Soil Excavation
Final Report
09448-258-033
A09448 04-18-97

ATTACHMENT H

ADEQ Letter to Motorola dated July 10, 1997 re: Arizona Department of Environmental Quality (ADEQ) Comments on Motorola 56th Street Soil Excavation, Final Report by Dames & Moore for Motorola, Inc,, April 18, 1997, Phoenix, Arizona

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Russell F. Rhoades, Director

July 10, 1997
RPU98,034

Mr. Thomas R. Suriano
Manager, Superfund and Due Diligence
Motorola, Inc.
5005 East McDowell Road
Phoenix, Arizona 85062-2953

Re: Arizona Department of Environmental Quality (ADEQ) Comments on Motorola 56th Street Soil Excavation, Final Report by Dames & Moore for Motorola Inc., April 18, 1997, Phoenix, Arizona

Dear Mr. Suriano:

ADEQ has reviewed the Motorola 56th Street Soil Excavation Final Report, and has the following comments:

1. The soil-gas concentrations at the five foot depth were significantly reduced for all contaminants after the removal action. In the ten foot depth soil-gas survey, concentrations were higher than the five foot soil-gas survey concentrations. The explanation in the report for the higher concentrations was off-gassing from the aquifer, which is approximately 12 feet below ground surface (bgs). This could be the cause if the volatile organic compound (VOC) concentrations in groundwater are high enough. However, it is understood based on previous sampling rounds that the concentrations in groundwater are not that high (~5.0 ug/L).

   During a June 30, 1997 meeting with Motorola, Dames & Moore (D&M) and ADEQ, Motorola and D&M stated that it is unlikely that off-gassing from the aquifer was responsible for the residual VOC concentrations in the soil gas.

2. According to Tom Suriano, Motorola Inc., the elevated soil-gas concentration (510 ug/L) resulted from approximately 30 years of off-gassing from the excavated vaults.

   Although it was never stated in the report that the excavated vaults of the former septic system (in use from the early 1950's to the early 1960's) was the source of the VOCs, based on the 1985, 1993, and 1996 soil-gas surveys, ADEQ agrees that the excavated vaults were the most likely source of the high VOC soil-gas concentrations for the following reasons:

a. The highest detection of TCE in the soil-gas survey was at location 96-24-10. The soil-gas concentration of 510 ug/L equates to 0.47 mg/kg based on equilibrium calculations and assumed matrix properties.

b. Based on calculated equilibrium values, the highest soil concentration (derived from soil-gas concentration) is still below the minimum GPL.

c. Soil vapor extraction systems are generally used in areas where the soil-gas concentrations are in the thousands of micrograms per liter of air (ug/L). Additional SVE would be inefficient at the low concentrations currently detected in this area. ADEQ agrees with the recommendation of no further remedial action for the soils at this facility unless new data becomes available which warrants further investigation or remediation.

3. Monitor well DM-1 (crossgradient) is approximately 80 feet southeast of the former vaults; monitor well DM-3 (crossgradient) is approximately 150 feet west of the former vaults; monitor wells DM-2A, DM-2B, and DM-11 are approximately 200 feet downgradient from the vaults. Only monitor well DM-2A had detectable (5 ug/L) concentrations of TCE in the ground water.

ADEQ recommends continued quarterly monitoring of these wells to insure there is no longer a source of groundwater contamination emanating from the former septic system.

If you have any questions, please telephone me at (602) 207-4194.

Sincerely,

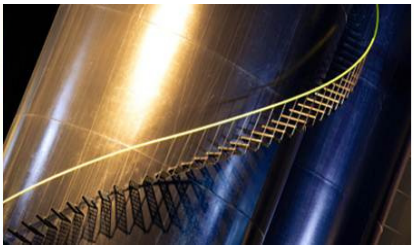
Maria M. Fant

Maria M. Fant
Project Manager
Remedial Projects Section

cc: Kurt Zeppetello, ADEQ/RIHU
Project and Reading Files

ATTACHMENT I

Environ Report, Site Remediation Motorola 56th Street Soil Excavation, Phoenix, Arizona
2013



Final Indoor Air Quality Report

Great Hearts Academies
Property / Veritas Preparatory Academy and Archway Classical Academy Veritas School Site
3102 North 56th Street
Phoenix, Arizona 85018

Prepared for:
Great Hearts Academies
Phoenix, Arizona

Prepared by:
ENVIRON International Corporation
Phoenix, Arizona

Date:
November 2013

ENVIRON

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Figure 2: IAQ Sampling Results
Figure 3: Sub-Slab Soil Vapor Results

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Table 1: Air Sampling Results: TO-15 SIM Analysis

Acronyms and Abbreviations

ADEQ	Arizona Department of Environmental Quality
bgs	below ground surface
Clear Creek	Clear Creek Associates
CTI	Chemical Transport, Inc.
DCE	1,2-dichloroethene
ENVIRON	ENVIRON International Corporation
Freescale	Freescale SemiConductor, Inc.
GHA	Great Hearts Academies
HVAC	Heating, Ventilation, and Air Conditioning
IAQ	Indoor Air Quality
mg/kg	milligrams per kilogram
Motorola	Motorola, Inc.
NFA	No Further Action
PCE	Tetrachloroethene/Perchloroethene
ppbv	part per billion by volume
QA/QC	Quality Assurance/Quality Control
R & D	Research and Development
RSL	Residential Screening Level
SIM	Selective Ion Method
SRL	Soil Remediation Level
Squire Sanders	Squire, Sanders & Dempsey, LLP
TCE	Trichloroethene
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
Zacher	Zacher Development

Executive Summary

This report summarizes testing, remediation, and confirmatory sampling conducted by ENVIRON International Corporation ("ENVIRON") at the Great Hearts Academies building at 3102 North 56th Street, Phoenix, Arizona. ENVIRON's investigation concludes that all areas of the building which now house the Archway Classical Academy Veritas and Veritas Preparatory Academy exhibit indoor air quality that meets or exceeds standards for residential use established by the US Environmental Protection Agency ("USEPA").

In late 2010, ENVIRON was retained on behalf of Great Hearts Academies to assist in the evaluation of the current Archway Classical Academy Veritas and Vertias Preparatory Academy school site for use as a charter school for grades kindergarten through 12. The nature of the historical industrial practices performed by the former owner of the property, Motorola, Inc., prompted ENVIRON to begin its evaluation of the Site by assessing the indoor air quality (ENVIRON, 2011a).

This initial assessment showed that indoor air quality in most areas of the building was below risk screening levels set by USEPA for residential use for the organic compounds related to Motorola's activities. However, one area in the southwestern corner of the main building showed concentrations of volatile organic compounds in indoor air above risk screening levels. Great Hearts Academies developed those portions of the building that had been shown to be below the risk screening levels while investigation of the southwestern area of the building continued.

ENVIRON analyzed sub-slab soil vapor in the southwestern area and confirmed the presence of elevated concentrations of volatile organic compounds, primarily trichloroethene and tetrachloroethene. ENVIRON continued with a step-out sub-slab soil vapor investigation and delineated a discrete source area of trichloroethene and tetrachloroethene in and limited to the southwestern portion of the building. ENVIRON conducted subsequent sub-slab soil testing in the area of the anomaly, encountering volatile organic compounds in soil to an approximate depth of 8 feet below ground surface, and an apparent buried structure (ENVIRON, 2011b).

Based on review of the analytical results for soil vapor and soil, Freescale Semiconductor, Inc. ("Freescale"), the corporate successor to Motorola, Inc., took responsibility for the environmental investigation and remediated the area to Arizona Residential Soil Remediation Levels ("SRLs") for trichloroethene (3.0 milligrams per kilogram), the main chemical of concern. ENVIRON provided periodic oversight of Freescale's investigation and excavation and was present for all confirmation sampling.

Freescale's excavation discovered a multi-chambered cement structure which was determined to have been a former wastewater treatment tank. After several phases of excavation, including removal of the cement structure and surrounding and underlying soils and confirmation sampling, Freescale achieved the established clean-up goal on August 10, 2011. A final report on the remediation was submitted to the Arizona Department of Environmental Quality.

The excavation was backfilled using certified clean material, and the cement slab was re-poured incorporating a Cupolex® passive sub-slab venting system as an additional precaution against

residual soil vapors. Construction of the floor was completed the first week of October, 2011. On October 14, 2011, ENVIRON returned to the site to perform an initial evaluation of the post-remediation indoor air quality of the former excavation area. At the time of the evaluation, this area was in an unfinished state, the concrete floor was not fully cured or sealed, and the southwestern portion of the building did not have an operational heating, ventilation, and air conditioning system. For trichloroethene, the results indicated that concentrations had not returned to ambient levels. ENVIRON concluded that these findings were related to residual off-gassing from within the unfinished floor and southwestern area of the building, and recommended that further indoor air quality evaluations be conducted after interior improvements of this area of the building were completed.

Improvement of the southwestern area of the building was completed in February, 2013 with completion of the gymnasium and the performing arts center. ENVIRON returned to the Site on March 22, 2013 to conduct an indoor air quality survey to evaluate if indoor air concentrations had returned to ambient levels. Indoor air samples were collected from the new gymnasium and performing arts center (areas which overlapped the former excavation area). The results from this sampling indicate that concentrations at all of the indoor air sampling locations are consistent with ambient levels and that indoor air concentrations are below USEPA's benchmarks for residential exposures, indicating that risk levels for teachers, children, and workers at the school are below levels of concern.

1 Introduction

ENVIRON International Corporation ("ENVIRON") was retained on behalf of Great Hearts Academies ("GHA") to assist in the evaluation of the Archway Classical Academy Veritas and Vertias Preparatory Academy school site located at 3102 North 56th Street, Phoenix, Arizona ("the Site"; see Figure 1). The Site was occupied beginning in approximately 1950 by Motorola, Inc. ("Motorola") and its successor Freescale Semiconductor, Inc. ("Freescale"), first as a research and manufacturing location and thereafter, for some 25 years, as an office.

Due to the nature of the industrial practices performed by Motorola, ENVIRON began its evaluation of the Site by assessing the indoor air quality ("IAQ"). Subsequent Phase II investigations eventually led to the discovery of a spatially contiguous volatile organic compound ("VOC") anomaly located in the southwestern portion of the main Site building. Following this discovery, Freescale excavated a concrete vault formerly associated with operations and the surrounding soils to Arizona residential Soil Remediation Levels ("SRLs"). After completion of remediation and facility improvements, ENVIRON conducted IAQ testing that confirmed air quality in the building meets or exceeds standards for residential use.

This report summarizes ENVIRON's investigations leading to the discovery of a VOC anomaly, the excavation of a buried structure in the vicinity of the anomaly, and the subsequent remediation of the excavation area on behalf of Freescale. The report concludes with a discussion of ENVIRON's post-remediation IAQ surveys and the current Site status.

1.1 Report Contents

Section 2 briefly describes the Site background. Section 3 describes ENVIRON's initial IAQ survey and sub-slab soil vapor investigation, expanded soil vapor investigation and soil investigation, the investigation, excavation, and remedial activities performed by Freescale, and ENVIRON's initial post-remediation IAQ survey. Section 4 describes ENVIRON's final post-remediation IAQ survey. A discussion of the current Site status is presented in Section 5. References are presented in Section 6.

2 Site Background

The Site is located on an approximately 14-acre parcel in a primarily residential neighborhood of eastern Phoenix, roughly equidistant between the intersections of North 56th Street with East Indian School Road to the north and East Thomas Road to the south. The eastern half of the property features an approximately 156,000-square foot building, which was constructed in three stages beginning in the 1950s (Figure 1; URS, 2004; Dames & Moore, 1995). An athletic field, asphalt-paved parking lot, and grass-lined storm water drainage basin are located on the western half of the property.

The Site was reportedly used for agricultural row crop cultivation from at least 1930 to 1949. Motorola owned and occupied the Site for electronic research and development ("R&D") and semiconductor manufacturing operations from 1950 to 1982 and for office use from 1982 to 2004. Motorola erected Building 1 on the Site in 1950 when it began electronic product R&D. In 1954, facility expansion doubled the size of the facility with the addition of Buildings 2, 3, and 4[1]. In 1982, manufacturing processes at the Site ceased. In 1985, a two-story office building was added to the east and south side of the structure and the entire building was renovated for commercial office use. In 2004, Motorola sold the property to Zacher Development ("Zacher"), and in 2007, Zacher sold the property to 3102N56 LLC. The property was thereafter unoccupied after it was vacated by Motorola in 2004. GHA purchased the property in March 2011 to develop it as a charter school for grades kindergarten through 12.

Motorola's historical operations at the Site resulted in discharges of solvents that contaminated groundwater through a system of former dry wells, leach fields, and other solvent handling and disposal methods. The primary contaminants of concern have been identified as trichloroethene ("TCE") and tetrachloroethene, also known as perchloroethene ("PCE"). Extensive soil and groundwater investigations and remedial activities were conducted at the Site between 1985 and 2005, when the on-site groundwater monitoring wells were closed. After conducting investigations of possible source areas, records indicate the following on-site remediation activities were implemented by Motorola between 1993 and 1996: abandonment of on-site dry wells; pilot scale bioremediation test operations; on-site soil vapor extraction; and on-site soil excavation. In 1997, following an on-site confirmation soil vapor investigation, the Arizona Department of Environmental Quality ("ADEQ") granted a no further action ("NFA") determination for soil at the Site.

[1] Building 2 was apparently demolished at some point in the facility history and no longer exists.

3 Prior Investigations and Remediation

3.1 Initial Evaluation

ENVIRON was retained in late 2010 to assist in the evaluation of the Site for use as a charter school for grades kindergarten through 12. It was understood that in the conversion of the Site, the southern half of former Building 3 would be renovated to construct a new gymnasium and performing arts center and that the remainder of the building would be converted to classrooms and administrative offices. In this use scenario, the primary issue of concern would be vapor intrusion from residual soil contamination and contaminated groundwater. To assist in evaluating the viability of the property for this intended use, ENVIRON evaluated indoor air quality ("IAQ") and sub-slab vapor conditions and estimated potential health risks to Site occupants from exposure to TCE and PCE vapor intrusion under the foreseeable future use scenarios. To provide perspective for interpreting the results, the indoor air sampling results were compared to health benchmarks, including the United States Environmental Protection Agency ("USEPA") indoor air Regional Screening Levels ("RSLs").[2] Indoor air concentrations were also compared with concentrations for ambient (outdoor) air from Phoenix-area monitoring locations and with concentrations in ambient (outdoor) samples collected at the Site. Details of ENVIRON's initial indoor air quality investigation and sub-slab soil vapor investigation are provided in Sections 3.1.1 and 3.1.2, respectively.

3.1.1 Indoor Air Quality Survey

As part of the initial Site evaluation, ENVIRON conducted two rounds of IAQ sampling at the Site, one on November 16, 2010 and a second on December 15, 2010. During both IAQ sampling events, three ambient outdoor air samples were collected; one each on the southwest (IAQ-Southwest) and northeast (IAQ-Northeast) sides of the building. In addition, one ambient air sample was collected on the roof of the building (IAQ-roof) during both IAQ sampling events, near an air intake vent.

For the November 2010 IAQ sampling event, the heating, ventilation, and air conditioning (HVAC) system operated for two days prior to sampling, was shut down the day prior to sampling, and was not running during the sampling in order to represent "worst-case" IAQ conditions during sampling. During this event, six indoor air samples were collected inside the building (IAQ-01 through IAQ-06) in areas that future workers and/or students may be anticipated to occupy and from utility closest/maintenance areas. Based on a review of previous investigations at the Site, samples were analyzed for selected chlorinated VOCs, including PCE, TCE, cis- and trans-1,2- dichloroethene ("1,2-DCE"), vinyl chloride, 1,1-dichloroethene ("1,1-DCE"), and methylene chloride, in accordance with USEPA Method TO-15 Selective Ion Method ("SIM").

During the November 2010 IAQ sampling event, indoor air concentrations were less than the residential and commercial/industrial RSLs for all chemicals except PCE and TCE (Table 1; Figure 2). For PCE, a comparison of the indoor sampling results with the results from the

[2] USEPA. Regional Screening Level (RSL) Summary Table May 2013. Accessed online at: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_MAY2013.pdf

ambient outdoor (or background) sampling locations indicated that indoor air concentrations were consistent with background concentrations. For TCE, the results indicated that concentrations at three locations (IAQ-01, IAQ-02, and IAQ-03) exceeded both ambient outdoor concentrations and residential and/or commercial/industrial RSLs. These samples were collected in the area that generally corresponded to the proposed gymnasium/performing arts area.

The second round of sampling, on December 15, 2010, was conducted while the HVAC system was operational to evaluate whether indoor air concentrations would decrease under these conditions. During this event, six additional indoor air samples were collected inside the building (IAQ-07 through IAQ-12), at locations where the November 2010 sampling results indicated the detection of VOCs (IAQ-07, IAQ-08, IAQ-09), or in other areas of the building not previously sampled (IAQ-10, IAQ-11, IAQ-12). As shown in Table 1, detected TCE concentrations were lower when the HVAC system was operational, but did not achieve ambient levels at all locations, specifically in the area that corresponded to the proposed gymnasium/performing arts area.

3.1.2 Sub-Slab Soil Vapor Investigation

On January 6, 2011, ENVIRON conducted a sub-slab soil vapor investigation to help identify the source of the elevated concentrations of TCE in the indoor air. Sub-slab samples (SS-01 through SS-04[3]) were collected in locations where IAQ sampling indicated elevated TCE concentrations as well as in areas in which indoor TCE concentrations were generally consistent with ambient levels.

The sub-slab soil vapor samples were analyzed for the same chlorinated VOCs as the IAQ samples, including PCE, TCE, cis- and trans-1,2-DCE, vinyl chloride, 1,1-DCE, and methylene chloride, in accordance with USEPA Method TO-15. The results of the sub-slab soil vapor testing identified a potential source area beneath the slab in the proposed gymnasium/performing arts area, with sub-slab TCE concentrations of 11,000 to 12,000 parts per billion by volume ("ppbv").

3.2 Expanded Investigation

To further characterize the potential source area identified during ENVIRON's January 2011 sub-slab soil vapor investigation, ENVIRON continued with a more refined step-out sub-slab soil vapor investigation in the proposed gymnasium/performing arts area, followed with sub-slab soil testing. Details of this expanded investigation are provided in Sections 3.2.1 and 3.2.2 below.

3.2.1 Sub-Slab Soil Vapor Investigation

From May 31, 2011 to June 2, 2011, 20 sub-slab soil vapor samples (ENV-SS-01 through ENV-SS-20) were collected in the proposed gymnasium/performing arts area. These samples were analyzed for VOCs in accordance with USEPA Method 8260B. Three duplicate soil vapor samples were collected and analyzed for Quality Assurance/Quality Control ("QA/QC")

[3] One duplicate sample was taken, SS-01-DUP; no sample was taken at SS-03 as the slab was not penetrated at 14 inches.

purposes. TCE, the primary chemical of concern, had the most elevated concentrations of all the VOCs detected in the 20 soil vapor samples. ENVIRON interpreted the TCE data by developing isoconcentration contours as depicted in Figure 3. TCE concentrations up to 20,521 ppbv were detected in ENV-SS-08; however, systematic step-out sampling showed detections quickly tapering to below 100 ppbv, delineating a discrete "duck's foot" shaped area as a TCE anomaly.

Based on these findings, ENVIRON proposed a follow-up sub-slab soil sampling investigation. To facilitate the sub-slab soil investigation, ENVIRON recommended saw-cutting the slab for removal and subsequent trenching.

3.2.2 Sub-Slab Soil Investigation

On June 14, 2011, a track-mounted direct push limited access rig ("LAR") was used to advance six soil vapor borings (SSB-1, -2, -3, -3A, -4, and SSB-5) in the proposed gymnasium/performing arts area. Several of the borings met refusal at various depths indicating the possible presence of subsurface structures. Direct push soil samples were collected at depths of approximately 2, 5, 10, and 15 feet in each boring, or to refusal. . In all, 18 soil samples (SSB-01-2-2.5 through SSB-05-10-10.3) were analyzed for VOCs in accordance with USEPA Method 8260B.

The main VOCs detected in the soil samples were TCE, PCE, toluene, chloroform, and xylenes; however, TCE was by far the most dominant VOC with a maximum detected concentration of 3,400 milligrams per kilogram ("mg/kg"). Results of ENVIRON's sub-slab soil vapor and soil investigations were communicated to Freescale, which entered into an agreement with GHA to investigate and address the VOC contamination observed in ENVIRON's prior investigations.

3.3 Freescale Investigation, Excavation, and Remediation

In July 2011, Freescale contracted Chemical Transportation, Inc. ("CTI") to excavate the pre-cut concrete slab overlying the affected area and to continue with the investigation of the underlying soils. Clear Creek Associates ("Clear Creek") provided environmental oversight of excavation activities and confirmation sampling on behalf of Freescale. The Arizona SRL concentration for TCE, 3.0 mg/kg, was established as the remedial objective. Soil confirmation samples were collected from the excavation and analyzed for VOCs using USEPA Method 8260B, semi-volatile organic compounds by USEPA Method 8270, and Title 22 metals using USEPA Methods 6010B/7470A.

Soil excavation commenced on July 13, 2011 using a small, limited-access backhoe (due to height restrictions). Soil was removed in depth increments until, at a depth of approximately 3 feet below ground surface ("bgs"), a concrete structure was encountered with three soil-filled chambers. Freescale suggested, based on a review of earlier reports that this structure corresponded to a wastewater treatment tank that reportedly was located in this portion of the Site when the facility expanded westward. There was no record of its removal or abandonment (Western Technologies, Inc., 2010). The concrete structure was removed between July 18 and 20, 2011, making way for continued soil excavation and confirmation sampling. Excavation continued from July 20 to August 10, 2011, until all confirmation samples met the remedial objective of 3.0 mg/kg TCE (Clear Creek Associates, 2011).

The excavation was backfilled using certified clean material, and the cement slab was re-poured incorporating a Cupolex® passive sub-slab venting system as an additional precaution against residual soil vapors. The remediation and installation of the new concrete floor was completed the first week of October, 2011.

3.4 Post-Remediation Indoor Air Quality Survey

On October 14, 2011, ENVIRON returned to the Site to perform an initial evaluation of the post-remediation indoor air quality in the former excavation area. At the time of the evaluation, this area was in an unfinished state; the new concrete floor had not cured, the concrete was not sealed, and there was no functioning HVAC system as in the remainder of the building. In line with the late 2010 IAQ sampling events, three ambient outdoor air samples were collected; one each on the southwest (IAQ-Southwest) and northeast (IAQ-Northeast) sides of the building and one on the roof of the building (IAQ-roof) near an air intake vent. In addition, two indoor air samples were collected (IAQ-13 and IAQ-14) from the former excavation area and location of the proposed gymnasium/performing arts area (Figure 1). For PCE, a comparison of the indoor sampling results with the results from the ambient outdoor (or background) sampling locations indicated that indoor air concentrations were consistent with background concentrations. For TCE, the results indicated that concentrations at the two indoor sampling locations (IAQ-13 and IAQ-14) exceeded both ambient outdoor concentrations and residential and/or commercial/industrial RSLs (Table 1).

These exceedances are thought to have resulted from residual off-gassing from within the unfinished building and that sampling had been conducted too soon after construction of the floor was completed, which had not allowed the building to equilibrate or represent finished building conditions. ENVIRON recommended that further IAQ evaluations be conducted after the building was finished and an operational HVAC system was in place.

4 Final Indoor Air Quality Survey

In late 2012 / early 2013, the southern half of the former Building 3 was renovated to construct the new gymnasium and performing arts center. The footprint of the former excavation area almost entirely fell within the walls of the new performing arts center, with only approximately 100 square feet of the former excavation area extending into the new gymnasium. Construction was completed in February 2013.

On March 22, 2013, ENVIRON returned to the Site to evaluate the IAQ of these newly finished areas. In line with previous IAQ sampling events, three ambient outdoor air samples were collected; one each on the southwest (IAQ-Southwest) and northeast (IAQ-Northeast) sides of the building and one on the roof of the building (IAQ-roof) near an air intake vent. In addition, four indoor air samples were collected; two from the new gymnasium area (IAQ-17 and IAQ-18) and two from the new performing arts center (IAQ-15 and IAQ-16) (Figure 1). The HVAC system was operational prior to and during the sampling to reflect the standard operating and indoor air conditions during the school week.

The results from this sampling event are presented in Table 1. For both TCE and PCE, the results indicate that concentrations at all four sampling locations are consistent with the ambient outdoor (background) concentrations and are below the USEPA residential and commercial/industrial RSLs.

5 Conclusions

Based on ENVIRON's observations of field procedures and communications with representatives of Freescale, CTI, and Clear Creek, ENVIRON concludes that the soil excavation and subsequent confirmation sampling that occurred in July and August of 2011 were conducted according to standard industry practices. The strong correlation of the areal extent of the final soil excavation with the areal extent of TCE observed by ENVIRON in sub-slab soil vapor (i.e., the 100 ppbv isoconcentration contour, Figure 3) indicates that the excavation activities removed TCE-impacted soil associated with the former acid treatment plant. Additionally, results of the confirmation sampling indicate that the remedial objective of removing impacted soils to Arizona Residential SRLs for contaminants of concern was met.

Based on the post-remediation indoor air concentrations, it appears that remedial activities conducted at the Site and the Cupolex® passive venting system installed with the floor have effectively mitigated the vapor intrusion pathway and that indoor air concentrations of TCE are consistent with ambient levels. ENVIRON concludes that under normal HVAC operating conditions indoor air concentrations are below USEPA's benchmarks for residential exposures indicates that risk levels for teachers, children, and workers at the school are below levels of concern.

6 References

Clear Creek Associates. 2011. Confirmation Soil Sampling Results, Great Hearts Academies (Former Motorola, Inc. Facility), 3102 N. 56th St., Phoenix, Arizona.

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URS, Inc. 2003. Phase II Soil and Soil Gas Investigation, 3102 N. 56th St., Phoenix, Arizona. December 3.

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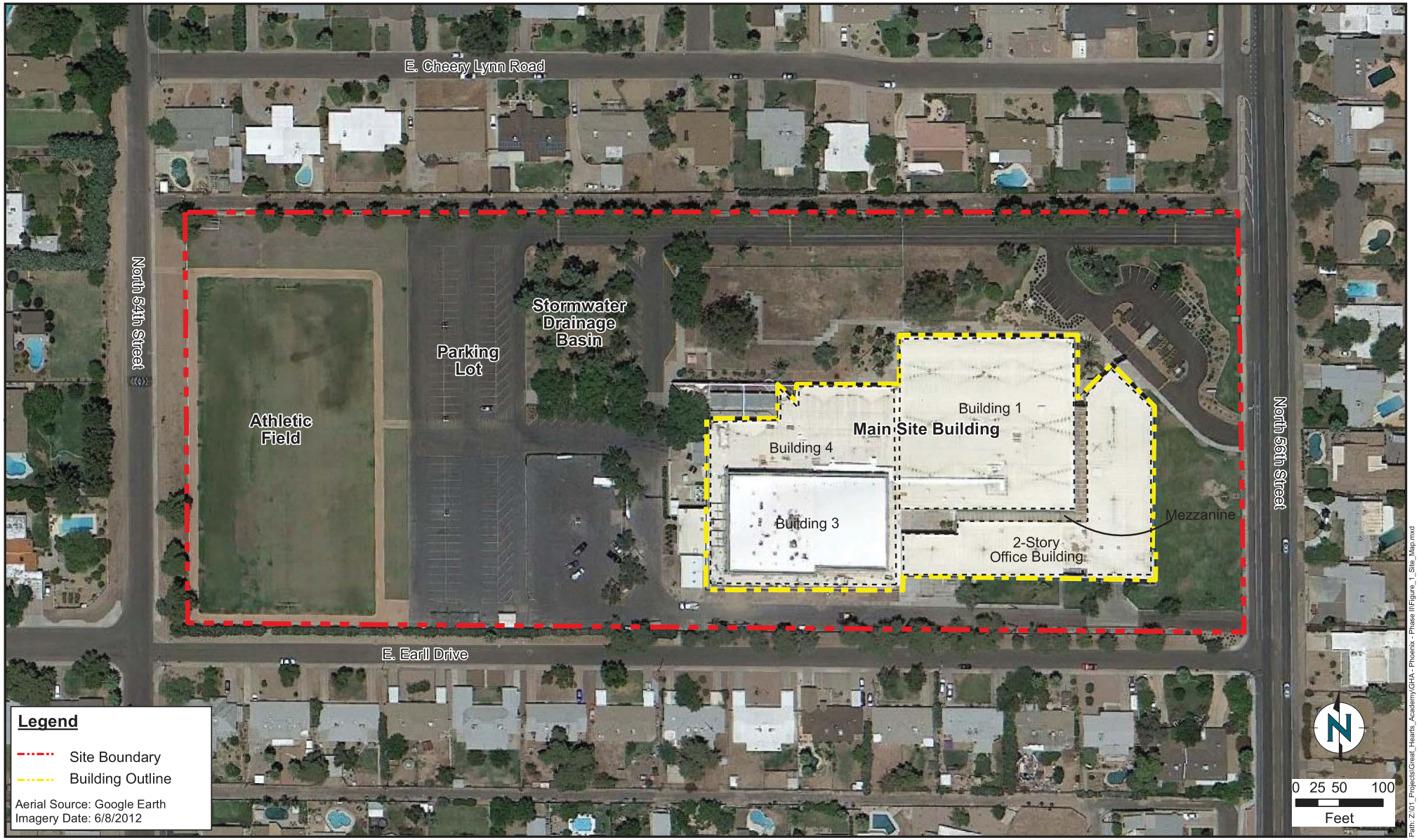
Figures



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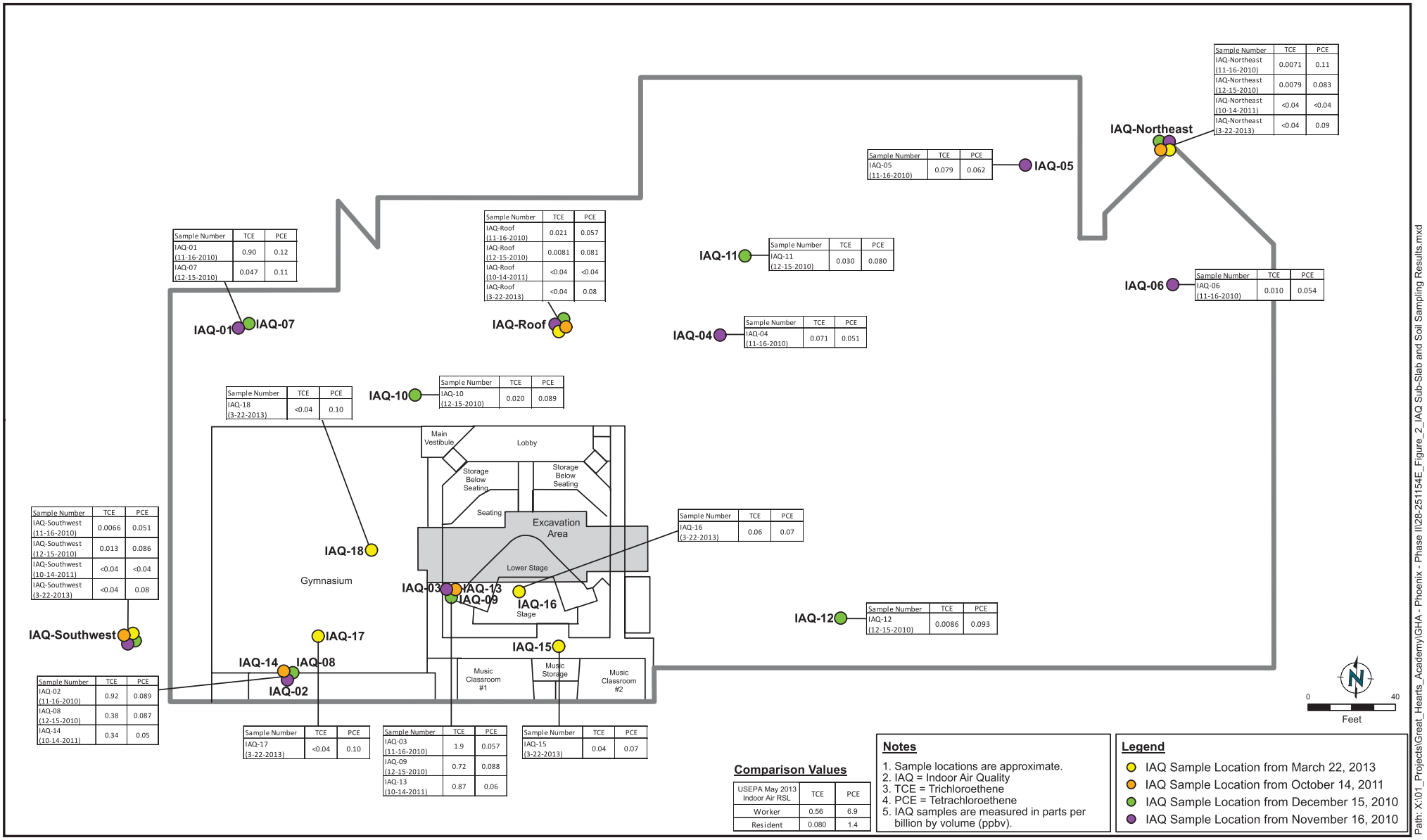
DRAFTED BY: JLV | Date: 5/23/2013

Site Map

Great Hearts Academies
3102 North 56th Street
Phoenix, Arizona

Figure 1

PROJECT: 28-25154E



Sample Number	TCE	PCE
IAQ-Northeast (11-16-2010)	0.0071	0.11
IAQ-Northeast (12-15-2010)	0.0079	0.083
IAQ-Northeast (10-14-2011)	<0.04	<0.04
IAQ-Northeast (3-22-2013)	<0.04	0.09

Sample Number	TCE	PCE
IAQ-05 (11-16-2010)	0.079	0.062

Sample Number	TCE	PCE
IAQ-11 (12-15-2010)	0.030	0.080

Sample Number	TCE	PCE
IAQ-06 (11-16-2010)	0.010	0.054

Sample Number	TCE	PCE
IAQ-04 (11-16-2010)	0.071	0.051

Sample Number	TCE	PCE
IAQ-Roof (11-16-2010)	0.021	0.057
IAQ-Roof (12-15-2010)	0.0081	0.081
IAQ-Roof (10-14-2011)	<0.04	<0.04
IAQ-Roof (3-22-2013)	<0.04	0.08

Sample Number	TCE	PCE
IAQ-01 (11-16-2010)	0.90	0.12
IAQ-07 (12-15-2010)	0.047	0.11

Sample Number	TCE	PCE
IAQ-10 (12-15-2010)	0.020	0.089

Sample Number	TCE	PCE
IAQ-18 (3-22-2013)	<0.04	0.10

Sample Number	TCE	PCE
IAQ-Southwest (11-16-2010)	0.0066	0.051
IAQ-Southwest (12-15-2010)	0.013	0.086
IAQ-Southwest (10-14-2011)	<0.04	<0.04
IAQ-Southwest (3-22-2013)	<0.04	0.08

Sample Number	TCE	PCE
IAQ-16 (3-22-2013)	0.06	0.07

Sample Number	TCE	PCE
IAQ-12 (12-15-2010)	0.0086	0.093

Sample Number	TCE	PCE
IAQ-02 (11-16-2010)	0.92	0.089
IAQ-08 (12-15-2010)	0.38	0.087
IAQ-14 (10-14-2011)	0.34	0.05

Sample Number	TCE	PCE
IAQ-17 (3-22-2013)	<0.04	0.10

Sample Number	TCE	PCE
IAQ-03 (11-16-2010)	1.9	0.057
IAQ-09 (12-15-2010)	0.72	0.088
IAQ-13 (10-14-2011)	0.87	0.06

Sample Number	TCE	PCE
IAQ-15 (3-22-2013)	0.04	0.07

Comparison Values

USEPA May 2013 Indoor Air RSL	TCE	PCE
Worker	0.56	6.9
Resident	0.080	1.4

Notes

1. Sample locations are approximate.
2. IAQ = Indoor Air Quality
3. TCE = Trichloroethene
4. PCE = Tetrachloroethene
5. IAQ samples are measured in parts per billion by volume (ppbv).

Legend

- IAQ Sample Location from March 22, 2013
- IAQ Sample Location from October 14, 2011
- IAQ Sample Location from December 15, 2010
- IAQ Sample Location from November 16, 2010

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DRAFTED BY: JLV

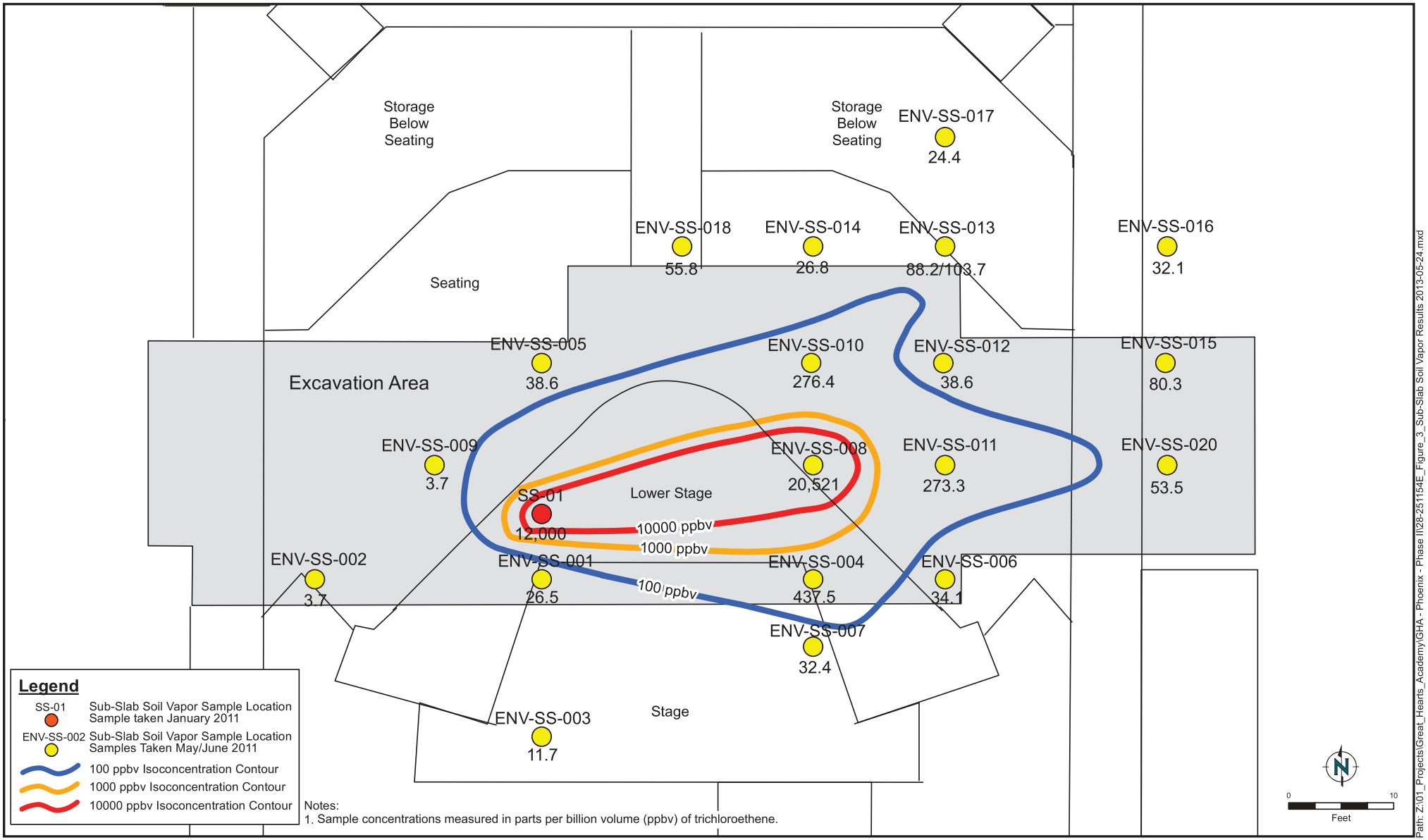
DATE: 4/26/2013

IAQ Sampling Results

Great Hearts Academies
3102 North 56th Street
Phoenix, Arizona

Figure 2

PROJECT: 28-25154E



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DRAFTED BY: JLV | DATE: 4/26/2013

Sub-Slab Soil Vapor Results

Great Hearts Academies
3102 North 56th Street
Phoenix, Arizona

Figure 3

PROJECT: 28-25154E

Tables

TABLE 1
Air Sampling Results: TO-15 SIM Analysis
3102 North 56th Street
Phoenix, Arizona

Chemical	Phoenix Area Background Concentrations [a]			USEPA May 2013 Indoor Air RSL [b]		Date Sampled [c]	Outdoors			Gymnasium			Performing Arts Center			Other Building Areas						
	Min	Avg	Max	Worker	Resident		IAQ-Roof	IAQ-Southwest	IAQ-Northeast	IAQ-02 IAQ-08 IAQ-14	IAQ-17	IAQ-18	IAQ-03 IAQ-09 IAQ-13	IAQ-15	IAQ-16	IAQ-01 IAQ-07	IAQ-04	IAQ-05	IAQ-06	IAQ-10	IAQ-11	IAQ-12
Trichloroethene	0	0.013	0.050	0.56	0.080	11/16/2010	0.021	0.0066 J	0.0071 J	**0.92**	--	--	**1.9**	--	--	**0.90**	0.071	0.079	0.010	--	--	--
						12/15/2010	0.0081 JB	0.013	0.0079 JB	**0.38**	--	--	**0.72**	--	--	0.047	--	--	--	0.020	0.030	0.0086 JB
						10/20/2011	<0.04	<0.04	<0.04	**0.34**	--	--	**0.87**	--	--	--	--	--	--	--	--	--
						3/22/2013	<0.04	<0.04	<0.04	--	<0.04	<0.04	--	0.04	0.06	--	--	--	--	--	--	--
Tetrachloroethene	0	0.05	0.17	6.9	1.4	11/16/2010	0.057	0.051	0.11	0.089	--	--	0.057	--	--	0.12	0.051	0.062	0.054			
						12/15/2010	0.081	0.086	0.083	0.087	--	--	0.088	--	--	0.11	--	--	--	0.089	0.080	0.093
						10/20/2011	<0.04	<0.04	<0.04	0.05	--	--	0.06	--	--	--	--	--	--	--	--	--
						3/22/2013	0.08	0.08	0.09	--	0.10	0.10	--	0.07	0.07	--	--	--	--	--	--	--

Notes:
Concentrations are shown in units of ppbv (parts per billion by volume).
B is a flag for a result where a trace amount of chemical was detected in the method blank.
J is a flag for a result between the MDL and RL (or lower quantitation limit, LQL). This compound was detected in the laboratory analysis at a value between the MDL and the RL, and should be considered a trace amount.
Shaded values exceed the commercial/industrial worker May 2013 RSL.
Values in bold are values that exceed the residential May 2013 RSL.

-- = sampling was not collected at this location.
< = Result was not detected at or above its MDL. The concentration indicated is the MDL.
IAQ = Indoor Air Quality
MDL = Method Detection Limit
NA = Not available.
RL = Reporting Limit
RSL = Regional Screening Level
USEPA = United States Environmental Protection Agency

[a] USEPA. 2010. AirData Monitor Data Queries. Available at http://www.epa.gov/aqspubl1/annual_summary.html. Accessed in 2010.
[b] USEPA. 2013. *Regional Screening Level (RSL) Summary Table (TR=1E-6, HQ=1) May 2013* . May. Available at http://www.epa.gov/reg3hwmd/risk/human/rb-concentration table/Generic Tables/docs/master sl table run MAY2013.pdf. Accessed on November 11, 2013.
[c] 11/16/2010 sampling event: The heating, ventilation, and air conditioning system was not operating prior to or during sampling.
12/15/2010 sampling event: The heating, ventilation, and air conditioning system was operational prior to and during sampling.
10/20/2011 sampling event: Sampling was conducted post-remediation in an unfinished portion of the building. The heating, ventilation, and air conditioning system was not operational in this portion of the building.
03/22/2013 sampling event: The heating, ventilation, and air conditioning system was operational prior to and during sampling.

APPENDICES

APPENDIX A

Land and Water Use Study

APPENDIX A

LAND AND WATER USE STUDY REPORT
REMEDIAL INVESTIGATION REPORT
56TH STREET AND EARLL DRIVE WQARF SITE

Prepared for:
NXP USA, Inc.

Prepared by:
Clear Creek Associates, LLC

June 2017

CLEAR CREEK ASSOCIATES

LAND AND WATER USE STUDY REPORT
REMEDIAL INVESTIGATION
56TH STREET AND EARLL DRIVE WQARF SITE

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ATTACHMENTS

Attachment A Series of historical aerial photographs obtained from the Maricopa County (Arizona) internet web site of the Facility area illustrating the land use development of the subject property and the surrounding area.
Attachment B Land and Water Use Study Questionnaires

LIST OF ACRONYMS AND ABBREVIATIONS

ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ADOA	Arizona Department of Administration
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
af	acre feet
AMA	Active Management Area
amsl	above mean sea level
ATSDR	Agency for Toxic Substances and Disease Registry
AWS	Assured Water Supply
AZGS	Arizona Geological Survey
AZPDES	Arizona Pollutant Discharge Elimination System
bgs	below ground surface
BOR	US Bureau of Reclamation
cis1,2-DCE	cis-1,2-Dichloroethylene
CAB	Community Advisory Board
CAGRD	Central Arizona Groundwater Replenishment District
CAP	Central Arizona Project
CAZB	Central Arizona Basin
CIA	Community Involvement Area
COP	City of Phoenix
1,1–DCA	1,1-Dichloroethane
1,2–DCA	1,2-Dichloroethane
DCE	1,1-Dichloroethene
EPA	US Environmental Protection Agency
ERA	Early Response Action
FCDMC	Flood Control District of Maricopa County
ft	feet
FS	Feasibility Study
GMA	Groundwater Management Act
gpm	gallons per minute
gw	groundwater
IGFR	Irrigation Grandfathered Right
LAU	Lower Alluvial Unit
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
mg/l or mg/L	milligrams per liter
MAU	Middle Alluvial Unit
msl	mean sea level
OCC	Old Crosscut Canal
PCE	Tetrachloroethene
ppb	parts per billion
ppm	parts per million
PQGWWP	Poor Quality Groundwater Withdrawal Permit
RASA	Regional Aquifer System Analysis
RI	Remedial Investigation
RO	Remedial Objectives
SRP	Salt River Project
TCA	1,1,1-Trichloroethane
TCE	Trichloroethylene
t-1,2-DCE	trans-1,2-Dichloroethene
UAU	Upper Alluvial Unit
µg/l or ug/L	micrograms per liter (note: “u” may be used in place of “µ” with the same meaning)
US	United States
USGS	US Geological Survey
VOCs	Volatile Organic Compounds
VC	Vinyl Chloride
WQARF	Water Quality Assurance Revolving Fund

LAND AND WATER USE STUDY REPORT
56TH STREET AND EARLL DRIVE WQARF SITE

1.0 INTRODUCTION

This Land and Water Use Study Report has been prepared in accordance with the Consent Order Docket No. RP-23-15 between ADEQ and Freescale (May 27, 2015) for the remedial investigations that have been conducted over time at the 56th Street and Earll Drive Water Quality Assurance Revolving Fund (WQARF) site in Phoenix, Arizona.

The 56th Street and Earll Drive WQARF Site (Site) is an area of groundwater impacted by volatile organic compounds (VOCs), primarily trichloroethene (TCE) and tetrachloroethene (PCE), in the east central Phoenix area (see Figure 1). The Site was placed on the ADEQ's WQARF Program registry on June 2, 2004. Prior to this designation, resulting from its listing on the WQARF registry, the site was informally referred to as the 56th Street Study Area. Historical operations at a number of commercial and industrial facilities, including the former Motorola 56th Street facility (Facility), are potential sources of the VOC contamination observed in groundwater at the Site. This site has been investigated and remediated by NXP USA, formerly Freescale, and previously by Motorola Inc. (Motorola) since 1985. Freescale is a spinoff of Motorola's Semiconductor Product Sector. Freescale was incorporated on December 3, 2003 under the name SPS, SpinCo., Inc. SPS, SpinCo., Inc. changed its name to Freescale Semiconductor, Inc. on February 13, 2004. Pursuant to an agreement between Freescale and Motorola, Freescale assumed the obligations of Motorola for the purposes of the investigation and remediation of the Site.

NXP Semiconductors (NXP) acquired Freescale by a merger on March 1, 2015. NXP and Freescale holding companies' merger was finalized on December 7, 2015. The official change in name of the legal entity Freescale Semiconductor, Inc. (Freescale) to NXP USA, Inc. was effective November 7, 2016. The name change was in connection with the completion of the merger between NXP Semiconductors N.V. and Freescale Semiconductor, Ltd. (the indirect parent company of Freescale Semiconductor, Inc.). NXP Semiconductors N.V., a Dutch public limited liability company is the indirect owner of NXP USA, Inc., formerly Freescale Semiconductor, Inc. NXP USA, Inc. will remain the owner and operator and assumes Freescale's responsibilities with respect to existing agreements and obligations related to the Site.

This Land and Water Use Study presents a summary of current and potential future land and water uses at the Site as required by Arizona Revised Statutes (ARS) R18-16-406(D).

> R18-16-406
>
> > D. The remedial investigation shall include the collection of information regarding current and reasonably foreseeable uses of land or of waters of the state that have been or are threatened to be impacted by the release, and projected time-frames for future changes in those uses. Reasonably foreseeable uses of land are those uses of land likely to occur at the site. Reasonably foreseeable uses of water are those likely to occur within 100 years unless a longer time period is shown to be reasonable based on site-specific circumstances. Information may be solicited from any interested person including any known well owner. Information collected shall include:

1. Information regarding current and reasonably foreseeable uses of water for each aquifer that is impacted or threatened to be impacted by the release, considering any hydraulic connection between aquifers. The information shall include the locations and uses of existing wells, including all wells already impaired due to contamination, the locations and uses, if known, of any planned wells, and any written water management plans used by water providers whose water supplies may be impacted by the release. This information shall be collected in consultation with affected water providers.

2. Information regarding current and reasonably foreseeable uses of water for each segment of surface water impacted or threatened to be impacted by the release. This information shall be collected in consultation with affected water providers.

3. Information regarding current and reasonably foreseeable uses of land impacted or threatened to be impacted by the release within the community involvement area. General land use information shall include the current type of use, density, character, and governmental jurisdictions. Future land use changes shall be considered using population projections, growth, plans for future development and local land use plans. This information shall be collected in consultation with local governments with land use jurisdiction. The information collected shall also include specific land uses and property ownership for properties where the land use is impacted or threatened to be impacted by the release.

The Land and Water Use Study Area is typically the Community Involvement Area (CIA) for a WQARF registry site. The CIA for the 56th Street and Earll Drive WQARF Site includes an area of about ¼ mile beyond the contaminant plume defined as the area with TCE concentrations at 5 parts per billion (or 5 ug/L) or greater in the groundwater (see Figure 1). The contaminant plume trends in a northeast to southwest direction having originated at the former Motorola facility property. The Land and Water Use Study Area is extended upgradient of the current plume to include the former Motorola 56th Street facility property at the northwest corner of 56th Street and Earll Drive. The stair-stepped, diagonally-trending boundaries of the Land and Water Use Study Area are also aligned with streets within the City of Phoenix (COP) and are (refer to Figure 2) shown as along the following streets:

- 56th Street to the east at the northeast part of the area,
- Osborn Road/Earll Drive/Thomas Road/Oak Street/McDowell Road/State Route Loop 202 on the north portion of the area,
- Thomas Road diagonally southwest to Roosevelt and Fillmore Streets on the south, and
- 27th and 28th Streets south of the SR Loop 202 (Red Mountain Freeway) along the western side of the area.

The Land and Water Use Study Area focuses on the former Motorola Facility property at the northeastern portion and the area (Figures 2 and 3) with the contaminant plume extending from downgradient of the former Facility toward the southwest. Land Use and Zoning Plans from the City of Phoenix were reviewed for current land uses and are summarized herein. The area was also reviewed by aerial photographs and by direct observations while routinely driving through the area.

The water use part of the study is focused on the actual CIA and contaminant plume area but also considers water resources on a broader basis. Information was incorporated from the routine data submittals of the ongoing groundwater monitoring and treatment system operations as well as additional

information on surface and groundwater from Arizona Department of Water Resources (ADWR), Salt River Project (SRP), and City of Phoenix.

1.1 Purpose and Objective

This Land and Water Use Study Report presents a summary of current and potential uses of land and water within the Study area. The Land and Water Use Study is intended to be an inclusive summary of information gathered from property owners, water providers, municipalities, and water supply well owners. The Study does not include an evaluation of the uses. The evaluation of uses will take place during public meetings and as part of the Proposed Remedial Objectives Report. This report was originally prepared in November 2015 and the updated in response to minor comments.

1.2 Process Overview and Report Organization

The Land and Water Use Study Report presents a summary of the current and reasonably foreseeable general land use and the history of the development and use of the Facility and the nearby surrounding area. Historic land use and area development is also shown by a series of aerial photographs in Appendix A.

This report also presents a summary of current and reasonably foreseeable water use including the general geology and hydrogeology of the area. Reports and databases from the Arizona Department of Water Resources (ADWR) were reviewed for water management plans, water quality and water supply information, surface water information, water uses, groundwater irrigation rights, and locations of existing groundwater supply wells. SRP was also contacted in regards to water supply services and operations in the area. Information is provided in text, figures, and tables as listed in the table of contents.

The ADEQ developed Land and Water Use Questionnaires as part of the Remedial Investigation/ Feasibility Study process. These questionnaires were provided to and were completed by:

- Michelle Hull, Great Hearts Academies (Veritas Preparatory Academy), the current land owner of the former Motorola facility property,
- Joe Giudice, City of Phoenix, Environmental Programs Director, and
- Andrea Martinez, Salt River Project, Environmental Compliance Engineer.

These completed forms are presented in Appendix B.

The accuracy of the information obtained from property owners, water providers, various reports and databases, City of Phoenix planning documents, and Arizona Department of Water Resources information cannot be guaranteed, especially as some of the documents are broad in subject presentation and not specifically detailed for the study area. The information is considered useful in characterizing the general land and water use of the area.

1.3 Remedial Objectives

The Remedial Objectives will be based on the current and “reasonably foreseeable” uses of land and water within the 56th Street and Earll Drive WQARF Site. The Remedial Objectives (RO) selection process will be made with stakeholder input through the public comment periods, Community Advisory Board (CAB) meetings, and public meetings.

2.0 USE IDENTIFICATION

2.1 Land Uses

The former Motorola 56th Street Facility property (see Figure 3) is located within the boundaries of the 56th Street and Earll Drive WQARF Site at 3102 North 56th Street, Phoenix, Arizona (Figure 1). The property is now owned by Great Hearts Academies and occupied by its Veritas Preparatory Academy. Figure 2 shows the boundaries of the Land and Water Use Study Area within the City of Phoenix as well as the location of the former Motorola Facility property, and the 5 ppb TCE contaminant plume that is used to define the WQARF Site. Current land use of the former Motorola 56th Street Facility and the surrounding area is presented in detail below. SRP owns and operates water delivery and electrical transmission delivery system property throughout the area.

2.1.1 Current Land Use

Former Motorola Facility Property/Current Great Hearts Academies - Veritas Preparatory Academy

The former Motorola Facility property is located within the boundaries of the 56th Street and Earll Drive WQARF Site at 3102 North 56th Street, Phoenix, Arizona (Figure 1). The property is now owned by Great Hearts Academies and used as its Veritas Preparatory Academy, a public charter school for kindergarten through 12th grades. The property consists of an approximately 14-acre parcel on the northwest corner of 56th Street and Earll Drive and includes four buildings, athletic fields, parking lots, and landscaped areas (Figure 3). The eastern half of the property includes four building structures totaling about 156,000 square-feet and a small parking lot on the northeast corner of the property. There is a vegetated stormwater drainage basin located in the north central portion of the property. The western portion consists of parking lots and athletic fields. The parcel is zoned as Industrial Park. The areas immediately surrounding the school are zoned residential.

The property was reportedly used for row crop agriculture from at least 1930 to 1949. Motorola owned and operated the site beginning in 1950. The Facility was first occupied in the spring of 1950 by Motorola Inc. and was used for a variety of product development, manufacturing, and testing operations until 1982. From 1982, the Facility was used for office purposes. The eastern half of the property included an approximately 156,000 square-foot building which was constructed in three stages since the 1950's. The Facility was vacated by Motorola in 2004 and sold to developers in 2005 who had originally planned to demolish the buildings to make way for residential development. However, the Facility was not removed but remained unoccupied from 2004 until Great Hearts Academies purchased the property in March 2011 to develop as a public charter school for grades kindergarten through 12. The school opened for students in Fall 2011 and continues to operate as a public K-12 charter school.

City of Phoenix

The City of Phoenix is located in the south central part of the State of Arizona. Phoenix is the largest city in Arizona based on current population. The estimated population in 2014 was 1,537,058 while the population of the entire state was 6,731,484. Population in 2010 was estimated at 1,447,617 for the City and 6,392,310 for the entire state. Population growth from 2010 to 2014 was greater in the Phoenix area at 6.2% versus the entire State which was at 5.3%. Estimated population of Phoenix in July 1980 was 796,745 and in July 2014 was 1,506,439 people. In July 1980, population for the State of Arizona was 2,733,100 and in July 2014 was 6,667,241 people (ADOA 2015).

Phoenix has a land area of 516.7 square miles; Arizona has 113,594.08 square miles (2010 data). Phoenix has 2,797.8 persons per square mile while the State of Arizona has 56.3 persons per square mile. Housing units in 2010 in Phoenix totaled 590,149, and State of Arizona totaled 2,844,526. Homeownership rate from 2009 – 2013 was 55.5% in Phoenix versus 64.4% statewide (US Census Bureau, 2015). Urban areas are defined as 50,000 or more people. In Arizona, 89.8% of the population is in an urban area (ADOA 2015).

The 56th Street and Earll Drive WQARF Site Land and Water Use Study Area (Figure 2) is located in east-central Phoenix. The area includes portions of the City's urban neighborhood villages designated as Camelback East Village, Central City Village, and Grand Canal Village. Current land use for this portion of City of Phoenix is primarily residential, light commercial, retail, schools, restaurants, office buildings, public libraries, affordable housing single-family homes owned by the City of Phoenix, fire department stations, public parks and open space including the Grand Canal (Figure 4). Based on a review of the zoning maps from the City of Phoenix Planning and Development Department, current zoning for this part of Phoenix (see Figures 5 and 6 which are modified from City of Phoenix maps to show the general study area) includes:

Single Family Residential

- RE-24: one family residence (24,000 sq.ft. minimum lot)
- R1-14: one family residence (14,000 sq.ft. minimum lot)
- R1-10: one family residence (density range of 3 to 3.5 or 4.5 with bonus per acre)
- R1-6: one family residence (density range of 5 to 5.5 or 6.5 with bonus per acre)

Multi-Family Residential

- R-3: Multiple Family Residence (detached density range 5 to 6.5 or 12 with bonus (attached density range 14.5 to 15.23 or 17.4 with bonus)
- R-3A: Multiple Family Residence (detached density range 5 to 6.5 or 12 with bonus (attached density range 22 to 23.1 or 26.4 with bonus)
- R-4: Multiple Family Residence (detached density range 5 to 6.5 or 12 with bonus (attached density range 29 to 30.45 or 34.8 with bonus)
- R-5: Multiple Family Residence (detached density range 5 to 6.5 or 12 with bonus (attached density range 43.5 to 45.68 or 52.2 with bonus)
- R-4A: Multiple Family Residence (dependent on lot area and unit type)
- PAD-14: Planned Area Development (29.0 dwellings per acre)

Commercial

- C-O: Commercial Office – Restricted Commercial
- C-1: Commercial – Neighborhood Retail
- C-2: Commercial – Intermediate Commercial
- RSC: Regional Shopping Center

Industrial

- IND PK: Industrial Park

Commercial use properties and regional shopping centers are primarily located along major arterial streets and roads while single family and multi-family residential with schools and parks are predominate across much of the study area. Figures 1 and 2 have a recent aerial photographic base and show the generally suburban character of the area. Figures 4, 5, and 6 are graphic based and show general land use and

zoning by categories. These figures have been prepared from figures provided of the entire City of Phoenix. The figures are reformatted to focus on the Land and Water Use Study area.

Salt River Project

SRP owns and operates a water delivery system with groundwater wells and a series of canals and other water conveyance features and electrical transmission delivery system property throughout the area.

2.1.2 Future Land Use

Former Motorola Facility Property/Current Great Hearts Academies – Veritas Preparatory Academy

The former Motorola facility property is currently owned by Great Hearts Academies and used as a public charter school. Great Hearts Academies plans to continue to use the property as a campus for a public charter school for grades kindergarten through 12 for many years.

City of Phoenix

The City of Phoenix is revising and updating its general plan, but no major use changes are anticipated in this area. Some additional development of residential townhomes and multi-family communities is proposed near 44th Street and Palm Lane, and a proposed single family residential development on vacant land near 40th Street and Oak is expected in the near future. These developments are compatible with the general plan and zoning. Otherwise, current general land use is expected to remain.

Salt River Project

SRP owns and operates a water delivery system with groundwater wells and a series of canals and other water conveyance features and electrical transmission delivery system property throughout the Land and Water Use Study Area (Figure 7). SRP is the oldest multipurpose federal reclamation project in the United States. SRP has been serving central Arizona since 1903, nearly 10 years before Arizona became the 48th state.

The SRP power district is one of the nation's largest public power utilities, providing electricity to approximately 1 million retail customers in a 2,900-square-mile service area that spans three Arizona counties, including most of the metropolitan Phoenix area (known as the Salt River Valley). SRP is an integrated utility, providing generation, transmission and distribution services, as well as metering and billing services.

SRP's water business is one of the largest raw-water suppliers in Arizona. SRP delivers about 800,000 acre-feet of water annually to a 375-square-mile service area and manages a 13,000-square-mile watershed that includes an extensive system of reservoirs, wells, canals and irrigation laterals.

Changes in land use are not anticipated for the future.

2.2 Groundwater Uses

This section is divided into discussions of potential groundwater use by water providers and private groundwater use. Groundwater use is influenced by hydrogeological conditions, available water supply, and groundwater quality considerations. Information on municipal water use is from available information through City of Phoenix, ADWR, Arizona Geological Survey (AZGS), U.S. Geological Survey (USGS), and SRP web sites; through correspondence/ interviews with water specialists and water providers; and through hydrogeological and water quality information developed over many years of investigations as part of the remedial background for the 56th Street and Earll Drive WQARF Site investigation. The ADWR has regulatory oversight of the State’s water resources.

In 1980, the State of Arizona developed and approved the Groundwater Management Code which recognized the need to aggressively manage the state's finite groundwater resources to support the growing economy. The Code also created the ADWR to implement the Code. Areas with heavy reliance on mined groundwater were identified and designated as Active Management Areas (AMAs). The five AMAs (Prescott, Phoenix, Pinal, Tucson, and Santa Cruz) are subject to regulation pursuant to the Groundwater Code. Each AMA carries out its programs in a manner consistent with these goals, while considering and incorporating the unique character of each AMA and its water users. Since groundwater use in AMAs is regulated, withdrawal of groundwater in these AMAs requires a permit from ADWR, and annual groundwater withdrawal and use reporting to ADWR.

In 1995, the state adopted Assured and Adequate Water Supply Rules that require all new development within Phoenix (and the other most populous areas of the state) to prove the availability of a 100-year water supply.

The Phoenix AMA is characterized as:

- covering over 5600 sq. miles
- consists of 7 sub-basins
- includes 287,000 acres of farmland
- subject to over 2 million acre-feet (AF) of annual water use

Historically, water users in the Phoenix AMA relied heavily on groundwater. In the Phoenix AMA, the primary management goal is for safe-yield by the year 2025. Safe-yield is accomplished when no more groundwater is being withdrawn than is being annually replaced. Over the past 30 years or so, use of renewable supplies has increased, in part due to the completion of the Central Arizona Project (CAP) and subsequent use of Colorado River water either directly or indirectly through artificial recharge and recovery projects, thereby reducing reliance on groundwater supplies. In some years there was flow in the Salt River either from upstream releases from the dams or from long-duration rainfall events resulting in high streambed infiltration. With these factors and increasing awareness of water use and the implementation of conservation measures, groundwater overdraft has been in decline since about the year 2000 in the Phoenix AMA. The groundwater levels continue to decline somewhat in some portions of the AMA due to the ongoing, multi-year drought.

There are two types of well drilling applications (Notice of Intent to Drill a Well forms) depending on use and location required for all wells to be drilled in an AMA. Exempt wells are typically small domestic wells which will pump only up to 35 gallons per minute. Exempt wells are not required to be metered and a water use report is not required to be filed with ADWR. Non-exempt wells require measuring of groundwater withdrawn from the well and reporting requirements, and may be subject to an annual groundwater withdrawal fee. Before a drillers permit is issued to drill a new well, the proposed plans and anticipated use are reviewed carefully by ADWR and the well owner is advised of water quality limitations (such as known contaminant plumes) in the area. Applications for new wells may be denied if the intended use may potentially cause risk to human health or the use is not allowable.

Based on review of the ADWR Well Registry Report, there are six (6) registered exempt wells and 15 registered non-exempt wells in the Land and Water Use Study Area. None of these wells are used for drinking water (or potable water supply) due to the various underlying groundwater contaminated plumes. Most of these exempt wells were drilled prior to 1960 and were intended as irrigation wells and some also for domestic use by the landowner. Of the six exempt wells, four are no longer in use and two may be used as flood irrigation for a residential lot. The SRP reports that it operates four (4) groundwater supply

wells (non-exempt) and water conveyance structures (such as the Grand Canal) in the Study Area, with another eight (8) wells located within about a mile of the Land and Water Use Study Area boundary. Other non-exempt wells are owned by Flood Control District of Maricopa County(FCDMC) (7 wells registered but no other information is available and wells may not have been drilled), NXP USA (former Freescale Semiconductor) (2 extraction wells used as part of the groundwater treatment system), Arizona State Land Department (1 well registered but used as a monitor well only since 1992), and LGE Corporation (1 well that was abandoned in 2003).

The ADWR Well Registry Report also shows 390 registered monitor wells. Not all of these wells have been drilled, and some have also been subsequently abandoned. In addition, there are 42 registered "other" wells which are typically geotechnical borings or investigation wells, not used for groundwater monitoring or use.

The Phoenix metropolitan area has numerous Irrigation Districts. The Salt River Valley Water Users Association Irrigation District (also known as Salt River Project) provides water delivery service to the Salt River Valley including east central Phoenix (Figure 10). The SRP water is stored in a series of reservoirs located along the Salt and Verde rivers, upstream of the Phoenix area, and then conveyed through a series of canals. The canal water source is primarily surface water but may be augmented by pumping of groundwater wells in times of drought.

Within AMAs, anyone who owned land that was legally irrigated with groundwater at any time from January 1, 1975 to January 1, 1980 and had been issued a Certificate of Irrigation Grandfathered Right (IGFR) by ADWR has the right to use groundwater for the irrigation of that land. The term irrigation is limited to the growing of crops for sale, human consumption or livestock feeding on two or more acres.

There are two types of non-irrigation grandfathered rights:

- Type 1 right is associated with land permanently retired from farming and converted to a non-irrigation use which may be sold or leased only with the land, and the maximum amount that may be pumped is three acre-feet per acre.
- Type 2 right can generally be used for any non-irrigation purpose from a non-exempt well (pumping capacity of greater than 35 gallons per minute) and equals the maximum amount pumped in any one year between 1975 and 1980. Type 2 rights may be sold separately from the land or well and are most often used for industrial purposes such as golf courses and dairies.

Table 5 presents the list of Irrigation Grandfathered Rights (IGRs) and Type 1 Non-IGRs use rights and status for acreage (ADWR 2015) within the Land and Water Use Study Area. Most of the uses are inactive or small and the amount of irrigated acreage is also minimal.

Service area rights allow cities, towns and private water companies and irrigation districts to withdraw and transport groundwater to serve their customers. Most people within an AMA receive water through service area rights. The City of Phoenix provides drinking water to residential and commercial properties in the Land and Water Use Study Area and must comply with Municipal Conservation Program requirements in the Groundwater Management Plans.

2.2.1 Hydrogeology, Groundwater Quality, and Available/Assured Water Supply

This section describes the hydrogeological conditions on a basin-wide basis, with more site-specific water quality and water supply information as well.

2.2.1.1 Hydrogeology and Water Resources

The former Motorola Facility property is located within the lowermost portion of the topographic swale between Camelback Mountain and the Papago Buttes, near the eastern margin of the West Salt River Valley sub-basin of the Salt River Valley. The Salt River Valley is a large geologic basin filled with sedimentary deposits. Based on data compiled by the ADWR for a regional groundwater model (Corkhill and others, 1993), the basin-fill deposits are characterized in most areas by (a) a lower unit consisting mainly of conglomerate and gravel, (b) a middle unit consisting predominantly of silt and clay, and (c) an upper unit consisting mainly of sand and gravel. ADWR defined these hydrogeologic units using data on particle-size and lithology, where available. The three units are characterized by unique hydraulic properties and were subdivided into three hydrogeologic units for hydrogeologic modeling purposes. The three hydrogeologic units, in ascending order, from the ADWR study are as follows: the Lower Alluvial Unit or LAU, the Middle Alluvial Unit or MAU, and the Upper Alluvial Unit or UAU. The west sub-basin consists of westward thickening sequence of Quaternary alluvial and colluvial sediments.

Geologic and hydrological data from hundreds of monitor wells were reviewed as part of an investigation into the subsurface geology and its influence on groundwater flow in the eastern edge of the West Salt River Valley (Reynolds and Bartlett 2000), primarily for the 52nd Street Superfund Site, but including portions of the adjacent 56th Street and Earll Drive WQARF Site area. This additional analysis conducted by Dr. Stephen Reynolds (Department of Geological Sciences, Arizona State University) and Doug Bartlett (Clear Creek Associates) of well boring logs, cores and cuttings in and in the vicinity of the Site identified three kinds of unconsolidated sediments in the Site area: Basin Fill, Salt River Gravels, and uppermost alluvium. These three locally identified hydrostratigraphic units are all part of what is identified as the UAU in the regional geologic setting. The three alluvial units together fill the Phoenix basin extending west from the Papago Park area, immediately to the south southeast of the former Motorola Facility property, deepening toward the west. To be consistent with prior reports, the term “alluvium” has been used in this and other documents to describe both shallow alluvium and Basin Fill. The alluvium is considered a single layer and is underlain by Tertiary and Precambrian bedrock where shallow bedrock is encountered in the eastern part of the Site. The bedrock consists of Precambrian granites and metarhyolites, Tertiary volcanics and arkosic sandstone.

The Basin Fill consists of slightly to moderately consolidated sandy and silty sediments and was deposited on top of the Tertiary and Precambrian bedrock units. Only the Basin Fill and uppermost alluvium units underlie the former Facility property and the majority of the WQARF Site. At the westernmost portion of the WQARF Site, but absent from the actual Facility area property, the basin fill is overlain by very coarse, unconsolidated gravels, consisting of pebbles, cobbles, gravels, and boulders in a sandy matrix. This unit represents older channel deposits of the Salt River and is, therefore, named the Salt River Gravels. The youngest unit in the Site area is the uppermost alluvium and consists of silt, sand, and minor amounts of gravel. Only the Basin Fill is saturated in the Site. Further to the west, outside the study area for the Site, portions of the Salt River Gravels are saturated.

Two distinct geologic units have been described as the primary water bearing formations in the east-central Phoenix area. These include the unconsolidated alluvium (unconsolidated Basin Fill) and bedrock consisting of Precambrian metarhyolite and granite as well as Tertiary volcanics and indurated sediments. Previous investigations have demonstrated that groundwater and contaminants can move between the alluvium and bedrock under certain conditions. Because these geologic units interact hydraulically and chemically, they have been classified in previous reports (Dames & Moore, 1993) as the alluvial-bedrock aquifer system. Unlike alluvium, however, bedrock is not sufficiently permeable to yield usable quantities

of water. Therefore, the alluvium and the bedrock are referred to as separate hydrologic units in many of the references.

The Facility property is underlain by gravelly sandy clayey alluvial/colluvial deposits and bedrock. Depth to bedrock in the vicinity of the Facility is about 12 to 100 feet. From early investigations, depth to water beneath the Facility property was estimated at between 11 and 19 feet. The saturated thickness of alluvium ranged from less than 10 feet in the eastern portion of the property to more than 70 feet in the southwestern portion of the property. Preliminary estimates of water on site prior to 1962 suggest shallow groundwater conditions beneath the Facility may have resulted from irrigation of the golf course immediately to the east of the facility and from seepage of the unlined Arizona Canal, about one-half mile to the north. Early estimates of the alluvium parameters include a porosity of 0.28, a hydraulic conductivity range of 30 to 45 feet per day, and a gradient of 0.006 feet per foot.

Historic groundwater elevation data show groundwater flow to the west southwest. Historic land use may have affected groundwater flow conditions in the area. Almost the entire area had been in citrus production until urbanization. To alleviate high groundwater problems in the citrus groves, SRP installed a drain field in the 1920s to lower water levels. According to SRP, this drain field was installed as part of an effort to lower the water table in an area from 56th Street west to the Old Crosscut Canal (48th Street) and from Earll Drive north to the Arizona Canal. The drain field is believed to consist of a series of four parallel buried pipe lines draining from east to west and discharging to the Old Crosscut Canal (OCC). SRP reports these drains consist of 8 to 10 inch diameter perforated pipe packed in gravel and placed in ditches at 12 to 14 feet deep. The outlet was identified by Dames & Moore in the east bank of the OCC. In October 1989 discharge from this feature was estimated at 20 gallons per minute (gpm). The southernmost drain is located between the north boundary of the Facility and Cheery Lynn Road. The OCC flows from north to south about one mile west of the Facility and is used to carry flood waters, although it was used in the past to transfer water from the Arizona Canal to the Grand Canal. The OCC was unlined for many years. The bottom of the Arizona Canal west of 56th Street was lined in 1945 and the banks were lined in 1950; the bottom of the Arizona Canal to the east of 56th Street was lined in 1962 and banks were lined in 1982 SRP reports pumping irrigation wells located near 48th Street and Indian School Road to the lower the water table in this area (Dames & Moore, Stage III Report, 1990).

There are several northwest-southeast trending bedrock ridges to the west of the facility. These ridges are the result of normal faulting in the Precambrian bedrock and fault block tilting. These ridges affect groundwater flow and contaminant plume migration in the area. One bedrock ridge underlies the 52nd Street and Thomas Road area. At this location, the saturated thickness of the alluvium is greatly reduced. There are several other less prominent northwest-southeast trending ridges to the west including near groundwater monitor wells DM-26 and DM-24, DM-23 and DM-21, and DM-28. The topography of the bedrock has a significant localized influence on VOC transport. In the area, VOC concentrations tend to be higher in the alluvium-bedrock interface.

Due to cementation, the primary permeability of the bedrock matrix can be quite low. The porosity of the bedrock is related to the frequency of fractures and vugs in the rock. The hydraulic conductivity depends on the interconnection of these fractures. The hydraulic conductivity for the bedrock was assumed to range from 0.002 to 0.05 feet per day based on hydraulic conductivity values for bedrock in the vicinity of Papago Buttes. Contaminants migrating in fractures can diffuse out of a fracture and into the surrounding bedrock matrix. The extent of this diffusion is affected by the degree of cementation of the bedrock matrix, but the diffuse contaminants will act as a continuing source of contamination as the VOCs slowly diffuse back into the groundwater within the bedrock fractures.

2.2.1.2 Groundwater Quality

This section provides information on groundwater on a regional basis, for the Salt River Valley, and then more specific to the 56th Street and Earll Drive WQARF Site.

The U.S. Geological Survey's (USGS) Regional Aquifer System Analysis (RASA) Program, Southwest Alluvial Basins, was implemented in 1978 to evaluate the ground water resources in the alluvial basins of Arizona and portions of New Mexico, California, and Nevada (USGS, 1991). The overall study looked at the extent of the groundwater system, the amount of groundwater stored and recharged, and the water quality. The chemistry and mineralogy of the rocks that form the mountains and the basin fill were evaluated as related to the chemical evolution of the groundwater. From a summary of the central and southern Arizona basins, "the ground water in the study area, as indicated by dissolved-solids and trace-element content, generally is of suitable chemical quality for most purposes but is not without some problems….The ground water in most basins can be classified as hard (>120 mg/L) to very hard (>180 mg/L)…In several basins, the ground water contains large concentrations of the trace elements – fluorine, chromium, arsenic, lead, boron, or selenium – that exceed standards established for public supply or certain agricultural uses." (USGS, 1991, p.C13). The report documents higher naturally-occurring amounts of boron in the Phoenix area as a result of granitic, pegmatitic, volcanic, and metasedimentary marine source rocks and reworking and concentrating of boron in soil in the alluvial basins.

The USGS completed another comprehensive water quality assessment as part of the National Water Quality Assessment Program which included the Salt River Basin. The report Water-Quality Assessment of the Central Arizona Basins, Arizona and Northern Mexico – Environmental Setting and Overview of Water Quality (USGS, 1998, Water Resources Investigation Report 98-4097). One of the major water-quality issues identified in the Central Arizona Basin (CAZB) study area by a committee of representatives from a variety of local, State, and Federal agencies included: "high concentrations of naturally occurring trace elements (fluoride, barium, arsenic, boron, and chromium) and high radon in ground water" (USGS, 1998, p. 40). The CAZB report also includes a discussion about the Verde River (the Verde River and Salt River confluence is upstream of the Phoenix metropolitan area), one of the sources of drinking and irrigation water in the Phoenix area and general water quality of groundwater in the Phoenix area.

> "In the study area, dissolved trace elements in streamflow are derived from natural sources such as metal-bearing geologic formations and anthropogenic activities such as mining and effluent discharge. Because of the widespread mineralization and associated mining in the study area, trace elements, such as beryllium, cadmium, copper, chromium, lead, manganese, mercury, nickel, zinc, arsenic, and cyanide, are found in streams and lakes. High concentrations of arsenic in water from the Verde River, which is used for municipal supply, create a potential problem for drinking-water supplies in Phoenix. Water from the Verde River is used to dilute the saline water of the Salt River and constitutes 30 percent of the flow to the Salt River, and 58 percent of the total arsenic load. The major source of arsenic is a mudstone unit within the Verde Formation near Camp Verde…….Boron and manganese concentrations typically exceed water quality standards in part of the study area."(USGS, 1998, p. 47)
>
> "High concentrations of dissolved solids in ground water are a concern in many parts of the CAZB (Central Arizona Basins), and high concentrations of specific elements, such as fluoride and sulfate, are problems in specific local areas….Chromium, arsenic, boron,

> barium, fluoride, selenium, and lead are found locally in high concentrations in ground water because of an oxidizing geochemical environment and human activities." (USGS, 1998, p.58).

Starting in 1984, Motorola conducted investigations at the Facility to determine if the soils and groundwater in the area were contaminated. Disposal of acids, solvents, metals, and other wastes at the Facility during the period of manufacturing occurred via dry wells, concrete tanks, sewage leach fields and shallow holes. Historical releases at the Facility resulted in localized impacts to soils as well as impacts to the underlying groundwater which subsequently migrated off-site. Extensive soil and groundwater investigations and remedial activities were conducted by Motorola from 1993 through 1996. In 1997, following an on-site confirmation soil vapor investigation, the ADEQ granted a no further action (NFA) determination for the site. Prior to purchase, Great Hearts retained environmental consultants to evaluate the property, and several of the buildings in particular for development of the property as a charter school. The primary issue of concern was vapor intrusion from residual soil contamination and contaminated groundwater. Soil vapor and soil samples were collected and analyzed for selected chlorinated solvents. The results led to further site evaluation, the excavation of soil, and the removal of a subsurface concrete structure. Subsequent testing yielded confirmation of the remedial objective of removing impacted soils and mitigation of the vapor intrusion pathway.

The plume continued to migrate, however, and several SRP irrigation supply wells are located in close proximity to the western end of the plume. Therefore, an Early Response Action (ERA) was planned to prevent continued plume migration and protect the nearby irrigation supply wells. A groundwater treatment plant (utilizing liquid phase granular activated carbon) was completed and is operational along the Grand Canal near 34th Street. The extracted groundwater from two wells is treated for the contaminants of concern and discharged to the Grand Canal for beneficial re-use.

Currently, the observed plume has migrated approximately 2-1/2 miles down-gradient to the southwest. Water quality samples are routinely analyzed for halogenated volatile organic compounds (VOCs). A short list of analytes that are known or suspected to occur in the area includes: 1,1,1-Trichloroethane (TCA), 1,1-Dichloroethane (DCA), 1,1-Dichloroethene (DCE), 1,2-Dichloroethane (1,2–DCA), cis-1,2-Dichloroethene (cis-1,2-DCE), trans-1,2-Dichloroethene (t-1,2-DCE), Tetrachloroethene (PCE), Trichloroethene (TCE) and Vinyl Chloride (VC).The primary compounds of concern are TCE and PCE in groundwater. The plume is defined by the analytical results for TCE and where TCE is 5 μg/L or greater.

In addition to the ongoing routine groundwater sampling and water level measurements, NXP is operating a groundwater treatment system, the 34th Street Groundwater Treatment Facility. The 34th Street Groundwater Treatment Facility includes two groundwater extraction wells on the north bank of the Grand Canal, a groundwater treatment plant and pipelines that convey water from the wells to the treatment plant and from the treatment plant to the Grand Canal where the treated water is discharged to the Grand Canal. Freescale received an Arizona Pollutant Discharge Elimination System (AZPDES) permit (No. AZ0025861) from ADEQ on March 8, 2011 to allow the discharge of the treated effluent from the then proposed groundwater treatment system to the surface water of the Grand Canal. The AZPDES permit also included a mixing zone for boron because Freescale's application demonstrated the reasonable potential for boron to be present in the groundwater and boron would not be removed by the treatment system. The AZPDES permit allows for the mixing zone in the Grand Canal for achieving surface water quality standards for boron. An application for the renewal of the AZPDES permit was

submitted to ADEQ in September 2015 and was approved on August 23, 2016. This reauthorized AZPDES permit expires on August 22, 2021.

The system began discharging treated groundwater to the SRP Grand Canal on November 1, 2013. There are occasional system shut-downs for routine maintenance or because SRP reduced the delivery flow of water in the Grand Canal and could not accept additional water from the treatment system. Shut-downs by SRP are expected to occur occasionally due to various conditions such as storm or flood conditions and when the flow in the Grand Canal is below the required minimum flow to meet the boron mixing zone requirements such as when SRP "dries up" the canal for routine maintenance. NXP continues to coordinate discharges from the 34th Street Groundwater Treatment Facility (for 56th Street and Earll Drive WQARF Site) with SRP.

For the calendar year 2016, approximately 138,795,000 gallons (426 acre-feet) were pumped from the extraction wells and treated at the 34th Street Treatment Facility (Clear Creek Associates, 2017). This water was treated for VOCs and discharged to the surface water in the Grand Canal for beneficial use as agricultural irrigation water. The treated effluent is routinely monitored for VOCs, Boron, and Selenium and Grand Canal water is sampled upstream and downstream of the discharge. Compliance monitoring and reporting is ongoing for amounts of water pumped, treated, and discharged, and for water quality.

Historic Boron Concentrations in Groundwater in Phoenix Area Wells and in Surface Water in Canals

Previous investigations for the Motorola 56th Street and Earll Drive Study Area/WQARF Site and the Motorola 52nd Street Site included inorganics analyses. These various inorganics investigations in the groundwater in the eastern Phoenix area have shown that boron occurs naturally and is believed to be derived from the geologic formations and deposits in that area. Boron has been detected in many SRP irrigation production wells and other wells monitored by SRP and the USGS in the area for many years, even before Motorola began operations at the 52nd Street or the 56th Street facilities. Groundwater in the east central Phoenix area (or western part of the Salt River Valley) is historically from a variety of sources including mountain front recharge at the edges of the basin, surface water infiltration from flows in the Salt River (includes Verde River water), Central Arizona Project (CAP) water, storm water, and agricultural flood irrigation. The SRP has a series of irrigation wells in the Salt River Valley. SRP irrigation wells in the area have been shut down because of water quality issues, but may be operated intermittently during drought conditions. SRP monitors these wells routinely. Historic and current water quality information show higher concentrations of boron in wells that are along the northern portion of the Phoenix basin, and in an area of ancient marine deposits.

Boron is a naturally-occurring element and is found typically combined with oxygen and other elements in minerals known as borates. Boron is widely found in sedimentary rocks, oceans, coal, shale, and some soils and volcanic rocks and volcanic spring water. Nonmarine evaporates are also an important source of boron compounds. There are more than 200 minerals that contain boron. Boron is widely distributed in surface water and groundwater. Exposure to boron is typically by food, mainly vegetables and fruit (ATSDR 2007). The highest concentrations of boron are found in the drinking water and soils of some of the driest climates in the world such as the Middle East, inland deserts of Australia, and the desert southwest of the United States and Chile. Large evaporite deposits of salt are common within the valley aquifers within the Basin and Range Province (includes Salt River Valley) and elevated concentrations of boron, sodium chloride, and calcium sulfate are often found in these basins and in the deeper alluvial zones of these basins in particular (Uhlman, 2008).

A study on boron in irrigation waters of Arizona and its effect on plants, completed by Stark in 1942, showed a range of concentrations of boron in surface and underground waters along the Salt River Valley and in the Phoenix area. Boron concentrations from water samples in 16 wells in the Phoenix area ranged from 0.17 to 4.17 parts per million (ppm) and two samples from the SRP canals were 0.05 and 0.19 ppm (Stark, 1942). This study noted that SRP pumped irrigation water used in the Arcadia area (near where the Motorola 56th Street facility was later built) to irrigate citrus groves that contained an average of 0.8 ppm boron and that boron toxicity symptoms were evident in these citrus groves. SRP abandoned some of the wells in favor of ones with lower concentrations of boron.

These various inorganics investigations in the Salt River Basin and Phoenix area have shown that boron occurs naturally in groundwater and surface water in the area. Some other sources of boron in the groundwater include the Verde Formation (non-marine and marine evaporites) covering an extensive area of central Arizona. The Verde River flows through the Verde Valley with extensive outcroppings of the Verde Formation and joins with the Salt River upstream of the Phoenix area, providing much of the water supply for the Phoenix metropolitan area (USGS 1998). The other likely source of boron in groundwater is from mountain front recharge and the weathering of rocks from the mountains in the northern portion of the western Salt River Valley. The geology of the Phoenix Mountains includes sequences of metasedimentary (includes oceanic to continental setting), metavolcanic, and volcanic rocks that have undergone extreme deformation (Johnson, Reynolds, and Jones, 2003). The slopes of the mountains include extensive alluvial fan and debris material which has contributed to the valley fill forming portions the Phoenix basin.

2.2.1.3 Available Water Supply Considerations

The availability of water supplies is of great importance when evaluating current and future uses of groundwater. There are two water providers in the Land and Water Use Study Area: SRP and City of Phoenix. The City of Phoenix Water Services Department is responsible for Phoenix's water and wastewater programs. The water program provides a safe and adequate domestic water supply to all residents in the water service area. In 1995, the state adopted Assured and Adequate Water Supply Rules that require all new development within Phoenix (and the other most populous areas of the state) to prove the availability of a 100-year water supply. These are the most stringent water supply regulations in the nation, and Phoenix meets or surpasses all of the State’s water supply requirements.

Historically, water users in the Phoenix AMA relied heavily on groundwater. Over the past 30 years or so, use of renewable supplies has increased, in part due to the completion of the Central Arizona Project (CAP) and subsequent use of Colorado River water either directly or indirectly through artificial recharge and recovery projects, thereby reducing reliance on groundwater supplies. In a normal supply year, more than 90 percent of the City of Phoenix water demand is met with surface water provided by SRP and CAP. With increasing awareness of water use and the implementation of conservation measures, groundwater overdraft has been in decline since about the year 2000 in the Phoenix AMA.

2.2.1.4 Arizona’s Groundwater Management Act and ADWR Assured Water Supply

In 1980, the State of Arizona developed and approved the Groundwater Management Code which recognized the need to aggressively manage the state’s finite groundwater resources to support the growing economy. The Code also created the ADWR to implement the Code. Areas with heavy reliance on mined groundwater were identified and designated as Active Management Areas (AMAs). The five AMAs (Prescott, Phoenix, Pinal, Tucson, and Santa Cruz) are subject to regulation pursuant to the Groundwater Code. Each AMA carries out its programs in a manner consistent with these goals, while

considering and incorporating the unique character of each AMA and its water users. Since groundwater use in AMAs is regulated, withdrawal of groundwater in these AMAs requires a permit from ADWR, and annual groundwater withdrawal and use reporting to ADWR.

The Central Arizona Groundwater Replenishment District (CAGRD) was established in 1993 by the state legislature to serve as a groundwater replenishment entity for its members. The purpose of the CAGRD is to provide a mechanism for landowners and water providers to demonstrate an assured water supply under the new Assured and Adequate Water Supply Rules ("AWS Rules") which became effective in 1995. It provides a method for property owners and water providers of all new development within Phoenix (and the other most populous areas of the state) to demonstrate the availability of a 100-year assured water supply under Arizona law by agreeing to have the CAGRD recharge amounts of groundwater that are over the limits established by the assured water supply rules. The CAGRD is operated by the Central Arizona Water Conservation District (CAWCD), which also oversees the Central Arizona Project (CAP). The CAGRD includes the Phoenix AMA. In 1999, the legislature expanded CAWCD's replenishment authorities and responsibilities by passing the Water Sufficiency and Availability Act.

In the Phoenix AMA, the primary management goal is safe-yield by the year 2025. Safe-yield is accomplished when no more groundwater is being withdrawn than is being annually replaced.

2.2.2 Water Providers

The City of Phoenix and SRP are the water providers within the Land and Water Use Study Area and have the rights to pump groundwater. Information on water provider services and related were obtained through web site information and reports, and from responses to the Land and Water Use Study Questionnaire for Municipalities/Utilities within the 56th Street and Earll Drive WQARF Registry Site provided to each as part of this study (City of Phoenix, 2011, 2015; SRP 2015).

2.2.2.1 City of Phoenix

The City of Phoenix Water Services Department prepared a 2011 Water Resource Plan which provides details on current and future water resource use and management guidelines and goals. Information from this plan was used for this report (City of Phoenix, 2011) in addition to the City's responses to the Land and Water Use Study Questionnaire for Municipalities/Utilities within the 56th Street and Earll Drive WQARF Registry Site.

Phoenix relies on four primary water supply sources: SRP system provided surface water from two watershed areas (Salt and Verde rivers) to eligible lands within the Phoenix service areas generally south of the Arizona Canal; Colorado River water delivered by the Central Arizona Project (CAP) to those Phoenix areas beyond SRP service; by groundwater wells; and reclaimed water.

In 1947, the City's first surface water treatment plant was completed on the Verde River to utilize surface water. As the system grew with the acquisition of several private water companies, additional surface water treatment plants were needed. Thus, the City entered into the 1952 "Water Delivery and Use Agreement" with SRP, which allowed water previously used for agriculture to be treated for potable purposes by the City and delivered to urbanized farmlands in the SRP territory. Between 1952 and 1975, the 24th Street, Deer Valley and Val Vista Water Treatment Plants were developed near the SRP canal system to provide water for urbanized lands with rights to SRP supplies. In 1990, an interconnect facility was built at the Granite Reef Diversion Dam where the CAP and SRP canal systems intersect. This facility allows CAP water to be sent to Phoenix's water treatment plants on the SRP system (via SRP

canals) under both normal and drought conditions. This feature significantly increases the reliability of Phoenix water supplies.

Though the City of Phoenix has access to substantial groundwater reserves within its service area, challenges pertaining to groundwater quality (in central Phoenix), water table declines (in north Phoenix) and relatively few active service area wells limits the potential for groundwater use (City of Phoenix 2011). The detection of widespread TCE contamination in the early 1980s led to investigation and remediation activities undertaken by the ADEQ, EPA, and parties responsible for the contamination. The City of Phoenix has been actively involved in the effort and is monitoring federal and state superfund activities. There are various WQARF and federal Superfund sites in the Phoenix area where groundwater has been impacted by solvents from various industries and PCE from dry cleaners. The extent of the contaminated groundwater has affected City wells from providing water supplies. ADEQ is actively working on these WQARF sites and has been consulting with the City about future water use when developing remedial (cleanup) objectives. The City has emphasized that the central Phoenix aquifer is an important water supply that the City will need to be able to access in the future (City of Phoenix 2011, 2015).

The City of Phoenix updates its Water Resource Plan approximately every five years and was last issued in 2011. These regular updates ensure that optimal water supplies and infrastructure are available to meet current and future demands -- in normal as well as drought conditions. The 2011 Water Resource Plan shows that, for most foreseeable scenarios, Phoenix has sufficient water supplies for the next 50 years and beyond. These supplies will likely be stretched even further, through planned conservation and infrastructure enhancements. Phoenix has faced the challenges of rapid growth and a hot, dry climate. By effective supply management and significant conservation achievements over the years, Phoenix residents are able to enjoy a lifestyle with high-quality water for drinking and other important uses. Even with the significant growth and dry periods Phoenix has experienced in recent decades, the City has not had to restrict water usage due to supply shortages and does not expect to do so any time soon. The City is prepared for the future and remains dedicated to delivering the water needed to meet its service area demands. The 2011 Water Resource Plan evaluated growth and drought conditions, and considered the current scientific information regarding the potential impacts of global climate change on the City water supplies. The next plan is scheduled to be updated in 2015.

2.2.2.2 Salt River Project

SRP owns and operates a water delivery system with groundwater wells and a series of canals and other water conveyance features throughout the Land and Water Use Study Area (Figures 7, 11 and 12). SRP is the oldest multipurpose federal reclamation project in the United States. SRP has been serving central Arizona since 1903 (SRP, 2015).

SRP's water business is one of the largest raw-water suppliers in Arizona. SRP delivers about 800,000 acre-feet of water annually to a 375-square-mile service area and manages a 13,000-square-mile watershed that includes an extensive system of reservoirs, wells, canals and irrigation laterals.

SRP anticipates all its properties in the vicinity of the 56th Street and Earll Drive WQARF Site will remain in use over the next 100 years. Additionally SRP anticipates its groundwater supply wells in the vicinity will transition from irrigation to municipal service (potable supply) within this time period (Salt River Project, 2015).

2.2.3 Groundwater Use Overview

2.2.3.1 City of Phoenix

Phoenix relies on four primary water supply sources: SRP system provided surface water from two watershed areas (Salt and Verde rivers) to eligible lands within the Phoenix service areas generally south of the Arizona Canal; Colorado River water delivered by the Central Arizona Project (CAP) to those Phoenix areas beyond SRP service; by groundwater wells; and reclaimed water. The City does not use groundwater from wells in the Land and Water Use Study Area due to the water quality standards.

2.2.3.2 Salt River Project

SRP delivers about 800,000 acre-feet of water annually to a 375-square-mile service area and manages a 13,000-square-mile watershed that includes an extensive system of reservoirs, wells, canals and irrigation laterals. SRP anticipates all its properties in the vicinity of the 56th Street and Earll Drive WQARF Site will remain in use over the next 100 years. Additionally SRP anticipates its groundwater supply wells in the vicinity will transition from irrigation to municipal service (potable supply) within this time period.

2.2.3.3 56th Street and Earll Drive WQARF Site Groundwater Monitor and Extraction Wells

The monitor well network for the 56th Street and Earll Drive WQARF Site includes 49 wells with water level and water quality data that have been used to characterize the WQARF Site area. Some of these wells are multiple port wells or paired wells allowing for sampling at various depths. There are two extraction wells located along the Grand Canal that are part of the groundwater treatment system. Figure 8 shows the locations of the monitor and extraction wells installed and used as part of the monitor well network. Several of the wells were abandoned as part of the redevelopment of the facility site when sold in 2005. Some wells are part of the Motorola 52nd Street Superfund Site but because of proximity to the migrating 56th Street plume, those wells have been added to the reporting for the 56th Street Site. The plume is defined by the extent of the 5 parts per billion (ppb) TCE concentration contour (2015 plume for the Land and Water Use Study). Table 1 presents a list of the groundwater monitoring wells that are included in the 56th Street and Earll Drive WQARF Site monitoring well network.

Groundwater flow is to the west-southwest across the WQARF Site area. Historically, elevated VOC concentrations were typically in wells located at the southwestern portion of the property. Recent analytical data from groundwater quality sampling shows either non-detect or low concentrations of TCE and PCE from the onsite wells. The concentrations have been increasing downgradient showing the plume continues to migrate. Water quality samples from wells adjacent to the former Motorola Facility indicate all contaminant sources to groundwater have been removed as the upgradient edge of the plume (as indicated by the TCE 5 ug/l or 5 ppb concentration contour) has moved downgradient. The highest concentrations indicate the core of the plume also continues to move downgradient. Generally, the impacted groundwater is migrating along the bottom of the Basin Fill aquifer near and along the bedrock contact with little to no impact observed in the shallow alluvial aquifer.

At the request of Freescale by application to the ADWR for a Poor Quality Groundwater Withdrawal Permit (PQGWWP), and with the approval of ADEQ, the ADWR issued the PQGWWP No. 59-541491.0002 pursuant to Arizona Revised Statutes (ARS) §45-516, effective July 15, 2010 for the withdrawal of poor quality groundwater to be treated to remove volatile organic compounds as part of the remediation activities by the permittee (Freescale). This was in anticipation of the of the early response action (ERA) at the site and the need to pump groundwater from extraction wells and developing the groundwater treatment system. The extraction wells were also designed to capture the contaminant plume.

NXP is operating a groundwater treatment system, known as the 34th Street Groundwater Treatment Facility which includes two groundwater extraction wells on the north bank of the Grand Canal, a groundwater treatment plant and pipelines that convey water from the wells to the treatment plant and from the treatment plant to the Grand Canal where the treated water is discharged. Freescale received an AZPDES permit from ADEQ on March 8, 2011 to allow the discharge of the treated effluent from the then proposed groundwater treatment system to the surface water of the Grand Canal. The AZPDES permit also included a mixing zone for boron because Freescale's application demonstrated the reasonable potential for naturally-occurring boron to be present in the groundwater and boron would not be removed by the treatment system. The AZPDES permit allows for the mixing zone in the Grand Canal for achieving surface water quality standards for boron. An application for the renewal of the AZPDES permit was submitted to ADEQ in September 2015 and was approved on August 23, 2016. This reauthorized AZPDES permit expires on August 22, 2021.

The system began extracting water though the groundwater wells, to the treatment system and then discharging treated groundwater to SRP's Grand Canal on November 1, 2013. A total of approximately 500,900,000 gallons of groundwater have been treated and 12 gallons (or 146.7 pounds) of VOCs as TCE have been removed since start-up of the treatment system in late 2013 through January 2016. NXP provides reports to ADEQ and ADWR on water quality and quantity pumped and treated and discharged to the surface water of the Grand Canal.

2.2.3.4 Private Groundwater Use

Private property owners within the Study Area may install an exempt (<35 gallons per minute) well on their property provided the well is permitted through the ADWR. However, ADWR will consider the location of the well, planned water use, and proximity to various contaminant groundwater plumes in the area and may reject the application. If the property owner has groundwater rights, they may install a nonexempt (>35 gallons per minute) domestic or production well but use may be limited due to water quality. The ADWR Well Registry Reports and water rights database were reviewed to identify potential private groundwater users within the Study Area. A list of exempt wells is shown in Table 2 and a list of IGR's and Type 1 non-IGR's rights within the Study Area is shown in Table 5. As discussed earlier, a Type 2 right may be located anywhere within the Phoenix AMA, including the Study Area. There are no Type 2 rights noted for the area.

Within the Land and Water Use study Area, there are more than 450 groundwater wells registered with ADWR. Figure 9 shows the general locations of the groundwater wells registered with ADWR. The locations are directly from the ADWR on-line database and are therefore located by legal or cadastral description to the nearest quarter/quarter/quarter section of the township and range and are not exact. From a review of the ADWR registered wells database, information was obtained for the groundwater wells that are classified as monitor, exempt, non-exempt, or other. Of the total number of registered wells, the majority are groundwater monitor wells and therefore are not used for domestic or public water supply.

Based on review of the ADWR Well Registry Report, there are six (6) registered exempt wells and 15 registered non-exempt wells in the Land and Water Use Study Area. None of these wells are used for drinking water (or potable water supply) due to the various underlying groundwater contaminate plumes. Most of these exempt wells were drilled prior to 1960 and were intended as irrigation wells and some also as domestic use by the landowner. Of the six exempt wells, four are no longer in use and two may be used

as flood irrigation for a residential lot. The SRP reports that it operates four (4) groundwater supply wells (non-exempt) and water conveyance structures (such as the Grand Canal) in the Study Area, with another eight (8) wells located within about a mile of the Land and Water Use Study Area boundary. Other non-exempt wells are owned by Maricopa County Flood Control District (7 wells registered but no other information is available and wells may not have been drilled), NXP (former Freescale) (2 extraction wells used as part of the groundwater treatment system), Arizona State Land Department (1 well registered but used as a monitor well only since 1992), and LGE Corporation (1 well that was abandoned in 2003).

The Arizona Department of Health Services (ADHS) conducted a health consultation under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) in 2003. The purpose of the health consultation was to determine whether contaminants in groundwater from the Motorola 56th Street facility represent a threat to public health. As part of the ADHS study, various documents and data were reviewed and interviews were conducted. Comprehensive organic priority pollutant and inorganic chemical analyses were performed on groundwater samples collected from five (5) downgradient irrigation wells in 1993. The samples were analyzed for common VOCs and metals. It was noted that all of the homes in the area receive their drinking water from the City of Phoenix municipal water system. There are no municipal supply wells in the known area of contamination. All residential irrigation well owners were contacted and interviewed. In all cases the irrigation wells were specifically used to water outside plants or were no longer in use. All occupants were aware of the non-potable nature of the water. Groundwater data from the affected area included five private irrigation wells downgradient of the facility. The samples were analyzed for common VOCs and metals. The results were reviewed and the contaminants of concern were identified: arsenic and fluoride. Solvent contaminants that were found in the 1980s were no longer present at detectable levels in the wells. The study also included exposure pathway and child health issues. ADHS concluded that "There are 5 private irrigation wells down-gradient of the Motorola 56th Street facility that have elevated levels of arsenic and fluoride in the water. All the wells are used solely for flood irrigation, and none are plumbed into the dwellings. Use of the private wells for flood irrigation poses **no public health hazard**." This exposure assessment focused on residents who live west (downgradient) of the facility and have private irrigation wells.

Some of these wells may still be in use for property irrigation and plant watering but they are not used as a potable water source. From the ADWR (2015) well records information, it appears most of the private wells are no longer in use.

2.3 Surface Water Use

Information on surface water was obtained from the Arizona Department of Water Resources (ADWR), City of Phoenix, Salt River Project (SRP), Flood Control District of Maricopa County (FCDMC), and from the ongoing remedial investigation for the 56th Street and Earll Drive WQARF Site. Surface water in the area is limited to flow in concrete-lined canals that are part of SRP's water distribution system of canals, dams, and groundwater wells. SRP operates the Arizona Canal, Crosscut Canal, and Grand Canal, all of which convey water in the vicinity of the Site Area. In normal run-off years, most of the water in the SRP canals is supplied from the Salt and Verde Rivers; in dry years, groundwater must be pumped from SRP wells to supplement the surface water supplies. The water is used for agricultural irrigation and recharge purposes and meets the water qualities for such purposes. There is no perennial stream flow and there are no natural ponds or lakes. There is occasional surface water flow in drainages and topographically low areas as a result of storm water runoff such as to the landscaped-covered greenbelt of

the Old Crosscut Canal (OCC) along 48th Street and to the north of McDowell Road. These storm water runoff areas are generally maintained by the FCDMC, City of Phoenix, or ADOT.

NXP is operating a groundwater treatment system, known as the 34th Street Groundwater Treatment Facility which includes two groundwater extraction wells on the north bank of the Grand Canal, a groundwater treatment plant and pipelines that convey water from the wells to the treatment plant and from the treatment plant to the Grand Canal where the treated groundwater water is discharged to the surface water of the Grand Canal. Freescale received an AZPDES permit from ADEQ on March 8, 2011 to allow the discharge of the treated effluent from the then proposed groundwater treatment system to the surface water of the Grand Canal. The AZPDES permit also included a mixing zone for boron because Freescale's application demonstrated the reasonable potential for naturally-occurring boron to be present in the groundwater and boron would not be removed by the treatment system. An application for the renewal of the AZPDES permit was submitted to ADEQ in September 2015, was approved on August 23, 2016, and is reauthorized until August 22, 2021. The AZPDES permit allows for the mixing zone in the Grand Canal for achieving surface water quality standards for boron.

The system began extracting water though the groundwater wells, to the treatment system and then discharging treated groundwater to SRP's Grand Canal on November 1, 2013. A total of approximately 289,700,000 gallons of groundwater have been treated and 7.4 gallons (or 89.5 pounds) of VOCs as TCE have been removed since start-up of the treatment system in late 2013 through June 2015. NXP provides reports to ADEQ, ADWR, and SRP on water quality and quantity pumped and treated and discharged to the surface water of the Grand Canal.

3.0 SUMMARY OF CURRENT AND REASONABLY FORESEEABLE USES

The former Motorola facility property is currently owned by Great Hearts Academies and used as a public charter school. Great Hearts plans to continue to use the site as a public charter school for grades kindergarten through 12 for many years. The remaining typical land use in the study area boundary is primarily residential, light commercial, retail, schools, restaurants, office buildings, public libraries, fire department stations, public parks and open space within the City of Phoenix. Since the shallow soils impacts do not apparently extend to properties adjacent to the former Motorola facility property, these other property owners (generally single family residential) were not contacted or questioned regarding future land use for their specific property. Based on future general plan and zoning land use maps provided by the City of Phoenix, there are no immediate plans to change overall general land use or zoning for the areas in the Land and Water Use Study Area. Only minor variances and adjustments may be made based on individual parcels, with some additional residential development anticipated, but no major changes are expected.

3.1 Land Use

3.1.1 Former Motorola 56th Street Facility

The property was reportedly used for row crop agriculture from at least 1930 to 1949. Motorola owned and operated the site beginning in 1950. In summary, the Facility was first occupied in the spring of 1950 by Motorola Inc. and was used for a variety of product development, manufacturing, and testing operations until 1982. As products became successful, these product lines were transferred to other facilities for routine production. After 1982, manufacturing operations were discontinued and the Facility was redeveloped for office uses. Starting in 1984, investigations were conducted at the Facility to determine if the soils and groundwater in the area were contaminated. The eastern half of the property

includes an approximately 156,000 square-foot building which was constructed in three stages since the 1950's. The Facility was vacated by Motorola in 2004 and sold to developers in 2005 who had originally planned to demolish the buildings to make way for residential development. However, the Facility was not removed but remained unoccupied from 2004 until Great Hearts Academies purchased the property in March 2011 to develop as a public charter school for grades kindergarten through 12. The school opened for students in Fall 2011 and continues to operate as a public K-12 charter school.

The eastern half of the school campus property includes four building structures totaling about 156,000 square-feet and a small parking lot on the northeast corner of the property. There is a vegetated stormwater drainage basin located in the north central portion of the property. The western portion consists of parking lots and athletic fields. The parcel is zoned as Industrial Park. The areas immediately surrounding the school are zoned residential. Great Hearts Academies plans to continue to use the school campus for many years.

3.1.2 City of Phoenix

The typical land use in the study area boundary is primarily residential, light commercial, retail, schools, restaurants, office buildings, public libraries, fire department stations, public parks and open space within the City of Phoenix. Based on future general plan and zoning land use maps provided by the City of Phoenix, there are no immediate plans to change overall general land use or zoning for the areas in the Land and Water Use Study Area. Only minor variances and adjustments may be made based on individual parcels, with some additional residential development anticipated, but no major changes are expected.

3.2 Groundwater Use

Groundwater use in the area is limited because of the underlying contaminant plume. However, the groundwater treatment system is in operation as part of the ERA. It is anticipated that the groundwater resources should be appropriately cleaned up and made available in the future.

3.2.1 56th Street and Earl Drive WQARF Site Monitor Wells and Groundwater Treatment System

NXP is operating a groundwater treatment system, known as the 34th Street Groundwater Treatment Facility which includes two groundwater extraction wells on the north bank of the Grand Canal, a groundwater treatment plant and pipelines that convey water from the wells to the treatment plant and from the treatment plant to the Grand Canal where the treated water is discharged. NXP withdraws groundwater through a PQGWWP. The AZPDES permit from ADEQ allows the discharge of the treated effluent from the groundwater treatment system to the surface water of the Grand Canal. The AZPDES permit also includes a mixing zone for naturally-occurring boron and allows for the mixing zone in the Grand Canal for achieving surface water quality standards for boron.

The system began extracting water though the groundwater wells, to the treatment system and then discharging treated groundwater to SRP's Grand Canal on November 1, 2013. A total of approximately 500,900,000 gallons of groundwater have been treated and 12 gallons (or 146.7 pounds) of VOCs as TCE have been removed since start-up of the treatment system in late 2013 through January 2016. NXP provides reports to ADEQ and ADWR on water quality and quantity pumped and treated and discharged to the surface water of the Grand Canal.

3.2.2 City of Phoenix

The City of Phoenix does not operate any production wells within the Land and Water Use Study Area and there are no current plans for groundwater development. However, the City expects that groundwater resources should be appropriately cleaned up and made available in the future if needed.

3.2.3 Salt River Project

SRP owns and operates a water delivery system with groundwater wells and a series of canals and other water conveyance features throughout the Land and Water Use Study Area (Figures 7, 11 and 12).

SRP anticipates all its properties in the vicinity of the 56th Street and Earll Drive WQARF Site will remain in use over the next 100 years. Additionally SRP anticipates its groundwater supply wells in the vicinity will transition from irrigation to municipal service (potable supply) within this time period (Salt River Project, 2015).

3.2.4 Private Groundwater Use

Based on review of the ADWR Well Registry Report, there are six (6) registered exempt wells and 15 registered non-exempt wells in the Land and Water Use Study Area. None of these wells are used for drinking water (or potable water supply) due to the various underlying groundwater contaminate plumes. Most of these exempt wells were drilled prior to 1960 and were intended as irrigation wells and some also as domestic use by the landowner. Of the six exempt wells, four are no longer in use and two may be used as flood irrigation for a residential lot.

The ADHS conducted a health consultation under a cooperative agreement with the ATSDR in 2003. The purpose of the health consultation was to determine whether contaminants in groundwater from the Motorola 56th Street facility represent a threat to public health. ADHS concluded that “There are 5 private irrigation wells down-gradient of the Motorola 56th Street facility that have elevated levels of arsenic and fluoride in the water. All the wells are used solely for flood irrigation, and none are plumbed into the dwellings.” This exposure assessment focused on residents who live west (downgradient) of the facility and have private irrigation wells.

Some of these wells may still in use for property irrigation and plant watering but they are not used as a potable water source. From the ADWR (2015 and 2016) records, it appears most of the private wells are no longer in use (see Table 3). The property owners with ADWR-registered exempt wells that may be used for domestic or irrigation purposes and which wells were identified as in the plume or potential pathway of the plume, were twice contacted by certified mail. Neither property owner responded. The correspondence included a letter identifying the well with notification that the well is in the 56th Street and Earll WQARF Site and may have contaminated water, and that the water is not to be used for drinking water purposes. ADWR imaged records information shows that one of the well owners had already been advised by ADWR that the well was located in a contaminated groundwater area. ADWR records about the other well indicate the well may no longer exist (Table 3).

3.3 Surface Water Use

Information on surface water was obtained from the Arizona Department of Water Resources (ADWR), City of Phoenix, Salt River Project (SRP), Flood Control District of Maricopa County (FCDMC), and from the ongoing remedial investigation for the 56th Street and Earll Drive WQARF Site. Surface water in the area is limited to flow in concrete-lined canals that are part of SRP’s water distribution system. In normal run-off years, most of the water in the SRP canals is supplied from the Salt and Verde Rivers; in

dry years, groundwater must be pumped from SRP wells to supplement the surface water supplies. The water is used for agricultural irrigation and recharge purposes and meets the water qualities for such purposes. There is no perennial stream flow and there are no natural ponds or lakes. There is occasional surface water flow in drainages and topographically low areas as a result of storm water runoff such as to the landscaped-covered greenbelt of the Old Crosscut Canal along 48th Street and to the north of McDowell Road. These storm water runoff areas are generally maintained by the FCDMC, City of Phoenix, or ADOT.

NXP is operating a groundwater treatment system, known as the 34th Street Groundwater Treatment Facility which includes two groundwater extraction wells on the north bank of the Grand Canal, a groundwater treatment plant and pipelines that convey groundwater from the wells to the treatment plant and then the treated groundwater is discharged to the surface water of the Grand Canal. Freescale received a AZPDES permit from ADEQ on March 8, 2011 to allow the discharge of the treated effluent from the groundwater treatment system to the surface water of the Grand Canal. The AZPDES permit also included a mixing zone for boron because Freescale's application demonstrated the reasonable potential for naturally-occurring boron to be present in the groundwater and boron would not be removed by the treatment system. An application for the renewal of the AZPDES permit was submitted to ADEQ in September 2015 and was approved on August 23, 2016. This reauthorized AZPDES permit expires on August 22, 2021. The AZPDES permit allows for the mixing zone in the Grand Canal for achieving surface water quality standards for boron.

The system began extracting water though the groundwater wells, to the treatment system and then discharging treated groundwater to SRP's Grand Canal on November 1, 2013. NXP provides reports to ADEQ, ADWR, and SRP on water quality and quantity pumped and treated and discharged to the surface water of the Grand Canal.

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TABLES

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-1 55-511096	C	28-48	1985 abandoned in 2005	A	N903849.00 E486155.00	1237.58	1237.22
DM-2A 55-511215	C	24-44	1985 abandoned in 2005	A	N903507.00 E485860.00	1237.77	1237.8
DM-2B 55-511214	C	59-79	1985 abandoned in 2005	A	N903507.00 E485842.00	1237.76	1237.77
DM-3 55-511097	C	21-41	1985 abandoned in 2005	A	N903871.00 E485803.00	1237.02	1237.09
DM-4 55-511216	C	14-44	1985 abandoned in 2005	A	N903514.00 E486399.00	1242.35	1241.56
DM-5 55-513424	C	72-92	1986 abandoned in 2014	A	N902910.00 E485377.00	1237	1237.32
DM-6 55-513497	C	17-27	1986	A	N902350.00 E484433.00	1232	1231.71
DM-7 55-513498	C	68-88	1986	A	N903483.00 E484175.00	1228	1227.86
DM-8 55-516146	C	63-83	1986	A	N901478.00 E485286.00	1243	1242.28
DM-9 55-516147	C	65-85	1986	A	N900859.00 E482724.00	1217	1216.12
DM-10 55-516148	C	39-49	1986 abandoned in 2014	A	N902820.00 E483258.00	1222	1221.43
DM-11 55-525689	C	102-150	1989 abandoned in 2005	B	N903522.00 E485850.00	1238	1237.49
DM-12 55-525692	C	11-77	1989	A, I	N901569.00 E483366.00	1222	1222.17
DM-12OW1 55-525690	C	66-78	1989	I	N901569.00 E483366.00	1221	1220.86
DM-12OW2 55-525691	C	11-67	1989	A, I	N901569.00 E483366.00	1223	1222.74
DM-13 55-531215	C	63-83	1991	A	N902089.51 E482859.13	1218.53	1218.53
DM-14 55-530424	C	42-55	1991	A	N903552.76 E482339.37	1218.72	1218.22

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56th Street and Earll Drive WQARF Site

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DM-15 55-536578	WB	18	1993	A	N902.053.854 E483.048.2395	1220	1219.62
		38		A			
		70		I			
		105		B			
		135		B			
		165		B			
		207		B			
DM-16 55-530527	C	99-120	1993	A	N901516.75 E481821.96	1209.93	1209.94
DM-17 55-530756	C	66-86	1993	A	N902790.52 E481871.60	1214.30	1214.17
DM-18 55-530526	C	20-30	1993	I	N902089.51 E482859.13	1242.50	1242.41
DM-19 55-548179	C	115-125	1995	I	N900710.54 E477369.41	1181	1179.81
DM-20 55-538644	WB	22	1993	A	N901.794.6809 E481.362.6670	1208.45	1207.60
		59		A			
		90		A			
		120		I			
		170		B			
		200		B			
		235		B			
		265		B			
DM-21 55-548368	C	123-135	1995	I	N900863.89 E475837.66	1174	1172.66

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-22 55-538306	WB	18	1993	A	N902.925.8947 E484.914.0087	1233.95	1233.15
		45		A			
		81		A			
		98		I			
		138		B			
		175		B			
		220		B			
		265		B			
		305		B			
DM-23 55-550731	C	75-85	1996	I	N899.123.8570 E478.773.0520	1182	1181.65
DM-24 55-550730	C	141-161	1995	I	N899.363.65 E479.872.27	1185	1185.42
DM-25 55-550729	C	103-123	1995	I	N900897.9296 E480869.7742	1200	1200.32
DM-26 55-550732	C	73-93	1995	I	N899124.9570 E479150.4289	1194	1193.77
DM-27 55-548369	C	160-180	1995	I	N899.621.124 E476483.928	1172	1171.43
DM-28 55-552877	C	75-215	1995	I	N898764.21 E474845.92	1161	1161.06
DM-29 55-207723	C	227-257	2005	A	N896631.74 E471657.83	1139.63	1139.25
DM-30 55-207724	C	195-225	2005	A	N898016.38 E474844.63	1159.32	1158.95
DM-31 55-207725	C	180-210	2005	A	N896269.42 E472669.14	1141.97	1141.39
DM-32 55-207726	C	128-158	2005	A, I	N897753.85 E473153.95	1150.04	1149.5
DM-33 55-207727	C	170-200	2005	A	N895881.16 E473502.86	1143.84	1143.57
DM-34 55-207728	C	70-100	2005	A	N899767.02 E477448.68	1178.25	1177.51
DM-35 55-207680	C	51-81	2005	A, I	N903468.25 E485857.04	1239.01	1238.71
DM-36 55-207681	C	125-165	2005	B	N903469.01 E485849.70	1239.12	1238.5
DM-37 55-219307	C	131-181	2009	A	N895680.72 E471458.53	1135.88	1135.36
DM-38 55-219306	C	166-216	2009	A	N895254.36 E471987.85	1136.32	1136.36

Table 1

List of Groundwater Monitor and Extraction Wells
56th Street and Earll Drive WQARF Site

Well ID Well Name ADWR Reg #	Well Type	Depth of Screened Interval or Port Depth (ft bgs)	Year Well Completed	Geologic Unit	Northing/ Easting Location	Land Surface Elevation (in feet amsl)	Measuring Point Elevation (in feet amsl)
DM-39 55-219352	E	134-184	2009	A	N895624.38 E471586.24	1136.34	1136.1
DM-40 55-219351	E	165-215	2009	A,I	N895381.28 E47823.28	1136.23	1136.21
DM-41 55-221555	C	153-203	2013	A,I	N895014.52 E470267.41	1128.33	1127.63
DM-42 55-221554	C	78-108	2013	A	N894603.15 E468888.85	1121.57	1120.95
DM-43A 55-226432	MP	110	2016	A	N895000.263 E468330.434	1121.50	1121.24
DM-43B 55-226432	MP	167	2016	A	N894999.938 E468330.383	1121.50	1121.19
DM-44A 55-226433	MP	109	2016	A	N894564.938 E467573.004	1117.88	1117.58
DM-44B 55-226433	MP	135	2016	A	N894564.550 E467573.01	1117.88	1117.56
COP-52	PC	13-23	Unknown	A	N902457 E484382	1232	1232
COP (GM-01)	PC	Unknown	Unknown	A, I	N902697 E484381	Unknown	1232
DM505 55-529811	C	214-263	1991	I	N895048.4 E472612.5	1136.92	1137.87

NOTES:
ADWR Reg # – Arizona Department of Water Resources well registration number
ft bgs – feet below ground surface
amsl – above mean sea level

Well Type
C – Conventional Well
E – Extraction Well
MP – Multiple Port Well
PC – City of Phoenix Conventional Well
WB – Westbay™ Well

Geologic Unit
A – Alluvium
B – Bedrock
I – Interface (alluvium/bedrock)

Northings and Eastings are in Arizona State Plane Coordinate System, North American Datum NAD27. Northings and Eastings for wells COP-52 and COP (GM-01) are estimated.

Table 2

ADWR Registered Wells - Exempt Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

ADWR REGISTRY ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet bgs)	CASING DEPTH (feet bgs)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE (gpm)	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
801658	332740111594201	A01003001ADA	AZ STATE LAND DEPT,	EXEMPT	40.00	40.00	6.00	8/8/1984	1/1/1951	40.00	10.00	NO			407389.90	3702859.00
639309	332900111573701	A02004029DDA	TAYLOR,J	EXEMPT	75.00	20.00	10.00	6/14/1982	10/1/1948	12.00	35.00	NO			410623.60	3705220.00
633954	332913111575301	A02004029DDA	ELLIS,K M	EXEMPT	0.00	0.00	0.00	5/20/1982		0.00	0.00	NO			410623.60	3705220.00
700292		A01003001BAB		EXEMPT	0.00	0.00	0.00	12/21/2004		0.00	0.00	NO			406384.80	3703278.00
632755		A02003036000	BRYANT,F H	EXEMPT	82.00	75.00	5.00	4/22/1982	1/1/1934	0.00	6.00	NO			406695.30	3704189.00
552481		A02004029CDC	SPCLO VIII, LLC	EXEMPT	85.00	85.00	4.00	9/18/1995	11/4/1995	14.00	25.00	NO	X	X	409604.80	3705034.00

NOTES:
bgs - below ground surface
gpm - gallons per minute

Well Status Update:

ADWR No.	Well Owner Name	Well Status Comments
55-801658	AZ State Land Dept.	Well was capped 2/25/1992; no longer in use.
55-639309	TAYLOR,J	Current well ownership unclear. Well location uncertain but near 5600 E. Earll Drive and N. 56th Street; however, well location is south of Facility and is cross gradient and upgradient of groundwater flow from Facility area.
55-633954	ELLIS,K M	North of Facility and upgradient of groundwater flow.
55-700292		Former "Cave" well. ADWR Administrative Late Registration of well in 2004 but ADWR comment was location of well was not found in the field; well owner unknown.
55-632755	BRYANT,F H	Well ownership unclear. Parcel with apparent well location has new owner Curtis Hamann Trust in 8/2011 but no records of well since 1982. Parcel is commercial vacant. Contact letters sent to parcel owner 2/25/2016 and 6/27/2016. No response.
55-552481	SPCLO VIII, LLC	Former "Hunt" well. New owner of well 3/13/2015 by ADWR Change in Well Ownership form. ADWR form shows well is in 56th St & Earll Drive Contamination Site. Contact letters sent to parcel owner 2/25/206 and 6/27/2016. No response.

Source:
Arizona Department of Water Resources (ADWR), 2015 and 2016. Online Database Information and Imaged Records.
Maricopa County Assessor, Database Records 2016.

Table 3

ADWR Registered Wells - Non-Exempt Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

ADWR REGISTRY ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE (gpm)	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
628943	332754111590401	A01004006ABB	LGE CORP.	NON-EXEMPT	299.00	217.00	7.00	7/16/1982		0.00	40.00	NO	A		408381.10	3703246.00
608380	332754112004601	A01003002AAA	SALT RIVER PROJECT,	NON-EXEMPT	250.00	219.00	19.00	5/11/1982	10/1/2012	86.00	2000.00	YES	X	X	405782.40	3703288.00
801656	332740111594301	A01003001ADA	AZ STATE LAND DEPT,	NON-EXEMPT	160.00	160.00	10.00	8/8/1984	5/27/1947	40.00	50.00	NO	X		407389.90	3702859.00
617849	332848111594201	A02003036AAA	SALT RIVER PROJECT,	NON-EXEMPT	305.00	305.00	18.00	5/26/1982	7/16/1971	22.00	954.00	YES			407407.30	3704891.00
617716	332848111594401	A02003036AAA	SALT RIVER PROJECT,	NON-EXEMPT	167.00	167.00	12.00	6/8/1982	1/1/1925	42.00	200.00	NO			407407.30	3704891.00
219351		A01003001BCA	FREESCALE SEMICONDUCTOR INC	NON-EXEMPT	215.00	215.00	1.00	9/1/2009		78.00	0.00	NO		X	406184.20	3702879.00
557215		A02004032BBB	MARICOPA COUNTY FCD,	NON-EXEMPT	0.00	0.00	0.00	8/22/1996		0.00	0.00	NO	X	X	409193.30	3704838.00
617710		A02004029CCB	SALT RIVER PROJECT,	NON-EXEMPT	110.00	55.00	0.00	6/8/1982	8/26/1924	0.00	0.00	NO			409202.70	3705241.00
557218		A02004032BCC	MARICOPA COUNTY FCD,	NON-EXEMPT	0.00	0.00	0.00	8/21/1996		0.00	0.00	NO	X	X	409183.50	3704237.00
552114		A02004031BBB	FLOOD CONTROL DIST,	NON-EXEMPT	0.00	0.00	0.00	11/20/1995		0.00	0.00	YES	N	N	407607.10	3704886.00
557219		A02004032CBB	MARICOPA COUNTY FCD,	NON-EXEMPT	0.00	0.00	0.00	8/21/1996		0.00	0.00	NO	X	X	409181.60	3704036.00
219352		A01003001BCA	FREESCALE SEMICONDUCTOR INC	NON-EXEMPT	185.00	184.00	1.00	9/1/2009		80.00	0.00	NO		X	406184.20	3702879.00
557217		A02004032BCB	MARICOPA COUNTY FCD,	NON-EXEMPT	0.00	0.00	0.00	8/21/1996		0.00	0.00	NO	X	X	409186.60	3704437.00
557216		A02004032BBC	MARICOPA COUNTY FCD,	NON-EXEMPT	0.00	0.00	0.00	8/21/1996		0.00	0.00	NO	X	X	409189.70	3704638.00
557220		A02004032CBC	MARICOPA COUNTY FCD,	NON-EXEMPT	0.00	0.00	0.00	8/21/1996		0.00	0.00	NO	X	X	409180.30	3703836.00

NOTES:
bgs - below ground surface
gpm - gallons per minute

Source: Arizona Department of Water Resources (ADWR) 2015. ADWR Online database information.

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
599174		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	0.00	32.00	8.00	6/26/2003	10/31/2003	23.00	0.00	NO	A	X	410006.70	3704826.00
547183		A01003001BDC	CIRCLE K CORP #1344,	MONITOR	90.00	40.00	4.00	12/29/1994	3/1/1995	61.00	0.00	NO	N	X	406385.30	3702674.00
599173		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	0.00	32.00	8.00	6/26/2003	10/30/2003	21.00	0.00	NO	A	X	410006.70	3704826.00
205355		A02004031DCC	EXXON MOBILOIL	MONITOR	83.00	80.00	5.00	9/30/2004	11/19/2005	65.00	0.00	NO	A	X	408383.20	3703447.00
525956		A02004029CCC	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	9/26/1989		0.00	0.00	NO	N		409198.40	3705040.00
525693		A02004032BBB	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	8/23/1989		0.00	0.00	NO	N		409193.30	3704838.00
534352		A01003002CAA	CITY OF PHOENIX	MONITOR	90.00	90.00	4.00	2/5/1992	2/6/1992	63.00	0.00	NO	A	X	404973.70	3702491.00
535974		A01003002DBC	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	7/9/1992		0.00	0.00	NO	N		405174.70	3702288.00
543761		A02004029DCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	5/12/1994		0.00	0.00	NO	N		410010.70	3705028.00
576543		A02004031BBB	WASH DEPOT XII INC	MONITOR	27.00	27.00	4.00	7/30/1999	8/19/1999	0.00	0.00	NO	A	X	407607.10	3704886.00
207019		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	46.00	41.00	20.00	3/9/2005		16.00	0.00	NO		X	409796.50	3704223.00
207724		A02003036DDB	FREESCALE SEMICONDUCTOR INC	MONITOR	236.00	225.00	4.00	5/5/2005	7/21/2005	60.00	0.00	NO		X	407189.50	3703669.00
527435		A01004006ABB	FARELLA BRAUN,	MONITOR	0.00	0.00	0.00	3/15/1990		0.00	0.00	NO	N		408381.10	3703246.00
543824		A02004029DCC	PHOENIX CITY OF	MONITOR	0.00	0.00	0.00	5/9/1994		0.00	0.00	NO	N		410010.70	3705028.00
531597		A01003002CCD	DYNASTY EXPRESS CORP,	MONITOR	0.00	0.00	0.00	4/18/1991		0.00	0.00	NO	N		404569.00	3701894.00
552967		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	30.00	25.00	2.00	11/8/1995	11/28/1995	18.00	0.00	NO	A	X	410006.70	3704826.00
537463		A02004031ADA	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		408985.90	3704443.00
545279		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/26/1994	9/2/1994	21.00	0.00	NO	A	X	409803.70	3704829.00
527436		A01004006ABB	FARELLA BRAUN,	MONITOR	0.00	0.00	0.00	3/15/1990		0.00	0.00	NO	N		408381.10	3703246.00
552708		A01003002DBB	CIRCLE K CORP 2847,	MONITOR	0.00	0.00	0.00	10/18/1995		0.00	0.00	NO	N		405175.30	3702489.00
551936		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/22/1995		0.00	0.00	NO	N		409796.50	3704223.00
550112		A02003036ACC	KAREN A OWENS	MONITOR	57.00	27.00	4.00	6/14/1995	6/28/1995	28.00	0.00	NO	A	X	406795.70	3704288.00
207017		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	50.00	40.00	20.00	3/9/2005		16.00	0.00	NO		X	409796.50	3704223.00
531707		A02004032ABB	TEXACO REFINING &,	MONITOR	0.00	0.00	0.00	5/3/1991		0.00	0.00	NO	N		410006.70	3704826.00
537466		A02004031AAA	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		408992.60	3704844.00
599171		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	25.00	22.00	2.00	6/26/2003	11/20/2003	0.00	0.00	NO	A	X	410006.70	3704826.00
545275		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/26/1994	8/30/1994	22.00	0.00	NO	A	X	409803.70	3704829.00
513497		A02004029DCC	FREESCALE SEMICONDUCTOR INC	MONITOR	28.00	28.00	4.00	2/20/1986	4/18/1986	15.00	0.00	NO	N	X	410010.70	3705028.00
541504		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	105.00	105.00	4.00	11/16/1993	3/18/1994	13.00	0.00	YES	A	X	409193.30	3704838.00
579846		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	50.00	10.00	4.00	2/25/2000	3/15/2000	20.00	0.00	NO		X	408601.20	3705057.00
538525		A01004006BAA	ARCO PRODUCTS CO,	MONITOR	38.00	0.00	0.00	3/26/1993	4/14/1993	0.00	0.00	NO	N	X	408182.60	3703248.00
531705		A02004032ABB	TEXACO REFINING &,	MONITOR	0.00	0.00	0.00	5/3/1991		0.00	0.00	NO	N		410006.70	3704826.00
700307		A02004032ABB		MONITOR	0.00	0.00	0.00	9/9/2002		0.00	0.00	NO			410006.70	3704826.00
526215		A02003036ACC	KAREN A OWENS	MONITOR	60.00	60.00	2.00	10/20/1989	11/17/1989	35.00	0.00	NO	A	X	406795.70	3704288.00
529811		A01003001BDC		MONITOR	270.00	264.00	5.00	11/2/1990	1/10/1991	63.00	13.00	NO	X	X	406385.30	3702674.00
571214		A02004031BAB	RICHFIELD COMPANY/BP WEST CAOST PR(	MONITOR	32.00	12.00	4.00	10/8/1998	11/1/1998	22.00	0.00	NO		X	408003.30	3704874.00
550599		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	7/17/1995		0.00	0.00	NO			409796.50	3704223.00
511096		A02004029DAD	FREESCALE SEMICONDUCTOR INC	MONITOR	55.00	20.00	5.00	5/10/1985	5/23/1985	0.00	9.00	NO	A	X	410627.70	3705421.00
543238		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	105.00	105.00	2.00	4/12/1994	4/22/1994	16.00	0.00	NO	A	X	409193.30	3704838.00
520859		A02004031DCC	MOBIL OIL CORP,	MONITOR	60.00	57.00	4.00	4/8/1988	4/13/1988	32.00	0.00	NO	N	X	408383.20	3703447.00
552877		A02003036DBD	FREESCALE SEMICONDUCTOR INC	MONITOR	220.00	215.00	4.00	11/15/1995	12/19/1995	46.00	13.00	NO	X	X	406991.50	3703877.00
543236		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	65.00	65.00	2.00	4/12/1994	4/27/1994	16.00	0.00	NO	A	X	409193.30	3704838.00
547916		A02003036CCC	CIRCLE K CORP #15,	MONITOR	0.00	0.00	0.00	2/23/1995		0.00	0.00	NO	N		405984.30	3703488.00
525694		A02004031AAD	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	8/23/1989		0.00	0.00	NO	N		408988.90	3704643.00
548369		A02004031BCC	FREESCALE SEMICONDUCTOR INC	MONITOR	185.00	180.00	4.00	3/16/1995	8/15/1995	0.00	13.00	NO	X	X	407598.90	3704274.00
536512		A01003002CDA	FREESCALE SEMICONDUCTOR INC	MONITOR	310.00	310.00	5.00	8/26/1992	9/14/1992	0.00	0.00	NO	N	X	404972.60	3702089.00
524752		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	40.00	35.00	4.00	6/1/1989	2/6/1990	17.00	0.00	NO	A	X	409803.70	3704829.00
581469		A02003036AAA	7-ELEVEN INC	MONITOR	0.00	0.00	0.00	5/31/2000		0.00	0.00	NO			407407.30	3704891.00
550113		A02003036ACC	KAREN A OWENS	MONITOR	57.00	27.00	4.00	5/14/1995	6/28/1995	28.00	0.00	NO	A	X	406795.70	3704288.00
559165		A02003036CAA	CONOCO PHILLIPS COMPANY	MONITOR	70.00	70.00	2.00	7/26/1996	8/27/1996	43.00	0.00	NO	A	X	406592.40	3704088.00
552456		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
582592		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
203977		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	40.00	40.00	4.00	6/9/2004		20.00	0.00	NO		X	409796.50	3704223.00
513498		A02004029DBC	FREESCALE SEMICONDUCTOR INC	MONITOR	96.00	88.00	4.00	2/20/1986	4/16/1986	0.00	9.00	NO	X	X	410018.80	3705430.00
547914		A02003036CCC	ONOCOPHILLIPS CO/TOSCO CORP/CIRCLE	MONITOR	90.00	45.00	4.00	2/23/1995	5/4/1995	70.00	0.00	NO	A	X	405984.30	3703488.00
537467		A02004031ADA	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		408985.90	3704443.00
552460		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
513424		A02004029DCA	FREESCALE SEMICONDUCTOR INC	MONITOR	96.00	96.00	4.00	2/20/1986	4/23/1986	14.00	9.00	NO	A	X	410217.70	3705226.00
514888		A02004031CDA	FREESCALE SEMICONDUCTOR INC	MONITOR	123.00	120.00	6.00	7/15/1986		40.00	13.00	NO	X	X	408186.90	3703652.00
539671		A01003002DDD	BP WEST COAST PRODUCTS	MONITOR	80.00	80.00	4.00	6/25/1993	7/1/1993	47.00	0.00	NO	A	X	405778.30	3701878.00

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
578220		A01004006BAA	ARCO PRODUCTS CO	MONITOR	75.00	75.00	4.00	11/15/1999	12/17/1999	50.00	0.00	NO	A	X	408182.60	3703248.00
545269		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	4.00	8/26/1994	8/29/1994	23.00	0.00	NO	A	X	410006.70	3704826.00
519510		A02004031ACC	THOMAS MALL PRTSHP.,	MONITOR	19.00	19.00	2.00	10/29/1987	11/4/1987	13.00	0.00	NO	N	X	408392.40	3704255.00
542313		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	30.00	25.00	2.00	2/4/1994	2/9/1994	15.00	0.00	NO	N	X	409803.70	3704829.00
548155		A01003001BBC	CIRCLE K CORP #1344,	MONITOR	0.00	0.00	0.00	3/6/1995		0.00	0.00	NO	N		405983.20	3703084.00
555921		A02004031CDD	UNOCAL CORPORATION	MONITOR	0.00	0.00	0.00	4/1/1996		0.00	0.00	NO	N		408184.50	3703450.00
913495		A02004032BBB	CIRCLE K STORES, INC.	MONITOR	50.00	50.00	2.00	7/19/2011		45.00	0.00	NO		X	409193.30	3704838.00
548156		A01003001BBC	CIRCLE K CORP #1344,	MONITOR	0.00	0.00	0.00	3/6/1995		0.00	0.00	NO	N		405983.20	3703084.00
205097		A01004006ABB	EXXON MOBIL CORPORATION	MONITOR	80.00	80.00	5.00	9/13/2004	12/1/2004	67.00	0.00	NO	A	X	408381.10	3703246.00
582593		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
547487		A02003036CCC	EXXON MOBIL OIL CORPORATION	MONITOR	85.00	85.00	4.00	1/27/1995	5/27/1995	68.00	0.00	NO	A	X	405984.30	3703488.00
700309		A02004031ABB		MONITOR	0.00	0.00	0.00	9/9/2002		0.00	0.00	NO			408399.40	3704861.00
550291		A01003001BDC	CIRCLE K CORP,	MONITOR	0.00	0.00	0.00	6/21/1995		0.00	0.00	NO	N		406385.30	3702674.00
207680		A02004029DDB	FREESCALE SEMICONDUCTOR INC	MONITOR	81.00	80.00	5.00	5/5/2005	8/15/2005	0.00	0.00	NO		X	410420.60	3705223.00
521573		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	31.00	31.00	4.00	6/23/1988	6/23/1988	21.00	0.00	NO	A	X	410006.70	3704826.00
576545		A02004031BBA	WASH DEPOT HOLDINGS INC	MONITOR	0.00	0.00	0.00	7/30/1999		0.00	0.00	NO			407805.20	3704880.00
540960		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	31.00	11.00	4.00	10/18/1993	10/21/1993	15.00	0.00	NO	A	X	410006.70	3704826.00
559254		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	35.00	5.00	2.00	8/13/1996	2/21/1997	15.00	0.00	NO	N	X	409796.50	3704223.00
581466		A02003036AAA	7-ELEVEN INC	MONITOR	0.00	0.00	0.00	5/31/2000		0.00	0.00	NO			407407.30	3704891.00
548345		A02004032BDD	CIRCLE K CORP #2891,	MONITOR	37.00	17.00	4.00	7/21/1995	3/21/1995	37.00	0.00	NO	N		409796.50	3704223.00
548377		A02004031BAB	BP WEST COAST PRODUCTS	MONITOR	30.00	15.00	4.00	3/13/1995	4/21/1995	20.00	0.00	NO	N	X	408003.30	3704874.00
599172		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	8.00	6/26/2003	10/30/2003	23.00	0.00	NO	A	X	410006.70	3704826.00
516146		A02004032ABD	FREESCALE SEMICONDUCTOR INC	MONITOR	48.00	48.00	4.00	12/3/1986	12/20/1986	0.00	9.00	NO	X	X	410207.20	3704620.00
573227		A01003002DDB	WILSON SCHOOL DISTRICT	MONITOR	0.00	0.00	0.00	2/8/1999		0.00	0.00	NO			405577.30	3702082.00
541503		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	105.00	105.00	4.00	11/16/1993	3/16/1994	13.00	0.00	NO	A	X	409193.30	3704838.00
525759		A02004031ABB	EXXON MOBIL OIL CORP	MONITOR	31.00	30.00	4.00	9/7/1989	9/8/1989	14.00	0.00	NO	A	X	408399.40	3704861.00
548343		A02004032BDD	CIRCLE K CORP #2891,	MONITOR	39.00	15.00	4.00	7/21/1995	3/20/1995	31.00	0.00	NO	N		409796.50	3704223.00
550729		A02004031ABA	FREESCALE SEMICONDUCTOR INC	MONITOR	135.00	123.00	4.00	7/14/1995	8/3/1995	22.00	13.00	NO	N	X	408597.50	3704855.00
482234		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	9/9/2002		0.00	0.00	NO	A		410006.70	3704826.00
482304		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	1/1/1994		0.00	0.00	NO	A		410006.70	3704826.00
551941		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
527382		A02004031ABB	EXXON MOBIL OIL CORP	MONITOR	40.00	40.00	4.00	3/14/1990	8/28/1990	25.00	0.00	NO	A	X	408399.40	3704861.00
540955		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	30.00	4.00	10/18/1993	10/1/1993	0.00	0.00	NO	N	X	409803.70	3704829.00
582588		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO		X	410006.70	3704826.00
536513		A01003002CDC	FREESCALE SEMICONDUCTOR INC	MONITOR	317.00	317.00	5.00	8/26/1992	9/12/1992	0.00	0.00	NO	N	X	404770.60	3701891.00
582591		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
530756		A02004029CCC	FREESCALE SEMICONDUCTOR INC	MONITOR	127.00	120.00	4.00	1/31/1991	3/27/1991	17.00	9.00	NO	X	X	409198.40	3705040.00
543233		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	105.00	105.00	4.00	4/12/1994	4/29/1994	16.00	0.00	NO	A	X	409193.30	3704838.00
552710		A01003002DBB	CIRCLE K CORP 2847,	MONITOR	0.00	0.00	0.00	10/18/1995		0.00	0.00	NO	N		405175.30	3702489.00
703010		A02004029DCC	FREESCALE SEMICONDUCTOR INC	MONITOR	0.00	0.00	0.00	3/20/2009	3/20/2009	0.00	0.00	NO			410010.70	3705028.00
525689		A02004029DAC	FREESCALE SEMICONDUCTOR INC	MONITOR	152.00	152.00	8.00	8/23/1989	9/27/1989	10.00	9.00	NO	A	X	410424.50	3705424.00
582595		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
553392		A01003001BDC	CIRCLE K STORES INC,	MONITOR	0.00	0.00	0.00	12/8/1995		0.00	0.00	NO	N		406385.30	3702674.00
599176		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	12.00	12.00	4.00	6/26/2003	11/3/2003	23.00	0.00	NO	A	X	410006.70	3704826.00
550292		A01003001BDC	CIRCLE K CORP,	MONITOR	0.00	0.00	0.00	6/21/1995		0.00	0.00	NO	N		406385.30	3702674.00
582597		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
538644		A02004031AAA	FREESCALE SEMICONDUCTOR INC	MONITOR	145.00	0.00	4.00	4/5/1993	5/7/1993	13.00	0.00	NO	N	X	408992.60	3704844.00
547179		A01003002DBB	CIRCLE K CORP #2847,	MONITOR	0.00	0.00	0.00	12/29/1994		0.00	0.00	NO	N		405175.30	3702489.00
545276		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/26/1994	8/31/1994	23.00	0.00	NO	A	X	409803.70	3704829.00
594153		A02003036CCC	ONOCOPHILLIPS CO/TOSCO CORP/CIRCLE	MONITOR	94.00	83.00	2.00	8/15/2002	9/20/2002	85.00	0.00	NO	A	X	405984.30	3703488.00
531599		A01003002CCD	DYNASTY EXPRESS CORP,	MONITOR	0.00	0.00	0.00	4/18/1991		0.00	0.00	NO	N		404569.00	3701894.00
543237		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	85.00	85.00	2.00	4/12/1994	4/25/1994	16.00	0.00	NO	A	X	409193.30	3704838.00
527339		A02004029DAD	MOTOROLA INC,	MONITOR	30.00	0.00	7.00	10/21/1984		0.00	0.00	NO	N	N	410627.70	3705421.00
539438		A02004031BAA	EXXON MOBIL OIL CORP	MONITOR	30.00	30.00	2.00	6/15/1993	8/2/1993	15.00	0.00	NO	A	X	408201.30	3704868.00
513927		A01003001BDD	MOTOROLA INC,	MONITOR	270.00	240.00	5.00	4/7/1986	8/19/1986	40.00	0.00	NO	N	X	406586.60	3702671.00
219306		A01003001BCA	FREESCALE SEMICONDUCTOR INC	MONITOR	217.00	215.00	5.00	9/1/2009	11/11/2009	85.00	0.00	NO		X	406184.20	3702879.00
571215		A02004031BAB	ARCO PRODUCTS COMPANY	MONITOR	0.00	0.00	0.00	10/8/1998		0.00	0.00	NO			408003.30	3704874.00
700324		A02004032ABB		MONITOR	0.00	0.00	0.00	9/9/2002		0.00	0.00	NO			410006.70	3704826.00
533582		A02004031ABB	EXXON CO,	MONITOR	30.00	10.00	2.00	10/30/1991	1/21/1992	19.00	0.00	NO	N	X	408399.40	3704861.00
509708		A02004031AAA	HARTIG, THOMAS &ASSO,	MONITOR	49.00	5.00	2.00	11/19/1984	11/27/1984	16.00	0.00	NO	N	X	408992.60	3704844.00

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
525958		A02004032BBC	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	9/26/1989		0.00	0.00	NO	N		409189.70	3704638.00
543760		A02004029DCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	5/12/1994		0.00	0.00	NO	N		410010.70	3705028.00
548161		A01003001BBC	CIRCLE K CORP #1344,	MONITOR	90.00	0.00	4.00	3/6/1995		0.00	0.00	NO	N		405983.20	3703084.00
519512		A02004031ACD	THOMAS MALL PRTSHP.,	MONITOR	29.00	29.00	2.00	10/29/1987	11/4/1987	24.00	0.00	NO	N	X	408590.80	3704251.00
547182		A01003001BDC	CIRCLE K CORP #1344,	MONITOR	90.00	40.00	4.00	12/29/1994	2/28/1995	61.00	0.00	NO	N	X	406385.30	3702674.00
553390		A01003001BDC	CIRCLE K STORES INC,	MONITOR	90.00	40.00	4.00	12/8/1995	2/5/1996	60.00	0.00	NO	N	X	406385.30	3702674.00
538443		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	305.00	305.00	4.00	3/16/1993	3/23/1993	13.00	0.00	NO	A	X	409803.70	3704829.00
534355		A01003002CAA	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	2/5/1992		0.00	0.00	NO	N		404973.70	3702491.00
541602		A02004032BAA	TEXACO CORP,	MONITOR	0.00	0.00	0.00	9/24/1997		0.00	0.00	NO	N		409803.70	3704829.00
221555		A01003002ADB	FREESCALE SEMICONDUCTOR INC	MONITOR	203.00	203.00	4.00	5/8/2012	6/25/2012	78.00	0.00	NO		X	405579.60	3702887.00
531706		A02004032ABB	TEXACO REFINING &,	MONITOR	0.00	0.00	0.00	5/3/1991		0.00	0.00	NO	N		410006.70	3704826.00
538307		A02004031AAA	MOTOROLA INC,	MONITOR	135.00	135.00	4.00	3/5/1993	3/22/1993	15.00	0.00	NO	N	X	408992.60	3704844.00
540958		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	30.00	4.00	10/18/1993	10/1/1993	0.00	0.00	NO	N	X	409803.70	3704829.00
548154		A01003001BBC	CIRCLE K CORP #1344,	MONITOR	90.00	0.00	4.00	3/6/1995		0.00	0.00	NO	N		405983.20	3703084.00
550732		A02004031ACD	FREESCALE SEMICONDUCTOR INC	MONITOR	106.00	93.00	4.00	7/14/1995	8/8/1995	20.00	13.00	NO	X	X	408590.80	3704251.00
548368		A02003036ADA	FREESCALE SEMICONDUCTOR INC	MONITOR	153.00	148.00	5.00	3/16/1995	4/28/1995	23.00	0.00	NO	N	X	407401.70	3704482.00
543207		A01003002DCC	KAIBAB INDUSTRIES,	MONITOR	0.00	0.00	0.00	4/12/1994		0.00	0.00	NO	N		405173.60	3701886.00
529537		A01003002CAA	CITY OF PHOENIX	MONITOR	90.00	90.00	4.00	9/10/1990	3/5/1998	55.00	0.00	NO	A	X	404973.70	3702491.00
530537		A02004031ADD	MARICOPA CO FLOOD	MONITOR	25.00	0.00	0.00	1/10/1991	1/23/1991	18.00	0.00	NO	N	X	408982.80	3704242.00
516148		A02004029CDC	FREESCALE SEMICONDUCTOR INC	MONITOR	87.00	20.00	4.00	12/3/1986	12/18/1986	0.00	9.00	NO	A	X	409604.80	3705034.00
550597		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	7/17/1995		0.00	0.00	NO	N		409796.50	3704223.00
536578		A02004032BAB	FREESCALE SEMICONDUCTOR INC	MONITOR	232.00	95.00	4.00	9/4/1992	1/4/1993	0.00	0.00	NO	N	X	409600.80	3704832.00
552707		A01003002DBB	CIRCLE K CORP 2847,	MONITOR	0.00	0.00	0.00	10/18/1995		0.00	0.00	NO	N		405175.30	3702489.00
222435		A01004006BAA	FREESCALE SEMICONDUCTOR INC	MONITOR	146.00	145.00	8.00	6/24/2013	10/30/2013	67.00	0.00	NO		X	408182.60	3703248.00
594894		A02004031BAB	LEON MARX	MONITOR	44.00	44.00	2.00	10/3/2002	11/6/2002	36.00	0.00	NO	A	X	408003.30	3704874.00
547917		A02003036CCC	CIRCLE K CORP #15,	MONITOR	0.00	0.00	0.00	2/23/1995		0.00	0.00	NO	N		405984.30	3703488.00
207725		A01003001BAC	FREESCALE SEMICONDUCTOR INC	MONITOR	228.00	210.00	5.00	5/5/2005	7/26/2006	71.00	0.00	NO		X	406384.90	3703076.00
535975		A01003002DAB	FREESCALE SEMICONDUCTOR INC	MONITOR	374.00	183.00	4.00	7/9/1992	7/30/1992	0.00	0.00	NO	N	X	405578.40	3702484.00
521704		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	36.00	36.00	4.00	7/5/1988	7/13/1988	15.00	7.00	NO	A	X	410006.70	3704826.00
222437		A02004031DAC	FREESCALE SEMICONDUCTOR INC	MONITOR	94.00	94.00	4.00	6/24/2013		78.00	0.00	NO		X	408784.80	3703844.00
901310		A02004031DCC	EXXONMOBIL OIL CORP	MONITOR	80.00	80.00	5.00	11/17/2004		62.00	0.00	NO		X	408383.20	3703447.00
520860		A02004031DCC	EXXON MOBIL OIL CORPORATION	MONITOR	60.00	57.00	4.00	4/8/1988	4/20/1988	31.00	0.00	NO	A	X	408383.20	3703447.00
538527		A01004006BAA	ARCO PRODUCTS CO,	MONITOR	38.00	0.00	0.00	3/26/1993	4/15/1993	0.00	0.00	NO	N	X	408182.60	3703248.00
534435		A01003002CAD	ADEQ,	MONITOR	112.00	110.00	4.00	2/12/1992	2/14/1992	65.00	25.00	NO	X	X	404973.10	3702290.00
550290		A01003001BDC	CIRCLE K CORP,	MONITOR	0.00	0.00	0.00	6/21/1995		0.00	0.00	NO	N		406385.30	3702674.00
540961		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	31.00	11.00	4.00	10/18/1993	10/22/1993	15.00	0.00	NO	A	X	410006.70	3704826.00
551932		A02004032BDD	CIRCLE K CORP #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
551933		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
543208		A01003002DCC	KAIBAB INDUSTRIES,	MONITOR	0.00	0.00	0.00	4/12/1994		0.00	0.00	NO	N		405173.60	3701886.00
543209		A01003002DCC	KAIBAB INDUSTRIES,	MONITOR	0.00	0.00	0.00	4/12/1994		0.00	0.00	NO	N		405173.60	3701886.00
543759		A02004029DCC	CITY OF PHOENIX WATER SERVICES	MONITOR	0.00	0.00	0.00	5/12/1994		0.00	0.00	NO	N		410010.70	3705028.00
527195		A02004031ABB	EXXON CO,	MONITOR	40.00	40.00	4.00	2/28/1990	8/28/1990	25.00	0.00	NO	N	X	408399.40	3704861.00
205096		A02004031DCC	EXXON MOBILOIL	MONITOR	0.00	0.00	0.00	9/13/2004		0.00	0.00	NO			408383.20	3703447.00
555698		A02004031BBB	LEON MARX	MONITOR	45.00	44.00	4.00	3/15/1996	3/27/1996	19.00	0.00	NO	A	X	407607.10	3704886.00
538441		A02004032ABB	TEXACO ENVIRONMENTAL,	MONITOR	32.00	32.00	4.00	3/16/1993	3/23/1993	13.00	0.00	NO	N	X	410006.70	3704826.00
207020		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	46.00	40.00	20.00	3/9/2005		16.00	0.00	NO		X	409796.50	3704223.00
582596		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
543235		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	35.00	35.00	2.00	4/15/1994	4/26/1994	16.00	0.00	NO	A	X	409193.30	3704838.00
539437		A02004031ABB	EXXON MOBIL OIL CORPORATION	MONITOR	30.00	30.00	2.00	6/15/1993	8/2/1993	15.00	0.00	NO	A	X	408399.40	3704861.00
207723		A01003001BBA	FREESCALE SEMICONDUCTOR INC	MONITOR	263.00	258.00	4.00	5/5/2005	7/17/2005	82.00	0.00	NO		X	406184.30	3703282.00
520861		A02004031DCC	EXXON MOBIL OIL CORPORATION	MONITOR	65.00	57.00	4.00	4/8/1988	4/20/1988	32.00	0.00	NO	A	X	408383.20	3703447.00
531478		A01003002DDC	MOTOROLA INC,	MONITOR	396.00	396.00	5.00	4/5/1991	5/8/1991	0.00	13.00	NO	X	X	405576.70	3701880.00
521724		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	12.00	12.00	2.00	7/8/1988	7/21/1988	0.00	0.00	NO	A	X	410006.70	3704826.00
521518		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	31.00	31.00	4.00	6/21/1988	6/23/1988	26.00	0.00	NO	A	X	410006.70	3704826.00
552968		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	29.00	24.00	2.00	11/8/1995	11/29/1995	17.00	0.00	NO	A	X	410006.70	3704826.00
527871		A02004031DCC	EXXON MOBIL OIL CORPORATION	MONITOR	45.00	45.00	4.00	4/26/1990	10/8/1990	35.00	0.00	NO	A	X	408383.20	3703447.00
553708		A02004031BBA	LEON MARX	MONITOR	45.00	45.00	4.00	1/5/1996	2/2/1996	22.00	0.00	NO	A	X	407805.20	3704880.00
537461		A02004030DDD	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		408997.30	3705045.00
537460		A02004029DCD	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		410213.70	3705025.00
916842		A01003002DCC	FREESCALE SEMICONDUCTOR, INC.	MONITOR	0.00	0.00	0.00	4/29/2014		0.00	0.00	NO		X	405173.60	3701886.00

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
541601		A02004032BAA	TEXACO CORP	MONITOR	0.00	0.00	0.00	9/24/1997		0.00	0.00	NO	N		409803.70	3704829.00
548346		A02004032BDD	CIRCLE K CORP #2891,	MONITOR	45.00	14.00	4.00	7/21/1995	3/22/1995	31.00	0.00	NO	N		409796.50	3704223.00
537464		A02004029DCD	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		410213.70	3705025.00
552461		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
221399		A02004032BBB	CIRCLE K STORES INC.	MONITOR	45.00	45.00	2.00	3/16/2012		30.00	0.00	NO		X	409193.30	3704838.00
529188		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	36.00	10.00	4.00	8/16/1990	3/11/1991	23.00	0.00	NO	A	X	409803.70	3704829.00
537465		A02004030DDD	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		408997.30	3705045.00
513425		A02004029CCD	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	2/20/1986		0.00	0.00	NO	N		409401.80	3705037.00
540957		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	31.00	11.00	4.00	10/18/1993	10/23/1993	15.00	0.00	NO	N	X	409803.70	3704829.00
521843		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	37.00	35.00	6.00	7/21/1988	10/26/1988	20.00	0.00	NO	A	X	410006.70	3704826.00
552455		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
590508		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	0.00	0.00	0.00	1/11/2002		0.00	0.00	NO			408601.20	3705057.00
552972		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	25.00	20.00	2.00	11/8/1995	12/4/1995	17.00	0.00	NO	A	X	410006.70	3704826.00
582589		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
531598		A01003002CCD	DYNASTY EXPRESS CORP,	MONITOR	0.00	0.00	0.00	4/18/1991		0.00	0.00	NO	N		404569.00	3701894.00
534353		A01003002CAA	CITY OF PHOENIX	MONITOR	90.00	90.00	4.00	1/31/1992	3/5/1998	68.00	0.00	NO	A	X	404973.70	3702491.00
540255		A02004031BAB	ARCO PRODUCTS CO,	MONITOR	0.00	0.00	0.00	8/17/1993		0.00	0.00	NO	N		408003.30	3704874.00
547181		A01003001BDC	CIRCLE K CORP #1344,	MONITOR	90.00	40.00	4.00	12/29/1994	2/28/1995	61.00	0.00	NO	N	X	406385.30	3702674.00
519509		A02004031ABA	THOMAS MALL PRTSHP.,	MONITOR	24.00	24.00	2.00	10/29/1987	11/4/1987	17.00	0.00	NO	N	X	408597.50	3704855.00
700308		A01003002DDD		MONITOR	0.00	0.00	0.00	9/9/2002		0.00	0.00	NO			405778.30	3701878.00
482302		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	1/12/2005		0.00	0.00	NO	A		410006.70	3704826.00
207681		A02004029DDB	FREESCALE SEMICONDUCTOR INC	MONITOR	170.00	165.00	5.00	5/5/2005	8/17/2005	0.00	0.00	NO		X	410420.60	3705223.00
524751		A02004032ABB	GROUNDWATER TECH INC,	MONITOR	0.00	0.00	0.00	6/1/1989		0.00	0.00	NO	N		410006.70	3704826.00
552458		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
538526		A01004006BAA	ARCO PRODUCTS CO,	MONITOR	38.00	0.00	0.00	3/26/1993	4/14/1993	0.00	0.00	NO	N	X	408182.60	3703248.00
599175		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	8.00	6/26/2003	10/31/2003	23.00	0.00	NO	A	X	410006.70	3704826.00
543764		A02004029DCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	5/12/1994		0.00	0.00	NO	N		410010.70	3705028.00
545278		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/26/1994	9/1/1994	22.00	0.00	NO	A	X	409803.70	3704829.00
221398		A02004032BBB	CIRCLE K STORES INC.	MONITOR	45.00	45.00	2.00	3/16/2012		30.00	0.00	NO		X	409193.30	3704838.00
546134		A02003036CAA	CONOCO PHILLIPS COMPANY	MONITOR	70.00	70.00	4.00	10/27/1994	3/7/1995	40.00	0.00	NO	A	X	406592.40	3704088.00
538524		A01004006BAA	ARCO PRODUCTS CO,	MONITOR	38.00	0.00	0.00	3/26/1993	4/14/1993	0.00	0.00	NO	N	X	408182.60	3703248.00
578847		A02003036ACC	KAREN OWENS	MONITOR	60.00	60.00	4.00	12/29/1999	3/16/2000	40.00	0.00	NO	A	X	406795.70	3704288.00
530527		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	89.00	87.00	4.00	1/28/1991	2/15/1991	20.00	9.00	NO	X	X	409193.30	3704838.00
548180		A02003036DAB	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	3/16/1995		0.00	0.00	NO	N		407194.90	3704077.00
552709		A01003002DBB	CIRCLE K CORP 2847,	MONITOR	0.00	0.00	0.00	10/18/1995		0.00	0.00	NO	N		405175.30	3702489.00
533584		A02004031ABB	EXXON MOBIL OIL CORP	MONITOR	30.00	10.00	2.00	10/30/1991	1/21/1992	19.00	0.00	NO	A	X	408399.40	3704861.00
547489		A02003036CCC	MOBIL OIL CORP,	MONITOR	0.00	0.00	0.00	1/27/1995		0.00	0.00	NO	N		405984.30	3703488.00
511214		A02004029DAC	FREESCALE SEMICONDUCTOR INC	MONITOR	88.00	78.00	6.00	5/22/1985	5/25/1985	0.00	9.00	NO	A	X	410424.50	3705424.00
547918		A02003036CCC	CIRCLE K CORP #15,	MONITOR	0.00	0.00	0.00	2/23/1995		0.00	0.00	NO	N		405984.30	3703488.00
222440		A01004006ABB	FREESCALE SEMICONDUCTOR INC	MONITOR	145.00	145.00	4.00	6/24/2013		78.00	0.00	NO		X	408381.10	3703246.00
594893		A02004031BAB	LEON MARX	MONITOR	46.00	46.00	2.00	10/3/2002	11/4/2002	36.00	0.00	NO	A	X	408003.30	3704874.00
544852		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/6/1994	9/7/1994	22.00	0.00	NO	A	X	410006.70	3704826.00
553711		A02004031BBB	LEON MARX	MONITOR	45.00	44.00	4.00	1/5/1996	2/6/1996	20.00	0.00	NO	A	X	407607.10	3704886.00
525690		A02004032BAB	FREESCALE SEMICONDUCTOR INC	MONITOR	75.00	10.00	8.00	8/23/1989	9/21/1989	15.00	9.00	NO	X	X	409600.80	3704832.00
519507		A02004031ABB	THOMAS MALL PRTSHP.,	MONITOR	19.00	19.00	2.00	10/29/1987	11/4/1987	13.00	0.00	NO	N	X	408399.40	3704861.00
543763		A02004029DCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	5/12/1994		0.00	0.00	NO	N		410010.70	3705028.00
555920		A02004031CDD	UNOCAL CORPORATION	MONITOR	0.00	0.00	0.00	4/1/1996		0.00	0.00	NO	N		408184.50	3703450.00
539672		A01003002DDD	BP WEST COAST PRODUCTS	MONITOR	80.00	80.00	4.00	6/25/1993	7/1/1993	47.00	0.00	NO	A	X	405778.30	3701878.00
482235		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	9/9/2002		0.00	0.00	NO	A		410006.70	3704826.00
531704		A02004032ABB	TEXACO REFINING &,	MONITOR	0.00	0.00	0.00	5/3/1991		0.00	0.00	NO	N		410006.70	3704826.00
203978		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	40.00	40.00	4.00	6/9/2004		20.00	0.00	NO		X	409796.50	3704223.00
576542		A02004031BBB	WASH DEPOT XII INC	MONITOR	40.00	40.00	2.00	7/30/1999	8/19/1999	30.00	0.00	NO	A	X	407607.10	3704886.00
582590		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	410006.70	3704826.00
551937		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
516147		A02004032BBD	FREESCALE SEMICONDUCTOR INC	MONITOR	83.00	20.00	4.00	12/3/1986	12/19/1986	0.00	9.00	NO	X	X	409395.50	3704634.00
511216		A02004029DAD	FREESCALE SEMICONDUCTOR INC	MONITOR	45.00	45.00	5.00	5/22/1985	5/30/1985	0.00	9.00	NO	A	X	410627.70	3705421.00
590507		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	0.00	0.00	0.00	1/11/2002		0.00	0.00	NO			408601.20	3705057.00
531600		A01003002CCD	DYNASTY EXPRESS CORP,	MONITOR	0.00	0.00	0.00	4/15/1991		0.00	0.00	NO	N		404569.00	3701894.00
547177		A01003002DBB	CIRCLE K CORP #2847,	MONITOR	80.00	40.00	4.00	12/29/1994	4/18/1995	60.00	0.00	NO	N	X	405175.30	3702489.00
521517		A02004032ABB	GROUNDWATER TECH INC,	MONITOR	31.00	31.00	4.00	6/21/1988	6/22/1988	26.00	0.00	NO	N	X	410006.70	3704826.00

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
552454		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
553710		A02004031BBA	LEON MARX	MONITOR	45.00	44.00	4.00	1/5/1996	2/5/1996	20.00	0.00	NO	A	X	407805.20	3704880.00
555701		A02004031BBB	MARX, LEON,	MONITOR	45.00	0.00	4.00	3/15/1996	6/25/1996	22.00	0.00	NO	A	X	407607.10	3704886.00
537462		A02004031AAA	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	12/3/1992		0.00	0.00	NO	N		408992.60	3704844.00
521723		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	12.00	12.00	2.00	7/8/1988	7/21/1988	0.00	0.00	NO	A	X	410006.70	3704826.00
530432		A02004030DDD	MARICOPA CO FLOOD	MONITOR	25.00	0.00	0.00	1/10/1991	1/23/1991	13.00	0.00	NO	N	X	408997.30	3705045.00
552706		A01003002DBB	CIRCLE K CORP 2847,	MONITOR	90.00	40.00	4.00	10/18/1995	2/3/1996	60.00	0.00	NO	N	X	405175.30	3702489.00
540959		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	31.00	11.00	4.00	10/18/1993	10/21/1993	15.00	0.00	NO	A	X	410006.70	3704826.00
547178		A01003002DBB	CIRCLE K CORP #2847,	MONITOR	80.00	40.00	4.00	12/29/1994	4/19/1995	60.00	0.00	NO	N	X	405175.30	3702489.00
543972		A02004029DCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	6/16/1994		0.00	0.00	NO	N		410010.70	3705028.00
553707		A02004031BBA	LEON MARX	MONITOR	45.00	44.00	4.00	1/5/1996	2/1/1996	20.00	0.00	NO	A	X	407805.20	3704880.00
530536		A02004031ADA	MARICOPA CO FLOOD	MONITOR	27.00	25.00	2.00	1/10/1991	1/29/1991	19.00	0.00	NO	N	X	408985.90	3704443.00
550114		A02003036ACC	KAREN A OWENS	MONITOR	57.00	27.00	4.00	6/14/1995	6/28/1995	28.00	0.00	NO	A	X	406795.70	3704288.00
511097		A02004029DAC	FREESCALE SEMICONDUCTOR INC	MONITOR	45.00	24.00	6.00	5/10/1985	5/28/1985	0.00	9.00	NO	A	X	410424.50	3705424.00
519511		A02004031ABC	THOMAS MALL PRTSHP.,	MONITOR	19.00	19.00	2.00	10/29/1987	11/4/1987	11.00	0.00	NO	N	X	408397.10	3704660.00
546135		A02003036CAA	CONOCO PHILLIPS COMPANY	MONITOR	70.00	70.00	4.00	10/27/1994	3/7/1995	40.00	0.00	NO	A	X	406592.40	3704088.00
543206		A01003002DCC	KAIBAB INDUSTRIES,	MONITOR	0.00	0.00	0.00	4/12/1994		0.00	0.00	NO	N		405173.60	3701886.00
527340		A02004029DAD	MOTOROLA INC,	MONITOR	16.00	0.00	7.00	3/8/1990		0.00	0.00	NO	N	N	410627.70	3705421.00
552971		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	27.00	22.00	2.00	11/8/1995	12/1/1995	18.00	0.00	NO	A	X	410006.70	3704826.00
548347		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	41.00	16.00	4.00	7/21/1995	3/22/1995	31.00	0.00	NO	N	X	409796.50	3704223.00
553709		A02004031BBB	LEON MARX	MONITOR	45.00	44.00	4.00	1/5/1996	1/31/1996	20.00	0.00	NO	A	X	407607.10	3704886.00
207726		A02003036CDA	FREESCALE SEMICONDUCTOR INC	MONITOR	158.00	158.00	5.00	5/5/2005		75.00	0.00	NO		X	406587.80	3703680.00
546138		A02003036CAA	CIRCLE K CORP,	MONITOR	0.00	0.00	0.00	10/27/1994		0.00	0.00	NO	N		406592.40	3704088.00
538306		A02004029DCA	FREESCALE SEMICONDUCTOR INC	MONITOR	326.00	320.00	4.00	3/5/1993	6/3/1993	13.00	0.00	NO	N	X	410217.70	3705226.00
559253		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	35.00	5.00	2.00	8/13/1996	2/21/1997	15.00	0.00	NO	N	X	409796.50	3704223.00
553391		A01003001BDC	CIRCLE K STORES INC,	MONITOR	0.00	0.00	0.00	12/8/1995		0.00	0.00	NO	N		406385.30	3702674.00
558260		A02003036CAA	CIRCLE K STORES INC,	MONITOR	0.00	0.00	0.00	6/6/1996		0.00	0.00	NO	N		406592.40	3704088.00
222436		A01004006ABB	FREESCALE SEMICONDUCTOR INC	MONITOR	165.00	160.00	8.00	6/24/2013	10/28/2013	77.00	0.00	NO		X	408381.10	3703246.00
701160		A02004032ABB	TEXACO CORP	MONITOR	0.00	0.00	0.00	1/12/2005	1/12/2005	0.00	0.00	NO			410006.70	3704826.00
540962		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	31.00	11.00	4.00	10/18/1993	10/22/1993	15.00	0.00	NO	A	X	409803.70	3704829.00
548153		A01003001BBC	CIRCLE K CORP #1344,	MONITOR	90.00	0.00	4.00	3/6/1995		0.00	0.00	NO	N		405983.20	3703084.00
538067		A02004031DCC	EXXON MOBIL CORPORATION	MONITOR	67.00	35.00	4.00	2/8/1993	4/8/1993	40.00	0.00	NO	N	X	408383.20	3703447.00
579848		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	50.00	10.00	4.00	2/25/2000	3/16/2000	20.00	0.00	NO		X	408601.20	3705057.00
213310		A02004031DAD	FREESCALE SEMICONDUCTOR INC	MONITOR	195.00	195.00	4.00	8/29/2006		38.00	0.00	NO		X	408980.20	3703840.00
527872		A01004006ABB	EXXON MOBIL OIL CORPORATION	MONITOR	65.00	65.00	4.00	2/8/1993	3/1/1993	45.00	0.00	NO	A	X	408381.10	3703246.00
555919		A02004031CDD	UNOCAL CORP,	MONITOR	0.00	0.00	0.00	4/1/1996		0.00	0.00	NO	N		408184.50	3703450.00
538442		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	31.00	31.00	4.00	3/16/1993	3/24/1993	13.00	0.00	NO	A	X	409803.70	3704829.00
546136		A02003036CAA	CONOCO PHILLIPS COMPANY	MONITOR	70.00	70.00	4.00	10/27/1994	3/8/1995	40.00	0.00	NO	A	X	406592.40	3704088.00
551940		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
582594		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	7/27/2000	7/1/2000	0.00	0.00	NO	A	X	409803.70	3704829.00
594896		A02004031BAB	LEON MARX	MONITOR	46.00	46.00	2.00	10/3/2002	11/5/2002	36.00	0.00	NO	A	X	408003.30	3704874.00
221397		A02004032BBB	CIRCLE K STORES INC.	MONITOR	45.00	45.00	2.00	3/16/2012		30.00	0.00	NO		X	409193.30	3704838.00
543971		A02004029CCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	6/16/1994		0.00	0.00	NO	N		409198.40	3705040.00
550598		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	7/17/1995		0.00	0.00	NO	N		409796.50	3704223.00
527869		A01004006BAA	EXXON MOBIL OIL CORPORATION	MONITOR	65.00	65.00	2.00	2/3/1993	3/10/1993	45.00	0.00	NO	A	X	408182.60	3703248.00
547708		A01003002DDB	WILSON SCHOOL DIST 7,	MONITOR	65.00	45.00	4.00	2/10/1995	2/20/1995	51.00	0.00	NO	N	X	405577.30	3702082.00
555700		A02004031BBB	MARX, LEON,	MONITOR	45.00	45.00	4.00	3/15/1996	6/26/1996	22.00	0.00	NO	A	X	407607.10	3704886.00
531113		A01004006ABA	FREESCALE SEMICONDUCTOR INC	MONITOR	265.00	155.00	5.00	2/28/1991	6/7/1991	0.00	0.00	NO	N	X	408579.70	3703243.00
547176		A01003002DBB	CIRCLE K CORP #2847,	MONITOR	80.00	40.00	0.00	12/29/1994	4/17/1995	0.00	0.00	NO	N	X	405175.30	3702489.00
543205		A01003002DCC	KAIBAB INDUSTRIES,	MONITOR	0.00	0.00	0.00	4/12/1994		0.00	0.00	NO	N		405173.60	3701886.00
546137		A02003036CAA	CONOCO PHILLIPS COMPANY	MONITOR	70.00	70.00	4.00	10/27/1994	3/8/1995	40.00	0.00	NO	A	X	406592.40	3704088.00
552462		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
550596		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	0.00	0.00	0.00	7/17/1995		0.00	0.00	NO	N		409796.50	3704223.00
552463		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
511215		A02004029DAC	FREESCALE SEMICONDUCTOR INC	MONITOR	45.00	21.00	7.00	5/22/1985	5/29/1985	0.00	9.00	NO	A	X	410424.50	3705424.00
574238		A02003036CCC	CONOCO PHILLIPS COMPANY	MONITOR	0.00	0.00	0.00	4/1/1999		0.00	0.00	NO			405984.30	3703488.00
916841		A01003001CBB	FREESCALE SEMICONDUCTOR, INC.	MONITOR	115.00	115.00	4.00	4/29/2014		90.00	0.00	NO		X	405981.70	3702479.00
559125		A02003036CAA	CONOCO PHILLIPS COMPANY	MONITOR	70.00	69.00	2.00	7/30/1996	8/27/1996	43.00	0.00	NO	A	X	406592.40	3704088.00
547185		A01003001BDC	CIRCLE K CORP #1344,	MONITOR	0.00	0.00	0.00	12/29/1994		0.00	0.00	NO	N		406385.30	3702674.00
222439		A01004006ABB	FREESCALE SEMICONDUCTOR INC	MONITOR	250.00	245.00	4.00	6/24/2013	10/23/2013	77.00	0.00	NO		X	408381.10	3703246.00

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
541502		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	105.00	105.00	2.00	11/16/1993	2/22/1994	20.00	0.00	NO	A	X	409193.30	3704838.00
525692		A02004032BAB	FREESCALE SEMICONDUCTOR INC	MONITOR	80.00	80.00	5.00	8/23/1989	8/31/1989	15.00	0.00	NO	N	X	409600.80	3704832.00
544851		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/26/1994	9/6/1994	22.00	0.00	NO	A	X	409803.70	3704829.00
207021		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	46.00	41.00	20.00	3/9/2005		16.00	0.00	NO		X	409796.50	3704223.00
548535		A01003002DDB	WILSON SCH DIST #7,	MONITOR	70.00	45.00	4.00	3/22/1995	4/7/1995	55.00	0.00	NO	N	X	405577.30	3702082.00
543234		A02004032BBB	FREESCALE SEMICONDUCTOR INC	MONITOR	105.00	105.00	4.00	4/12/1994	5/2/1994	16.00	0.00	NO	A	X	409193.30	3704838.00
547410		A01004006ABB	ASHFORD PHOENIX LP	MONITOR	65.00	65.00	2.00	1/17/1995	1/31/1995	50.00	0.00	NO	A	X	408381.10	3703246.00
221554		A01003002ACC	FREESCALE SEMICONDUCTOR INC	MONITOR	108.00	108.00	0.00	5/8/2012	6/25/2012	79.00	0.00	NO		X	405175.80	3702690.00
543762		A02004029DCC	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	5/12/1994		0.00	0.00	NO	N		410010.70	3705028.00
219307		A01003001BCA	FREESCALE SEMICONDUCTOR INC	MONITOR	185.00	180.00	6.00	9/1/2009	11/5/2009	85.00	0.00	NO		X	406184.20	3702879.00
555697		A02004031BBB	LEON MARX	MONITOR	45.00	44.00	4.00	3/15/1996	3/29/1996	19.00	0.00	NO	A	X	407607.10	3704886.00
552969		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	32.00	25.00	2.00	11/8/1995	11/30/1995	22.00	0.00	NO	A	X	410006.70	3704826.00
574237		A02003036CCC	CONOCO PHILLIPS COMPANY	MONITOR	0.00	0.00	0.00	4/1/1999		0.00	0.00	NO			405984.30	3703488.00
558261		A02003036CAA	CIRCLE K STORES INC,	MONITOR	0.00	0.00	0.00	6/6/1996		0.00	0.00	NO	N		406592.40	3704088.00
582586		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	0.00	0.00	0.00	7/27/2000		0.00	0.00	NO	A		409803.70	3704829.00
581192		A02004031BAB	BP WEST COAST PRODUCTS	MONITOR	40.00	40.00	4.00	5/11/2000	6/29/2000	0.00	0.00	NO		X	408003.30	3704874.00
551939		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
222443		A01004006BAD	FREESCALE SEMICONDUCTOR INC	MONITOR	103.00	103.00	4.00	6/24/2013		80.00	0.00	NO		X	408182.60	3703047.00
547184		A01003001BDC	CIRCLE K CORP #1344,	MONITOR	0.00	0.00	0.00	12/29/1994		0.00	0.00	NO	N		406385.30	3702674.00
482303		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	1/1/1994		0.00	0.00	NO	A		410006.70	3704826.00
582587		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	0.00	0.00	0.00	7/27/2000		0.00	0.00	NO	A		409803.70	3704829.00
548534		A01003002DDB	WILSON SCH DIST #7,	MONITOR	70.00	45.00	4.00	3/22/1995	4/6/1995	55.00	0.00	NO	N	X	405577.30	3702082.00
552459		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
525957		A02004031AAA	MOTOROLA INC,	MONITOR	0.00	0.00	0.00	9/26/1989		0.00	0.00	NO			408992.60	3704844.00
533583		A02004031ABB	EXXON CO,	MONITOR	0.00	0.00	0.00	10/30/1991		0.00	0.00	NO	N		408399.40	3704861.00
581470		A02003036AAA	7-ELEVEN INC	MONITOR	0.00	0.00	0.00	5/31/2000		0.00	0.00	NO			407407.30	3704891.00
534354		A01003002CAA	PHOENIX, CITY OF,	MONITOR	0.00	0.00	0.00	2/5/1992		0.00	0.00	NO	N		404973.70	3702491.00
551938		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
531215		A02004032BAB	FREESCALE SEMICONDUCTOR INC	MONITOR	83.00	83.00	4.00	3/11/1991	4/3/1991	20.00	9.00	NO	X	X	409600.80	3704832.00
578848		A02003036ACC	KAREN OWENS	MONITOR	60.00	60.00	4.00	12/29/1999	3/17/2000	40.00	0.00	NO	A	X	406795.70	3704288.00
548152		A01003001BBC	CIRCLE K CORP #1344,	MONITOR	90.00	0.00	4.00	3/6/1995		0.00	0.00	NO	N		405983.20	3703084.00
207018		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	46.00	41.00	20.00	3/9/2005		16.00	0.00	NO		X	409796.50	3704223.00
594895		A02004031BAB	LEON MARX	MONITOR	46.00	46.00	2.00	10/3/2002	11/7/2002	36.00	0.00	NO	A	X	408003.30	3704874.00
581465		A02003036AAA	7-ELEVEN INC	MONITOR	0.00	0.00	0.00	5/31/2000		0.00	0.00	NO			407407.30	3704891.00
573226		A01003002DDB	WILSON SCHOOL DISTRICT	MONITOR	75.00	75.00	4.00	2/8/1999	3/11/1999	62.00	0.00	NO		X	405577.30	3702082.00
537131		A01003002DAB		MONITOR	160.00	150.00	18.00	10/22/1992	1/18/1993	59.00	0.00	YES	N	X	405578.40	3702484.00
552970		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	32.00	25.00	2.00	11/8/1995	11/30/1995	22.00	0.00	NO	A	X	410006.70	3704826.00
550730		A02004031BDA	FREESCALE SEMICONDUCTOR INC	MONITOR	170.00	161.00	4.00	7/14/1995	7/28/1995	35.00	0.00	NO	N	X	408196.50	3704463.00
540956		A02004032BAA	TEXACO CORP,	MONITOR	31.00	11.00	4.00	10/18/1993	10/23/1993	15.00	0.00	NO	N	X	409803.70	3704829.00
552457		A02004032BDD	CIRCLE K STORE,	MONITOR	0.00	0.00	0.00	10/4/1995		0.00	0.00	NO	N		409796.50	3704223.00
519508		A02004031ABD	THOMAS MALL PRTSHP,	MONITOR	29.00	29.00	2.00	10/29/1987	11/4/1987	23.00	0.00	NO	N	X	408595.30	3704654.00
597009		A02004031BAB	BP WEST COAST PRODUCTS	MONITOR	45.00	45.00	4.00	2/5/2003	3/3/2003	30.00	0.00	NO		X	408003.30	3704874.00
548374		A02004031BAB	BP WEST COAST PRODUCTS	MONITOR	32.00	12.00	4.00	3/13/1995	3/27/1995	16.00	0.00	NO	N	X	408003.30	3704874.00
574236		A02003036CCC	ONOCOPHILLIPS CO/TOSCO CORP/CIRCLE	MONITOR	110.00	110.00	4.00	4/1/1999	4/28/1999	85.00	0.00	NO	A	X	405984.30	3703488.00
207728		A02004031BDC	FREESCALE SEMICONDUCTOR INC	MONITOR	120.00	100.00	5.00	5/5/2005		65.00	0.00	NO		X	407995.80	3704265.00
533585		A02004031ABB	EXXON MOBIL OIL CORP	MONITOR	30.00	10.00	2.00	10/30/1991	1/21/1992	19.00	0.00	NO	A	X	408399.40	3704861.00
542314		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	25.00	0.00	2.00	2/4/1994	2/9/1994	14.00	0.00	NO	A	X	410006.70	3704826.00
525691		A02004032BAB	FREESCALE SEMICONDUCTOR INC	MONITOR	68.00	58.00	2.00	8/23/1989	9/8/1989	15.00	0.00	NO	N	X	409600.80	3704832.00
542655		A01003002DDD	BP WEST COAST PRODUCTS	MONITOR	82.00	37.00	4.00	3/7/1994	10/25/1994	55.00	0.00	NO	A	X	405778.30	3701878.00
576544		A02004031BBA	WASH DEPOT HOLDINGS INC	MONITOR	0.00	0.00	0.00	7/30/1999		0.00	0.00	NO			407805.20	3704880.00
541600		A02004032BAA	TEXACO CORP,	MONITOR	0.00	0.00	0.00	9/24/1997		0.00	0.00	NO	N		409803.70	3704829.00
213311		A02004031DAD	FREESCALE SEMICONDUCTOR INC	MONITOR	100.00	95.00	4.00	8/29/2006		38.00	0.00	NO		X	408980.20	3703840.00
581467		A02003036AAA	7-ELEVEN INC	MONITOR	0.00	0.00	0.00	5/31/2000		0.00	0.00	NO			407407.30	3704891.00
207016		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	46.00	40.00	20.00	3/9/2005		16.00	0.00	NO		X	409796.50	3704223.00
521516		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	30.00	30.00	4.00	6/21/1988	6/22/1988	20.00	0.00	NO	A	X	410006.70	3704826.00
573547		A02003036AAA	SOUTHLAND CORPORATION	MONITOR	51.00	50.00	4.00	3/1/1999	3/29/1999	39.00	0.00	NO		X	407407.30	3704891.00
548376		A02004031BAB	BP WEST COAST PRODUCTS	MONITOR	30.00	15.00	7.00	3/13/1995	4/21/1995	21.00	0.00	NO	N	X	408003.30	3704874.00
551935		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
550595		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	7/17/1995		0.00	0.00	NO	N		409796.50	3704223.00
222438		A01004006BAA	FREESCALE SEMICONDUCTOR INC	MONITOR	143.00	143.00	4.00	6/24/2013		80.00	0.00	NO		X	408182.60	3703248.00

Table 4

ADWR Registered Wells - Monitor Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

REGISTRY_ID	GWSI SITE ID	CADASTRAL	OWNER NAME	WELL TYPE GROUP	WELL DEPTH (feet)	CASING DEPTH (feet)	CASING DIAMETER (inches)	APPLICATION	INSTALLED	WATER LEVEL (feet bgs)	PUMP RATE	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS
547180		A01003002DBB	CIRCLE K CORP #2847,	MONITOR	0.00	0.00	0.00	12/29/1994		0.00	0.00	NO	N		405175.30	3702489.00
527870		A02004031CDD	EXXON MOBIL OIL CORPORATION	MONITOR	45.00	45.00	4.00	4/26/1990	10/9/1990	35.00	0.00	NO	A	X	408184.50	3703450.00
207727		A01003001BAD	FREESCALE SEMICONDUCTOR INC	MONITOR	280.00	200.00	5.00	5/5/2005		75.00	0.00	NO		X	406585.70	3703073.00
551934		A02004032BDD	CIRCLE K STORE #2891,	MONITOR	0.00	0.00	0.00	9/1/1995		0.00	0.00	NO	N		409796.50	3704223.00
521842		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	36.00	35.00	6.00	7/21/1988	10/25/1988	20.00	0.00	NO	A	X	410006.70	3704826.00
590506		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	0.00	0.00	0.00	1/11/2002		0.00	0.00	NO			408601.20	3705057.00
916843		A01003002DCC	FREESCALE SEMICONDUCTOR, INC.	MONITOR	84.00	0.00	0.00	4/29/2014	7/23/2014	79.00	0.00	NO		X	405173.60	3701886.00
595990		A02003036ACC	KAREN A OWENS	MONITOR	64.00	64.00	4.00	11/20/2002		45.00	0.00	NO		X	406795.70	3704288.00
547913		A02003036CCC	ONOCOPHILLIPS CO/TOSCO CORP/CIRCLE	MONITOR	90.00	45.00	4.00	2/23/1995	5/3/1995	70.00	0.00	NO	A	X	405984.30	3703488.00
548344		A02004032BDD	CIRCLE K CORP #2891,	MONITOR	43.00	16.00	4.00	7/21/1995	3/21/1995	16.00	0.00	NO	N		409796.50	3704223.00
482233		A02004032ABB	SHELL OIL PRODUCTS US	MONITOR	35.00	35.00	2.00	9/9/2002		0.00	0.00	NO	A		410006.70	3704826.00
581468		A02003036AAA	7-ELEVEN INC	MONITOR	0.00	0.00	0.00	5/31/2000		0.00	0.00	NO			407407.30	3704891.00
534223		A01003002DDC	ADEQ,	MONITOR	110.00	110.00	4.00	1/23/1992	2/10/1992	68.00	25.00	NO	X	X	405576.70	3701880.00
524753		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	40.00	35.00	4.00	6/1/1989	2/6/1990	17.00	0.00	NO	A	X	409803.70	3704829.00
579847		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	50.00	10.00	4.00	2/25/2000	3/15/2000	20.00	0.00	NO		X	408601.20	3705057.00
555169		A02004029DDD	ADAMS,,K	MONITOR	34.00	33.00	2.00	2/8/1996	3/4/1996	0.00	0.00	NO	N	X	410619.50	3705019.00
571845		A01004006BAA	ARCO PRODUCTS COMPANY	MONITOR	0.00	0.00	0.00	10/29/1998		0.00	0.00	NO			408182.60	3703248.00
530431		A02004030DDA	MARICOPA CO FLOOD	MONITOR	27.00	25.00	2.00	1/10/1991	1/28/1991	14.00	0.00	NO	N	X	409001.60	3705246.00
570408		A02004031BAA	BP WEST COAST PRODUCTS	MONITOR	33.00	12.00	4.00	8/21/1998	11/3/1998	23.00	0.00	NO		X	408201.30	3704868.00
555699		A02004031BBA	MARX, LEON,	MONITOR	45.00	45.00	4.00	3/15/1996	6/27/1996	22.00	0.00	NO	A	X	407805.20	3704880.00
579845		A02004030DCD	CHEVRON PRODUCTS COMPANY	MONITOR	50.00	10.00	4.00	2/25/2000	3/14/2000	20.00	0.00	NO		X	408601.20	3705057.00
545277		A02004032BAA	SHELL OIL PRODUCTS US	MONITOR	32.00	32.00	4.00	8/26/1994	8/31/1994	23.00	0.00	NO	A	X	409803.70	3704829.00
548375		A02004031BAB	BP WEST COAST PRODUCTS	MONITOR	30.00	10.00	4.00	3/13/1995	3/28/1995	16.00	0.00	NO	N	X	408003.30	3704874.00
208759		A01004006ABB	FREESCALE SEMICONDUCTOR INC	MONITOR	400.00	160.00	2.00	8/2/2005	3/10/2006	69.00	0.00	NO		X	408381.10	3703246.00
550731		A02004031BDD	FREESCALE SEMICONDUCTOR INC	MONITOR	100.00	95.00	4.00	7/14/1995	7/21/1995	25.00	13.00	NO	X	X	408194.20	3704260.00
514887		A02004031CDC	FREESCALE SEMICONDUCTOR INC	MONITOR	155.00	140.00	6.00	7/15/1986	7/21/1986	37.00	0.00	NO	N	X	407985.80	3703452.00
547915		A02003036CCC	ONOCOPHILLIPS CO/TOSCO CORP/CIRCLE	MONITOR	90.00	37.00	10.00	2/23/1995	5/5/1995	70.00	0.00	NO	A	X	405984.30	3703488.00
559252		A02004032BDD	CONOCO PHILLIPS COMPANY	MONITOR	35.00	5.00	2.00	8/13/1996	2/21/1997	15.00	0.00	NO	N	X	409796.50	3704223.00
521998		A02004029CCD	PHOENIX, CITY OF,	MONITOR	24.00	13.00	2.00	8/5/1988	8/16/1988	15.00	0.00	NO	N	X	409401.80	3705037.00
548179		A02004031BCA	FREESCALE SEMICONDUCTOR INC	MONITOR	163.00	135.00	5.00	3/16/1995	4/21/1995	20.00	13.00	NO	X	X	407800.00	3704473.00

NOTES:
bgs - below ground surface

Source: Arizona Department of Water Resources (ADWR) 2015. ADWR online database information.

Table 5

List of Parties with Irrigation Grandfathered Rights (IGR's) and Type 1 Non-IGR's
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site

RIGHT NO	OWNER	RIGHT LOCATION	FILE STATUS	RIGHT TYPE	CRTP CODE	IRRIGATED ACRES
58-107531.0001	TAMAROFF TRUST	A-1.0-3.0 01DD	INACTIVE - DEVELOPED	IRRIGATION USE	J	19.46
58-107531.0001	SUNBELT HOLDINGS, INC	A-1.0-3.0 01DD	INACTIVE - DEVELOPED	IRRIGATION USE	J	19.46
58-107531.0000	RAMADA INC.	A-1.0-3.0 01D	INACTIVE - FULL CONVEYANCE	IRRIGATION USE	J	19.46
58-107531.0000	JOHN W GRAHAM	A-1.0-3.0 01D	INACTIVE - FULL CONVEYANCE	IRRIGATION USE	J	19.46
58-107167.0000	STATE OF ARIZONA	A-1.0-3.0 01H	INACTIVE - FULL CONVEYANCE	IRRIGATION USE	J	166.2
58-107167.0000	STATE OF ARIZONA	A-1.0-3.0 01H	INACTIVE - FULL CONVEYANCE	IRRIGATION USE	J	166.2
58-107167.0001	STATE OF ARIZONA	A-1.0-3.0 01H	INACTIVE - EXTINGUISHED/ NOT PLEDGED	IRRIGATION USE	J	166.2
58-107167.0001	STATE OF ARIZONA	A-1.0-3.0 01H	INACTIVE - EXTINGUISHED/ NOT PLEDGED	IRRIGATION USE	J	166.2
58-113292.0000	BAKER JAMES R	A-2.0-3.0 25AD	EXEMPT - SMALL	IRRIGATION USE	J	9.68
58-113292.0000	BAKER COLLETTE	A-2.0-3.0 25AD	EXEMPT - SMALL	IRRIGATION USE	J	9.68
58-114440.0000	STATE OF ARIZONA	A-1.0-4.0 06ACD	INACTIVE - DEVELOPED	IRRIGATION USE	J	4.99
58-100948.0000	BERTINO ELSIE C	A-1.0-4.0 06BC	INACTIVE - PARTIAL CONVEYANCE	IRRIGATION USE	J	12.07
58-102093.0000	BERTINO F JR	A-1.0-4.0 06BDD	EXEMPT - SMALL	IRRIGATION USE	J	4.29
58-114439.0000	ST OF AZ DEPT OF TRANSPORTATION	A-1.0-4.0 06BD	INACTIVE - DEVELOPED	IRRIGATION USE	J	8.63
58-100948.0000	BERTINO ELSIE C	A-1.0-4.0 06BD	INACTIVE - PARTIAL CONVEYANCE	IRRIGATION USE	J	12.07
58-100948.0001	BERTINO, ELSIE C, TRUSTEE	A-1.0-4.0 06BG	EXEMPT - SMALL	IRRIGATION USE	J	8.59
58-100948.0002	ARIZONA DEPT OF TRANSPORTATION	A-1.0-4.0 06BG	INACTIVE - DEVELOPED	IRRIGATION USE	J	3.12
58-114446.0000	STATE OF ARIZONA	A-1.0-4.0 06B	INACTIVE - DEVELOPED	IRRIGATION USE	J	11.45
58-114447.0000	STATE OF ARIZONA	A-1.0-4.0 06CAE	INACTIVE - DEVELOPED	IRRIGATION USE	J	8.74
58-100872.0000	CAMELHEAD EQUITIES LTD. PTSP.	A-1.0-4.0 06CA	ACTIVE - EXEMPT TO FILE	IRRIGATION USE	J	3.38
58-100789.0001	THOMAS 48 JOINT VENTURE	A-2.0-4.0 29CCC	ACTIVE - EXEMPT TO FILE	IRRIGATION USE	J	3.60
58-115064.0000	CREIGHTON UNITED METHOD CHURCH	A-2.0-4.0 29CCC	EXEMPT - SMALL	IRRIGATION USE	J	2.21
58-100789.0000	MILLER, NINA CLARK	A-2.0-4.0 29CC	INACTIVE - FULL CONVEYANCE	IRRIGATION USE	J	3.60
58-101900.0000	KING ELEANOR B	A-2.0-4.0 29CDB	EXEMPT - SMALL	IRRIGATION USE	J	4.75
58-101900.0000	KING OLIVER S	A-2.0-4.0 29CDB	EXEMPT - SMALL	IRRIGATION USE	J	4.75
58-101695.0000	COOPER GRACE C	A-2.0-4.0 29CDE	EXEMPT - SMALL	IRRIGATION USE	J	2.37
58-105984.0000	PHOENIX NEWSPAPERS INC.	A-2.0-4.0 30AAH	INACTIVE - DEVELOPED	IRRIGATION USE	J	18.74
58-105984.0000	PHOENIX NEWSPAPERS INC	A-2.0-4.0 30AAH	INACTIVE - DEVELOPED	IRRIGATION USE	J	18.74

NOTES:
Right Locations are provided in terms based on ADWR locations using Township and Range and Section and quarter sections
IGR - Irrigation Grandfathered Rights

SOURCE:
Arizona Department of Water Resources (ADWR) 2015. Online database search of irrigation water rights.

FIGURES

56th Street and Earll Drive WQARF Site

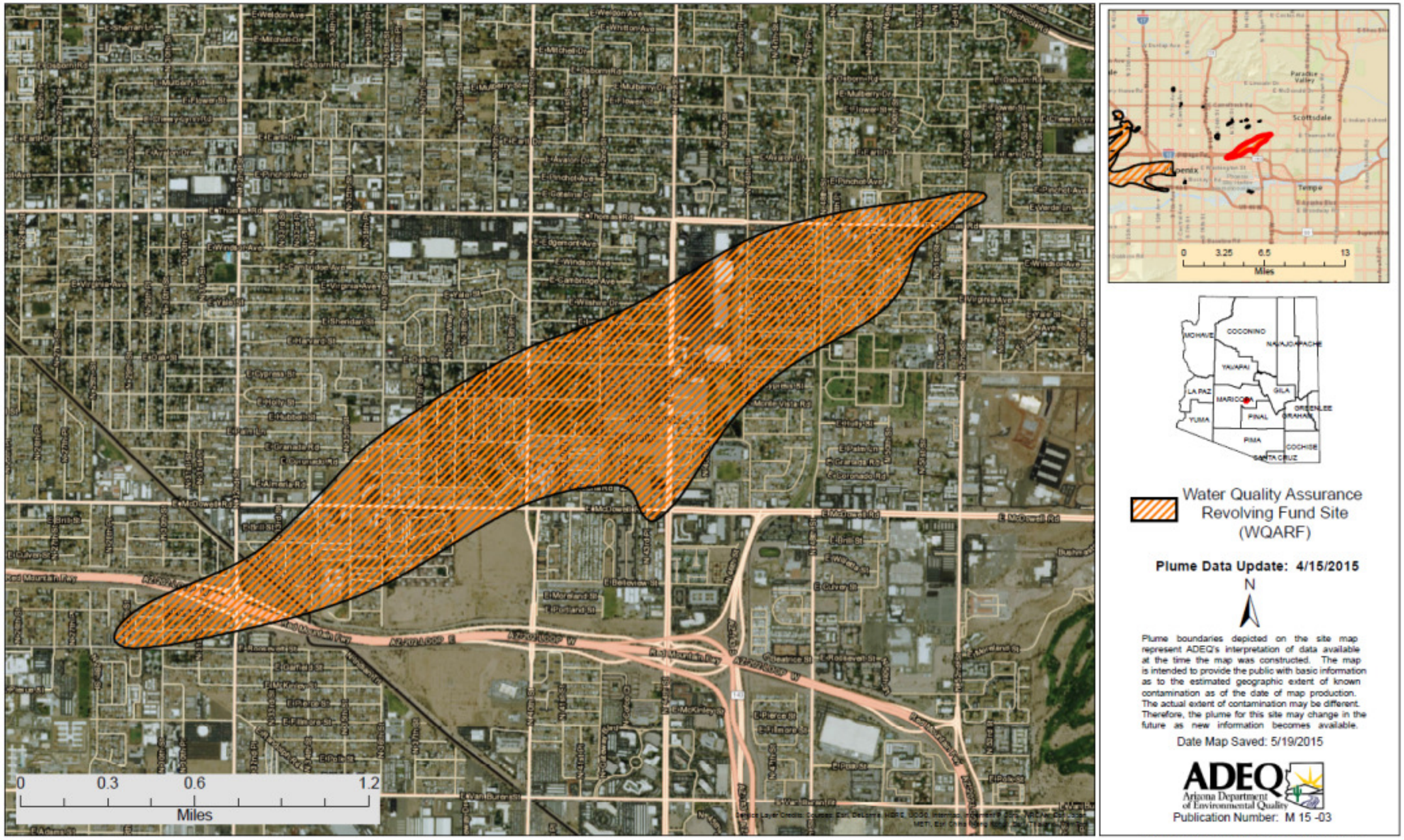
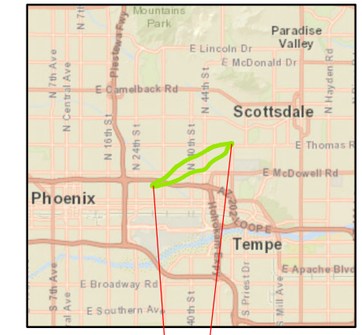
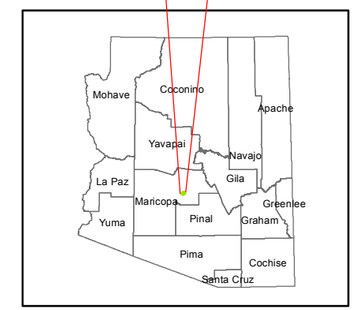


FIGURE 1





LEGEND:

AREA OF TCE CONCENTRATION ABOVE 5 ug/L IN ALLUVIUM (APRIL 2014) (USED TO DETERMINE LAND AND WATER USE STUDY AREA)

LAND AND WATER USE STUDY AREA

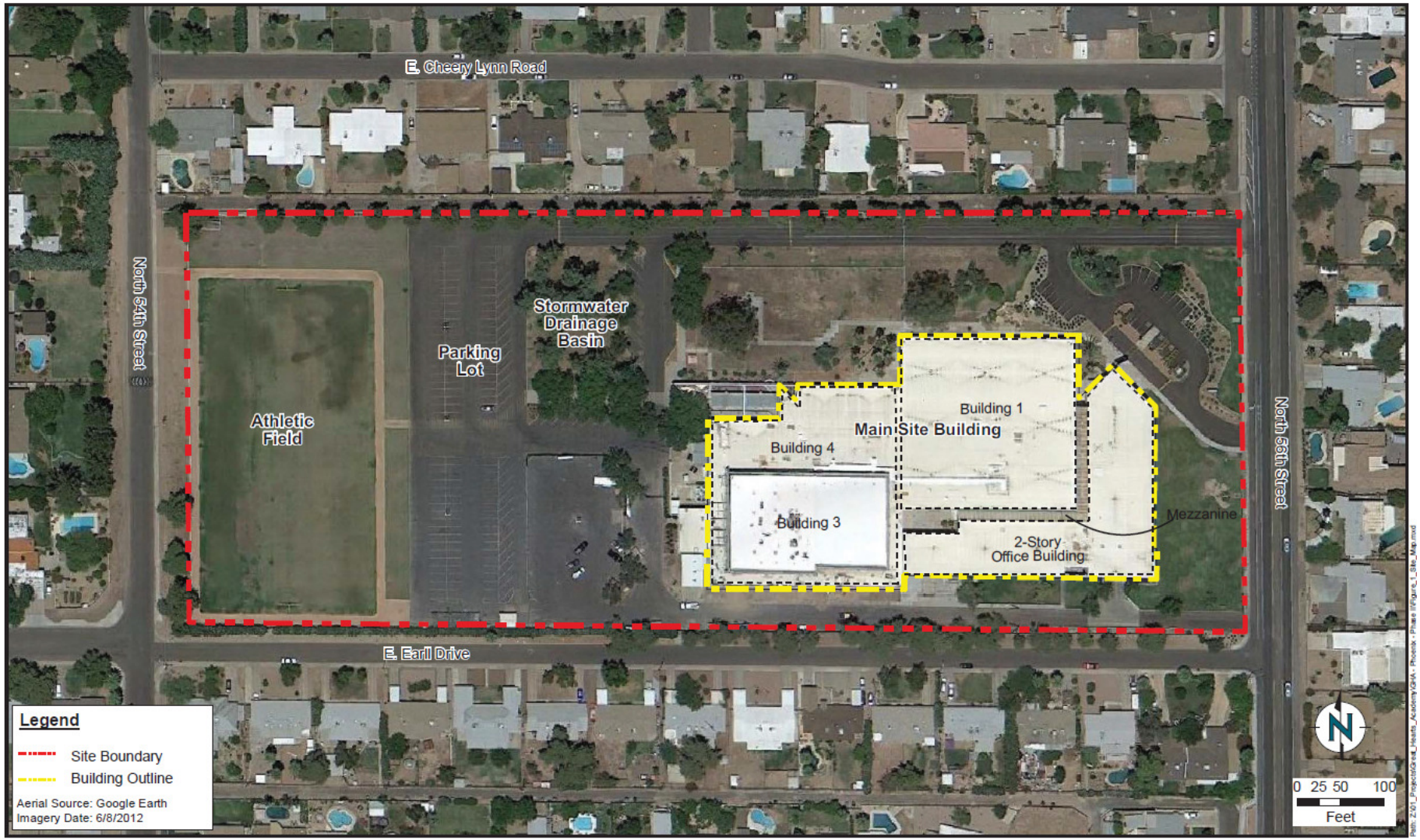
0 1,000 2,000 4,000
Feet

LAND AND WATER USE STUDY AREA
56TH STREET AND EARLL DRIVE WQARF SITE

FIGURE 2

CLEAR CREEK ASSOCIATES

LAND AND WATER USE STUDY
56th ST AND EARLL DR WQARF SITE
JUNE 2017



ENVIRON

DRAFTED BY: JLV | Date: 5/23/2013

Site Map

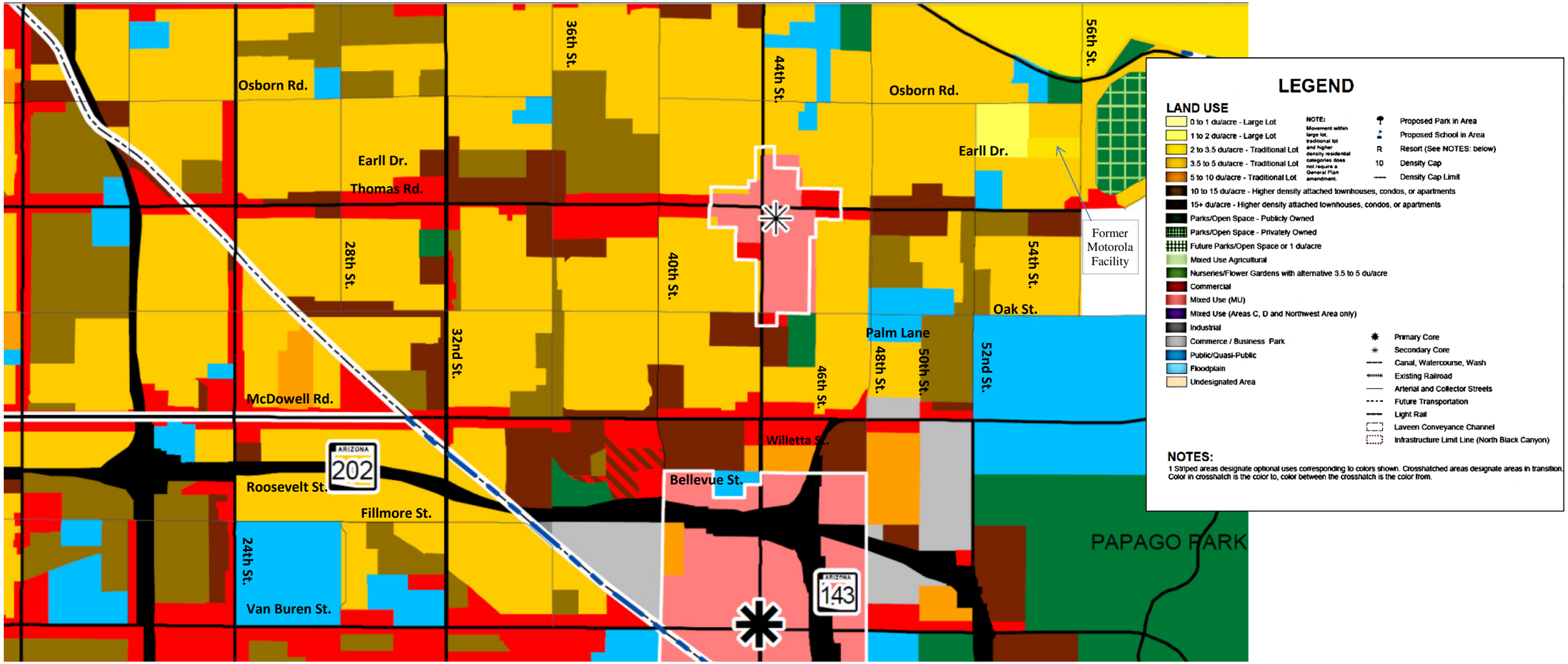
Great Hearts Academies
3102 North 56th Street
Phoenix, Arizona

PROJECT: 28-25154E

FIGURE 3

Land and Water Use Study
56th Street and Earll Drive WQARF Site

City of Phoenix General Plan Land Use
56th Street and Earll Drive WQARF Site Area



From: City of Phoenix 2014. City of Phoenix General Plan 2002, revised July 2014.

FIGURE 4

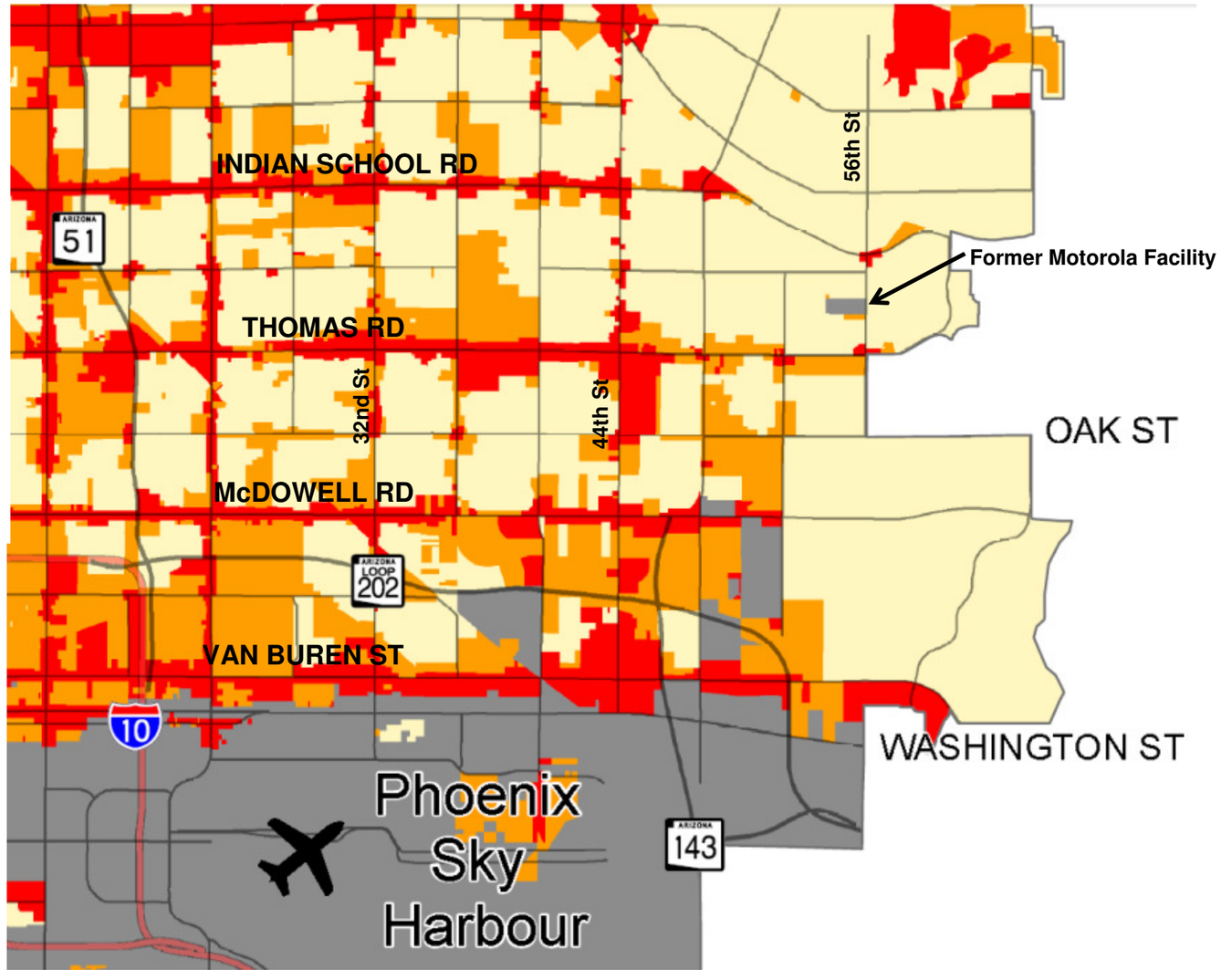
Land and Water Use Study
56th Street and Earll Drive WQARF Site

City of Phoenix
PLANNING AND DEVELOPMENT DEPARTMENT

Zoning

February 2014

Zoning Classifications
- Single-Family Residential
- Multi-Family Residential
- Downtown Code
- Commercial
- Industrial
- Non-Developable



0 1.25 2.5 5
Miles

Single-Family Residential

S-1	Ranch or Farm Commercial
RE-43	One Family Residence (43,560 Sq. Ft. Minimum) *
RE-24	One Family Residence (24,000 Sq. Ft. Minimum) *
R1-14	One Family Residence (14,000 Sq. Ft. Minimum) *
RE-35	Single Family Residence (Density Range of 1.1 to 1.15 or 1.32 w/ Bonus)
R1-18	Single Family Residence (Density Range of 1.95 to 2.05 or 2.34 w/ Bonus)
R1-10	Single Family Residence (Density Range of 3 to 3.5 or 4.5 w/ Bonus)
R1-8	Single Family Residence (Density Range of 4 to 4.5 or 5.5 w/ Bonus)
R1-6	Single Family Residence (Density Range of 5 to 5.5 or 6.5 w/Bonus)
PAD-2	Planned Area Development (1.0 Dwelling/Acre)*
PAD-3	Planned Area Development (1.35 Dwelling/Acre)*
PAD-4	Planned Area Development (1.75 Dwelling/Acre)*
PAD-5	Planned Area Development (2.20 Dwelling/Acre)*
PAD-6	Planned Area Development (2.75 Dwelling/Acre)*
PAD-7	Planned Area Development (3.50 Dwelling/Acre)*
PAD-8	Planned Area Development (4.75 Dwelling/Acre)*
PCD	Planned Community District

Multi-Family Residential

R-2	Multiple Family Residence (Detached Density Range 5 to 6.5 or 12 w/ Bonus) (Attached Density Range 10 to 10.5 or 12 w/ Bonus)
R-3	Multiple Family Residence (Detached Density Range 5 to 6.5 or 12 w/ Bonus) (Attached Density Range 14.5 to 15.23 or 17.4 w/ Bonus)
R-3A	Multiple Family Residence (Detached Density Range 5 to 6.5 or 12 w/ Bonus) (Attached Density Range 22 to 23.1 or 26.4 w/ Bonus)
R-4	Multiple Family Residence (Detached Density Range 5 to 6.5 or 12 w/Bonus) (Attached Density Range 29 to 30.45 or 34.8 w/ Bonus)
R-5	Multiple Family Residence (Detached Density Range 5 to 6.5 or 12 w/ Bonus) (Attached Density Range 43.5 to 45.68 or 52.2 w/ Bonus)
R-4A	Multiple Family Residence (Dependent on Lot Area and Unit Type)
PAD-9	Planned Area Development (6.0 Dwellings/Acre)*
PAD-10	Planned Area Development (8.0 Dwellings/Acre)*
PAD-11	Planned Area Development (10.0 Dwellings/Acre)*
PAD-12	Planned Area Development (12.0 Dwellings/Acre)*
PAD-13	Planned Area Development (14.5 Dwellings/Acre)*
PAD-14	Planned Area Development (29.0 Dwellings/Acre)*
PAD-15	Planned Area Development (43.5 Dwellings/Acre)*
UR	Urban Residential (7th Ave. to 7th St. & Lincoln St. to Grand Canal)

Commercial

S-2	Ranch or Farm Commercial
R-O	Residential Office-Restricted Commercial
C-O	Commercial Office-Resricted Commercial
C-O/G-O	Commercial Office-General Office Option (Minimum 1 Gross Acre)
C-O/M-O	Commercial Office-Major Office Option (Minimum 5 Gross Acres
C-1	Commercial-Neighborhood Retail
C-2	Commercial-Intermediate Commercial
C-3	Commercial-General Commercial
P-1	Passenger Automobile Parking, Limited (Surface Parking)
P-2	Parking (Surface Parking and Parking Structures)
GC	Golf Course
MUA	Mixed Use Agricultural
RH	Resort
RSC	Regional Shopping Center*

Industrial

IND. PK.	Industrial Park*
CP/BP	Commerce Park-Business Park Option
CP/GCP	Commerce Park-General Commerce Park Option
A-1	Light Industrial
A-2	Industrial

Non-Developable

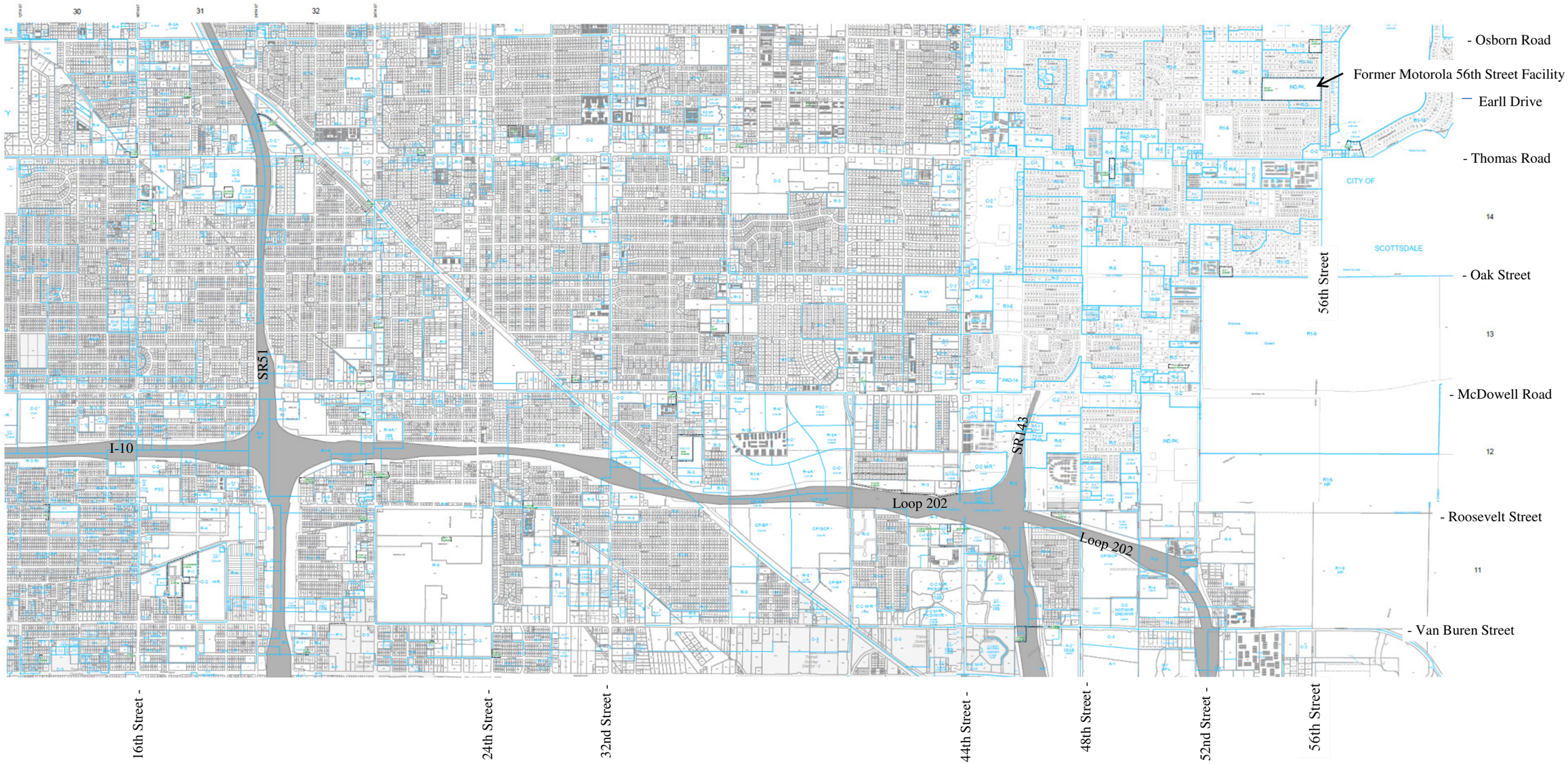
FH	Flood Hazard and Erosion Management

Note: This figure has been modified from the City of Phoenix Zoning Map to show only a portion of the City of Phoenix that is more pertinent to this report.

FIGURE 5

Land and Water Use Study
56th Street and Earll Drive WQARF Site

City of Phoenix Planning Department Zoning Parcel Maps
Including 56th Street and Earll Drive WQARF Site and Surrounding Area

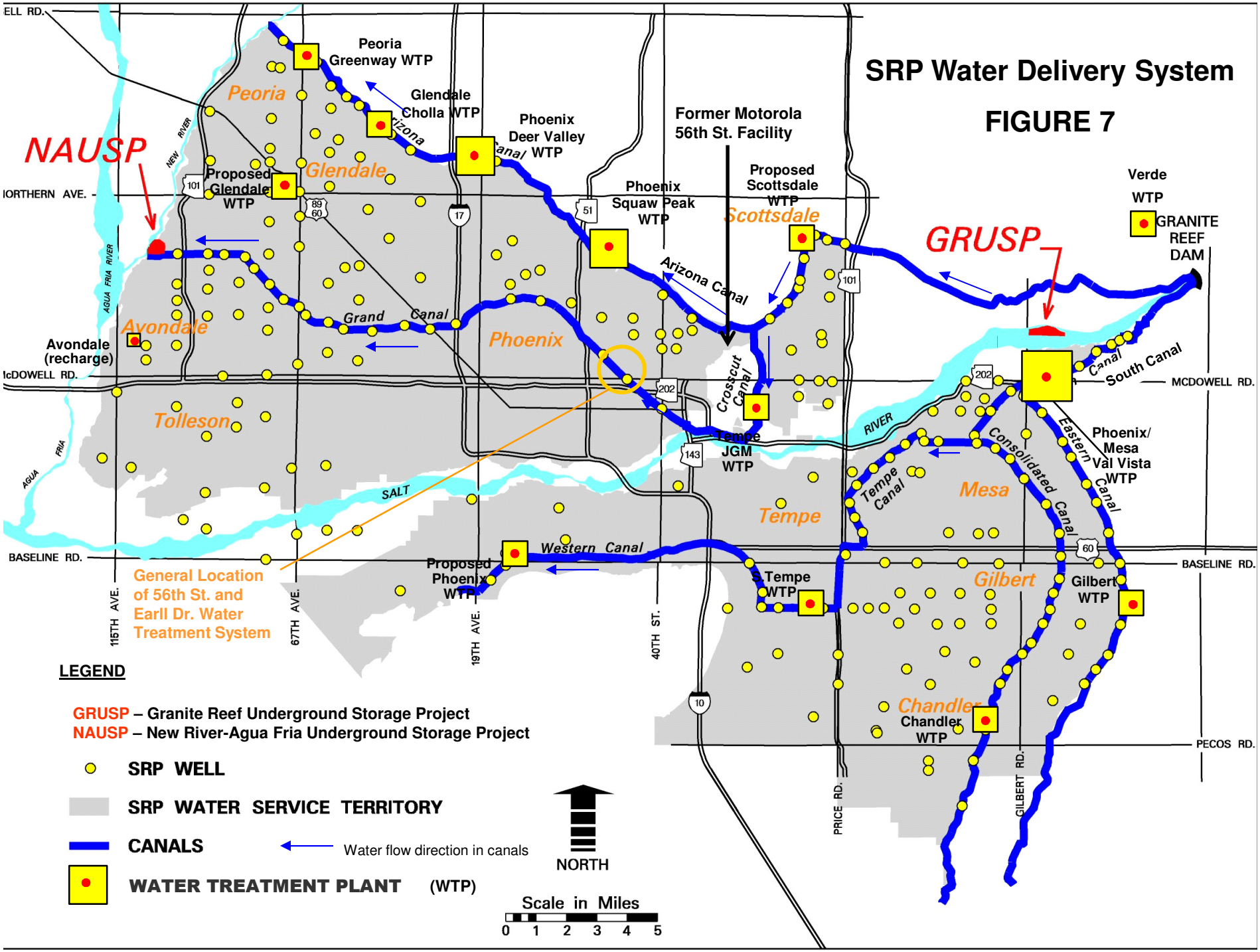


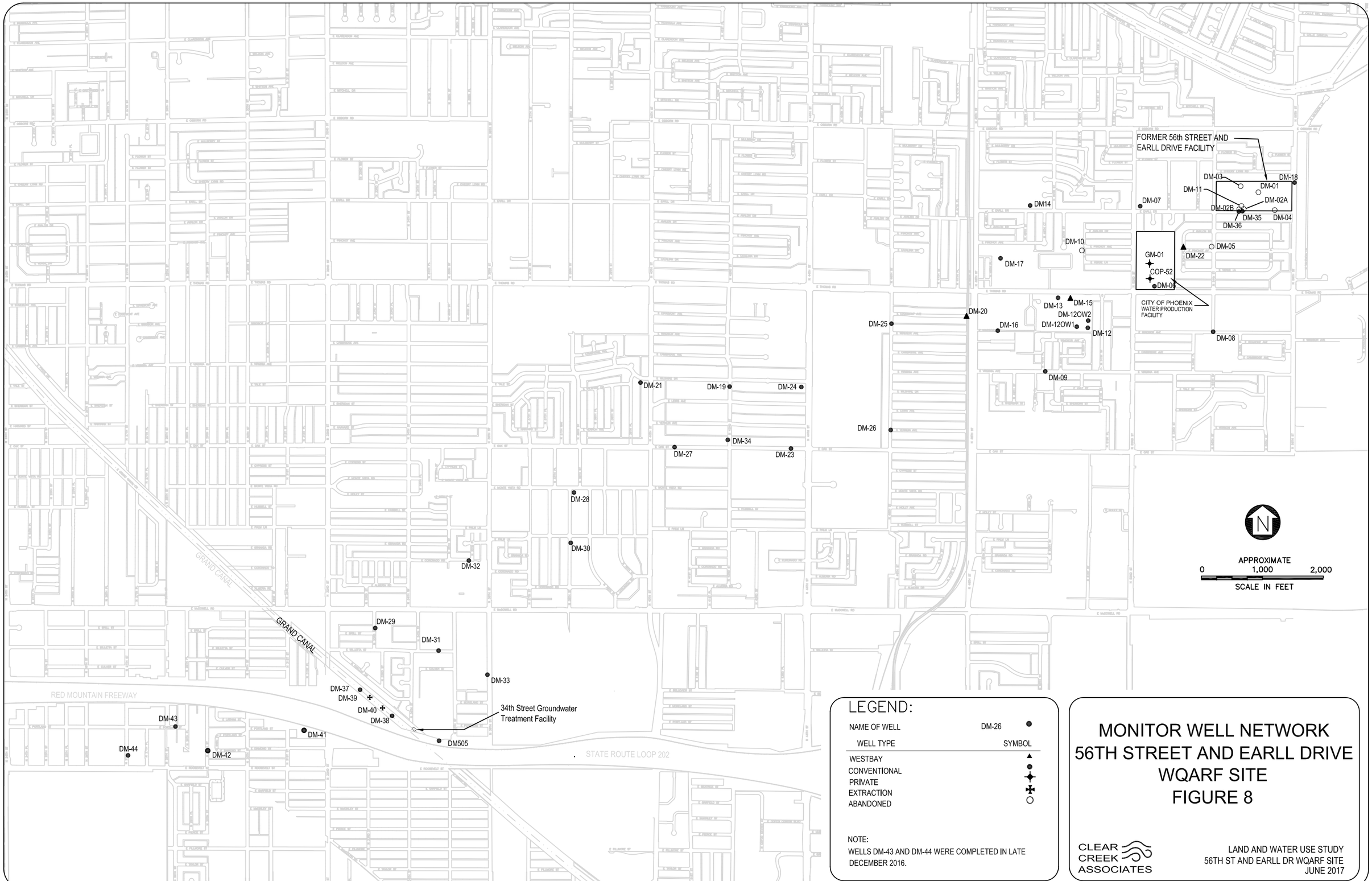
Scale 1000 feet

City of Phoenix
Planning Department

FIGURE 6

Land and Water Use Study
56th Street and Earll Drive WQARF Site


SRP Water Delivery System
FIGURE 7
NAUSP
GRUSP
Peoria Greenway WTP
Glendale Cholla WTP
Phoenix Deer Valley WTP
Former Motorola 56th St. Facility
Proposed Glendale WTP
Phoenix Squaw Peak WTP
Proposed Scottsdale WTP
Verde WTP
GRANITE REEF DAM
Avondale (recharge)
Tempe JGM WTP
Phoenix/ Mesa Val Vista WTP
S.Tempe WTP
Gilbert WTP
Chandler WTP
Proposed Phoenix WTP
General Location of 56th St. and Earll Dr. Water Treatment System
Peoria
Glendale
Avondale
Phoenix
Scottsdale
Tolleson
Tempe
Mesa
Gilbert
Chandler
Arizona Canal
Grand Canal
Crosscut Canal
Tempe Canal
Consolidated Canal
Eastern Canal
South Canal
Western Canal
SALT RIVER
NEW RIVER
AGUA FRIA RIVER
NORTHERN AVE.
McDOWELL RD.
BASELINE RD.
PECOS RD.
115TH AVE.
67TH AVE.
19TH AVE.
40TH ST.
PRICE RD.
GILBERT RD.
LEGEND
GRUSP – Granite Reef Underground Storage Project
NAUSP – New River-Agua Fria Underground Storage Project
SRP WELL
SRP WATER SERVICE TERRITORY
CANALS
Water flow direction in canals
WATER TREATMENT PLANT (WTP)
NORTH
Scale in Miles
0 1 2 3 4 5



LEGEND:

NAME OF WELL	DM-26 ●
WELL TYPE	SYMBOL
WESTBAY	▲
CONVENTIONAL	●
PRIVATE	✦
EXTRACTION	✢
ABANDONED	○

NOTE:
WELLS DM-43 AND DM-44 WERE COMPLETED IN LATE DECEMBER 2016.

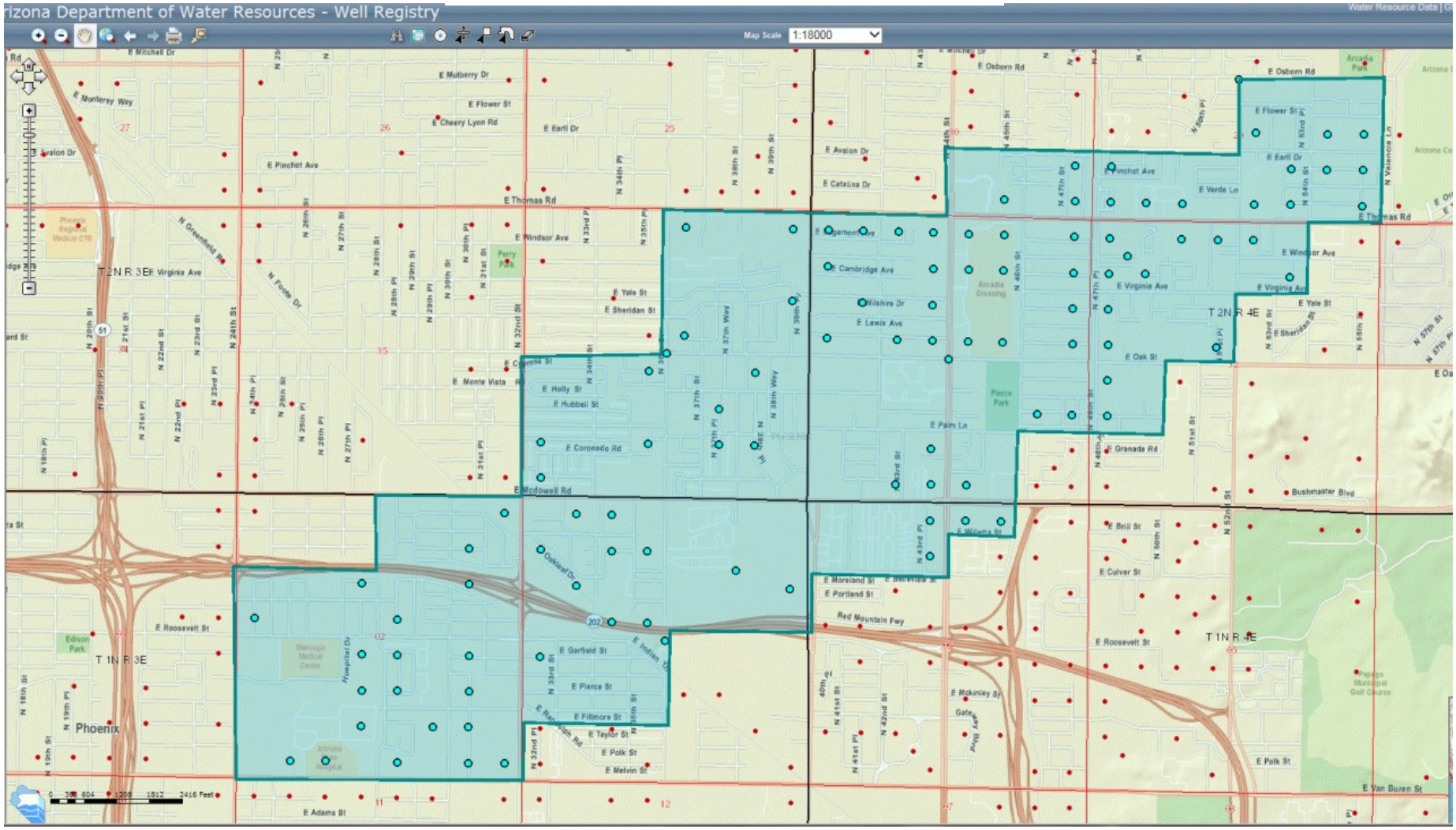
MONITOR WELL NETWORK
56TH STREET AND EARLL DRIVE
WQARF SITE
FIGURE 8

CLEAR CREEK ASSOCIATES

LAND AND WATER USE STUDY
56TH ST AND EARLL DR WQARF SITE
JUNE 2017

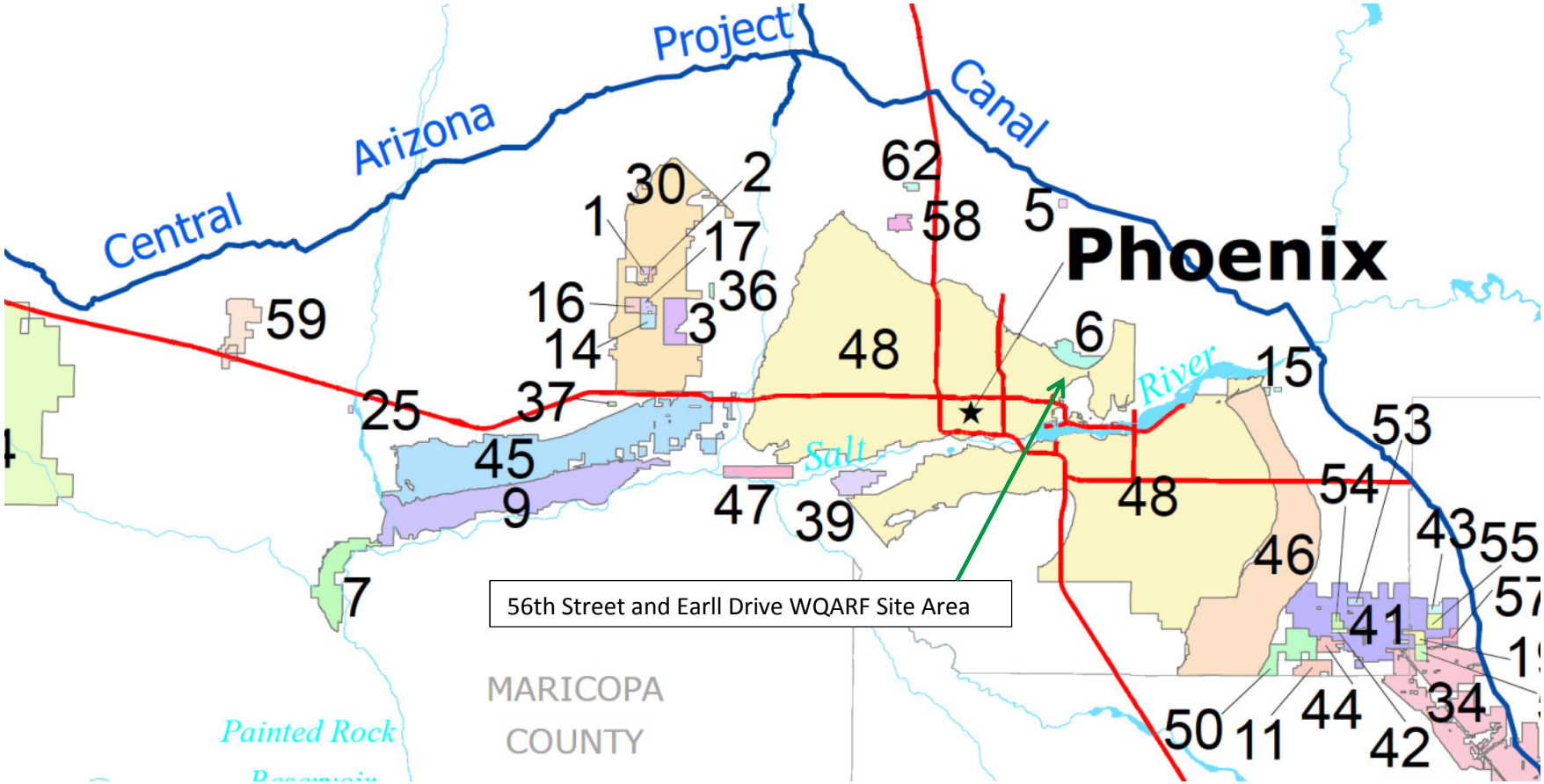
FIGURE 9

General Locations of ADWR-Registered Wells
Land and Water Use Study Area
56th Street and Earll Drive WQARF Site



Source: Arizona Department of Water Resources (ADWR) Well Registry database, 2015

Irrigation Districts in the Phoenix, Arizona Area

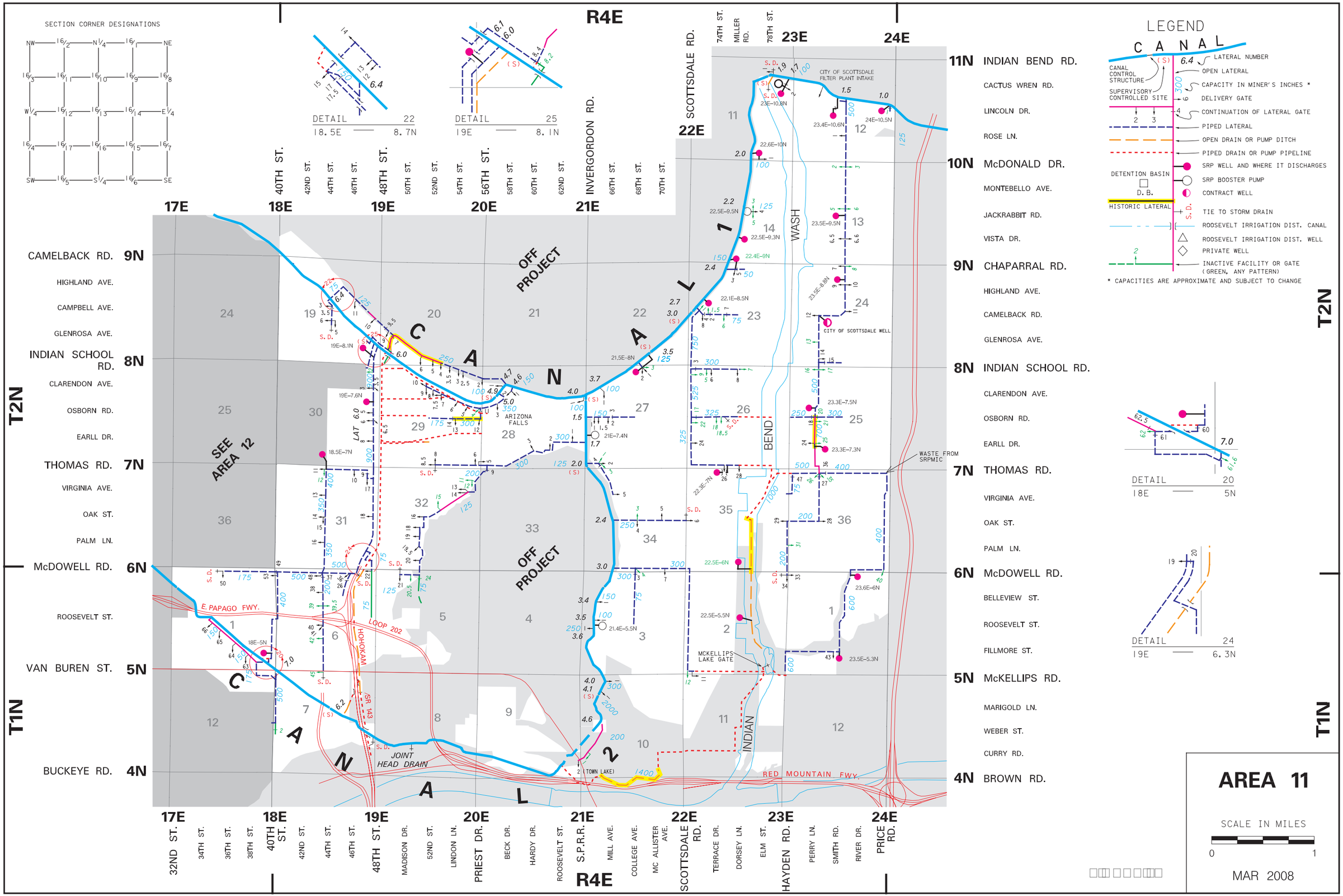


48 – Salt River Valley Water Users Association Irrigation District

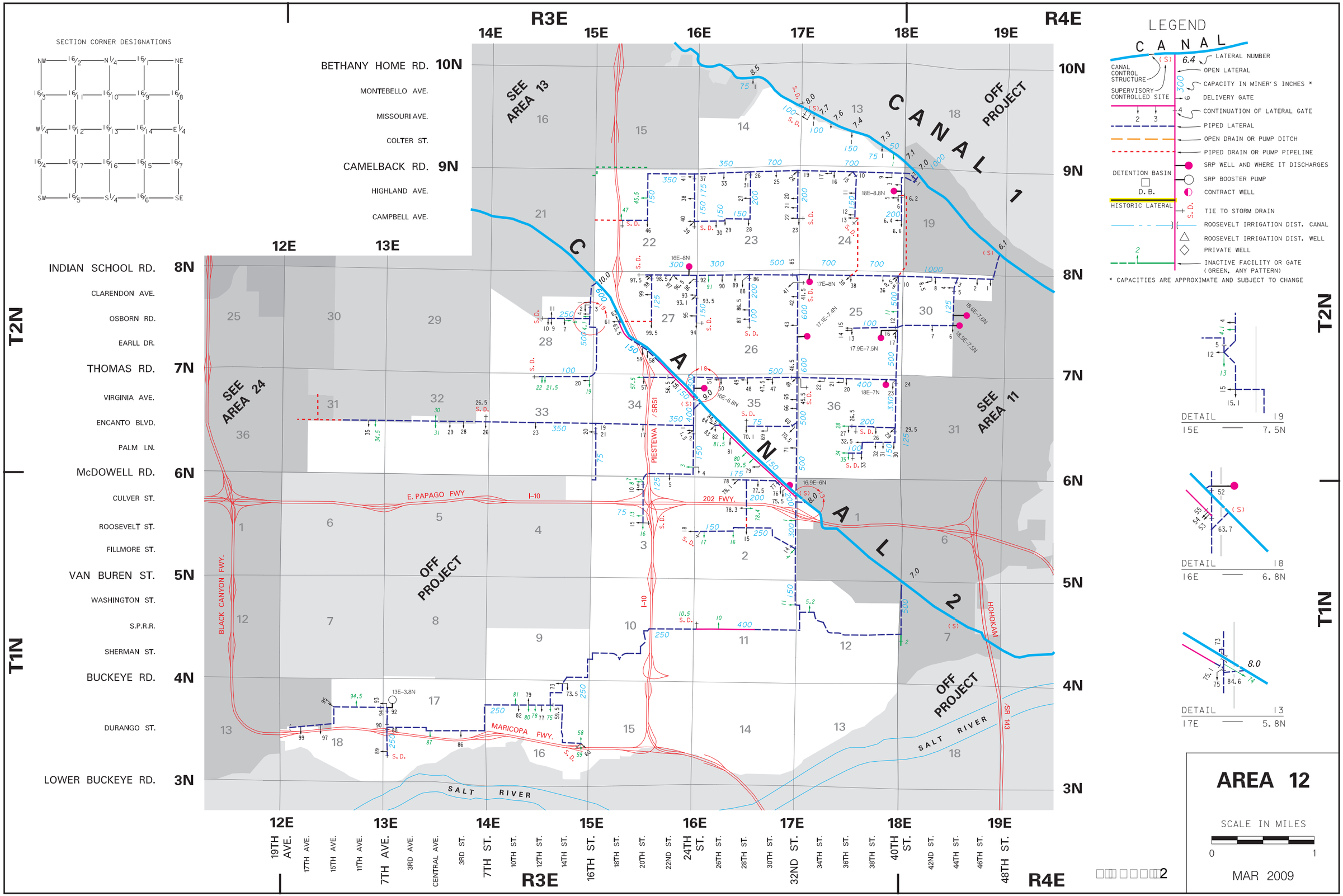
NOTE: This figure has been modified from Arizona Irrigation Districts (ADWR 2014) to show the Phoenix, Arizona area.

Figure 10

Land and Water Use Study
56th Street and Earll Drive WQARF Site


AREA 11
SECTION CORNER DESIGNATIONS
LEGEND
CANAL
LATERAL NUMBER
OPEN LATERAL
CAPACITY IN MINER'S INCHES *
DELIVERY GATE
CONTINUATION OF LATERAL GATE
PIPED LATERAL
OPEN DRAIN OR PUMP DITCH
PIPED DRAIN OR PUMP PIPELINE
SRP WELL AND WHERE IT DISCHARGES
SRP BOOSTER PUMP
CONTRACT WELL
TIE TO STORM DRAIN
ROOSEVELT IRRIGATION DIST. CANAL
ROOSEVELT IRRIGATION DIST. WELL
PRIVATE WELL
INACTIVE FACILITY OR GATE (GREEN, ANY PATTERN)
CANAL CONTROL STRUCTURE
SUPERVISORY CONTROLLED SITE
DETENTION BASIN
D. B.
HISTORIC LATERAL
* CAPACITIES ARE APPROXIMATE AND SUBJECT TO CHANGE
R4E
T2N
T1N
17E
18E
19E
20E
21E
22E
23E
24E
CAMELBACK RD. 9N
HIGHLAND AVE.
CAMPBELL AVE.
GLENROSA AVE.
INDIAN SCHOOL RD. 8N
CLARENDON AVE.
OSBORN RD.
EARLL DR.
THOMAS RD. 7N
VIRGINIA AVE.
OAK ST.
PALM LN.
McDOWELL RD. 6N
ROOSEVELT ST.
VAN BUREN ST. 5N
BUCKEYE RD. 4N
11N INDIAN BEND RD.
CACTUS WREN RD.
LINCOLN DR.
ROSE LN.
10N McDONALD DR.
MONTEBELLO AVE.
JACKRABBIT RD.
VISTA DR.
9N CHAPARRAL RD.
HIGHLAND AVE.
CAMELBACK RD.
GLENROSA AVE.
8N INDIAN SCHOOL RD.
CLARENDON AVE.
OSBORN RD.
EARLL DR.
7N THOMAS RD.
VIRGINIA AVE.
OAK ST.
PALM LN.
6N McDOWELL RD.
BELLEVIEW ST.
ROOSEVELT ST.
FILLMORE ST.
5N McKELLIPS RD.
MARIGOLD LN.
WEBER ST.
CURRY RD.
4N BROWN RD.
32ND ST.
34TH ST.
36TH ST.
38TH ST.
40TH ST.
42ND ST.
44TH ST.
46TH ST.
48TH ST.
MADISON DR.
52ND ST.
LINDON LN.
PRIEST DR.
BECK DR.
HARDY DR.
ROOSEVELT ST.
S.P.R.R.
MILL AVE.
COLLEGE AVE.
MC ALLISTER AVE.
SCOTTSDALE RD.
TERRACE DR.
DORSEY LN.
ELM ST.
HAYDEN RD.
PERRY LN.
SMITH RD.
RIVER DR.
PRICE RD.
74TH ST.
MILLER RD.
78TH ST.
INVERGORDON RD.
SCOTTSDALE RD.
CITY OF SCOTTSDALE FILTER PLANT INTAKE
CITY OF SCOTTSDALE WELL
WASTE FROM SRPMIC
MCKELLIPS LAKE GATE
ARIZONA FALLS
OFF PROJECT
SEE AREA 12
E. PAPAGO FWY.
LOOP 202
HOHOKAM
SR 143
JOINT HEAD DRAIN
TOWN LAKE
RED MOUNTAIN FWY.
INDIAN BEND WASH
DETAIL 22 18.5E 8.7N
DETAIL 25 19E 8.1N
DETAIL 20 18E 5N
DETAIL 24 19E 6.3N
SCALE IN MILES
0
1
MAR 2008
2/22/08 REF: CAR:[140,013]ZFACMX11.DGN CAR:[140,013]ZJERFX11.DGN

AREA 12



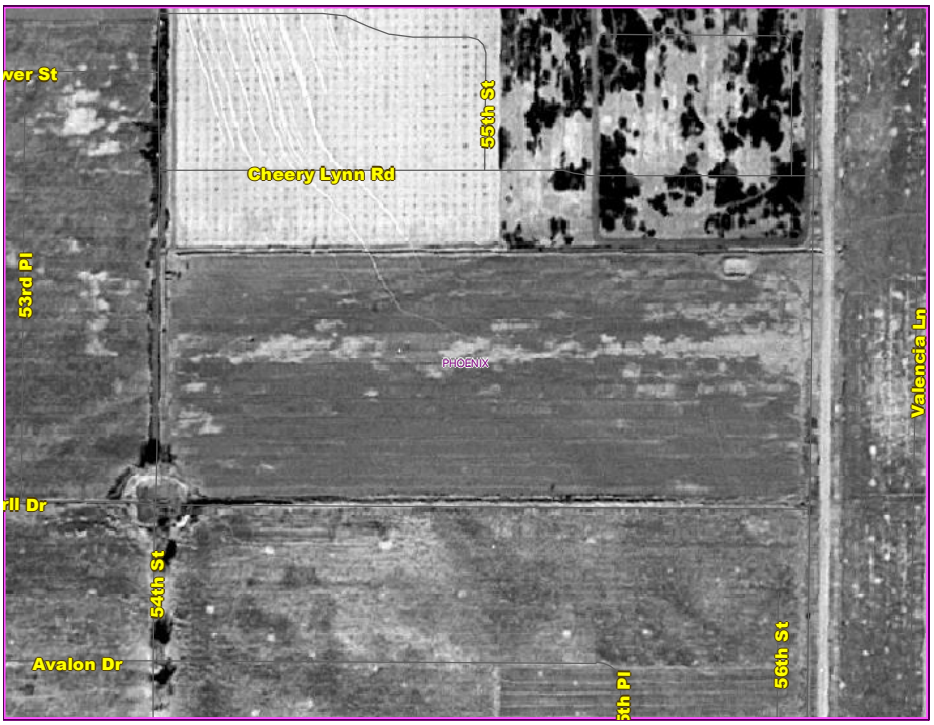
REV: 3/08/09 REF: CAR:[140,013]ZFACMX12.DGN CAR:[140,013]ZJERFX12.DGN

ATTACHMENTS

ATTACHMENT A

Series of historical aerial photographs obtained from the Maricopa County (Arizona) internet web site of the Facility area illustrating the land use development of the subject property and the surrounding area.

56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE



January 29, 1930

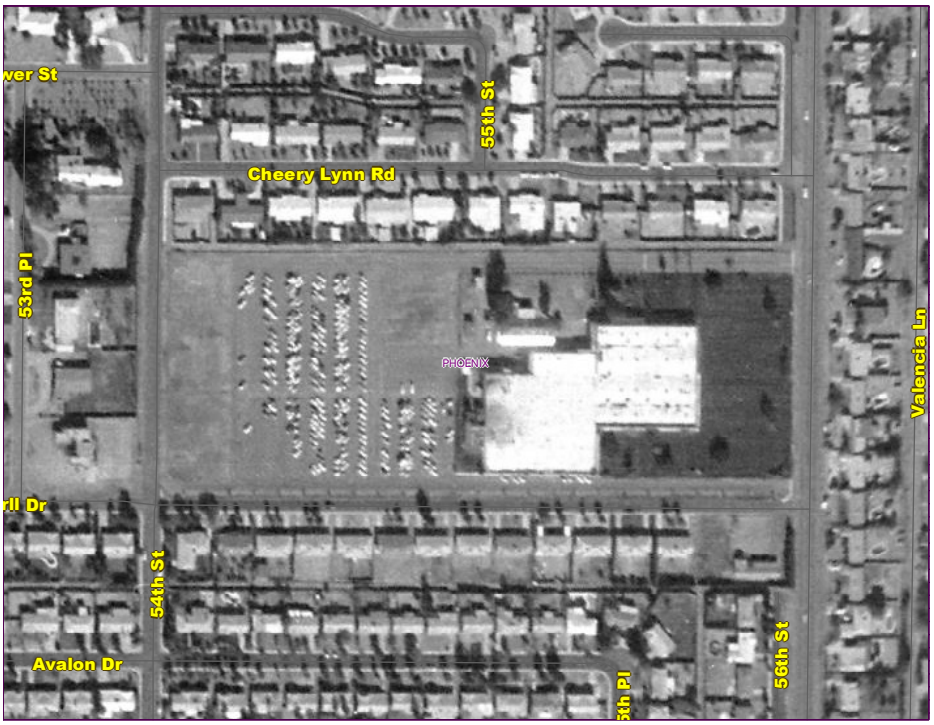
March 9, 1949

56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE

February 15, 1959

1962

56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE



March 8, 1969

December 15, 1979

56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE

January 21, 1993

December 1996

56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE

January 28, 2000

December 6, 2002

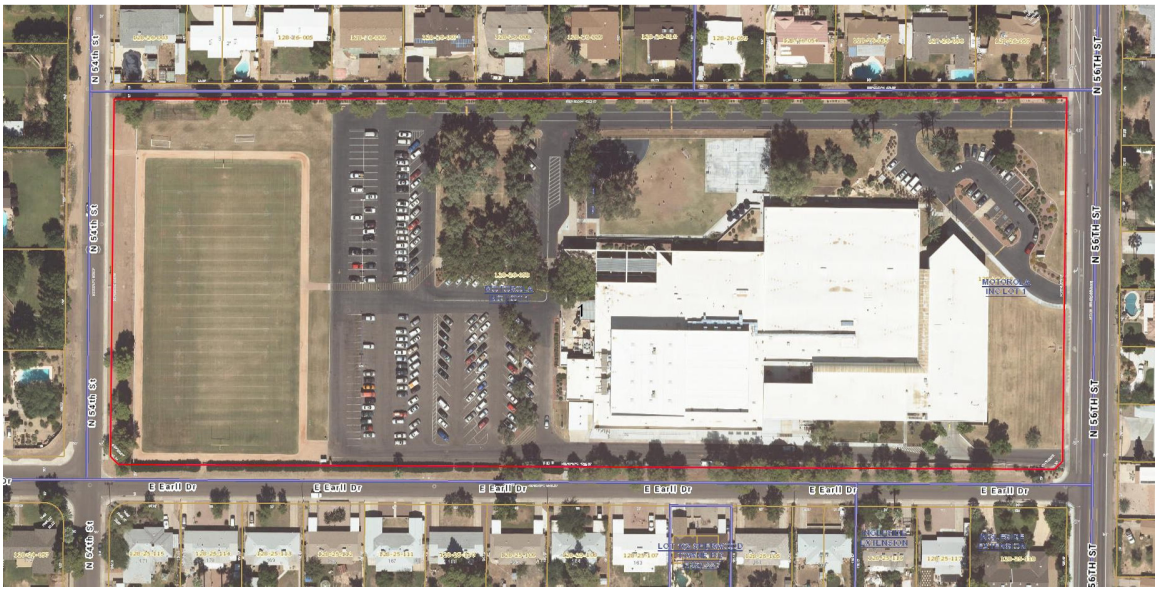
56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE

November 8, 2006

November 2011
Great Hearts Academy

56TH STREET AND EARLL DRIVE
AERIAL PHOTOGRAPHS FROM MARICOPA COUNTY WEB SITE

2013
Great Hearts Academy



2015
Great Hearts Academy

ATTACHMENT B

Land and Water Use Study Questionnaires

LEGEND:

APPROXIMATE AREA OF TCE CONCENTRATION IN GROUNDWATER ABOVE 5 ug/l

LAND AND WATER USE STUDY AREA

0 500 1,000 2,000 3,000 4,000 5,000
Feet

56TH STREET AND EARLL DRIVE
WQARF SITE
Land and Water Use Study Area

Figure 1

CLEAR CREEK ASSOCIATES

Land And Water Use Study
56th Street and Earll Drive
September 2014

LAND AND WATER USE STUDY QUESTIONNAIRE FOR MUNICIPALITIES/UTILITIES WITHIN THE 56th STREET AND EARLL DRIVE WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Water user municipality/utility name: City of Phoenix

Date Questionnaire was completed: January 7, 2015

Name of person completing Questionnaire: Elizabeth Zima, OEP /Gary Gin, WSD /Xandon Keating, PDD

Contact Name: Joe Giudice

Title: Acting Environmental Programs Manager

Division: Office of Environmental Programs

Address: 200 W. Washington St. / 14th Floor

Phoenix, AZ 85003

Phone Number: 602-256-5654

1. What is the current use of your municipality's/utility's property within the limits of the 56th STREET AND EARLL DRIVE WQARF site? (Boundaries for the Land and Water Use Study Area are shown on Figure 1). The former Motorola Facility is located at 56th Street and Earll Drive. The stair-stepped, diagonally-trending boundaries of the Land and Water Use Study area are aligned with streets within the City of Phoenix and are as follows (refer to Figure 1):

- 56th Street to the east at the northeast part of the area,
- Osborn Road/Earll Drive/Thomas Road/Oak Street/McDowell Road/State Route Loop 202 on the north portion of the area,
- Thomas Road diagonally southwest to Roosevelt and Fillmore Streets on the south, and
- 27th and 28th Streets south of the SR Loop 202 (Red Mountain Freeway) along the western side of the area.

Parks, fire stations, libraries, and affordable housing single-family homes owned by the City of Phoenix.

General use of area also includes residential, schools, commercial and canal.

2. Please list the municipality's/utility's properties of concern/boundaries (neighborhood planning committees, zoning, canals, wells) within the 56th STREET AND EARLL DRIVE WQARF site boundary.

Camelback East Village Planning Committee

Central City Village Planning Committee

Grand Canal Village Planning Committee

3. What are the foreseeable plans for the municipality's/utility's property within the 56th STREET AND EARLL DRIVE WQARF site boundary as far into the future as they are known and up to 100 years, if possible.

City of Phoenix owned – same as present.

Some additional development of residential townhomes and multifamily communities proposed near 44th St & Palm and proposed single family residential near vacant land at 40th St & Oak; otherwise general use expected to be approximately same as present.

4. Does the municipality/utility have a published general plan for the property within the 56th STREET AND EARLL DRIVE WQARF site boundary?

Yes.

5. Are parcel, zoning, or land maps available through the municipality/utility? Where are they located?

Yes. Phoenix.gov/planning

6. Please list any specific neighborhood concern the municipality/utility is aware of within the 56th STREET AND EARLL DRIVE WQARF site boundaries? Please list future concerns (e.g.- freeway expansion, water use, water availability, etc.)

Although there are no current plans to utilize groundwater in this area, the City of Phoenix would hope that groundwater supplies/resources be effectively cleaned up should they be needed in the future.

7. Please list any future zoning plans or area plans for the municipality/utility within the 56th STREET AND EARLL DRIVE WQARF site boundary:

As discussed in question 3, some additional residential development is expected to occur.

The general plan is currently in the process of being updated.

8. Please list any "special projects" projected or anticipated within the 56th STREET AND EARLL DRIVE WQARF site boundaries:

Additional residential developments.

9. If any property is leased (the municipality/utility is the lessor), how long is the lease term?

Single family homes managed by the Housing Department typically leased yearly.

10. If the property is leased, are there plans to renew the lease and is so, for how long?

Yes, on a yearly basis.

11. Please list any environmental spill of material or waste products that has occurred within the municipality/utility within the 56th STREET AND EARLL DRIVE WQARF site boundary in the past 5 years?

The City is aware of the following small spills that were reporting to the illegal dumping program. There may be other spills in the area that were not reported.

Illegal dumping of oil into alley soil behind 2416 N. 37th Way, cleaned by COP contractor.

Illegal dumping of 6-7 containers with spillage in alley behind 2830 E. Taylor, cleaned by COP contractor.

Illegal dumping of 35 gallons unknown liquid with spillage in alley behind 3011 E Culver St., cleaned by COP contractor.

12 Is the municipality/utility currently sampling groundwater wells within the 56th STREET AND EARLL DRIVE WQARF site? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

No.

13. Does your municipality/utility have an environmental manager or do you outsource environmental management to an environmental consulting firm? If so, please provide the following information:

Name: City of Phoenix Office of Env. Programs

Contact: Joe Giudice

Title: Acting Environmental Programs Manager

Address: 200 W. Washington St. / 14th Floor

Phoenix, AZ 85003

Phone: 602-256-5654

14. Please indicate anticipated groundwater development by the municipality/utility within the 56th STREET AND EARLL DRIVE WQARF site boundary.

There are no current plans for groundwater development. However the City of Phoenix expects that groundwater resources should be appropriately cleaned up and available in the future if needed.

15. Are there any groundwater wells owned by the water provider that have been affected by the 56th STREET AND EARLL DRIVE WQARF site? If so, please list the ADWR well identification numbers. What is the current status of these wells (e.g.- shut down, still pumping)?

No.

16. What is the future use (up to 100 years) for any wells that have been impacted by the 56th STREET AND EARLL DRIVE WQARF site?

N/A

Thank you for your time. Barbara Murphy, a representative from Freescale Semiconductor's consultant, Clear Creek Associates (6155 E. Indian School Road #200, Scottsdale, Arizona 85251) may follow-up on answers provided. Please contact her at 480-659-7131 or at **bmurphy@clearcreekassociates.com** if you have any questions or comments. Please return this completed questionnaire by e-mail or regular mail to Barbara Murphy.

LAND AND WATER USE STUDY QUESTIONNAIRE FOR MUNICIPALITIES/UTILITIES WITHIN THE 56th STREET AND EARLL DRIVE WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Water user municipality/utility name: Salt River Project_____

Date Questionnaire was completed: _____February 17, 2015_____

Name of person completing Questionnaire: _____Andrea Martinez_____

Contact Name: _____Andrea Martinez_____

Title: ___Principal Environmental Compliance Engineer_____

Division: ___Environmental Compliance_____

Address: ___PAB 352, P. O. Box 52025_____

___Phoenix AZ 85233_____

Phone Number: ___602-236-2618_____

1. What is the current use of your municipality's/utility's property within the limits of the 56th STREET AND EARLL DRIVE WQARF site? (Boundaries for the Land and Water Use Study Area are shown on Figure 1). The former Motorola Facility is located at 56th Street and Earll Drive. The stair-stepped, diagonally-trending boundaries of the Land and Water Use Study area are aligned with streets within the City of Phoenix and are as follows (refer to Figure 1):

- 56th Street to the east at the northeast part of the area,
- Osborn Road/Earll Drive/Thomas Road/Oak Street/McDowell Road/State Route Loop 202 on the north portion of the area,
- Thomas Road diagonally southwest to Roosevelt and Fillmore Streets on the south, and
- 27th and 28th Streets south of the SR Loop 202 (Red Mountain Freeway) along the western side of the area.

SRP owns and operates groundwater supply wells 16.9E-6.0N, 18.0E-7.0N, 17.5E-7N and 18.5E-7N including other water conveyance structures in the subject area including the Grand Canal.

Power transmission and distribution lines are also within 56th Street & Earll Drive WQARF boundaries. Additionally, SRP has multiple other groundwater supply wells in close proximity to the site.

2. Please list the municipality's/utility's properties of concern/boundaries (neighborhood planning committees, zoning, canals, wells) within the 56th STREET AND EARLL DRIVE WQARF site boundary.

In addition to the groundwater supply wells noted above in #1, SRP owns other groundwater supply wells within a mile of this site. Listed below along with their direction and approximate distance:

Groundwater supply well 19E-8.1N – approx. 1- mile to the north;

Groundwater supply well 19E- 7.6N – approx. ½- mile to the north;

Groundwater supply well 18E-5.0N – approx. 1/3- mile to the south;

Groundwater supply well 16.0E-6.8N – approx. 1-mile to the northwest;

Groundwater supply well 17.1E-7.4N – approx. ½- mile to the northwest;

Groundwater supply well 17E-8N – approx. 1- mile to the north;

Groundwater supply well 17.9E-7.5N – approx. 1/2- mile to the north;

Groundwater supply well, 18.6E-7.6N – approx. 1/4 - mile to the north;

See question #15 for contamination concerns.

3. What are the foreseeable plans for the municipality's/utility's property within the 56th STREET AND EARLL DRIVE WQARF site boundary as far into the future as they are known and up to 100 years, if possible.

SRP anticipates all its properties in the vicinity of the 56th Steet & Earll Drive WQARF Area will remain in use over the next 100 years. Additionally, SRP anticipates that its groundwater supply wells that are in the vicinity (see questions #1 and #2 above) will transition from irrigation to municipal service (potable supply) within this time period.

4. Does the municipality/utility have a published general plan for the property within the 56th STREET AND EARLL DRIVE WQARF site boundary?

No

5. Are parcel, zoning, or land maps available through the municipality/utility? Where are they located?

Not available

6. Please list any specific neighborhood concern the municipality/utility is aware of within the 56th STREET AND EARLL DRIVE WQARF site boundaries? Please list future concerns (e.g.- freeway expansion, water use, water availability, etc.)

Water shortage is an issue that can impact this neighborhood as it can all of metropolitan Phoenix. As water quality issues will impact water supplies as much as water quantity, SRP has a specific concern regarding water quality impacts associated with the 56th Street & Earll Drive WQARF site. SRP expects the groundwater supply wells noted in #1 and #2 above will transition to potable supply in the future so the chemical quality of the groundwater is a significant issue. Our concern is heightened because of anticipated climate change and the additional stress expected to be applied to already stressed surface water supplies. The importance of groundwater and the ability to utilize the aquifer in local and large scale water management scenarios is critical to the future growth and wellbeing of the entire metro-area.

7. Please list any future zoning plans or area plans for the municipality/utility within the 56th STREET AND EARLL DRIVE WQARF site boundary:

None, SRP does not do zoning.

8. Please list any "special projects" projected or anticipated within the 56th STREET AND EARLL DRIVE WQARF site boundaries:

Transition of SRP owned groundwater supply wells from irrigation to municipal service (potable supply). Additionally it may become necessary in the future to construct additional groundwater supply wells in close proximity to the 56th Street & Earll Drive WQARF site boundaries.

9. If any property is leased (the municipality/utility is the lessor), how long is the lease term?

There is no property in the area where SRP is the lessor.

10. If the property is leased, are there plans to renew the lease and is so, for how long?

N/A

11. Please list any environmental spill of material or waste products that has occurred within the municipality/utility within the 56th STREET AND EARLL DRIVE WQARF site boundary in the past 5 years?

None

12 Is the municipality/utility currently sampling groundwater wells within the 56th STREET AND EARLL DRIVE WQARF site? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

SRP conducts routine groundwater sampling from its wells when possible. Water quality records are available on request, if not already submitted to the ADEQ groundwater database.

13. Does your municipality/utility have an environmental manager or do you outsource environmental management to an environmental consulting firm? If so, please provide the following information:

Name:	*David Sultana*
Contact:	
Title:	*Manager, Water Quality & Waste Management Services*
Address:	*PAB 352, P.O. Box 52025*
	Phoenix, AZ 85233
Phone:	*(602) 236-8118*

14. Please indicate anticipated groundwater development by the municipality/utility within the 56th STREET AND EARLL DRIVE WQARF site boundary.

Though SRP has no current plans to develop additional groundwater supplies within the 56th Street & Earll Drive WQARF site, it is very likely they will be added in the future. The site is completely within the SRP water service area and SRP must be responsive to the water supply needs of its shareholders and customers. To meet its water delivery needs SRP may elect to increase its groundwater use in close proximity to the WQARF site as noted in #8 above. SRP may do this by constructing additional groundwater supply wells or by connecting its existing water supply wells to direct municipal delivery or pipe them to the Arizona Canal or Grand Canal to provide greater flexibility in its delivery operations. In any case, there are many scenarios where usage of groundwater in the vicinity of the WQARF site can be expected to increase above historic levels.

15. Are there any groundwater wells owned by the water provider that have been affected by the 56th STREET AND EARLL DRIVE WQARF site? If so, please list the ADWR well identification numbers. What is the current status of these wells (e.g.- shut down, still pumping)?

Some of the SRP groundwater supply wells listed in #1 and #2 above have shown elevated PCE and TCE levels, above AWQS, since 1980:

16.0E-6.8N (55-607726) – TCE concentrations as high as 9.9 µg/L and PCE as high as 12 µg/L; Active

16.9E-6.0N (55-608380) – TCE concentrations as high as 10 µg/L; Active

17E-8N (55-608431) – PCE concentrations as high as 82 µg/L; Active

17.1E-7.4N (55-607731) – PCE concentrations as high as 20 µg/L; Active

17.9E-7.5N (55-617857) – TCE concentrations as high as 9.9 µg/L and PCE as high as 210 µg/L; Active

18E-5.0N (55-608430) – TCE concentrations as high as 36 µg/L; Active

18.5E-7N (55-607712) – TCE concentrations as high as 22 µg/L and PCE as high as 6 µg/L; Active

There was no PCE or TCE above AWQS unless noted above for the wells listed in questions #1 and #2.

17.5E-7N (55-607672) – Currently inactive

18.0E-7.0N (55-617849)- Active

18.6E-7.6N (55-202398)- Active

19E- 7.6N (55-608433)- Active

19E-8.1N (55-607748)- Active

16. What is the future use (up to 100 years) for any wells that have been impacted by the 56th STREET AND EARLL DRIVE WQARF site?

All of SRP's groundwater supply wells in the vicinity of the 56th Street & Earll Drive WQARF site are anticipated to remain in use over the next 100 years. SRP delivers nearly 1,000,000 acre-feet of water per year to the metro Phoenix area. In normal run off years, most of this is supplied from surface water coming from the Salt and Verde Rivers. However, in dry years, groundwater must be pumped to supplement the surface water supplies. SRP's water supply wells are a critical resource especially in drought conditions and it is very important to SRP that it have a reliable supply of water to meet customer and shareholder needs.

Thank you for your time. Barbara Murphy, a representative from Freescale Semiconductor's consultant, Clear Creek Associates (6155 E. Indian School Road #200, Scottsdale, Arizona 85251) may follow-up on answers provided. Please contact her at 480-659-7131 or at **bmurphy@clearcreekassociates.com** if you have any questions or comments. Please return this completed questionnaire by e-mail or regular mail to Barbara Murphy.

LAND AND WATER USE STUDY QUESTIONNAIRE
FOR PROPERTY OWNERS WITHIN THE
56th STREET AND EARLL DRIVE WQARF REGISTRY SITE

Please answer all questions. Mark "NA" for questions that are not applicable. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Facility Name: Veritas Preparatory Academy

Date Questionnaire was completed: 1/20/15

Name of person completing Questionnaire: M Hull

Address: 7205 N Pima Rd
Scottsdale Az

Contact Name: Michelle Hull

Address:

Phone Number:

A. Property Information

1. What is the current use of the property? Please include a detailed facility description.

Utilized as a public charter School K-12 campus

2. What are the foreseeable plans for the property (extension of buildings, increased production, etc.) as far into the future as they are known and up to 100 years, if possible?

Continue as a K-12 campus

3. Is the property owned or leased? owned

4. Who is the owner of the property?

Name: Great Hearts Academies

Address: 83102 N 56th St

Phx Az. 85018

Phone Number: 602-438-7045

5. If the property is leased, how long is the lease term?

6. If the property is leased, are there plans to renew the lease and for how long?

7. If the property is owned, do you plan on relocating and if so in what timeframe?

no

B. Environmental Information

1. Are there any groundwater wells on the property? If so, what is the current use of water in those wells? (e.g.- drinking water, water supply, monitoring, irrigation, remediation)

no

2. Are there any proposed changes to the current use of water in the wells from item #1 anticipated for the next 100 years?

no

3. Please list the company's waste streams?

N/A

4. Please list any spill of material or waste products that has occurred at the facility in the past 5 years.

N/A

5. Is your company currently sampling any groundwater wells on the property? If so, how often is the sampling conducted? Are analytical results being submitted to ADEQ for the groundwater database?

no

6. If there are any groundwater wells on the property that supply drinking water, how in any people are served and what is the Public Water Supply (PWS) number?

no

7. Do you anticipate that any groundwater wells will be drilled in the next 100 years at this property? If yes, what will the water be used for?

no

8. Does your facility have an environmental manager or is environmental management outsourced to an environmental consulting firm? If so, please list the person's information:

Name: _____

Address: _____

_____

_____

Phone Number: _____

Thank you for your time. Barbara Murphy, a representative from Freescale Semiconductor's consultant, Clear Creek Associates (6155 E. Indian School Road #200, Scottsdale, Arizona 85251) may follow-up on answers provided. Please contact her at 480-659-7131 or at **bmurphy@clearcreekassociates.com** if you have any questions or comments. Please return this completed questionnaire by e-mail or regular mail to Barbara Murphy.

APPENDIX B

ADEQ Remedial Objectives Report

(Provided by ADEQ)

REMEDIAL OBJECTIVES REPORT
56th STREET and EARLL DRIVE
WATER QUALITY ASSURANCE REVOLVING FUND
REGISTRY SITE
PHOENIX, ARIZONA

November 20, 2018

Arizona Department of Environmental Quality
Remedial Projects Unit
1110 West Washington
Phoenix, Arizona 85007

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LIST OF ABBREVIATIONS & ACRONYMS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
AMA	Active Management Area
A.R.S.	Arizona Revised Statutes
AWQS	Aquifer Water Quality Standard
CIA	Community Involvement Area
COC	Contaminants of Concern
FS	Feasibility Study
LWUS	Land and Water Use Study
PCE	Tetrachloroethene
RO	Remedial Objective
RI	Remedial Investigation
SRL	Soil Remediation Level
SRP	Salt River Project
SVE	Soil Vapor Extraction
TCE	Trichloroethene
µg/L	Micrograms per liter
WQARF	Water Quality Assurance Revolving Fund

1.0 INTRODUCTION

The Arizona Department of Environmental Quality (ADEQ) has prepared this Remedial Objectives (ROs) Report for the 56th Street and Earll Drive Water Quality Assurance Revolving Fund (WQARF) Registry Site (the Site) to meet requirements established under Arizona Administrative Code (A.A.C.) R18-16-406. This RO Report relies upon the Land and Water Use Study (LWUS) and other sections of the Remedial Investigation (RI) Report dated June 2017 and prepared by Clear Creek Associates on behalf of NXP USA (formerly Motorola).

ROs are established for the current and reasonably foreseeable uses of land and waters of the state that have been or are threatened to be impacted by a release of a hazardous substance within the Community Involvement Area (CIA). Pursuant to A.A.C. R18-16-406(D), it is specified that reasonably foreseeable uses of land are those likely to occur at the site and the reasonably foreseeable uses of water are those likely to occur within one hundred years unless site-specific information suggests a longer time period is more appropriate.

Reasonably foreseeable uses are those likely to occur, based on information provided by water providers, well owners, land owners, government agencies, and others. Not every use identified in the LWUS will have a corresponding RO. Uses identified in the LWUS may or may not be addressed based on information gathered during the public involvement process, limitations of WQARF, and whether the use is reasonably foreseeable.

The ROs must be stated in the following terms: (1) protecting against the loss or impairment of each use; (2) restoring, replacing, or otherwise providing for each use; (3) when action is needed to protect or provide for the use; and (4) how long action is needed to protect or provide for the use.

The ROs chosen for the site will be used to evaluate specific remedial measures and strategies in the feasibility study (FS) phase of the WQARF process. The FS will evaluate specific remedial measures and strategies required to meet ROs. A remedial strategy is one or a combination of six general strategies identified in Paragraph B.4 of Arizona Revised Statutes (A.R.S.) § 49-282.06 (plume remediation, physical containment, controlled migration, source control, monitoring, and no action). A remedial measure is a specific action taken in conjunction with remedial strategies to achieve one or more ROs (for example, well replacement, well modification, water treatment, water supply replacement, and engineering controls).

Written comments on this proposed RO report will be accepted for a period of 30 days following the release. The comment period may be extended if significant public interest exists or if significant issues or information is brought to the attention of ADEQ. The final report will include a responsiveness summary to written comments received from the public during the comment period. The final RO Report will be an appendix to the final RI Report.

2.0 REMEDIAL OBJECTIVES FOR LAND USE

The Site is defined by the extent of impacted groundwater located downgradient of the former Motorola 56th Street facility (Facility) located on the northwest corner of 56th Street and Earll Drive. The area evaluated in the LWUS was designated by the Community Involvement Area (CIA) as about ¼ mile beyond the contaminant plume defined as the area with trichloroethene (TCE) concentrations at 5 parts per billion (or 5 micrograms per liter [µg/L]) or greater in the groundwater. The LWUS is extended upgradient of the current contaminant plume to include the Facility to the east, Osborn Road to the north, then stair-stepped, diagonally-trending (see Figure 2 in Appendix A) westward to about 27th Street and State Route Loop 202/Roosevelt Street to the south. The Facility is a 14-acre parcel located in the city of Phoenix and is located at 3102 North 56th Street, bounded approximately by 54th Street to the west and 56th Street to the east, Earll Drive to the south, and the school's alley/roadway to the north. The main contaminants of concern (COCs) for the Site are TCE and tetrachloroethene (PCE). Source areas for the contamination were located at the Facility and included dry wells, leaching fields, buried waste solvent and acid treatment tanks.

Remedial activities at the Facility have included abandonment of dry wells, excavation of contaminated soil, and operation of a soil vapor extraction (SVE) system.

Typically, ROs for land use are established for those properties known to be contaminated with hazardous substances above a Soil Remediation Level (SRL) or a risk-based level. Although TCE and PCE were historically present in the soils at the Facility, the soils have been addressed by the removal and remediation activities noted above.

2.1 Summary of Current and Reasonably Foreseeable Land Use

The Facility is currently owned by Great Hearts Academies and occupied by its Veritas Preparatory Academy. The 14-acre parcel includes four buildings, athletic fields, parking lots, and landscaped areas. The parcel is zoned as Industrial Park. The areas immediately surrounding the school are zoned residential (mostly single family residential, some multi-family residential). Based on future land use survey provided by Great Hearts Academies, there are no immediate plans to change the land use or zoning.

Former source areas at the Facility were below the current buildings, asphalted parking lots, and landscaped areas. Residential SRLs utilizing $1x10^{-6}$ numeric standards for COCs do not apply as children below the age of 18 are not expected to be in frequent, repeated contact with the soil at the Facility and the former source areas have been addressed through excavation and removal, or SVE treatment.

2.2 Soil Remedial Objective

Remedial actions for soil at the Facility have restored conditions to below Soil Remediation Level standards specified in A.A.C. R18-7-201 et. seq. (specifically background remediation standards prescribed in R18-7-204, predetermined remediation standards prescribed in R18-7-205, or site-

specific remediation standards prescribed in R18-7-206) that are applicable to the hazardous substances identified. Therefore, no ROs for soil are necessary for the Site.

3.0 REMEDIAL OBJECTIVES FOR GROUNDWATER USE

The groundwater use portion of the LWUS is an inclusive summary of information gathered from the Arizona Department of Water Resources (ADWR), water providers, municipalities, and land owners (based on Maricopa County Tax Assessor records) as well as information from reports completed as part of the ongoing investigations of the Facility and the Site area. The groundwater plume is generally bounded by 56th Street to the east, 27th Street to the west, Earll Drive to the north, Roosevelt Street to the south. The water providers within the Site are the City of Phoenix and the Salt River Project (SRP).

3.1 Summary of Current and Reasonably Foreseeable Groundwater Use

The Study Area lies within the Phoenix Active Management Area (AMA). The Phoenix AMA was created by the Arizona Groundwater Management Code passed in 1980 and covers approximately 5,646 square miles in central Arizona. All groundwater withdrawn from any AMA must occur under a groundwater right or permit, unless groundwater is being withdrawn from an exempt well.

According to ADWR records, there are six registered exempt wells and 15 registered non-exempt wells within the Study Area. None of these wells are used for drinking water (or potable water) supply. Of the six exempt wells, four are no longer in use and two may be used as flood irrigation for a residential lot. SRP operates four groundwater supply wells (non-exempt) and water conveyance structures in the Study Area in addition to eight wells located within approximately one mile of the Study Area. The other non-exempt wells are owned by Flood Control District of Maricopa County (seven), NXP USA (two), Arizona State Land Department (one), and LGE Corporation (one abandoned in 2003). ADWR records also show 390 registered monitoring wells. Not all of these wells have been drilled and some have been subsequently abandoned. Additionally, the records show 42 registered "other" wells which are typically geotechnical borings or investigation wells, not used for groundwater monitoring or withdrawal.

Questionnaires were mailed to the City of Phoenix, SRP, Great Hearts Academies, and two private property owners with ADWR registered wells to obtain information regarding current and future uses of groundwater within the Site. The two private property owners were contacted by certified mail twice; neither responded. The following paragraphs identify current and foreseeable groundwater uses within the Site and ROs.

The Site is in the City of Phoenix and the Phoenix AMA, an area where groundwater use is controlled and regulated by ADWR. The City of Phoenix does not operate groundwater wells within the Site but has indicated that it expects groundwater to be available for use in the future. Currently a portion of the groundwater within the Site is contaminated with COCs that would restrict use of the groundwater by the City of Phoenix if the city wanted to use the groundwater for municipal public drinking water supply purposes.

SRP currently owns and operates four wells (16.9E-6.0N; 18.0E-7.0N; 17.5E-7N; 18.5E-7N) within the Site boundaries, which all pump to the Grand Canal. TCE has been detected above the Arizona Water Quality Standard (AWQS) of 5.0 micrograms per liter (µg/L) in well 16.9-6.0N and 18.5E-7N. Currently the wells provide water for irrigation; however, SRP anticipates that the wells will transition to drinking water supply in the reasonably foreseeable future.

3.2 Groundwater Remedial Objective

Current groundwater use in the site is for irrigation however, the regional aquifer is considered to be a drinking water supply source for the city of Phoenix.. Future groundwater use at this site is for irrigation and domestic purposes. Multiple monitoring wells and remediation system extraction wells have exceeded AWQS for site COCs. Therefore, the RO for groundwater use at the site is:

> **To restore, replace or otherwise provide for water for the designated use, lost or impaired by contamination associated with the 56th Street and Earll WQARF site. This action will be needed for as long as the need for the water exists, the resource remains available and the contamination associated with the 56th Street and Earll WQARF site prohibits or limits the use of groundwater.**

4.0 REMEDIAL OBJECTIVES FOR SURFACE WATER USE

Surface water within the Site occurs in engineered concrete-lined canals that are part of SRP's water distribution system. SRP operates the Grand Canal in the vicinity of the Site area. Water in the canals is from upgradient surface water sources (Salt and Verde rivers and Central Arizona Project water), occasional storm water run-off, or some additional groundwater that is pumped from SRP wells to supplement the surface water supplies in dry years. The water in the Grand Canal in the Site area and downgradient is used for agricultural and urban irrigation and recharge purposes and meets the water qualities for such purposes.

4.1 Summary of Current and Reasonably Foreseeable Surface Water Use

Surface water within the Site is provided/distributed by SRP via the Grand Canal for irrigation and recharge uses. The Grand Canal is located in the southwestern portion of the Site 34th Street and State Route Loop 202 (south of McDowell Road).

NXP operates a groundwater treatment system, known as the 34th Street Groundwater Treatment Facility and includes two groundwater extraction wells on the north bank of the Grand Canal. Treatment plant pipelines convey water from the extraction wells to the treatment plant and from the treatment plant to the Grand Canal where the treated groundwater is discharged. The treated water currently meets MCLs for the contaminants of concern.

Future SRP plans for the Grand Canal water may include using the canal water to supply raw water to municipal water treatment facilities for treatment and distribution as drinking water.

4.2 Surface Water Remedial Objective

Current surface water use within the Site via the Grand Canal is for irrigation and groundwater recharge uses and comes primarily from upgradient surface water sources occasionally supplemented by water from groundwater wells; SRP's reasonably foreseeable plans are to provide the canal water as a raw water supply for treatment for drinking water supply purposes. Currently, the surface water meets the standards for its intended use; therefore no ROs for surface water are necessary.

Appendix A

Recommendations Received From Oral Solicitations/Comments for Proposed Remedial Objectives

No oral solicitations/comments received.

Appendix B

Recommendations Received From Written Solicitations/Comments for Proposed Remedial Objectives

From: Nichole S. Osuch [mailto:Osuch.Nichole@azdeq.gov]
Sent: Tuesday, September 4, 2018 4:53 PM
To: Jenn Mccall <jenn.mccall@nxp.com>
Subject: comment on Draft RI Report - 56th St & Earll Dr WQARF Site

Re: Comment on Draft Remedial Investigation Report
56th Street and Earll Drive WQARF Site

Dear Ms. McCall,

The Arizona Department of Environmental Quality Remedial Projects Unit has the following comment on the *Draft Remedial Investigation Report* dated May 2018:

- The RPU requests NXP USA, Inc. install additional groundwater monitoring wells at the downgradient edge of the plume to define the extent of contamination in accordance with Arizona Administrative Code R18-16-406 as a Remedial Investigation data gap to be completed in the Feasibility Study. Laboratory analytical results from groundwater samples collected in April 2018 indicates trichloroethene above the Aquifer Water Quality Standards of 0.005 milligram per liter at DM-43 and DM-44.

Please contact me if you have any questions.

Nichole Osuch, PMP
Project Manager
Remedial Projects Unit
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, AZ 85007
602-771-4847
osuch.nichole@azdeq.gov

City of Phoenix
OFFICE OF ENVIRONMENTAL PROGRAMS

September 4, 2018

Arizona Department of Environmental Quality
Waste Programs Division
Ms. Nicole Osuch
1110 W. Washington Street
Phoenix, Arizona 85007

Re: Comments regarding the Draft Remedial Investigation and Remedial Objectives Report for 56th Street and Earll Drive, Water Quality Assurance Revolving Fund (WQARF) prepared by Clear Creek Associates for NXP Semiconductor (former Freescale Semiconductor, Inc., former Motorola) under a Consent Order RP-23-15 with the Arizona Department of Environmental Quality (ADEQ) dated July, 2018.

Dear Ms. Osuch,

The City of Phoenix (City) has reviewed the above referenced Draft RI and RO for 56th Street and Earll Drive and has the following comments for ADEQ.

General comments:
The City is pleased that NXP Semiconductor (former Freescale Semiconductor, Inc., former Motorola) has finally completed the draft remedial investigation report for the 56th Street and Earll Drive Water Quality Assurance Revolving Fund (WQARF) site. This work was performed under the May 27, 2015 Consent Order between NXP and Arizona Department of Environmental Quality (ADEQ). For the purpose of this letter the City will refer to NXP as the former Motorola (as the draft RI stated).

The Draft RI mentions other potential sources in the Introduction and on figure 5. Figure 5 indicates 7 other potential sources that Motorola believes contributed to the contamination plume. Motorola lists the City of Phoenix Water Facility located at 52nd Street and Thomas Road (City Facility) as the first most likely potential additional source.

The City adamantly disagrees with Motorola's claim. The City has conducted an extensive historical search and collected numerous soil and groundwater samples at this facility. This work was completed on a voluntary basis by the City under an approved Arizona Department of Environmental Quality (ADEQ) workplan in 1995. The City met with ADEQ and provided an addendum to our investigation report. The results of the investigation demonstrated that the City is not a responsible party to this WQARF site. The City facility is part of our water distribution system, and in the past, was used to supply water to the City from our Val Verde Plant. Now it is a water maintenance yard that has two divisions that operate out of this facility; Collection and Distribution. The Collection and Distribution Divisions have crews that report there and then set out to perform maintenance or repairs to the water and wastewater lines that occur throughout Phoenix. Heavy duty utility trucks, haul trucks, backhoes, loaders and employee vehicles park there. This is not a manufacturing facility, and based on the work the City has conducted at this facility, and the historical research into the chemical use at this facility, there has been no use or storage of significant quantities of products containing chlorinated solvents at

this location. The City's business is to serve the public, which we do through numerous avenues such as delivering clean water, which this City facility helps support.

In contrast to the City's maintenance yard, Motorola is a semiconductor company that operated a manufacturing facility on its property. At the Motorola plant, research and development operations were conducted for numerous products. These products were then manufactured and tested at this facility. It has been documented by Motorola's former consultant, Dames and Moore, in 1986 and ADEQ in 1991 that Motorola released approximately 20,000 gallons of chlorinated solvents on their property between the 1950's and 1970's. Motorola is a manufactory who made products and used enormous amounts of solvents in their process. Motorola is located upgradient from the City's property, consequently, any releases at the Motorola property that leached to groundwater would flow under the City's property.

Specific comments:

1. Executive Summary page 2: The RI discusses historical elevated soil gas concentrations were located at the City Facility. The City's Geraghty and Miller 1995 report indicates that two soil samples were taken in the capillary fringe. These wet and moist samples had trace amounts of Tetrachloroethene (PCE) and Trichloroethene (TCE). These samples were taken in the capillary fringe or smear zone of the groundwater that was contaminated from an up-gradient source (Motorola). The five other samples taken at this location from 0 to 6.5 feet below ground surface (bgs)indicated non-detect for PCE and TCE. These samples were taken in the old southern water basin which is approximately 5 feet deep. Groundwater in the southern basin during the time of sampling was approximate 14 to 15 feet bgs. This indicates that the PCE and TCE in the 10 – 11.5-foot sample (actually 15-foot sample due to basin depth) was contaminated from the up-gradient (Motorola) groundwater plume. This part of the report should be removed or should accurately reflect the source of these detections. The samples taken at COP facility indicate the groundwater beneath our property was contaminated by the Motorola plume directly upgradient.
2. Introduction page 2: The RI refers to Figure 5 for other potential sources. Figure 5 indicates 7 other locations where potential sources might be, and the City Facility is listed as the 1st potential responsible party. The figure cites Motorola's other leased property as the 5th possible source on this figure. This figure is inappropriate as it implies the City facility, which has demonstrated through sampling that is not a responsible party, is the next most likely responsible party. It is the City's opinion that the City facility should not be indicated on this figure at all, but especially not listed first.
3. Stage IV investigation page 25: The RI states that high concentrations of PCE in wells DM-13 and COP 52 may be indicating another source of VOC contamination. The City disagrees and hypotheses that the high concentrations could be from the result of the bedrock high that the City Facility is located on, which allows the groundwater contamination to pool up and concentrate, or, it could be from a slug of higher concentration contamination moving downgradient from the Motorola facility.
4. 1995 Internal PRP Search and 2008 Information to ADEQ, 7.1.8 page 28 and Appendix F. This letter indicates that City Facility as a potential source. The City adamantly disagrees with Motorola's claim for all the reasons cited above.
5. The City would like to clarify that the "no further action" letter sent by ADEQ in 1997 to Motorola was not granted, pursuant to Arizona Revised Statutes 49 -181.
6. Motorola has a data gap in their characterization of the groundwater plume and therefore it is not defined. There are no wells outside their plume boundary of 5 ug/L for TCE, which is the Aquifer Water Quality Standard (AWQS). On the north western side of the plume, DM43, DM29,

DM32, DM28, DM27 are all above the AWQS of 5 ug/L, this indicates the plume is undefined on the north western side.

7. There are numerous typos in the report. The City will only point out a few where the meaning of the report does not make sense. Section 2.2.3.3, some of the wells may still "be" in use; section 3.2.2 appropriately cleaned up "and" made available; section 7.1.3 compare favorably with "existing" water quality data; and section 7.1.8 PRP search under the direction of "their" legal counsel.
8. The City, as a water provider, agrees with the RO that ADEQ has selected for the groundwater at this site and appreciates that ADEQ is protecting this most important resource.

The City appreciates the opportunity to comment on this RI and RO. If ADEQ would like to meet and discuss any of these comments, please contact me at 602-256-5681 or julie.riemenschneider@phoenix.gov.

Sincerely,

Julie Riemenschneider
Environmental Programs Coordinator
Office of Environmental Programs, City of Phoenix

C: Tina LePage, ADEQ (electronic copy)
Scott Greene, ADEQ (electronic copy)
Nancy Allen, OEP (electronic copy)
Stephen Wetherell (electronic copy)
Alexander Richards, WSD (electronic copy)

Delivering water and power™

Andrea Martinez, Water Quality &
Waste Management Services Manager
PAB 359 | P.O. Box 52025
Phoenix, AZ 85072-2025
P: (602) 236-2618 | srpnet.com
Andrea.martinez@srpnet.com

September 4, 2018

Via Electronic Mail

To: Ms. Nichole Osuch, PMP
Project Manager
Remedial Projects Unit
Arizona Department of Environmental Quality
1110 W. Washington St.
Phoenix, AZ 85007
Email: osuch.nichole@azdeq.gov

Reference: Draft Remedial Investigation Report, 56th Street and Earll Drive Water Quality Assurance Revolving Fund Site; Phoenix, AZ

RE: Salt River Project Comments Draft- Remedial Investigation Report, 56th Street and Earll Drive

Salt River Project Agricultural Improvement and Power District (SRP) appreciates the opportunity to provide comments on the Draft Remedial Investigation Report (RI) published in May 2018 for the 56th Street and Earll Drive Water Quality Assurance Revolving Fund (WQARF) site in Phoenix. SRP has reviewed the RI and requests that the Arizona Department of Environmental Quality (ADEQ) consider the following update to Attachment B, SRP's *"Land and Water Use Study Questionnaire for Municipalities/Utilities within the 56th Street and Earll Drive WQARF Registry Site"* dated February 17, 2015 and subsequent Appendix A *"Land and Water Use Study Report"* dated June 2017. Comments are as follows:

Update to foreseeable plans for the municipality's/utility's property within the 56th Street and Earll Drive WQARF Site boundary (Questionnaire #3)

SRP signed a contract in 2017 to supply raw water to the City of Goodyear (City) future water treatment plant. Once the City's water treatment facility is completed, groundwater wells in and around the site, including SRP wells 18.5E-7N, 18E-5N, 18E-7N, and 16.9E-6N, will transition from irrigation status to also include raw drinking water supply well

status. The water will be delivered to the City of Goodyear water treatment plant via the Grand Canal.

Update to list of future concerns (e.g. - freeway expansion, water use, water availability, etc.), "special projects" and future uses for wells within the site boundaries. (Questionnaire #6, #8 and #16)

SRP reiterates that the current use of these wells for downstream irrigation will transition in the near term to a raw water supply for drinking water purposes. Once the City starts treating the raw water delivered by SRP, thousands of drinking water customers will likely be served.

SRP maintains a policy that prohibits wells to discharge into canals if the water does not meet applicable standards for the receiving water body. Consistent with Arizona Pollutant Discharge Elimination System (AZPDES) permit #AZ0024341, wells discharging into canals that feed municipal drinking water systems must not exceed established drinking water standards (DWS) for volatile organic compounds (VOC). As such, SRP expects that responsible parties will provide well head treatment at any impacted SRP well, and any water discharged to an SRP canal meets DWS. SRP reserves the right to use impacted wells for irrigation purposes where the well's discharge may be isolated to laterals and canals without prospective drinking water uses, where concentrations of contaminants do not exceed the relevant standard or where there is no risk to public health.

Our concern is heightened because of anticipated effects of climate change and the additional stress expected that will be placed on already stressed surface water supplies. The importance of groundwater and the ability to utilize the aquifer in local and large scale water management scenarios is critical to the future growth and wellbeing of the entire metro-area. We cannot overstate the importance of effective cleanups of contaminants that potentially threaten drinking water in the Phoenix metropolitan area.

SRP appreciates the opportunity to provide the foregoing comments to ADEQ. SRP reserves its right to provide additional comments once the foregoing concerns are addressed.

If you have any questions, please call me at 602-236-2618.

Sincerely,

Andrea Martinez
Water Quality & Waste Management Services Manager

cc: Bob Pane, SRP

Responsiveness Summary – Draft Remedial Investigation Report
(comments in italics, NXP response in bold)

ADEQ Comment (Email dated September 4, 2018):

The RPU requests NXP USA, Inc. install additional groundwater monitoring wells at the downgradient edge of the plume to define the extent of contamination in accordance with Arizona Administrative Code R18-16-406 as a Remedial Investigation data gap to be completed in the Feasibility Study. Laboratory analytical results from groundwater samples collected in April 2018 indicates trichloroethene above the Aquifer Water Quality Standards of 0.005 milligram per liter at DM-43 and DM-44.
NXP Response: NXP will work with ADEQ to evaluate the potential need to further define the western boundary of the plume.

City of Phoenix comments (letter to ADEQ dated September 4, 2018):

General comments:
The City is pleased that NXP Semiconductor (former Freescale Semiconductor, Inc., former Motorola) has finally completed the draft remedial investigation report for the 56th Street and Earll Drive Water Quality Assurance Revolving Fund (WQARF) site. This work was performed under the May 27, 2015 Consent Order between NXP and Arizona Department of Environmental Quality (ADEQ). For the purpose of this letter the City will refer to NXP as the former Motorola (as the draft RI stated).

The Draft RI mentions other potential sources in the Introduction and on figure 5. Figure 5 indicates 7 other potential sources that Motorola believes contributed to the contamination plume. Motorola lists the City of Phoenix Water Facility located at 52nd Street and Thomas Road (City Facility) as the first most likely potential additional source.

The City adamantly disagrees with Motorola's claim. The City has conducted an extensive historical search and collected numerous soil and groundwater samples at this facility. This work was completed on a voluntary basis by the City under an approved Arizona Department of Environmental Quality (ADEQ) workplan in 1995. The City met with ADEQ and provided an addendum to our investigation report. The results of the investigation demonstrated that the City is not a responsible party to this WQARF site. The City facility is part of our water distribution system, and in the past, was used to supply water to the City from our Val Verde Plant. Now it is a water maintenance yard that has two divisions that operate out of this facility; Collection and Distribution. The Collection and Distribution Divisions have crews that report there and then set out to perform maintenance or repairs to the water and wastewater lines that occur throughout Phoenix. Heavy duty utility trucks, haul trucks, backhoes, loaders and employee vehicles park there. This is not a manufacturing facility, and based on the work the City has conducted at this facility, and the historical research into the chemical use at this facility, there has been no use or storage of significant quantities of products containing chlorinated solvents at this location. The City's business is to serve the public, which we do through numerous avenues such as delivering clean water, which this City facility helps support.

In contrast to the City's maintenance yard, Motorola is a semiconductor company that operated a manufacturing facility on its property. At the Motorola plant, research and development operations were conducted for numerous products. These products were then manufactured and tested at this facility. It has been documented by Motorola's former consultant, Dames and Moore, in 1986 and ADEQ in 1991that Motorola released approximately 20,000 gallons of chlorinated solvents on their property between the 1950's and 1970's. Motorola is a manufactory who made products and used enormous amounts of solvents in their process. Motorola is located upgradient from the City's property, consequently, any releases at the Motorola property that leached to groundwater would flow under the City's property.

NXP Response: There was no specific connotation to the numbering on Figure 5. As noted below. To be more consistent, we have revised Figure 5 to more closely represent the historical information from prior reports on PRPs, specifically the Dames & Moore 1995 report and the September 24, 2008 PRP letter from Freescale to ADEQ.

Specific comments:

1. *Executive Summary page 2: The RI discusses historical elevated soil gas concentrations were located at the City Facility. The City's Geraghty and Miller 1995 report indicates that two soil samples were taken in the capillary fringe. These wet and moist samples had trace amounts of Tetrachloroethene (PCE) and Trichloroethene (TCE). These samples were taken in the capillary fringe or smear zone of the groundwater that was contaminated from an up-gradient source (Motorola). The five other samples taken at this location from 0 to 6.5 feet below ground surface (bgs) indicated non-detect for PCE and TCE. These samples were taken in the old southern water basin which is approximately 5 feet deep. Groundwater in the southern basin during the time of sampling was approximate 14 to 15 feet bgs. This indicates that the PCE and TCE in the 10 -11.5-foot sample (actually 15-foot sample due to basin depth) was contaminated from the up-gradient (Motorola) groundwater plume. This part of the report should be removed or should accurately reflect the source of these detections. The samples taken at COP facility indicate the groundwater beneath our property was contaminated by the Motorola plume directly upgradient.*

   NXP Response: Based on the available water level and water quality data from multiport monitor wells in the vicinity of the City Facility, we do not concur with the conclusions in the Geraghty and Miller Report.

2. *Introduction page 2: The RI refers to Figure 5 for other potential sources. Figure 5 indicates 7 other locations where potential sources might be, and the City Facility is listed as the 1st potential responsible party. The figure cites Motorola's other leased property as the 5th possible source on this figure. This figure is inappropriate as it implies the City facility, which has demonstrated through sampling that is not a responsible party, is the next most likely responsible party. It is the City's opinion that the City facility should not be indicated on this figure at all, but especially not listed first.*

   NXP Response: This figure was not intended as a "ranking" of PRPs as indicated in the legend which only uses the numbers as a reference point. The PRP information is presented as part of the description of all the remedial investigations done by NXP and its predecessors over the years to define the contamination and possible sources at the site. To be more consistent, we have revised Figure 5 to more closely represent the historical information

from prior reports on PRPs, specifically the Dames & Moore 1995 report and the September 24, 2008 PRP letter from Freescale to ADEQ.

3. *Stage IV investigation page 25: The RI states that high concentrations of PCE in wells DM-13 and COP 52 may be indicating another source of VOC contamination. The City disagrees and hypotheses that the high concentrations could be from the result of the bedrock high that the City Facility is located on, which allows the groundwater contamination to pool up and concentrate, or, it could be from a slug of higher concentration contamination moving downgradient from the Motorola facility.*
   NXP Response: Please see NXP Response to Specific Comment No. 1, above.

4. *1995 Internal PRP Search and 2008 Information to ADEQ, 7.1.8 page 28 and Appendix F. This letter indicates that City Facility as a potential source. The City adamantly disagrees with Motorola's claim for all the reasons cited above.*
   NXP Response: Please see NXP Response to Specific Comment No. 1, above.

5. *The City would like to clarify that the "no further action" letter sent by ADEQ in 1997 to Motorola was not granted, pursuant to Arizona Revised Statutes 49 -181.*
   NXP Response: Comment noted. That section was not enacted until 2000, after the date of the letter. Nevertheless, ADEQ concluded in the 1997 letter that "no further remedial action for soils was needed unless new data becomes available that warrants further investigation or remediation."

6. *Motorola has a data gap in their characterization of the groundwater plume and therefore it is not defined. There are no wells outside their plume boundary of 5 ug/L for TCE, which is the Aquifer Water Quality Standard {AWQS). On the north western side of the plume, DM43, DM29, DM32, DM28, DM27 are all above the AWQS of 5 ug/L, this indicates the plume is undefined on the north western side.*
   NXP Response: NXP will work with ADEQ to evaluate the potential need to further define the western boundary of the plume.

7. *There are numerous typos in the report. The City will only point out a few where the meaning of the report does not make sense. Section 2.2.3.3, some of the wells may still "be" in use; section 3.2.2 appropriately cleaned up "and" made available; section 7.1.3 compare favorably with "existing" water quality data; and section 7.1.8 PRP search under the direction of "their" legal counsel.*
   NXP Response: NXP and Clear Creek make every effort to avoid typos in any reports we produce. The typos and grammatical preferences identified by the City do not detract from the overall quality of the report and we will correct the three typos and others, if any, in the final report.

Responsiveness Summary – Remedial Objectives
(comments in italics, NXP response in bold)

Salt River Project Comments (letter to ADEQ dated September 4, 2018):

SRP has reviewed the RI and requests that the Arizona Department of Environmental Quality (ADEQ) consider the following update to Attachment B, SRP's "Land and Water Use Study Questionnaire for Municipalities/Utilities within the 56th Street and Earll Drive WQARF Registry Site" dated February 17, 2015 and subsequent Appendix A "Land and Water Use Study Report" dated June 2017. Comments are as follows:

Update to foreseeable plans for the municipality's/utility's property within the 56th Street and Earll Drive WQARF Site boundary (Questionnaire #3)

SRP signed a contract in 2017 to supply raw water to the City of Goodyear (City) future water treatment plant. Once the City's water treatment facility is completed, groundwater wells in and around the site, including SRP wells 18.5E-7N, 18E-5N, 18E-7N, and 16.9E- 6N, will transition from irrigation status to also include raw drinking water supply well status. The water will be delivered to the City of Goodyear water treatment plant via the Grand Canal.
NXP Response: SRP's statement regarding the transmission of raw water to a potential future drinking water treatment facility via the Grand Canal will be added to the Final RI Report.

Update to list of future concerns (e.g. - freeway expansion, water use, water availability, etc.), "special projects" and future uses for wells within the site boundaries. (Questionnaire #6, #8 and #16)

SRP reiterates that the current use of these wells for downstream irrigation will transition in the near term to a raw water supply for drinking water purposes. Once the City starts treating the raw water delivered by SRP, thousands of drinking water customers will likely be served.
NXP Response: See prior response. Treated water from the Liquid-phase Granular Activated Carbon (LGAC) groundwater treatment system operated as part of the Early Response Action currently removes the COCs to, or below, their respective drinking water Maximum Contaminant Levels (MCLs).

SRP maintains a policy that prohibits wells to discharge into canals if the water does not meet applicable standards for the receiving water body. Consistent with Arizona Pollutant Discharge Elimination System (AZPDES) permit #AZ0024341, wells discharging into canals that feed municipal drinking water systems must not exceed established drinking water standards (DWS) for volatile organic compounds (VOC). As such, SRP expects that responsible parties will provide well head treatment at any impacted SRP well, and any water discharged to an SRP canal meets DWS. SRP reserves the right to use impacted wells for irrigation purposes where the well's discharge may be isolated to laterals and canals without prospective drinking water uses, where concentrations of contaminants do not exceed the relevant standard or where there is no risk to public health.

NXP Response: The existing Remedial Objective recognizes the need to restore, replace, or otherwise provide for uses of water lost or impaired by contamination from the 56th Street and Earll Drive WQARF Site. Discharge from the treatment facility operated by NXP is required to meet the MCL for TCE and PCE in accordance with NXP's AZPDES Permit No. AZ0025861. Treated water from the LGAC groundwater treatment system currently removes the COCs to, or below, their respective drinking water MCLs.

Our concern is heightened because of anticipated effects of climate change and the additional stress expected that will be placed on already stressed surface water supplies. The importance of groundwater and the ability to utilize the aquifer in local and large scale water management scenarios is critical to the future growth and wellbeing of the entire metro-area. We cannot overstate the importance of effective cleanups of contaminants that potentially threaten drinking water in the Phoenix metropolitan area.
NXP Response: See prior response.

City of Phoenix comments (letter to ADEQ dated September 4, 2018):

8. *The City, as a water provider, agrees with the RO that ADEQ has selected for the groundwater at this site and appreciates that ADEQ is protecting this most important resource.*
   NXP Response: NXP agrees with the appropriateness of the RO for groundwater.

APPENDIX C

Motorola 56th Street and Earll Drive WQARF Site

Bibliography - List of Reports, Documents, and Key Correspondence as Part of Site Characterization and Ongoing Remedial Investigations

APPENDIX C

MOTOROLA 56TH STREET AND EARLL DRIVE WQARF SITE BIBLIOGRAPHY - LIST OF REPORTS, DOCUMENTS, AND KEY CORRESPONDENCE AS PART OF SITE CHARACTERIZATION AND REMEDIAL INVESTIGATIONS

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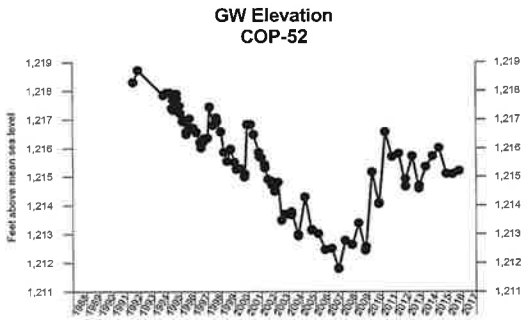
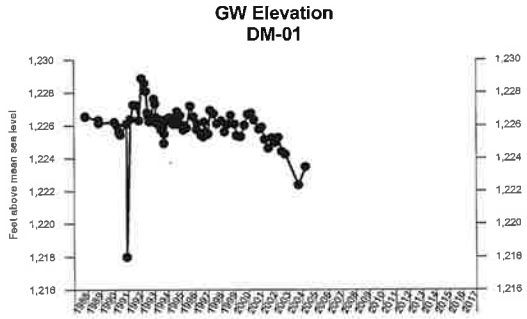
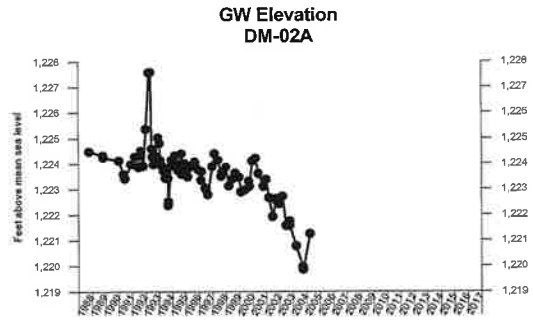
APPENDIX D

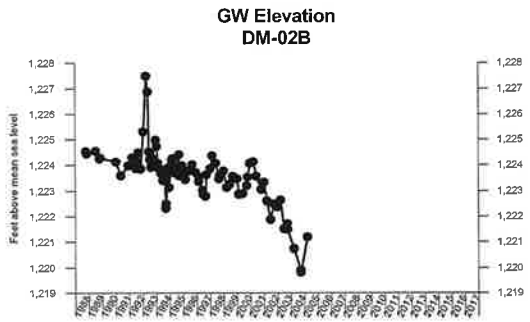
Time Series Graphs

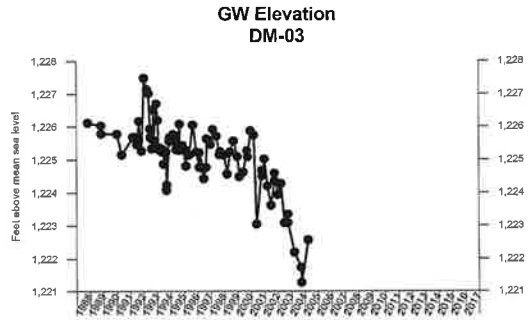
Time–Series Graphs
Hydrographs of Groundwater Elevation by Well

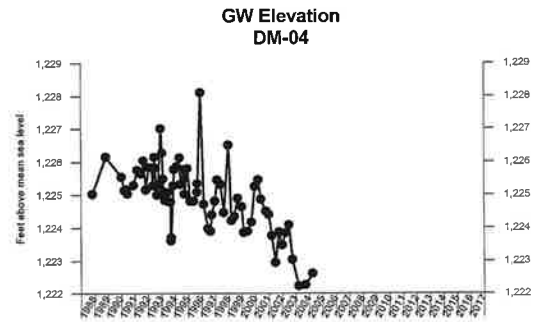


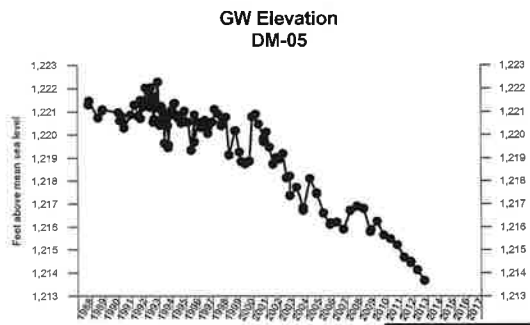


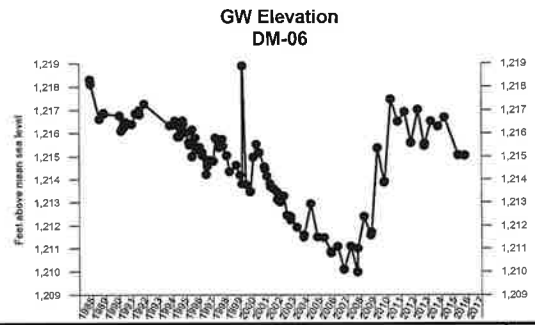


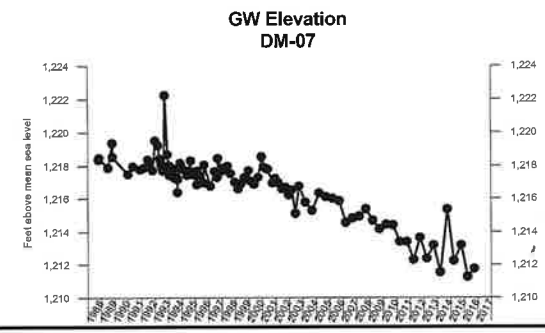












EXPLANATION

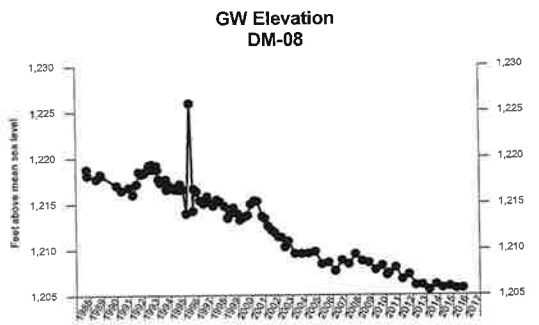
● - Measured Value
○ - Undetected (Displayed at RL)

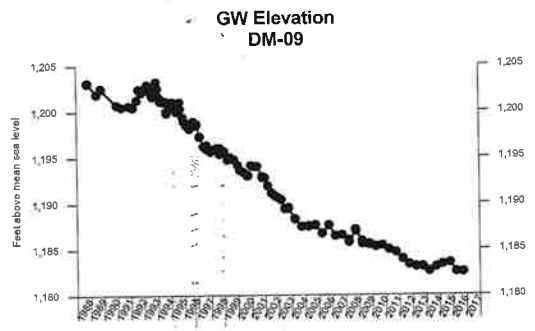
CLEAR CREEK ASSOCIATES

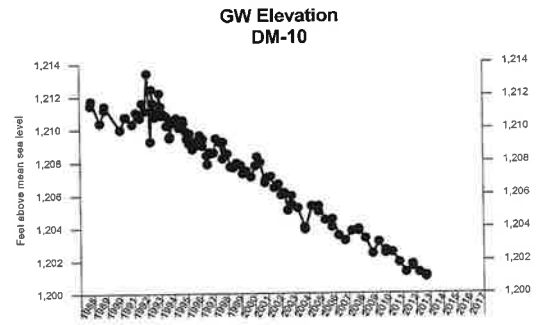
Project Name: 56th Street and Earll Drive WQARF Site

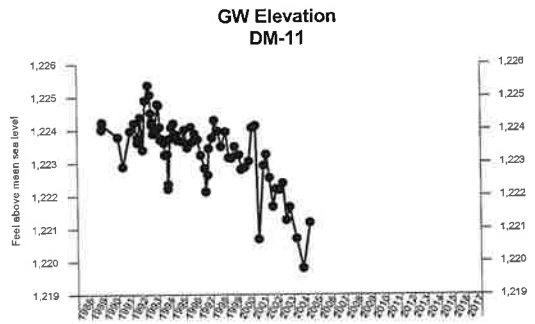
Job No: 005-134-17 | Date: June 2017

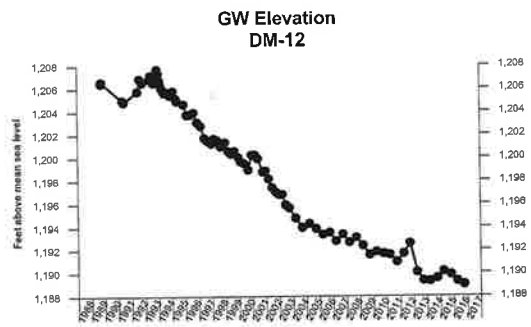
Time-Series Graphs
GW Elevation
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

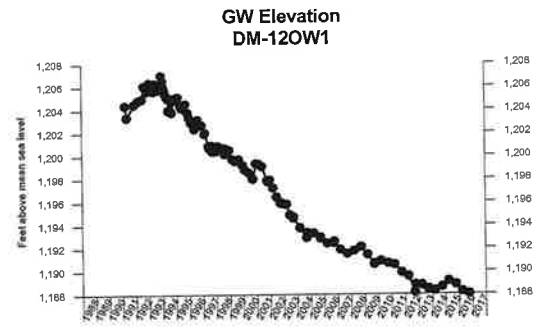


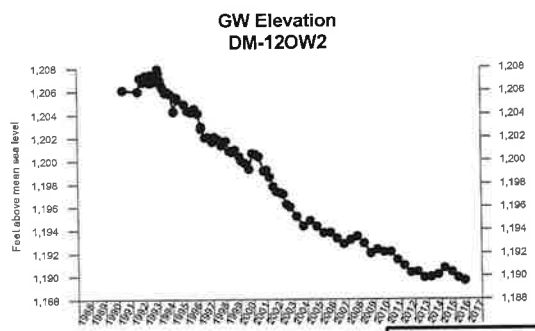


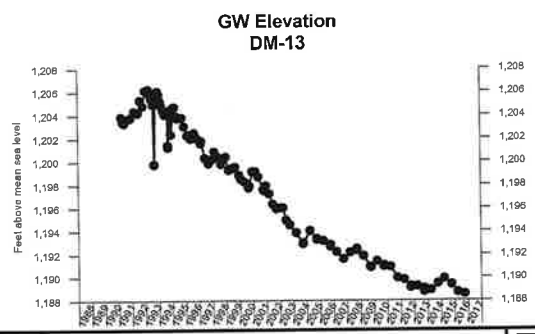


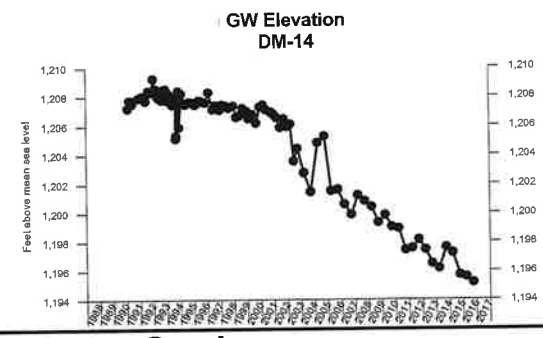












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CLEAR CREEK ASSOCIATES

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Job No: 005-134-17 | Date: June 2017

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56th Street and Earll Drive WQARF Site
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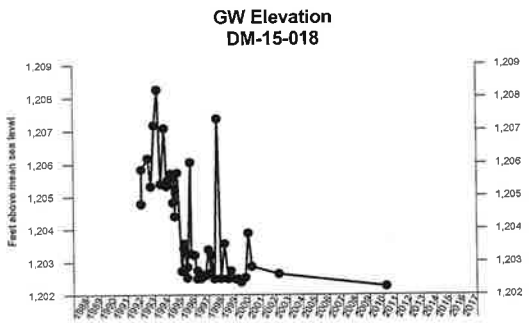

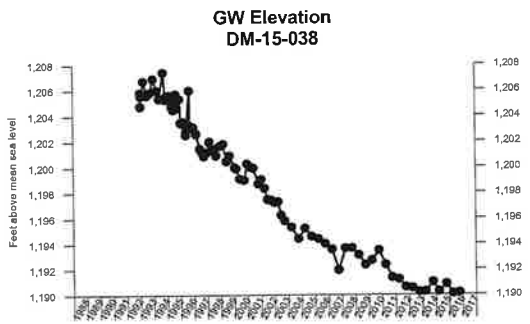

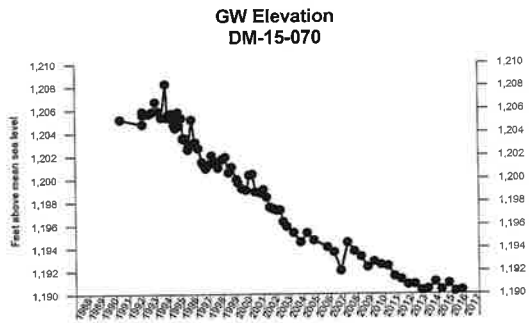

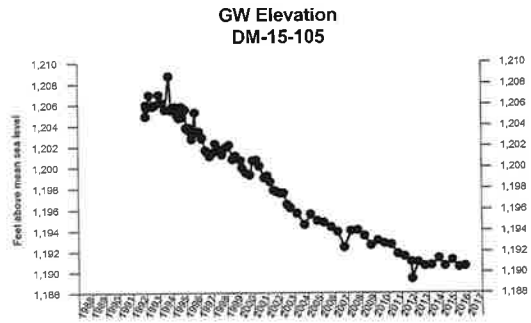

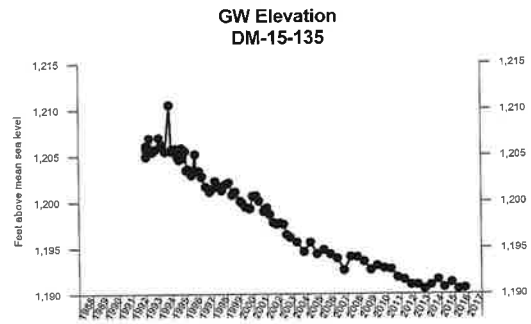

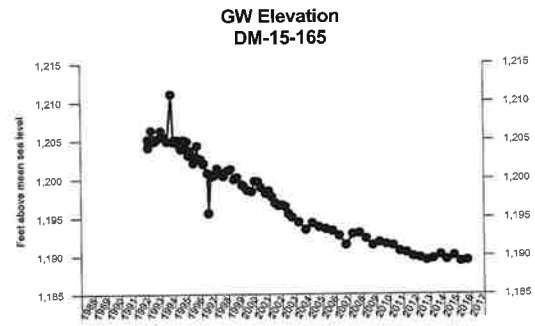

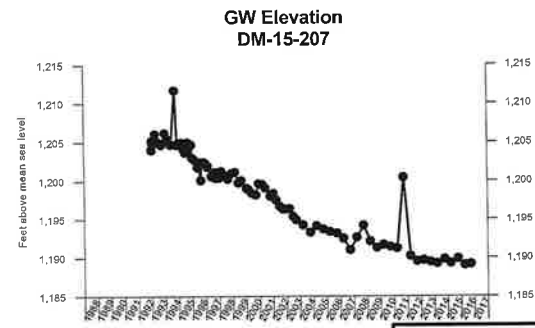

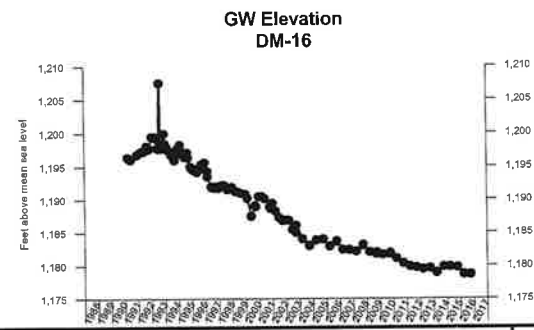

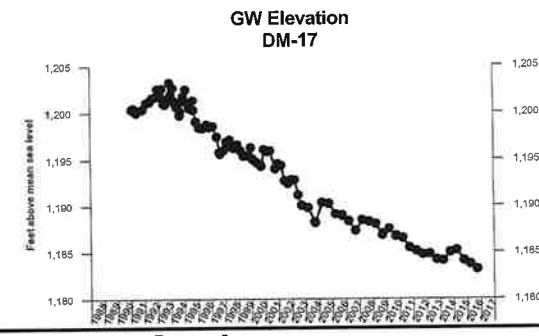

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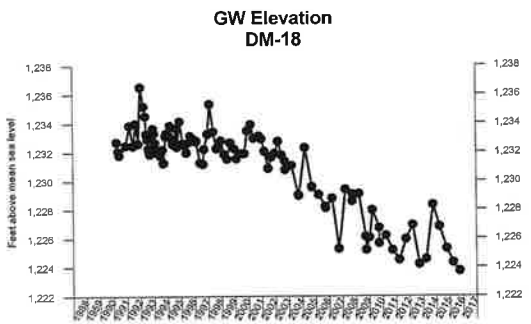
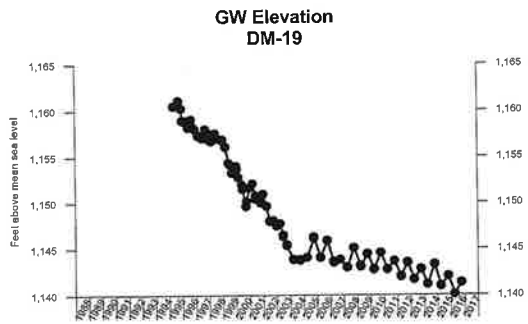
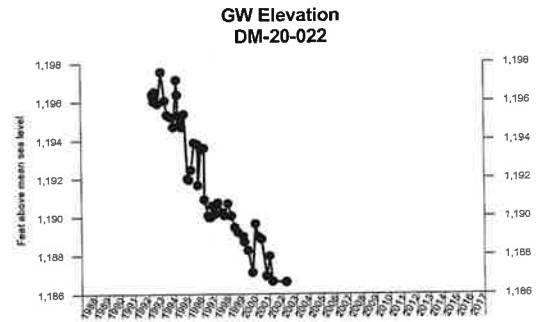
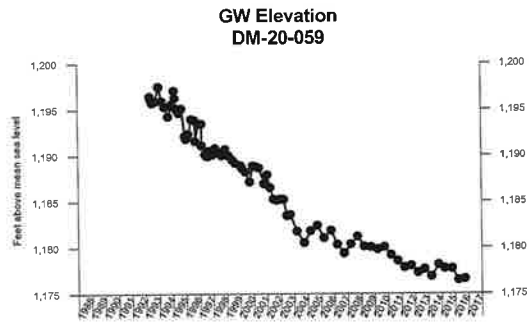
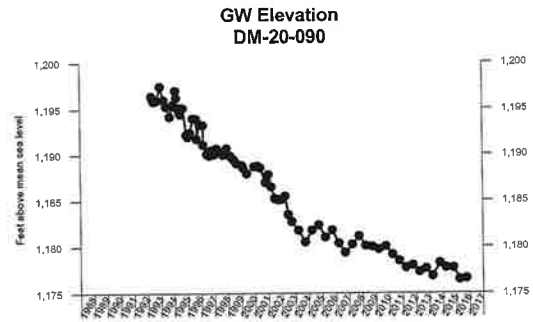
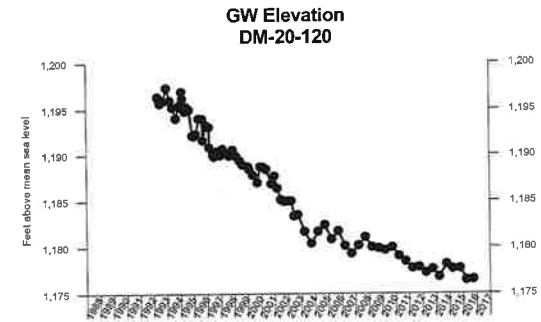


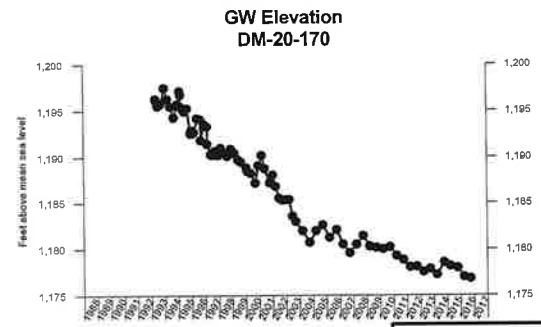


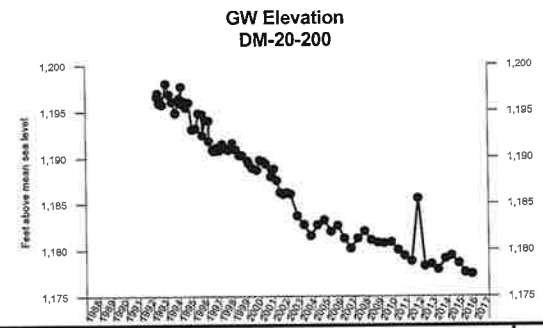


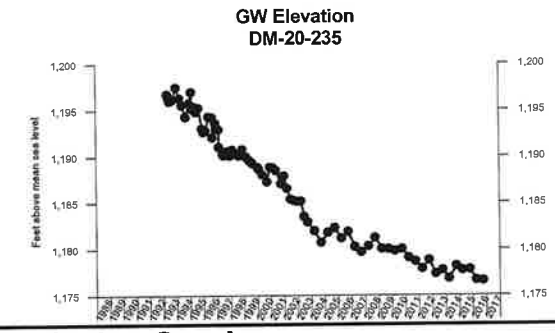












EXPLANATION

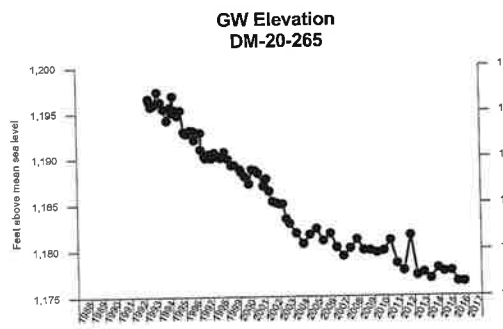
● - Measured Value
o - Undetected (Displayed at RL)

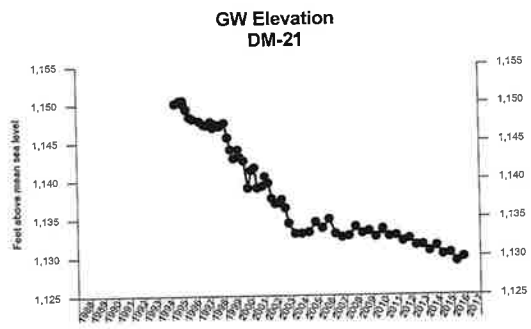
CLEAR CREEK ASSOCIATES

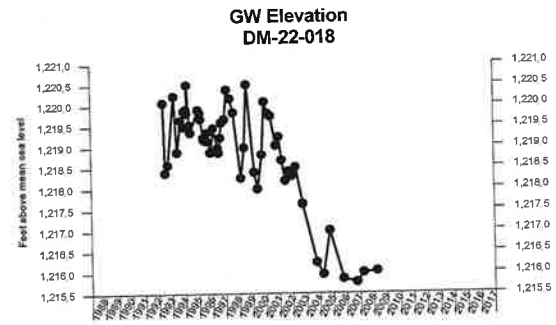
Project Name: 56th Street and Earll Drive WQARF Site

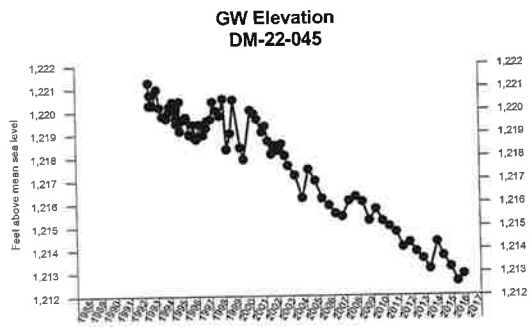
Job No: 005-134-17 | Date: June 2017

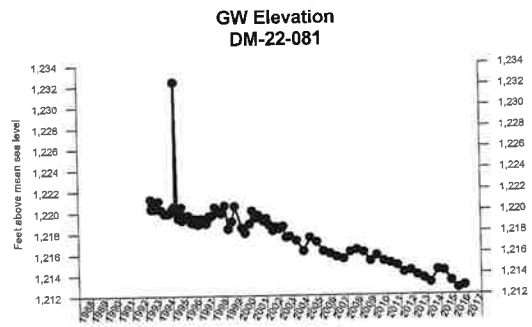
Time-Series Graphs
GW Elevation
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

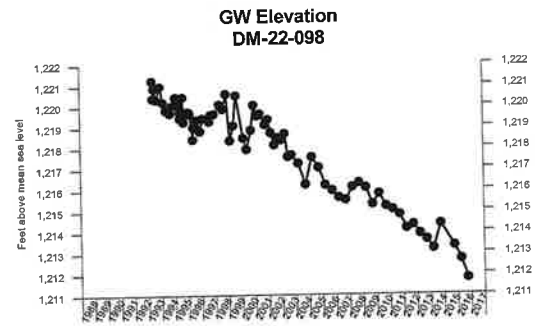


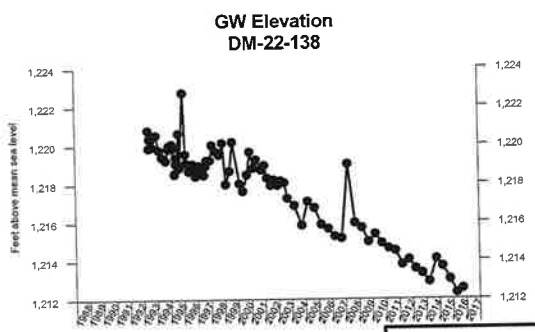


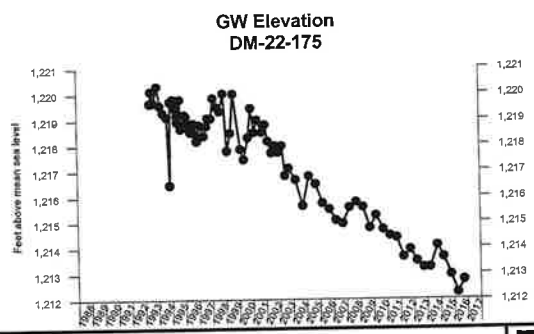


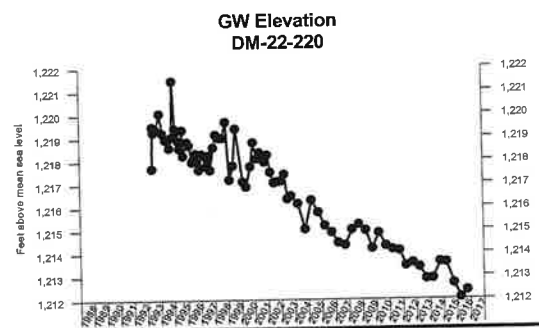












EXPLANATION

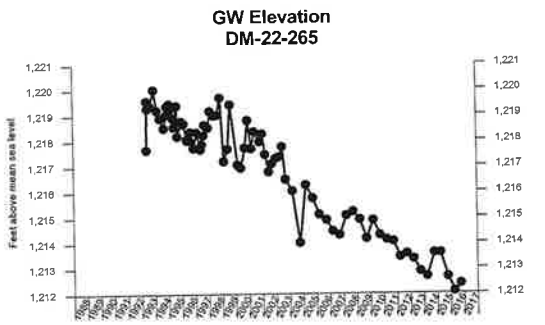
● - Measured Value
○ - Undetected (Displayed at RL)

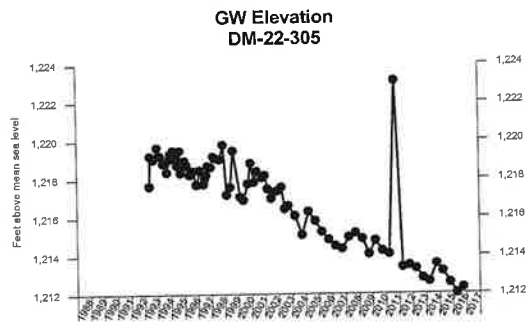
CLEAR CREEK ASSOCIATES

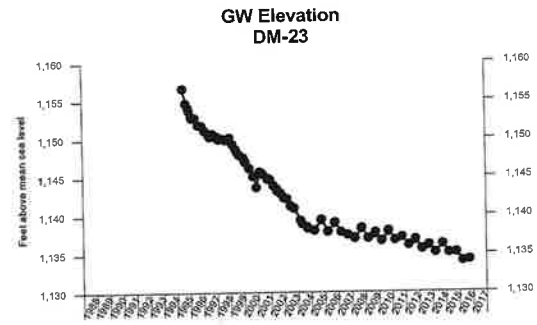
Project Name: 56th Street and Earll Drive WQARF Site

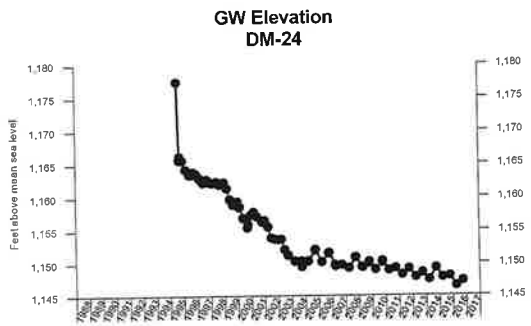
Job No: 005-134-17 | Date: June 2017

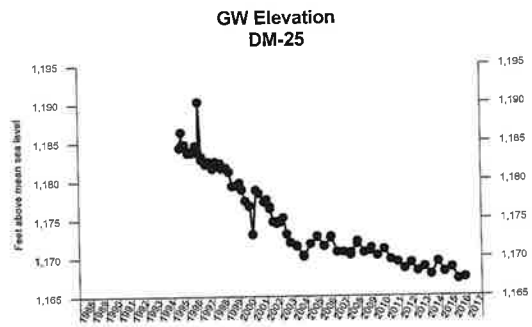
Time-Series Graphs
GW Elevation
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

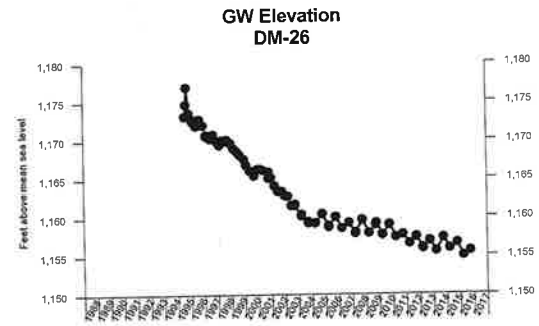


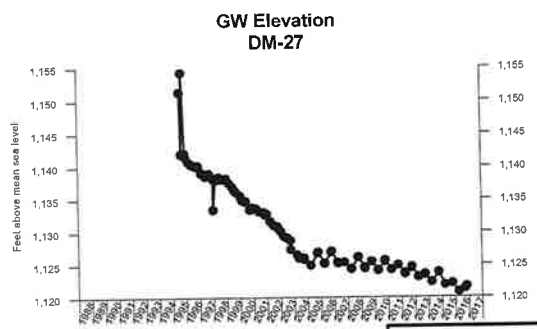


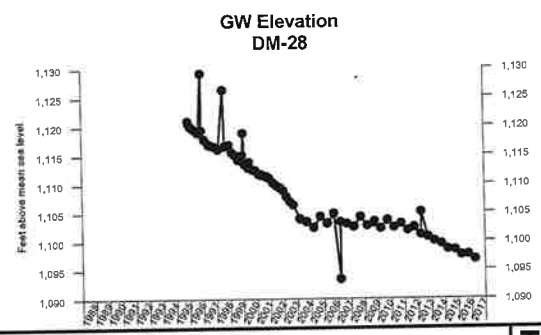


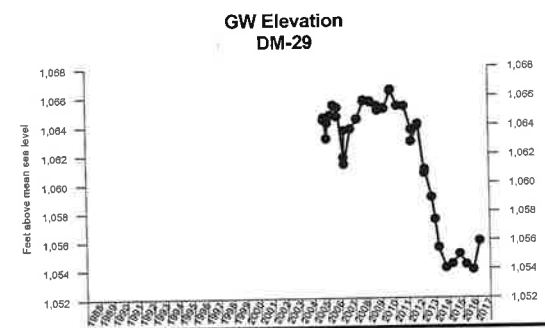












EXPLANATION

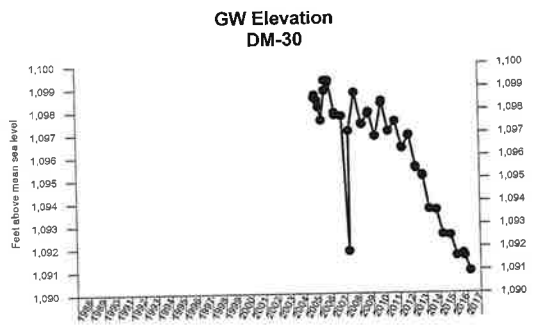
● - Measured Value
○ - Undetected (Displayed at RL)

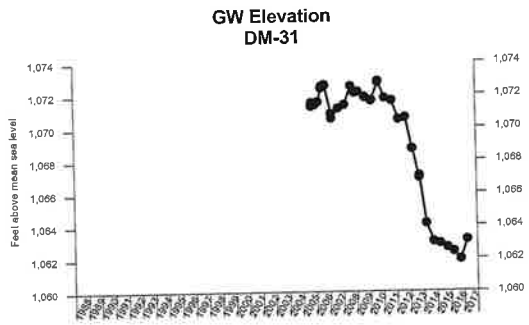
CLEAR CREEK ASSOCIATES

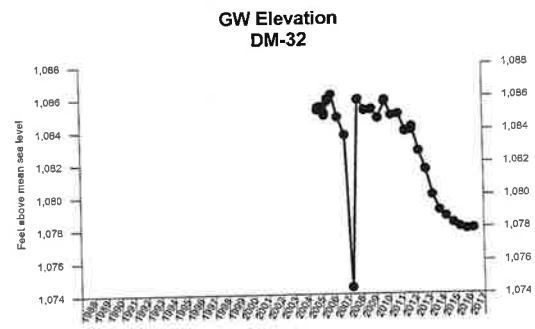
Project Name: 56th Street and Earll Drive WQARF Site

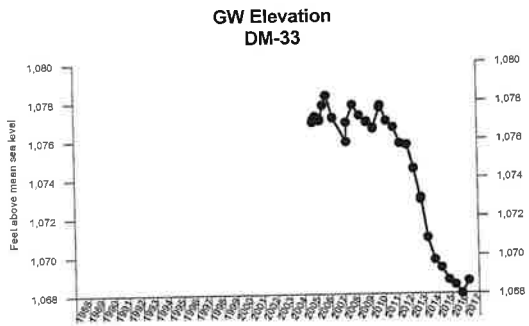
Job No: 005-134-17 | Date: June 2017

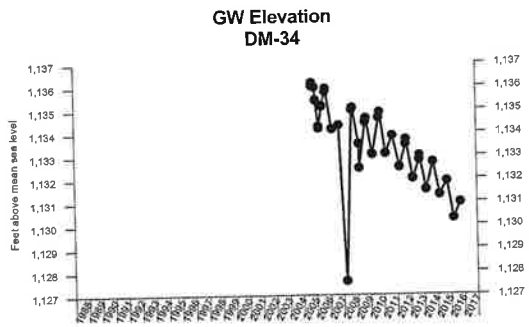
Time-Series Graphs
GW Elevation
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

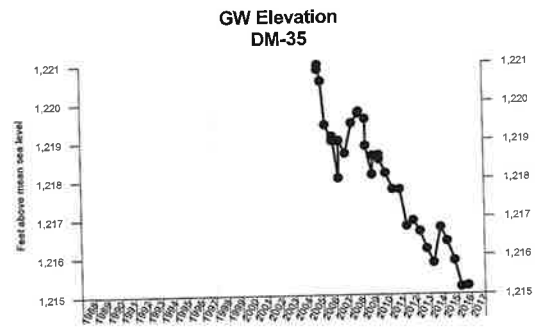


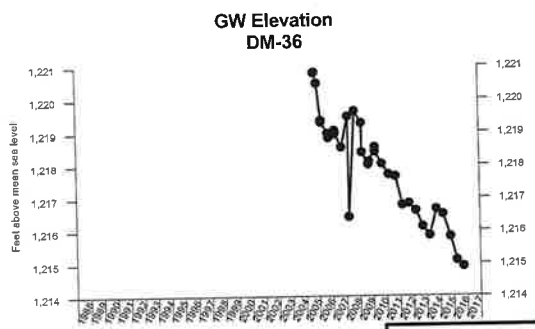


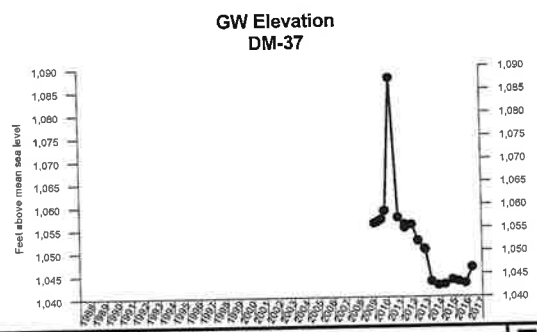


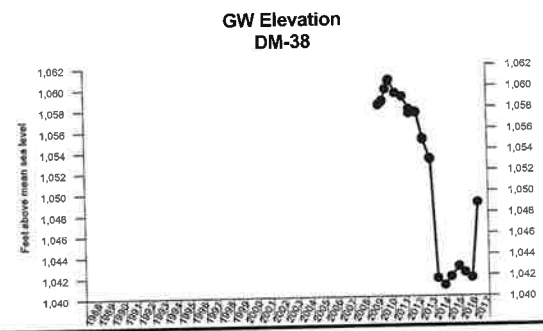












EXPLANATION

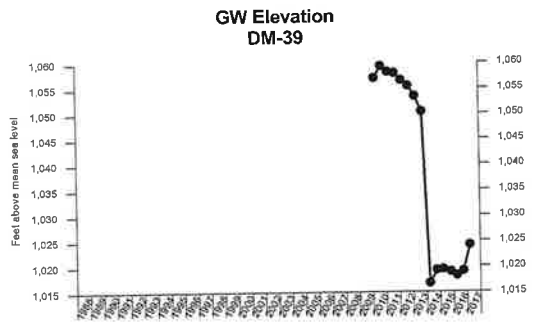
● - Measured Value
○ - Undetected (Displayed at RL)

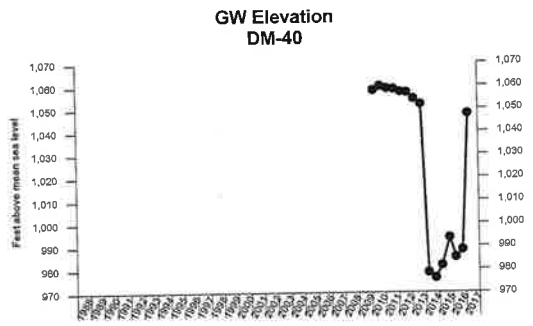
CLEAR CREEK ASSOCIATES

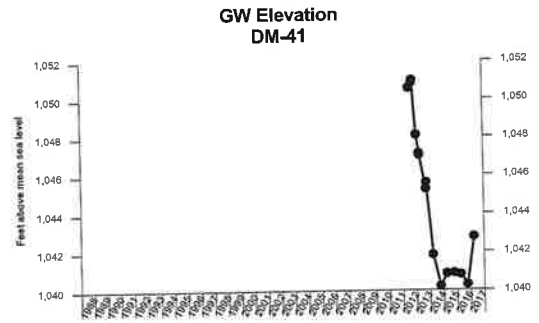
Project Name: 56th Street and Earll Drive WQARF Site

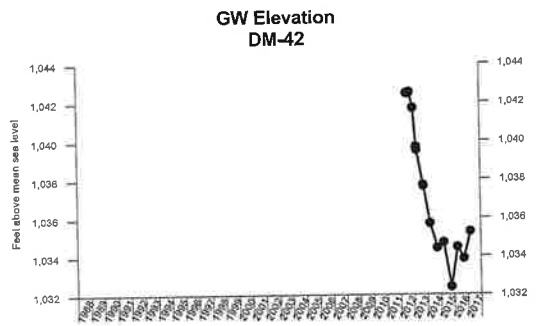
Job No: 005-134-17 | Date: June 2017

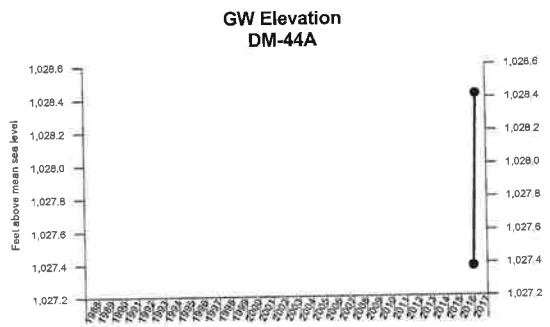
Time-Series Graphs
GW Elevation
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

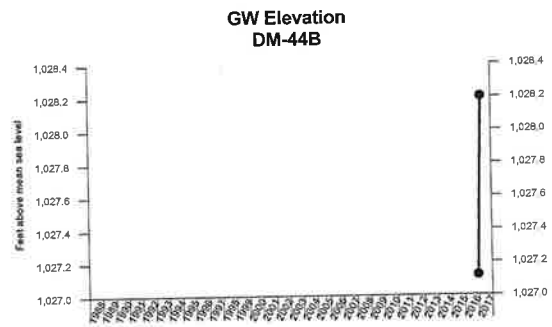


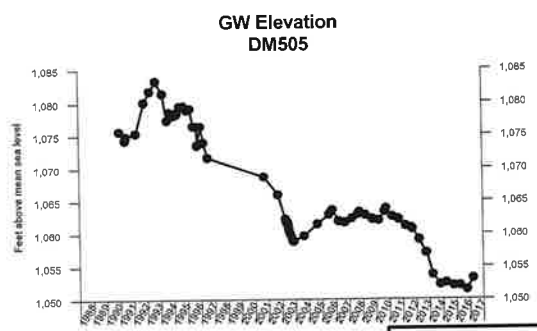


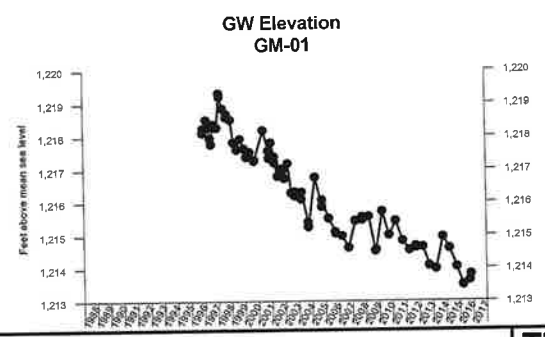












EXPLANATION

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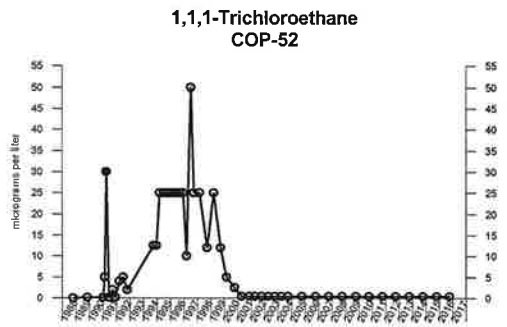
CLEAR CREEK ASSOCIATES

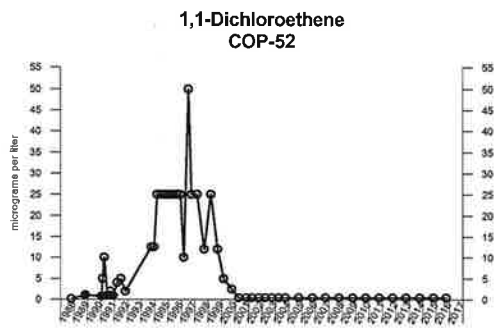
Project Name: 56th Street and Earll Drive WQARF Site

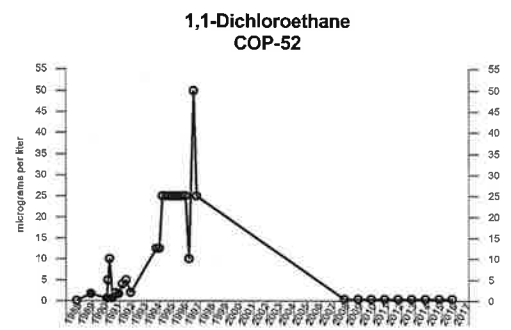
Job No: 005-134-17 | Date: June 2017

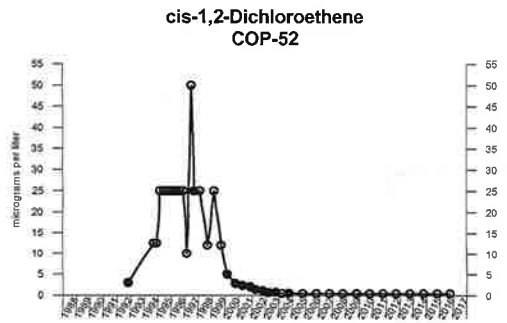
Time-Series Graphs
GW Elevation
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

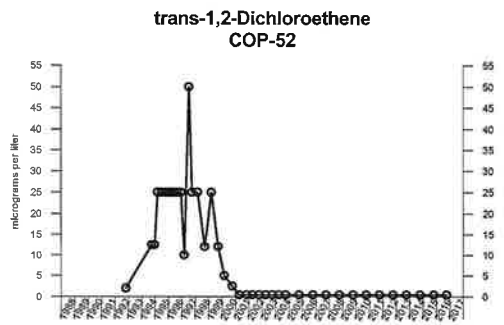
Time–Series Graphs
Analytical Data of Key Constituents by Well

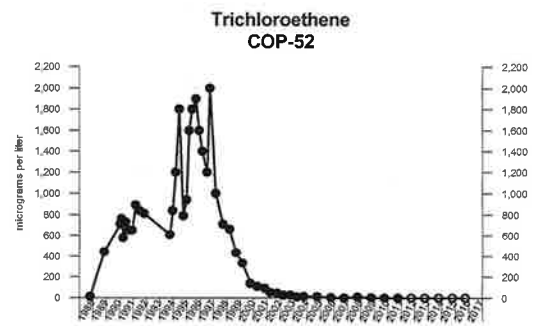


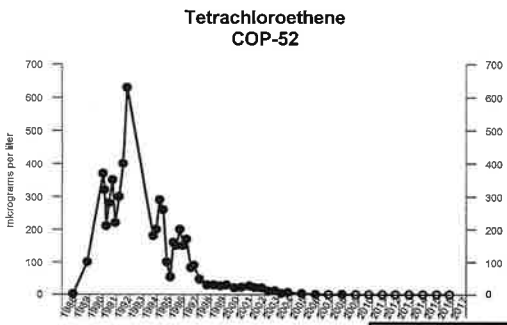


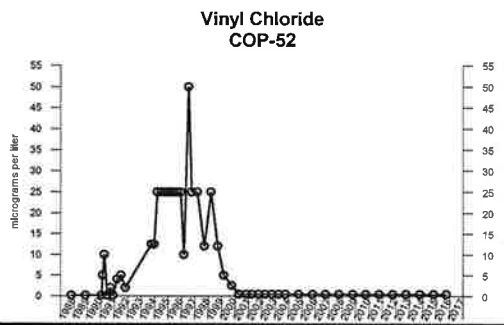


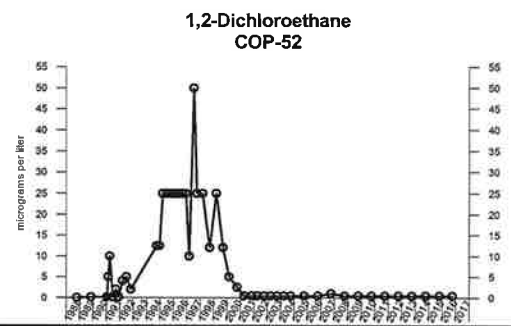












EXPLANATION

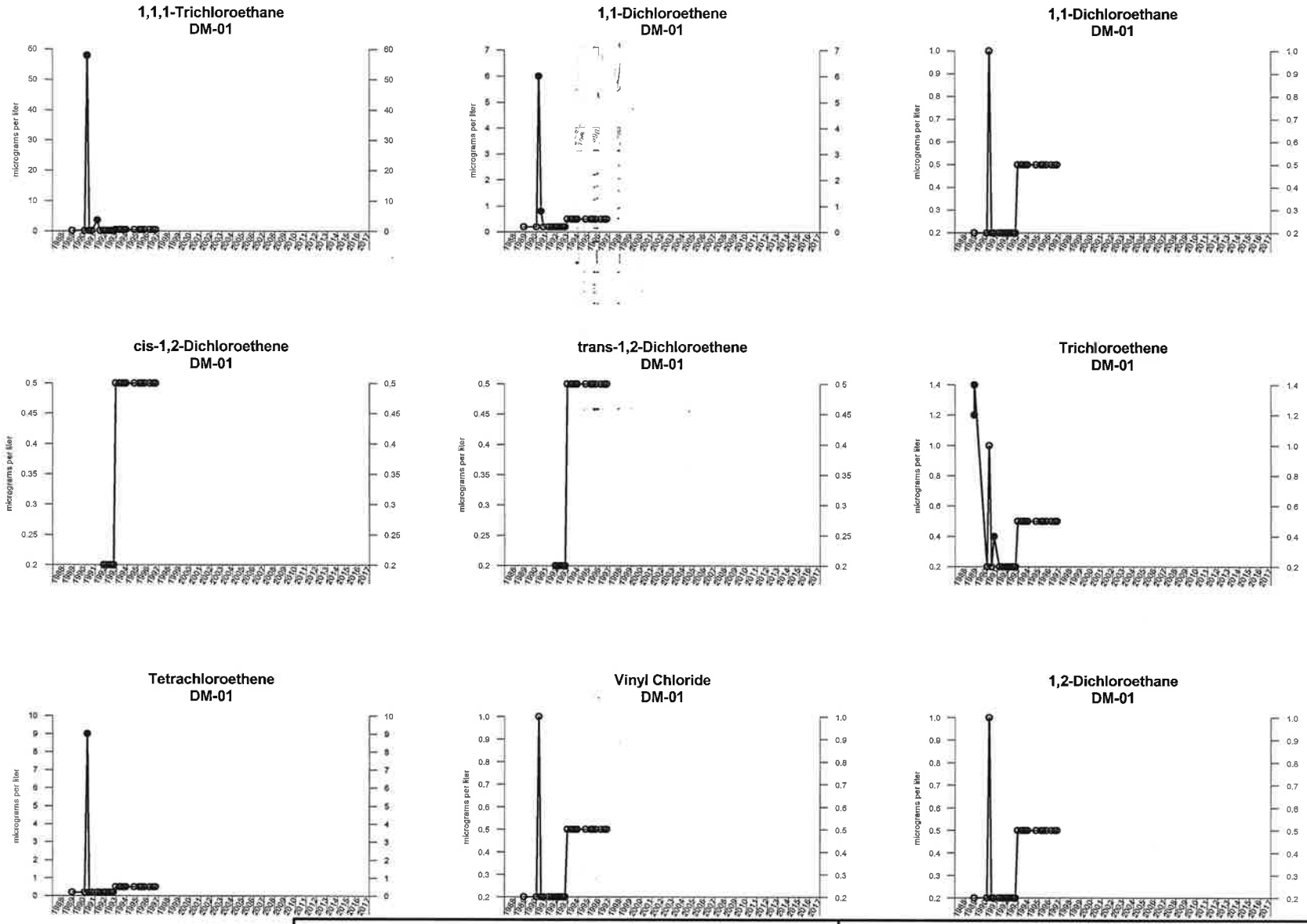
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
COP-52
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

- ● - Measured Value
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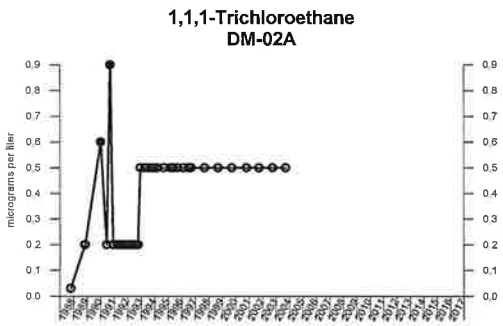
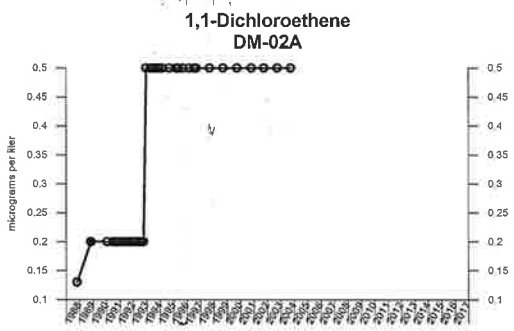
CLEAR CREEK ASSOCIATES

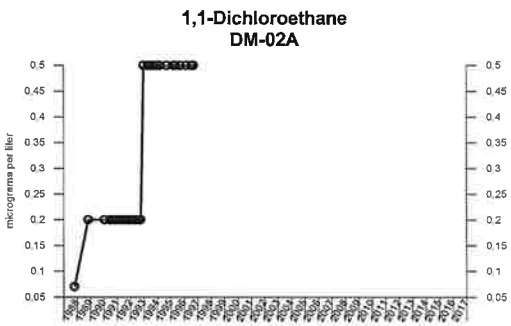
Project Name: 56th Street and Earll Drive WQARF Site

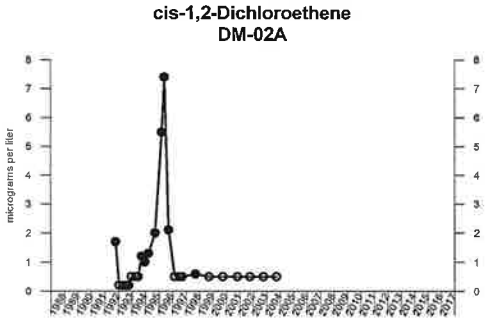
Job No: 005-134-17 | Date: June 2017

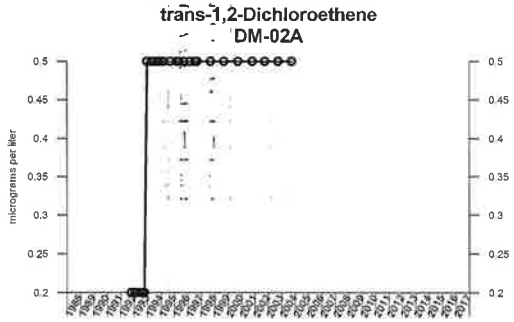
Time-Series Graphs
DM-01
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

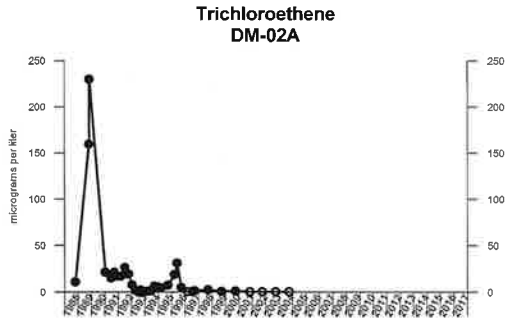


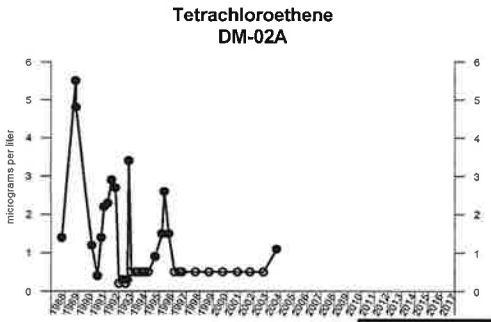


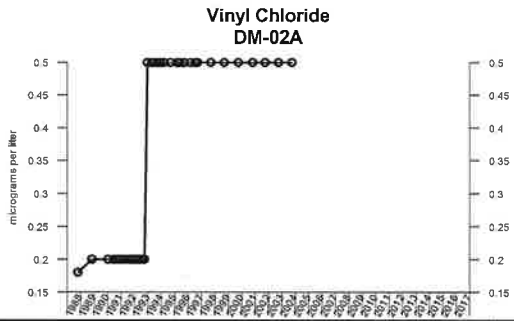












EXPLANATION

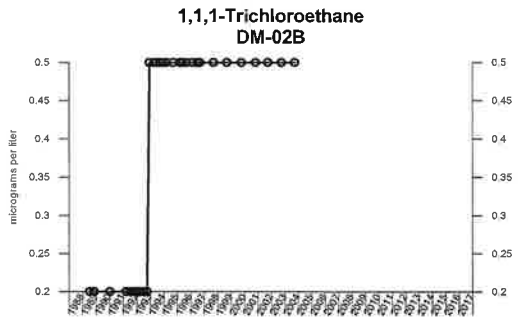
● - Measured Value
○ - Undetected (Displayed at RL)

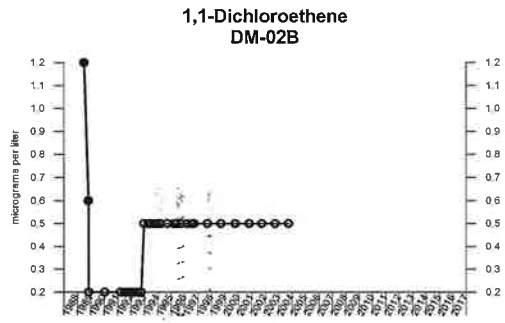
CLEAR CREEK ASSOCIATES

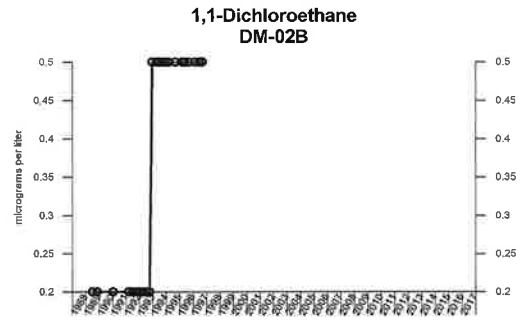
Project Name: 56th Street and Earll Drive WQARF Site

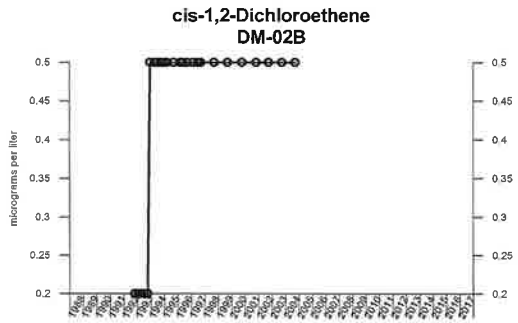
Job No: 005-134-17 | Date: June 2017

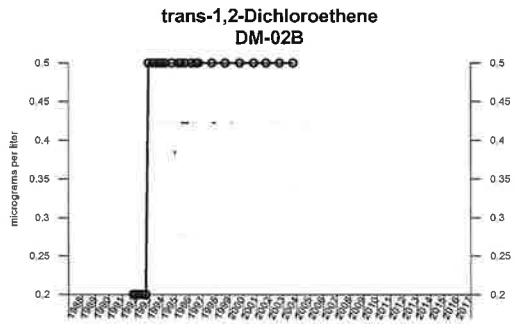
Time-Series Graphs
DM-02A
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

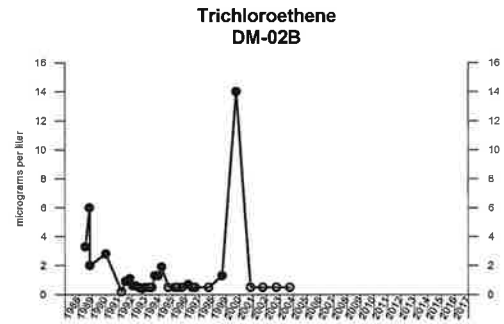


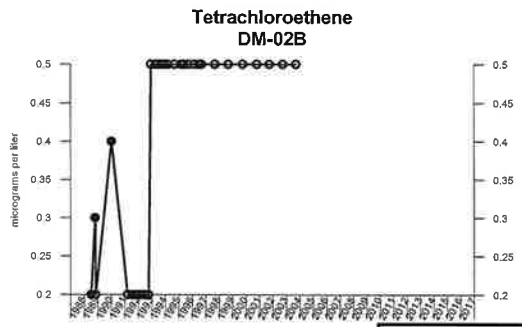


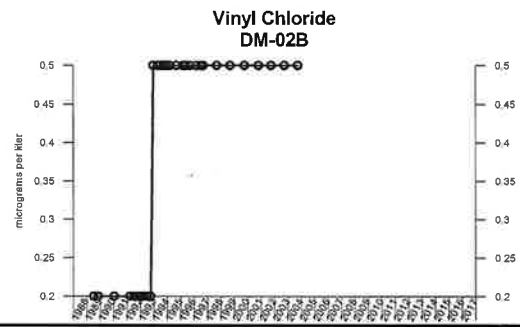












EXPLANATION

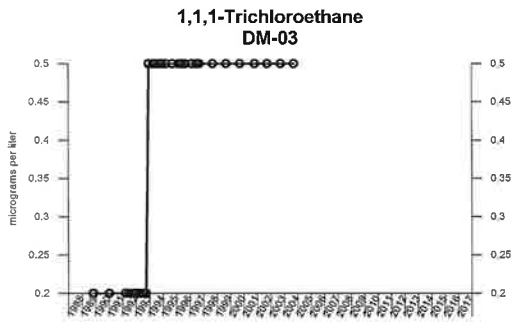
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

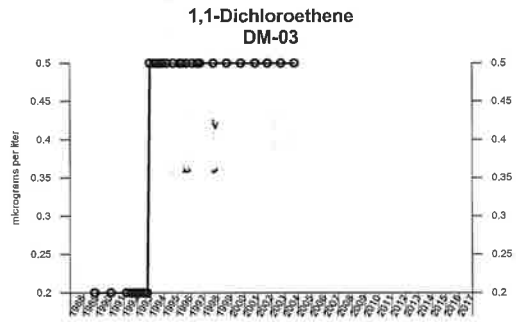
CLEAR CREEK ASSOCIATES

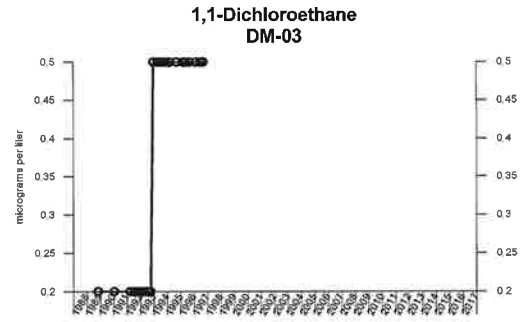
Project Name: 56th Street and Earll Drive WQARF Site

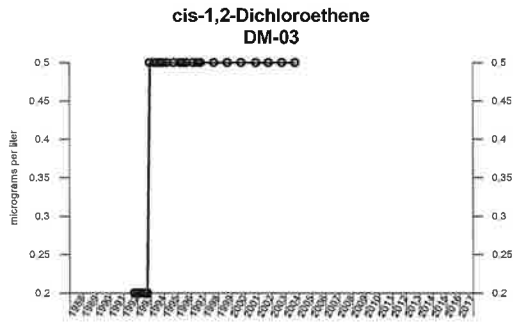
Job No: 005-134-17 | Date: June 2017

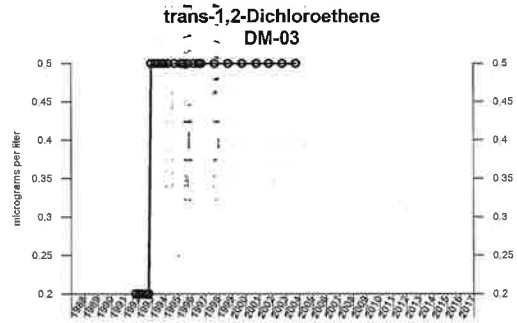
Time-Series Graphs
DM-02B
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

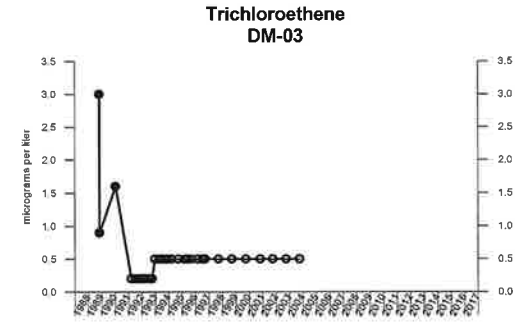


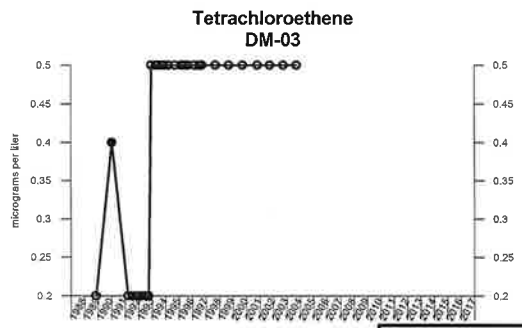


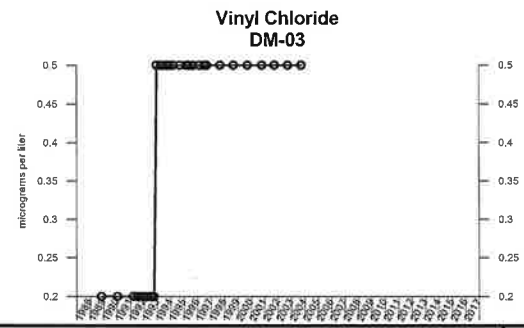


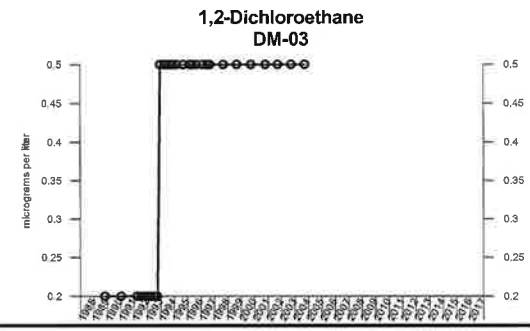












EXPLANATION

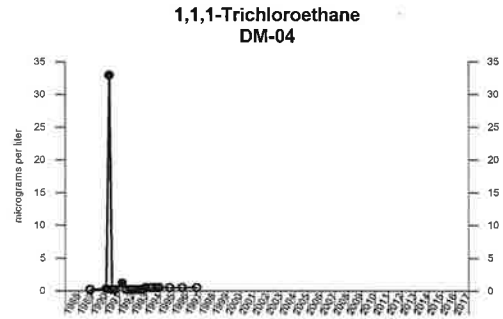
● - Measured Value
○ - Undetected (Displayed at RL)

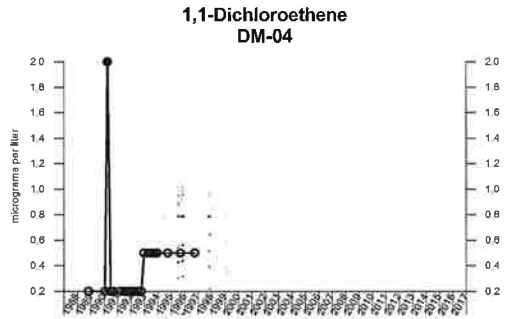
CLEAR CREEK ASSOCIATES

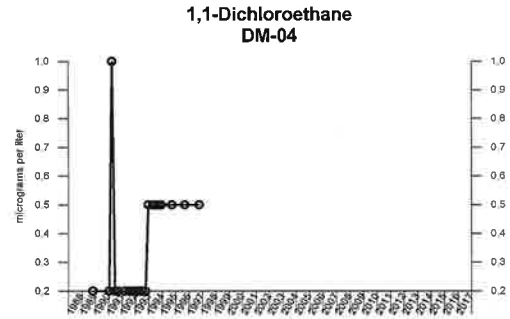
Project Name: 56th Street and Earll Drive WQARF Site

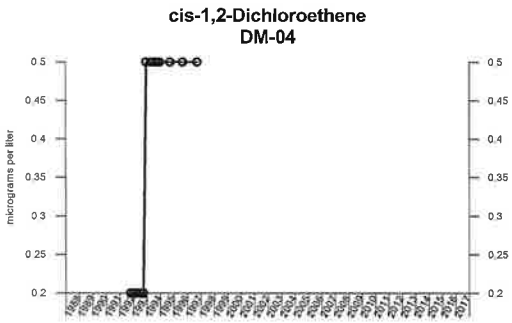
Job No: 005-134-17 | Date: June 2017

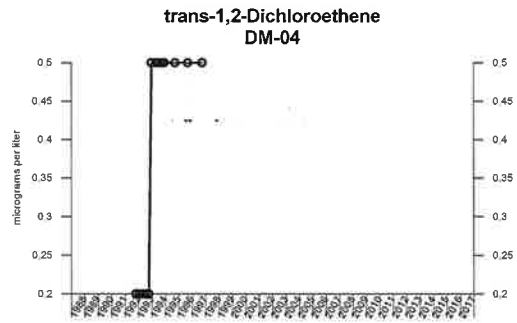
Time-Series Graphs
DM-03
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

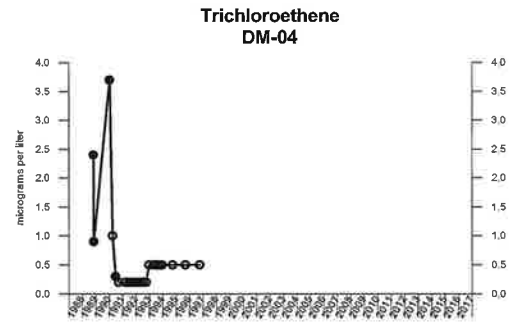


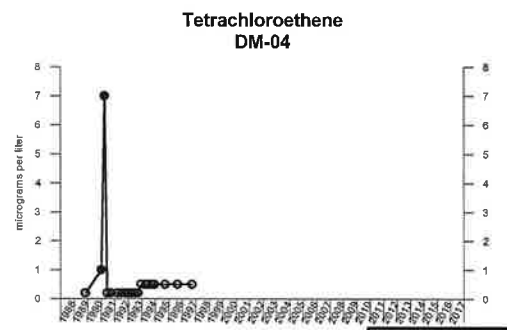


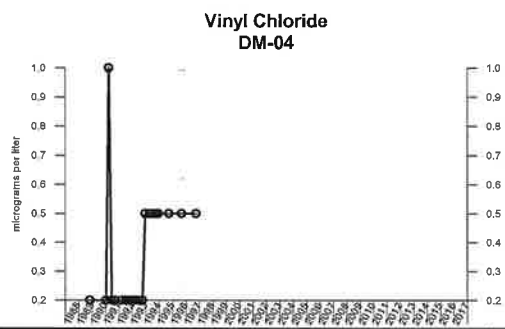


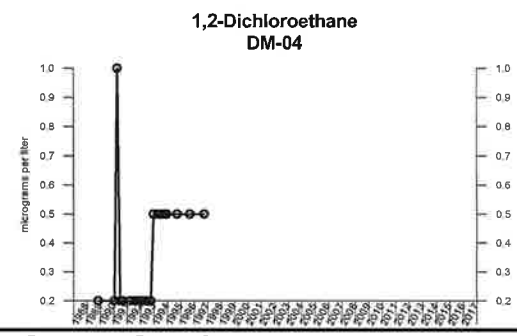












EXPLANATION

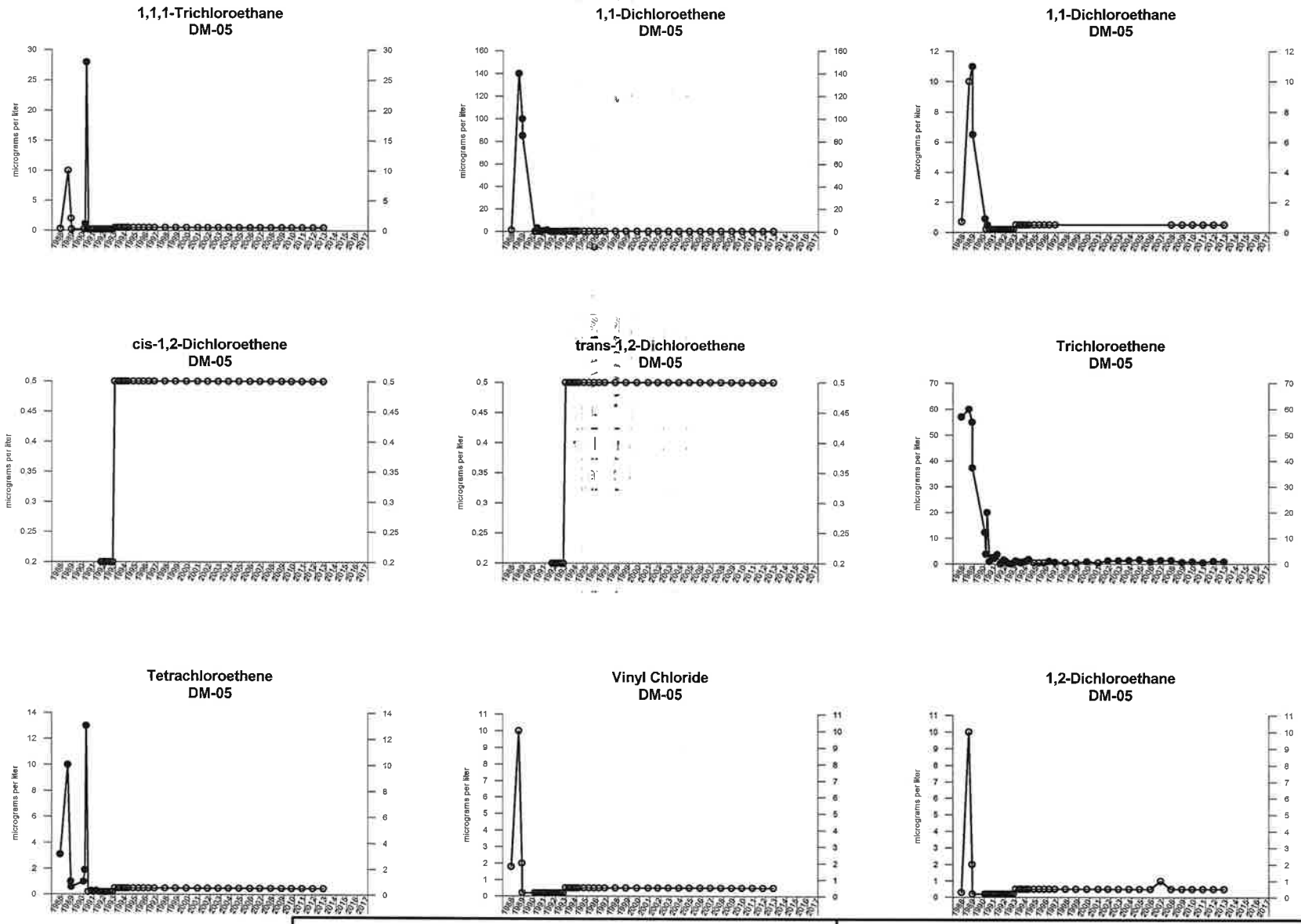
● - Measured Value
○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-04
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

- ● - Measured Value
- ○ - Undetected (Displayed at RL)

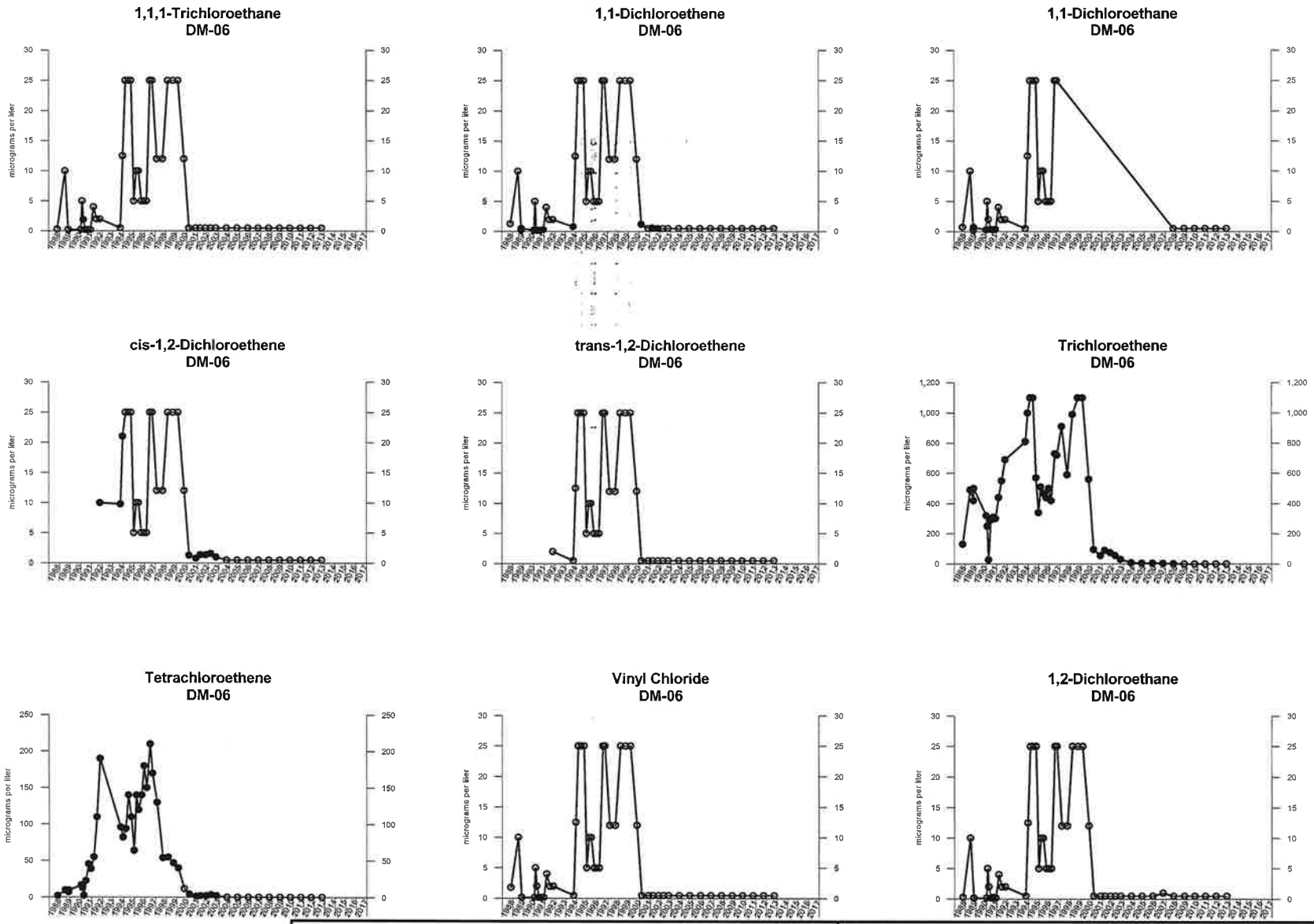
CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17

Date: June 2017

Time-Series Graphs
DM-05
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

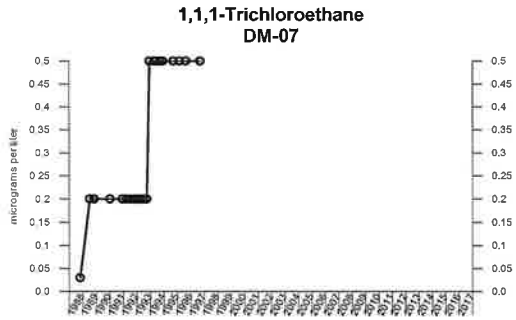
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

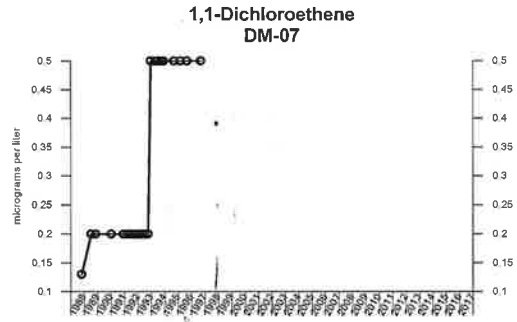
CLEAR CREEK ASSOCIATES

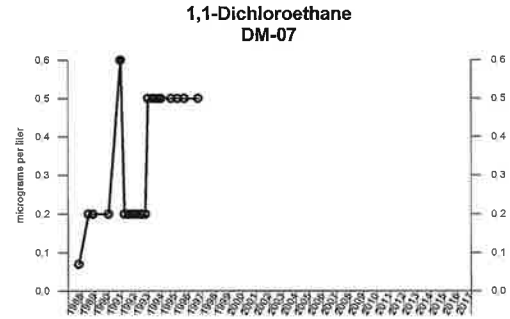
Project Name: 56th Street and Earll Drive WQARF Site

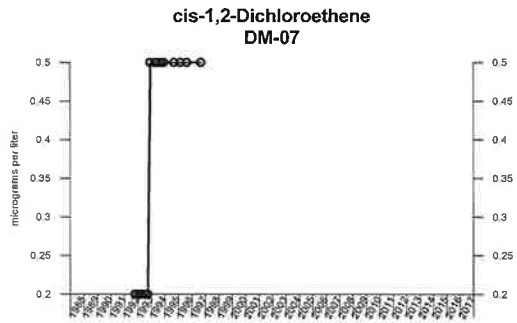
Job No: 005-134-17 | Date: June 2017

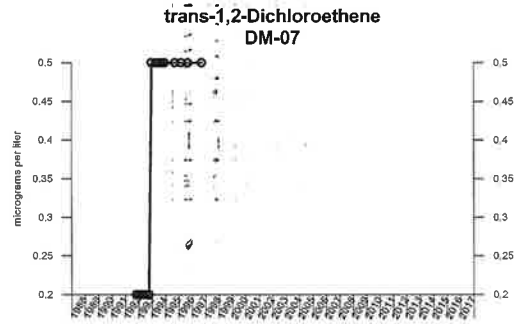
Time-Series Graphs
DM-06
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

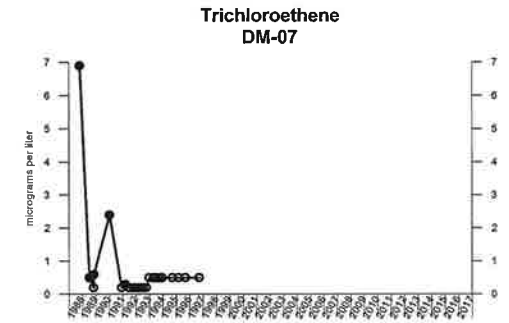


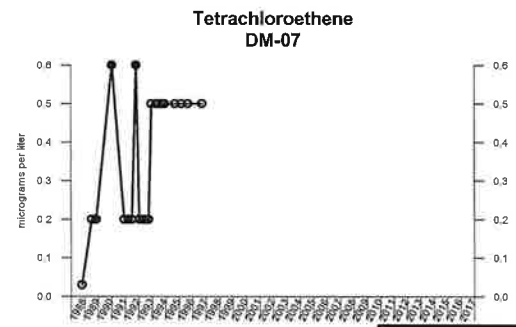


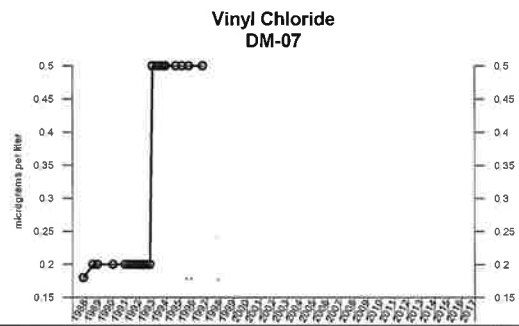


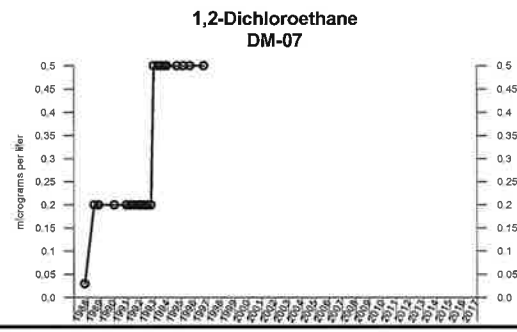












EXPLANATION

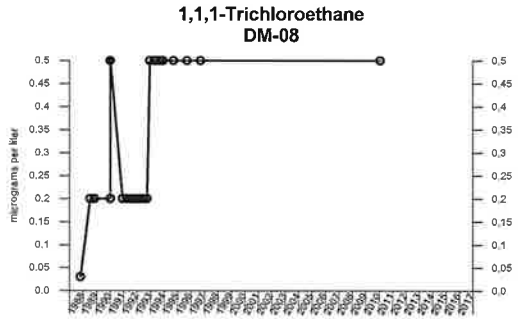
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

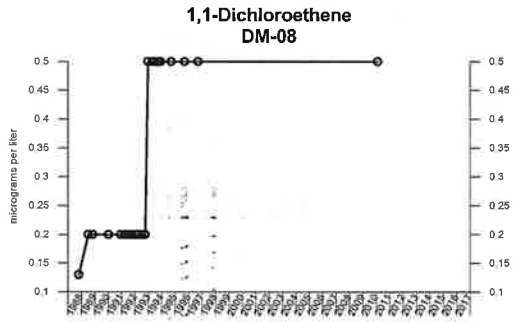
CLEAR CREEK ASSOCIATES

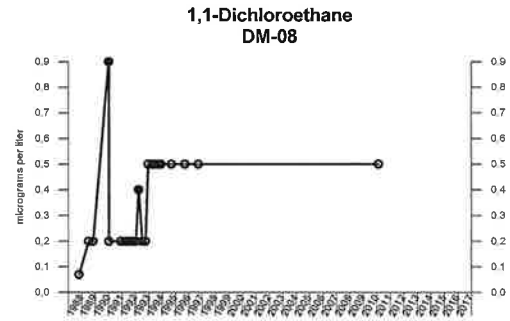
Project Name: 56th Street and Earll Drive WQARF Site

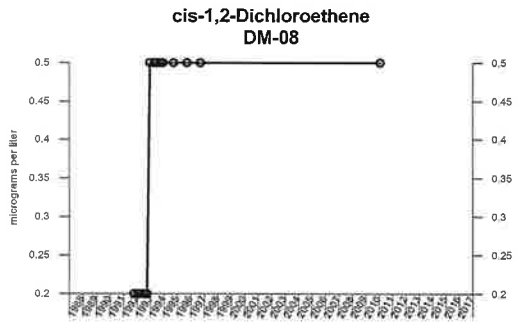
Job No: 005-134-17 | Date: June 2017

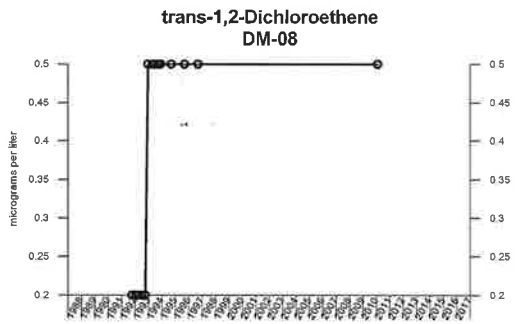
Time-Series Graphs
DM-07
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

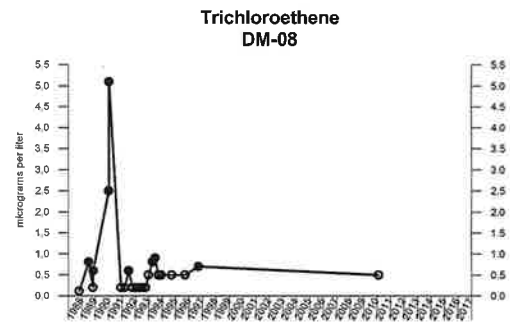


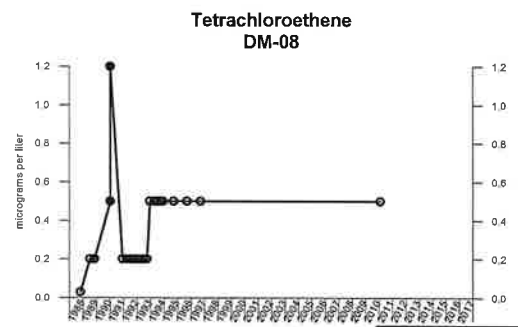


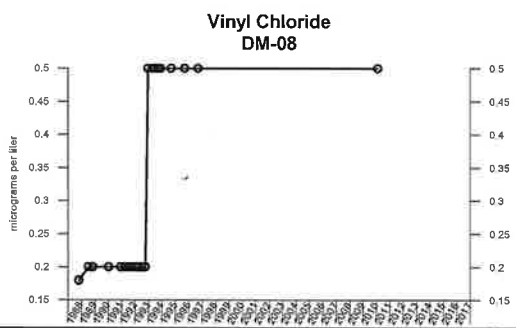


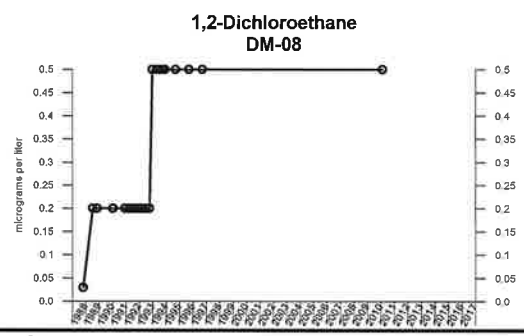












EXPLANATION

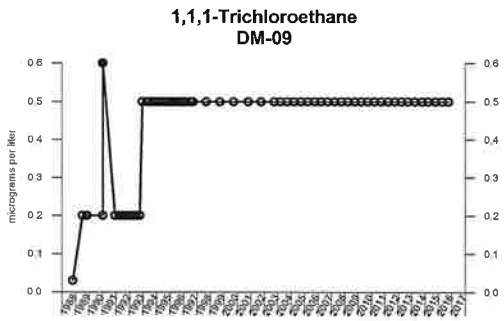
● - Measured Value
○ - Undetected (Displayed at RL)

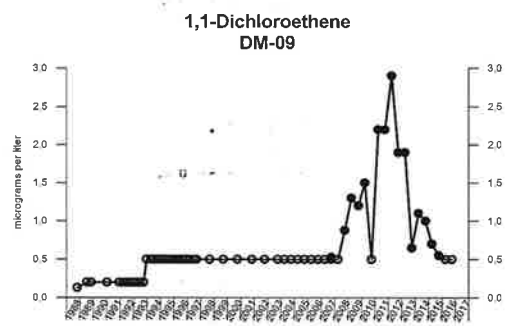
CLEAR CREEK ASSOCIATES

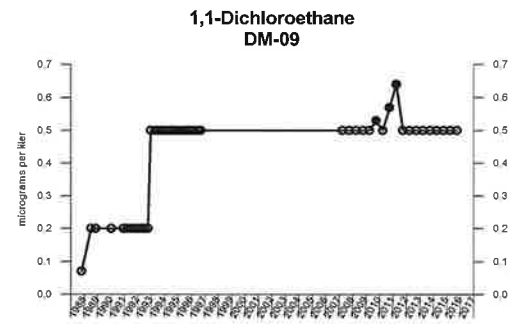
Project Name: 56th Street and Earll Drive WQARF Site

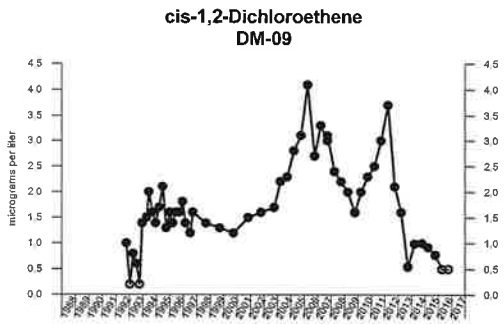
Job No: 005-134-17 | Date: June 2017

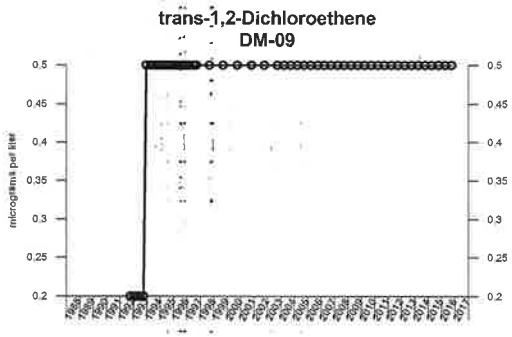
Time-Series Graphs
DM-08
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

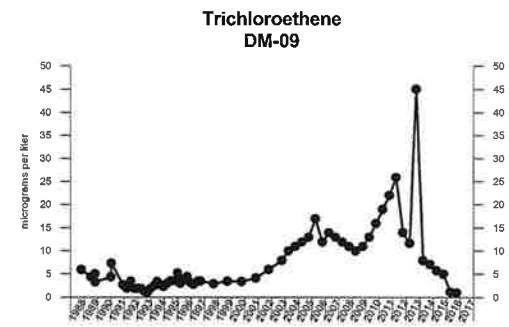


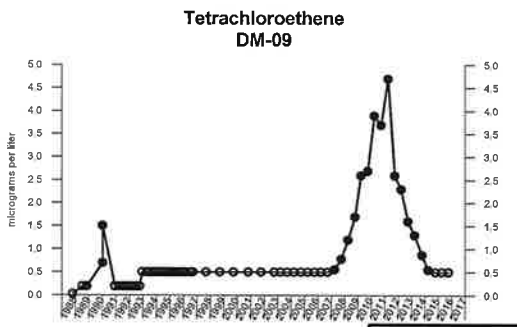


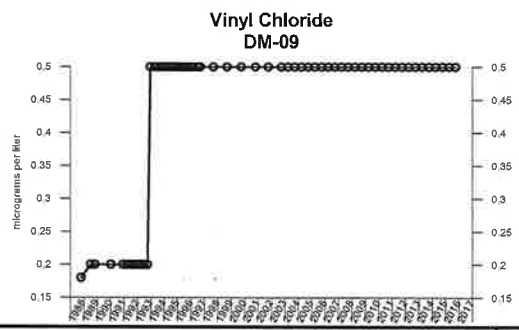


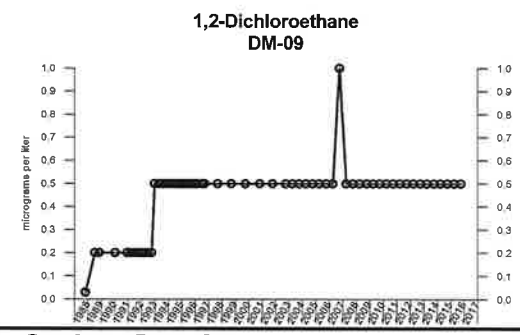












EXPLANATION

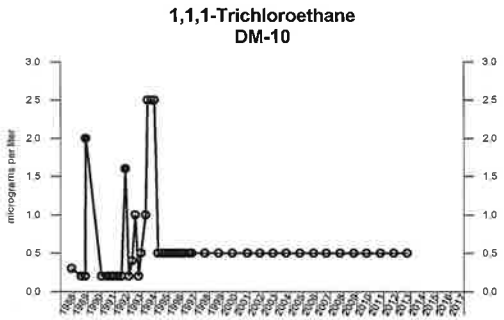
● - Measured Value
○ - Undetected (Displayed at RL)

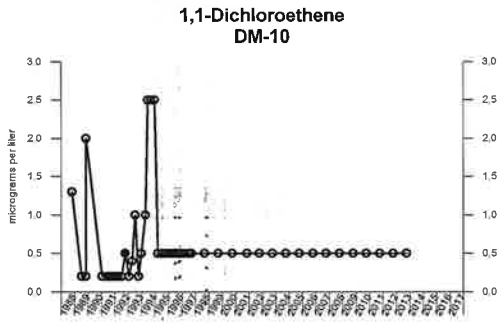
CLEAR CREEK ASSOCIATES

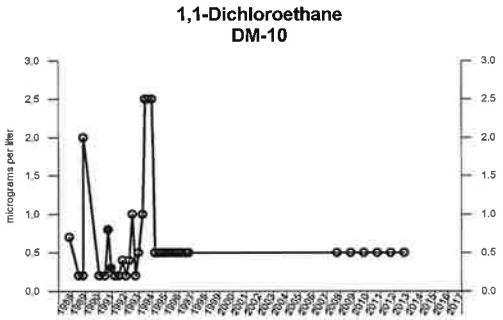
Project Name: 56th Street and Earll Drive WQARF Site

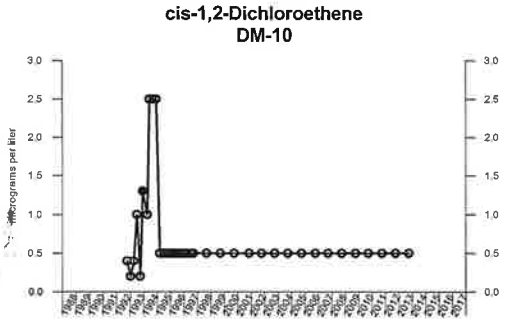
Job No: 005-134-17 | Date: June 2017

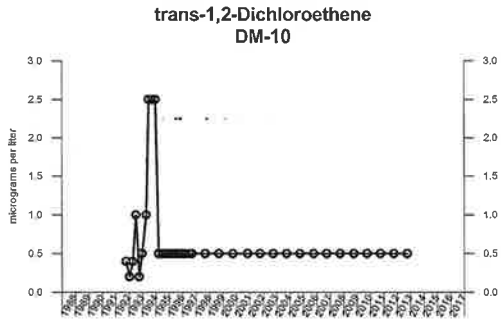
Time-Series Graphs
DM-09
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

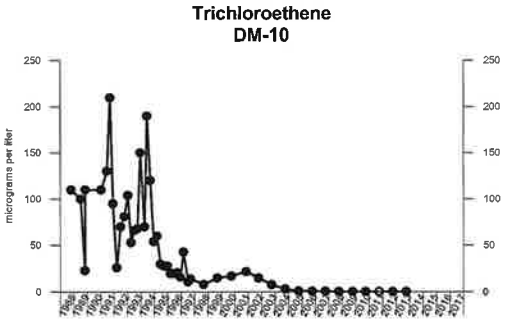


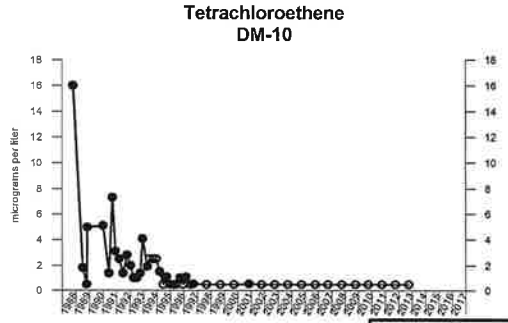


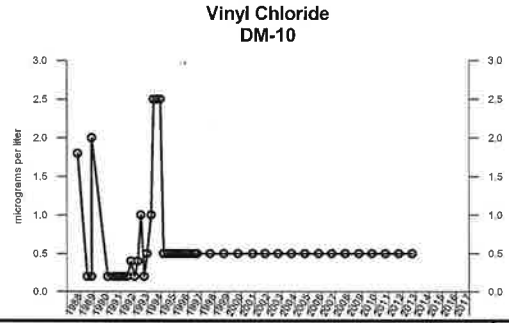


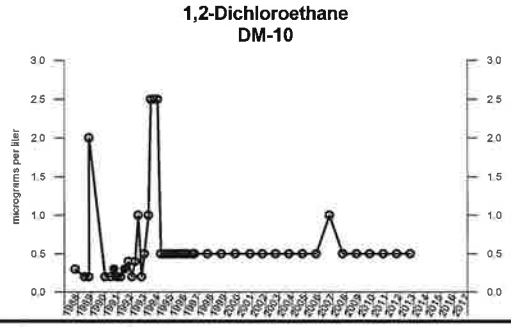












EXPLANATION

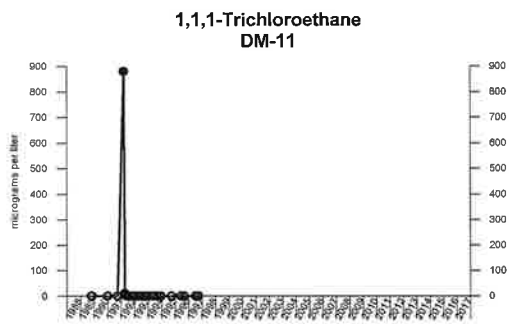
● - Measured Value
○ - Undetected (Displayed at RL)

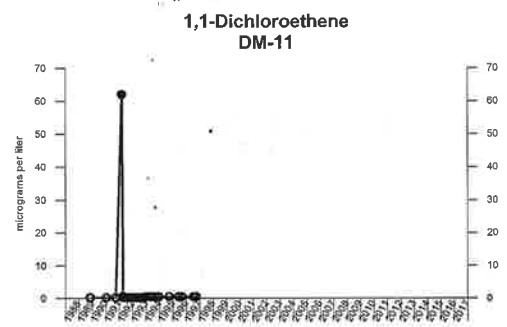
CLEAR CREEK ASSOCIATES

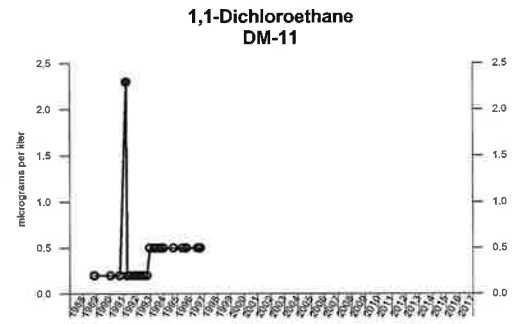
Project Name: 56th Street and Earll Drive WQARF Site

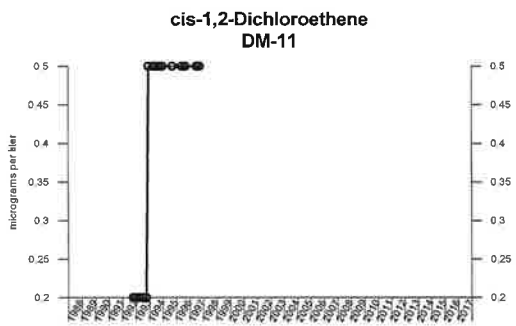
Job No: 005-134-17 | Date: June 2017

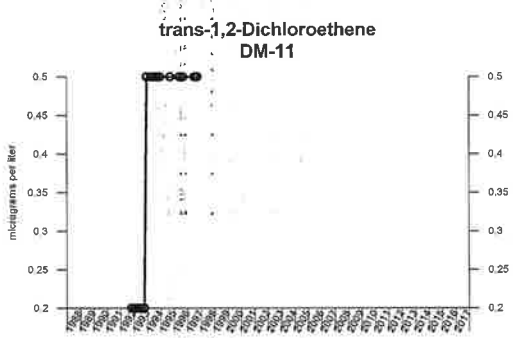
Time-Series Graphs
DM-10
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

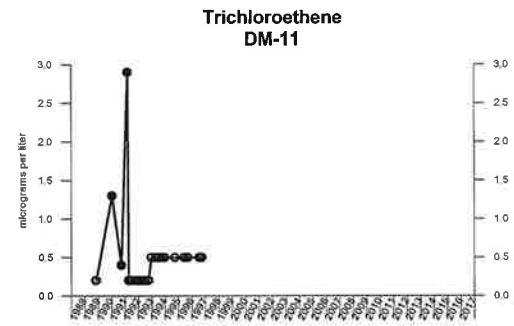


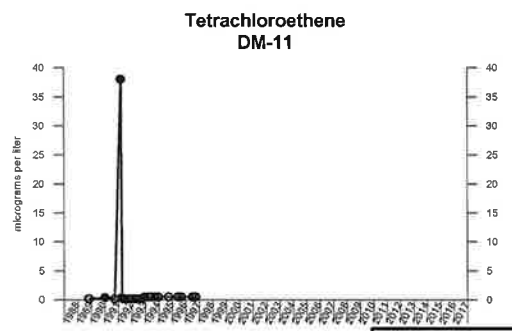


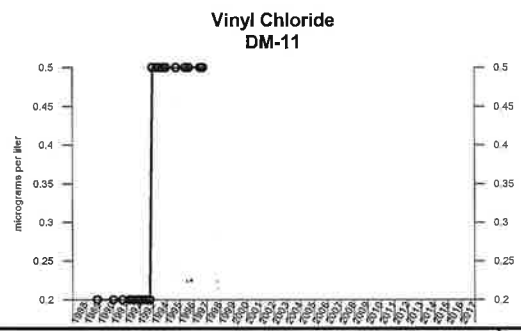


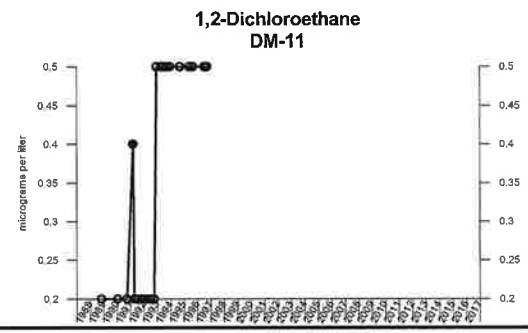












EXPLANATION

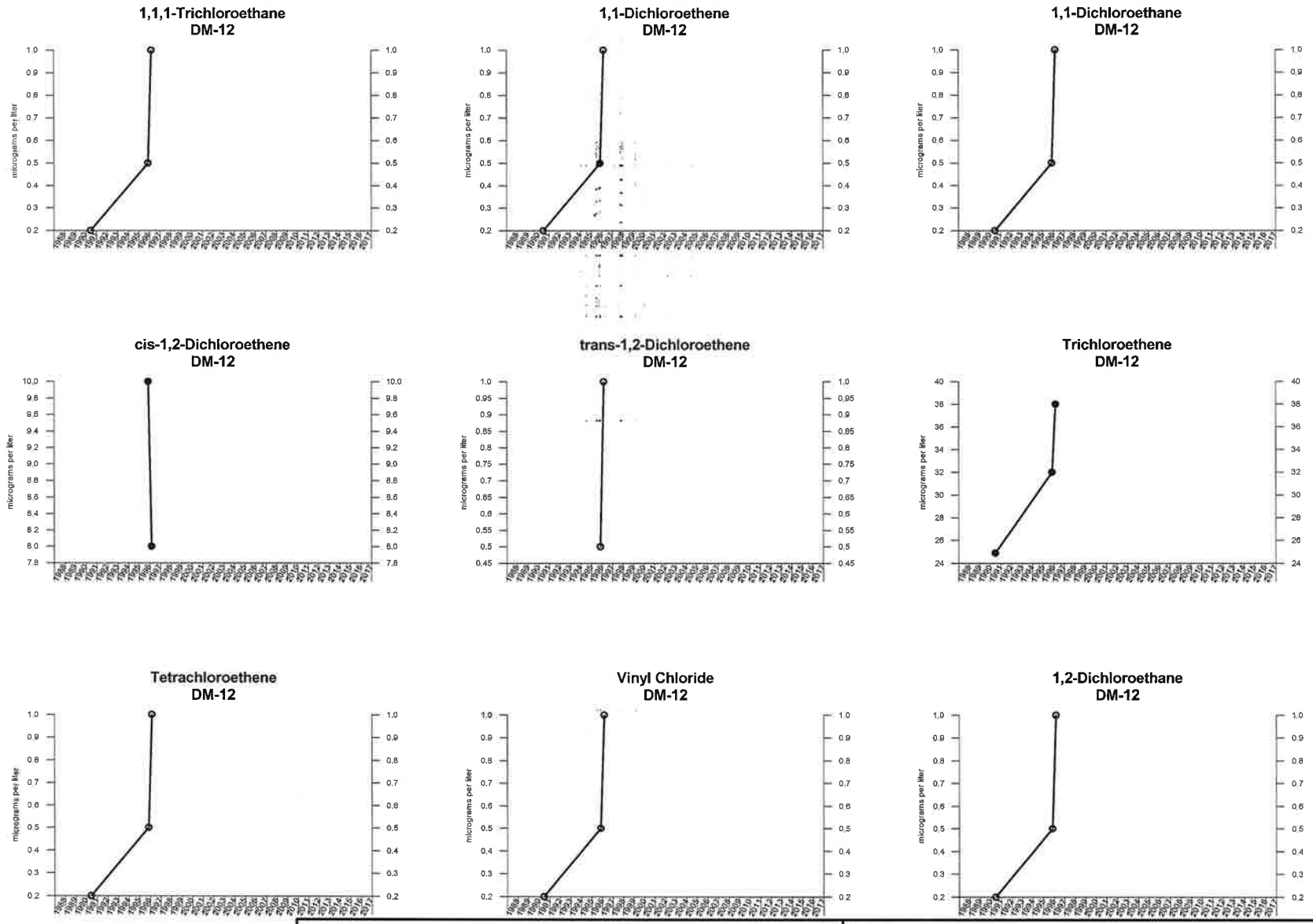
● - Measured Value
○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-11
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

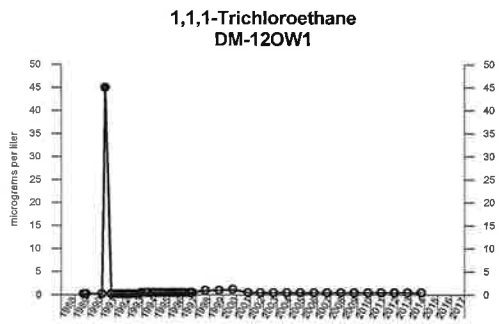
● - Measured Value
○ - Undetected (Displayed at RL)

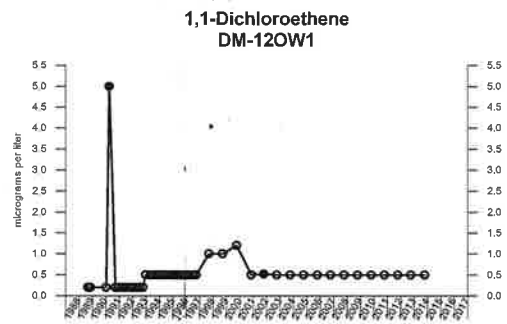
CLEAR CREEK ASSOCIATES

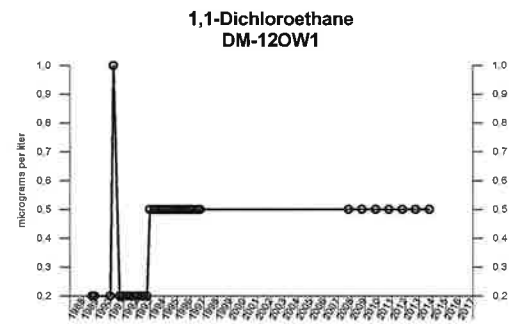
Project Name: 56th Street and Earll Drive WQARF Site

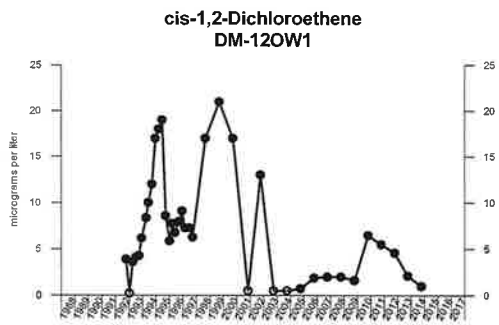
Job No: 005-134-17 | Date: June 2017

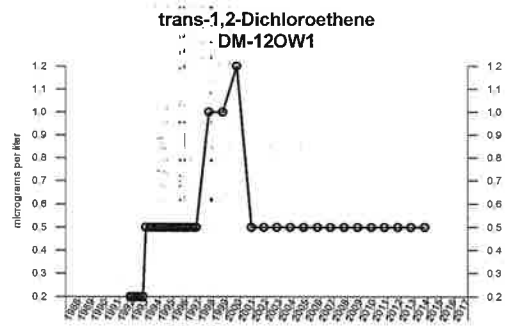
Time-Series Graphs
DM-12
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

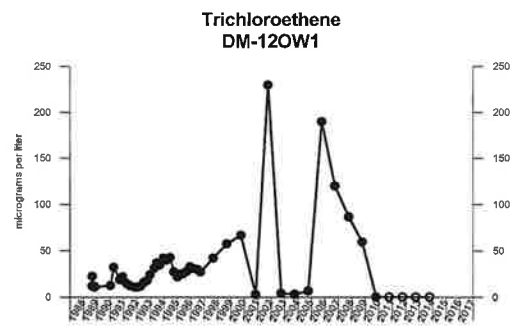


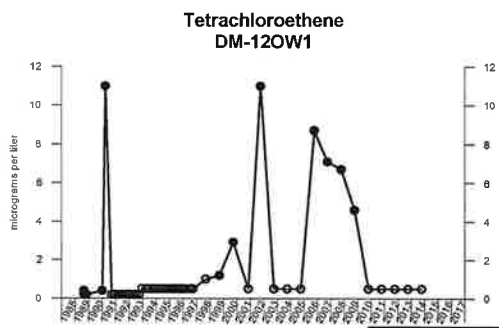


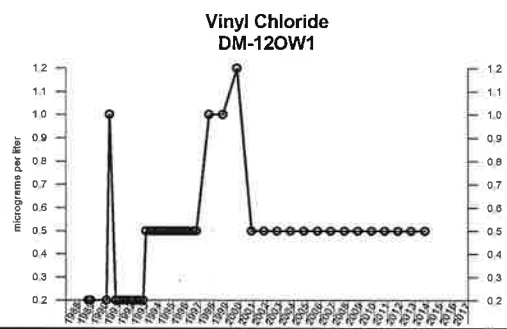


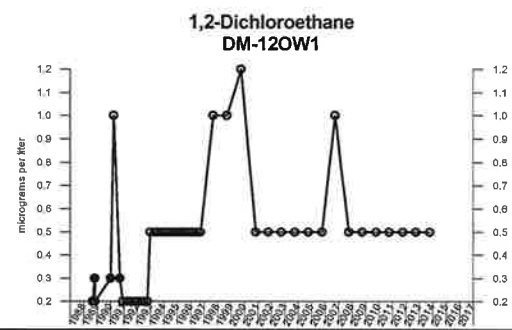












EXPLANATION

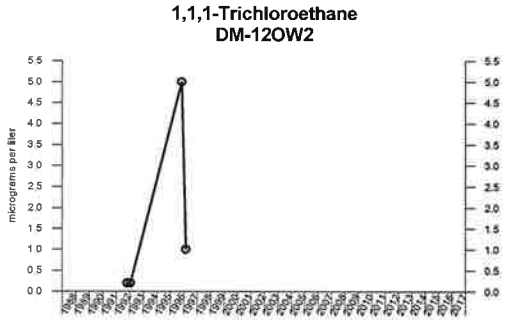
● - Measured Value
○ - Undetected (Displayed at RL)

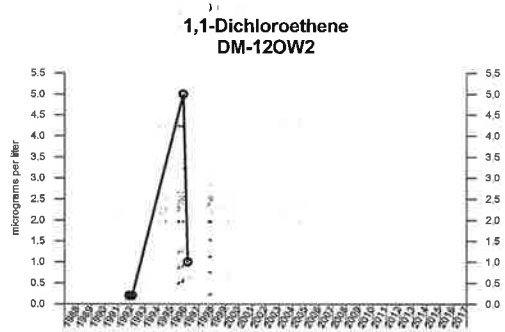
CLEAR CREEK ASSOCIATES

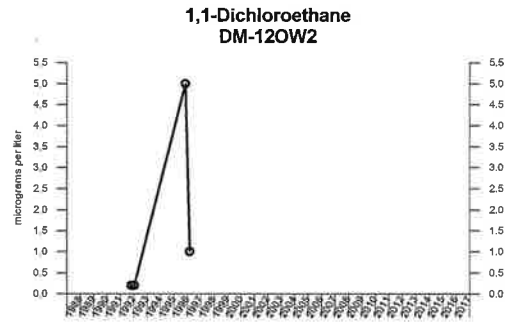
Project Name: 56th Street and Earll Drive WQARF Site

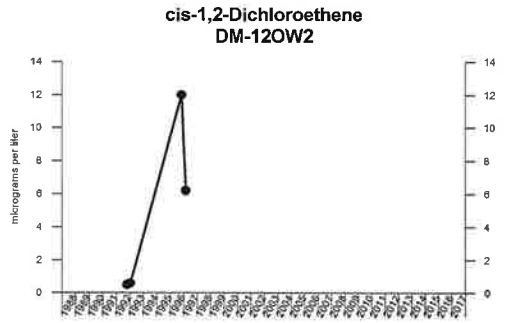
Job No: 005-134-17 | Date: June 2017

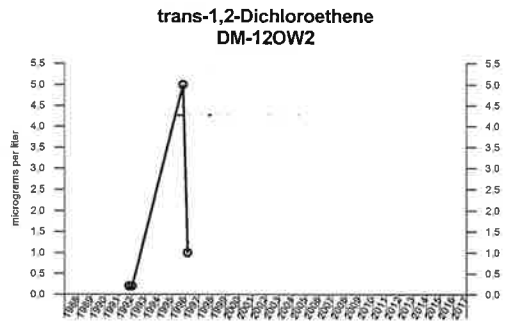
Time-Series Graphs
DM-12OW1
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

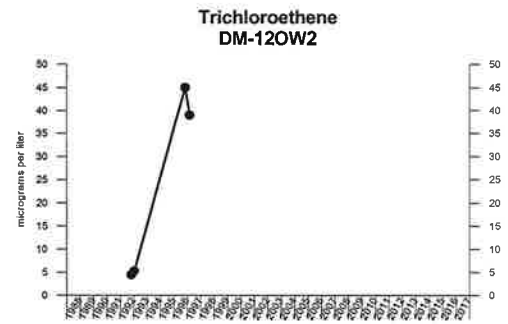


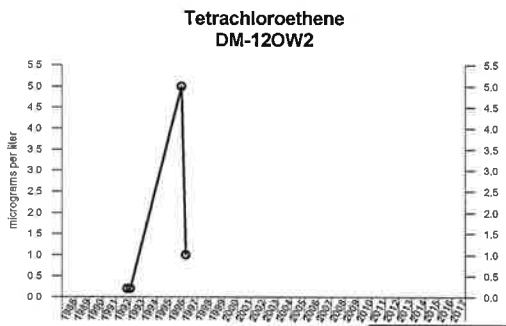


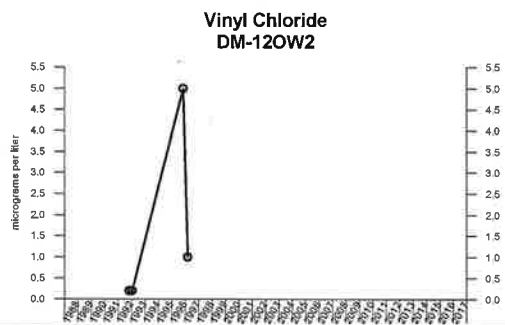












EXPLANATION

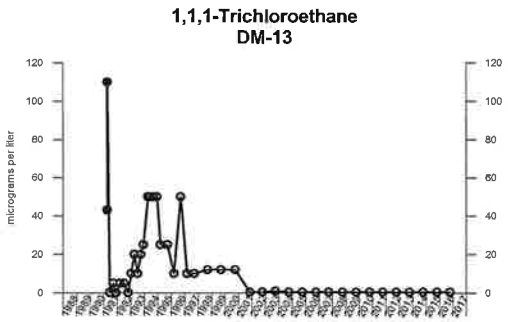
● - Measured Value
○ - Undetected (Displayed at RL)

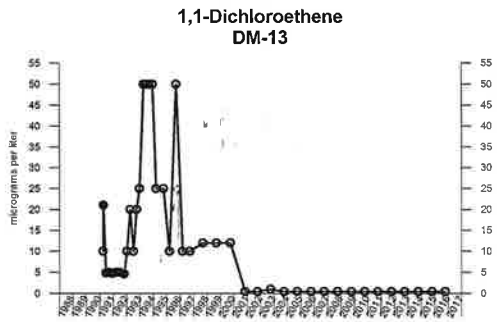
CLEAR CREEK ASSOCIATES

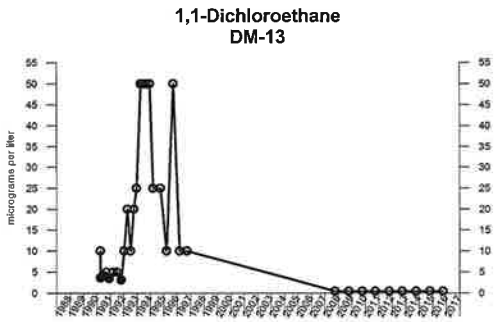
Project Name: 56th Street and Earll Drive WQARF Site

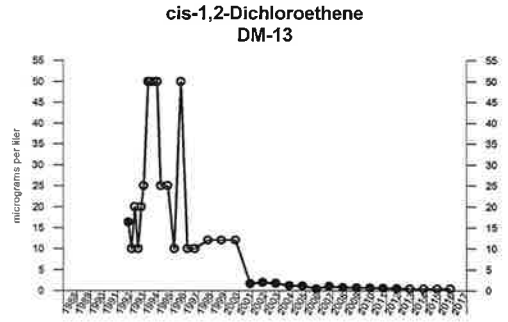
Job No: 005-134-17 | Date: June 2017

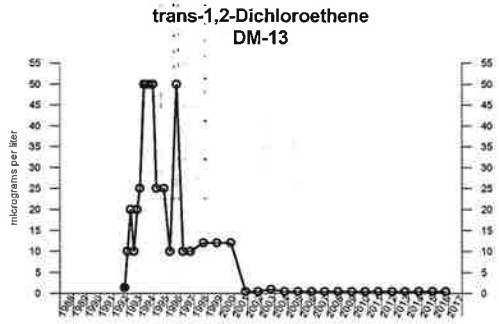
Time-Series Graphs
DM-12OW2
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

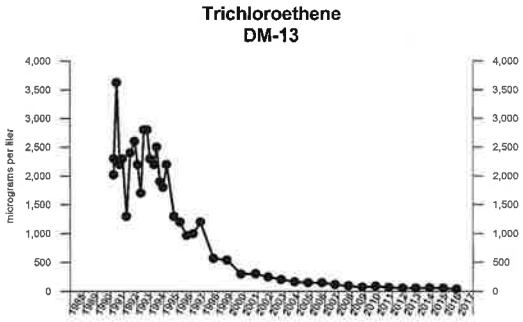


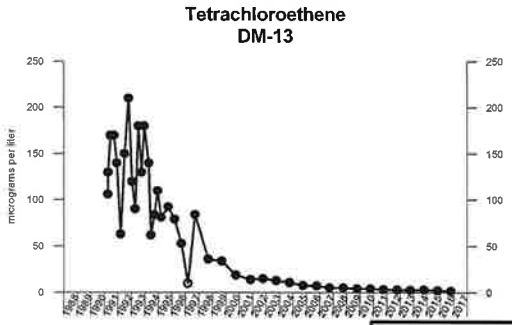


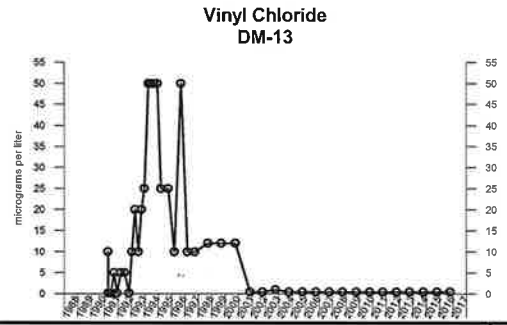


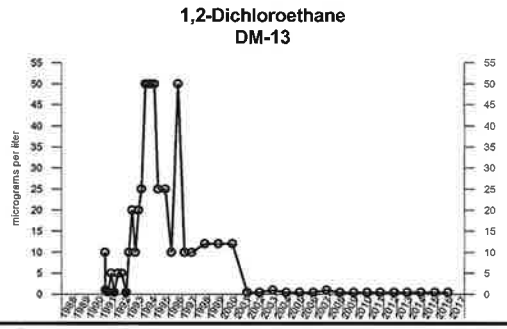












EXPLANATION

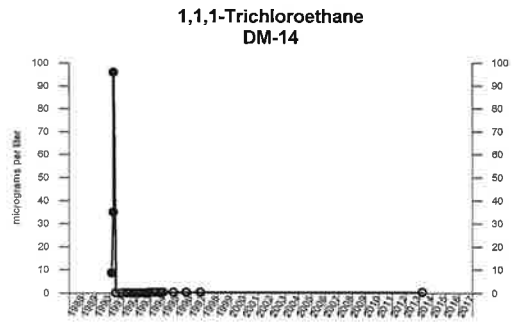
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

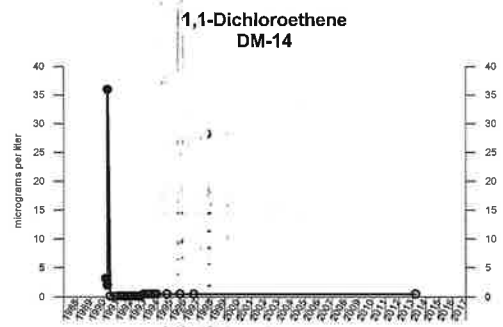
CLEAR CREEK ASSOCIATES

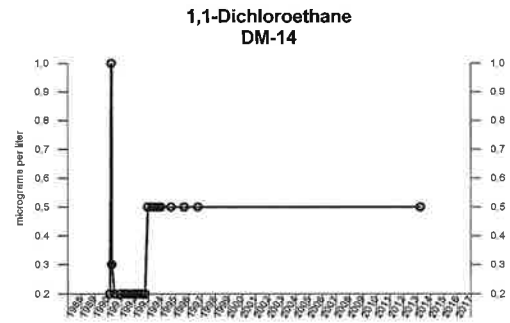
Project Name: 56th Street and Earll Drive WQARF Site

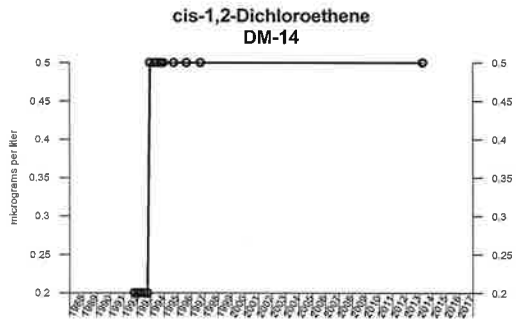
Job No: 005-134-17 | Date: June 2017

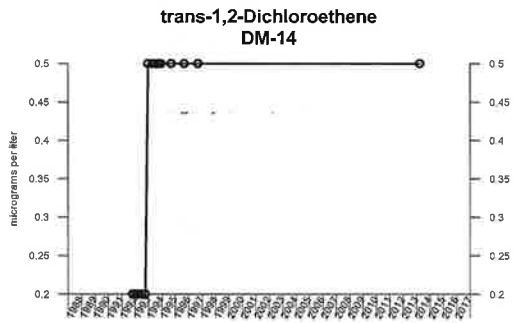
Time-Series Graphs
DM-13
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

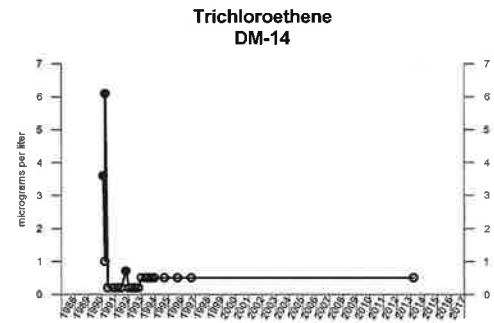


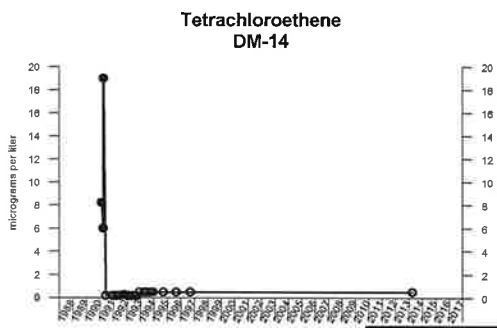


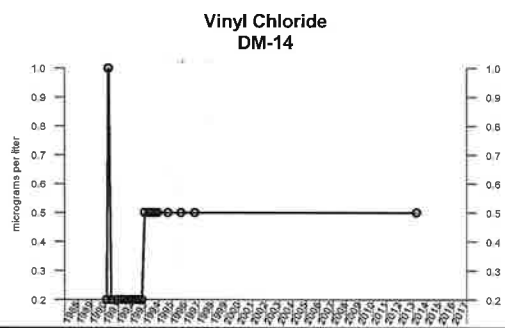


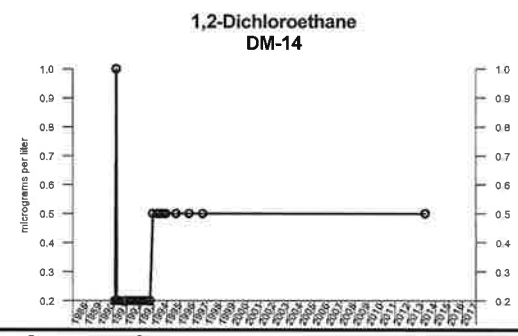












EXPLANATION

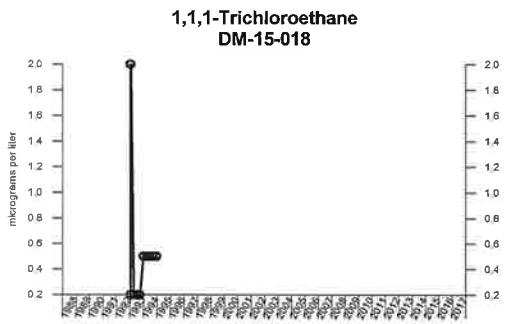
● - Measured Value
○ - Undetected (Displayed at RL)

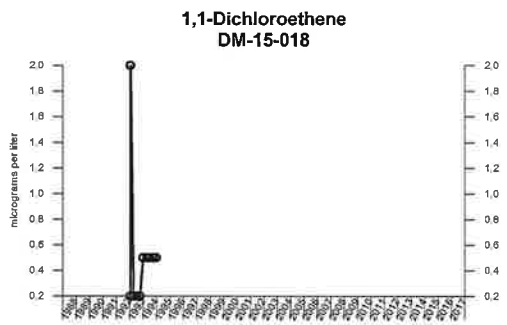
CLEAR CREEK ASSOCIATES

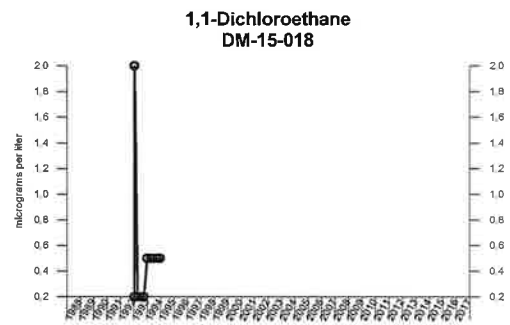
Project Name: 56th Street and Earll Drive WQARF Site

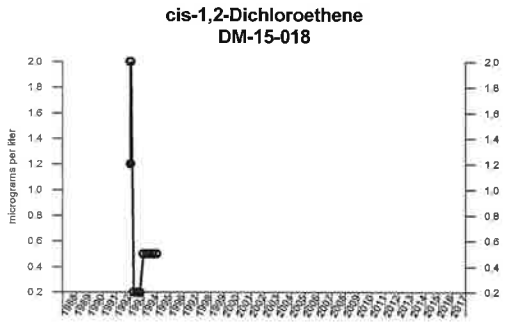
Job No: 005-134-17 | Date: June 2017

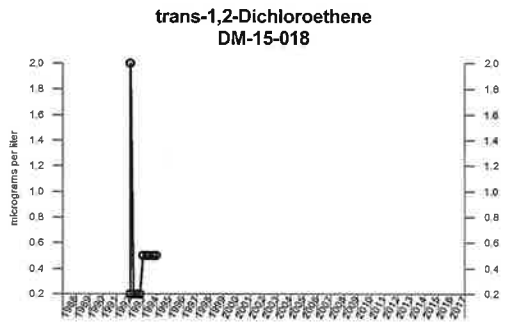
Time-Series Graphs
DM-14
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

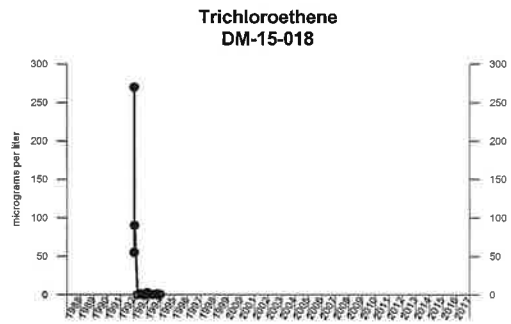


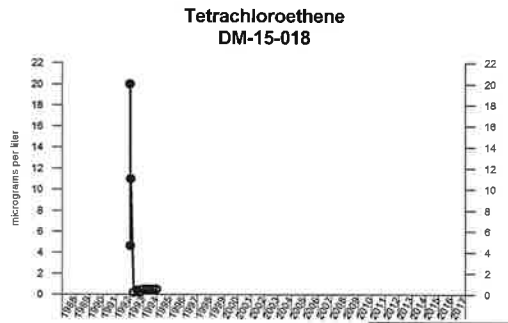


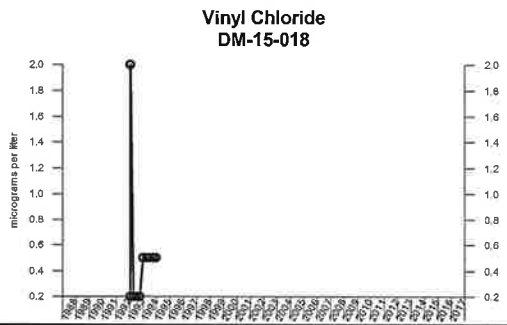


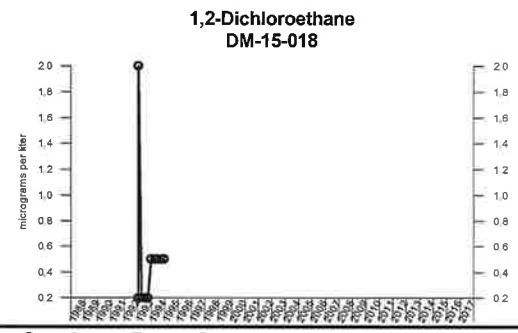












EXPLANATION

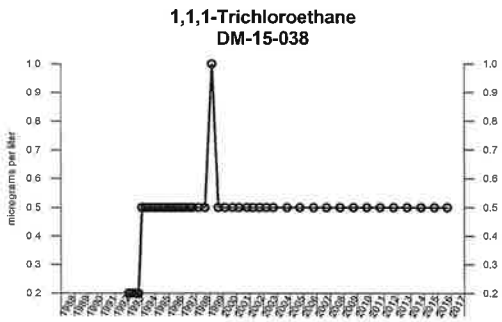
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

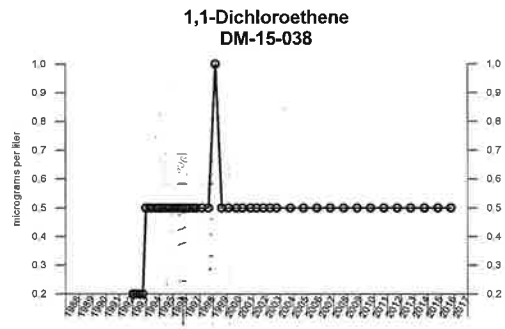
CLEAR CREEK ASSOCIATES

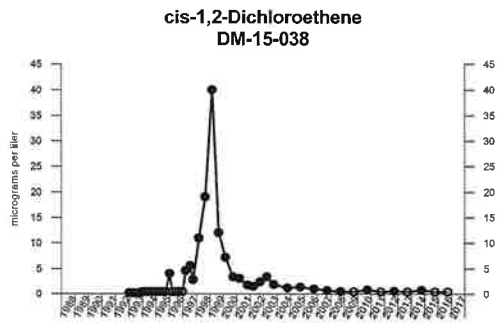
Project Name: 56th Street and Earll Drive WQARF Site

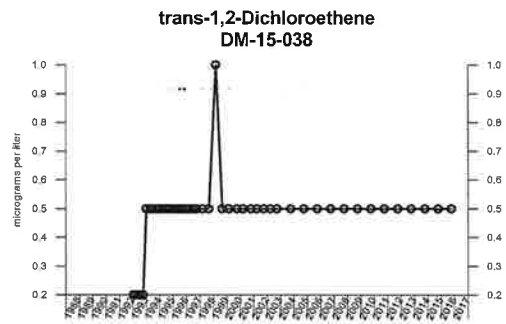
Job No: 005-134-17 | Date: June 2017

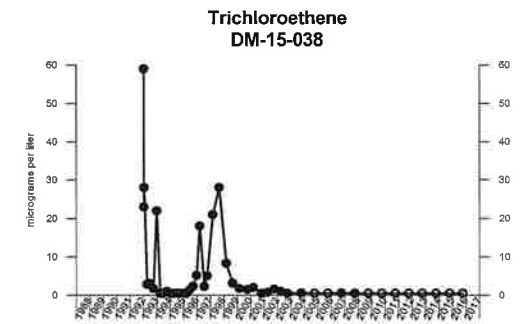
Time-Series Graphs
DM-15-018
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

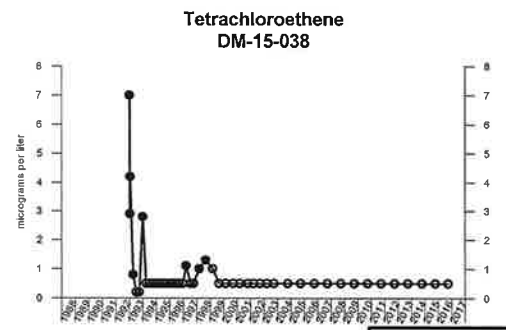


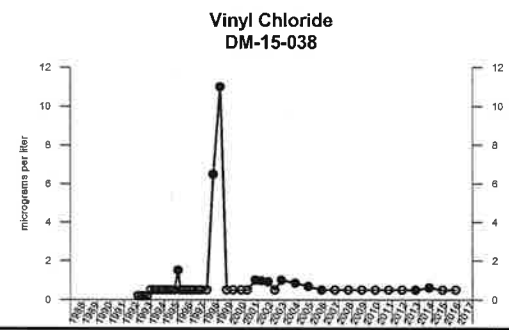


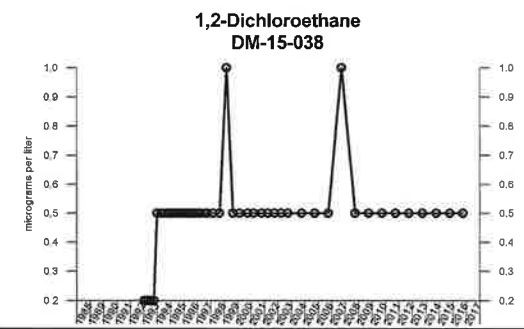












EXPLANATION

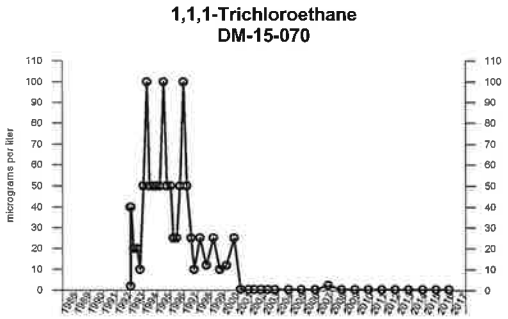
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

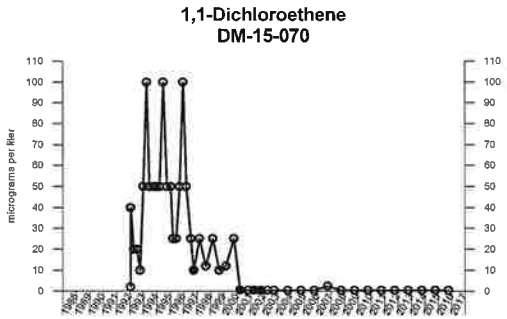
CLEAR CREEK ASSOCIATES

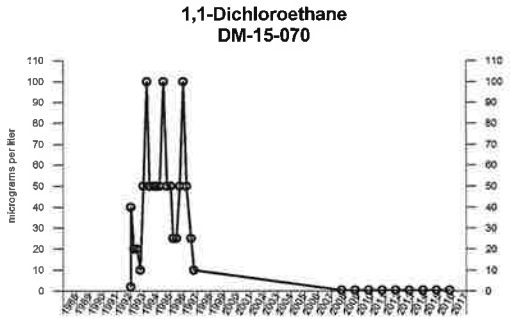
Project Name: 56th Street and Earll Drive WQARF Site

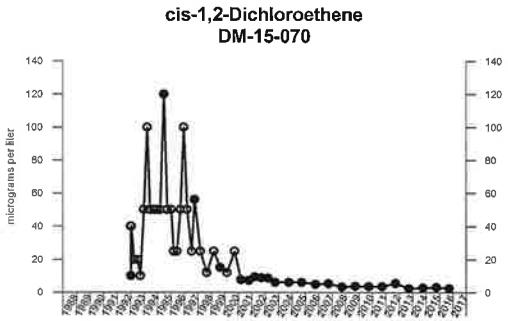
Job No: 005-134-17 | Date: June 2017

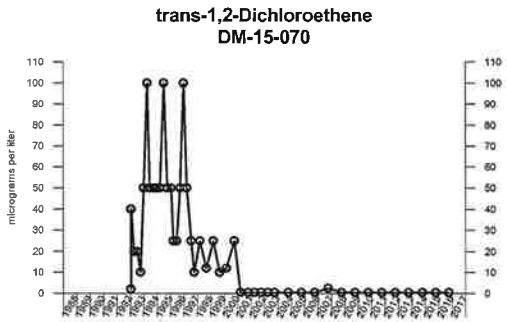
Time-Series Graphs
DM-15-038
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

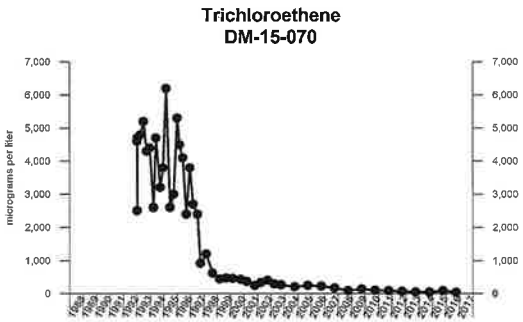


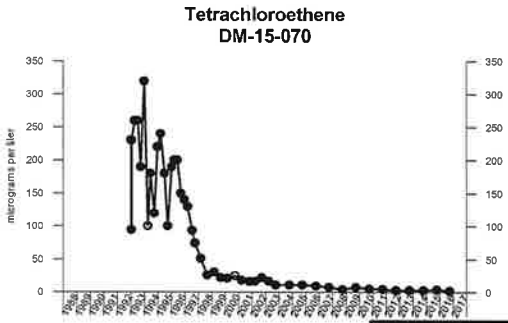


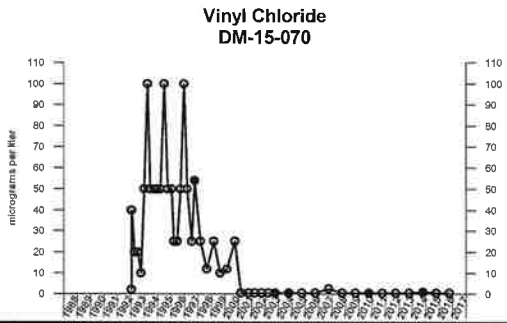


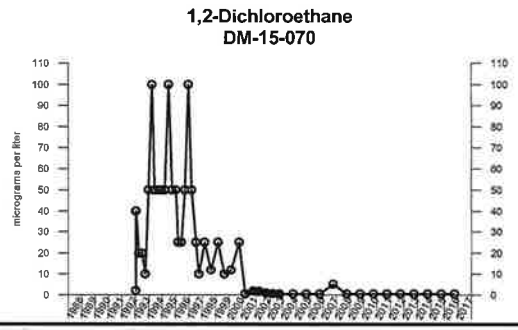












EXPLANATION

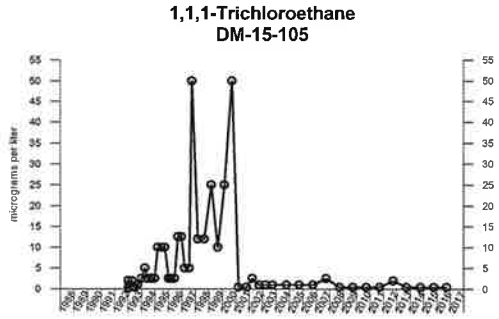
● - Measured Value
○ - Undetected (Displayed at RL)

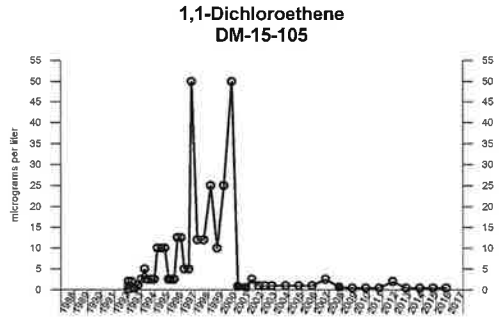
CLEAR CREEK ASSOCIATES

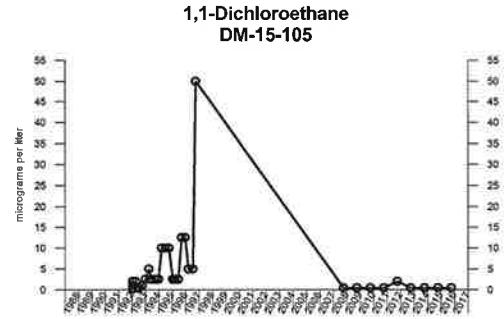
Project Name: 56th Street and Earll Drive WQARF Site

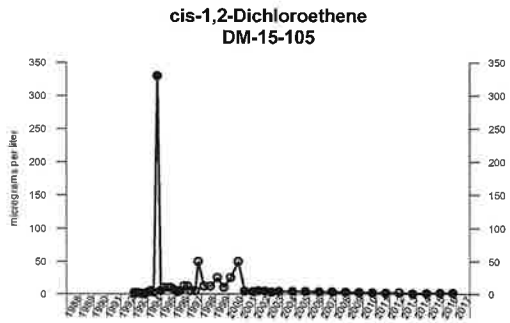
Job No: 005-134-17 | Date: June 2017

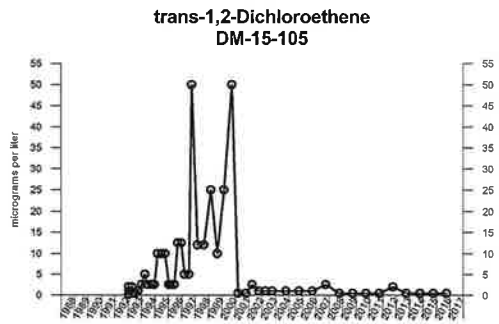
Time-Series Graphs
DM-15-070
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

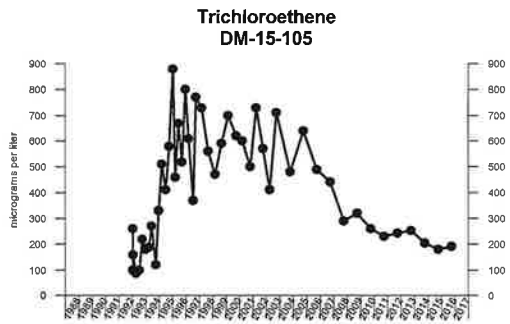


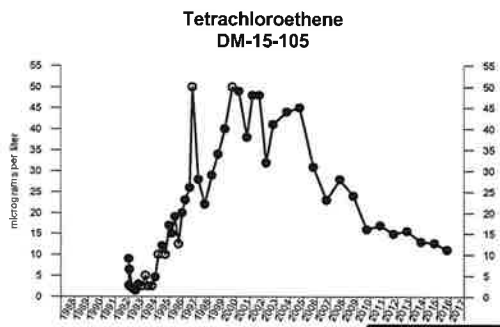


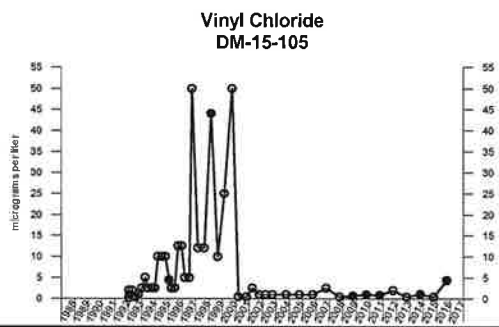


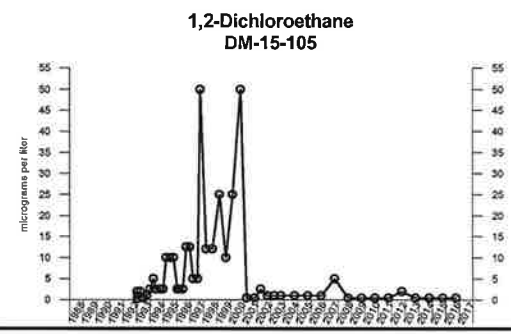












EXPLANATION

● - Measured Value
○ - Undetected (Displayed at RL)

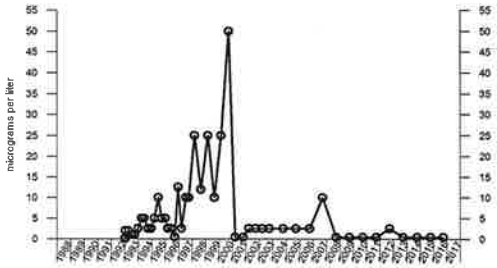
CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

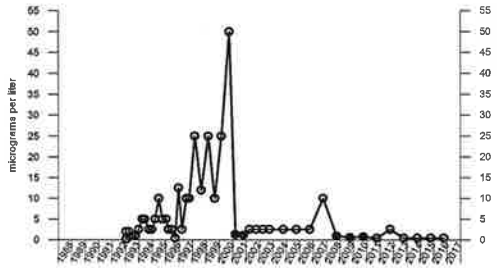
Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-15-105
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

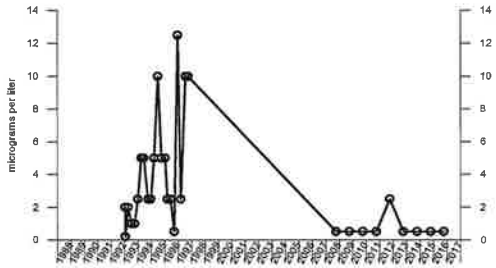
1,1,1-Trichloroethane
DM-15-135



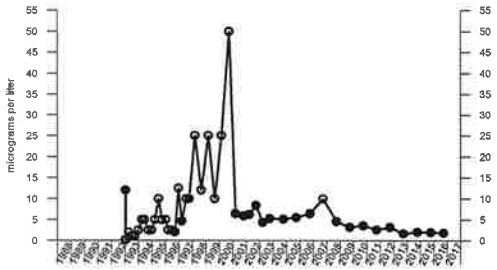
1,1-Dichloroethene
DM-15-135



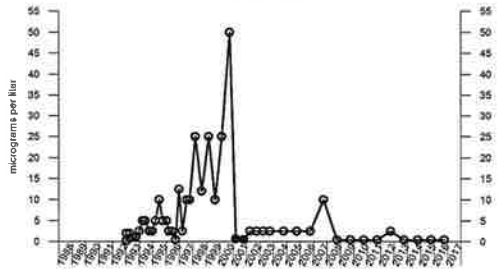
1,1-Dichloroethane
DM-15-135



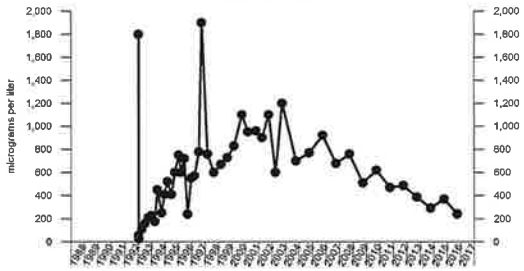
cis-1,2-Dichloroethene
DM-15-135



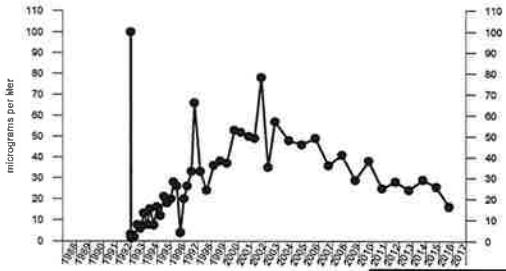
trans-1,2-Dichloroethene
DM-15-135



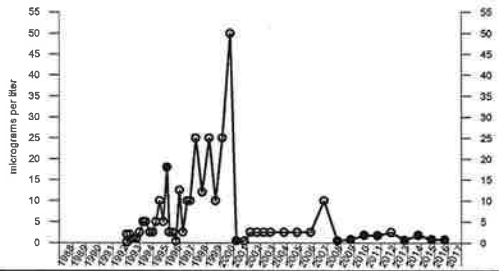
Trichloroethene
DM-15-135



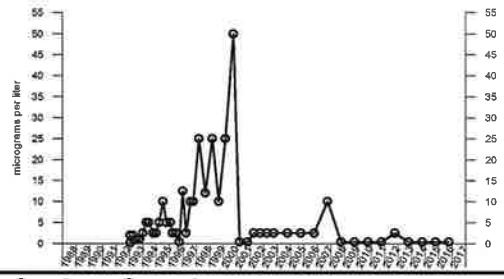
Tetrachloroethene
DM-15-135



Vinyl Chloride
DM-15-135



1,2-Dichloroethane
DM-15-135



EXPLANATION

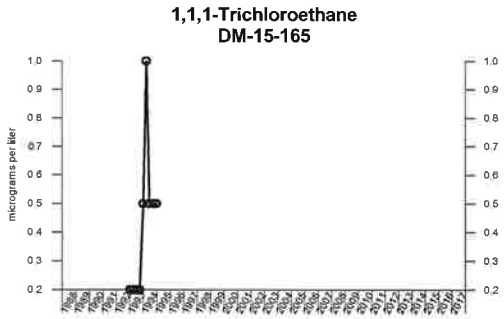
● - Measured Value
○ - Undetected (Displayed at RL)

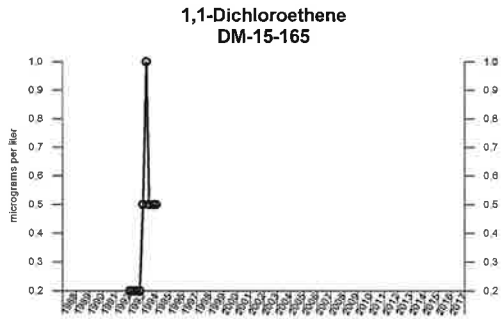
CLEAR CREEK ASSOCIATES

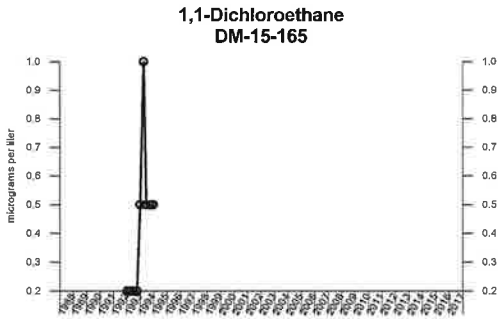
Project Name: 56th Street and Earll Drive WQARF Site

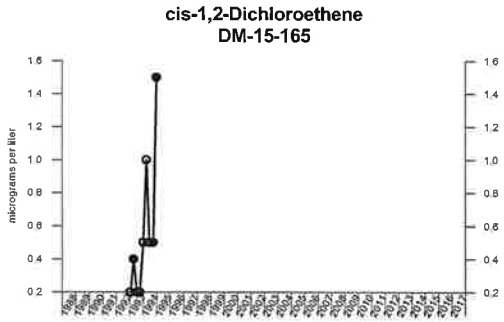
Job No: 005-134-17 | Date: June 2017

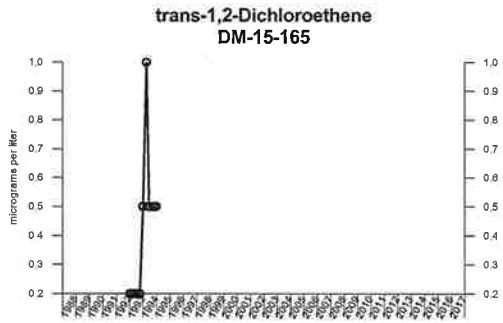
Time-Series Graphs
DM-15-135
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

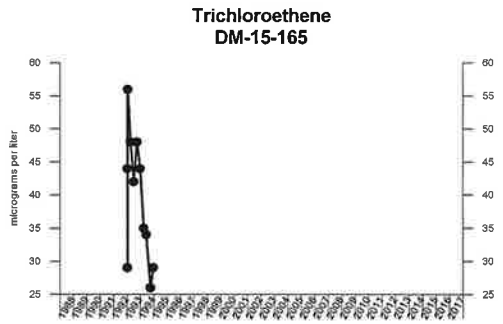


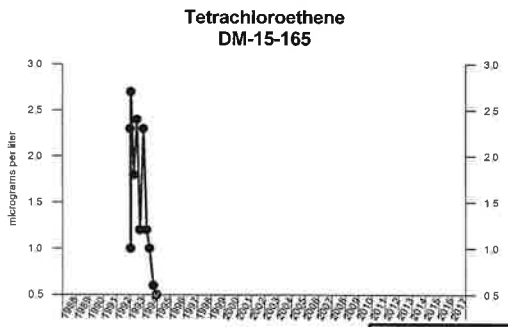


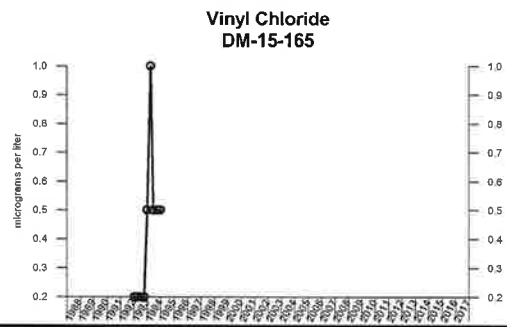


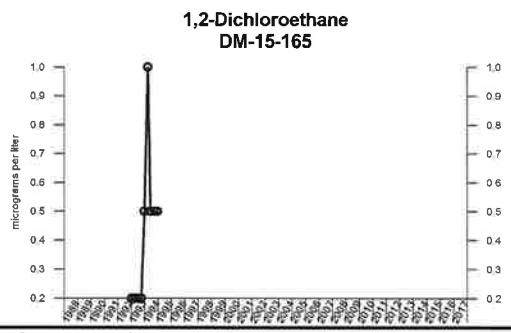












EXPLANATION

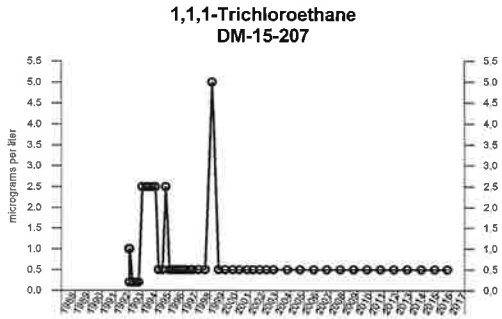
● - Measured Value
○ - Undetected (Displayed at RL)

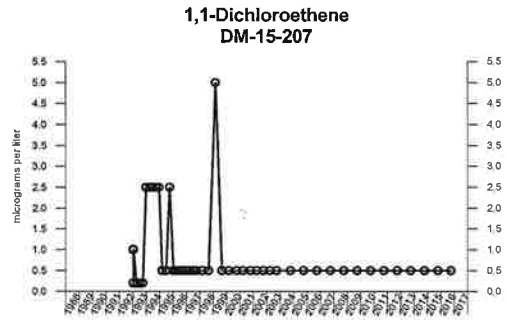
CLEAR CREEK ASSOCIATES

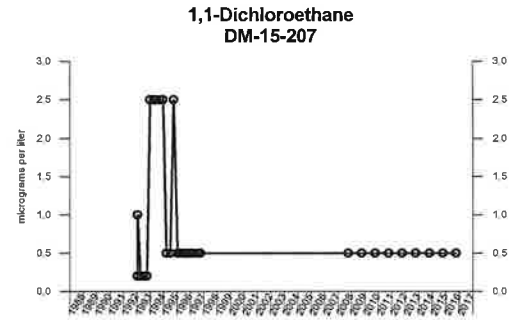
Project Name: 56th Street and Earll Drive WQARF Site

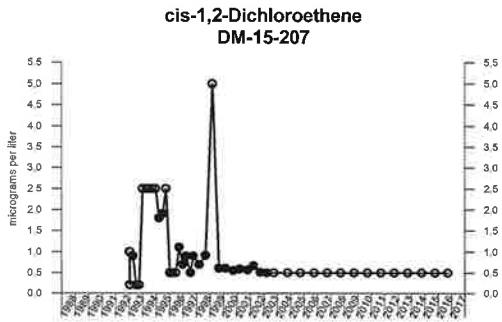
Job No: 005-134-17 | Date: June 2017

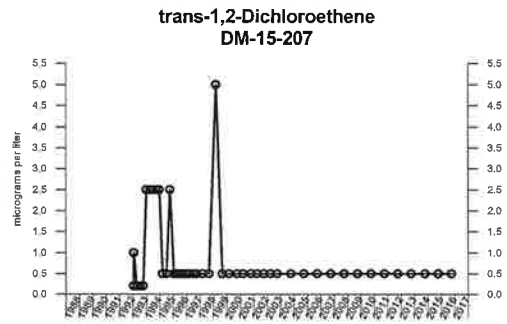
Time-Series Graphs
DM-15-165
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

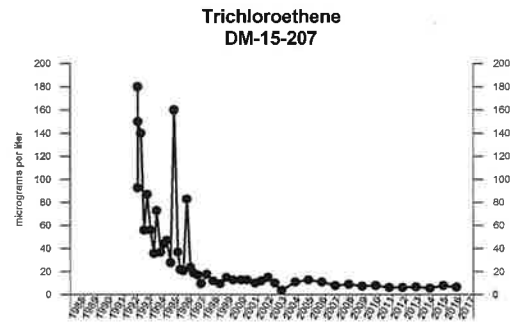


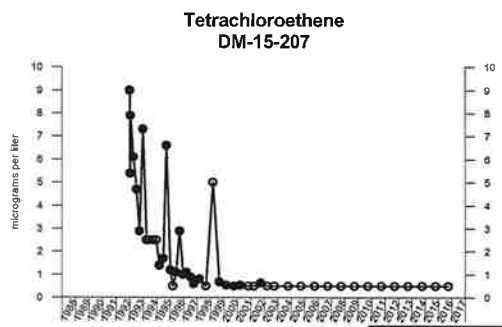


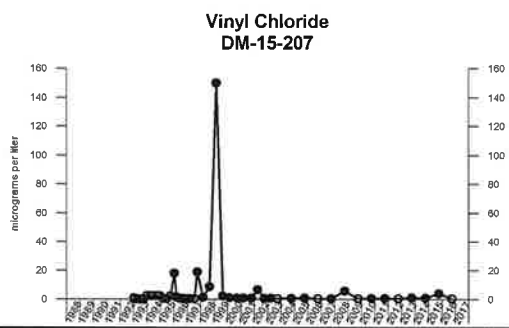


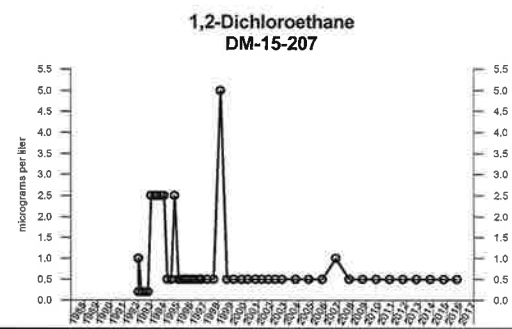












EXPLANATION

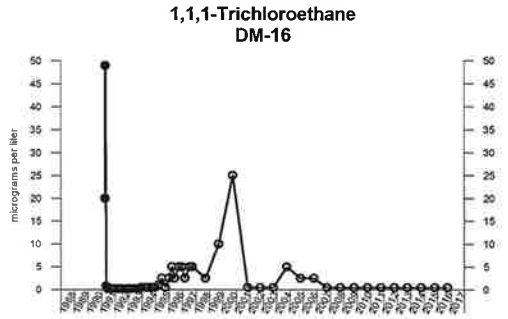
● - Measured Value
○ - Undetected (Displayed at RL)

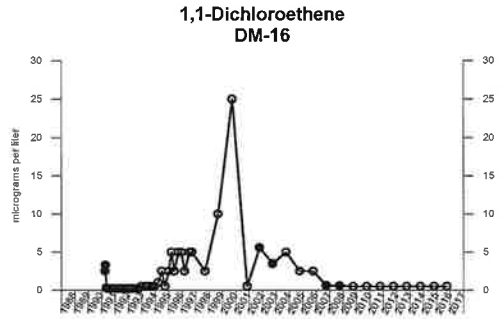
CLEAR CREEK ASSOCIATES

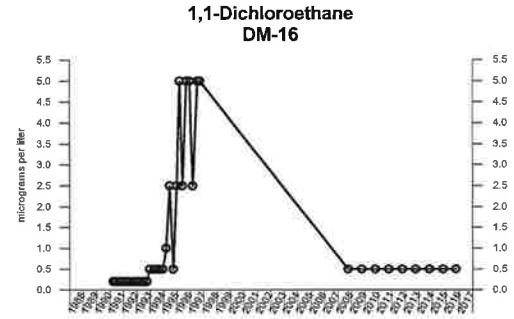
Project Name: 56th Street and Earll Drive WQARF Site

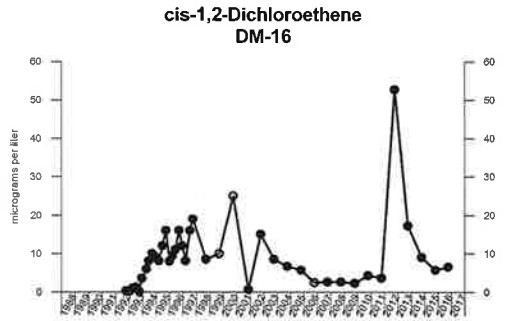
Job No: 005-134-17 | Date: June 2017

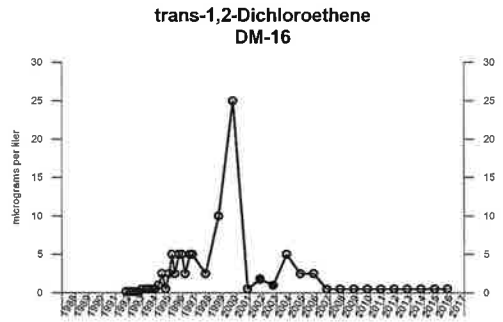
Time-Series Graphs
DM-15-207
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

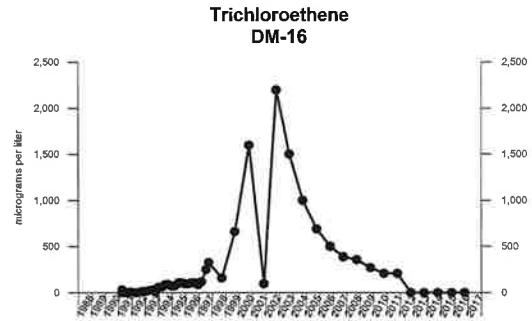


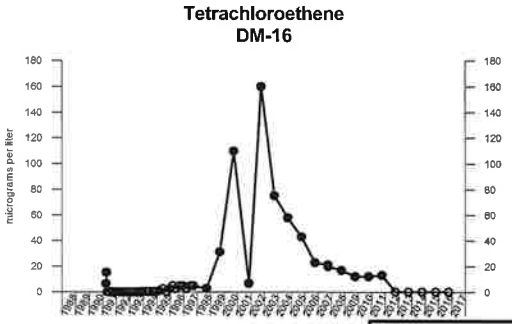


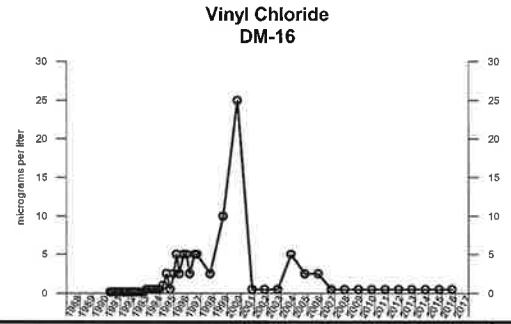


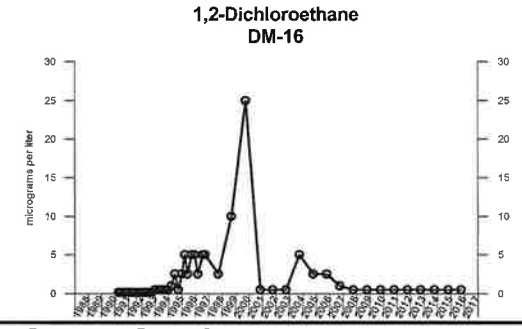












EXPLANATION

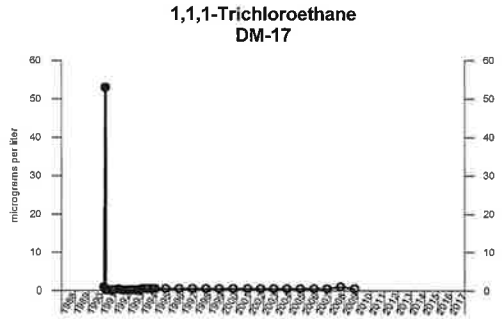
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

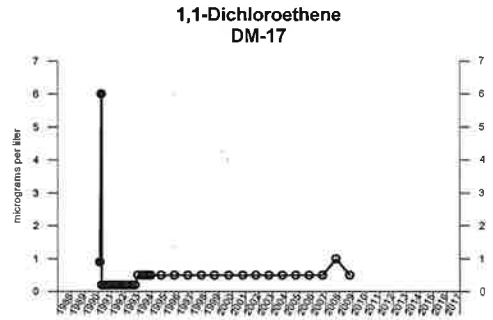
CLEAR CREEK ASSOCIATES

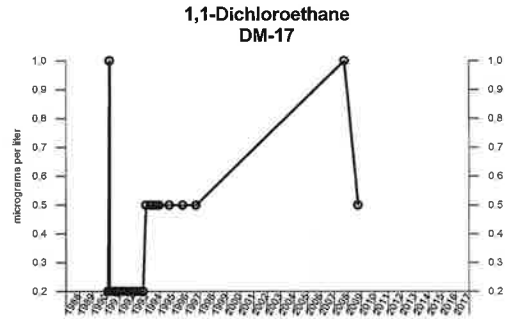
Project Name: 56th Street and Earll Drive WQARF Site

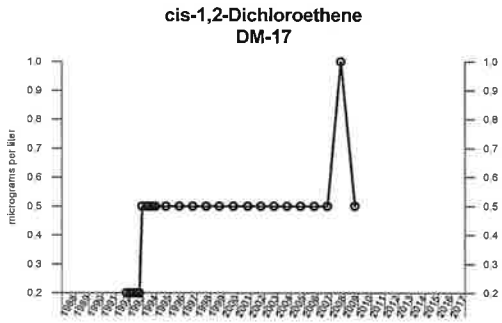
Job No: 005-134-17 | Date: June 2017

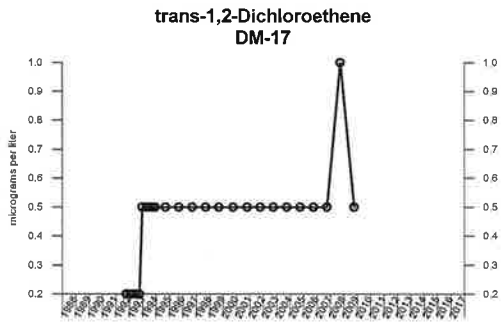
Time-Series Graphs
DM-16
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

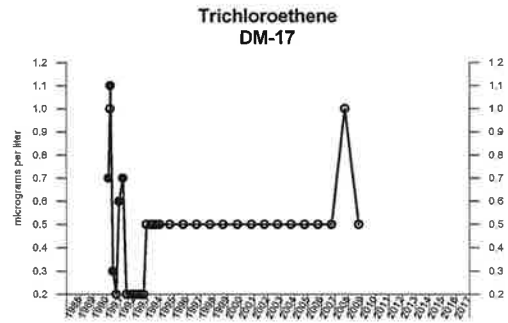


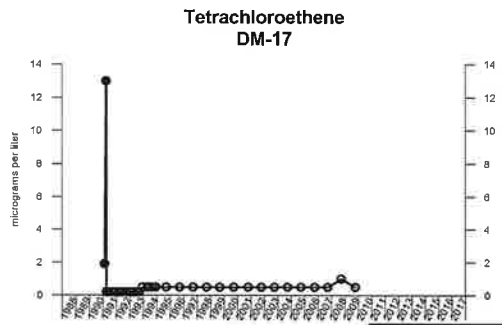


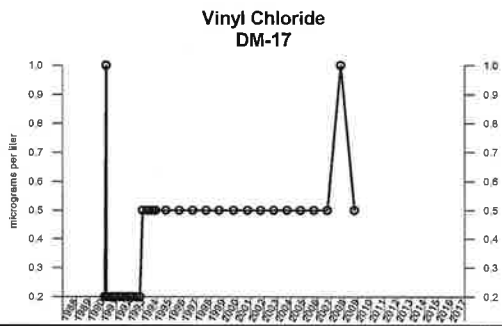


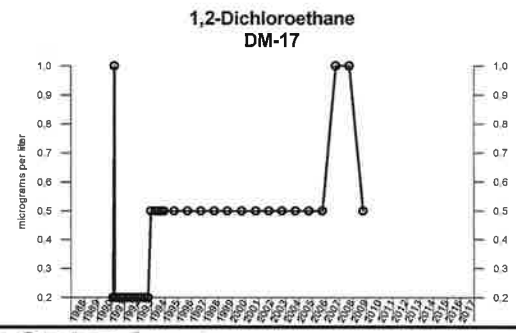












EXPLANATION

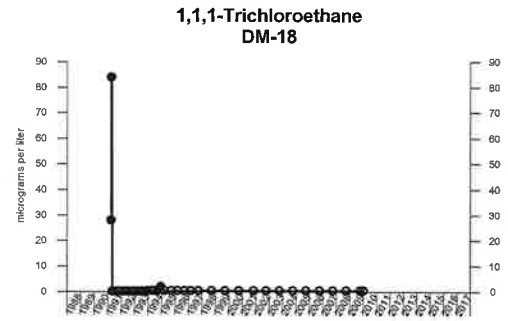
● - Measured Value
○ - Undetected (Displayed at RL)

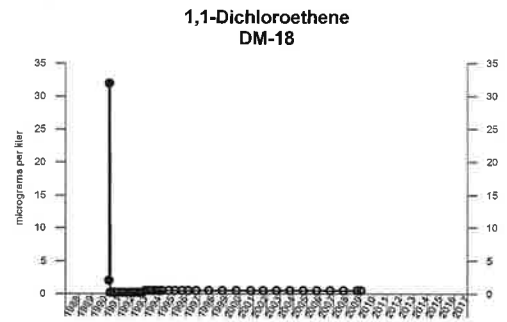
CLEAR CREEK ASSOCIATES

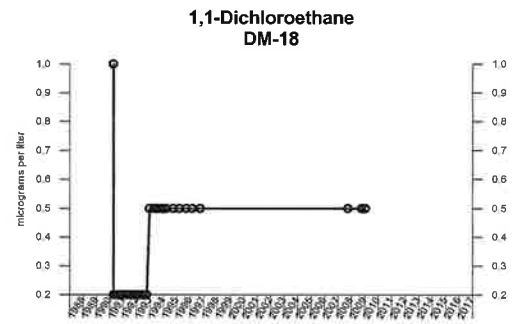
Project Name: 56th Street and Earll Drive WQARF Site

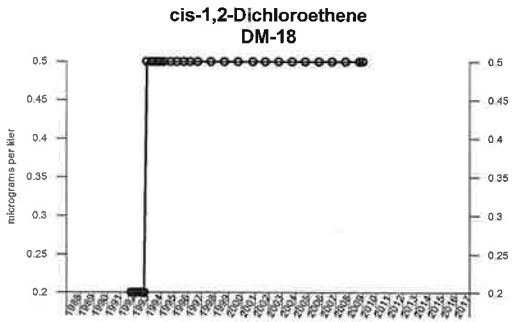
Job No: 005-134-17 | Date: June 2017

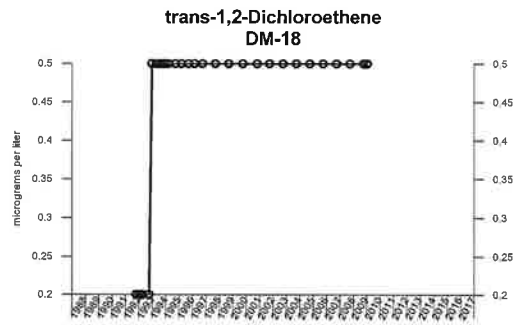
Time-Series Graphs
DM-17
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

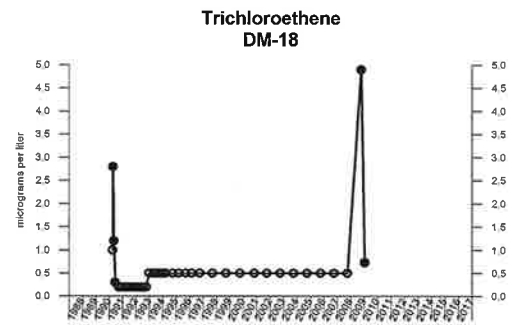


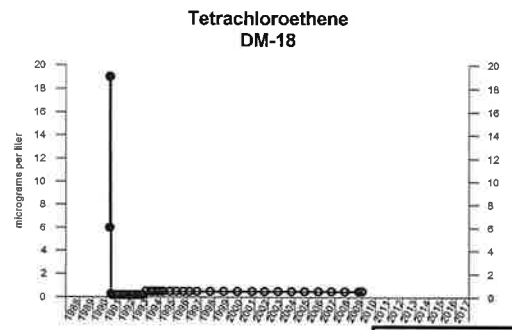


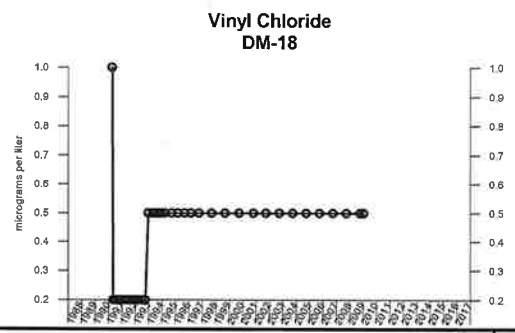


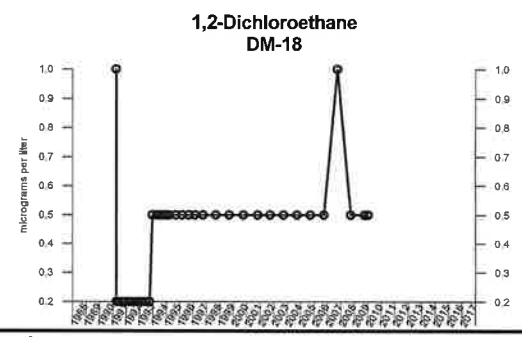












EXPLANATION

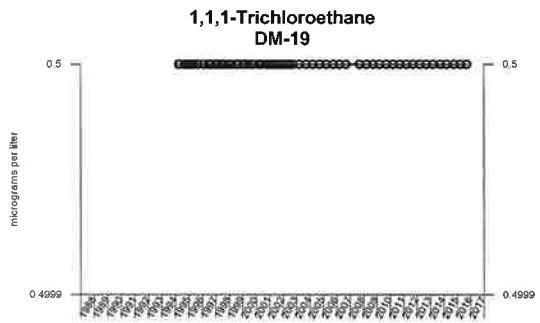
● - Measured Value
○ - Undetected (Displayed at RL)

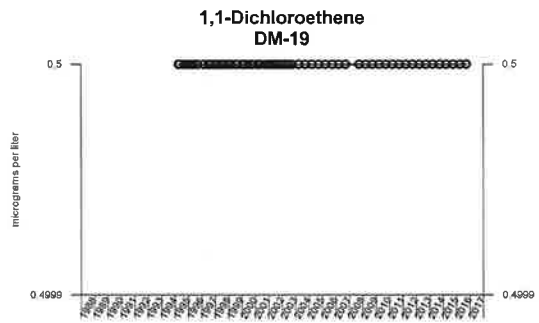
CLEAR CREEK ASSOCIATES

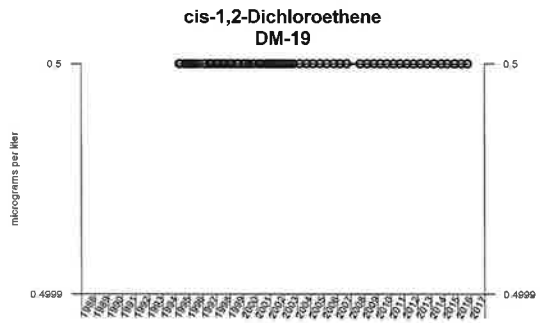
Project Name: 56th Street and Earll Drive WQARF Site

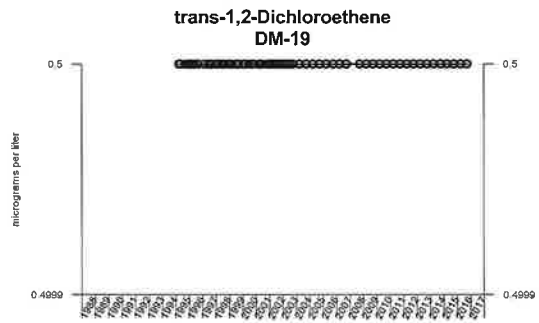
Job No: 005-134-17 | Date: June 2017

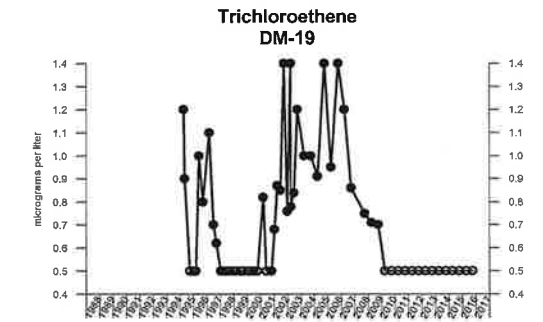
Time-Series Graphs
DM-18
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

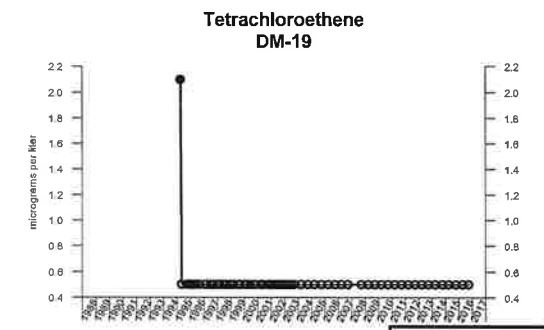


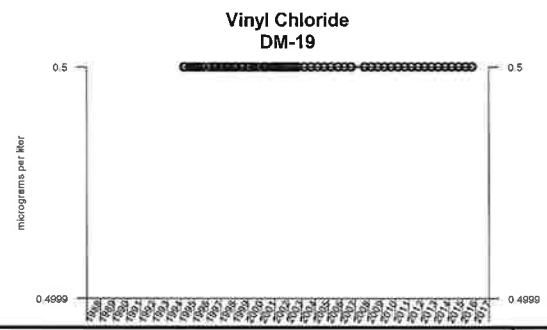


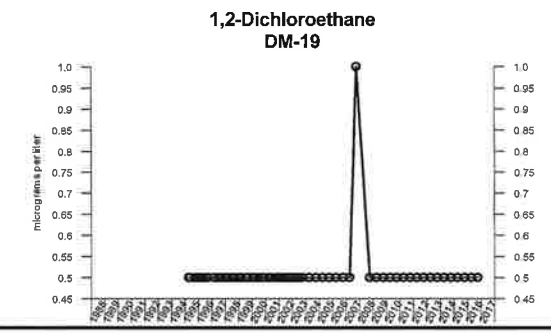












EXPLANATION

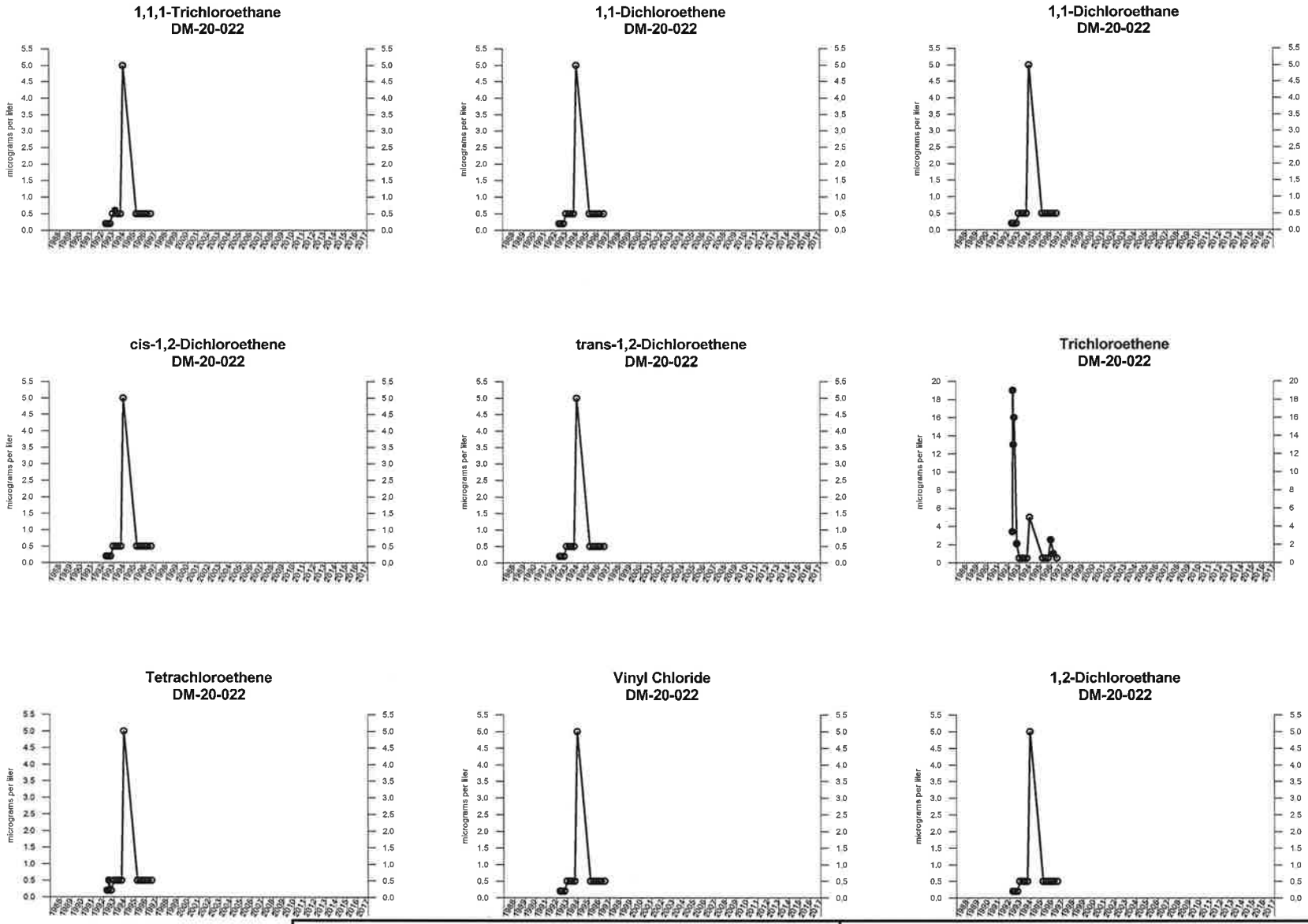
● - Measured Value
○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-19
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

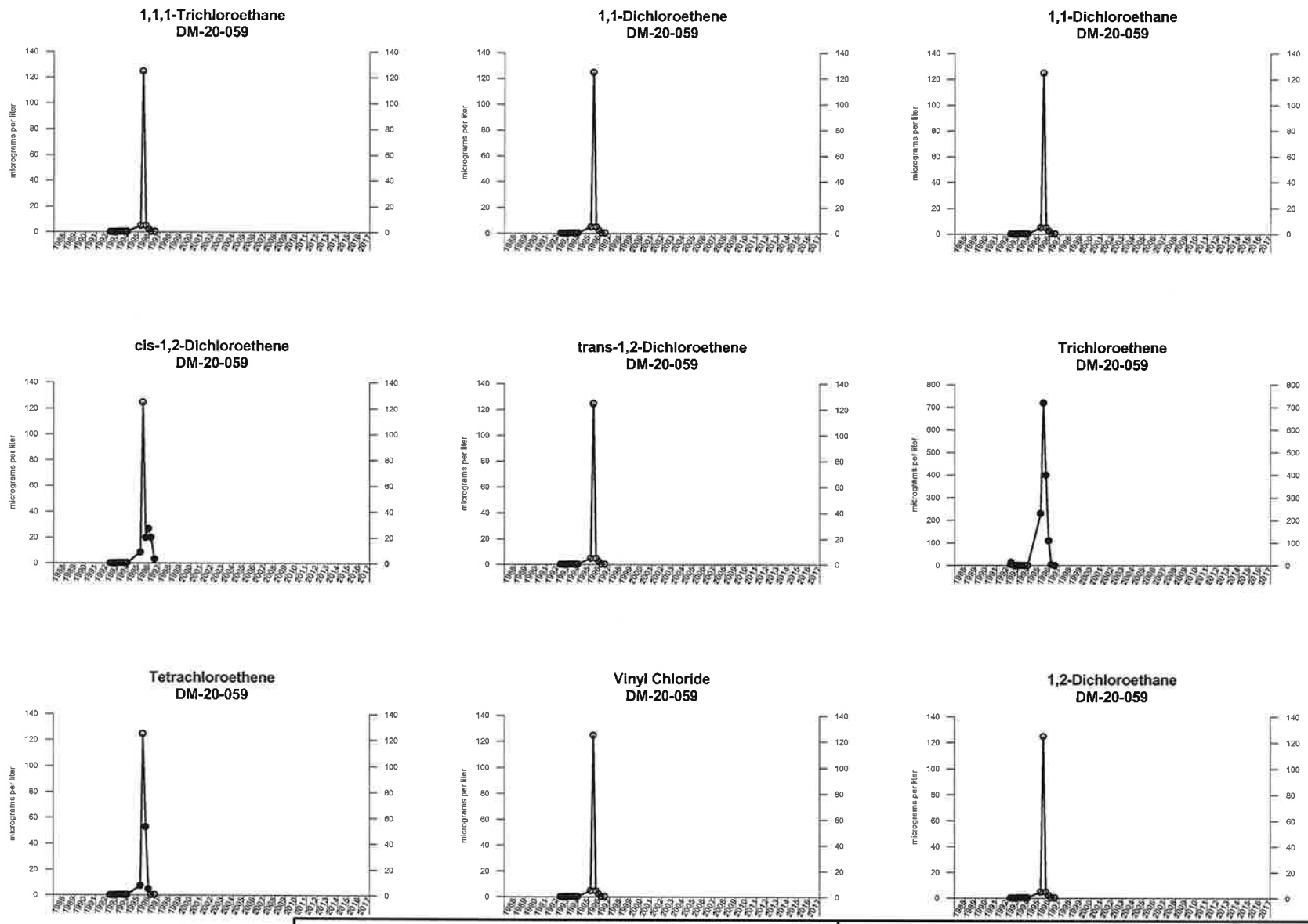
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-20-022
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

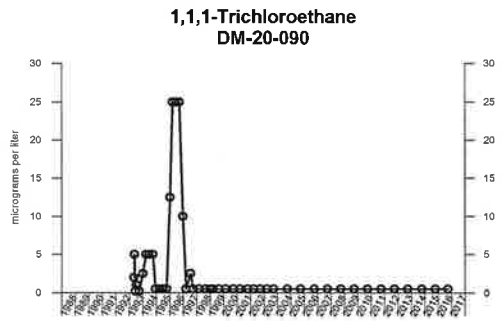
● - Measured Value
○ - Undetected (Displayed at RL)

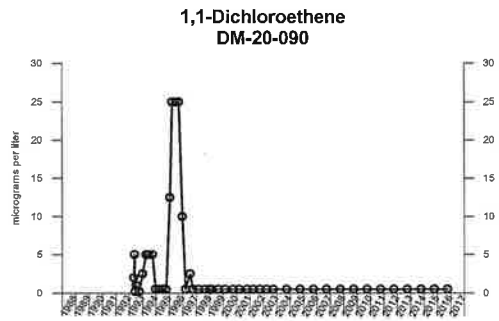
CLEAR CREEK ASSOCIATES

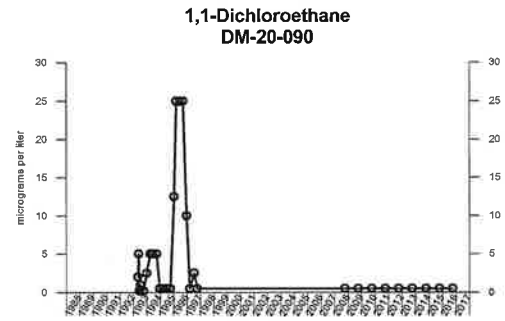
Project Name: 56th Street and Earll Drive WQARF Site

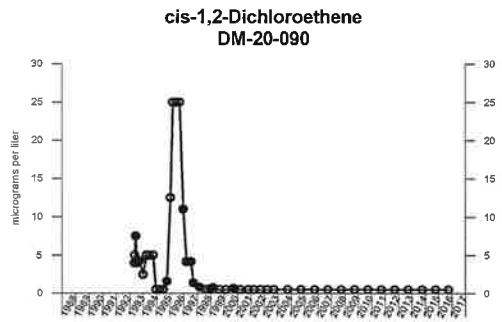
Job No: 005-134-17 | Date: June 2017

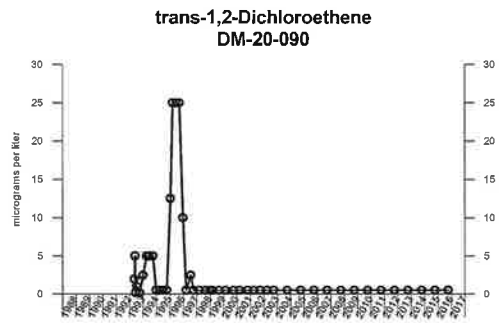
Time-Series Graphs
DM-20-059
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

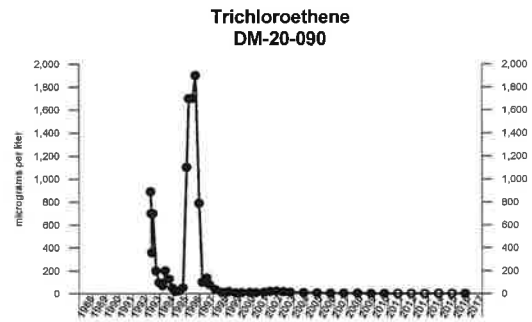


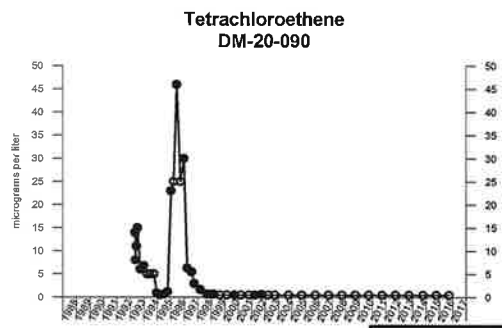


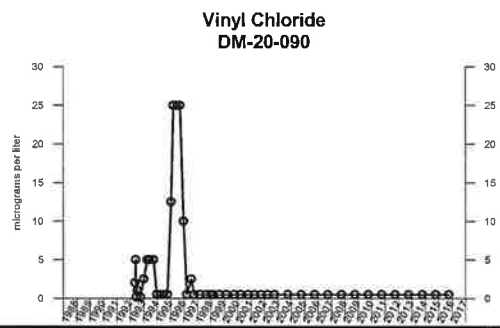


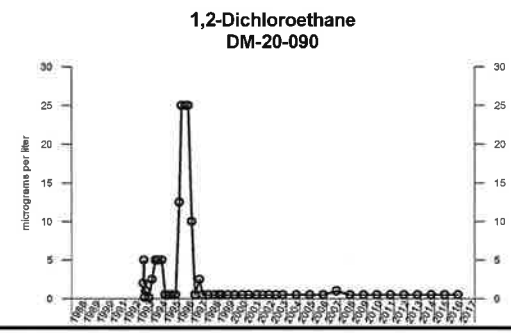












EXPLANATION

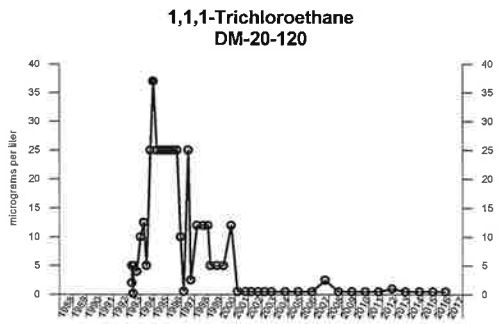
● - Measured Value
○ - Undetected (Displayed at RL)

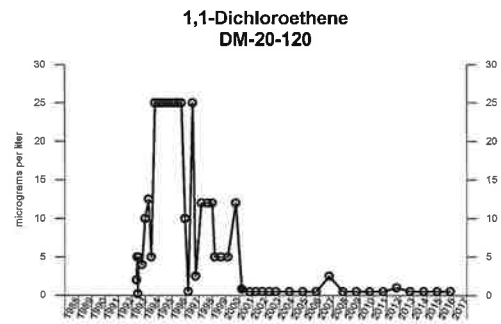
CLEAR CREEK ASSOCIATES

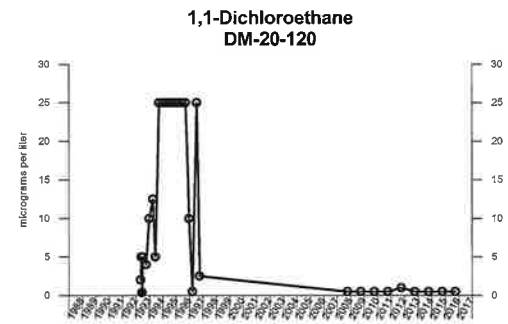
Project Name: 56th Street and Earll Drive WQARF Site

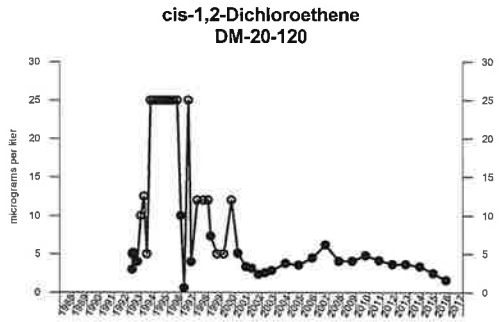
Job No: 005-134-17 | Date: June 2017

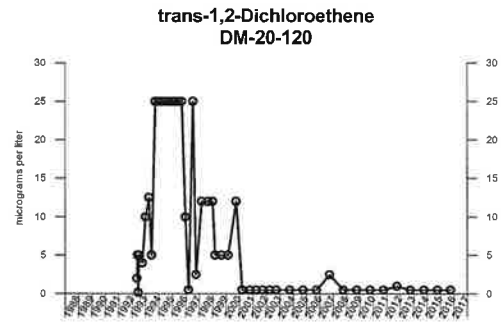
Time-Series Graphs
DM-20-090
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

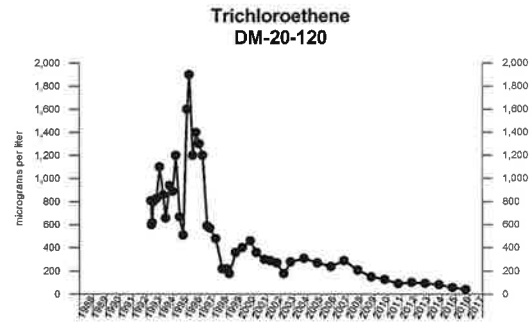


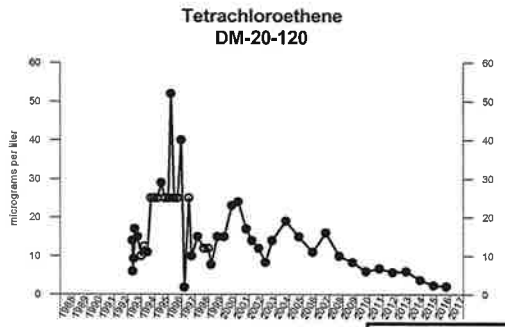


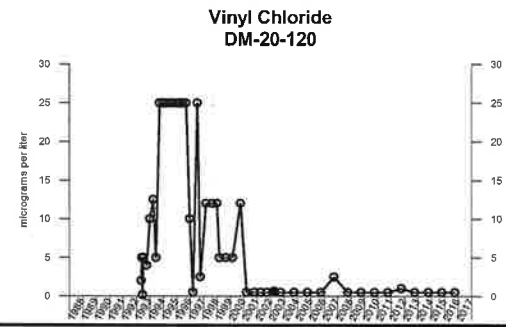


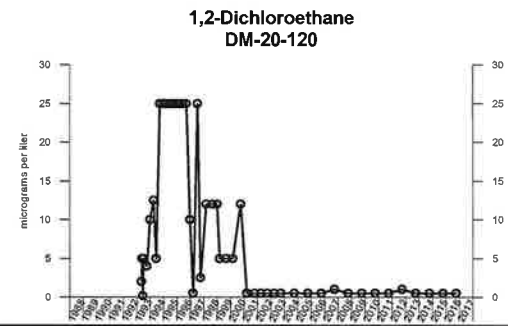












EXPLANATION

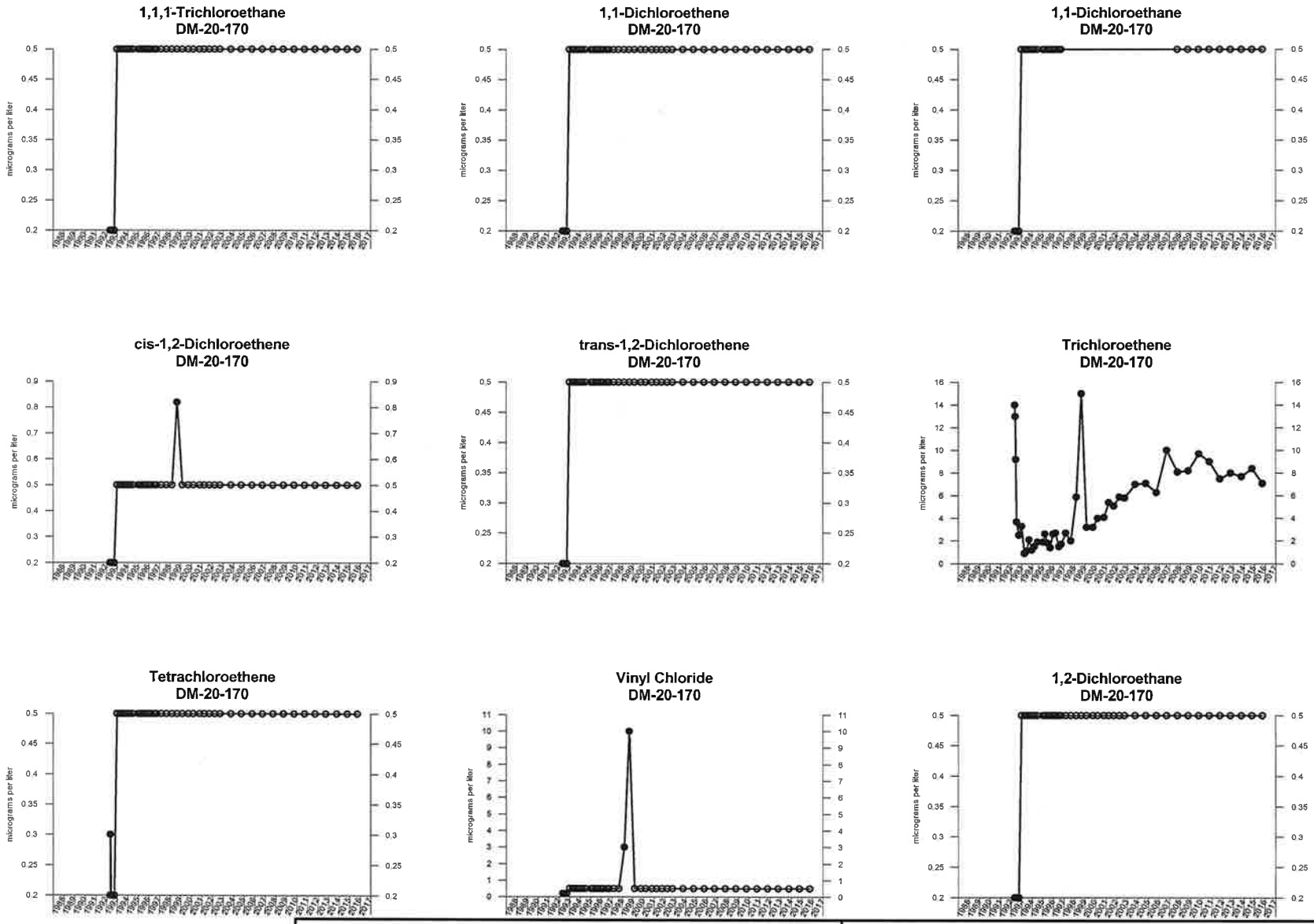
● - Measured Value
○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-20-120
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

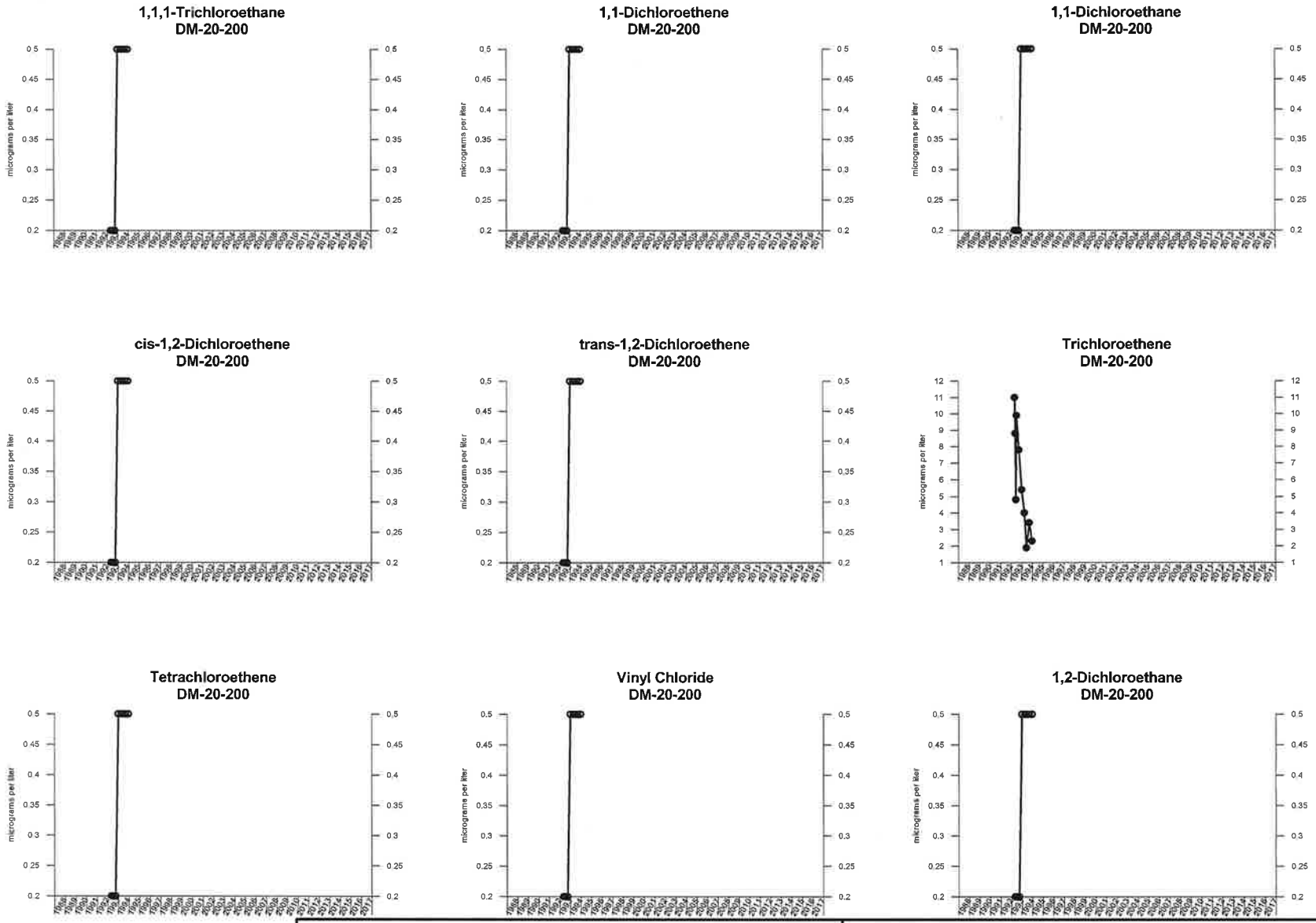
● - Measured Value
○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-20-170
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

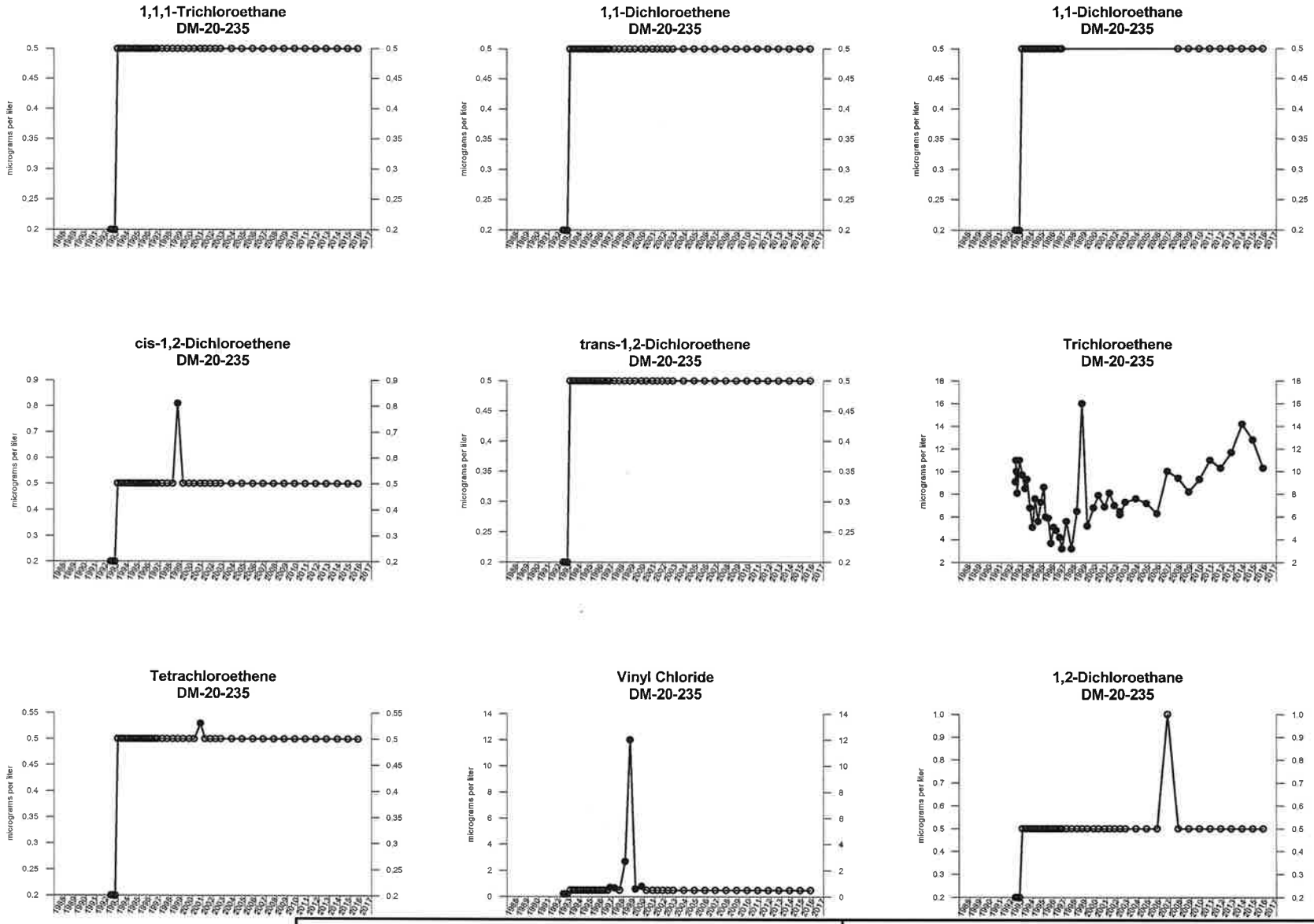
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-20-200
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

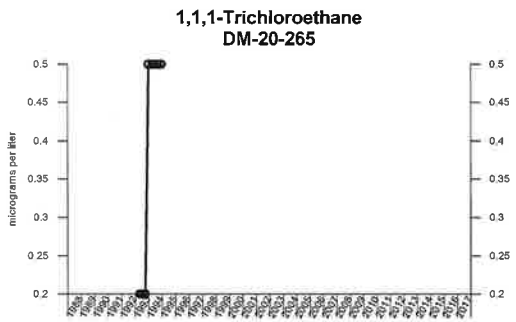
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

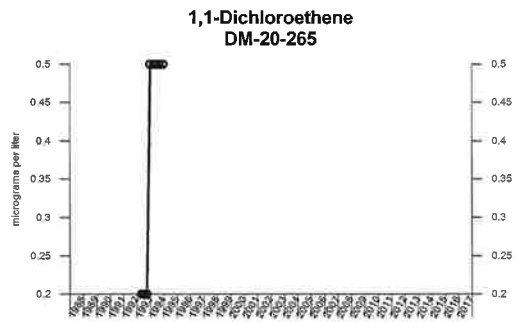
CLEAR CREEK ASSOCIATES

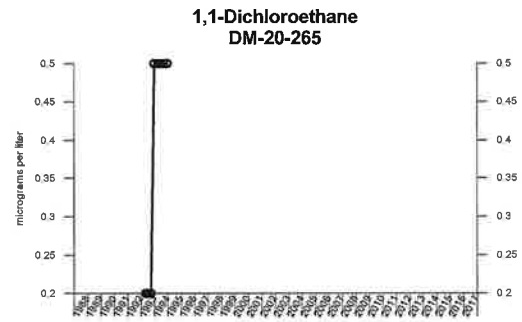
Project Name: 56th Street and Earll Drive WQARF Site

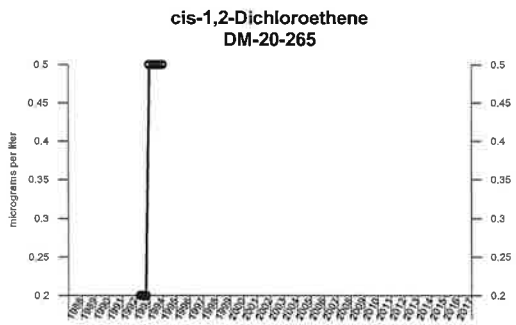
Job No: 005-134-17 | Date: June 2017

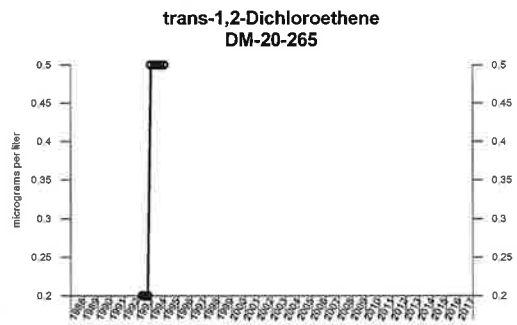
Time-Series Graphs
DM-20-235
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

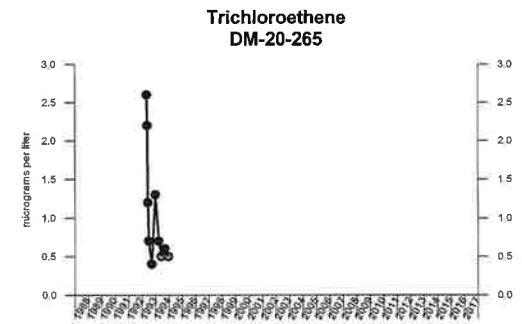


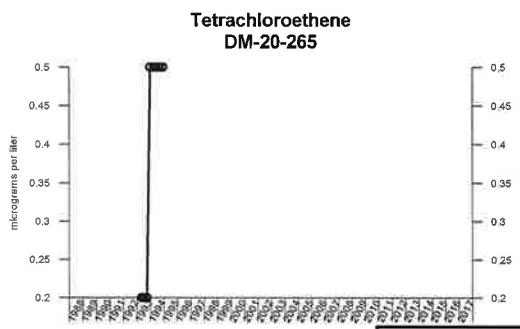


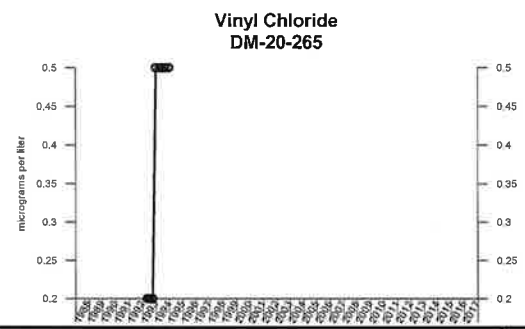


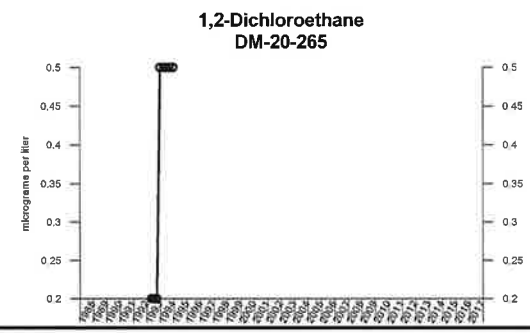












EXPLANATION

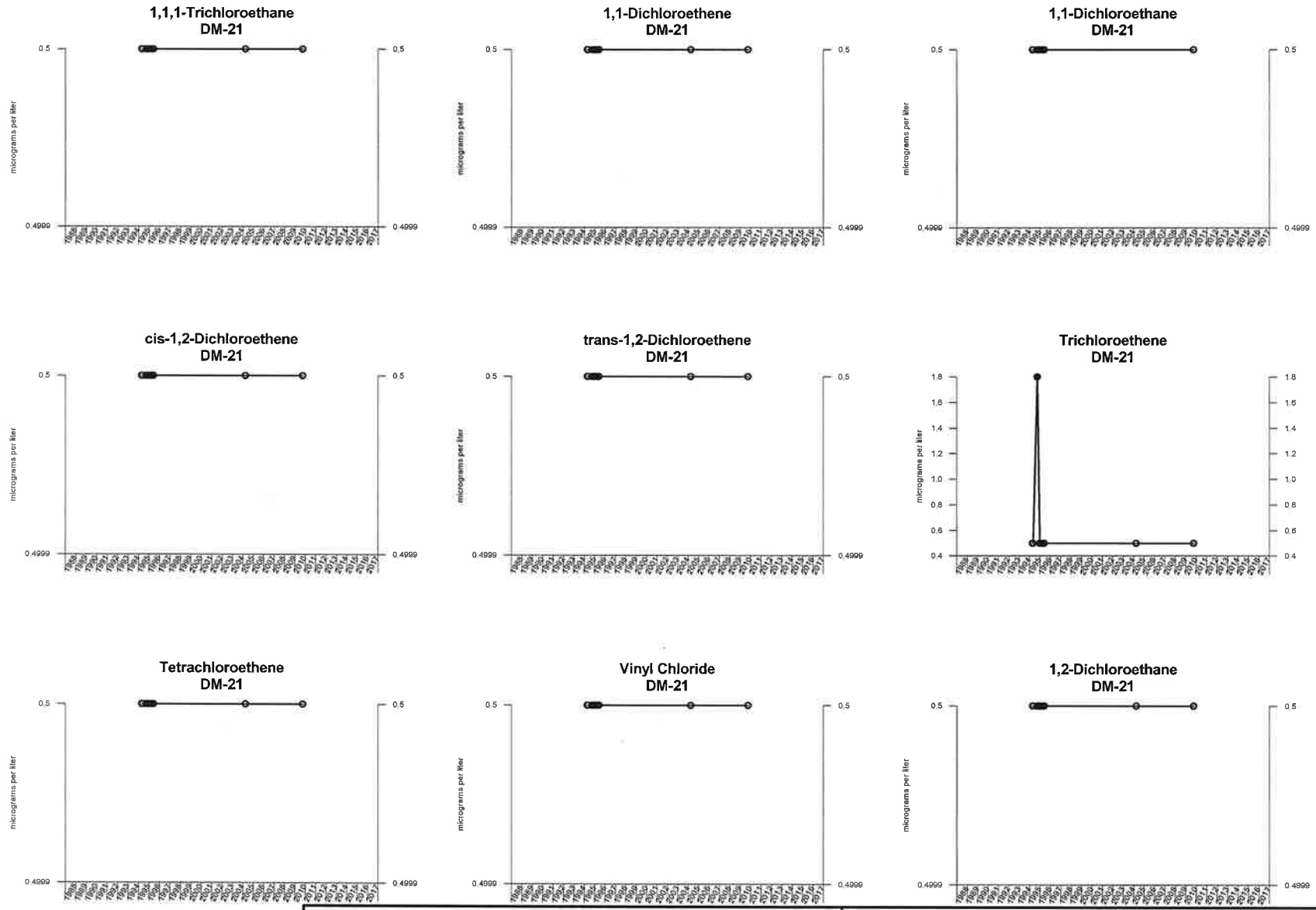
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-20-265
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

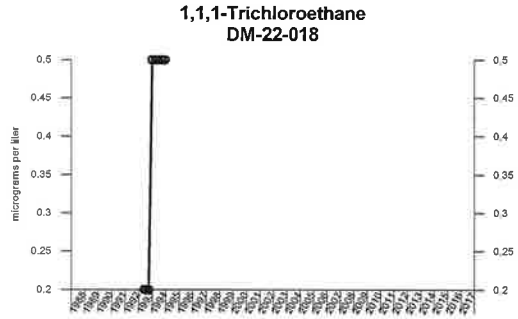
● - Measured Value
○ - Undetected (Displayed at RL)

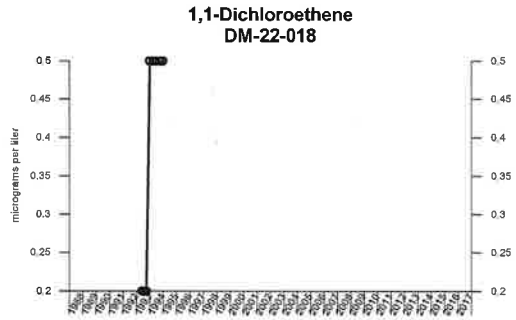
CLEAR CREEK ASSOCIATES

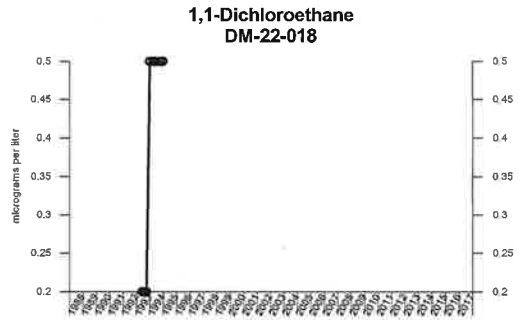
Project Name: 56th Street and Earll Drive WQARF Site

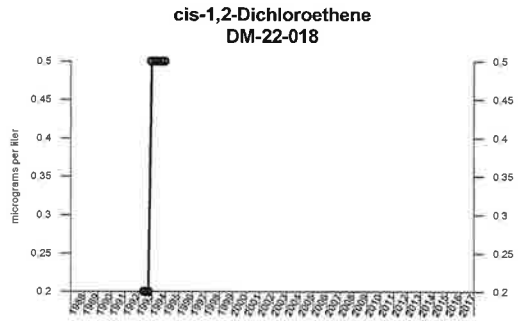
Job No: 005-134-17 | Date: June 2017

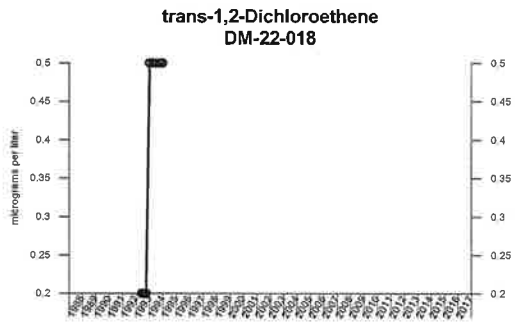
Time-Series Graphs
DM-21
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

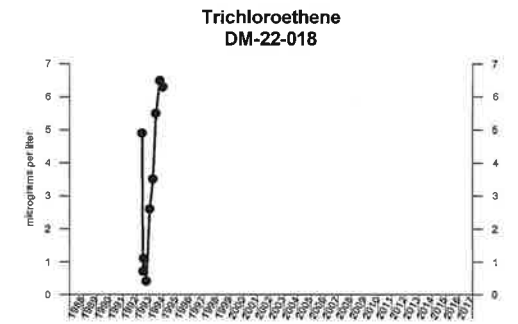


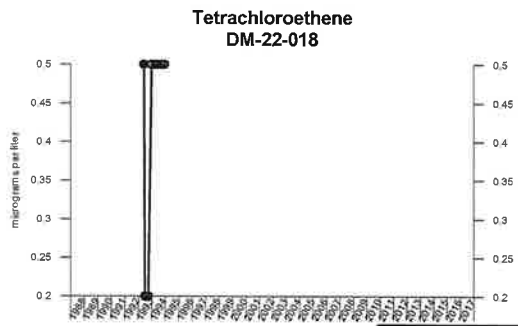


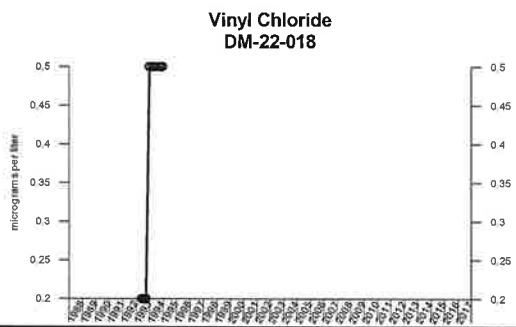


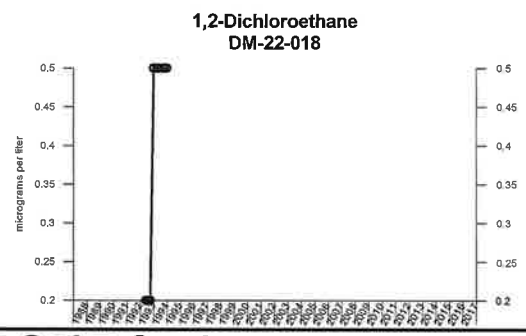












EXPLANATION

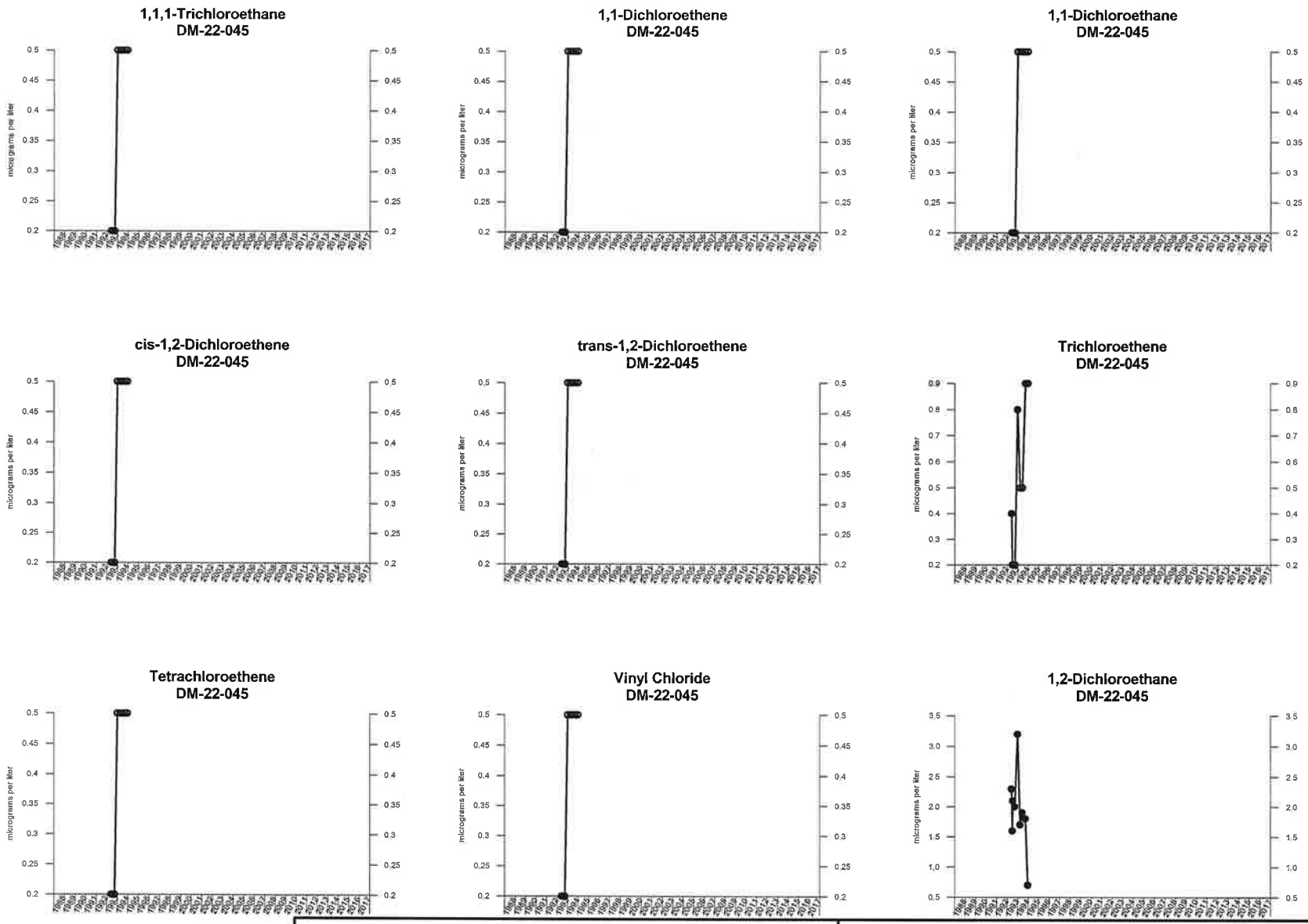
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-22-018
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

- ● - Measured Value
- ○ - Undetected (Displayed at RL)

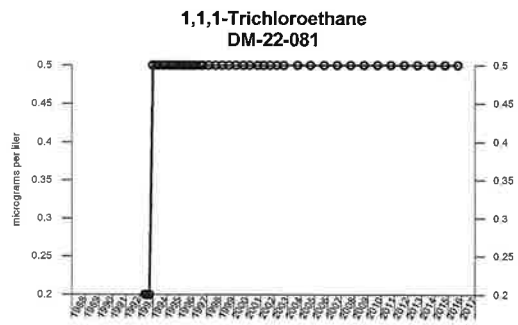
CLEAR CREEK ASSOCIATES

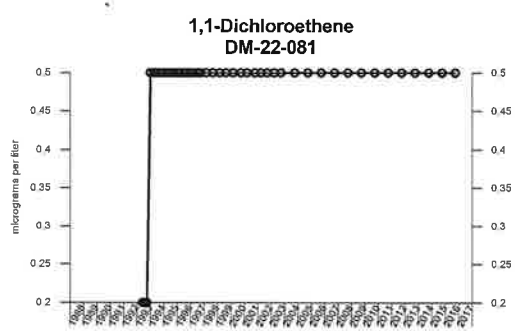
Project Name: 56th Street and Earll Drive WQARF Site

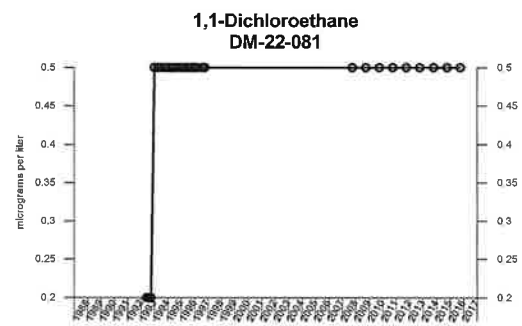
Job No: 005-134-17

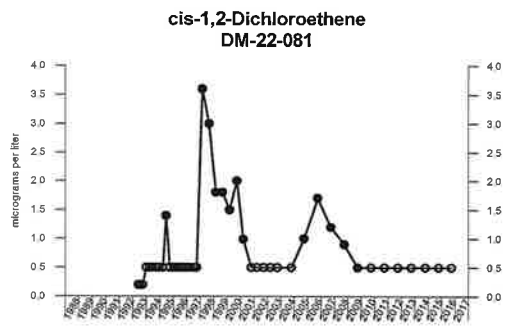
Date: June 2017

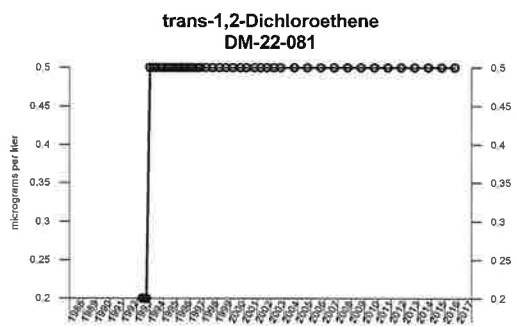
Time-Series Graphs
DM-22-045
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

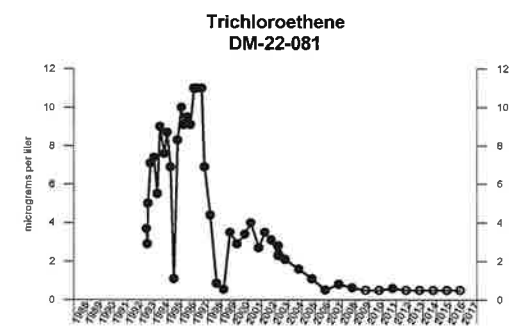


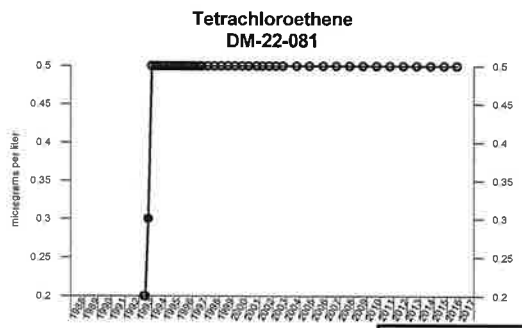


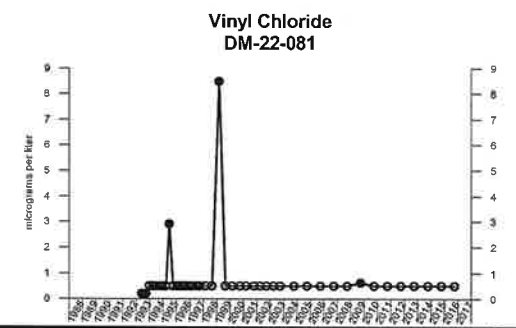


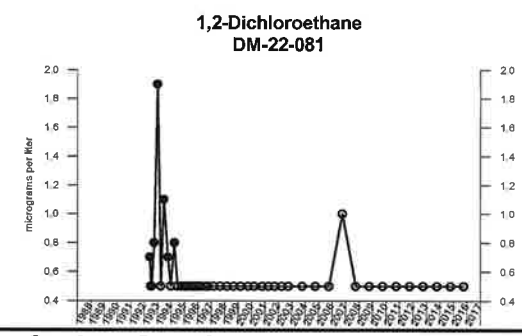












EXPLANATION

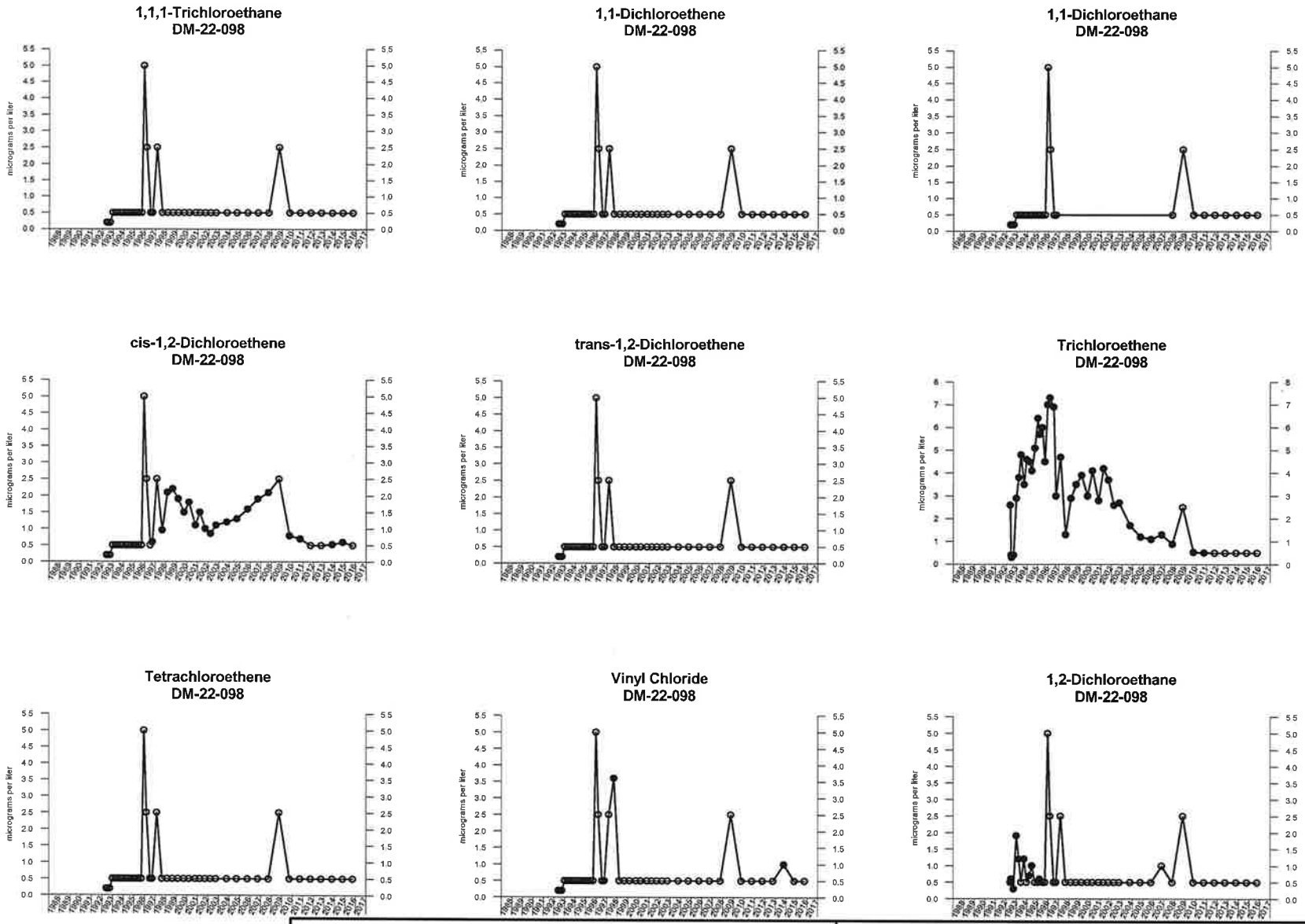
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-22-081
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

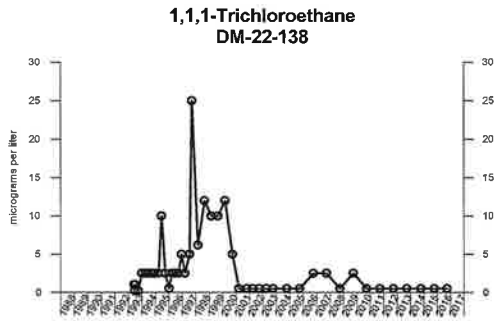
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

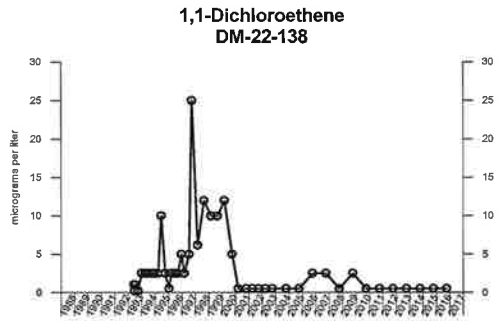
CLEAR CREEK ASSOCIATES

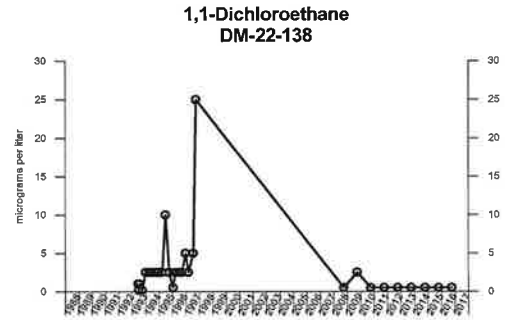
Project Name: 56th Street and Earll Drive WQARF Site

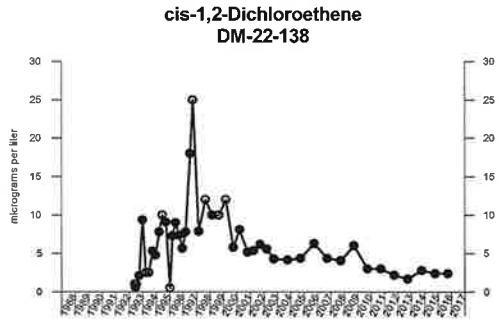
Job No: 005-134-17 | Date: June 2017

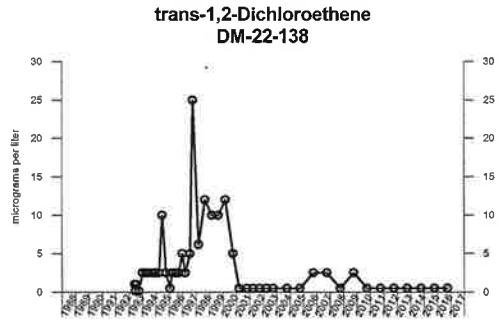
Time-Series Graphs
DM-22-098
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

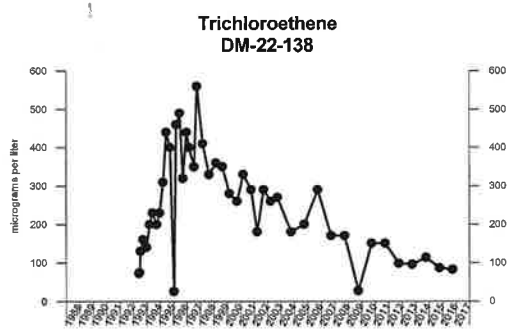


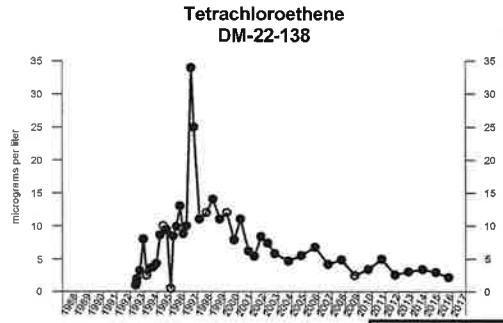


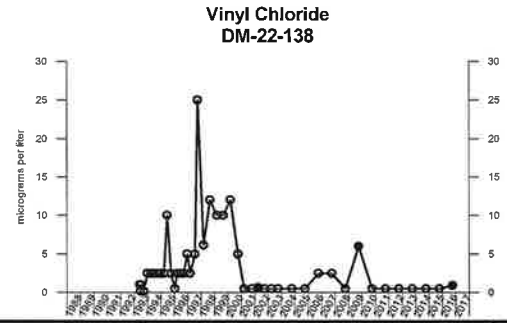


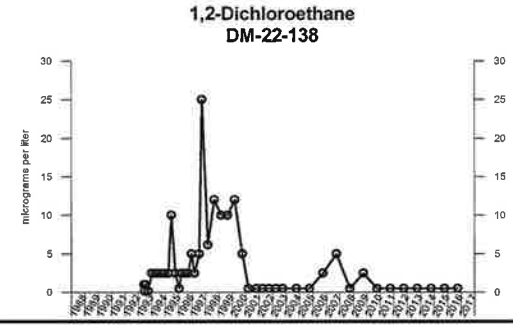












EXPLANATION

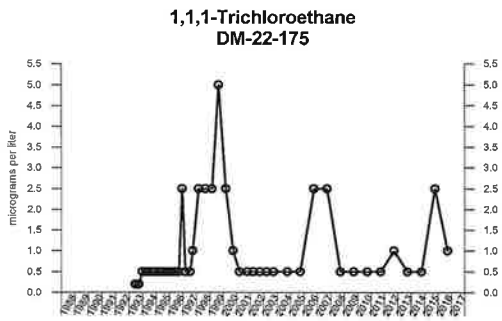
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

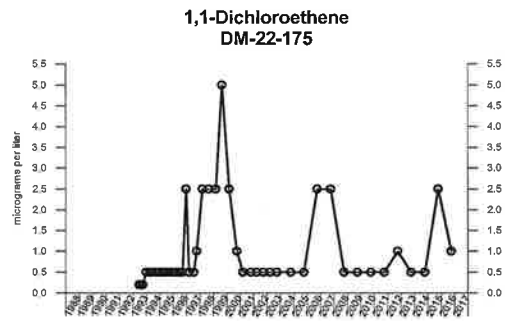
CLEAR CREEK ASSOCIATES

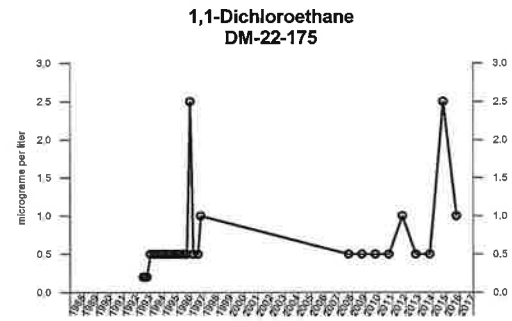
Project Name: 56th Street and Earll Drive WQARF Site

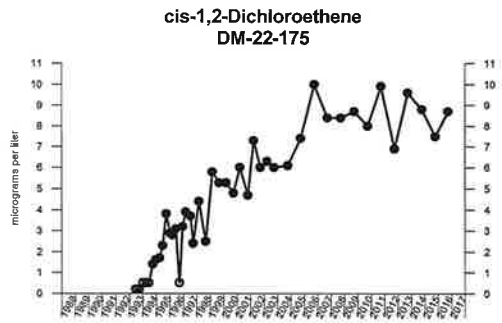
Job No: 005-134-17 | Date: June 2017

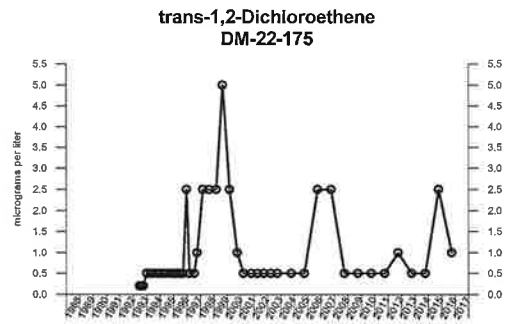
Time-Series Graphs
DM-22-138
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

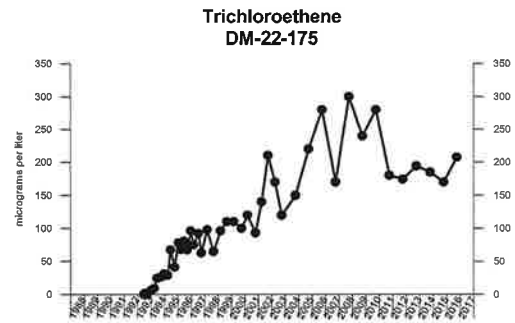


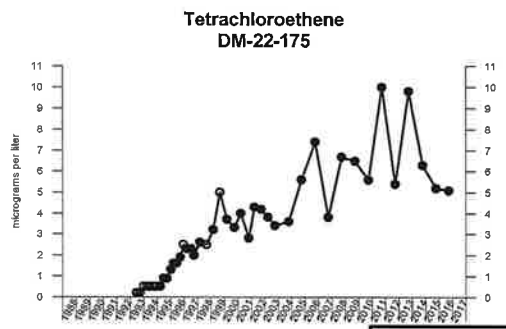


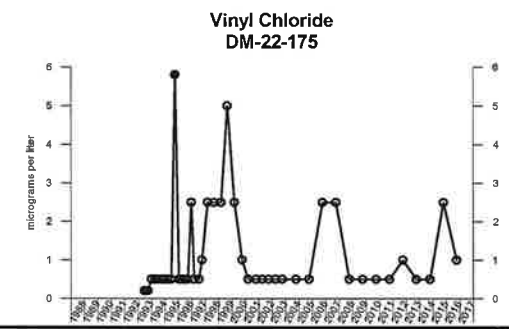


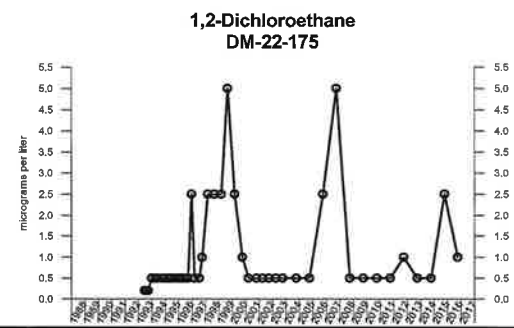












EXPLANATION

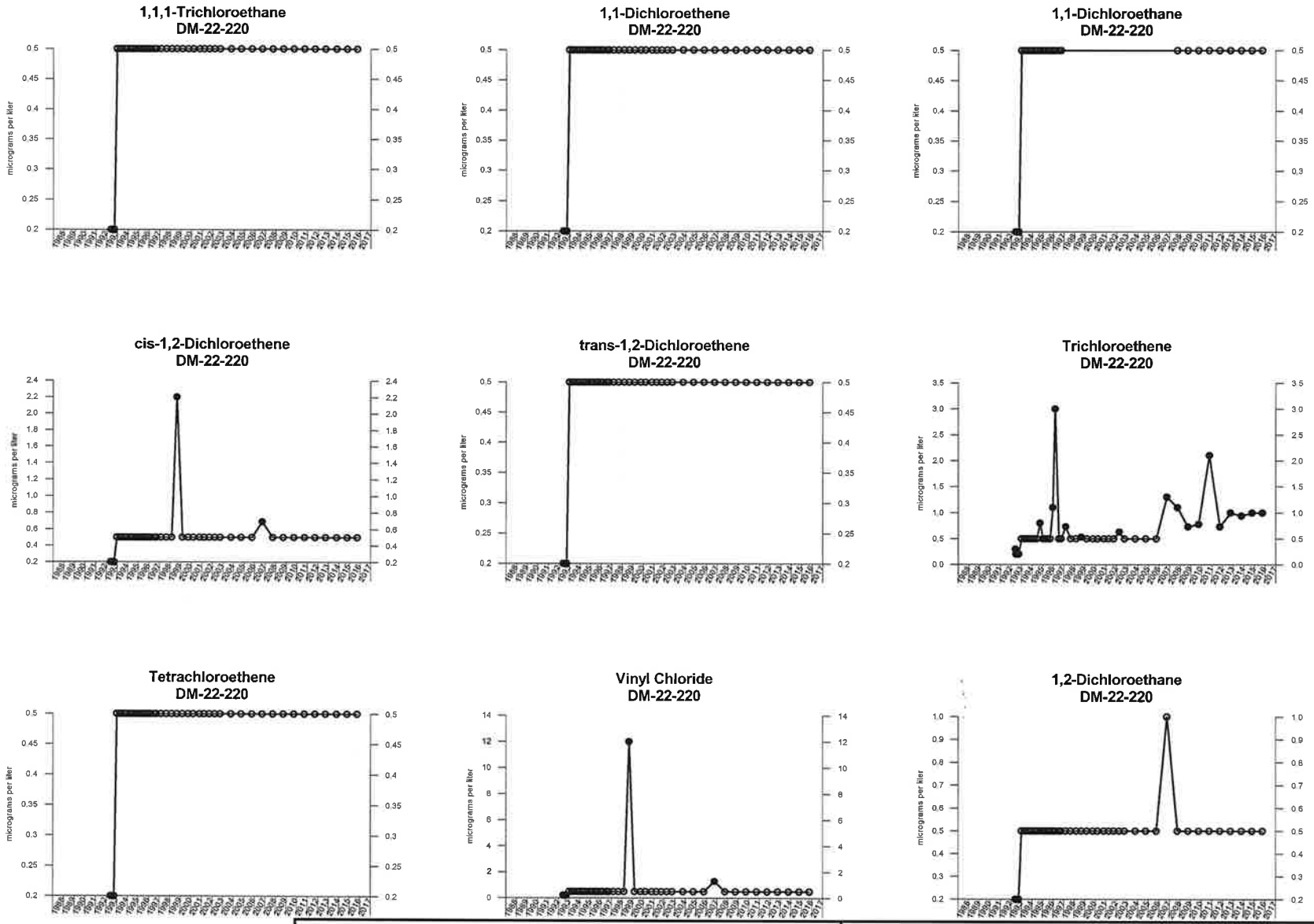
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-22-175
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

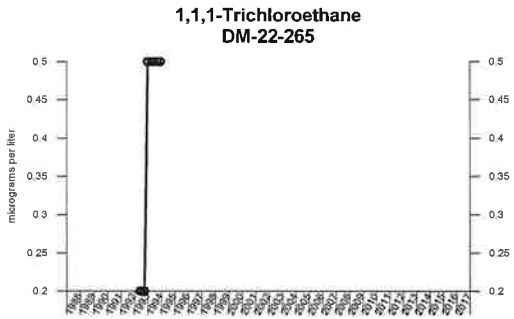
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

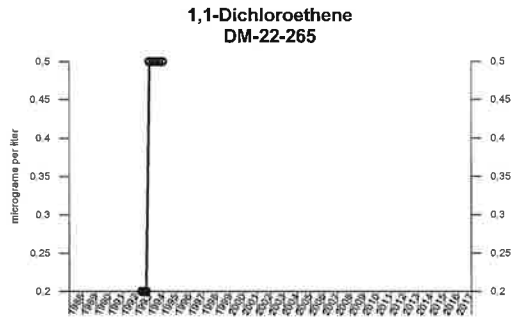
CLEAR CREEK ASSOCIATES

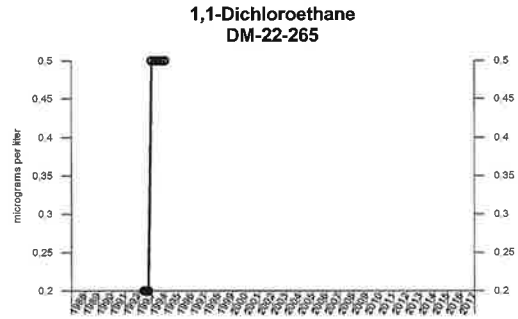
Project Name: 56th Street and Earll Drive WQARF Site

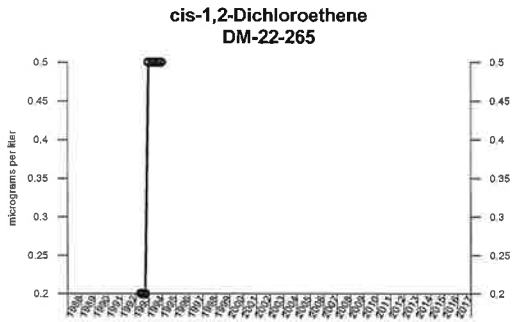
Job No: 005-134-17 | Date: June 2017

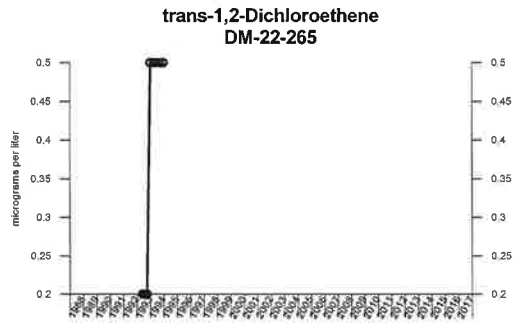
Time-Series Graphs
DM-22-220
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

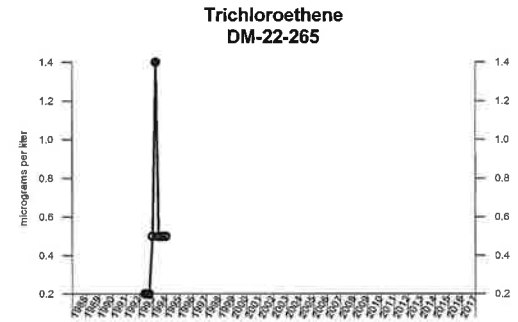


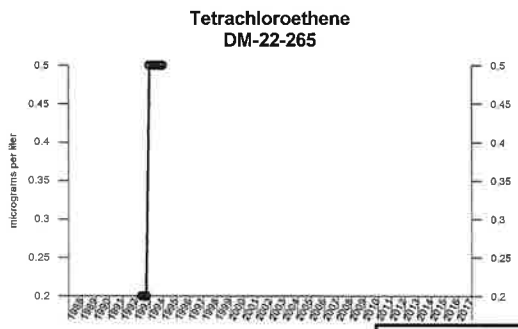


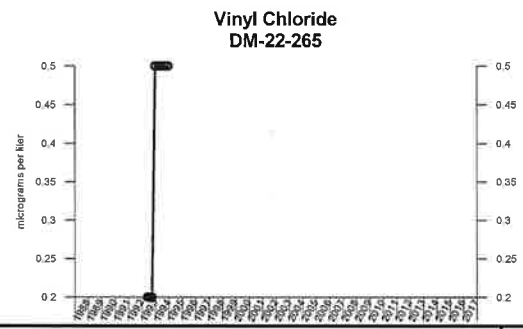


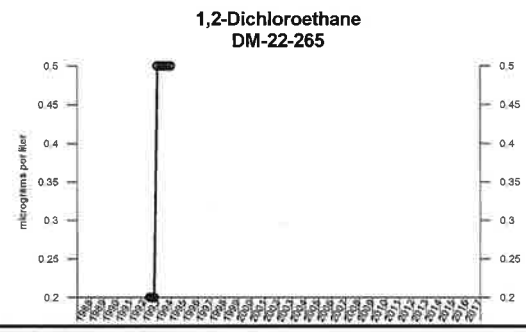












EXPLANATION

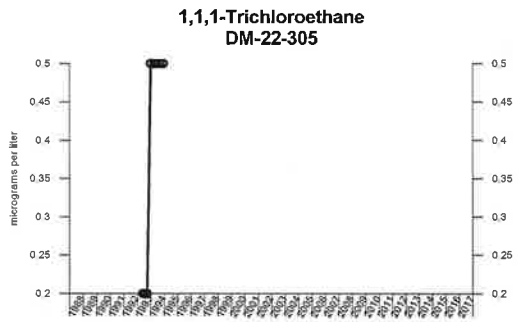
● - Measured Value
○ - Undetected (Displayed at RL)

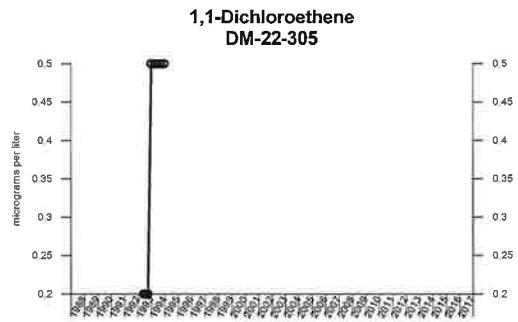
CLEAR CREEK ASSOCIATES

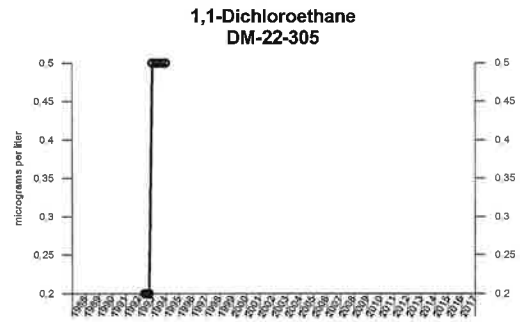
Project Name: 56th Street and Earll Drive WQARF Site

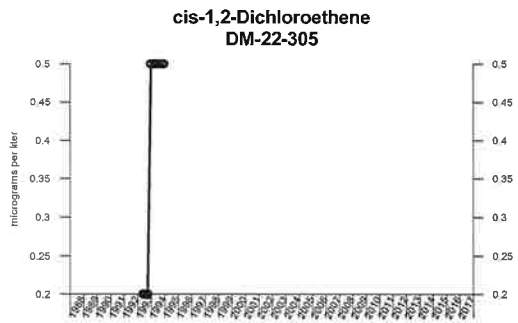
Job No: 005-134-17 | Date: June 2017

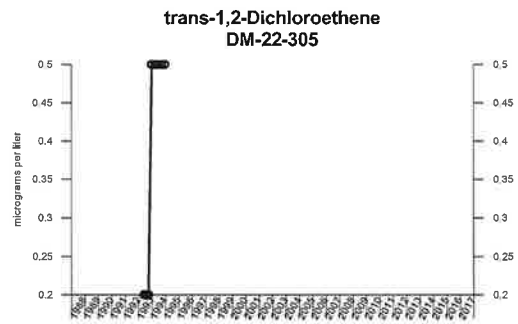
Time-Series Graphs
DM-22-265
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

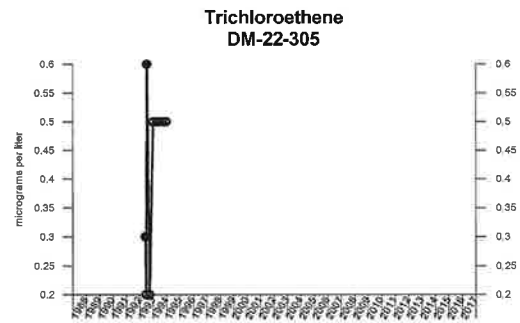


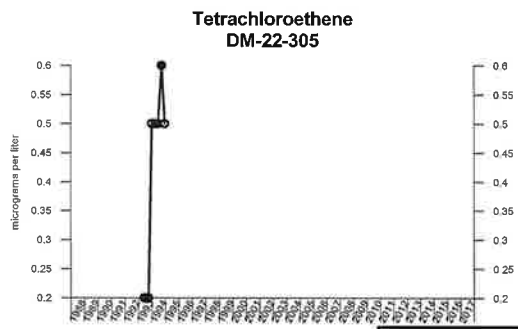


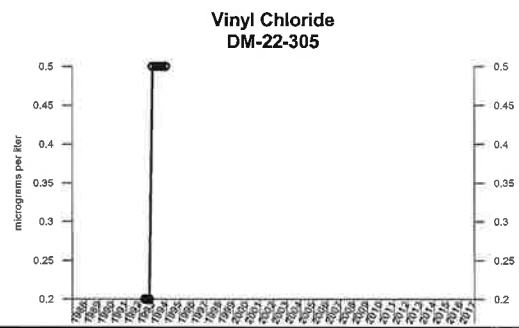


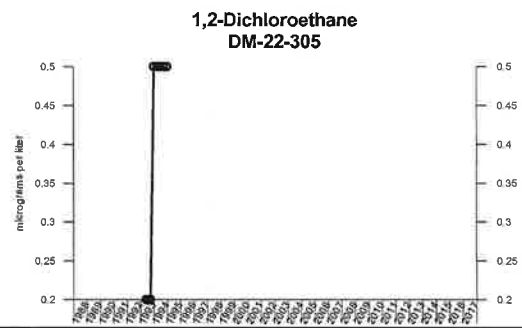












EXPLANATION

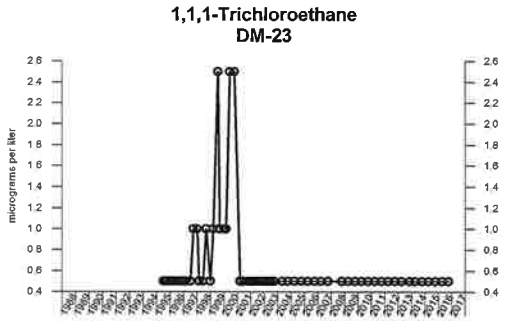
● - Measured Value
○ - Undetected (Displayed at RL)

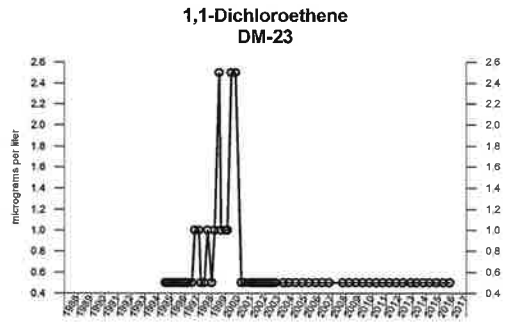
CLEAR CREEK ASSOCIATES

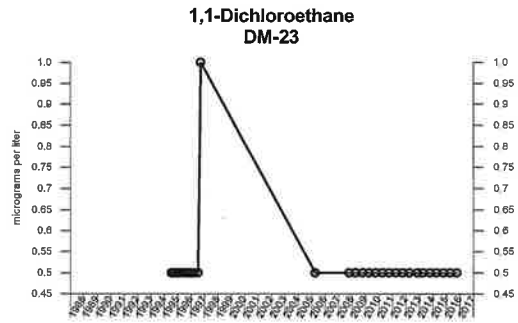
Project Name: 56th Street and Earll Drive WQARF Site

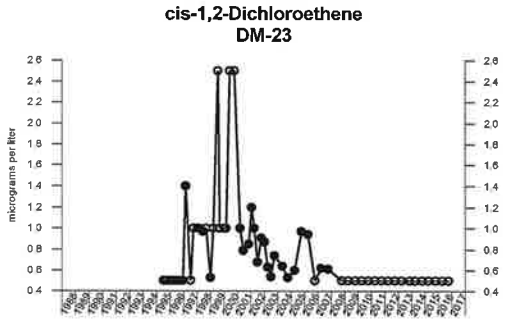
Job No: 005-134-17 | Date: June 2017

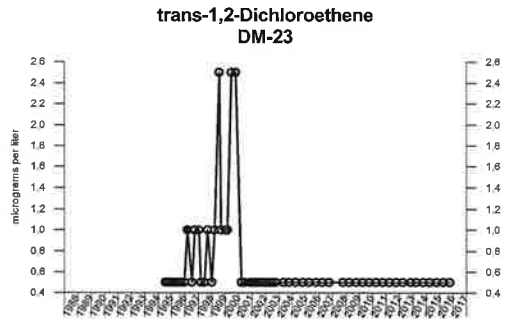
Time-Series Graphs
DM-22-305
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

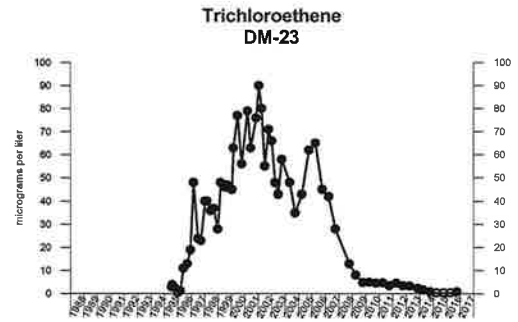


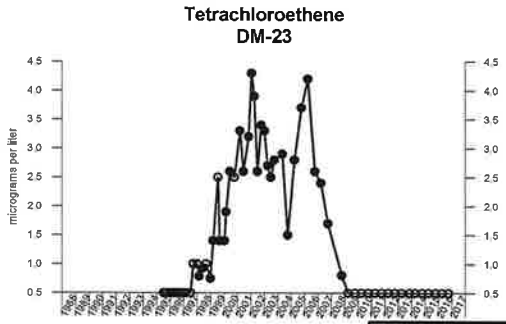


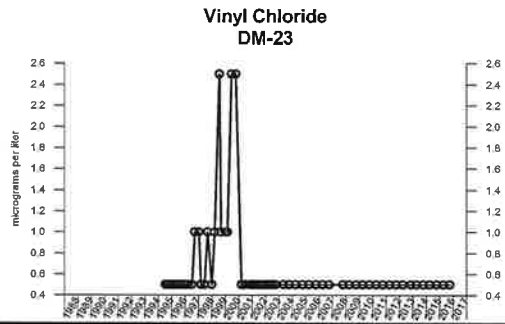


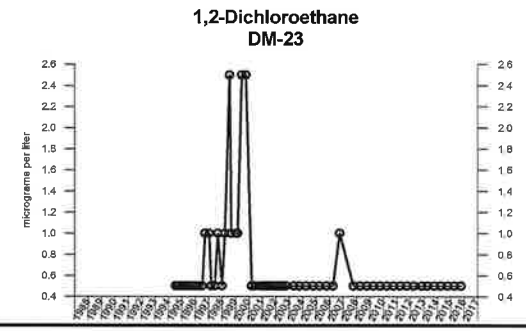












EXPLANATION

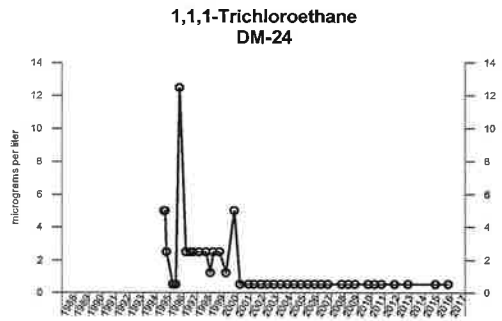
● - Measured Value
○ - Undetected (Displayed at RL)

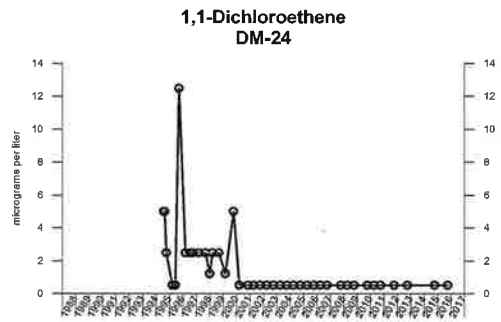
CLEAR CREEK ASSOCIATES

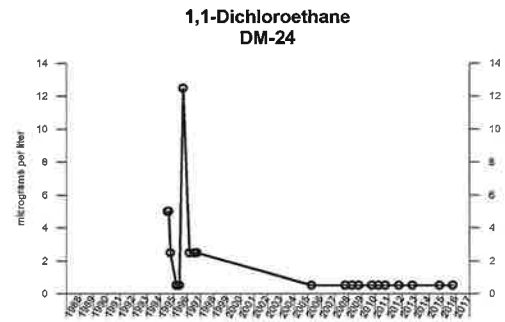
Project Name: 56th Street and Earll Drive WQARF Site

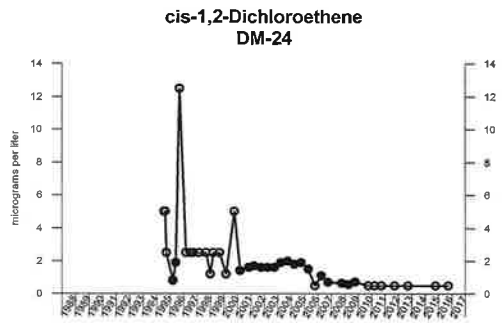
Job No: 005-134-17 | Date: June 2017

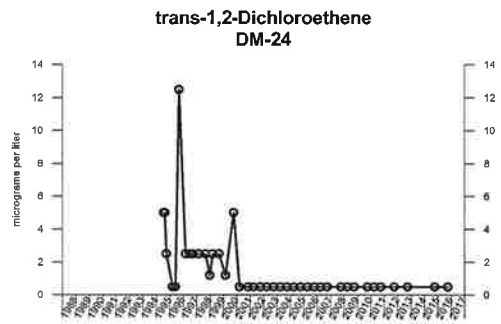
Time-Series Graphs
DM-23
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

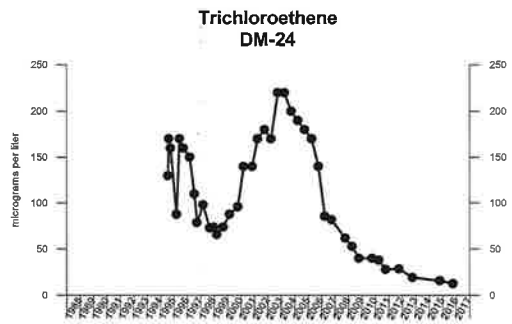


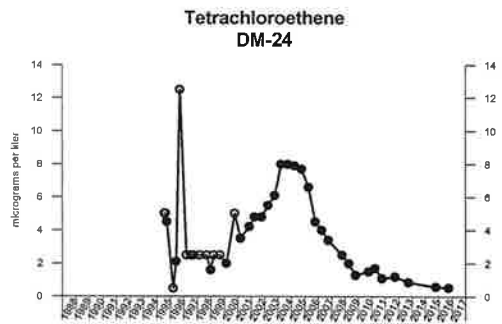


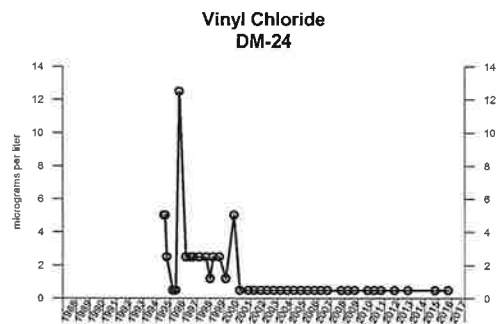


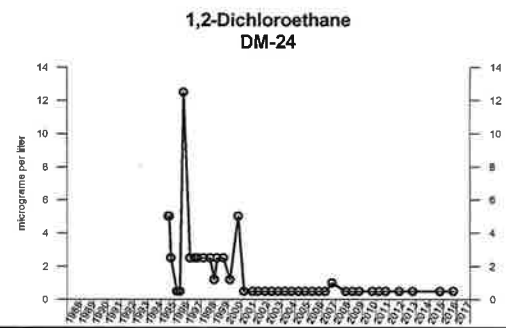












EXPLANATION

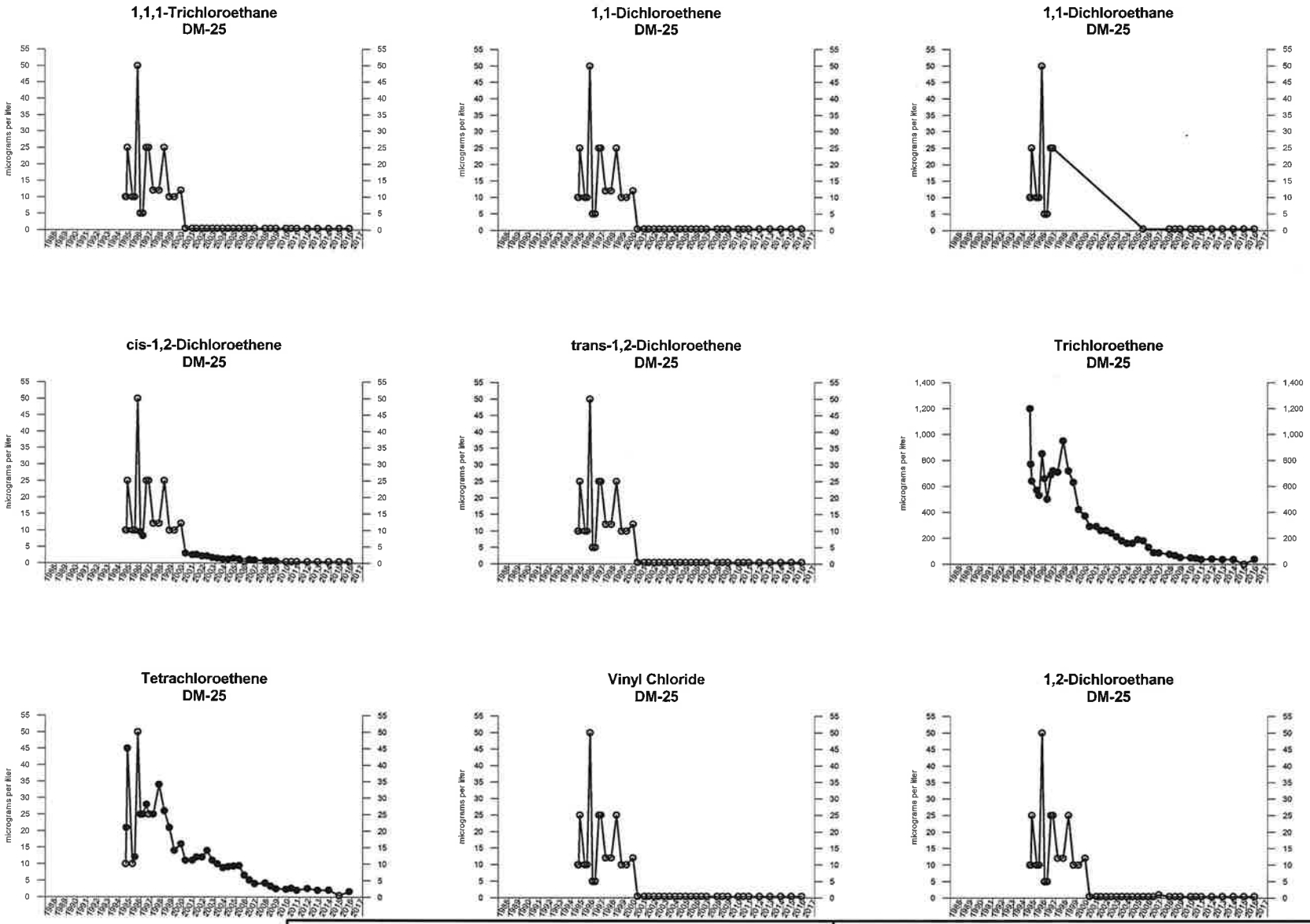
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-24
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

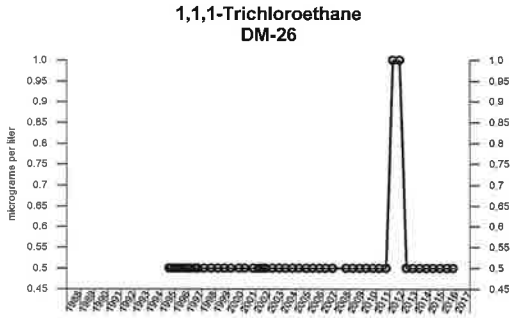
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

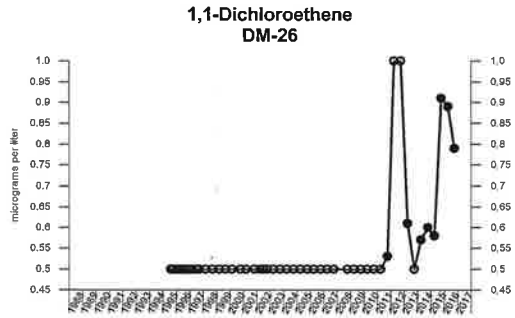
CLEAR CREEK ASSOCIATES

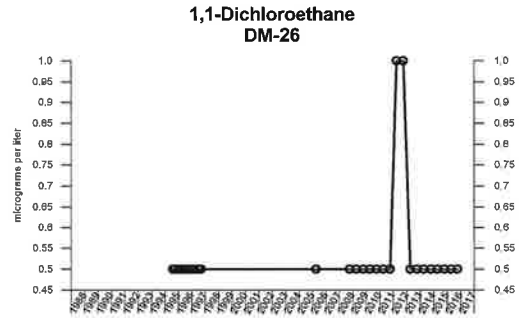
Project Name: 56th Street and Earll Drive WQARF Site

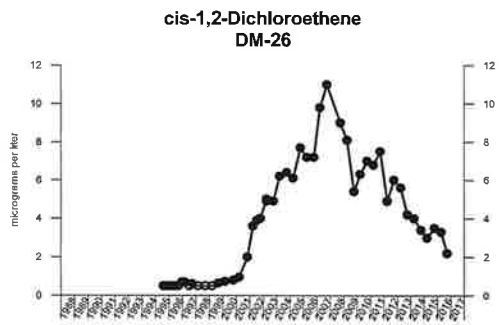
Job No: 005-134-17 | Date: June 2017

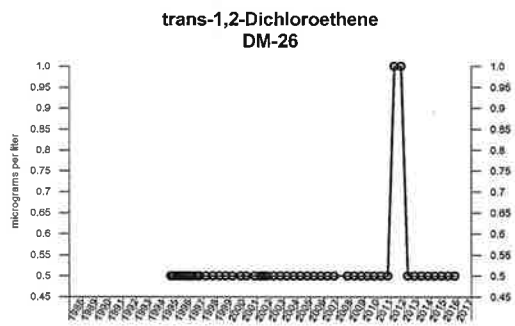
Time-Series Graphs
DM-25
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

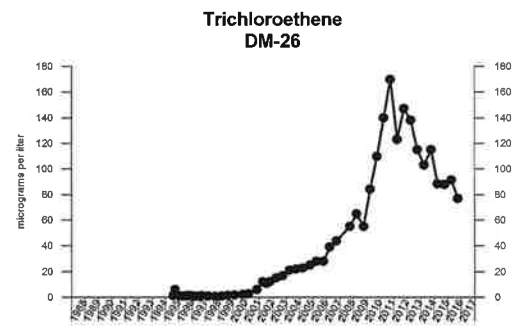


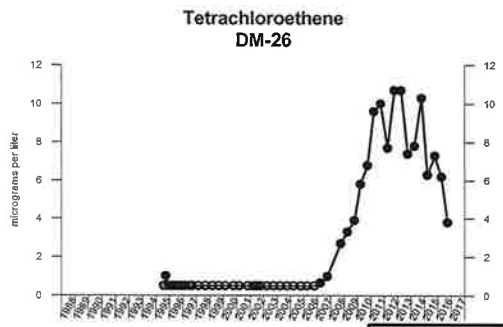


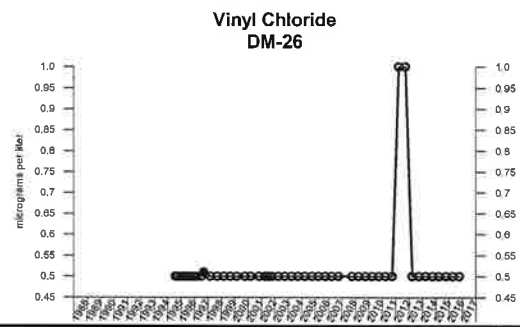


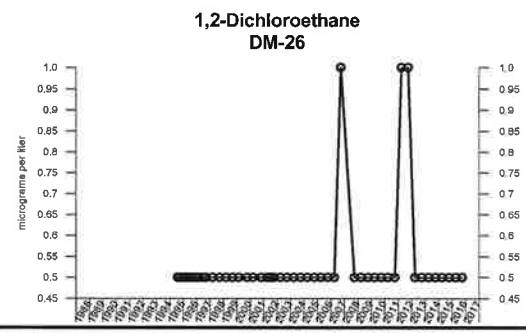












EXPLANATION

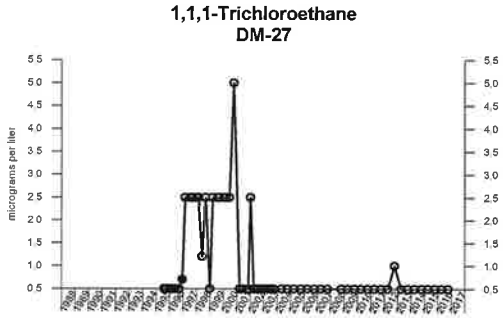
● - Measured Value
○ - Undetected (Displayed at RL)

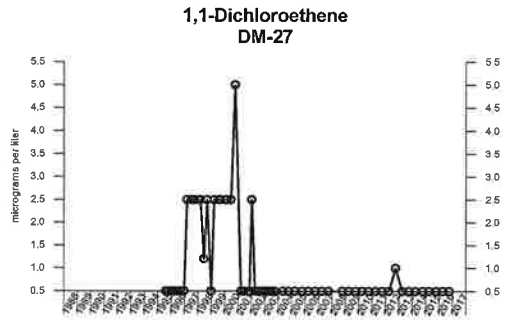
CLEAR CREEK ASSOCIATES

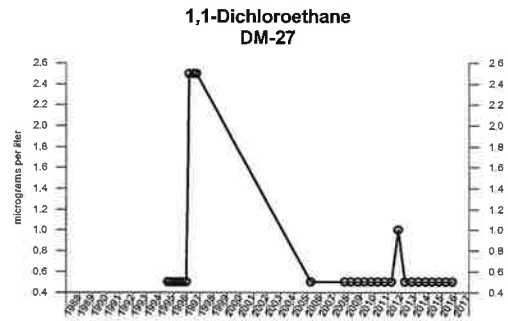
Project Name: 56th Street and Earll Drive WQARF Site

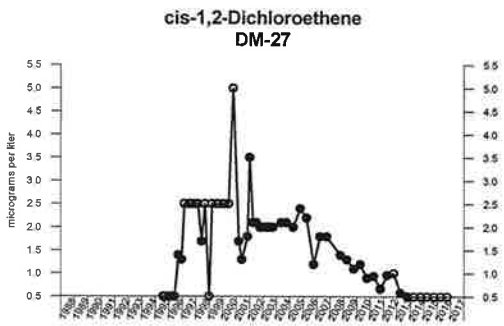
Job No: 005-134-17 | Date: June 2017

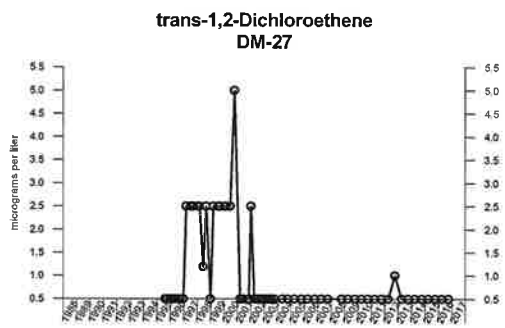
Time-Series Graphs
DM-26
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

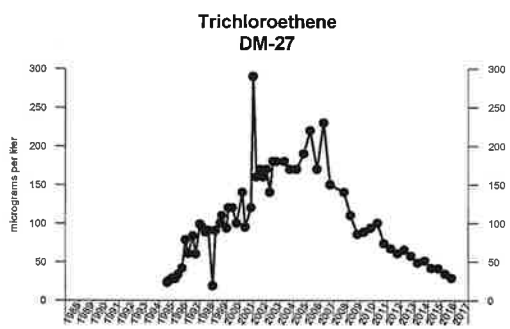


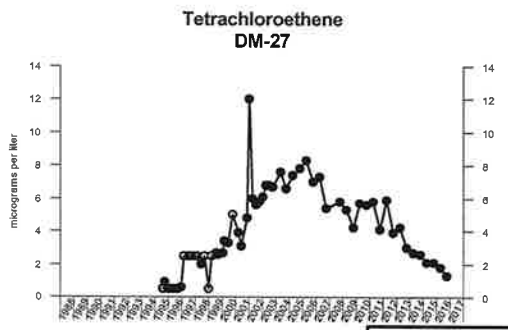


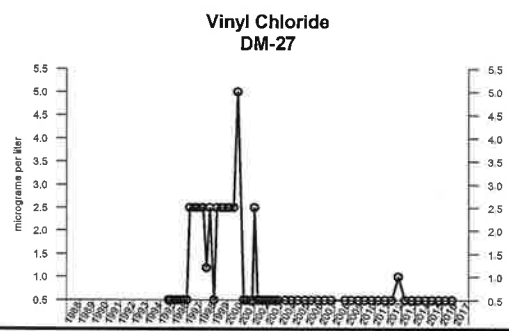


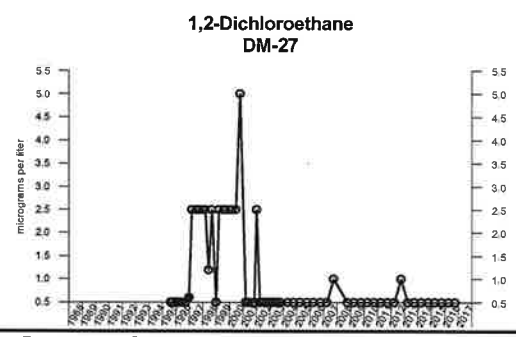












EXPLANATION

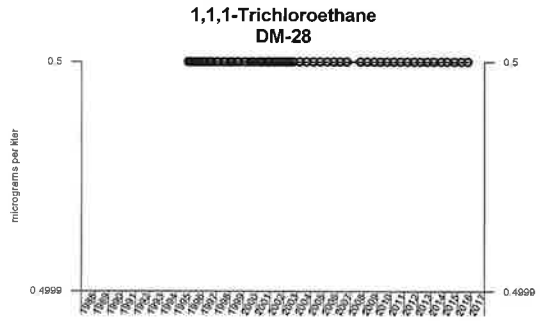
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

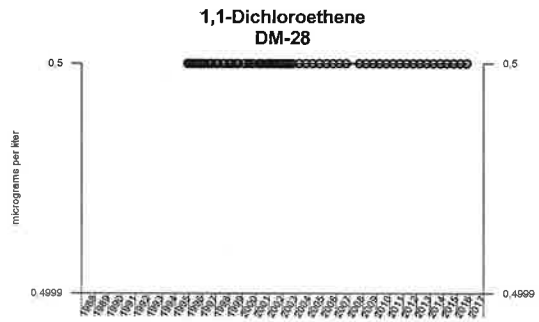
CLEAR CREEK ASSOCIATES

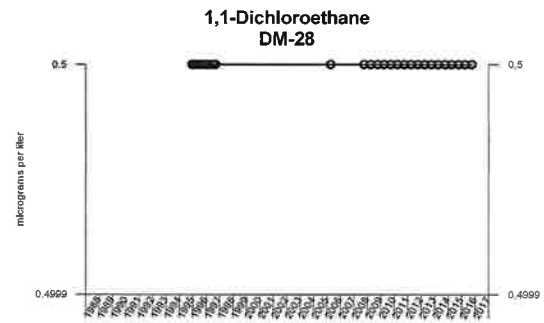
Project Name: 56th Street and Earll Drive WQARF Site

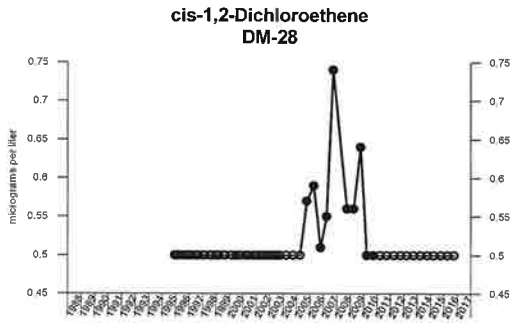
Job No: 005-134-17 | Date: June 2017

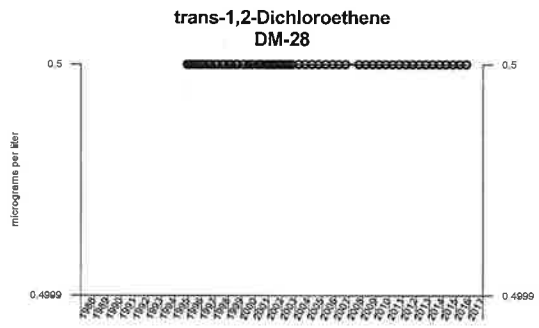
Time-Series Graphs
DM-27
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

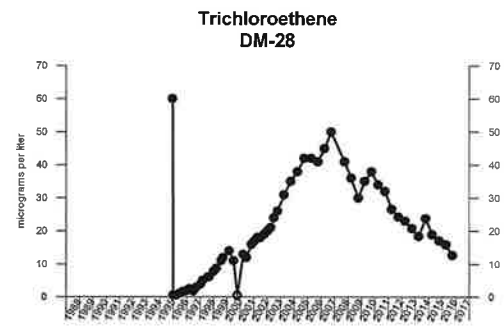


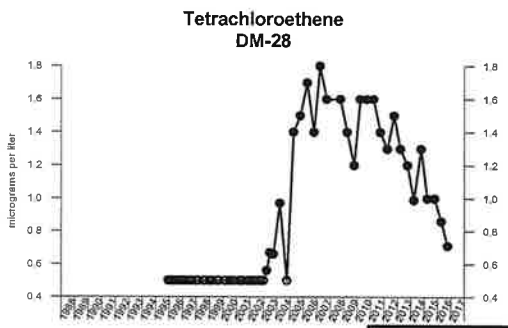


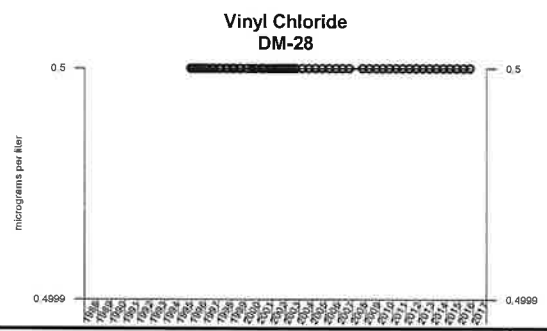


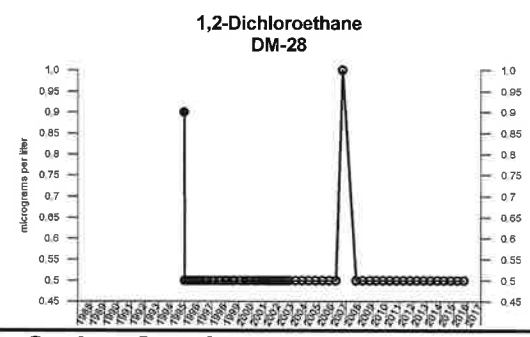












EXPLANATION

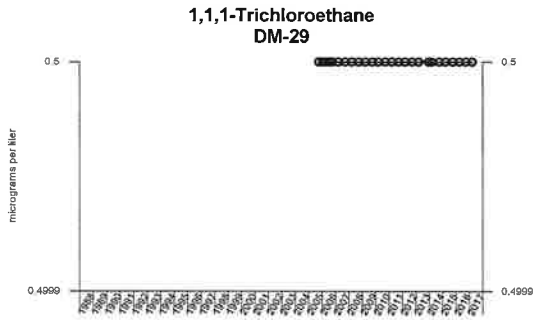
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

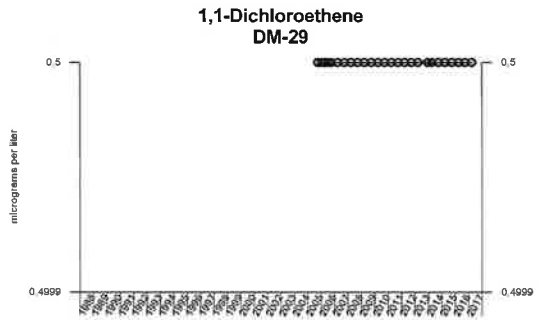
CLEAR CREEK ASSOCIATES

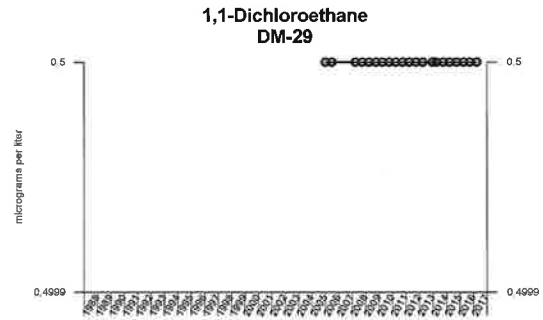
Project Name: 56th Street and Earll Drive WQARF Site

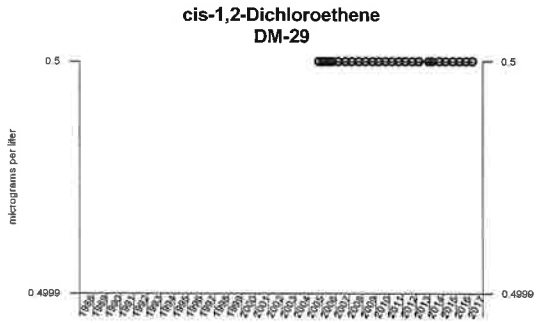
Job No: 005-134-17 | Date: June 2017

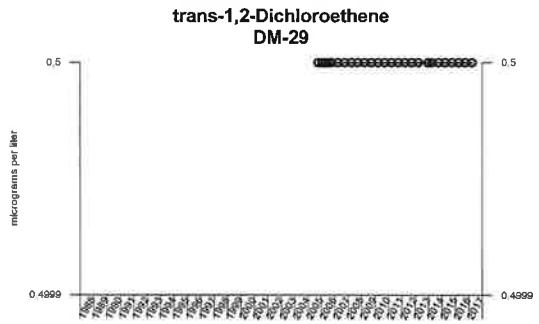
Time-Series Graphs
DM-28
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

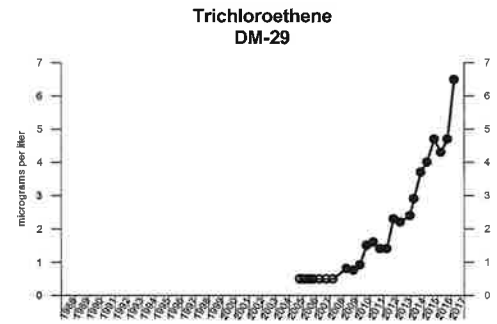


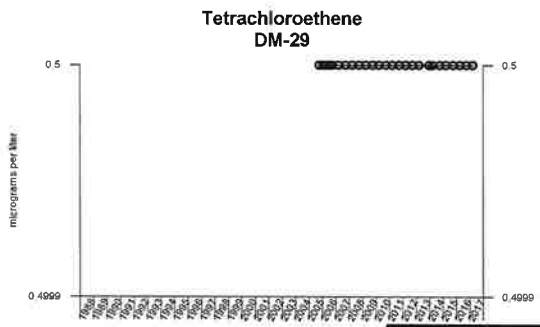


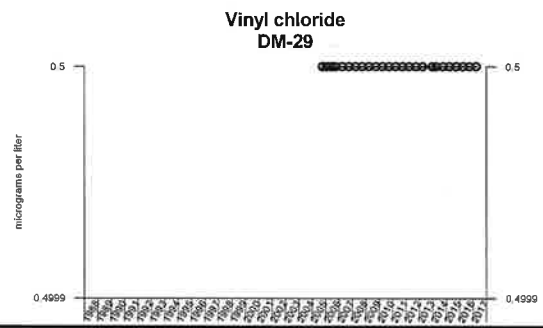


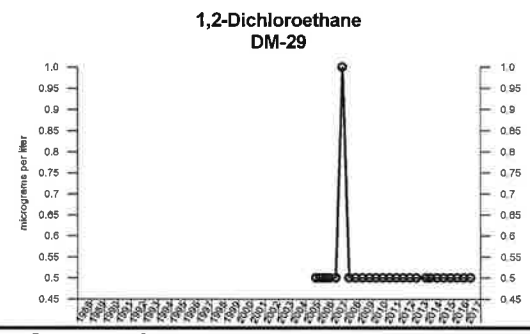












EXPLANATION

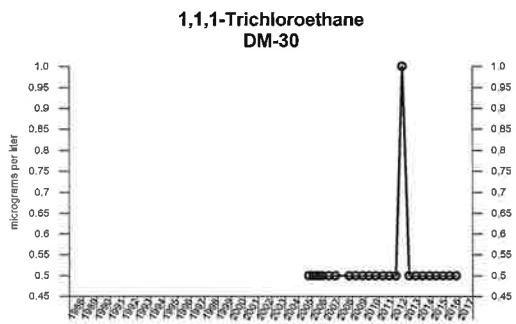
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

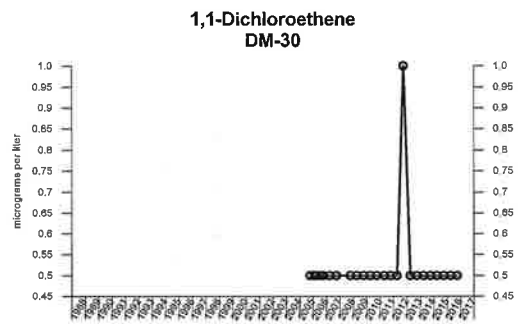
CLEAR CREEK ASSOCIATES

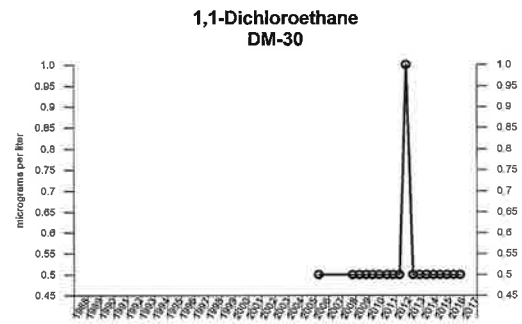
Project Name: 56th Street and Earll Drive WQARF Site

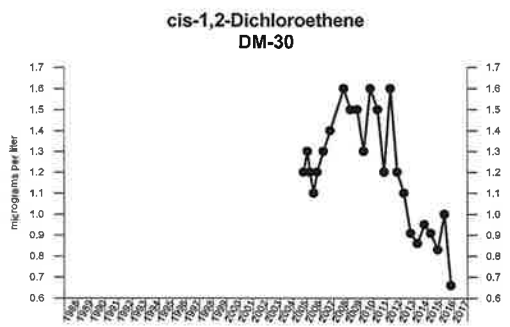
Job No: 005-134-17 | Date: June 2017

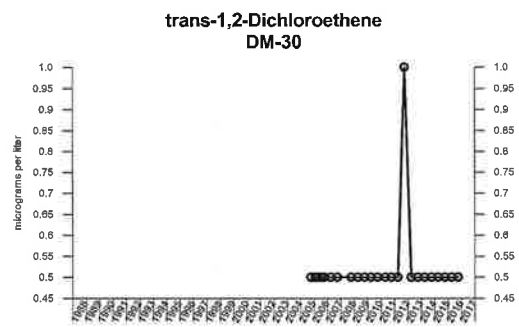
Time-Series Graphs
DM-29
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

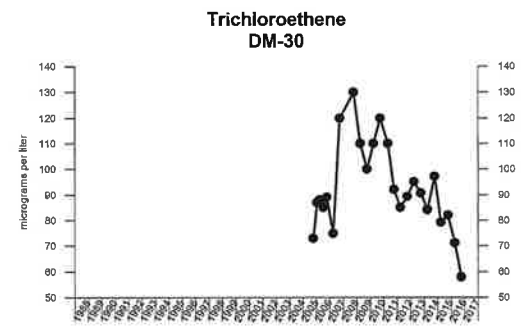


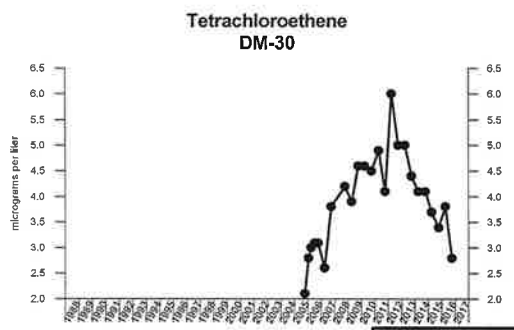


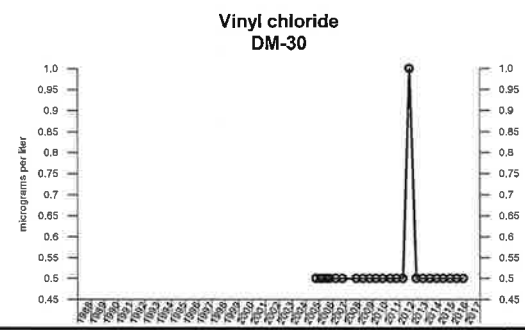


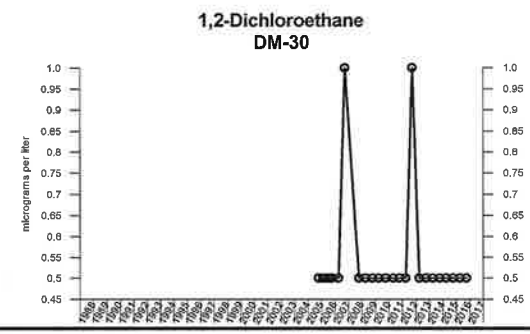












EXPLANATION

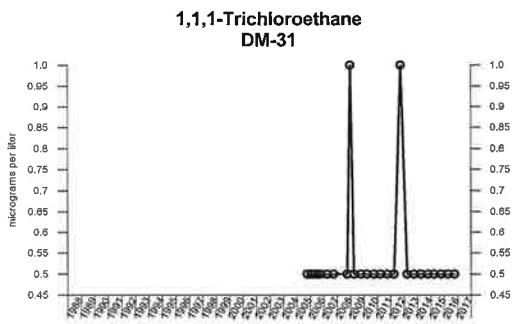
● - Measured Value
○ - Undetected (Displayed at RL)

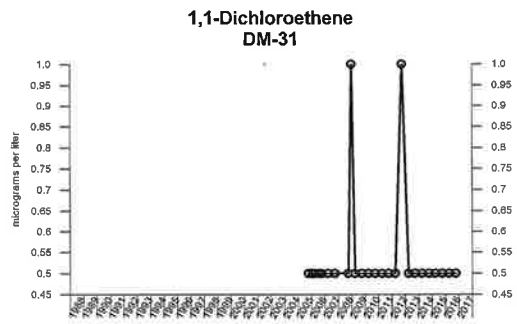
CLEAR CREEK ASSOCIATES

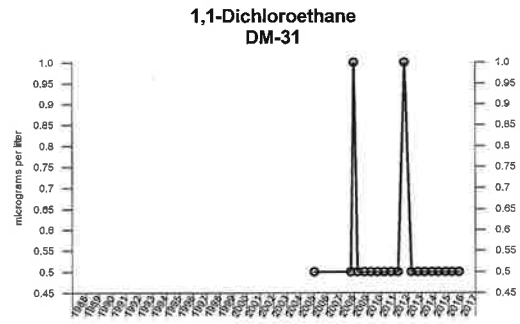
Project Name: 56th Street and Earll Drive WQARF Site

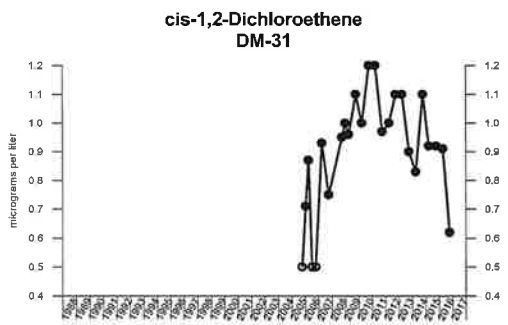
Job No: 005-134-17 | Date: June 2017

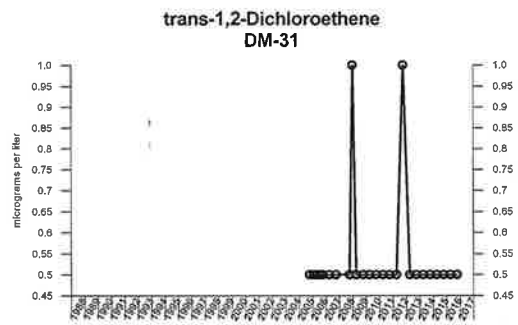
Time-Series Graphs
DM-30
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

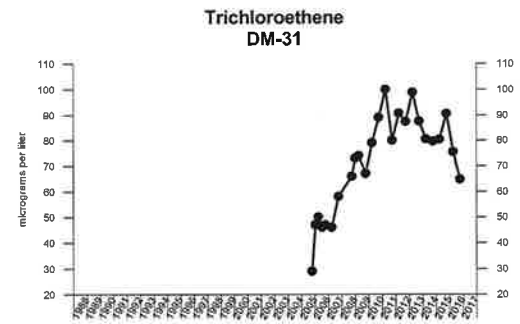


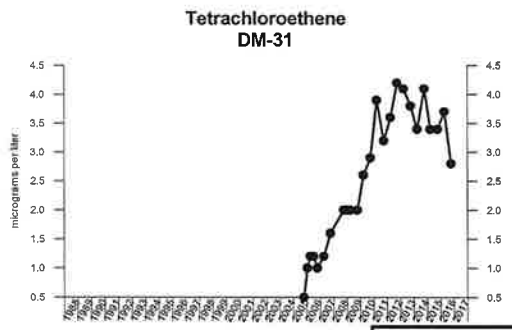


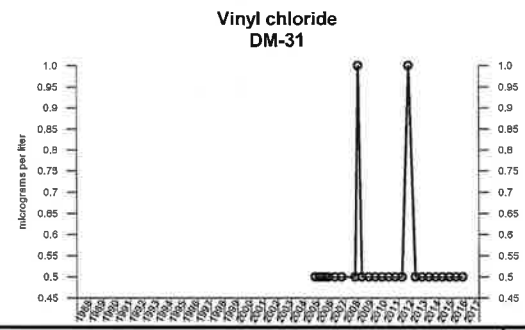


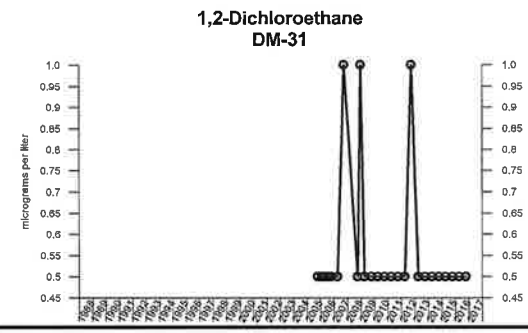












EXPLANATION

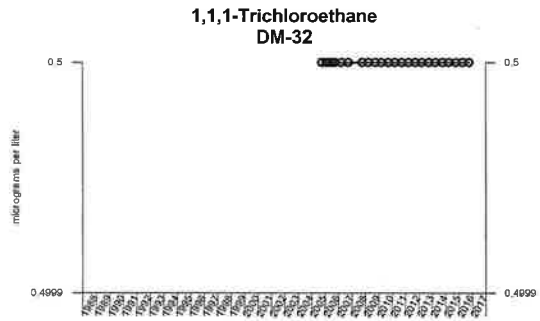
● - Measured Value
○ - Undetected (Displayed at RL)

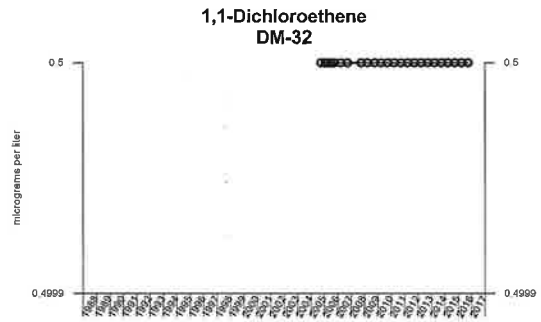
CLEAR CREEK ASSOCIATES

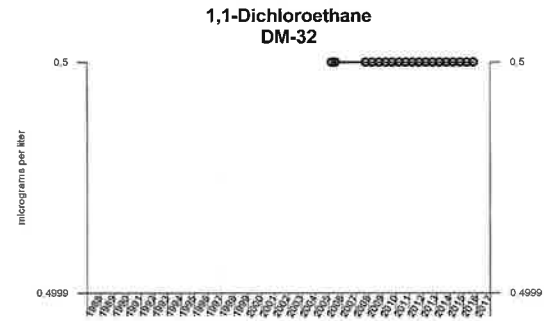
Project Name: 56th Street and Earll Drive WQARF Site

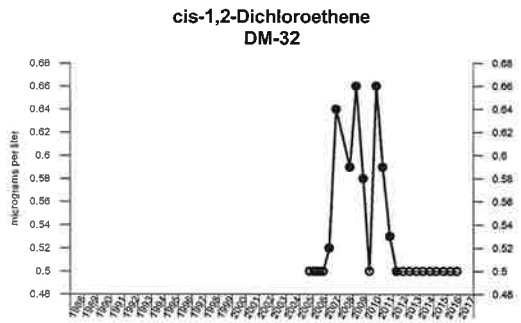
Job No: 005-134-17 | Date: June 2017

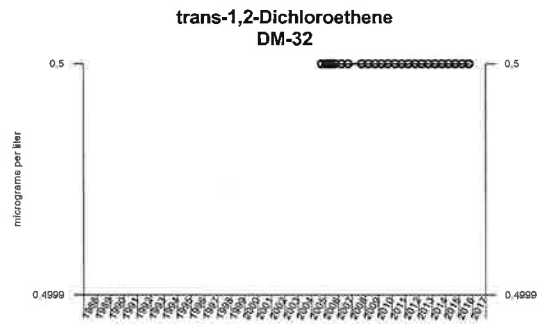
Time-Series Graphs
DM-31
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

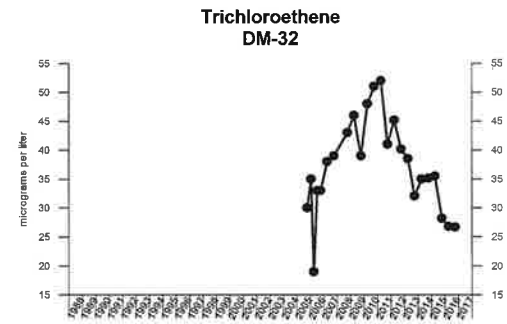


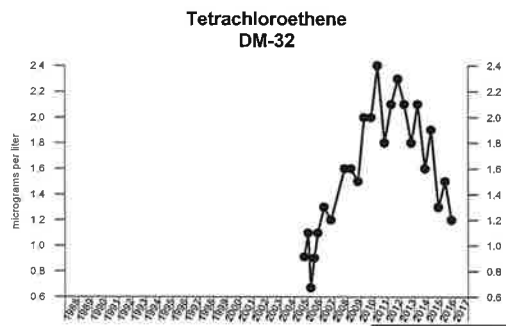


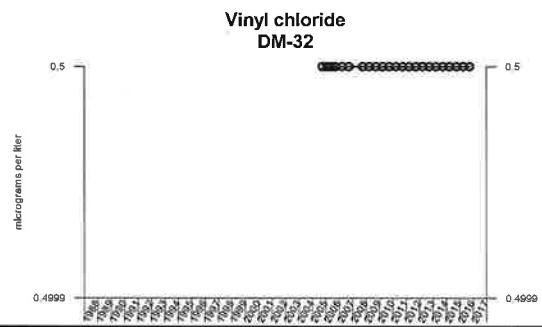


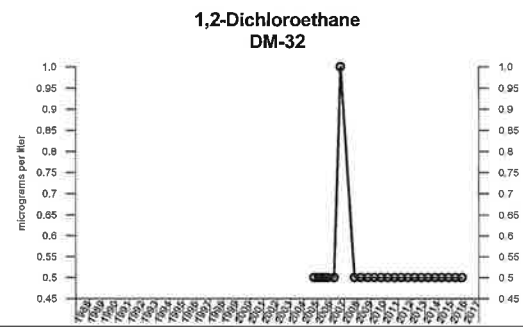












EXPLANATION

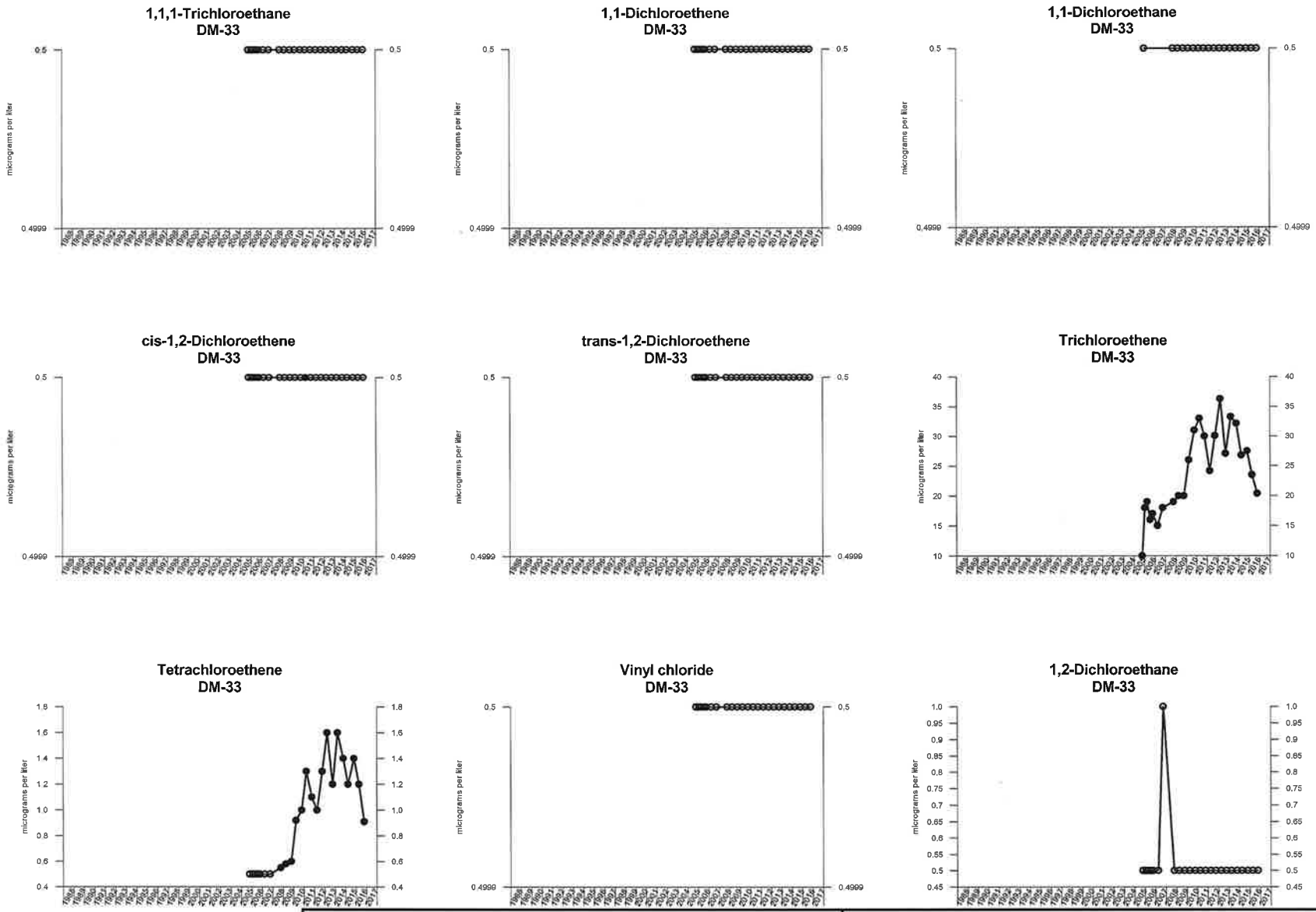
● - Measured Value
○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-32
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

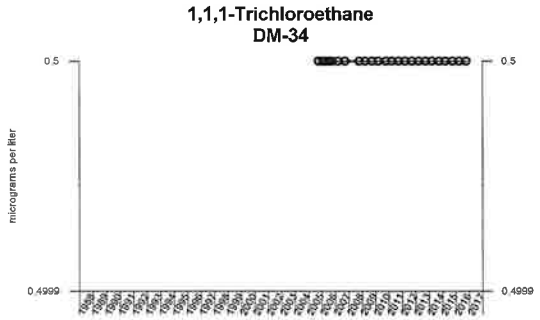
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

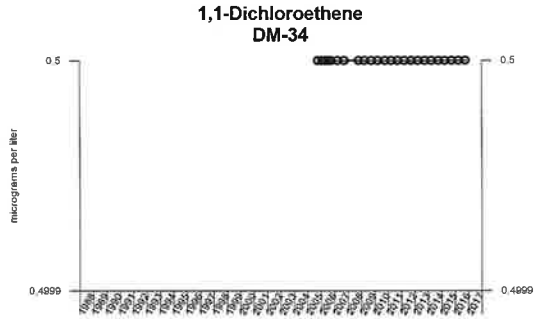
CLEAR CREEK ASSOCIATES

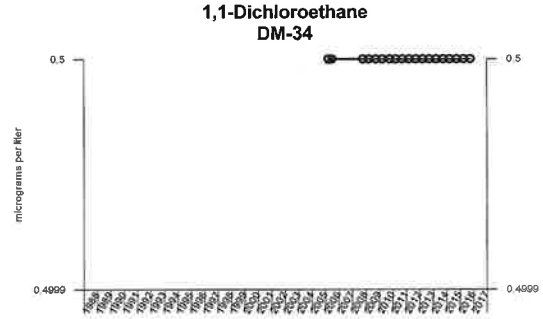
Project Name: 56th Street and Earll Drive WQARF Site

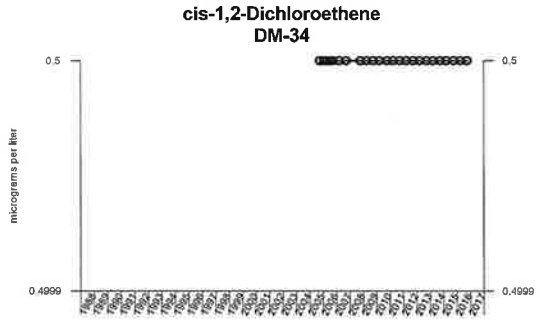
Job No: 005-134-17 | Date: June 2017

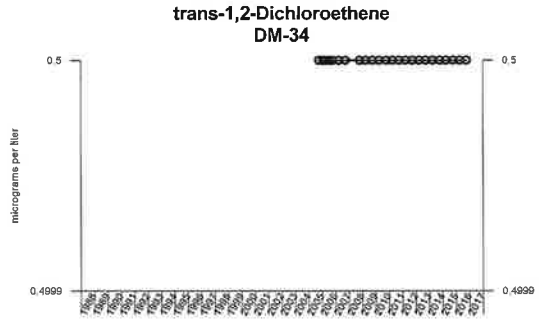
Time-Series Graphs
DM-33
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

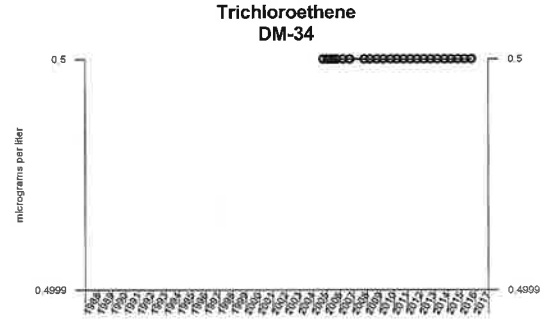


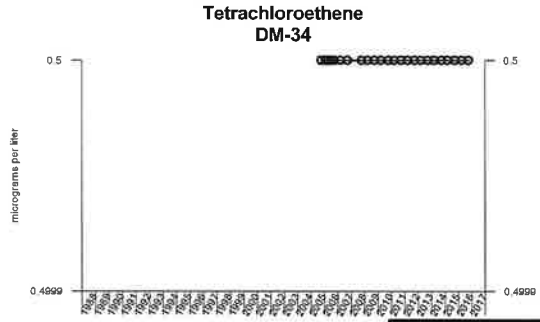


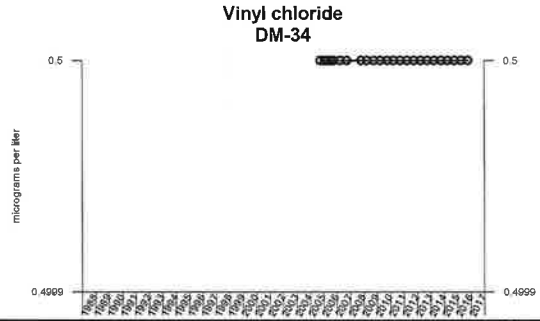


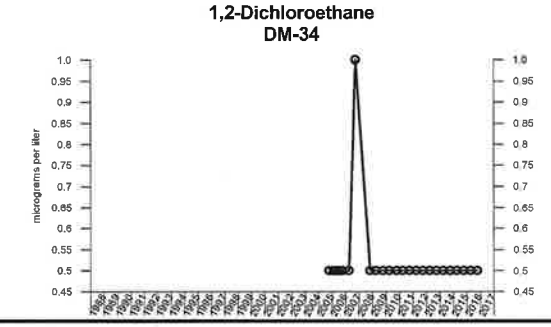












EXPLANATION

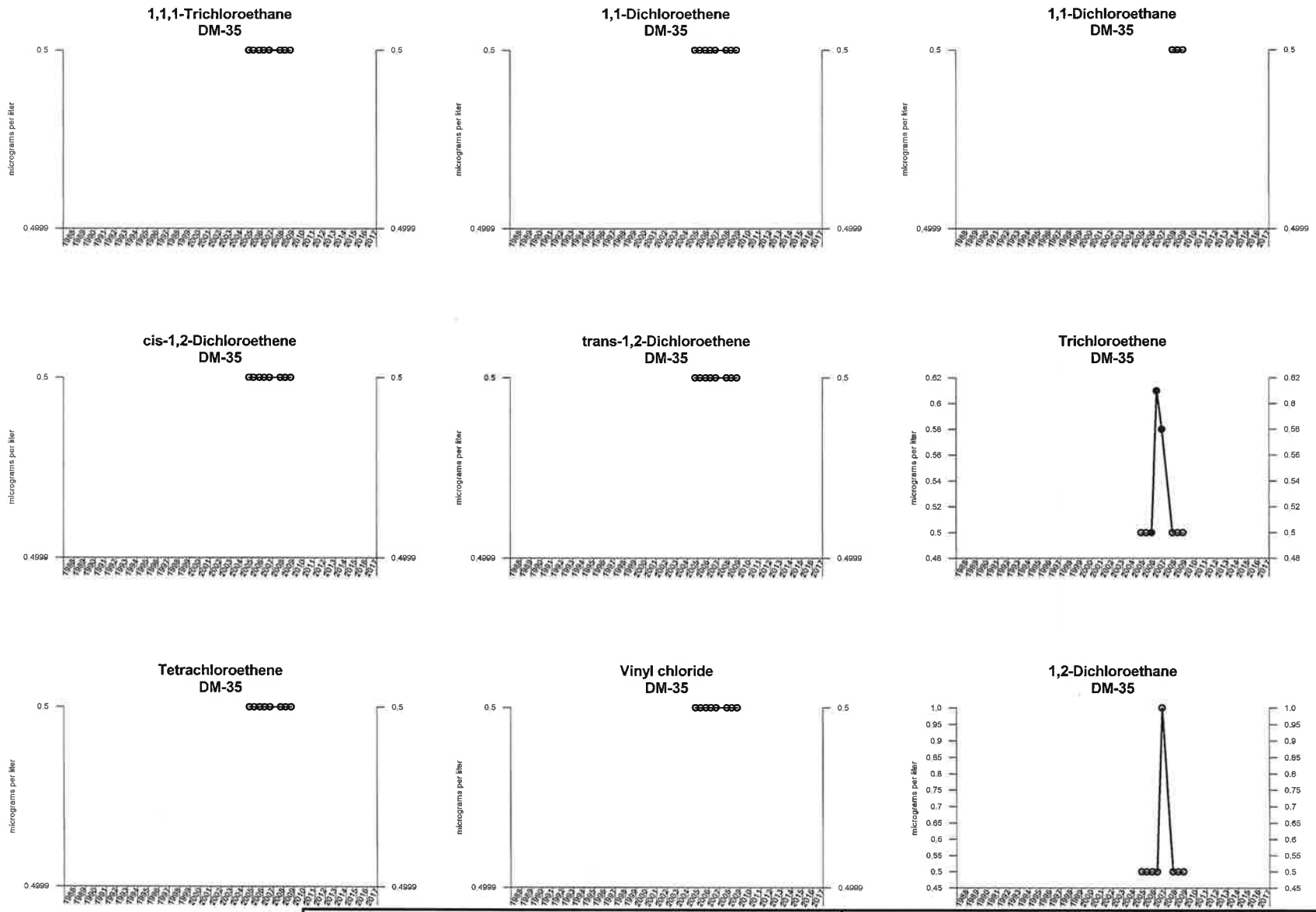
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-34
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

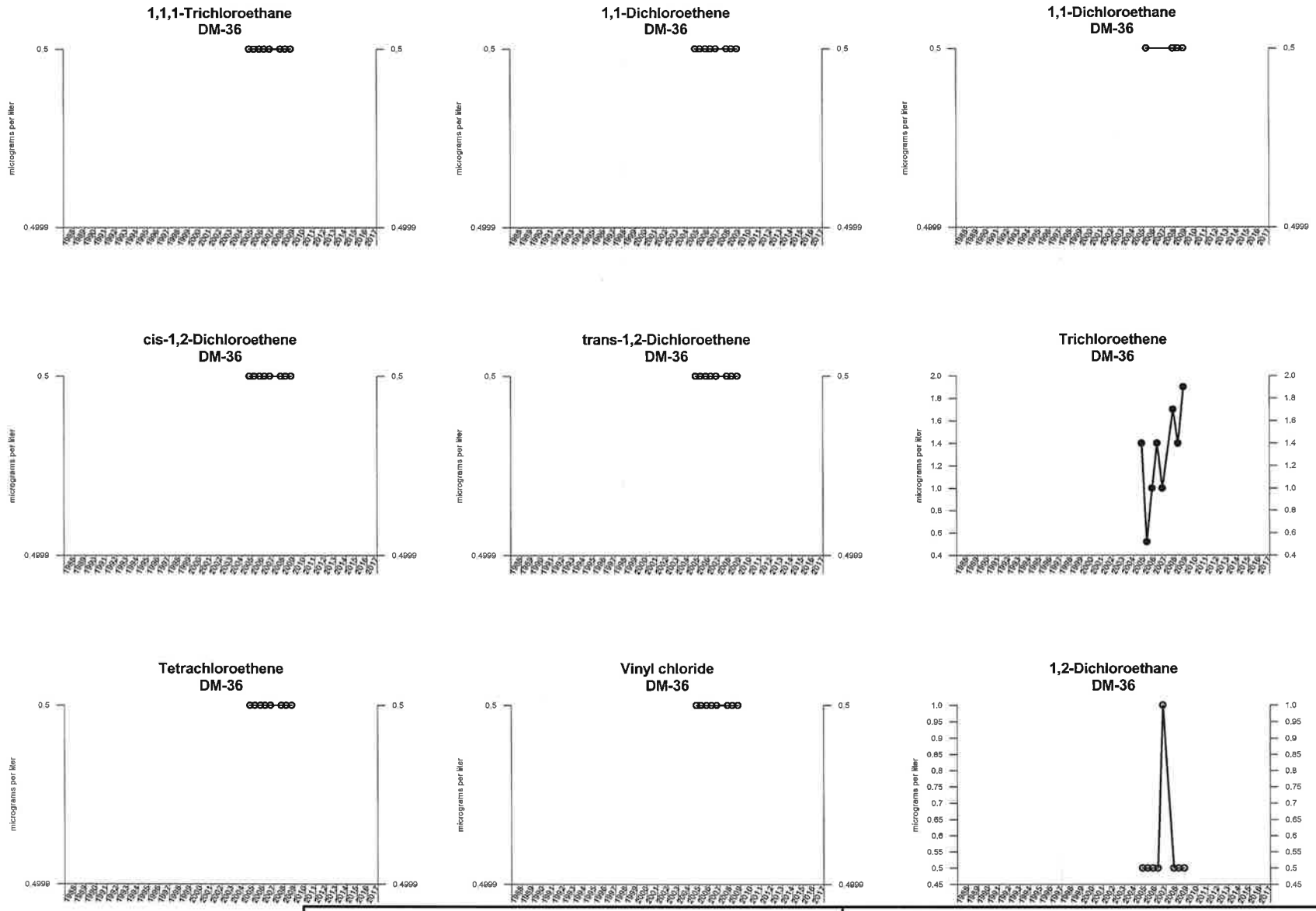
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-35
56th Street and Earll Drive WQARF Site
Phoenix, Arizona



EXPLANATION

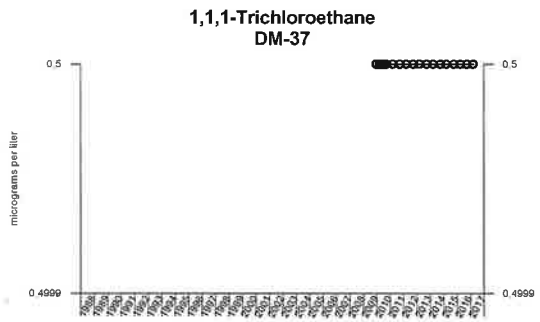
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

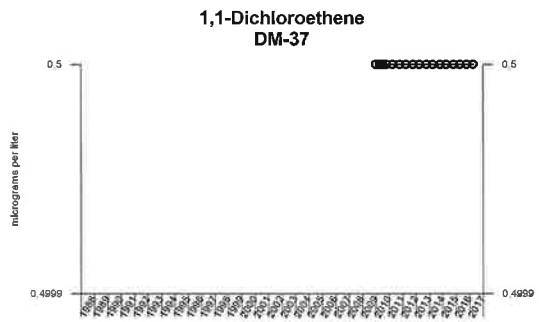
CLEAR CREEK ASSOCIATES

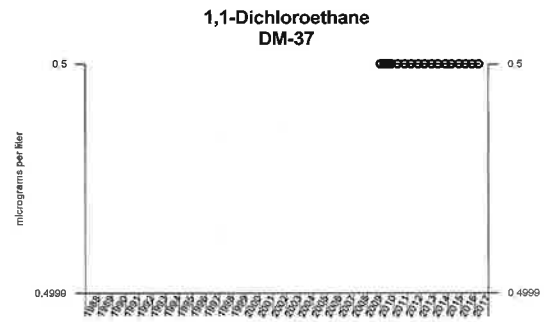
Project Name: 56th Street and Earll Drive WQARF Site

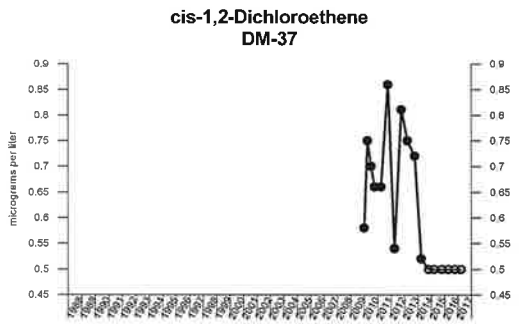
Job No: 005-134-17 | Date: June 2017

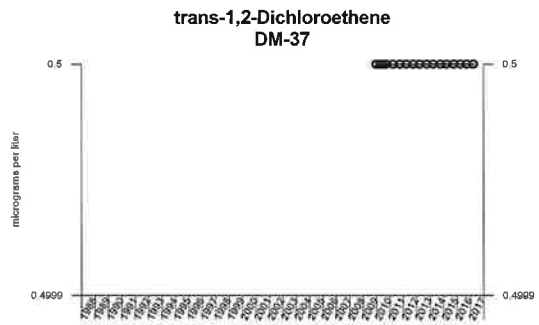
Time-Series Graphs
DM-36
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

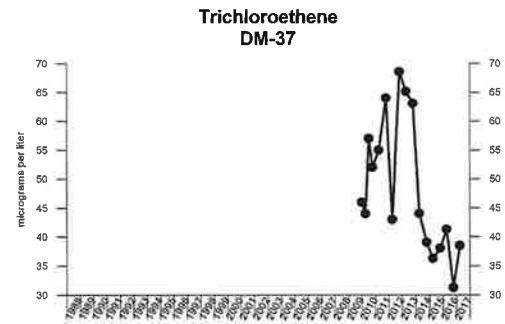


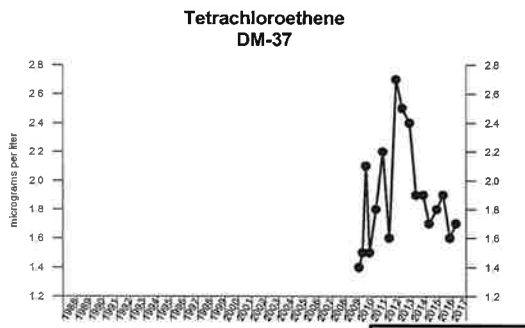


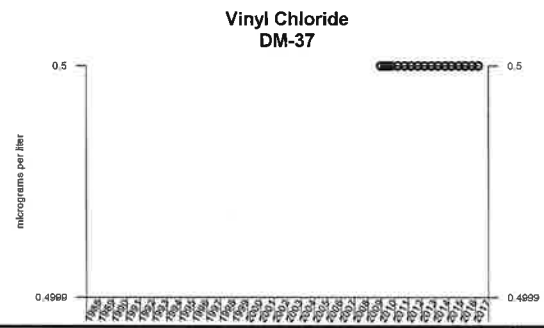












EXPLANATION

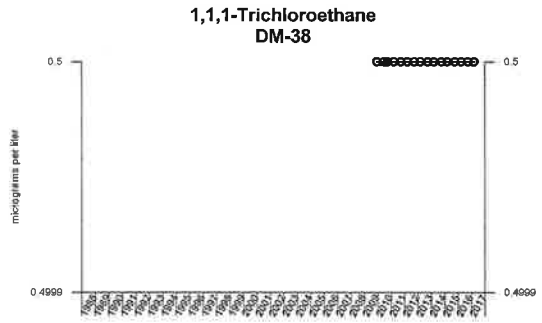
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

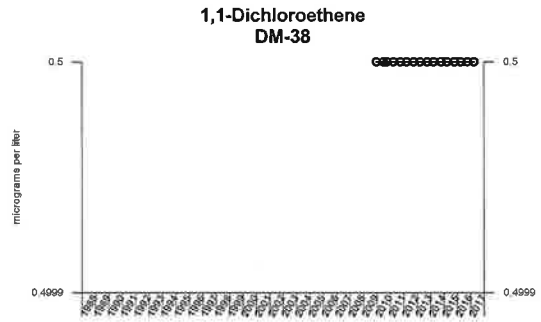
CLEAR CREEK ASSOCIATES

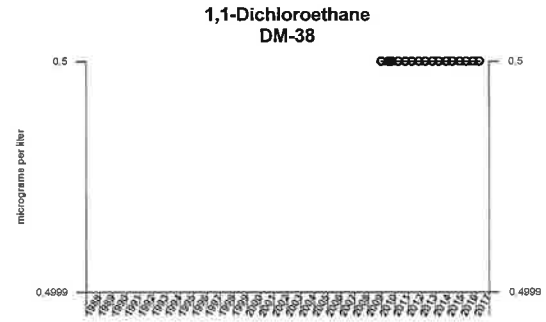
Project Name: 56th Street and Earll Drive WQARF Site

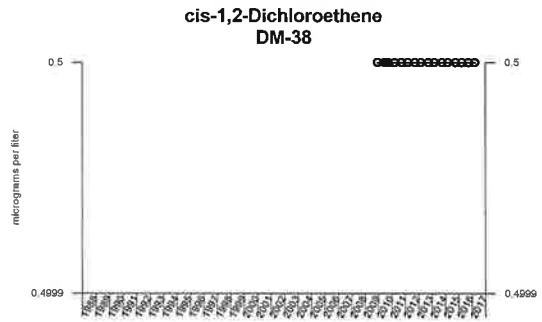
Job No: 005-134-17 | Date: June 2017

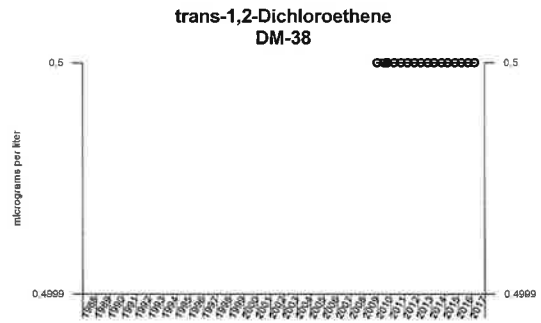
Time-Series Graphs
DM-37
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

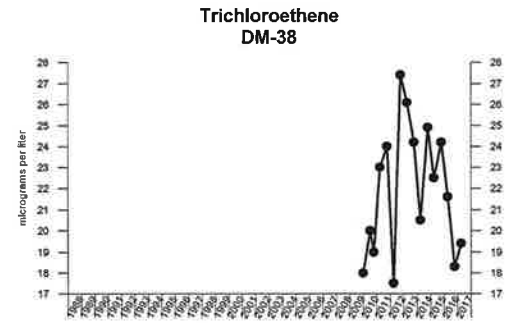


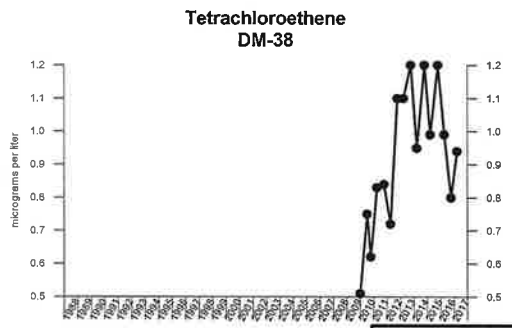


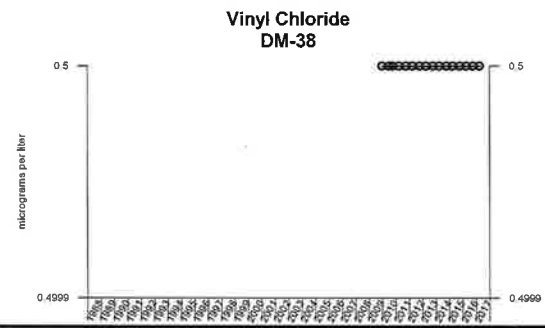


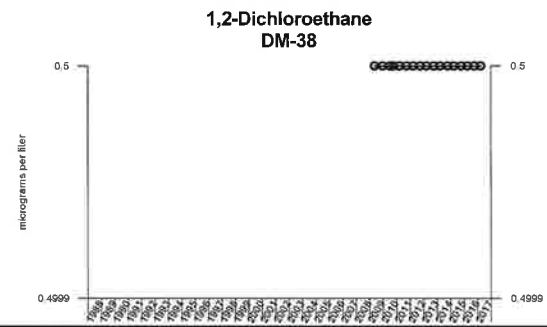












EXPLANATION

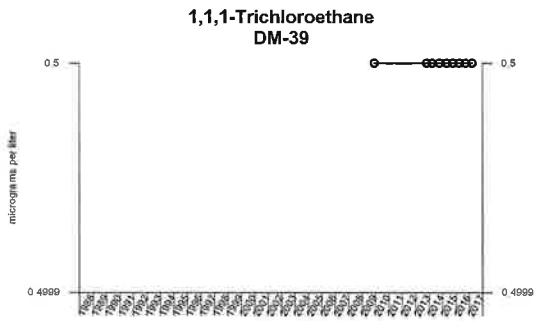
● - Measured Value
○ - Undetected (Displayed at RL)

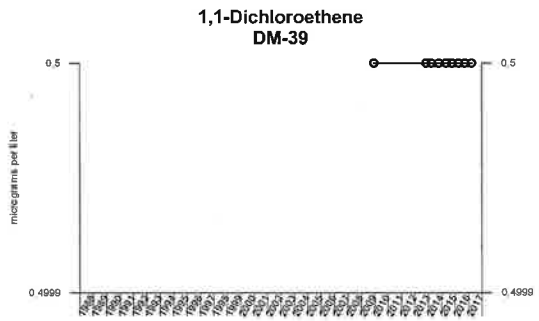
CLEAR CREEK ASSOCIATES

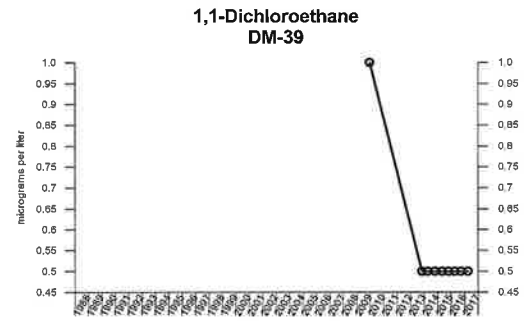
Project Name: 56th Street and Earll Drive WQARF Site

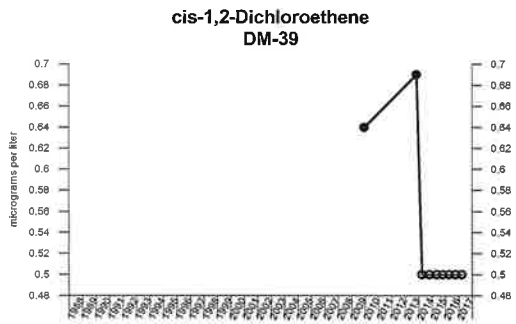
Job No: 005-134-17 | Date: June 2017

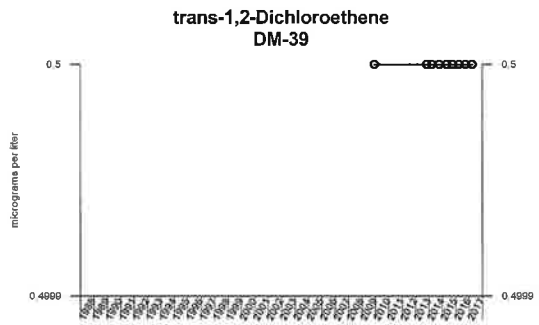
Time-Series Graphs
DM-38
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

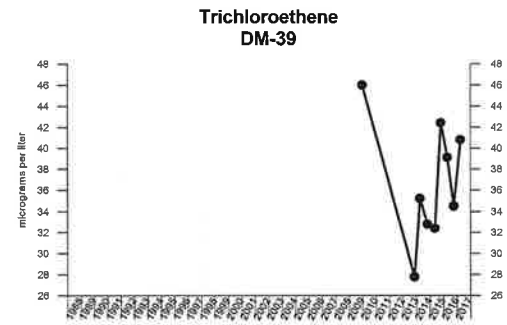


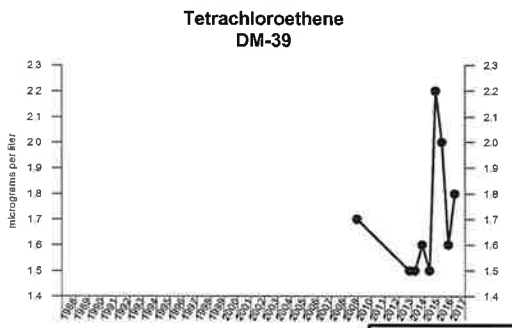


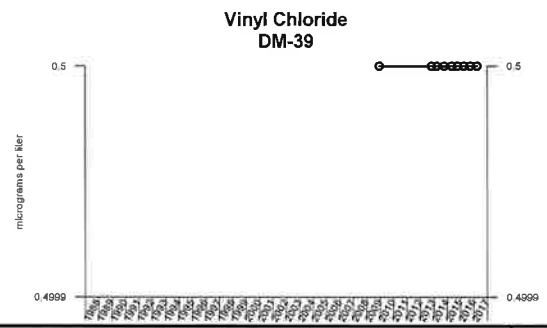


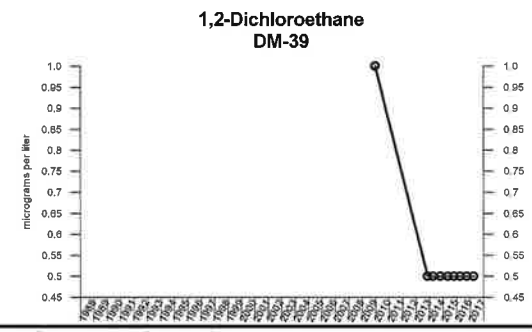












EXPLANATION

- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
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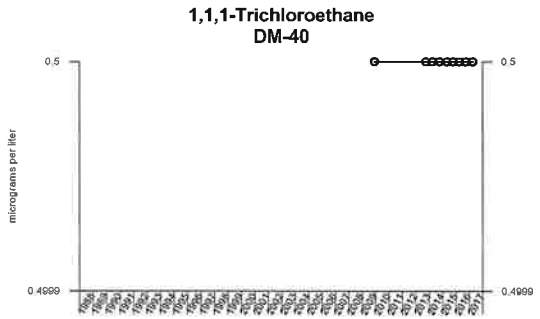
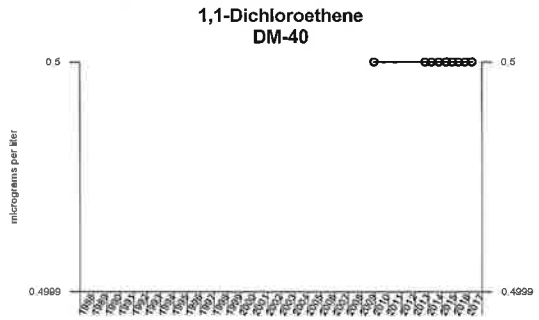
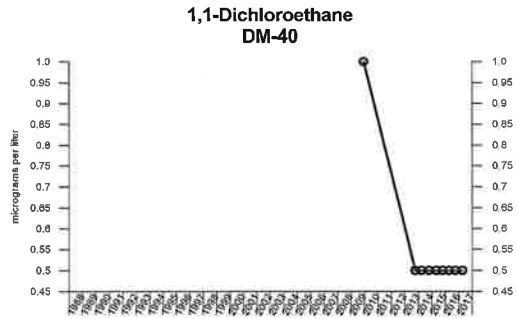
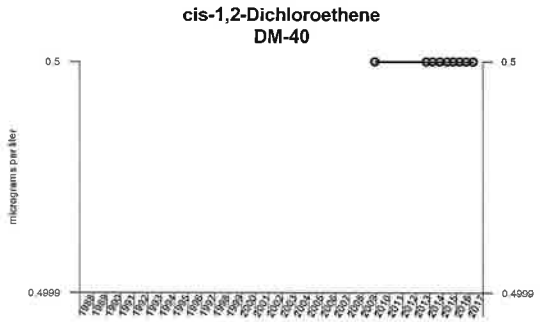
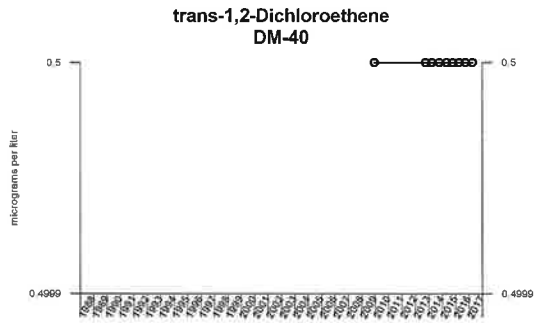
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

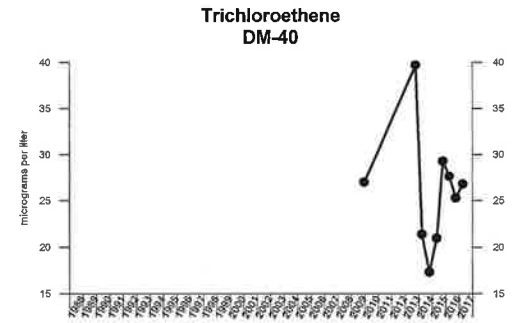


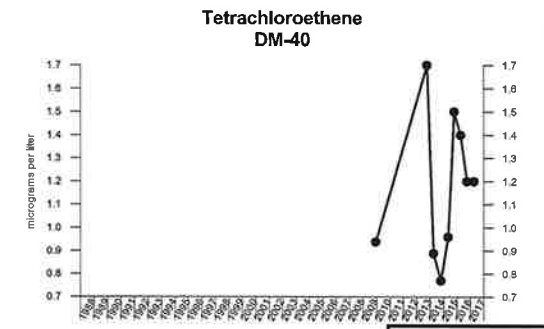


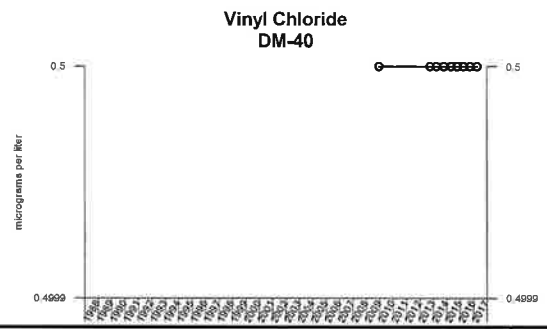


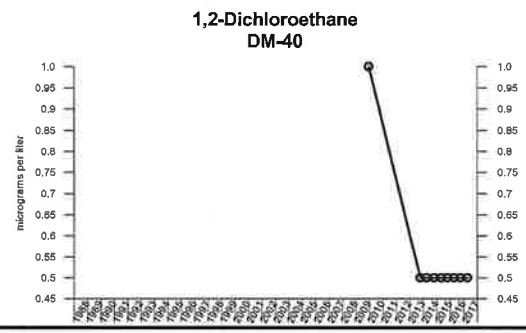












EXPLANATION

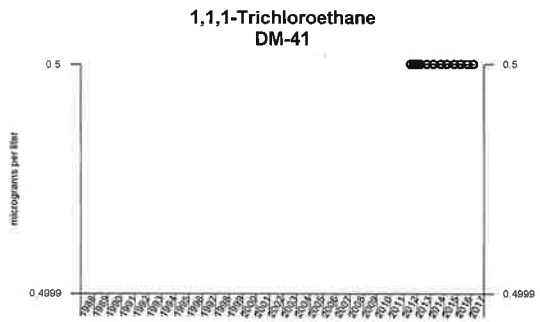
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

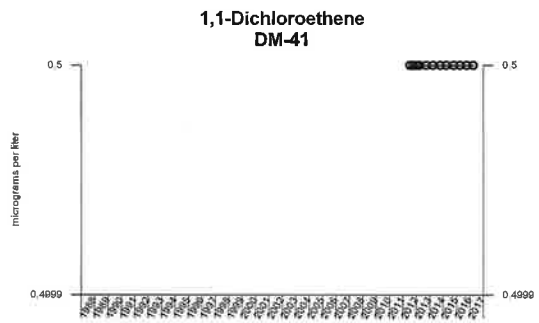
CLEAR CREEK ASSOCIATES

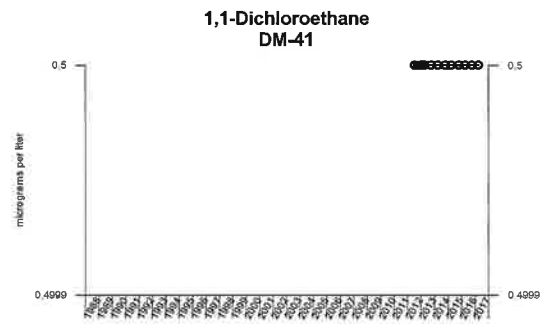
Project Name: 56th Street and Earll Drive WQARF Site

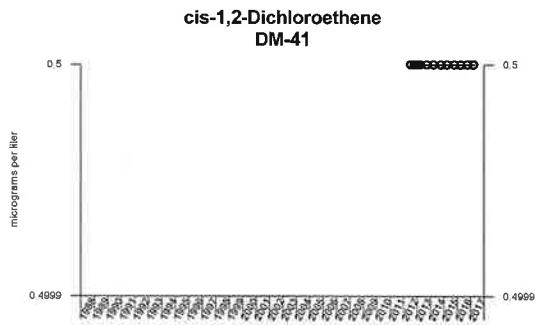
Job No: 005-134-17 | Date: June 2017

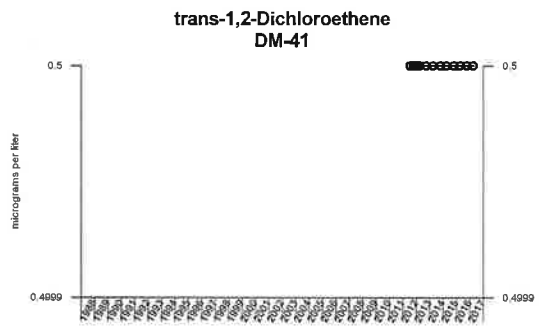
Time-Series Graphs
DM-40
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

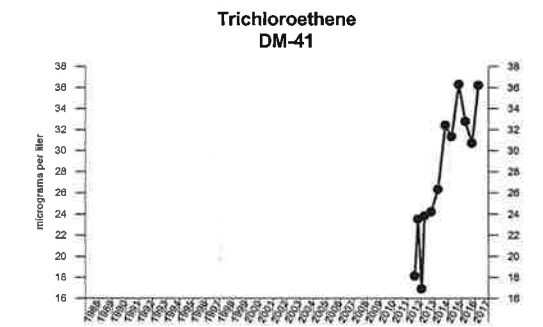


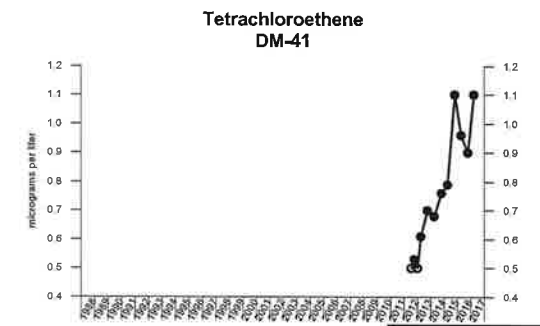


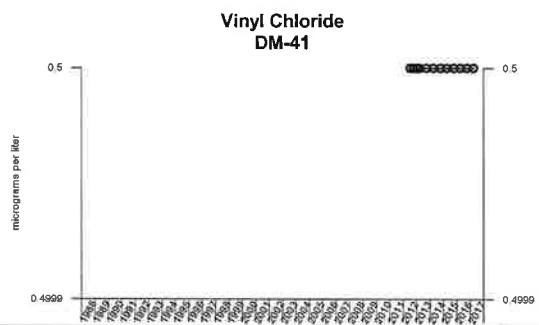


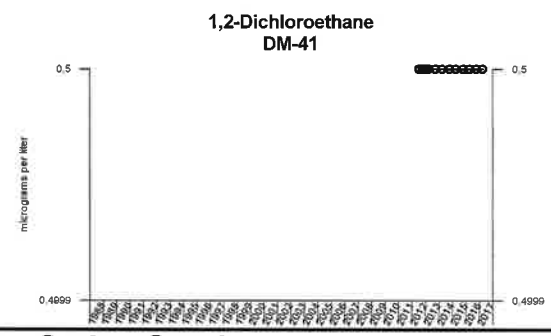












EXPLANATION

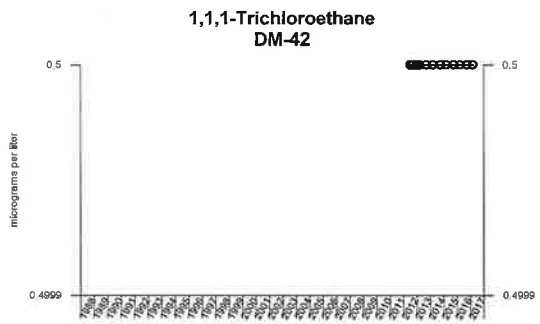
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

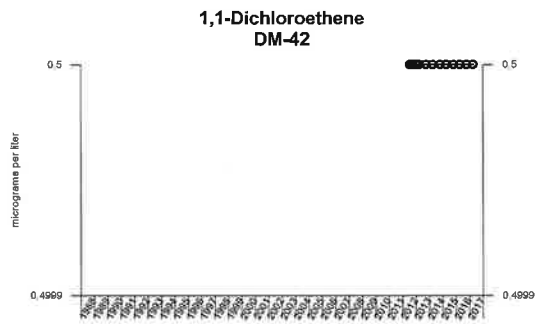
CLEAR CREEK ASSOCIATES

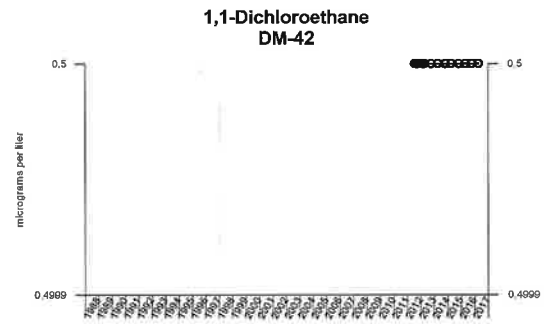
Project Name: 56th Street and Earll Drive WQARF Site

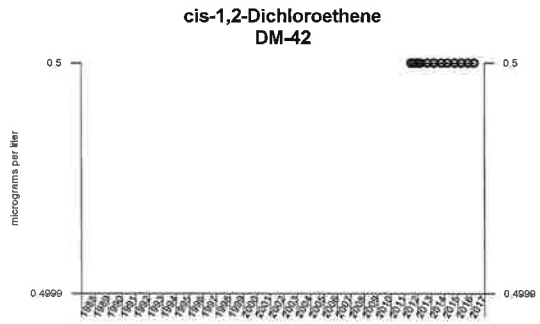
Job No: 005-134-17 | Date: June 2017

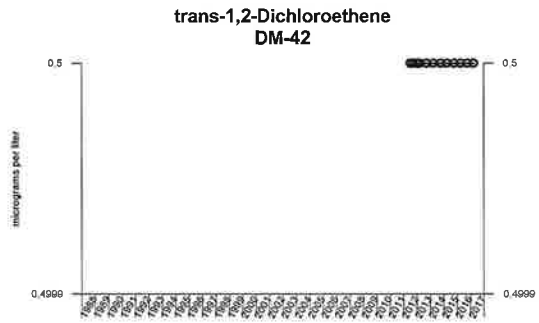
Time-Series Graphs
DM-41
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

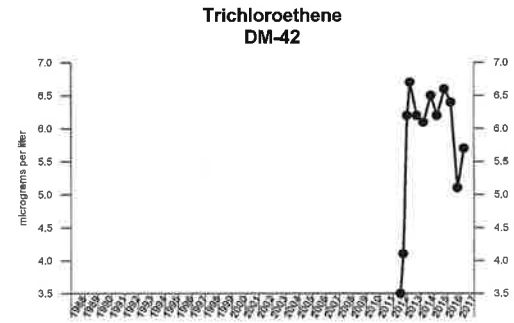


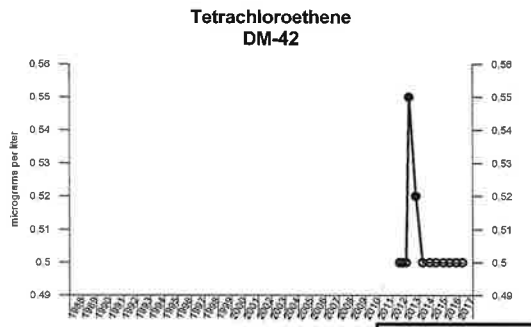


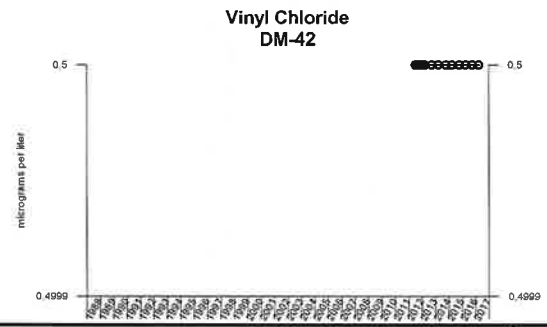












EXPLANATION

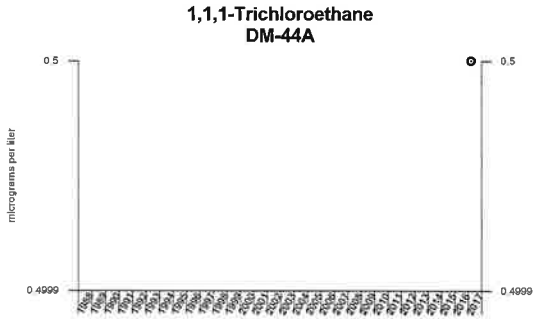
- ● - Measured Value
- ○ - Undetected (Displayed at RL)

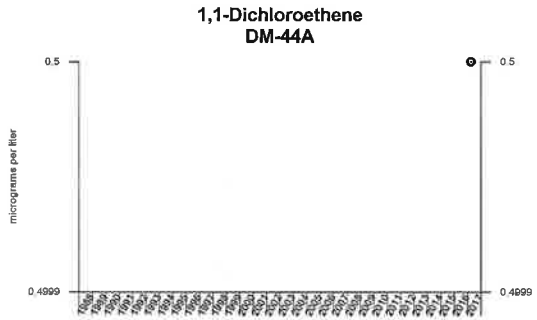
CLEAR CREEK ASSOCIATES

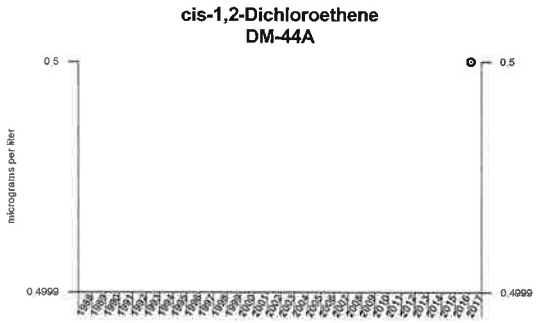
Project Name: 56th Street and Earll Drive WQARF Site

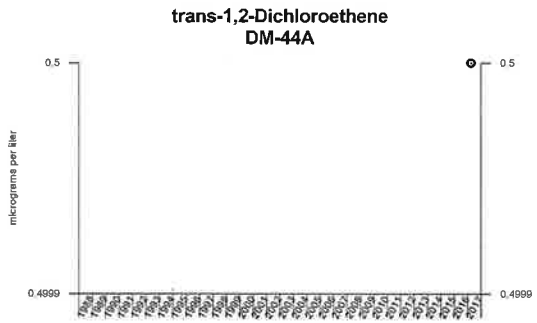
Job No: 005-134-17 | Date: June 2017

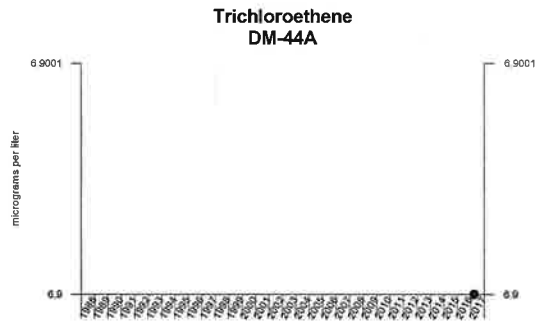
Time-Series Graphs
DM-42
56th Street and Earll Drive WQARF Site
Phoenix, Arizona

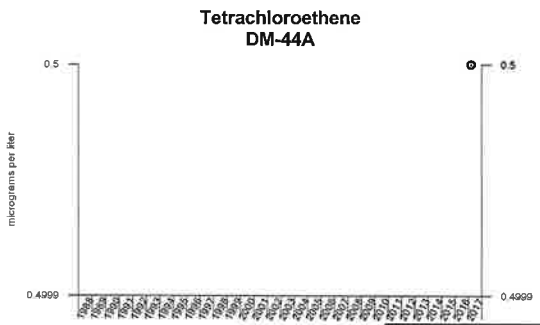


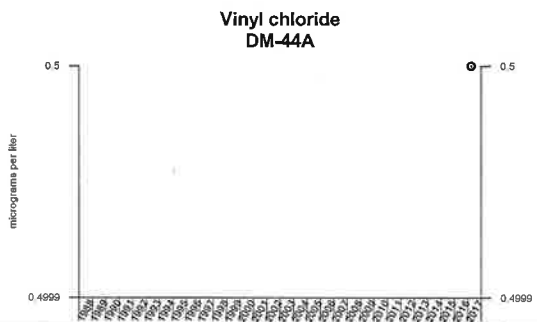


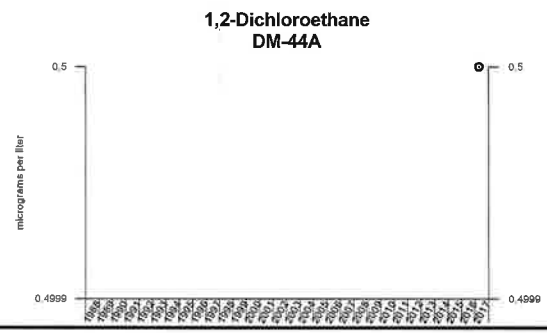












EXPLANATION

- ● - Measured Value
- ○ - Undetected (Displayed at RL)

CLEAR CREEK ASSOCIATES

Project Name: 56th Street and Earll Drive WQARF Site

Job No: 005-134-17 | Date: June 2017

Time-Series Graphs
DM-44A
56th Street and Earll Drive WQARF Site
Phoenix, Arizona