

RECORD OF DECISION

WEST CENTRAL PHOENIX – EAST GRAND AVENUE WATER QUALITY ASSURANCE REVOLVING FUND SITE

PHOENIX, ARIZONA

August 12, 2024

Prepared by:



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Acronyms

| | |
|---------|---|
| A.A.C. | Arizona Administrative Code |
| ADEQ | Arizona Department of Environmental Quality |
| ADWR | Arizona Department of Water Resources |
| AWQS | Aquifer Water Quality Standard |
| A.R.S. | Arizona Revised Statute |
| bgs | Below Ground Surface |
| CAB | Community Advisory Board |
| CIP | Community Involvement Plan |
| COC | Contaminant(s) of Concern |
| 1,1-DCE | 1,1-Dichloroethene |
| ERA | Early Response Action(s) |
| FS | Feasibility Study |
| GMCA | G.M Clement & Associates, Inc |
| GPL | Groundwater Protection Level(s) |
| LAU | Lower Alluvial Unit |
| LOE | Lines of Evidence |
| MAU | Middle Alluvial Unit |
| MTP | Mobile Home Trailer Park |
| NFA | No Further Action |
| µg/L | Micrograms per Liter |
| MNA | Monitored Natural Attenuation |
| PA | Preliminary Assessment |
| PCE | Tetrachloroethene |
| PRAP | Proposed Remedial Action Plan |
| RI | Remedial Investigation |
| RO | Remedial Objective(s) |
| ROD | Record of Decision |
| SRL | Soil Remediation Level(s) |
| SRP | Salt River Project |
| SVE | Soil Vapor Extraction |
| TCE | Trichloroethene |
| UAU | Upper Alluvial Unit |
| VOC | Volatile Organic Compound(s) |
| WQARF | Water Quality Assurance Revolving Fund |

1.0 DECLARATION

1.1 *Site Name and Location*

This Record of Decision (ROD) is for the West Central Phoenix - East Grand Avenue Water Quality Assurance Revolving Fund (WQARF) Registry Site (Site) located in Maricopa County, Phoenix, Arizona (Figure 1). The Site is located in a mixed commercial and industrial area of Phoenix and includes the area located between the Salt River Project (SRP) Grand Canal to the north, North 29th Avenue to the east, West Cheery Lynn Road to the south, and North 33rd Avenue to the west in Phoenix, Arizona (Figure 2).

The Site was added to the WQARF registry in 1998, with an eligibility and evaluation score of 31 out of 120.

1.2 *Basis and Purpose*

This ROD presents the Selected Remedy, chosen in accordance with applicable requirements in Title 18, Chapter 16 of the Arizona Administrative Code (A.A.C.). The process for selecting the remedy complied with Arizona Revised Statute (A.R.S.) §49-282.06 and §49-287.04. The Arizona Department of Environmental Quality (ADEQ), as the lead agency, has reviewed the remedy and determined that Site completion criteria used to evaluate the selected remedial action for Contaminants of Concern (COCs) in groundwater and the Remedial Objectives (ROs) will be satisfied. This ROD describes the basis for the Selected Remedy and addresses all elements of A.A.C. R18-16-410 under the WQARF Program. The decision in this ROD is based upon previous activities and investigations performed at this Site that are documented and located in ADEQ's Administrative Record file. The State of Arizona, acting by and through ADEQ, has selected the remedy detailed in this document.

1.3 *Site Assessment*

The COCs include tetrachloroethene (PCE) and trichloroethene (TCE). These compounds were historically detected in the soil, soil vapor, and groundwater at concentrations that exceeded regulatory levels (i.e., soil remediation levels [SRLs], groundwater protection levels [GPLs], and Aquifer Water Quality Standards [AWQS]). Other volatile organic compounds (VOCs), including 1,1-dichloroethene (1,1-DCE), were historically detected and are no longer considered COCs because concentrations of these other VOCs are below regulatory levels. PCE and TCE concentrations currently exceed regulatory standards. Groundwater is the only media currently impacted with COC concentrations exceeding regulatory standards. The soil at the Site does not contain VOCs with concentrations that exceed regulatory standards. Releases of VOCs to the environment occurred at the former Univar Solutions facility, the former Granberry facility, the former FedMart facility, and the former Mogul facility. The location of these former facilities is presented on Figure 2.

Soil Vapor Extraction (SVE) was implemented from 2004 to 2013 as an Early Response Action (ERA) at the former Univar Solutions facility and removed approximately 2,000 pounds of VOCs from the soil.

1.4 Selected Remedy

The Selected Remedy, identified as the Less Aggressive Remedy in the Feasibility Study Report (FS) prepared by Univar Solutions (Arcadis, 2020) and proposed in the Proposed Remedial Action Plan (PRAP) (ADEQ, 2020), to remediate the groundwater at the Site includes the following remedial technology:

- Monitored natural attenuation (MNA)

A detailed description of the Selected Remedy is provided in Section 3.0 of this ROD.

1.5 Differences From the PRAP

The Selected Remedy is different from the remedy proposed in the PRAP per the following:

- The contingency for wellhead treatment at the SRP well 10.5E-7.5N and the Mobile Home Trailer Park (MTP) well MTP-1 was removed from the Selected Remedy. Continued evaluation of the data collected suggested that a contingency for wellhead treatment at these two wells is not needed based on the following:
 - The SRP well 10.5E-7.5N is screened within the middle alluvial unit (MAU) and lower alluvial unit (LAU) while the MTP-1 well is screened within the MAU. The only aquifer currently affected by COCs greater than the AWQS at the Site is the upper alluvial unit (UAU). Additional details regarding the alluvial units is provided in Section 2.1.
 - COC concentrations have been decreasing since monitoring began in the 1990s and the areal extent of COCs above the AWQS has decreased by approximately 60 percent from the historical extent as shown by Figure 3.
 - COCs have not been detected above the AWQS in the SRP well 10.5E-7.5N or MTP-1 well for more than 20 years (Arcadis, 2020).
- The duration of the MNA was reduced from 18 years (FS and PRAP) to eight years based on COC concentrations that have been decreasing since monitoring began in the 1990s and the areal extent of COCs above the AWQS has decreased by approximately 60 percent from the historical extent as shown by Figure 3. The maximum PCE and TCE concentrations have decreased from 280 and 270 micrograms per liter ($\mu\text{g/L}$), respectively, in 2006 (GMCA, 2006) to 8.5 and 12.3 $\mu\text{g/L}$ in 2023 (Arcadis, 2023). Mann-Kendall trend analyses confirm overall decreasing concentration trends (Appendix A). Further, the evaluation of geochemical parameters confirm that aquifer conditions are such that natural biodegradation is contributing to plume attenuation (ARCADS, 2020).
- A contingency of an additional four years of MNA performance monitoring will be implemented if the remedial objectives have not been achieved after eight years.

- A proposed replacement for monitoring well WCP-201 was added to the Selected Remedy. Well WCP-201 is located near the source area and the water levels in this well have fluctuated between being dry and having a few feet of water. The monitoring of this well is vital for establishing that the Selected Remedy has remediated the contamination at the source area.

1.6 Statutory Determinations

In June 2006 and May 2018, the Remedial Investigation (RI) Report (Weston, 2006) and the RI Addendum (ADEQ, 2018) were completed pursuant to A.R.S. §49-287.03(E) and A.A.C. 18-16-406. The RI Report and subsequent RI Addendum:

- Established the nature and extent of the contamination and the sources thereof;
- Identified current and potential impacts to public health, welfare, and the environment;
- Identified current and reasonably foreseeable uses of land and waters of the state; and
- Obtained and evaluated information necessary for identification and comparison of alternative remedial actions.

In June 2020, the FS Report (Arcadis, 2020) was completed pursuant to A.R.S. §49-287.03(F) and A.A.C. 18-16-407. The FS, based on information obtained during the RI, evaluated three remedial alternatives and recommended a remedy for the Site. The FS:

- Provided for the development of a Reference Remedy and at least two alternative remedies which were capable of achieving the ROs;
- Confirmed that the Reference Remedy was based upon best engineering, geological, and hydrogeological judgement;
- Provided one alternative remedy that was more aggressive than the Reference Remedy; and
- Provided one alternative remedy that was less aggressive than the Reference Remedy.

In November 2020, ADEQ completed the PRAP (ADEQ, 2020) pursuant to A.R.S. §49-287.04 and A.A.C. 18-16-408. The PRAP presented the remedy recommended in the FS (Less Aggressive Remedy), proposed a remedy, and provided costs to implement the remedy. Public comments on the Proposed Remedy were solicited and received (Appendix B). The PRAP:

- Identified the boundaries of the Site;
- Summarized the results of the RI and FS;
- Proposed the Selected Remedy and its cost; and
- Described how the remedial goals and selection factors were evaluated.

Pursuant to A.R.S. §49-287.04 and A.A.C. 18-16-410, this ROD is the final administrative decision as defined under A.R.S. §41-1092. The Selected Remedy meets the following criteria as stipulated in A.R.S. §49-282.06:

- Assures the protection of public health and welfare and the environment;
- To the extent practicable, provides for the control, management or cleanup of the hazardous substances in order to allow the maximum beneficial use of the waters of the state; and
- Is reasonable, necessary, cost-effective, and technically feasible.

2.0 SITE BACKGROUND

2.1 *Site Description*

The Site is located in a mixed commercial and industrial area of Phoenix, Arizona. The boundaries subject to remedial action includes the area located between the SRP Grand Canal to the north, North 29th Avenue to the east, West Cheery Lynn Road to the south, and North 33rd Avenue to the west in Phoenix, Arizona (Figure 2). The Site is defined by the geographical areal extent of the groundwater plume impacted with COCs (Figure 4).

The regional aquifer underlying the Site is divided into three separate hydrogeologic units as documented in the FS Report prepared by Univar Solutions (Arcadis, 2020) as follows:

- The UAU is mostly unconfined and extends to an approximate depth of 220 feet below ground surface (bgs). The UAU is composed of gravels, sands, and silts.
- The MAU is confined and is encountered at depths between approximately 220 and 550 feet bgs. The MAU is composed of finer-grained sediments, silts and clays, and some sand and gravel.
- The LAU is confined and is encountered at depths between approximately 550 and 1,000 feet bgs. The LAU is composed mostly of conglomerate and gravel with some mudstone.

The majority of the monitoring wells at the Site have been completed within the UAU with a small number of monitoring wells completed within the MAU. The contaminant data collected from the shallower UAU and deeper MAU wells indicates the contamination at the Site is confined to the UAU. The water level data from the UAU and MAU wells indicate vertical groundwater flow is from the MAU upward into the UAU (Arcadis, 2020).

The current depth to groundwater ranges from 137 to 153 feet bgs (Arcadis, 2023). Historically, lateral groundwater flow was to the southwest. However, the groundwater flow direction shifted in 2011 to the west and by 2023 the groundwater flow direction was generally to the west and northwest at an approximate gradient of 0.005 feet per foot (Arcadis 2020, 2023). This change is attributed to improvements to the canal lining, regional groundwater pumping, and changes to local groundwater pumping (Arcadis, 2020).

Well MTP-1 is completed within the MAU while the SRP well 10.5E-7.5N and Danone water supply wells (Danone Well 1 and Danone Well 2) are completed within the MAU and/or LAU. COC concentrations are currently below the AWQS in the SRP, MTP, and Danone water supply wells (Arcadis, 2020). COC concentrations in the SRP and MTP wells have been less than the AWQS for more than twenty years and

COCs have never been detected in either of the Danone wells, even when the COC plume was larger and COC concentrations were higher (Arcadis, 2020).

The nearest residential area is located down gradient and less than 0.25-miles northwest of the current extent of the groundwater contaminant plume. Other residential areas are located upgradient or cross-gradient of the groundwater contaminant plume.

2.2 Source of Release

ADEQ investigated the Site to determine parties responsible for the release of COCs. Data supports unpermitted releases of COCs at the former Univar Solutions facility, the former Granberry facility, the former FedMart facility, and the former Mogul facility. A brief summary of each facility is presented below:

- Former Univar Facility - The former Univar Solutions facility was located at 2930/2940 West Osborn Road (Figure 2). Beginning in 1957, the former Univar Solutions facility was used for warehousing and distribution of scientific and laboratory equipment by Van Waters & Rogers (VWR). In the mid-1960s, VWR expanded to include warehousing and the distribution of industrial and agricultural chemical products, upholstery supplies, and laundry and dry-cleaning supplies. VWR ceased all operations at the Property by 1971 (Arcadis, 2020).
- Former Granberry Facility - The former Granberry facility was located at 2901 and 2905 West Osborn Road (Figure 2). The former Granberry facility began operation in 1982, and was a generator of hazardous waste including TCE and/or PCE (Arcadis, 2020).
- Former FedMart Facility - The former FedMart facility was located at 3010 Grand Avenue (Figure 2). The former FedMart facility operated as a retail gas distribution facility between 1967 and 1990. Soil and groundwater investigations conducted at the former facility identified PCE and TCE in the soil and groundwater at the property (Weston, 2006).
- Former Mogul Facility - The former Mogul facility was located at 3030 North 30th Avenue which is outside of the groundwater plume and boundaries of the Site (Figure 2). Soil and groundwater data collected at the facility indicate that there was a release at the facility that impacted groundwater. COC soil concentrations were below residential and non-residential Arizona SRLs and minimum GPLs. Groundwater monitoring wells located at the former Mogul facility did historically have TCE above the AWQS (Arcadis, 2020); however, no data supports the migration of COCs beyond the facility and there is no data to support that the Mogul release reached the East Grand Avenue groundwater plume. Univar Solutions (Arcadis, 2020) indicated that the former Mogul facility is not considered a continuing source of COCs.

2.3 Need for Remedial Action

2.3.1 Soil/Soil Vapor

The soil at the Site does not contain COCs above SRLs or GPLs. Thus, no remediation for soil or soil vapor is needed.

2.3.2 Groundwater

COCs including PCE and TCE are present in the UAU groundwater at concentrations that exceed the AWQS. Groundwater in the vicinity of the Site is currently used as a source of irrigation and drinking water. Thus, a remedial action for groundwater is required.

The concentrations of VOCs in samples collected from area water supply wells installed in the MAU and LAU (deeper hydrogeologic units) in the vicinity of the Site are less than the AWQS (Arcadis, 2020). The well data from these water supply wells and the Site monitoring wells supports that the deeper hydrogeologic units have not been impacted by the contamination emanating from the Site.

2.4 Chronology of Site Activities

A detailed history of the remedial investigations and ERAs conducted is presented in the RI, the FS, and the PRAP. A brief summary of these activities is presented below:

1982: VOCs were detected in the groundwater within the West Central Phoenix area.

1987: The West Central Phoenix area was designated a WQARF priority list site.

1993: ADEQ conducted a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Preliminary Assessment (PA) at the former Univar Solutions facility.

1994: Univar Solutions conducted a preliminary site characterization investigation at the former Univar Solutions facility.

1997 to 1998: Additional investigations were conducted that included soil, soil vapor, and groundwater sampling.

1998: The Site was placed on the WQARF Registry with a score of 31 out of a possible 120.

1999 to 2004: Additional investigations were conducted that included soil, soil vapor, and groundwater sampling.

2004: Univar Solutions began operating an SVE system as an ERA in February. The Draft RI Report was issued for public comment in May.

2006: The Final RI Report was issued in July.

2013: Univar Solutions shut down the SVE system following rebound testing and analysis. The SVE system removed over 2,000 pounds of VOCs between 2004 and 2013.

2017 to 2018: ADEQ conducted a soil gas investigation to confirm no other sources of contamination were present.

2018: The RI Report Addendum was issued in May.

2019: Univar Solutions installed additional monitoring wells to delineate the current extent of COCs in the groundwater.

2020: The FS Report was issued in July. The PRAP was completed and issued for public comment in December.

2.5 Source Area Definition

Data collected and analyzed during the RI confirmed that contaminants were released into the soil and groundwater. COCs currently detected above regulatory levels include PCE and TCE. Data confirmed sources of the soil and groundwater contamination were the former Univar Solutions facility, the former Granberry facility, and the former FedMart facility. A summary of the contamination is presented below:

- **Soil** - The soil does not contain compounds with concentrations that exceed regulatory standards (i.e., SRLs and GPLs).
- **Groundwater** - The current extent of COCs in the groundwater is shown on Figure 4. Well data supports that the COC plume is within the UAU. Compounds that exceed the AWQS include PCE and TCE. The maximum PCE and TCE concentrations currently detected in the groundwater are 8.5 and 12.3 µg/L, respectively (Arcadis, 2023). The AWQS for PCE and TCE is 5 µg/L. The groundwater data indicates the upper 30 to 50 feet of the aquifer is impacted with VOCs.

3.0 SELECTED REMEDY

The Selected Remedy is based on the evaluation presented in the FS (Arcadis, 2020) and summarized in the PRAP (ADEQ, 2020). The FS evaluated remedial alternatives for COCs in groundwater (Arcadis, 2020). The remedial alternatives presented in the FS were developed to meet the ROs (ADEQ, 2006). The PRAP provided the basis for the Selected Remedy (ADEQ, 2020). As previously mentioned, a remedial alternative for soil is not necessary because no soil contamination is present. The Selected Remedy for the groundwater is MNA. The Selected Remedy does not include a contingency for wellhead treatment as presented in Section 1.5.

3.1 *Selected Remedy Summary*

3.1.1 MNA

MNA is a remedial measure that involves routine groundwater sampling and analysis to monitor the results of one or more naturally occurring physical, chemical, or biological processes that reduce the mass, toxicity, volume, or concentration of chemicals in groundwater. MNA is a mechanism by which COCs are reduced by natural means without other control, removal, treatment, or aquifer-modifying activities. These in-situ processes may include dilution, adsorption, volatilization, precipitation, and biological degradation of the contaminants in the groundwater.

MNA will consist of routine groundwater monitoring and sampling to monitor groundwater contamination at the Site. The groundwater samples will be analyzed for VOCs. The groundwater samples will also be analyzed for natural attenuation performance parameters including alkalinity, total organic carbon, dissolved oxygen, oxidation-reduction potential (ORP), iron, manganese, nitrate, sulfate, methane, ethene and ethane for at least two calendar years (four semi-annual sampling events) to establish baseline trends. The groundwater monitoring data will be used to evaluate plume migration, plume stability, and natural attenuation of the plume. After the completion of the baseline sampling events, the MNA performance parameters may be reevaluated to determine if specific frequency may decrease for a specific MNA performance parameter or if a specific MNA performance parameter may be removed from the sampling program.

Based on Mann-Kendall trend analysis, MNA monitoring will be conducted for a period of up to eight years as presented in Table 1. The groundwater monitoring well network will consist of compliance wells, performance wells, and sentinel wells. For years one, two, seven and eight, the program will include semi-annual water level monitoring and groundwater sampling of up to 10 wells and semi-annual reporting. For years three through six, the program will include annual water level monitoring and groundwater sampling of up to 10 wells and annual reporting. The number and frequency of wells to be monitored and sampled will be adjusted over time in response to changing groundwater conditions. At a minimum, the number of wells and the frequency of monitoring will be evaluated and updated every two years. MNA will be terminated and the Site will be closed when COC concentrations remain below the respective

AWQS after a minimum of two consecutive years of semi-annual monitoring and sampling from all site monitoring wells.

If after eight years MNA is not performing in accordance with the objectives set forth, a contingency of an additional four years of MNA performance monitoring will be required.

The Selected Remedy includes a replacement for well WCP-201. WCP-201 is at risk of going dry due to declining water levels (see Section 1.5). WCP-201 is currently screened between 114 and 154 feet bgs. The replacement well will be screened between approximately 140 and 180 feet bgs. The existing WCP-201 will be abandoned during the well replacement activities in accordance with applicable Arizona Department of Water Resources (ADWR) requirements including A.A.C. R12-15-816.

Table 1 – MNA Monitoring Summary

| Well Name | Screen Interval (feet bgs) | Monitored Parameters |
|--|----------------------------|--|
| EGA-01 | 120 to 170 | Water Levels, VOCs, & Natural Attenuation Parameters** |
| EGA-03 | 140 to 190 | |
| EGA-04A | 145 to 195 | |
| EGA-04B | 215 to 245 | |
| EGA-05A | 145 to 195 | |
| EGA-05B | 225 to 255 | |
| WCP-44 | 108 to 148 | |
| WCP-48 | 225 to 245 | |
| WCP-88 | 110 to 150 | |
| WCP-201 / WCP-201R | 114 to 154 / 140 to 180* | |
| Notes: bgs = below ground surface VOCs = volatile organic compounds *Screen interval of WCP-201R is estimated **Natural Attenuation Parameters include: alkalinity, total organic carbon, dissolved oxygen, oxidation-reduction potential (ORP), iron, manganese, nitrate, sulfate, methane, ethene and ethane. | | |

At the conclusion of MNA activities, the 39 monitoring wells associated with the Site will be abandoned in accordance with applicable ADWR requirements including A.A.C. R12-15-816. A list of the 39 monitoring wells to be abandoned is presented in Appendix C. After well abandonment, ADEQ will delist the Site in accordance with A.R.S. §49-287.01(K).

3.2 Achievement of Remedial Objectives and Remedial Action Criteria

In accordance with A.A.C. R18-16-406(I), ADEQ prepared the RO Report (ADEQ, 2006) that established ROs for the current and reasonably foreseeable uses of land and waters of the State of Arizona that have

been or are threatened to be affected by a release of a hazardous substance. In accordance with A.A.C. R18-16-407, the ROs were evaluated in the FS Report and, according to A.A.C. R18-16-408 and A.R.S. §49-287.04, considered in development of the remedial action alternatives presented in the PRAP Report.

The RO Report (ADEQ, 2006) identified the current and future land use at the Site as industrial. Soil sampling results confirmed that COCs in the soil are below regulatory levels (i.e., SRLs and GPLs) for the industrial setting. Thus, a RO for soil was not established and is not needed.

The RO Report (ADEQ, 2006) identified current and future groundwater uses at the Site. These included the current and future use of groundwater for drinking water by well MTP-1, the current and future use of groundwater for drinking water by the Danone wells, and the current use of groundwater for irrigation by SRP wells 10.5E-7.5N and 11.2E-7.7N. Based on these groundwater uses, ADEQ established the following ROs for the Site:

- To protect, replace or otherwise provide alternative water supply should use of the MTP drinking water well be lost in the future due to changes in groundwater flow direction that would contaminate the well with TCE, PCE, and/or 1,1-DCE contamination emanating from the Site;
- To protect, replace, or otherwise provide alternative water supply should use of the Danone Waters drinking water well(s) be lost in the future due to contamination of the deeper aquifer by the TCE, PCE, and/or 1,1-DCE contamination emanating from the Site; and
- To protect, replace, or otherwise provide an alternative water supply should use of the SRP wells be lost in the future due to contamination of the wells with TCE, PCE, and/or 1,1-DCE contamination emanating from the Site.

The SRP Grand Canal creates the northern boundary of the Site and is a concrete lined canal. The water in the Grand Canal is supplemented with groundwater pumped from SRP wells near the Site. Thus, a RO for surface water use is not needed because the ROs for groundwater use for the water pumped into the Grand Canal are applicable.

In addition to the potential future groundwater uses identified in the RO Report (ADEQ, 2006), recent consultations with the water providers indicated potential future use of groundwater for drinking water by SRP and the potential future use of groundwater by the City of Phoenix for drinking water (Arcadis, 2020). It should be noted the nearest City of Phoenix production well (inactive Well #77) is located approximately one mile north and cross-gradient of the site.

MNA requires demonstrating several lines of evidence (LOE) to demonstrate it is able to meet the ROs in an acceptable time frame. Three LOE have been demonstrated. The key LOE is a geographically stable or decreasing plume, which is demonstrated with the existing data (Figure 4). The second LOE is decreasing concentrations (or mass) trends. The results of the groundwater monitoring and sampling show decreasing concentrations of COCs in the groundwater, supported with Mann-Kendall trend analysis. The third LOE is favorable geochemistry and biologic conditions for MNA. The Univar Solutions FS documented favorable geochemistry. At the low concentrations in the plume, breakdown products of PCE (i.e, TCE, cis-

1,2-dichloroethene, and vinyl chloride) are expected and found to be generally below detection limits. These three primary LOE demonstrate that the Selected Remedy of MNA for groundwater will reduce COCs to below the AWQS and meet the protectiveness elements of the ROs for groundwater. Given the low concentrations and clear trends, ADEQ finds there is no reason to implement the replacement or alternative supply aspects of the ROs.

Based on these determinations, the Selected Remedy demonstrates:

- The ability to achieve the ROs with regard to both land use and groundwater use;
- Consistency with plans of affected water providers and the general land use plans of the local government(s); and
- Compatibility with regard to practicability, cost, risk, and benefit.

3.3 Compliance with Arizona Administrative Code and Arizona Revised Statutes

In 1998, the Site was placed on the WQARF Registry by ADEQ with a score of 31 out of a possible 120. In 2006, ADEQ issued the RI Report (Weston, 2006) for public comment to meet the requirements under A.A.C. R18-16-404(C)(1)(b) and A.A.C. R18-16-406(F). The report documented the results of the field investigation activities conducted up to 2006. Solicitation of ROs was conducted during the Community Advisory Board (CAB) meeting process per A.A.C. R18-16-406(I). The RO Report (ADEQ, 2006) was finalized in June 2006 and included as an appendix to the RI Report.

A FS Work Plan (GMCA, 2009) was prepared for ADEQ in October 2009 and a public notice was issued in 2014 in accordance with the requirements outlined in A.A.C. R18-16-404(C)(1)(d). The Univar Solutions FS Report (Arcadis, 2020) was prepared documenting the development and evaluation of alternatives for remediation of the Site and provided a recommendation of a final remedy capable of achieving the ROs developed for the Site.

A PRAP (ADEQ, 2020) was prepared based on the work executed under the FS Work Plan and contained in the FS Report. The PRAP documented the results of the RI and FS and proposed a remedy. MNA was proposed as the remedy for the Site. Based on a comparison with alternative remedies, the Selected Remedy:

- Adequately assures the protection of public health, welfare, and the environment;
- To the extent practicable, provides for the control, management and cleanup of COC contamination, maximizing beneficial use of the groundwater use; and
- Is reasonable, necessary, cost-effective, and technically feasible.

The Selected Remedy is consistent with A.R.S. §49-282.06 as it provides protection to the public by providing control of hazardous substances.

3.4 Community Involvement and Public Comment Requirements

A CAB was formed for the West Central Phoenix area and met on a regular basis to discuss the issues and status of investigation and cleanup activities conducted. These meetings were open to the public. The most recent CAB meeting was held on August 23, 2023. A Community Involvement Plan (CIP) (ADEQ, 2022) was also developed and regularly updated for the Site. The specific public participation activities that have been completed are presented in Table 2.

3.5 Schedule

The schedule for implementing the Selected Remedy will be dictated by the WQARF program priorities and available funding after the ROD has been executed and entered into the Administrative Record. MNA will be conducted until the COCs are no longer present above their respective AWQS or the Director determines that the conditions of A.R.S. §49-282.06(D) have been met. Based on current groundwater data trends, ADEQ estimates groundwater remediation at the Site will be needed for up to eight years with a contingency of four additional years as presented in Section 1.5.

During implementation of the Selected Remedy, Periodic Site Reviews will be performed at a minimum of every two years to assess the viability of the remedy.

Upon completion of remedial actions, the monitoring wells associated with the Site will be abandoned in accordance with ADWR requirements including A.A.C. R12-15-816 and the Site will be delisted in accordance with A.R.S. §49-287.01(K).

Table 2 - Community Involvement Activities

| Community Involvement Activity | Regulatory Citation/Rule | Date |
|---|--|---|
| Establish Community Involvement Area | A.R.S. §49-289.02(A) | April/May 1998 |
| Notice of listing on the Registry | A.R.S. §49-287.01 A.R.S. §49-289.03(A) | April 1998 |
| Hazardous substance contamination notice and fact sheet | A.R.S. §49-289.02(B) A.R.S. §49-287.03(B) A.A.C. R18-16-404(C)(1)(i) | April 2000 |
| Notice of RI scope of work, fact sheet, and outline of CIP | A.R.S. §49-287.03(B) A.R.S. §49-287.03(C) A.A.C. R18-16-403(F) A.A.C. R18-16-403(G) | 1998 |
| Establish CAB selection committee | A.R.S. §49-289.03(D) | April 2000 |
| Establish CAB | A.R.S. §49-289.03(C) A.R.S. §49-289.03(F)(1) | June 2000 |
| Prepare and update CIP | A.R.S. §49-287.03(D) A.R.S. §49-289.03(C) A.A.C. R18-16-403(E) A.A.C. R18-16-404(C) | June 2000 Updates: September 2009/April 2015/January 2019/June 2022 |
| Land and Water Use Study Questionnaires mailed | A.A.C. R18-16-404(C)(1)(a) | March/April/June 2001 |
| Notice of opportunity to comment on Draft RI Report | A.A.C. R18-16-404(C)(1)(b) A.A.C. R18-16-406(F) | May 2004 |
| Public notice for solicitation of ROs | A.A.C. R18-16-404(C)(1)(b) A.A.C. R18-16-406(I)(2) | August 2004 |
| Notice of opportunity to comment on Proposed RO Report | A.A.C. R18-16-404(C)(1)(c) A.A.C. R18-16-406(I)(5) | January 2006 |
| Public meeting(s) to discuss proposed/revised RO Report (if needed) | A.A.C. R18-16-406(I)(5) | Not Applicable |
| Notice of availability of Final RI and RO Reports | A.A.C. R18-16-406(J) | July 2006 |
| Notice of availability of the FS Work Plan | A.A.C. R18-16-404(C)(1)(d) | October 2014 |
| Notice of availability of the FS Report | Not Required | July, 2020 |
| Issue notice of availability and opportunity to comment on the PRAP. Three comment letters were received. | A.R.S. §49-287.04(B) A.A.C. R18-16-404(C)(1)(e) A.A.C. R18-16-408(C)(1) | December, 2020 |
| Notice of Cost Credit and Remedial Action | A.A.C. R18-16-409 | February, 2024 |
| Notice of ROD & Responsiveness Summary Availability | A.R.S. §49-287.04 (G) A.A.C. R18-16-404(C)(1)(f) | TBD |

4.0 RESPONSIVENESS SUMMARY

In accordance with A.A.C. R18-16-410(B)(2) and A.R.S. §49-287.04(F), a comprehensive responsiveness summary was prepared to identify and respond to all comments received on the PRAP at the conclusion of the public comment period. A 90-day comment period for the PRAP was held starting on December 10, 2020, and was subsequently extended through March 22, 2021. Three letters containing written comments were received during the comment period as follows:

- One letter from Karis Nelson on behalf of SRP dated March 10, 2021;
- One letter from Julie Riemenschneider on behalf of City of Phoenix dated March 10, 2021; and
- One letter from Mark Metcalf on behalf of Univar Solutions dated March 22, 2021.

No other comments were received on the PRAP. A copy of the comment letters and the ADEQ response to the comments is presented in Appendix B.

5.0 COST

As required in A.A.C. R18-16-410(C), this section presents the costs (excluding non-recoverable costs) previously incurred during Site characterization and implementation of the ERAs and presents the costs of the Selected Remedy.

5.1 *Historical Costs*

The Site was placed on the WQARF Registry in 1998 due to the discovery of soil and groundwater contamination at the Site. Investigation and remediation by ADEQ began in 1993 and will continue as the Selected Remedy is implemented. An ERA was initiated starting in 2004 and was instrumental in reducing contaminant concentrations and risk of exposure. These activities to date have cost **\$4,695,605.46**. The total cost includes the sum of the costs incurred by the State of Arizona (**\$2,774,571.34**) and the costs incurred by Univar Solutions (**\$1,921,034.12**) that were approved by ADEQ in accordance with A.A.C. R18-16-413 and A.A.C. R18-16-409(H). A summary of the Univar Solutions historical costs is presented in Appendix D.

5.2 *Future Costs*

The estimated cost to implement the Selected Remedy at the Site is summarized in Table 3. Costs are presented in current dollars (not discounted) with 3% inflation. The detailed costs of the remedy are presented in Appendix E.

Table 3 – Selected Remedy Cost Summary

| Year | Description | Cost |
|--|---|-----------------------|
| 1 | Semi-Annual MNA at 10 Wells, Remedial Work Plan, & Replacement of WCP-201 | \$220,000.00 |
| 2 | Semi-Annual MNA at 10 Wells & Periodic Review | \$90,640.00 |
| 3 | Annual MNA at 10 Wells | \$35,010.00 |
| 4 | Annual MNA at 10 Wells & Periodic Review | \$48,080.00 |
| 5 | Annual MNA at 10 Wells | \$43,332.00 |
| 6 | Annual MNA at 10 Wells & Periodic Review | \$51,008.00 |
| 7 | Semi-Annual MNA at 10 Wells | \$78,807.00 |
| 8 | Semi-Annual MNA at 10 Wells & Site Closure Report | \$121,758.00 |
| 9 | Site Closure and Well Abandonment of the 39 Site Monitoring Wells* | \$324,673.00 |
| SUBTOTAL SELECTED REMEDY COST | | \$1,013,308.00 |
| 10 | Annual MNA at 10 Wells & Periodic Review | \$57,410.00 |
| 11 | Annual MNA at 10 Wells | \$44,349.00 |
| 12 | Annual MNA at 10 Wells & Periodic Review | \$60,906.00 |
| 13 | Annual MNA at 10 Wells | \$47,050.00 |
| SUBTOTAL CONTINGENCY COST | | \$209,715.00 |
| TOTAL SELECTED REMEDY COST | | \$1,223,023.00 |
| <u>Notes:</u> Costs assumes inflation rate of 3% *See Appendix C for list of wells to be abandoned | | |

6.0 CONCLUSIONS

The Selected Remedy chosen for the Site is MNA. MNA will be conducted for up to eight years or until the ROs for groundwater have been met. If MNA has not achieved the ROs for groundwater within eight years, a contingency of an additional four years of MNA performance monitoring will be implemented. Once ROs for groundwater have been met, remedial and monitoring activities will cease and the monitoring wells associated with the Site will be abandoned in accordance with ADWR requirements including A.A.C. R12-15-816 and the Site will be delisted in accordance with A.R.S. §49-287.01(K). At any time prior to completion of the Selected Remedy, a portion of the Site may be issued a no further action (NFA) determination in accordance with A.R.S. §49-287.01 (F) & (G).

7.0 REFERENCES

Arizona Department of Environmental Quality (ADEQ), 2006. Remedial Objectives Report, West Central Phoenix East Grand Avenue Site, Phoenix, Arizona. June.

ADEQ, 2018. 2018 Final Remedial Investigation Report Addendum. May 9.

ADEQ, 2020. Proposed Remedial Action Plan, West Central Phoenix – East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. November 15.

ADEQ, 2022. West Central Phoenix Community Involvement Plan. June.

Arcadis, 2020. Feasibility Study Report, East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. June.

Arcadis, 2023. 2023 Annual Groundwater Monitoring Report, East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. November 10.

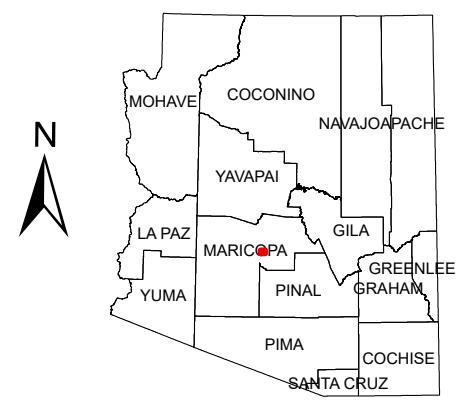
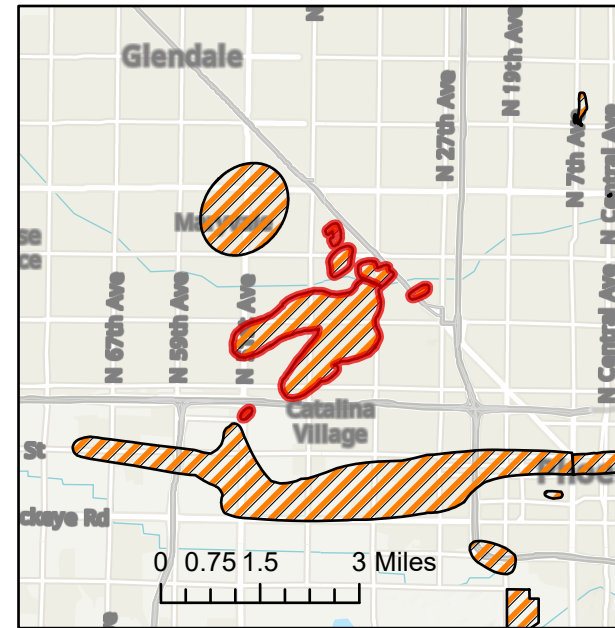
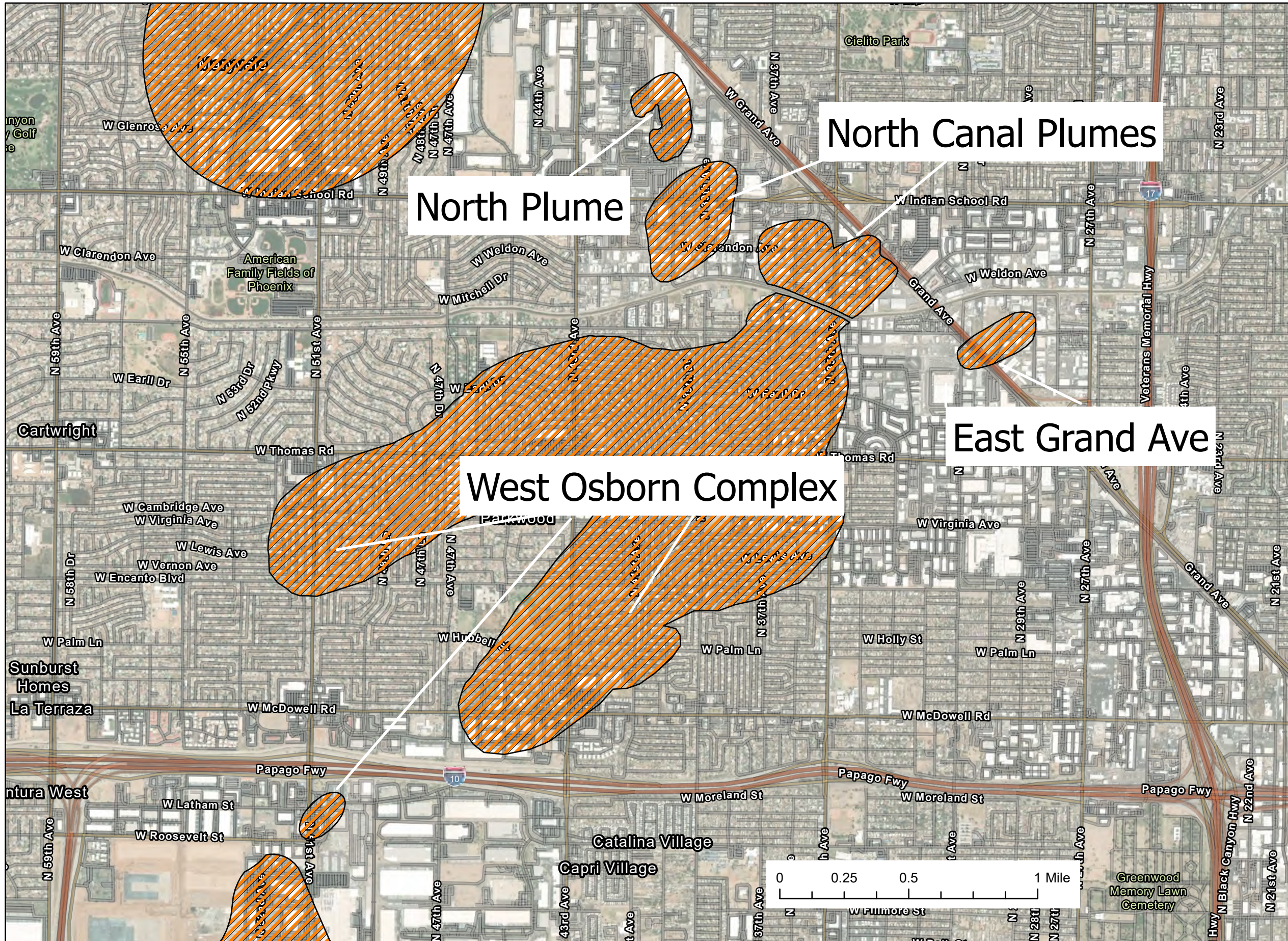
G.M Clement & Associates, Inc (GMCA), 2006. 2006 Annual Groundwater Monitoring Report, West Central Phoenix East Grand Avenue WQARF Site, Phoenix, Arizona. December.

GMCA, 2009. Feasibility Study Work Plan, West Central Phoenix East Grand Avenue WQARF Site, Phoenix, Arizona. July.

Weston Solutions (Weston), 2006. Final Remedial Investigation Report, West Central Phoenix East Grand Avenue WQARF Site, Phoenix, Arizona. June.

FIGURES

FIGURE 1 - SITE LOCATION MAP

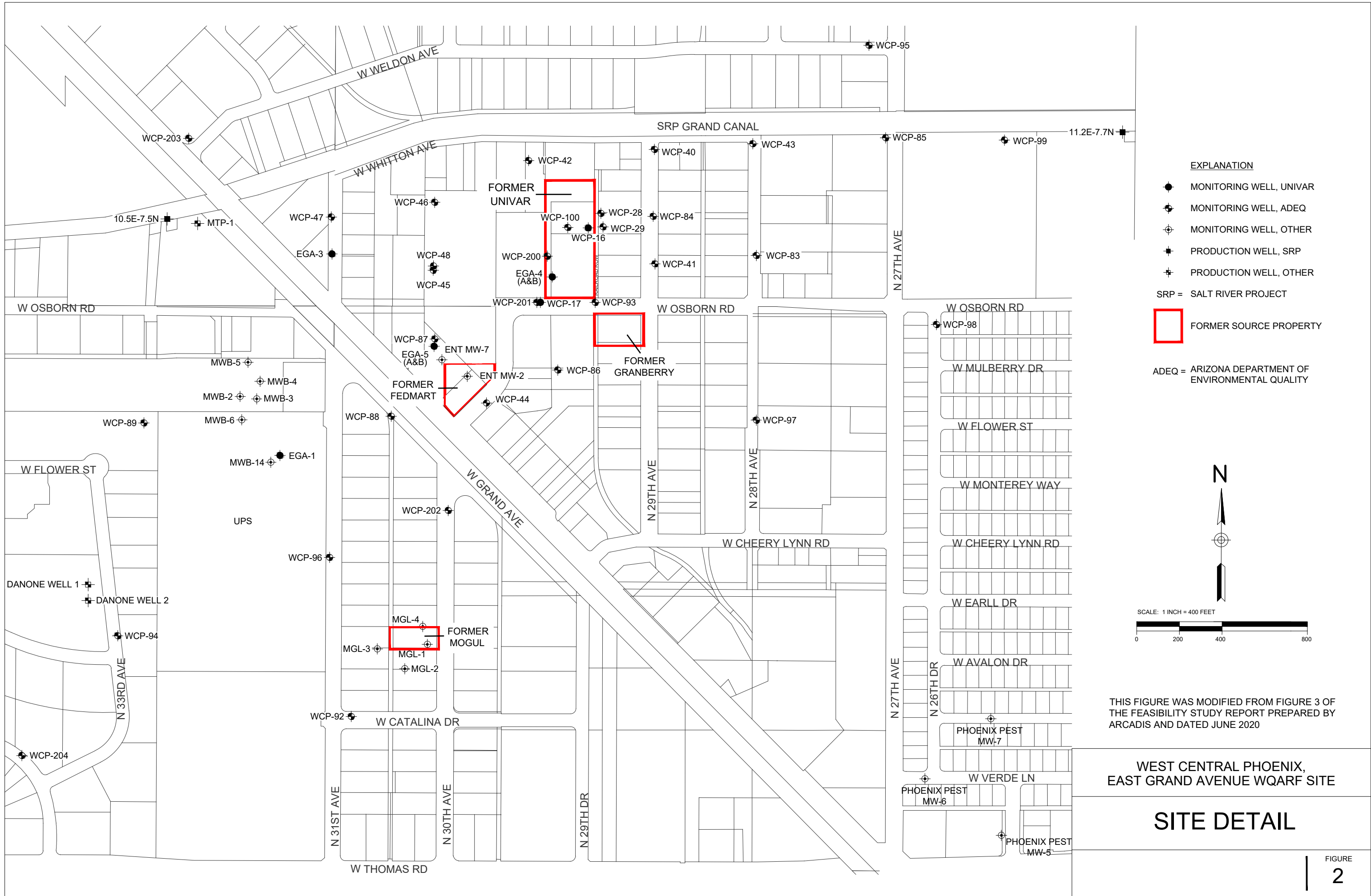


- WQARF Estimated Plume Boundary
- Counties

All WQARF Sites associated with West Central Phoenix are labeled.

Plume boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume for this site may change in the future as new information becomes available.





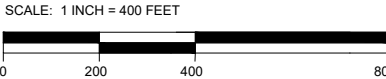
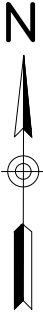
EXPLANATION

- MONITORING WELL, UNIVAR
- ⊕ MONITORING WELL, ADEQ
- ⊕ MONITORING WELL, OTHER
- ⊕ PRODUCTION WELL, SRP
- ⊕ PRODUCTION WELL, OTHER

SRP = SALT RIVER PROJECT

⬜ FORMER SOURCE PROPERTY

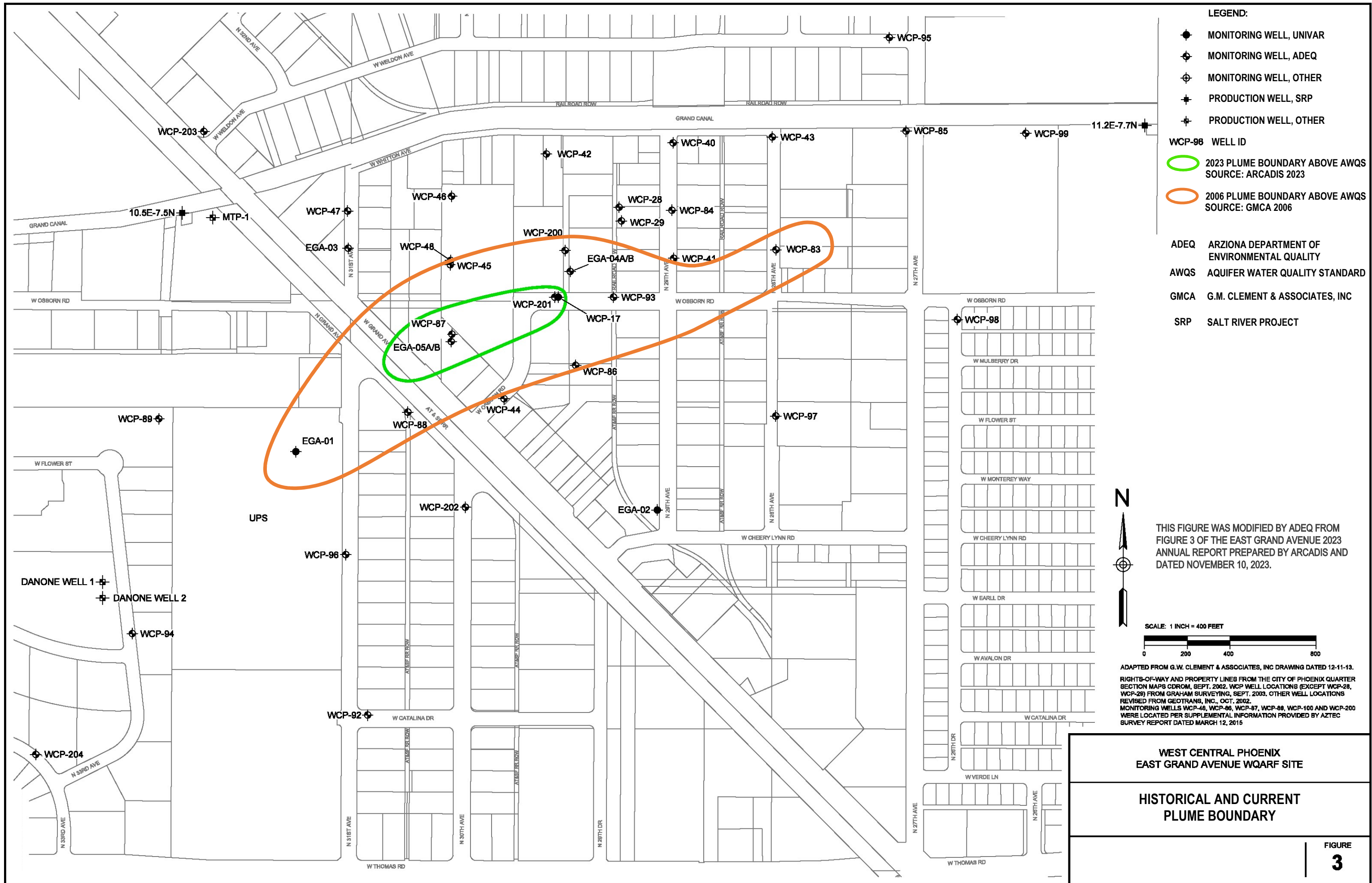
ADEQ = ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



THIS FIGURE WAS MODIFIED FROM FIGURE 3 OF THE FEASIBILITY STUDY REPORT PREPARED BY ARCADIS AND DATED JUNE 2020

WEST CENTRAL PHOENIX,
EAST GRAND AVENUE WQARF SITE

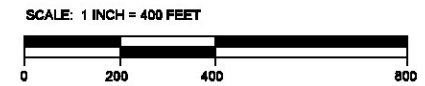
SITE DETAIL



- LEGEND:**
- ◆ MONITORING WELL, UNIVAR
 - ◆ MONITORING WELL, ADEQ
 - ◆ MONITORING WELL, OTHER
 - ⊕ PRODUCTION WELL, SRP
 - ⊕ PRODUCTION WELL, OTHER
- WCP-98 WELL ID
- 2023 PLUME BOUNDARY ABOVE AWQS SOURCE: ARCADIS 2023
 - 2006 PLUME BOUNDARY ABOVE AWQS SOURCE: GMCA 2006
- ADEQ ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 AWQS AQUIFER WATER QUALITY STANDARD
 GMCA G.M. CLEMENT & ASSOCIATES, INC
 SRP SALT RIVER PROJECT



THIS FIGURE WAS MODIFIED BY ADEQ FROM FIGURE 3 OF THE EAST GRAND AVENUE 2023 ANNUAL REPORT PREPARED BY ARCADIS AND DATED NOVEMBER 10, 2023.

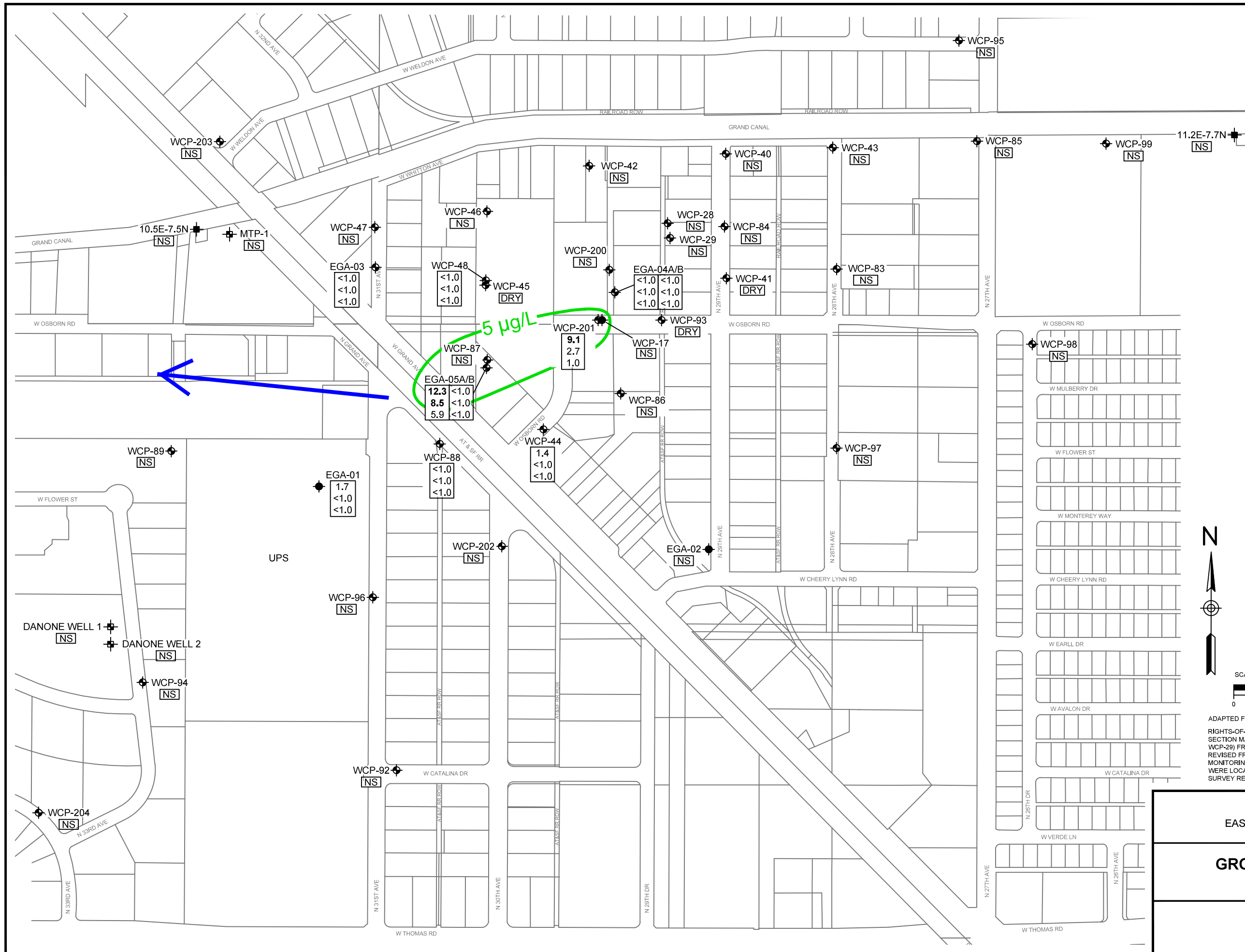


ADAPTED FROM G.W. CLEMENT & ASSOCIATES, INC DRAWING DATED 12-11-13.
 RIGHTS-OF-WAY AND PROPERTY LINES FROM THE CITY OF PHOENIX QUARTER SECTION MAPS CDROM, SEPT. 2002. WCP WELL LOCATIONS (EXCEPT WCP-28, WCP-29) FROM GRAHAM SURVEYING, SEPT. 2003. OTHER WELL LOCATIONS REVISED FROM GEOTRANS, INC., OCT. 2012. MONITORING WELLS WCP-48, WCP-86, WCP-87, WCP-88, WCP-100 AND WCP-200 WERE LOCATED PER SUPPLEMENTAL INFORMATION PROVIDED BY AZTEC SURVEY REPORT DATED MARCH 12, 2015

**WEST CENTRAL PHOENIX
 EAST GRAND AVENUE WQARF SITE**

**HISTORICAL AND CURRENT
 PLUME BOUNDARY**

**FIGURE
 3**



- LEGEND:
- ◆ MONITORING WELL, UNIVAR
 - ◆ MONITORING WELL, ADEQ
 - ◆ MONITORING WELL, OTHER
 - ◆ PRODUCTION WELL, SRP
 - ◆ PRODUCTION WELL, OTHER
- | WCP-96 | WELL I.D | AWQS |
|--------|---------------------|------|
| <1.0 | TRICHLOROETHENE | 5 |
| <1.0 | TETRACHLOROETHENE | 5 |
| <1.0 | 1,1- DICHLOROETHENE | 7 |
- CONCENTRATIONS SHOWN IN MICROGRAMS PER LITER (µg/L)
- ADEQ = ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
- AWQS = ARIZONA AQUIFER WATER QUALITY STANDARD
- DRY = SCHEDULED TO BE SAMPLED BUT GROUNDWATER ELEVATION WAS BELOW THE BOTTOM OF THE WELL SCREEN
- NS = NOT SCHEDULED TO BE SAMPLED
- SRP = SALT RIVER PROJECT
- BOLD** = RESULT GREATER THAN THE RESPECTIVE AWQS
- TRICHLOROETHENE (TCE) ISOCONCENTRATION CONTOUR - TCE HAS THE HIGHEST CONCENTRATION RELATIVE TO THE AWQS (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION



THIS FIGURE WAS MODIFIED BY ADEQ FROM FIGURE 3 OF THE EAST GRAND AVENUE 2023 ANNUAL REPORT PREPARED BY ARCADIS AND DATED NOVEMBER 10, 2023.



ADAPTED FROM G.W. CLEMENT & ASSOCIATES, INC DRAWING DATED 12-11-13. RIGHTS-OF-WAY AND PROPERTY LINES FROM THE CITY OF PHOENIX QUARTER SECTION MAPS CDROM, SEPT, 2002. WCP WELL LOCATIONS (EXCEPT WCP-28, WCP-29) FROM GRAHAM SURVEYING, SEPT, 2003. OTHER WELL LOCATIONS REVISED FROM GEOTRANS, INC., OCT, 2002. MONITORING WELLS WCP-46, WCP-88, WCP-87, WCP-88, WCP-100 AND WCP-200 WERE LOCATED PER SUPPLEMENTAL INFORMATION PROVIDED BY AZTEC SURVEY REPORT DATED MARCH 12, 2015

WEST CENTRAL PHOENIX
EAST GRAND AVENUE WQARF SITE

**GROUNDWATER QUALITY
SEPTEMBER 2023**

FIGURE
4

APPENDIX A

MANN-KENDALL ANALYSIS

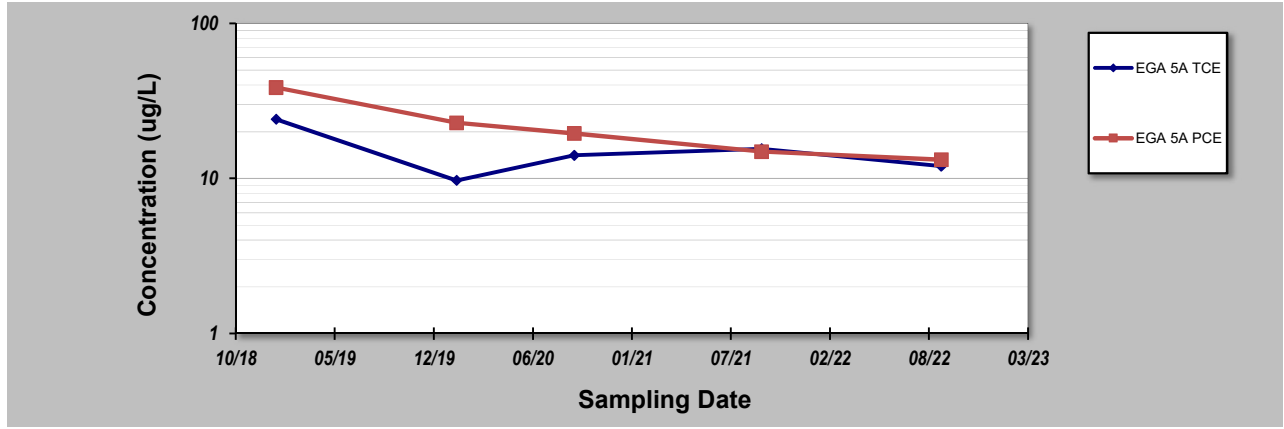
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

| | |
|-----------------------------------|----------------------------------|
| Evaluation Date: 28-Feb-23 | Job ID: 9999 |
| Facility Name: ADEQ | Constituent: TCE, PCE |
| Conducted By: DVS | Concentration Units: ug/L |

Sampling Point ID: **EGA 5A TCE** | **EGA 5A PCE** | | | | |

| Sampling Event | Sampling Date | TCE, PCE CONCENTRATION (ug/L) | | | | | |
|----------------|---------------|-------------------------------|------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 17-Jan-19 | 24 | 38.5 | | | | |
| 2 | 16-Jan-20 | 9.7 | 22.8 | | | | |
| 3 | 10-Sep-20 | 14.1 | 19.5 | | | | |
| 4 | 23-Sep-21 | 15.5 | 14.9 | | | | |
| 5 | 21-Sep-22 | 12 | 13.2 | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
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| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

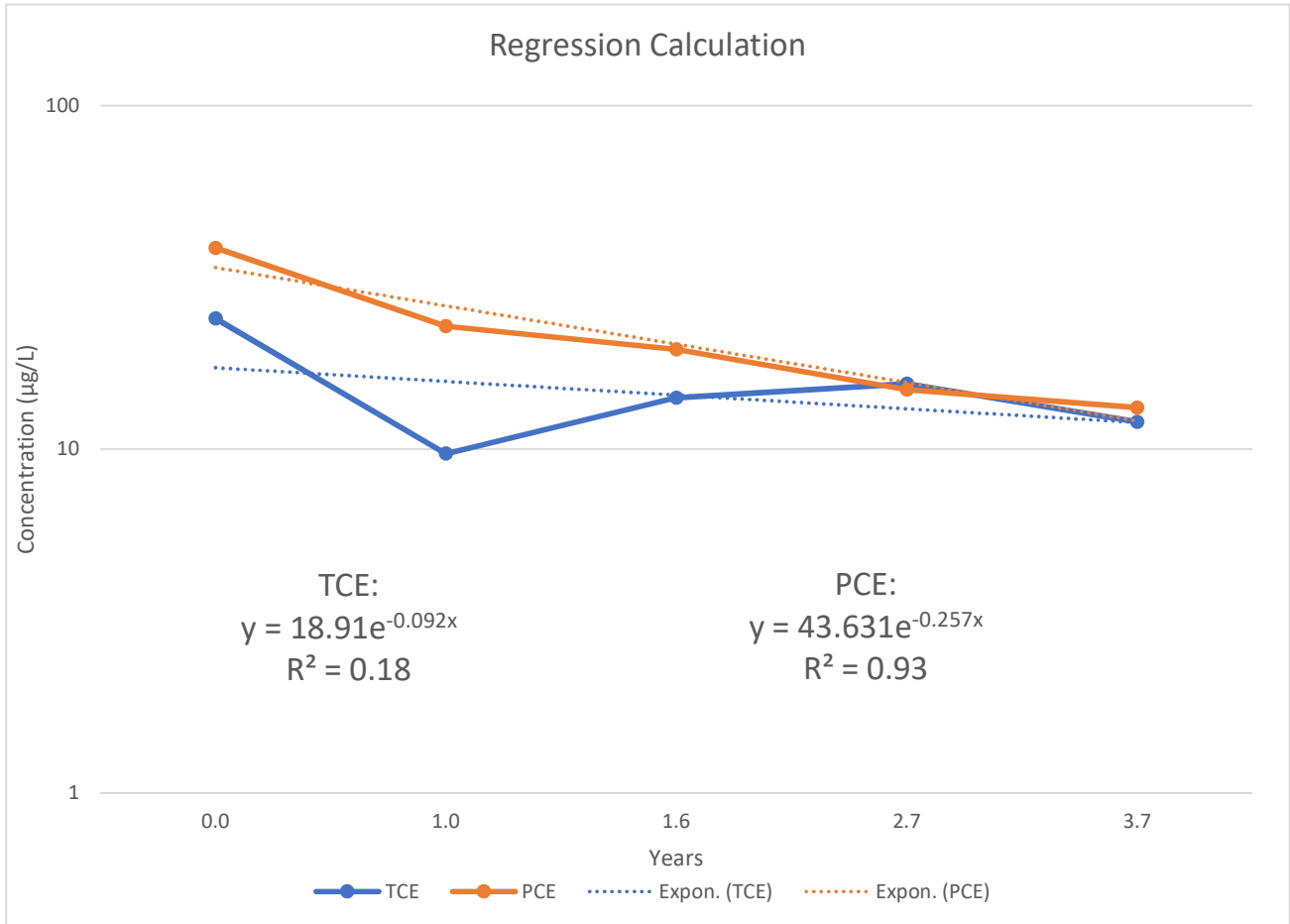
| | | | | | | |
|-----------------------------|--------|------------|--|--|--|--|
| Coefficient of Variation: | 0.36 | 0.46 | | | | |
| Mann-Kendall Statistic (S): | -2 | -10 | | | | |
| Confidence Factor: | 59.2% | 99.2% | | | | |
| Concentration Trend: | Stable | Decreasing | | | | |



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
 - Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.
GSI Environmental Inc., www.gsi-net.com

Appendix A: Mann-Kendall Analysis



| Sampling Date | Years | TCE (µg/L) | PCE (µg/L) |
|---------------|-------|------------|------------|
| 1/17/2019 | 0.0 | 24 | 38.5 |
| 1/16/2020 | 1.0 | 9.7 | 22.8 |
| 9/10/2020 | 1.6 | 14.1 | 19.5 |
| 9/23/2021 | 2.7 | 15.5 | 14.9 |
| 9/21/2022 | 3.7 | 12 | 13.2 |

| Contaminant | Rate k | Half-life $t_{1/2}$ years |
|-------------|-----------|------------------------------|
| PCE | -0.257 | 2.696498054 |
| TCE | -0.092 | 7.532608696 |

Note:

µg/L: micrograms per liter

PCE: Tetrachloroethene

TCE: Trichloroethene

Data Source: Arcadis, 2023. 2023 Annual Groundwater Monitoring Report, East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. November 10.

APPENDIX B

RESPONSIVENESS SUMMARY

PROPOSED REMEDIAL ACTION PLAN COMMENTS

Written Comments from Karis Nelson with SRP

Karis Nelson wrote:

Thank you for the opportunity to review the East Grand Avenue PRAP. Based upon our review and the information provided at the WCP CAB meeting, we have no comments on the PRAP.

ADEQ Response:

Thank you.

Written Comments from Julie Riemenschneider with City of Phoenix

General Comment #1

Julie Riemenschneider wrote:

The East Grand Avenue site is 1 of 4 remaining sites included in the larger West Central Phoenix WQARF area. The City has shut off 6 municipal wells (COP 70, COP 71, COP 151, COP 152, COP 68 and COP 77) in the WCP WQARF area due to the discovery of trichloroethene (TCE) and tetrachloroethene (PCE) in the well water, as noted in your PRAP in section 3.1. The City submitted letters in August 2000, March 2005 and October 2012, to ADEQ concerning the loss of these wells due to the known groundwater contamination. The City and ADEQ have had numerous meetings through the years where the City has expressed both concern and need for this groundwater to be remediated so that these wells can be put back in service. With continued drought conditions, the City anticipates the likely need to use some or all the currently inactive City wells in this area. The PRAP and Record of Decision (ROD) should address potential well head treatment for all the City's wells within a ½ to 1 mile of the site and not just one well.

ADEQ Response:

The Proposed Remedial Action Plan (PRAP) and Record of Decision (ROD) mention that the City of Phoenix has indicated that there may be potential future use of groundwater for drinking water in the area. However, no active City of Phoenix wells are within a one-mile radius of the West Central Phoenix East Grand Avenue WQARF Site (Arcadis, 2020). It should be noted the nearest City of Phoenix production well (inactive Well #77) is located approximately one mile north and cross-gradient of the site. Therefore, these wells are not included in the PRAP or ROD.

Specific Comment #1

Julie Riemenschneider wrote:

Section 3.6.2 Groundwater, ADEQ points out the remedial objectives (ROs) for mobile home trailer park (MTP) drinking water well, Danone Waters wells and SRP wells and also references the potential for future use of groundwater by the City of Phoenix. As previously discussed, the City has 6 wells in the West Central Phoenix WQARF area that were shut off due to the WQARF contamination. Although the City is not currently pumping any municipal wells in this area, this water resource is part of our future water needs. On July 17, 2015, the City requested in writing that another RO be added "To protect future water supply should the COP need water that has been lost due to contamination" from this WQARF site. The City agrees with ADEQ that this groundwater should be restored to municipal regulatory standards for future use for all water providers.

ADEQ Response:

The PRAP and ROD mention that the City of Phoenix has indicated that there may be potential future use of groundwater for drinking water in the area. The deep aquifers (Middle Alluvial Unit and Lower Alluvial Unit) have not been affected by COCs from the West Central Phoenix – East Grand Avenue Site (Arcadis, 2020). A risk assessment was performed to determine the risk to any future groundwater use in the area. It was determined that future use would not be adversely affected by the observed conditions and will not pose a future risk to human health (Arcadis, 2020). As such, the addition of the requested RO is not required.

Specific Comment #2

Julie Riemenschneider wrote:

Section 5.1.2 Wellhead Treatment Contingencies: The City notes that none of the City wells are listed in this section. At a minimum City wells 70, 71 and 151, 152 should be listed in this section. As discussed in the ADEQ report titled *Final Remedial Investigation Report for West Central Phoenix East Grand Avenue dated June 2006/* section 1.1 and Figure 1-1 indicates how City wells 70, 71 and 151, 152 were shut down due to TCE being detected in them in 1982, and by 1987 the West Central Phoenix WQARF sites were formed.

ADEQ Response:

City of Phoenix wells 70, 71, 151 and 152 are not within a one-mile radius of the West Central Phoenix – East Grand Avenue Site (Arcadis, 2020). Therefore, these wells do not require wellhead treatment contingencies as part of the West Central Phoenix – East Grand Avenue ROD. The TCE detection in 1982 is associated with the former West Central Phoenix WQARF Site. In 1998, the West Central Phoenix WQARF Site was split into five separate and distinct WQARF Sites, one of which is now known as the West

Central Phoenix – East Grand Avenue Site. The remedial objectives and remedies outlined in this ROD are specific only to the West Central Phoenix – East Grand Avenue Site.

Specific Comment #3

Julie Riemenschneider wrote:

Section 6.4 Consistency with Water management Plans. This section indicates there are no active supply wells currently impacted by the plume. The City's wells are inactive *because* of the plume. As stated earlier, with continued drought conditions, the City anticipates the likely need to use some or all the currently inactive COP wells in this area.

ADEQ Response:

As previously mentioned, the TCE detected in the existing City of Phoenix wells in 1982 is associated with the former West Central Phoenix WQARF Site. In 1998, the West Central Phoenix WQARF Site was split into five separate and distinct WQARF Sites, one of which is now known as the West Central Phoenix – East Grand Avenue Site (Arcadis, 2020). The COP wells are not directly impacted by the plume that is currently defined as West Central Phoenix – East Grand Avenue. This ROD is specific only to the West Central Phoenix – East Grand Avenue Site.

Specific Comment #4

Julie Riemenschneider wrote:

Table A-2 must be amended to account for well head treatment of the City's wells. Currently there is only money allotted for SRP and MTP wells.

ADEQ Response:

As previously mentioned, no active City of Phoenix wells are within a one-mile radius of the West Central Phoenix – East Grand Avenue Site (Arcadis, 2020). Therefore, these wells do not require wellhead treatment contingencies as part of the West Central Phoenix – East Grand Avenue ROD. It should be noted the nearest City of Phoenix production well (inactive Well #77) is located approximately one mile north and cross-gradient of the site.

Written Comments from Mark Metcalf with Univar Solutions

Comment #1

Mark Metcalf wrote:

Section 1.0, page 1, first paragraph

The PRAP is based on information contained in the following documents:

- *Final Remedial Investigation Report, West Central Phoenix East Grand Avenue WQARF Site (Weston, 2006)*
- *Feasibility Study Report, East Grand Avenue Water Quality Assurance Revolving Fund Site, Phoenix, Arizona (ARCADIS, 2020)*

Univar Comment:

The Remedial Investigation (RI) Addendum is not included in this list; however, it is referenced at length throughout the remainder of the PRAP document. Univar Solutions provided comments on the RI Addendum in a letter dated August 28, 2018. ADEQ acknowledged receipt of the letter but did not respond or correct the RI Addendum based on Univar Solutions' comments. There are incorrect statements in the RI Addendum that have been carried into the PRAP or it was incorrectly referenced and therefore some of Univar Solutions' comments are carried forward to this letter (see comment 2, below).

ADEQ Response:

The Feasibility Study (Arcadis, 2020) prepared by Univar references the 2018 Final Remedial Investigation Report Addendum. The RI Addendum document is additionally referenced in PRAP section 3.0 Remedial Investigation Results. ADEQ will ensure the language used in the ROD is clear and accurate.

Comment #2

Mark Metcalf wrote:

Section 3.1, page 3, first paragraph

Groundwater contamination was discovered at the Site in 1982 when trichloroethene (TCE) was detected in nearby City of Phoenix water production wells. Subsequent investigations at the Site identified the former Univar facility as the source of contamination at the Site.

Univar Comment:

These statements are misleading and in error. First, the EGA is not linked to the TCE detected in nearby City of Phoenix production wells. No evidence indicates there is a nexus between the EGA contaminant plume and City of Phoenix wells. To the contrary, sampling evidence indicates that West Central Phoenix WQARF sites, such as the West Osborn Complex (GeoTrans 2004), not the EGA Site, are the source of contamination in the City of Phoenix water production (supply) wells noted above. The wording in the PRAP strongly implies the EGA Site and Univar Solutions was responsible for the TCE detected in the City of Phoenix water supply well. That is incorrect.

ADEQ Response:

The PRAP should have specified that Groundwater contamination was discovered in 1982 within the West Central Phoenix area when trichloroethene (TCE) was detected in nearby City of Phoenix water production wells. ADEQ will ensure the language used in the Record of Decision (ROD) is clear and accurate.

Univar Comment:

Further, the 2006 RI identified multiple potential sources and two confirmed sources of contaminants of concern (COCs) to the EGA Site: the former Univar Solutions facility and the former Mogul facility. The RI also recognized the presence of unassociated chlorinated volatile organic compounds (CVOCs) sources upgradient and side gradient from the former Univar Solutions facility, and several sources of volatile organic compounds (VOCs) (e.g., benzene). Thus, it has been documented that additional source areas were historically present at the EGA Site. These source areas are discussed in the ADEQ-approved RI, the Feasibility Study (FS), and below. More detailed information can be found in the Final RI Report (Weston 2006), the Additional Potential Sources letter (Univar Solutions 2012), the RI Addendum (ADEQ 2018), and Univar Solutions' comments on the RI Addendum (Univar Solutions 2018). The RI Addendum identified one additional, potential historical source area near EGA-02 (Sections 2.4.4 and 2.4.5; ADEQ 2018, Univar Solutions 2018) located cross-gradient from the former Univar Solutions facility. These locations are shown on the attached Figures A-1, A-2, and A-3 along with the maximum, historical extent of TCE, tetrachloroethene (PCE), and 1,1-dichloroethene (1,1-DCE) at the EGA Site, respectively. The collective maximum CVOC plume extent is shown in Figure A-4. While the Site conditions have changed over time, and continue to change, the figures reasonably portray the historical location of the CVOCs in groundwater that exceeded Arizona aquifer water quality standards (AWQS). The figures were developed using multiple lines of evidence and consider: 1) the historical distributions of COCs in groundwater, 2) historical flow directions, and 3) historical soil-gas or soil results (i.e., sources of COCs to groundwater). While the actual plume may not perfectly match the isocontour at a given point in time, it illustrates the known, maximum impact to groundwater. Based on the information below, it is probable that the impacts from some of the sources were greater (e.g., EGA-02 area). As described below, historical investigations were spaced over a large period (1994 to 2018) and some investigations were inadequate. Thus, a single

snapshot of the plume in time is not possible. The extent of other COCs (like benzene) are limited in extent and are also discussed below. The COCs in each of these source areas is discussed in more detail in the RI, in Section 2.5.4 of the FS, and are summarized below:

1. Univar Comment on former Mogul facility

- a. The former Mogul facility is located approximately 1,700 feet south and crossgradient from the former Univar Solutions facility as shown on Figure A-1.
- b. A 1993 report from ADEQ concluded, “a release of metals and VOCs has occurred to the surface and due to the dry wells, potentially deep into the unsaturated zone from this site.” (ADEQ 1993)
- c. Several CVOCs were detected in soils and in groundwater beneath and adjacent to the former Mogul facility.
- d. 1,2-DCA, benzene, and TCE were detected in former Mogul facility groundwater monitoring wells greater than the AWQS (ADEQ 1993, Weston 2006). The results are summarized in Table A-1, Figure A-1 through A-3, and in the RI.
- e. “The contaminants in this plume appear to be from an additional source located at or near the Mogul facility and are not attributable to releases from the VW&R facility. Additionally, concentrations of VOCs detected in WCP-92, installed southeast of the Mogul facility, can be attributed to the contaminant source at Mogul.” (Weston 2006)
- f. Therefore, historical data and reports irrefutably demonstrate the former Mogul facility was a source of CVOCs and other contaminants to the EGA Site.

ADEQ Response:

The Feasibility Study (Arcadis, 2020) prepared by Univar indicates that the former Mogul facility is not considered a continuing source of Contaminants of Concern (COCs). While the former Mogul site did historically have COCs above the AWQS, these detections were primarily restricted to wells MGL-1, MGL-2 and MGL-3 on their property. As stated in the RI report, contaminants detected at the former Mogul site are not attributed to releases from the former Univar facility. Maximum groundwater concentrations for COCs in the Mogul wells MGL-1, MGL-2 and MGL-3 collected from May 2001 – November 2001 are as follows (Weston, 2006):

- PCE: 0.7 µg/L
- TCE: 9 µg/L
- 1,1-DCE: 1 µg/L

Downgradient well WCP-92 had one detection of TCE greater than the AWQS. This detection occurred in a Hydropunch® sample in June 2001 prior to well installation. The difference in concentration may have been attributed to the different sampling techniques, as outlined in the RI report section 7.5.1 (Weston, 2006) and the concentration continued to decrease to below AWQS as evident in the March 2003 sampling (Arcadis, 2020). This further verifies the Mogul facility site is not considered a continuing source. The Feasibility Study (Arcadis, 2020) prepared by Univar stated that the former Mogul facility is “*not considered a significant ongoing source of COCs to groundwater. Therefore, a source control remedial strategy is not appropriate to safeguard or achieve the Remedial Objectives (ROs) at this time.*”

2. Univar Comment on former Granberry Supply facility

- a. The former Granberry Supply facility was a generator of characteristic hazardous waste, including TCE and PCE (Univar Solutions 2012). In addition, this facility had a leaking underground storage tank (facility ID 0.005238) that was subsequently closed in 1998 (Weston 2006).
- b. The former Granberry Supply facility was adjacent to and south of the former Univar Solutions facility.
- c. The 2016 soil gas concentrations near the former Granberry Supply facility were generally below reporting limits (Figure A-4 and Table A-2 and A-3), indicating there is not a significant, residual/continuing source of VOCs in shallow soils at/near the former facility.
- d. According to the FS, “the former Granberry Supply facility likely is not a continuing source of COCs to groundwater.” This, along with the information noted above, indicate that while the Granberry Supply facility is not an ongoing source, it may have been a historical source of VOCs to soils and/or groundwater.
- e. No CVOC source area investigations were conducted at this facility (i.e., no site assessments, soil samples, soil-gas samples, etc. were collected). Thus, it is unclear if the soils pose a threat to potential receptors or if the facility historically contributed to the groundwater.

ADEQ Response:

Data and regulatory records have been re-evaluated and ADEQ has determined that the former Granberry Supply facility is a contributor to the EGA plume. ADEQ used a third party allocator to identify their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

Contamination associated with the leaking underground storage tank (LUST) at the former Granberry Supply facility is not regulated by the WQARF program under Arizona Revised Statutes (ARS) 49-283.02. This type of contamination is regulated by the ADEQ LUST program. The work at the LUST site was completed in 1998 under a risk-based corrective action (RBCA) tier 1 closure (Weston, 2006).

3. Univar Comment on WCP-202 area

- a. Concentrations of benzene in groundwater above the 5 ug/L AWQS were detected in monitoring wells WCP-44 and WCP-202. The maximum benzene concentrations were detected in WCP-202 at 6,300 ug/L, more than 1,000 times greater than the AWQS. Due to the elevated benzene concentrations, CVOC reporting limits were generally elevated in this well.
- b. According to Section 7.2 and 7.6.2.2 of the RI Report (Weston 2006):
 - i. “Although WCP-44 and WCP-202 are located near documented [Leaking Underground Storage Tank] LUST sites (Former Arco, Former Fedmart, Former Granberry, Former Southwest Roofing), the high concentrations of benzene detected at these locations, up to 6,300 µg/L in WCP-202, appear to be the result of an unrelated benzene release.”

- ii. “Analytical results were also evaluated for WCP-202, located southwest of ENT-MW-2 and WCP-44. Based on a review of the chromatograms and spectra for this well, there were no hydrocarbon peaks present and the high benzene detections were attributed to a benzene release.”
- c. The high concentrations of benzene demonstrate there was a VOC source present near or upgradient from monitoring well WCP-202. The benzene was not attributed to the Former Univar Solutions facility and no reported attempt was made to investigate the source of VOCs to WCP-202 or the distribution of benzene at the EGA Site.
- d. No CVOC source area investigations were conducted near this area (i.e., no site assessments, soil samples, soil-gas samples, etc. were collected). Thus, it is unclear if the soils pose a threat to potential receptors or groundwater.

ADEQ Response:

Data and regulatory records have been re-evaluated and ADEQ has determined that the former FedMart facility is a contributor to the EGA plume. ADEQ used a third party allocator to identify their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

Regarding the benzene release, the additional sites mentioned in the comment, including FedMart, were evaluated because of the high benzene concentration detected in WCP-202. However, findings were inconclusive and the RI was finalized stating “*The source of the benzene release is unknown at this time.*” The subsequent FS had no further mention of benzene or WCP-202. Univar has not provided sufficient new information or data to ADEQ, in accordance with the Arizona Revised Statutes (ARS) 49-287.04, that warrants additional investigation by ADEQ of these facilities and areas. WCP-202 has had no benzene detections since at least 2008 and downgradient wells have been below AWQS or below laboratory reporting limits (Arcadis, 2023).

4. Univar Comment on EGA-02/29th Avenue area

- a. Elevated VOC concentrations were detected in shallow soil-gas samples collected south (cross-gradient) and east (upgradient) from the former Univar Solutions facility in 2016 and 2017 (ADEQ 2017, ADEQ 2018, Arcadis 2018). In addition, CVOC soil-gas concentration bullseye(s) was detected near industrial buildings located south of the former Univar Solutions’ facility (Figure A-4).
- b. According to the RI Addendum (ADEQ 2018), PCE, TCE, and chloroform soil-gas concentrations were detected at concentrations greater than the U.S. Environmental Protection Agency (USEPA) non-residential soil vapor screening levels (SVSLs) in 2016 and 2017. The SVSLs were based on the USEPA Regional Screening Levels (RSLs) and an attenuation factor of 0.03 (ADEQ 2018). The maximum soil-gas concentrations were: 380 micrograms per cubic meter (ug/m³) of chloroform; 45,000 ug/m³ of TCE; 1,600 ug/m³ of PCE. The respective non-residential SVSLs are 18 ug/m³, 100 ug/m³, 1,567 ug/ m³. Thus, these compounds exceed the non-residential SVSL by 22, 450, and 1.02 times, respectively. The TCE non-residential SVSL

- reported in the RI Addendum was based on outdated TCE guidance and should have been 100 ug/m³ given the current industrial air screening level 3 ug/m³.
- c. Based on Univar Solutions' review of the RI Addendum, bromodichloromethane also exceeded the non-residential SVSLs (Table A-2 and Table A-3). Further, benzene and ethylbenzene exceeded the residential SVSL (Table A-2). Thus, these COCs also could pose a threat to human health now or in the future.
 - d. While a full list of VOCs was evaluated in the 2016 soil gas study, only a short list of VOCs was used in the 2017 soil gas study. Thus, many of the VOCs (like benzene) that were detected in the 2016 soil gas samples were not analyzed in the subsequent 2017 soil gas samples (WM-01 through WM-64). Further other VOCs like benzene were not evaluated in the report despite exceeding the residential and/or non-residential SVSL and despite being detected in groundwater at the EGA Site. The 62 samples (WM-01 through WM-64) collected in 2017 were only analyzed for six VOCs, as reported in Table A-3. Thus, other VOCs could have exceeded screening criteria where these samples were collected. The RI Addendum should have retained all VOCs greater than screening criteria at a minimum.
 - e. The RI Addendum did not compare the soil-gas concentrations to residential standards and thus does not consider future uses of the properties. The RI Addendum also did not assess other VOCs like benzene. As stated above, there were significant historical concentrations of benzene in groundwater at the EGA Site at monitoring well WCP-202. Thus, analysis and evaluation of benzene data was needed for all soil gas samples in this area.
 - f. The 2016/2017 soil gas study was conducted predominantly within the City of Phoenix right-of-way along the roadways. Thus, the soil-gas samples were indirectly measuring soil-gas concentrations at adjacent properties and as such would generally underestimate soil-gas concentrations at these properties and thus underestimate soil concentrations. Further, they had not adequately pinpointed the source area(s) the study was designed to evaluate. Only a handful of the soil gas samples were collected from the parcels where the primary VOC releases would have occurred (e.g., dry wells, tanks, spills, etc.).
 - g. The soil gas investigation reveals there were releases and sources of VOCs and CVOCs at or near the Maricopa County Parcel numbers: 108-05-014, 108-05-015, 108-04-016A, 108-04-018, and 108-04-019. The highest concentrations were observed on parcel 108-05-014 (Figure A-4).
 - h. According to ADEQ's Site Investigation Manual (2014), soil gas surveys (particularly passive sampling) are intended for identification of sources areas to guide further investigation or remediation, not for final delineation or compliance determinations. No site investigations (SI's) or RIs were conducted at these parcels to identify potential sources of the VOCs and no soil borings, test pits, soil samples, or groundwater samples were collected from these parcels to evaluate potential sources of the VOCs or delineate the observed VOCs. That is particularly concerning given that VOC concentrations were observed greater than the nonresidential SVSLs in soil gas and the historical detections of VOCs in groundwater greater than the AWQS downgradient from these areas. Thus, it is unclear if the soils pose a threat to potential receptors or groundwater.
 - i. Given the location of the soil gas samples (Figure 4), the date of the investigation relative to the likely release dates, and the fact that most of the parcels were not evaluated, it is very probable that soil gas concentrations and soil concentrations within the source areas were significantly greater historically than they were in 2016 and 2017 (i.e., 20 to 50 years after the releases). Many of the parcels noted above have been used for commercial/industrial purposes dating back to the 1960s. CVOCs are volatile and thus concentrations naturally

- volatilize, diffuse, and spread reducing concentrations over time. Thus, concentrations today can easily be an order of magnitude less (or more) than historical concentrations. In other words, this site posed significantly more risk to receptors and groundwater in the past than today.
- j. One deep soil boring and groundwater well (EGA-02) was installed east of one of the probable source area(s) on 29th Avenue in 2017. As indicated earlier, the Attachment A Page 6 of 14 investigation indirectly evaluated potential sources. Based on the soil gas data, the source of the CVOCs to EGA-02 likely came from the central portions of parcel 108-05-014 or 180-04-019. Monitoring well EGA-02 was installed approximately 50 to 300 feet east and upgradient from these probable source areas. CVOCs were detected in all EGA-2 soil-gas samples collected from the first sample at 40 feet bgs all the way to groundwater (approximately 150 feet bgs), indicating that CVOC contamination from a nearby source(s) had historically migrated through the vadose zone to groundwater. The maximum soil gas concentrations (1,1-DCA = 2,207 ug/m³; 1,1-DCE = 51,610 ug/m³; and TCE = 70,350 ug/m³) were detected at approximately 100 feet below the ground surface (bgs) at concentrations above the respective USEPA industrial RSLs and SVSLs.
 - k. Important soil properties like fraction of organic carbon, bulk density, soil moisture, and air-filled porosity were not analyzed during the 2016 and 2017 investigations (ADEQ 2014, 2018). Further, passive sampling techniques are less quantitative measures of actual soil vapor concentrations and ADEQ's Soil Vapor Sampling Guidance (2008) states "This guidance describes procedures for collection of active soil vapor samples and does not address procedures for collection of passive soil vapor samples." As such, an accurate conversion of the soil gas concentrations to soil concentrations could not be conducted. These variables significantly affect the conversion of soil gas concentrations to soil concentrations. A sensitivity analysis should be conducted to assess the potential error introduced in the conversion from soil gas to soil concentrations.
 - l. CVOC concentrations in monitoring well EGA-02 were less than the AWQS. However, as noted above, this well is located significantly upgradient from the potential and probable release and likely installed decades after the release(s) given the historical and more recent property uses. Thus, they cannot be used to reliably conclude if historical releases resulted in impacts to groundwater.
 - m. Based on the RI Addendum and communications with the ADEQ (personal comm. 2018), ADEQ did not attempt to identify the source of the CVOCs described above nor did they physically investigate the facilities where elevated soil-gas concentrations were present.
 - n. Based on boring/monitoring well EGA-02, the RI Addendum concluded there were no sources of CVOCs in the area. However, that conclusion was based on insufficient and flawed characterization as discussed above. Again, monitoring well EGA-02 was installed 50 to 300 feet upgradient from the probable release area(s). For comparison monitoring wells WCP-28 and WCP-29 were located approximately 100 to 200 feet upgradient from the former Univar Solutions release area and were 2 to 3 orders of magnitude less than the wells within the former Univar Solutions source area. If the TCE concentrations from EGA-02 are increased by 2-3 orders of magnitude, they would exceed AQWS, further supporting the probable existence of a downgradient source. Thus, the RI Addendum investigation and conclusions were flawed, particularly 20, 30, 40, 50 years after a release. Instead, the RI Addendum investigation should have first attempted to identify the release location(s) and sources through additional soil gas sampling and soil sampling. Following, identification of the source area, one or more monitoring wells should have been installed below and slightly

- downgradient from the source area not upgradient from it. Further, the RI Addendum needed to consider historical impacts to groundwater. The rationale followed by ADEQ to investigate the source of VOCs near EGA-02 clearly did not follow industry best practices and did appear not even meet ADEQ's best practices or guidance. For example, no conceptual site model was developed, soil borings, or wells were not installed in the appropriate location, no investigation rationale was provided, and all documentation was sub-standard.
- o. Historical CVOC concentrations in the groundwater downgradient from EGA-02 at the Former Mogul facility wells were historically elevated above the AWQS in 2001 (Weston 2006). Further, CVOCs were detected in downgradient monitoring wells WCP-92 and WCP-202 at or near the AWQS. These data indicate upgradient sources of VOCs were present.
 - p. Given the law of conservation of mass and the fact that VOCs are volatile and soluble at moderate concentrations, the 2016 and 2017 soil gas and groundwater concentrations would be significantly less than historical concentrations. Thus, it is probable historical concentration were significantly greater.
 - q. Based on these observations, ADEQ's investigation and assessments did not appear to substantively follow ADEQ's Site Investigation Manual (2014). ADEQ should state whether they followed ADEQ's guidance and where they did not follow this guidance and why.
 - r. The VOCs near EGA-02 were not mentioned in the PRAP or in the identification of the potential responsible parties (PRPs). Based on this collective information, the PRAP mistakenly concludes no additional sources of VOCs at the EGA Site were present in this area. Further, the PRAP wrongly concludes there is no soilgas threat based on the data reported in the RI Addendum. Arcadis and Univar Solutions discussed these technical concerns with the ADEQ on February 22, 2019 and commented on the ADEQ's RI Addendum in a letter dated September 12, 2019. However, ADEQ did not respond to the letter.

ADEQ Response:

The Feasibility Study (Arcadis, 2020) prepared by Univar acknowledges that there were detections of soil vapor COCs in the vadose zone around the EGA-02 well and 29th Avenue area. ADEQ follows Arizona regulatory standards, not regulatory standards administered by the United States Environmental Protection Agency (EPA). Thus, ADEQ regulates to the State of Arizona Soil Remediation Levels (SRLs) and Groundwater Protection Levels (GPLs), not the EPA Regional Screening Levels (RSLs) or Soil Vapor Screening Levels (SVSLs). When the soil gas concentrations are converted to soil concentrations per A.C.C. R18-7-203(C), the detections are below calculated non-residential SRLs and GPLs. As stated in the RI addendum, *"The soil concentrations calculated from the soil gas results are all below the minimum GPLs for groundwater. Thus, the results of the investigation did not identify any additional sources or properties which could be contributing to the VOC groundwater contamination at the Site"* (ADEQ, 2018). While the RI Addendum (ADEQ, 2018) did not include a comparison between the soil gas concentrations and residential standards, the concentrations are below residential SRL standards.

The remedial objectives target specific chlorinated volatile organic compounds PCE, TCE and 1,1-DCE, as the Site COCs. The purpose of the 2017 soil gas investigation was to identify additional sources that could be contributing to the COC groundwater contamination at the site. The passive monitoring of the shallow gas boreholes in April and June 2017 was done in part to identify the best location, closest to the area

with the highest passive detection of COCs, to install monitor well EGA-02. Well EGA-02 was installed close to boring WM-50, which had a higher concentration of COCs detected than borings closer to the center of parcels 180-05-014 and 180-04-019. Soil gas samples were collected from EGA-02 and analyzed by active sampling method TO-15 in November 2017, and groundwater was collected from EGA-02 from November 2017 to January 2018. As stated above, all soil gas samples were below calculated non-residential and residential SRLs and GPLs and all groundwater samples were below AWQS (ADEQ, 2018). Subsequent groundwater samples collected from well EGA-02 have also been below the AWQS (Arcadis, 2023). As stated previously, Univar has not provided sufficient new information or data to ADEQ, in accordance with the Arizona Revised Statutes (ARS) 49-287.04, that warrants additional investigation by ADEQ of these facilities and areas.

Further, Univar, per the ADEQ approved Monitoring Well Installation and Groundwater Monitoring Work Plan prepared by Univar dated August 9, 2019, was provided the opportunity to collect the data necessary to complete the Feasibility Study Report. The purpose of the ADEQ approved 2019 work plan, as stated in Section 2, was *“to confirm and assess the current COC concentrations prior to completion of the FS.”* Thus, Univar was provided the opportunity to collect the data deemed necessary to validate their claims of additional sources of contamination at the Site. It is unclear why Univar did not propose and conduct additional investigation at the Site based on their concerns of additional contamination at the Site.

Regarding the conclusion that there is no soil gas threat, the PRAP was based on the data and conclusions presented in the Feasibility Study (Arcadis, 2020) that was prepared by Univar. The Feasibility Study concluded *“Based on the results [summarized in the FS], soils are not a media of concern for the EGA Site.”* This conclusion, made by Arcadis on behalf of Univar, contradicts Univar’s comment regarding the Risk Evaluation Summary. ADEQ approved the Feasibility Study, thus agreeing with the Univar / Arcadis conclusion presented in the Feasibility Study that states the EGA-02/29th Avenue area is *“not considered a significant ongoing source of COCs to groundwater. Therefore, a source control remedial strategy is not appropriate to safeguard or achieve the Remedial Objectives (ROs) at this time.”*

Although ADEQ does not consider any of the parties in the vicinity of the EGA-02 well and 29th Avenue area as potential responsible parties at the Site, ADEQ used a third-party allocator to identify the responsible parties and their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

5. Univar Comment on Upgradient source(s)

- a. Elevated VOC concentrations were detected in shallow soil-gas samples collected east and upgradient from the former Univar Solutions facility as shown on attached Figures A-1 and A-4 and within the RI Addendum.
- b. According to the ADEQ-approved RI and the FS, CVOCs were detected at concentrations greater than the AWQS in several monitoring wells upgradient of the former Univar Solutions facility: WCP-41, WCP-83, WCP-85. Monitoring well WCP-85 is located nearly 1,500 feet upgradient from the former Univar Solutions facility near the Grand Canal. The recharge from the Grand Canal historically resulted in a large hydraulic mound which forced groundwater

- away from the canal to the south and southwest. This created a hydraulic barrier that would have prevented migration of COCs from the former Univar Solutions upgradient to the east/northeast as demonstrated by historical groundwater elevation maps. The historical groundwater flow directions are described in the RI and the FS (Weston 2006, Arcadis 2018). The long-term flow directions are validated by the plume orientation pointing to the southwest. Further, the CVOC concentrations decreased from upgradient monitoring well WCP-83 to the more downgradient monitoring well WCP-41 and both of these wells have historically been upgradient from the former Univar Solutions facility.
- c. ADEQ made no reported attempt to investigate the potential sources of these CVOCs other than the shallow soil gas investigation conducted in 2016 in the City of Phoenix right-of-way, 10 years after the upgradient source was reported in the RI. As noted earlier, studies conducted in the right-of-way, distal from the releases and several decades after the release was an ineffective approach to evaluate sources of VOCs to groundwater and leads to inaccurate and unreliable conclusions.
 - d. The location of the wells upgradient from the former Univar Solutions facility, the hydraulic barrier, and the CVOC concentrations trends from upgradient to downgradient, affirm that CVOCs located in the upgradient area were not associated with and did not migrate from the former Univar Solutions facility. This demonstrates there was another source of CVOCs to groundwater at the EGA Site upgradient (east, northeast) of the former Univar Solutions facility. This is also corroborated by the soil-gas data which indicate a VOC source is/was present east and upgradient of the former Univar Solutions facility (see Figure A-4). This additional source of VOCs was not mentioned in the PRAP or in the identification of the PRPs. Based on this collective information, the PRAP cannot reasonably conclude additional sources of VOCs in the area upgradient from the former Univar Solutions facility were not present or that Univar Solutions is the only PRP.

ADEQ Response:

The Feasibility Study (Arcadis, 2020) prepared by Univar acknowledges that the Weston 2006 RI concluded that there were detections of TCE above the AWQS upgradient of the former Univar Solutions facility. However, the maximum TCE concentration in the upgradient area was recorded in 2007 at 20 µg/L in well WCP-83, and the COC levels have been below the AWQS in all upgradient wells since 2013 (Arcadis, 2020). By comparison, the maximum TCE concentration at the former Univar Solutions facility was in 1997 at 2,700 µg/L. (Weston, 2006). Upgradient wells WCP-41 and WCP-83 were also sampled chronologically closer to the mentioned 1997 maximum concentration date, with TCE detections at 10 µg/L in 1999 and 13 µg/L in 2001, respectively (Weston, 2006). This shows that despite the 10-year period between the maximum concentration dates, the historical impact of the upgradient area has not been a major contributing source to the current plume. Further, as indicated in the FS, the TCE concentration in well WCP-41 has been decreasing since 2001 and fell below AWQS in 2003. Well WCP-83 has been decreasing since 2008 and has been below AWQS since 2013 (Arcadis, 2020).

The third upgradient well mentioned, WCP-85, had a maximum TCE concentration of 8 µg/L in February 2001 and had dropped to below AWQS by August 2001. No COCs were detected in the well in January 2002 (Weston, 2006). This further shows that the historical impact of the upgradient area has not been a contributing source to the current plume.

The 2016 soil gas survey found no detections of TCE and only two soil gas samples from the upgradient area collected by method TO-15 had detections for PCE. These detections were 0.0161 mg/m³ and 0.0138 mg/m³ which are well below the calculated SRLs and GPLs. Therefore, the upgradient site is *“not considered a significant ongoing source of COCs to groundwater. Therefore, a source control remedial strategy is not appropriate to safeguard or achieve the Remedial Objectives (ROs) at this time.”* as documented in the Feasibility Study prepared by Univar.

Although ADEQ does not consider any of the parties around the upgradient area as potential responsible parties at the Site, ADEQ used a third-party allocator to identify the responsible parties and their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

Univar Comment:

Based on these facts and data, the PRAP incorrectly concluded Univar Solutions was the sole source of COCs at the EGA Site. Therefore, the statement *“Subsequent investigations at the Site identified the former Univar facility as the source of contamination at the Site.”* is false. For these reasons, the PRAP and the Final 287.04 package identifying PRPs is incorrect and should be corrected. The data clearly establishes that there is a complex mixture and comingling of VOC sources at the EGA Site and some of the responsible parties are known, such as the Former Mogul facility and others are uncertain or pending. Additional investigations of these other unknown sources are warranted as they may pose a threat to human health and the environment and may or likely are a PRP at the EGA Site.

ADEQ Response:

Data and regulatory records have been re-evaluated and ADEQ has determined that the former Univar Solutions facility is the main source of groundwater contamination; however, the former Granberry Supply facility and the former FedMart facility were also contributors to the EGA plume. As previously mentioned, ADEQ used a third party allocator to identify their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

In summary to the responses provided previously about the other locations, ADEQ currently does not consider the former Mogul facility, the WCP-202 area, the EGA-02/29th Avenue area or the upgradient area as potential responsible parties at the Site based on the following:

- A. ADEQ has conducted numerous investigations throughout the Site as documented by the Remedial Investigation Report (Weston, 2006) and the Remedial Investigation Addendum (ADEQ, 2018). The data show none of these facilities or areas significantly contributed to the groundwater contamination associated with the Univar Facility.

- B. The Feasibility Study (Arcadis, 2020) prepared by Univar stated these facilities and areas are “*not considered a continuing source of COCs to groundwater at the EGA Site.*”
- C. Univar has not provided sufficient new information or data to ADEQ, in accordance with the Arizona Revised Statutes (ARS) 49-287.04, that warrants additional investigation by ADEQ of these facilities and areas.
- D. Univar, per the ADEQ approved Monitoring Well Installation and Groundwater Monitoring Work Plan prepared by Univar and dated August 9, 2019, was provided the opportunity to collect the data necessary to complete Feasibility Study Report. The purpose of the work plan, as stated in Section 2 of the ADEQ approved work plan, was “*to confirm and assess the current COC concentrations prior to completion of the FS.*” Thus, Univar was provided the opportunity to collect the data deemed necessary to validate their claims of additional sources of contamination at the Site. It is not clear why Univar did not propose and conduct additional investigations at the Site based on their concerns of additional contamination at the Site.

Comment #3

Mark Metcalf wrote:

Section 3.2, Source of Contamination, page 3

Data collected during the remedial investigation and follow-up investigations indicated that contaminant releases occurred in soil and groundwater at the Site. The source of this contamination is the area near and under the former building foundation at the former Univar facility. No other sources of contamination have been identified at the Site (ADEQ, 2018).

Univar Comment:

It is false to say “*The source of this contamination is the area near and under the former building foundation at the former Univar facility. No other sources of contamination have been identified at the Site (ADEQ, 2018).*” While the former Univar Solutions facility was one of the sources of VOCs to the EGA Site, it was not the only source. As indicated in comment 2, the RI and the RI Addendum both reveal that additional sources of VOCs and other COCs are and/or were present at the EGA Site. While ADEQ has not yet identified the origin of many of those sources, it does not follow that the former Univar Solutions was responsible for all of the releases and contamination. Univar Solutions has informed ADEQ on several occasions that additional sources of contaminants were present at the Site, and provided information, data, and support for the same (Univar Solutions 2012 and Arcadis 2018). Further, ADEQ and Weston stated additional sources were present (see above). Thus, these statements (and similar statements) should be revised to state that other sources are and were present at the EGA Site. Further, it is incumbent on ADEQ to identify these other sources, if possible, and if they cannot be identified, they should be classified orphan sites.

ADEQ Response:

As previously mentioned in response to Comment #2, data and regulatory records have been re-evaluated and ADEQ has determined that the former Univar Solutions facility is the main source of groundwater contamination; however, the former Granberry Supply facility and the former FedMart facility were also contributors to the EGA plume. ADEQ used a third party allocator to identify their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

Comment #4

Mark Metcalf wrote:

Section 3.3, Contaminants of Concern, page 4

The Contaminants of Concern (COCs) at the Site include compounds that have been detected above regulatory standards in the soil and groundwater as presented below:

- *Soil - The soil at the Site does not contain any compounds with concentrations that exceed regulatory standards.*
- *Groundwater - The COCs in the groundwater at the Site include tetrachloroethene (PCE), TCE, and 1,1-dichloroethene (1,1-DCE). These contaminants are currently present in the groundwater at the Site at concentrations that exceed regulatory standards.*
- *Other Chemicals - Other chemicals that have periodically been detected at concentrations above applicable regulatory standards at the Site include 1,1,1-trichloroethane and Freon 11. None of these compounds are considered COCs at the Site.*

Univar Comment:

The PRAP does not address the VOCs that exceeded USEPA soil-gas screening levels in several areas that may pose an unacceptable risk to current or future human health as indicated above and in the RI Addendum. Table A-2, A-3, and A-4 summarize the soil-gas data and highlights where exceedances of criteria were observed.

Benzene was not included as a COC (see Comment 1) and the rationale for excluding 1,1,1-trichloroethane and freon 11 as COCs were not provided. As stated in Section 7.2 and 7.6.2.2 of the RI Report (Weston 2006), benzene was detected at concentrations more than 1,000 times greater than the AWQS in monitoring well WCP-202 in 2001 (and other wells). The source of the benzene was not identified but was attributed to a benzene product release (i.e., not a gasoline release) nor was it attributed to former Univar Solutions facility (Weston 2006). The benzene exceeding AWQS detected in WCP-44 was attributed to the Former Fedmart/Sunbelt gasoline release which was addressed separately and subsequently closed in 2018 (ADEQ 2021). Thus, only the benzene in WCP-202 remains open. Other gasoline releases were also present and include the former Southwest Roofing facility). See response to comment 2, part 4.

Therefore, the PRAP is incorrect as written and the PRAP should address these other compounds or state how they will be addressed elsewhere. The PRAP also should speak to the data gaps and how those will be resolved.

ADEQ Response:

As previously stated, ADEQ follows Arizona regulatory standards, not regulatory standards administered by the United States Environmental Protection Agency (EPA); therefore, ADEQ regulates to the state Soil Remediation Levels (SRLs) and Groundwater Protection Levels (GPLs), not the EPA Regional Screening Levels (RSLs) or Soil Vapor Screening Levels (SVSLs). When the soil gas concentrations are converted to soil concentrations per A.C.C. R18-7-203(C), the detections for non-COC parameters listed in response tables A-2, A-3 and A-4 are below residential and non-residential SRLs and GPLs. Again, as previously mentioned, the Feasibility Study (Arcadis, 2020) prepared by Univar concludes that *“Based on the results [summarized in the FS], soils are not a media of concern for the EGA Site.”*

As previously stated, the RO report (Weston, 2006, and ADEQ, 2006) identified chlorinated volatile organic compounds PCE, TCE and 1,1-DCE, as the Site COCs. The remedial objectives outlined in the RO report are to protect current and future use of groundwater for drinking water use by the Mobile Home Trailer Park (MTP) well, the Danone Waters wells, and SRP wells from the COCs emanating from the Site. None of the non-COC compounds listed in response tables A-2, A-3 and A-4 have been detected in groundwater samples above the AWQS (Arcadis, 2023). As such, as stated in the FS prepared by Univar, these parameters are *“not considered a significant ongoing source of COCs to groundwater. Therefore, a source control remedial strategy is not appropriate to safeguard or achieve the Remedial Objectives (ROs) at this time.”*

Regarding the benzene detected in WCP-202, see the ADEQ response to comment 2, part 3.

Comment #5

Mark Metcalf wrote:

Section 3.3, Contaminants of Concern, page 4

Compounds that exceed the Aquifer Water Quality Standard (AWQS) include PCE, TCE, and 1,1-DCE.

Univar Comment:

See comment 4.

ADEQ Response:

PCE and TCE are the only COCs currently identified above applicable regulatory standard for the WCP-EGA site.

Comment #6

Mark Metcalf wrote:

Section 3.5, Risk Evaluation Summary, page 4

Multiple investigations have been conducted at the Site since VOCs were initially detected in the groundwater in 1982. The data from these investigations were used to evaluate the risks that the soil, soil vapor, and groundwater pose to the public and the environment. The risk evaluations indicate there is no current human health risk from soil, soil vapor, or groundwater contamination.

Univar Comment:

As noted in comment 4, the PRAP does not address certain VOCs identified in the RI or the RI Addendum and that exceeded USEPA soil-gas screening levels in several areas that may pose an unacceptable risk to current or future human health, particularly near EGA-02 where soil-gas concentrations are significantly greater than the industrial SVSLs (ADEQ 2018). Most notably, TCE was detected at concentrations as high as 45,000 ug/m³ near existing buildings including a possible church. The USEPA residential air screening level is 0.48 ug/m³ and the industrial air screening level is 3 ug/m³ for TCE. The soil gas results are summarized in Figure A-4 and Tables A-2, A-3, and A-4. Are these elevated soil-gas concentrations being addressed outside the PRAP and if so how? Any additional data or investigations associated with this release are considered relevant to the EGA Site and must therefore be disclosed in the EGA Site public record.

ADEQ Response:

See ADEQ response to comment 4 and comment 2, part 4.

Comment #7

Mark Metcalf wrote:

Section 4.2, Development of the Reference Remedy and Alternative Remedies, page 7

Wellhead Treatment (Contingency) – Wellhead treatment would be a contingency to treat impacted groundwater withdrawn from the aquifer from a drinking water well.

Univar Comment:

All remedies in the PRAP include a contingency remedy of wellhead treatment regardless of the risk or probability. The rationale for selecting the wellhead treatment contingency was not provided. The FS and PRAP conclude there are no current risks to human health from groundwater (Section 3.5). The FS also

indicated that the COCs in groundwater did not pose a threat to existing water supply wells or foreseeable groundwater uses. Further, the probability of needing a contingency, particularly wellhead treatment is extremely low (Arcadis 2020).

The PRAP assumes the Mobile Home Trailer Park (MTP) potable well and/or Salt River Project (SRP) irrigation well could become impacted by COCs in groundwater associated with the EGA Site. As demonstrated in the FS (Arcadis 2020), neither of these wells are threatened by the EGA Site. Further, COC concentrations have been stable and/or decreasing with time in all wells (Arcadis 2020). Figure A-5 illustrates the long-term decreasing trend of TCE concentrations in monitoring well WCP-87 and EGA-05 (replacement well to WCP-87). Thus, it is unreasonable, unnecessary, and not cost-effective to provide a wellhead treatment contingency of \$7.51 million (Section 5.4). Instead, the PRAP should consider the more cost-effective and more reasonable contingency remedies proposed in the FS, which are fully capable of protecting the water supply in the unlikely event a contingency remedy is needed. Those contingencies include:

1. Plume containment and hot-spot treatment
2. Well modification or replacement

Numerous other more reasonable and cost-effective contingencies or combination of contingencies also could be considered.

Arizona Revised Statute (ARS) 49-282.06 provides,

Remedial actions shall: 1) assure the protection of public health and welfare of the environment, 2) to the extent practicable provide for the control, management or cleanup of the hazardous substances in order to allow the maximum beneficial use of the waters of the state, and 3) be reasonable, necessary and cost-effective.

As stated above, the well head contingency remedy does not appear to be reasonable, necessary, or cost effective given the information provided in the RI, the FS, and the PRAP. Thus, it does not comply with the statutes. The PRAP should include contingencies consistent with ARS 49-282.06; consider the need for (probability of) the contingency remedy(s); and the cost-effectiveness of the contingency remedy(s) as described in the FS. Therefore, the contingency remediation costs (\$7.51 million) are inappropriate and must be revised consistent with the FS and ARS 49-282.06.

ADEQ Response:

ADEQ has re-evaluated the proposed contingency and has determined it is not required.

Comment #8

Mark Metcalf wrote:

Section 5.1.2, Wellhead Treatment Contingency, page 9-10

Wellhead treatment could be implemented at two down-gradient production wells (Mobile Home Trailer Park Well and adjacent SRP production well 10.5E-7.5N) if they become impacted with groundwater contamination associated with the Site and their use is restricted due to COCs present in the water supplied from the well. Wellhead treatment will consist of LGAC treatment. The cost of installing wellhead treatment at a production well is well specific and would be variable depending on the well location, well production rate, and the timing of bringing the well online. This contingency assumes that one production well with a production rate of 1,000 gallons per minute (gpm) and one production well with a production rate of 50 gpm will need wellhead treatment for a period of up to 12 years.

Univar Comment:

Please see comment 7.

ADEQ Response:

ADEQ has re-evaluated the proposed contingency and has determined it is not required.

Comment #9

Mark Metcalf wrote:

Section 5.1.1, MNA, page 9

MNA will consist of routine groundwater monitoring and sampling to monitor groundwater contamination at the Site. The groundwater samples will be analyzed for VOCs and selected natural attenuation parameters such as dissolved oxygen, oxidation-reduction potential (ORP), iron, manganese, nitrate, sulfate, methane, and ethane. The groundwater monitoring data will be used to evaluate plume migration, plume stability, and natural attenuation of the plume. The data will also be used to trigger appropriate contingency actions (i.e., wellhead treatment at an impacted water supply well) to manage risk associated with the groundwater plume migration. MNA will continue until the concentrations of the COCs drop below the AWQS.

Univar Comment:

Please note, the FS did not include monitoring of secondary and tertiary monitored natural attenuation (MNA) parameters. Stable and decreasing trend of the COC is/was considered the primary line of evidence

of natural attenuation in the FS. Thus, the less-aggressive remedy (groundwater monitoring) did not include analysis, management, evaluation and reporting of the following: dissolved oxygen, oxidation-reduction potential, iron, manganese, nitrate, sulfate, methane, and ethane. Ongoing demonstration of natural attenuation through evaluation of these secondary and tertiary lines of evidence is not necessary. However, these indicator parameters were called for in the PRAP. Please provide a rationale for why these parameters should be included given the known geochemistry in groundwater at the EGA Site. Additionally, see comment 7 regarding the wellhead treatment contingency.

ADEQ Comment:

ADEQ proposed monitoring additional MNA parameters in the PRAP to use as additional lines of evidence to confirm the environment within the aquifer is conducive for the natural degradation of the contaminants. The cost for analyzing these additional parameters is minimal and the addition of these parameters to the remedy did not change the proposed cost or duration of the remedy. The costs for the proposed remedy were taken from the Feasibility Study (Arcadis, 2020) that was prepared by Univar and subsequently approved by ADEQ. In addition, ADEQ has re-evaluated the proposed contingency and has determined it is not required.

Comment #10

Mark Metcalf wrote:

Attachment A - Preliminary List of Potentially Responsible Parties

Van Waters and Rogers, Inc.

Univar Comment:

Van Waters and Rogers, Inc. was listed as the only PRP. As described above there are several PRPs and known source areas (unidentified PRPs). The known and confirmed PRPs include the Former Mogul facility as well as the former Van Waters and Rogers facility Final RI Report (Weston 2006) and Feasibility Study (Arcadis 2020). The confirmed source areas with unidentified PRPs include (1) the upgradient sources of COCs, (2) the source(s) near EGA-02/29th Avenue area, (3) the source near WCP-202, and (4) potentially the Former Granberry Supply facility, at a minimum.

ADEQ Response:

As previously mentioned, data and regulatory records have been re-evaluated and ADEQ has determined that the former Univar Solutions facility is the main source of groundwater contamination; however, the former Granberry Supply facility and the former FedMart facility were also contributors to the EGA plume.

ADEQ used a third party allocator to identify their respective liability at the Site. The findings of the allocator will be issued to the public in accordance with ARS 49-287.05.

REFERENCES

Arizona Department of Environmental Quality (ADEQ), 2006. Remedial Objectives Report, West Central Phoenix East Grand Avenue Site, Phoenix, Arizona. June.

ADEQ, 2018. 2018 Final Remedial Investigation Report Addendum. May 9.

Arcadis, 2020. Feasibility Study Report, East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. June.

Arcadis, 2023. 2023 Annual Groundwater Monitoring Report, East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. November 10.

Weston Solutions (Weston), 2006. Final Remedial Investigation Report, West Central Phoenix East Grand Avenue WQARF Site, Phoenix, Arizona. June.

APPENDIX C

SITE MONITORING WELL CONSTRUCTION DETAILS

Appendix C: Site Monitoring Well Construction Details



| Well ID | ADWR Well Registry Number 55- | Installation Date | Casing Diameter (in) | Casing Material | Screened Interval (ft bgs) | Slot Size (in) | Total Well Depth (ft bgs) | Measuring Point Elevation (ft amsl) | Northing (ift) | Easting (ift) | Most Recent Survey Date |
|-----------------------|-------------------------------|-------------------|----------------------|-----------------|----------------------------|----------------|---------------------------|-------------------------------------|----------------|---------------|-------------------------|
| WCP-15 ^a | 57140 | 3/18/1997 | - | - | - | - | - | - | - | - | 4/2/1997 |
| WCP-16 ^{a,b} | 57141 | 3/19/1997 | - | - | - | - | - | - | - | - | 4/2/1997 |
| WCP-17 ^b | 57142 | 3/19/1997 | 4 | Sch. 40 PVC | 97-127 | - | 127 | 1106.61 | 905051.07 | 637244.25 | 4/2/1997 |
| WCP-28 ^{c,d} | 58848 | 5/26/1998 | 4 | Sch. 40 PVC | 99.5-139.5 | 0.010 | 139.5 | 1108.65 | 905468.51 | 637527.14 | - ¹ |
| WCP-29 ^{c,d} | 58849 | 5/28/1998 | 4 | Sch. 40 PVC | 99.5-139.5 | 0.010 | 139.5 | 1108.75 | 905404.81 | 637537.24 | - ¹ |
| WCP-30 ^a | 58850 | 5/27/1998 | - | - | - | - | - | - | - | - | - |
| WCP-40 | 58854 | 9/28/1999 | 4 | Sch. 40 PVC | 110-150 | 0.010 | 150 | 1110.39 | 905767.71 | 637777.80 | - ¹ |
| WCP-41 | 58855 | 9/30/1999 | 4 | Sch. 40 PVC | 103.5-143.5 | 0.010 | 143.5 | 1108.09 | 905231.36 | 637780.41 | - ¹ |
| WCP-42 ^c | 58856 | 10/4/1999 | 4 | Sch. 40 PVC | 108.5-148.5 | 0.010 | 148.5 | 1109.66 | 905715.61 | 637188.84 | - ¹ |
| WCP-43 | 58857 | 10/12/1999 | 4 | Sch. 40 PVC | 106-146 | 0.010 | 146 | 1111.64 | 905794.33 | 638238.50 | - ¹ |
| WCP-44 | 58858 | 12/1/1999 | 4 | Sch. 40 PVC | 108-148 | 0.010 | 148 | 1104.25 | 904579.66 | 636991.55 | 6/14/2004 |
| WCP-45 | 58859 | 10/6/1999 | 4 | Sch. 40 PVC | 108-148 | 0.010 | 148 | 1107.16 | 905201.23 | 636741.89 | 11/1/2019 |
| WCP-46 | 58860 | 12/3/1999 | 4 | Sch. 40 PVC | 108-148 | 0.010 | 148 | 1109.39 | 905520.06 | 636748.85 | 3/10/2015 |
| WCP-47 | 59409 | 1/16/2001 | 4 | Sch. 40 PVC | 112.5-152.5 | 0.010 | 152.5 | 1108.42 | 905451.02 | 636265.08 | 6/14/2004 |
| WCP-48 | 58861 | 6/20/2000 | 4 | Sch. 40 PVC | 225-245 | 0.010 | 245 | 1107.06 | 905221.10 | 636742.98 | 11/1/2019 |
| WCP-83 | 59421 | 1/23/2001 | 4 | Sch. 40 PVC | 109-149 | 0.010 | 149 | 1108.90 | 905270.79 | 638255.27 | 6/14/2004 |
| WCP-84 | 59422 | 1/29/2001 | 4 | Sch. 40 PVC | 108.5-148.5 | 0.010 | 148.5 | 1109.09 | 905454.33 | 637771.90 | - ¹ |
| WCP-85 ^c | 59423 | 1/9/2001 | 4 | Sch. 40 PVC | 109-149 | 0.010 | 149 | 1113.10 | 905822.13 | 638860.36 | - ¹ |
| WCP-86 | 59424 | 1/16/2001 | 4 | Sch. 40 PVC | 110-150 | 0.010 | 150 | 1105.66 | 904734.01 | 637325.11 | 3/10/2015 |
| WCP-87 | 59425 | 1/29/2001 | 4 | Sch. 40 PVC | 112.5-152.5 | 0.010 | 152.5 | 1105.70 | 904879.54 | 636749.59 | 3/10/2015 |
| WCP-88 | 59426 | 1/31/2001 | 4 | Sch. 40 PVC | 110-150 | 0.010 | 150 | 1104.54 | 904517.66 | 636545.21 | 3/10/2015 |
| WCP-89 | 59427 | 2/2/2001 | 4 | Sch. 40 PVC | 113-153 | 0.010 | 153 | 1105.37 | 904486.22 | 635387.43 | - ¹ |
| WCP-90 ^a | 59428 | 1/19/2001 | - | - | - | - | - | - | - | - | - |
| WCP-92 | 59429 | 7/17/2001 | 4 | Sch. 40 PVC | 109-149 | 0.010 | 149 | 1098.56 | 903109.68 | 636358.33 | 11/1/2019 |
| WCP-93 ^e | 59430 | 7/25/2001 | 4 | Sch. 40 PVC | 109-149 | 0.010 | 149 | 1105.69 | 905050.87 | 637500.68 | 5/16/2016 |
| WCP-94 | 59431 | 7/19/2001 | 4 | Sch. 40 PVC | 110-150 | 0.010 | 150 | 1101.58 | 903487.84 | 635264.57 | 11/1/2019 |
| WCP-95 | 59432 | 7/6/2001 | 4 | Sch. 40 PVC | 99-139 | 0.010 | 139 | 1114.23 | 906255.88 | 638782.68 | - ¹ |
| WCP-96 | 59433 | 7/23/2001 | 4 | Sch. 40 PVC | 109.5-149.5 | 0.010 | 149.5 | 1101.62 | 903855.11 | 636256.05 | 11/1/2019 |
| WCP-97 | 59434 | 7/3/2001 | 4 | Sch. 40 PVC | 109-149 | 0.010 | 149 | 1104.31 | 904499.20 | 638255.06 | - ¹ |
| WCP-98 | 59435 | 7/11/2001 | 4 | Sch. 40 PVC | 109-149 | 0.010 | 149 | 1106.35 | 904947.30 | 639098.53 | - ¹ |
| WCP-99 | 60377 | 11/15/2001 | 4 | Sch. 40 PVC | 108-148 | 0.010 | 148 | 1111.26 | 905811.52 | 639416.97 | - ¹ |
| WCP-100 ^a | 60378 | 11/21/2001 | - | - | - | - | - | - | - | - | 3/10/2015 |
| WCP-200 | 60379 | 11/19/2001 | 4 | Sch. 40 PVC | 114-154 | 0.010 | 154 | 1108.20 | 905267.44 | 637275.88 | 3/10/2015 |
| WCP-201 | 60380 | 12/3/2001 | 4 | Sch. 40 PVC | 114-154 | 0.010 | 154 | 1106.69 | 905051.00 | 637227.35 | 11/1/2019 |
| WCP-202 | 60381 | 12/5/2001 | 4 | Sch. 40 PVC | 111-151 | 0.010 | 151 | 1100.81 | 904075.96 | 636812.30 | 11/1/2019 |
| WCP-203 | 60382 | 12/18/2001 | 4 | Sch. 40 PVC | 121.5-161.5 | 0.010 | 161.5 | 1111.86 | 905819.90 | 635597.05 | - ¹ |
| WCP-204 | 60383 | 11/29/2001 | 4 | Sch. 40 PVC | 110-150 | 0.010 | 150 | 1097.31 | 902927.58 | 634815.71 | - ¹ |
| EGA-01 | 64836 | 3/19/2005 | 4 | Sch. 40 PVC | 120-170 | 0.010 | 170 | 1105.00 | 904331.20 | 636018.54 | 11/1/2019 |
| EGA-02 | 921030 | 11/28/2017 | 4 | Sch. 40 PVC | 165-175 | 0.020 | 200 | 1101.97 | 904079.44 | 637739.26 | 11/1/2019 |
| EGA-03 | 923357 | 11/1/2019 | 4 | Sch. 80 PVC | 140-190 | 0.010 | 190 | 1107.48 | 905277.97 | 636267.86 | 11/1/2019 |
| EGA-04A | 923375 | 10/14/2019 | 2.5 | Sch. 80 PVC | 145-195 | 0.010 | 195 | 1107.82 | 905170.49 | 637299.46 | 11/1/2019 |
| EGA-04B | 923375 | 10/14/2019 | 2.5 | Sch. 80 PVC | 215-245 | 0.010 | 245 | 1107.88 | 905170.84 | 637299.38 | 11/1/2019 |
| EGA-05A | 923386 | 10/28/2019 | 2.5 | Sch. 80 PVC | 145-195 | 0.010 | 195 | 1105.91 | 904845.27 | 636746.44 | 11/1/2019 |
| EGA-05B | 923386 | 10/28/2019 | 2.5 | Sch. 80 PVC | 225-255 | 0.010 | 255 | 1105.96 | 904845.26 | 636746.80 | 11/1/2019 |

Notes:

WQARF = Water Quality Assurance Revolving Fund
 ID = identification
 ADWR = Arizona Department of Water Resources
 in = inches
 ft bgs = feet below ground surface
 ft amsl = feet above mean sea level
 ift = international feet
 - = Data unknown
 Grey highlight = well was abandoned

Sch. 40 PVC = Schedule 40 Polyvinyl Chloride
 Sch. 80 PVC = Schedule 80 Polyvinyl Chloride
 SVE = soil vapor extraction
 Elevations are expressed in National Geodetic Vertical Datum (NGVD) 29
 Northings and Eastings are expressed in North American Datum (NAD) 83 State Plane Arizona Central
^a Abandoned wells: WCP-15 (in 2002), WCP-30 (in 2006), WCP-90 (in 2014), WCP-16 (in 2022), WCP-100 (in 2022)
^b Converted to SVE well: WCP-16 (in 2008), WCP-17 (in 2009)
^c No property access: WCP-28 (since 2004), WCP-29 (since 2004), WCP-42 (since 2009), WCP-85 (since 2010)
^d Temporary access granted: WCP-28 (in July 2017), WCP-29 (in July 2017)
^e Pump removed: WCP-93 (in April 2016)
¹ Survey data was attained from the Final Remedial Investigation Report (Weston 2006); Northings and Eastings are expressed in North American Datum (NAD) of 1927 State Plane Arizona Central

Data Source: Arcadis, 2023. 2023 Annual Groundwater Monitoring Report, East Grand Avenue Water Quality Assurance Revolving Fund Registry Site, Phoenix, Arizona. November 10.

APPENDIX D

UNIVAR SOLUTIONS HISTORICAL COST CREDIT

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--------------------------------|----------------|--------------|--------------------------|---------------|---------------|----------------|--|
| 1 | | STREICH, LANG, WEEKS, & CARDON | 140786 | 10/28/94 | Legal | Investigation | \$ 4,995.79 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 2 | | STREICH, LANG, WEEKS, & CARDON | 141717 | 11/29/94 | Legal | Investigation | \$ 3,449.76 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 3 | | DEL MAR ANALYTICAL | P3408 | 2/9/95 | Lab | Investigation | \$ 1,672.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 4 | | HARDING LAWSON ASSOCIATES | 134982 | 2/13/95 | Environmental contractor | Investigation | \$ 21,056.38 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 5 | | DEL MAR ANALYTICAL | P3558 | 2/22/95 | Lab | Investigation | \$ 713.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 6 | | NEWSCOUNT | 043638 | 2/27/95 | News clip vendor | Investigation | \$ 23.87 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 7 | | SCHMID, SUSAN | LTR | 3/1/95 | Legal | Investigation | \$ 777.31 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 8 | | HARDING LAWSON ASSOCIATES | 136537 | 3/23/95 | Environmental contractor | Investigation | \$ 2,526.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 9 | | HARDING LAWSON ASSOCIATES | 136538 | 3/23/95 | Environmental contractor | Investigation | \$ 556.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 10 | | HARDING LAWSON ASSOCIATES | 136662 | 3/27/95 | Environmental contractor | Investigation | \$ 8,176.31 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 11 | | STREICH, LANG, WEEKS, & CARDON | 145453 | 3/29/95 | Legal | Investigation | \$ 360.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 12 | | SCHMID, SUSAN | STATEMENT | 4/3/95 | Legal | Investigation | \$ 1,586.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 13 | | HARDING LAWSON ASSOCIATES | 137401 | 4/14/95 | Environmental contractor | Investigation | \$ 7,183.35 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 14 | | HARDING LAWSON ASSOCIATES | 137402 | 4/14/95 | Environmental contractor | Investigation | \$ 1,069.39 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 15 | | HARDING LAWSON ASSOCIATES | 137403 | 4/14/95 | Environmental contractor | Investigation | \$ 4,294.41 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 16 | | STREICH, LANG, WEEKS, & CARDON | 146439 | 4/27/95 | Legal | Investigation | \$ 90.40 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 17 | | SCHMID, SUSAN | APRIL 1995 | 4/30/95 | Legal | Investigation | \$ 941.97 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 18 | | HARDING LAWSON ASSOCIATES | 138691 | 5/16/95 | Environmental contractor | Investigation | \$ 1,420.76 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 19 | | HARDING LAWSON ASSOCIATES | 138693 | 5/16/95 | Environmental contractor | Investigation | \$ 2,329.69 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 20 | | DEL MAR ANALYTICAL | P2852 | 5/18/95 | Lab | Investigation | \$ 600.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 21 | | STREICH, LANG, WEEKS, & CARDON | 147288 | 5/23/95 | Legal | Investigation | \$ 1,542.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 22 | | MP ENVIRONMENTAL SERVICES INC. | 34870 | 5/31/95 | Environmental services | Investigation | \$ 125.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 23 | | SCHMID, SUSAN | STATEMENT | 6/12/95 | Legal | Investigation | \$ 1,353.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 24 | | GERAGHTY & MILLER, INC. | 43711 | 6/14/95 | Environmental contractor | Investigation | \$ 7,576.72 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 25 | | STREICH, LANG, WEEKS, & CARDON | 148351 | 6/27/95 | Legal | Investigation | \$ 2,055.30 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 26 | | MP ENVIRONMENTAL SERVICES INC. | 35774 | 6/29/95 | Environmental services | Investigation | \$ 349.88 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 27 | | SCHMID, SUSAN | JUNE INV | 7/5/95 | Legal | Investigation | \$ 329.91 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 28 | | MP ENVIRONMENTAL SERVICES INC. | 36617 | 7/18/95 | Environmental services | Investigation | \$ 85.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 29 | | STREICH, LANG, WEEKS, & CARDON | 149458 | 7/26/95 | Legal | Investigation | \$ 26.30 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 30 | | SCHMID, SUSAN | STATMENT | 8/8/95 | Legal | Investigation | \$ 94.59 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 31 | | SCHMID, SUSAN | STATEMENT | 9/2/95 | Legal | Investigation | \$ 120.15 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 32 | | HARDING LAWSON ASSOCIATES | 145467 | 11/2/95 | Environmental contractor | Investigation | \$ 1,484.58 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 33 | | SCHMID, SUSAN | OCT1995INVOICE | 11/9/95 | Legal | Investigation | \$ 1,002.31 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 34 | | SCHMID, SUSAN | STMTNOV | 12/7/95 | Legal | Investigation | \$ 852.83 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 35 | | WEST VAN BUREN GROUP | STMT | 12/21/95 | Legal | Investigation | \$ 14,700.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 36 | | HARDING LAWSON ASSOCIATES | 148536 | 1/25/96 | Environmental contractor | Investigation | \$ 4,503.42 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 37 | | STREICH, LANG, WEEKS, & CARDON | 157038 | 2/28/96 | Legal | Investigation | \$ 530.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 38 | | STREICH, LANG, WEEKS, & CARDON | 159335 | 4/26/96 | Legal | Investigation | \$ 161.69 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 39 | | HARDING LAWSON ASSOCIATES | 161912 | 2/26/97 | Environmental contractor | Investigation | \$ 911.81 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 40 | | HARDING LAWSON ASSOCIATES | 163073 | 3/26/97 | Environmental contractor | Investigation | \$ 3,610.34 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 41 | | HARDING LAWSON ASSOCIATES | 164322 | 4/23/97 | Environmental contractor | Investigation | \$ 1,630.29 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 42 | | HARDING LAWSON ASSOCIATES | 166665 | 6/27/97 | Environmental contractor | Investigation | \$ 2,457.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--------------------------------|------------|--------------|--------------------------|---------------|---------------|----------------|--|
| 43 | | HARDING LAWSON ASSOCIATES | 171835 | 11/24/97 | Environmental contractor | Investigation | \$ 592.41 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 44 | | STREICH, LANG, WEEKS, & CARDON | 187685 | 12/22/97 | Legal | Investigation | \$ 144.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 45 | | EMCON NORTHWEST, INC. | 49819 | 1/26/98 | Consulting/contractor | Investigation | \$ 1,262.08 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 46 | | HARDING LAWSON ASSOCIATES | 174126 | 2/6/98 | Environmental contractor | Investigation | \$ 647.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 47 | | EMCON NORTHWEST, INC. | 50733 | 2/23/98 | Consulting/contractor | Investigation | \$ 1,480.11 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 48 | | STREICH, LANG, WEEKS, & CARDON | 190201 | 2/24/98 | Legal | Investigation | \$ 125.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 49 | | EMCON NORTHWEST, INC. | 52377 | 3/25/98 | Consulting/contractor | Investigation | \$ 552.60 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 50 | | STREICH, LANG, WEEKS, & CARDON | 192983 | 4/21/98 | Legal | Investigation | \$ 725.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 51 | | EMCON NORTHWEST, INC. | 53462 | 4/22/98 | Consulting/contractor | Investigation | \$ 2,085.20 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 52 | | EMCON NORTHWEST, INC. | 54744 | 5/22/98 | Consulting/contractor | Investigation | \$ 733.05 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 53 | | EMCON NORTHWEST, INC. | 56510 | 6/23/98 | Consulting/contractor | Investigation | \$ 83.64 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 54 | | STREICH, LANG, WEEKS, & CARDON | 195584 | 6/24/98 | Legal | Investigation | \$ 20.07 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 55 | | EMCON NORTHWEST, INC. | 98153 | 8/3/98 | Consulting/contractor | Investigation | \$ 862.12 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 56 | | STREICH, LANG, WEEKS, & CARDON | 198437 | 8/26/98 | Legal | Investigation | \$ 100.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 57 | | EMCON NORTHWEST, INC. | 98161 | 8/31/98 | Consulting/contractor | Investigation | \$ 709.67 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 58 | | EMCON NORTHWEST, INC. | 981641 | 9/24/98 | Consulting/contractor | Investigation | \$ 221.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 59 | | STREICH, LANG, WEEKS, & CARDON | 200821 | 10/22/98 | Legal | Investigation | \$ 22.79 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 60 | | STREICH, LANG, WEEKS, & CARDON | 200904 | 10/23/98 | Legal | Investigation | \$ 650.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 61 | | EMCON NORTHWEST, INC. | 981681 | 10/29/98 | Consulting/contractor | Investigation | \$ 966.24 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 62 | | EMCON NORTHWEST, INC. | 981784 | 11/25/98 | Consulting/contractor | Investigation | \$ 272.95 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 63 | | EMCON NORTHWEST, INC. | 981932 | 12/21/98 | Consulting/contractor | Investigation | \$ 352.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 64 | | EMCON NORTHWEST, INC. | 67785 | 1/20/99 | Consulting/contractor | Investigation | \$ 1,299.18 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 65 | | STREICH, LANG, WEEKS, & CARDON | 205080 | 1/26/99 | Legal | Investigation | \$ 809.56 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 66 | | EMCON NORTHWEST, INC. | 68891 | 2/22/99 | Consulting/contractor | Investigation | \$ 3,070.22 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 67 | | STREICH, LANG, WEEKS, & CARDON | 206523 | 2/23/99 | Legal | Investigation | \$ 625.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 68 | | STREICH, LANG, WEEKS, & CARDON | 207939 | 3/22/99 | Legal | Investigation | \$ 1,168.77 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 69 | | EMCON NORTHWEST, INC. | 70713 | 3/23/99 | Consulting/contractor | Investigation | \$ 2,368.58 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 70 | | EMCON NORTHWEST, INC. | 72323 | 4/26/99 | Consulting/contractor | Investigation | \$ 732.12 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 71 | | STREICH, LANG, WEEKS, & CARDON | 209572 | 4/29/99 | Legal | Investigation | \$ 431.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 72 | | EMCON NORTHWEST, INC. | 73134 | 5/21/99 | Consulting/contractor | Investigation | \$ 59.19 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 73 | | STREICH, LANG, WEEKS, & CARDON | 211020 | 5/31/99 | Legal | Investigation | \$ 62.31 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 74 | | EMCON NORTHWEST, INC. | 74695 | 6/21/99 | Consulting/contractor | Investigation | \$ 283.87 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 75 | | STREICH, LANG, WEEKS, & CARDON | 212119 | 6/22/99 | Legal | Investigation | \$ 75.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 76 | | EMCON NORTHWEST, INC. | 76382 | 7/16/99 | Consulting/contractor | Investigation | \$ 210.74 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 77 | | EMCON NORTHWEST, INC. | 77424 | 8/20/99 | Consulting/contractor | Investigation | \$ 229.28 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 78 | | EMCON NORTHWEST, INC. | 228332 | 9/30/99 | Consulting/contractor | Investigation | \$ 83.58 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 79 | | H S I GEOTRANS INC | 210101 | 10/3/99 | Environmental contractor | Investigation | \$ 1,568.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 80 | | H S I GEOTRANS INC | 211101 | 10/3/99 | Environmental contractor | Investigation | \$ 1,319.47 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 81 | | H S I GEOTRANS INC | 210102 | 10/31/99 | Environmental contractor | Investigation | \$ 465.86 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 82 | | H S I GEOTRANS INC | 211102 | 10/31/99 | Environmental contractor | Investigation | \$ 141.08 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 83 | | H S I GEOTRANS INC | 210103 | 11/28/99 | Environmental contractor | Investigation | \$ 1,012.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 84 | | H S I GEOTRANS INC | 210104 | 1/2/00 | Environmental contractor | Investigation | \$ 1,339.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|-----------------------------|------------|--------------|--------------------------|---------------|---------------|----------------|--|
| 85 | | H S I GEOTRANS INC | 210106 | 2/27/00 | Environmental contractor | Investigation | \$ 2,216.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 86 | | STREICH LANG | 225576 | 3/30/00 | Legal | Investigation | \$ 110.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 87 | | H S I GEOTRANS INC | 210107 | 4/2/00 | Environmental contractor | Investigation | \$ 135.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 88 | | STREICH LANG | 226987 | 4/29/00 | Legal | Investigation | \$ 87.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 89 | | H S I GEOTRANS INC | 210108 | 4/30/00 | Environmental contractor | Investigation | \$ 222.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 90 | | H S I GEOTRANS INC | 211108 | 4/30/00 | Environmental contractor | Investigation | \$ 130.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 91 | | H S I GEOTRANS INC | 210109 | 5/28/00 | Environmental contractor | Investigation | \$ 135.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 92 | | H S I GEOTRANS INC | 211109 | 5/28/00 | Environmental contractor | Investigation | \$ 857.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 93 | | STREICH LANG | 231754 | 7/27/00 | Legal | Investigation | \$ 113.59 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 94 | | H S I GEOTRANS INC | 210110 | 8/27/00 | Environmental contractor | Investigation | \$ 67.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 95 | | HARDING LAWSON ASSOCIATES | 507913CK | 9/22/00 | Environmental contractor | Investigation | (\$ 698.90) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 96 | | H S I GEOTRANS INC | 210111 | 10/1/00 | Environmental contractor | Investigation | \$ 3,295.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 97 | | H S I GEOTRANS INC | 211113 | 10/1/00 | Environmental contractor | Investigation | \$ 1,661.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 98 | | H S I GEOTRANS INC | 210112 | 10/29/00 | Environmental contractor | Investigation | \$ 3,211.12 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 99 | | H S I GEOTRANS INC | 211114 | 10/29/00 | Environmental contractor | Investigation | \$ 560.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 100 | | QUARLES BRADY STREICH LANG | 401913 | 11/1/00 | Legal | Investigation | \$ 1,869.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 101 | | GM CLEMENT & ASSOCIATES INC | 10001 | 11/21/00 | Environmental contractor | Investigation | \$4,610.55 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 102 | | H S I GEOTRANS INC | 210113 | 11/27/00 | Environmental contractor | Investigation | \$ 5,287.39 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 103 | | QUARLES BRADY STREICH LANG | 407344 | 12/1/00 | Legal | Investigation | \$ 247.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 104 | | GM CLEMENT & ASSOCIATES INC | 10002 | 12/11/00 | Environmental contractor | Investigation | \$2,948.07 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 105 | | QUARLES BRADY STREICH LANG | 413807 | 1/1/01 | Legal | Investigation | \$ 137.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 106 | | GEOTRANS INC | 210114 | 1/2/01 | Environmental contractor | Investigation | \$ 12,011.12 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 107 | | H S I GEOTRANS INC | 210115 | 1/28/01 | Environmental contractor | Investigation | \$ 5,770.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 108 | | ADAMS LAW FIRM | 2070 | 1/30/01 | Legal | Investigation | \$ 7,286.69 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 109 | | GM CLEMENT & ASSOCIATES INC | 2101 | 2/6/01 | Environmental contractor | Investigation | \$2,632.02 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 110 | | QUARLES BRADY STREICH LANG | 422776 | 2/22/01 | Legal | Investigation | \$ 1,980.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 111 | | H S I GEOTRANS INC | 210116 | 2/25/01 | Environmental contractor | Investigation | \$ 8,251.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 112 | | GM CLEMENT & ASSOCIATES INC | 2102 | 3/13/01 | Environmental contractor | Investigation | \$3,051.39 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 113 | | QUARLES BRADY STREICH LANG | 427236 | 3/14/01 | Legal | Investigation | \$ 4,228.10 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 114 | | H S I GEOTRANS INC | 210117 | 4/1/01 | Environmental contractor | Investigation | \$ 4,666.76 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 115 | | QUARLES BRADY STREICH LANG | 432762 | 4/12/01 | Legal | Investigation | \$ 746.13 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 116 | | GEOTRANS INC | 210118 | 4/29/01 | Environmental contractor | Investigation | \$ 4,726.11 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 117 | | GM CLEMENT & ASSOCIATES INC | 2103 | 5/3/01 | Environmental contractor | Investigation | \$1,933.19 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 118 | | GEOTRANS INC | 210119 | 5/30/01 | Environmental contractor | Investigation | \$ 1,413.97 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 119 | | GEOTRANS INC | 211118 | 5/30/01 | Environmental contractor | Investigation | \$ 2,426.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 120 | | QUARLES BRADY STREICH LANG | 445592 | 6/13/01 | Legal | Investigation | \$ 13.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 121 | | H S I GEOTRANS INC | 270117 | 7/2/01 | Environmental contractor | Investigation | \$ 131.90 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 122 | | H S I GEOTRANS INC | 210121 | 7/31/01 | Environmental contractor | Investigation | \$ 258.69 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 123 | | GM CLEMENT & ASSOCIATES INC | 2104 | 10/1/01 | Environmental contractor | Investigation | \$4,257.27 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 124 | | H S I GEOTRANS INC | 730101 | 10/10/01 | Environmental contractor | Investigation | \$ 10,931.23 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 125 | | GM CLEMENT & ASSOCIATES INC | 2105 | 11/5/01 | Environmental contractor | Investigation | \$2,114.22 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 126 | | H S I GEOTRANS INC | 730103 | 11/25/01 | Environmental contractor | Investigation | \$ 5,220.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|-----------------------------------|-------------|--------------|--------------------------|---------------|---------------|----------------|--|
| 127 | | MARTEN & BROWN LLP | 100047 | 12/17/01 | Legal | Investigation | \$ 2,996.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 128 | | H S I GEOTRANS INC | 730104 | 1/2/02 | Environmental contractor | Investigation | \$ 3,793.69 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 129 | | GM CLEMENT & ASSOCIATES INC | 2106 | 1/6/02 | Environmental contractor | Investigation | \$1,224.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 130 | | QUARLES BRADY STREICH LANG | 493760 | 1/14/02 | Legal | Investigation | \$ 550.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 131 | | ADAMS LAW FIRM | 2486 | 1/23/02 | Legal | Investigation | \$ 2,112.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 132 | | H S I GEOTRANS INC | 730105 | 1/29/02 | Environmental contractor | Investigation | \$ 4,334.22 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 133 | | MARTEN & BROWN LLP | 100112 | 2/11/02 | Legal | Investigation | \$ 470.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 134 | | QUARLES BRADY STREICH LANG | 501943 | 2/20/02 | Legal | Investigation | \$ 220.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 135 | | H S I GEOTRANS INC | 730106 | 2/26/02 | Environmental contractor | Investigation | \$ 8,824.84 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 136 | | QUARLES BRADY STREICH LANG | 509259 | 3/21/02 | Legal | Investigation | \$ 165.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 137 | | H S I GEOTRANS INC | 730107 | 4/2/02 | Environmental contractor | Investigation | \$ 15,453.92 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 138 | | ADAMS LAW FIRM | 2531 | 4/10/02 | Legal | Investigation | \$ 4,425.55 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 139 | | QUARLES BRADY STREICH LANG | 514681 | 4/16/02 | Legal | Investigation | \$ 859.10 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 140 | | GM CLEMENT & ASSOCIATES INC | EGA2107 | 4/23/02 | Environmental contractor | Investigation | \$1,650.72 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 141 | | H S I GEOTRANS INC | 731108 | 4/30/02 | Environmental contractor | Investigation | \$ 739.55 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 142 | | MP ENVIRONMENTAL SERVICES INC. | 133887 | 5/1/02 | Environmental services | Investigation | \$ 137.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 143 | | MP ENVIRONMENTAL SERVICES INC. | 133946 | 5/2/02 | Environmental services | Investigation | \$ 139.45 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 144 | | LAYNE CHRISTENSEN COMPANY | 10812229 | 5/8/02 | Drilling & Well Services | Investigation | \$ 40,855.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 145 | | MP ENVIRONMENTAL SERVICES INC. | 134317 | 5/17/02 | Environmental services | Investigation | \$ 14.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 146 | | QUARLES BRADY STREICH LANG | 522412 | 5/21/02 | Legal | Investigation | \$ 1,010.60 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 147 | | H S I GEOTRANS INC | 730109 | 5/29/02 | Environmental contractor | Investigation | \$ 14,658.33 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 148 | | H S I GEOTRANS INC | 731109 | 5/29/02 | Environmental contractor | Investigation | \$ 3,410.36 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 149 | | COLUMBIA ANALYTICAL SERVICES INC. | VOPAK0502EA | 5/31/02 | Lab | Investigation | \$ 320.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 150 | | ADAMS LAW FIRM | 2681 | 6/14/02 | Legal | Investigation | \$ 412.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 151 | | QUARLES BRADY STREICH LANG | 527791 | 6/14/02 | Legal | Investigation | \$ 222.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 152 | | MP ENVIRONMENTAL SERVICES INC. | 135714 | 6/20/02 | Environmental services | Investigation | \$ 420.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 153 | | H S I GEOTRANS INC | 730110 | 7/2/02 | Environmental contractor | Investigation | \$ 32,262.05 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 154 | | H S I GEOTRANS INC | 731110 | 7/2/02 | Environmental contractor | Investigation | \$ 1,184.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 155 | | GM CLEMENT & ASSOCIATES INC | EGA2108 | 7/8/02 | Environmental contractor | Investigation | \$2,879.07 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 156 | | QUARLES BRADY STREICH LANG | 533122 | 7/9/02 | Legal | Investigation | \$ 163.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 157 | | MP ENVIRONMENTAL SERVICES INC. | 137009 | 7/22/02 | Environmental services | Investigation | \$ 420.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 158 | | H S I GEOTRANS INC | 731111 | 7/30/02 | Environmental contractor | Investigation | \$ 399.19 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 159 | | ADAMS LAW FIRM | 2731 | 8/14/02 | Legal | Investigation | \$ 346.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 160 | | MP ENVIRONMENTAL SERVICES INC. | 138291 | 8/19/02 | Environmental services | Investigation | \$ 420.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 161 | | H S I GEOTRANS INC | 730112 | 8/27/02 | Environmental contractor | Investigation | \$ 11,758.03 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 162 | | COLUMBIA ANALYTICAL SERVICES INC. | VOPAK0802EA | 8/31/02 | Lab | Investigation | \$ 158.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 163 | | MP ENVIRONMENTAL SERVICES INC. | 139657 | 9/17/02 | Environmental services | Investigation | \$ 420.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 164 | | H S I GEOTRANS INC | 730113 | 10/1/02 | Environmental contractor | Investigation | \$ 12,894.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 165 | | BOART LONGYEAR COMPANY | 34161017 | 10/15/02 | Drilling & Well Services | Investigation | \$ 1,868.75 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 166 | | MP ENVIRONMENTAL SERVICES INC. | 141111 | 10/21/02 | Environmental services | Investigation | \$ 280.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 167 | | H S I GEOTRANS INC | 730114 | 10/29/02 | Environmental contractor | Investigation | \$ 7,160.02 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 168 | | GM CLEMENT & ASSOCIATES INC | EGA2109 | 10/31/02 | Environmental contractor | Investigation | \$301.02 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|---------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 169 | | GEOMATRIX CONSULTANTS | 0020537 | 11/4/02 | Environmental contractor | Investigation | \$ 2,334.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 170 | | MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT | 111302 | 11/13/02 | Permits | Remediation | \$ 85.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 171 | | H S I GEOTRANS INC | 730115 | 11/26/02 | Environmental contractor | Investigation | \$ 5,474.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 172 | | H S I GEOTRANS INC | 731115 | 11/26/02 | Environmental contractor | Investigation | \$ 894.98 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 173 | | MARICOPA COUNTY | 120302 | 12/3/02 | Permits | Remediation | \$ 70.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 174 | | MARICOPA COUNTY | 55631424CK | 12/3/02 | Permits | Remediation | (\$ 70.00) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 175 | | ARIZONA PUBLIC SERVICE CO. | 160105 | 12/5/02 | Utility | Remediation | \$ 715.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 176 | | QUARLES BRADY STREICH LANG | 5677735 | 12/9/02 | Legal | Investigation | \$ 440.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 177 | | MP ENVIRONMENTAL SERVICES INC. | 144110 | 12/12/02 | Environmental services | Investigation | \$ 143.30 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 178 | | ROADWAY EXPRESS, INC. | 8829436579 | 12/14/02 | Equipment Freight | Investigation | \$ 606.60 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 179 | | GM CLEMENT & ASSOCIATES INC | EGA2110 | 12/17/02 | Environmental contractor | Investigation | \$459.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 180 | | ALLEN CONSULTING ENGINEERS INC | 17502 | 12/26/02 | Engineering | Investigation | \$ 324.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 181 | | H S I GEOTRANS INC | 730116 | 12/31/02 | Environmental contractor | Investigation | \$ 1,859.86 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 182 | | GEOMECHANICS SOUTHWEST, INC. | 507988 | 1/8/03 | Drilling & Well Services | Investigation/Remediation | \$ 10,629.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 183 | | BRANOM INSTRUMENT CO. | 210875 | 1/14/03 | Process Instruments | Investigation/Remediation | \$ 339.76 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 184 | | GEOMATRIX CONSULTANTS | 0021814 | 1/15/03 | Environmental contractor | Investigation/Remediation | \$ 8,124.24 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 185 | | MP ENVIRONMENTAL SERVICES INC. | 145234 | 1/20/03 | Environmental services | Investigation/Remediation | \$ 140.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 186 | | BRANOM INSTRUMENT CO. | 2108752 | 1/24/03 | Process Instruments | Investigation/Remediation | \$ 558.04 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 187 | | H S I GEOTRANS INC | 730117 | 1/28/03 | Environmental contractor | Investigation/Remediation | \$ 1,357.98 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 188 | | GEOMATRIX CONSULTANTS | 0022286 | 2/10/03 | Environmental contractor | Investigation/Remediation | \$ 2,286.02 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 189 | | ROADWAY EXPRESS, INC. | 8125882097 | 2/13/03 | Equipment Freight | Investigation/Remediation | \$ 449.94 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 190 | | MP ENVIRONMENTAL SERVICES INC. | 146502 | 2/18/03 | Environmental services | Investigation/Remediation | \$ 189.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 191 | | H S I GEOTRANS INC | 730118 | 2/25/03 | Environmental contractor | Investigation/Remediation | \$ 2,577.76 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 192 | | MARISCAL WEEKS MCINTYRE & FREIDLANDER, PA | 030103 | 3/1/03 | Legal | Investigation/Remediation | \$ 2,481.20 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 193 | | ENVIRONMENTAL INSTRUMENTS CO. | 36812 | 3/14/03 | Environmental services | Investigation/Remediation | \$ 3,689.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 194 | | GM CLEMENT & ASSOCIATES INC | EGA3001 | 3/26/03 | Environmental contractor | Investigation/Remediation | \$10,928.65 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 195 | | ADAMS LAW FIRM | 10034 | 3/28/03 | Legal | Investigation/Remediation | \$ 2,376.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 196 | | GM CLEMENT & ASSOCIATES INC | EGA2111 | 4/14/03 | Environmental contractor | Investigation/Remediation | \$1,145.52 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 197 | | GM CLEMENT & ASSOCIATES INC | EGA3002A | 4/22/03 | Environmental contractor | Investigation/Remediation | \$15,070.23 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 198 | | GM CLEMENT & ASSOCIATES INC | EGA3002B | 4/24/03 | Environmental contractor | Investigation/Remediation | \$6,454.55 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 199 | | TRANSWEST GEOCHEM | 303340 | 4/28/03 | Lab | Investigation/Remediation | \$ 11,028.35 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 200 | | GEOTRANS INC | INV0000024988 | 4/29/03 | Environmental contractor | Investigation/Remediation | \$ 1,657.89 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 201 | | GEOMATRIX CONSULTANTS | 0023662 | 5/5/03 | Environmental contractor | Investigation/Remediation | \$ 92.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 202 | | GEOTRANS INC | INV0000028278 | 5/29/03 | Environmental contractor | Investigation/Remediation | \$ 1,384.89 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 203 | | COCHISE CONTRACTORS INC | 900941 | 6/25/03 | Civil contractor | Investigation/Remediation | \$ 30,896.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 204 | | MARISCAL WEEKS MCINTYRE & FREIDLANDER, PA | 062703 | 6/27/03 | Legal | Investigation/Remediation | \$ 1,331.94 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 205 | | GM CLEMENT & ASSOCIATES INC | EGA3003A | 6/28/03 | Environmental contractor | Investigation/Remediation | \$1,003.48 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 206 | | GM CLEMENT & ASSOCIATES INC | EGA3003B | 6/29/03 | Environmental contractor | Investigation/Remediation | \$989.88 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 207 | | GEOTRANS INC | INV0000031077 | 7/1/03 | Environmental contractor | Investigation/Remediation | \$ 2,387.74 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 208 | | BASCOR ENVIRONMENTAL, INC. | 0306280 | 7/2/03 | Environmental Consultant | Investigation/Remediation | \$ 335.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 209 | | TRANSWEST GEOCHEM | 306376 | 7/8/03 | Lab | Investigation/Remediation | \$ 2,250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|----------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 210 | | QUALITY BY DESIGN | 1462 | 7/11/03 | Contractor | Remediation | \$ 1,800.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 211 | | GM CLEMENT & ASSOCIATES INC | EGA3004A | 7/22/03 | Environmental contractor | Investigation/Remediation | \$5,353.67 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 212 | | GM CLEMENT & ASSOCIATES INC | EGA3004B | 7/23/03 | Environmental contractor | Investigation/Remediation | \$1,200.11 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 213 | | H S I GEOTRANS INC | INV0000033724 | 7/29/03 | Environmental contractor | Investigation/Remediation | \$ 1,241.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 214 | | BASCOR ENVIRONMENTAL, INC. | 0307280 | 8/6/03 | Environmental Consultant | Investigation/Remediation | \$ 97.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 215 | | US ENVIRONMENTAL RENTAL CORP | R112314 | 8/7/03 | Lab | Investigation/Remediation | \$ 3,570.04 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 216 | | GM CLEMENT & ASSOCIATES INC | 3005A | 8/18/03 | Environmental contractor | Investigation/Remediation | \$658.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 217 | | GM CLEMENT & ASSOCIATES INC | 3005B | 8/18/03 | Environmental contractor | Investigation/Remediation | \$728.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 218 | | COCHISE CONTRACTORS INC | 901016 | 8/20/03 | Civil contractor | Investigation/Remediation | \$ 3,805.33 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 219 | | GEOTRANS INC | INV0000037569 | 8/26/03 | Environmental contractor | Investigation/Remediation | \$ 4,690.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 220 | | SAGUARO ENVIRONMENTAL SERVICES | 386061 | 9/5/03 | Environmental Services | Investigation/Remediation | \$ 182.56 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 221 | | BASCOR ENVIRONMENTAL, INC. | 0308280 | 9/8/03 | Environmental Consultant | Investigation/Remediation | \$ 1,407.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 222 | | GEOTRANS INC | INV0000040219 | 9/30/03 | Environmental contractor | Investigation/Remediation | \$ 12,105.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 223 | | COCHISE CONTRACTORS INC | 901113 | 10/2/03 | Civil contractor | Investigation/Remediation | \$ 7,724.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 224 | | TRANSWEST GEOCHEM | 309408 | 10/6/03 | Lab | Investigation/Remediation | \$ 3,600.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 225 | | BASCOR ENVIRONMENTAL, INC. | 0309280 | 10/9/03 | Environmental Consultant | Investigation/Remediation | \$ 2,061.39 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 226 | | QUALITY BY DESIGN | 1500 | 10/26/03 | Contractor | Remediation | \$ 300.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 227 | | GM CLEMENT & ASSOCIATES INC | 3006A | 10/26/03 | Environmental contractor | Investigation/Remediation | \$9,107.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 228 | | GM CLEMENT & ASSOCIATES INC | 3006B | 10/27/03 | Environmental contractor | Investigation/Remediation | \$5,516.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 229 | | GEOTRANS INC | INV0000043011 | 10/28/03 | Environmental contractor | Investigation/Remediation | \$ 3,850.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 230 | | GEOTRANS INC | INV0000045748 | 11/25/03 | Environmental contractor | Investigation/Remediation | \$ 4,415.95 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 231 | | GM CLEMENT & ASSOCIATES INC | 3007B | 12/3/03 | Environmental contractor | Investigation/Remediation | \$977.71 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 232 | | GM CLEMENT & ASSOCIATES INC | 3007A | 12/4/03 | Environmental contractor | Investigation/Remediation | \$1,003.31 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 233 | | MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT | 120503 | 12/5/03 | Permits | Remediation | \$ 1,300.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 234 | | BASCOR ENVIRONMENTAL, INC. | 0311280 | 12/6/03 | Environmental Consultant | Investigation/Remediation | \$ 938.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 235 | | ARIZONA PUBLIC SERVICE CO. | 247654287DEC03 | 12/18/03 | Utility | Remediation | \$ 76.56 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 236 | | TRANSWEST GEOCHEM | 312203 | 1/2/04 | Lab | Investigation/Remediation | \$ 2,250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 237 | | TRANSWEST GEOCHEM | 312204 | 1/2/04 | Lab | Investigation/Remediation | \$ 110.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 238 | | SAGUARO ENVIRONMENTAL SERVICES | 432474 | 1/8/04 | Environmental Services | Investigation/Remediation | \$ 202.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 239 | | CASCADE CONTROLS CORP. | 016677000 | 1/16/04 | Drilling & Well Services | Investigation/Remediation | \$ 95.30 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 240 | | GM CLEMENT & ASSOCIATES INC | 4001A | 1/16/04 | Environmental contractor | Investigation/Remediation | \$1,225.39 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 241 | | GM CLEMENT & ASSOCIATES INC | 4001B | 1/16/04 | Environmental contractor | Investigation/Remediation | \$950.89 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 242 | | GM CLEMENT & ASSOCIATES INC | 4002A | 1/22/04 | Environmental contractor | Investigation/Remediation | \$6,344.82 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 243 | | GM CLEMENT & ASSOCIATES INC | 4002B | 1/22/04 | Environmental contractor | Investigation/Remediation | \$1,909.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 244 | | TRANSWEST GEOCHEM | 401156 | 1/23/04 | Lab | Investigation/Remediation | \$ 370.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 245 | | GEOTRANS INC | INV0000054153 | 1/27/04 | Environmental contractor | Investigation/Remediation | \$ 125.40 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 246 | | VAPORTECH SERVICES | 3090 | 1/31/04 | Remediation film coating | Remediation | \$ 559.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 247 | | ARIZONA PUBLIC SERVICE CO. | 247654287FEB04 | 2/2/04 | Utility | Remediation | \$ 78.35 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 248 | | SAGUARO ENVIRONMENTAL SERVICES | 444280 | 2/3/04 | Environmental Services | Investigation/Remediation | \$ 35.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 249 | | CASCADE CONTROLS CORP. | 016684301 | 2/5/04 | Drilling & Well Services | Investigation/Remediation | \$ 395.93 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 250 | | TRANSWEST GEOCHEM | 402012 | 2/6/04 | Lab | Investigation/Remediation | \$ 370.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--------------------------------|-----------------|--------------|-------------------------------|---------------------------|---------------|----------------|--|
| 251 | | J ELLIS SERVICES | 523 | 2/9/04 | Remediation contractor | Remediation | \$ 10,502.92 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 252 | | VAPORTECH SERVICES | 3117 | 2/14/04 | Remediation film coating | Remediation | \$ 1,425.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 253 | | QWEST | 6022539179FEB04 | 2/19/04 | Telecom | Remediation | \$ 107.14 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 254 | | US FILTER | 0157179IN | 2/26/04 | Remediation filters/treatment | Remediation | \$ 9,221.05 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 255 | | GEOTRANS INC | INV0000057129 | 2/26/04 | Environmental contractor | Investigation/Remediation | \$ 217.36 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 256 | | GM CLEMENT & ASSOCIATES INC | 4003A | 3/1/04 | Environmental contractor | Investigation/Remediation | \$9,648.30 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 257 | | SAGUARO ENVIRONMENTAL SERVICES | 454306 | 3/3/04 | Environmental Services | Investigation/Remediation | \$ 182.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 258 | | SAGUARO ENVIRONMENTAL SERVICES | 455438 | 3/3/04 | Environmental Services | Investigation/Remediation | \$ 203.34 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 259 | | QUALITY BY DESIGN | 1553 | 3/13/04 | Contractor | Remediation | \$ 650.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 260 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAR04 | 3/18/04 | Utility | Remediation | \$ 79.20 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 261 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAR04A | 3/18/04 | Utility | Remediation | \$ 59.81 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 262 | | QWEST | 6022539179MAR04 | 3/19/04 | Telecom | Remediation | \$ 58.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 263 | | VAPORTECH SERVICES | 3171 | 3/22/04 | Remediation film coating | Remediation | \$ 380.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 264 | | ELECTRO TEST INC | 0172556IN | 3/23/04 | Electrical services | Remediation | \$ 3,200.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 265 | | TRANSWEST GEOCHEM | 403042 | 3/24/04 | Lab | Investigation/Remediation | \$ 150.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 266 | | QWEST | 6022508602APR04 | 4/1/04 | Telecom | Remediation | \$ 238.33 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 267 | | GEOTRANS INC | INV0000061751 | 4/1/04 | Environmental contractor | Investigation/Remediation | \$ 706.42 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 268 | | GM CLEMENT & ASSOCIATES INC | 4004A | 4/2/04 | Environmental contractor | Investigation/Remediation | \$8,153.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 269 | | GM CLEMENT & ASSOCIATES INC | 4004B | 4/5/04 | Environmental contractor | Investigation/Remediation | \$312.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 270 | | US FILTER | 0158592IN | 4/8/04 | Remediation filters/treatment | Remediation | \$ 8,384.80 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 271 | | TRANSWEST GEOCHEM | 403228 | 4/15/04 | Lab | Investigation/Remediation | \$ 2,400.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 272 | | ARIZONA PUBLIC SERVICE CO. | 247654287APR04 | 4/15/04 | Utility | Remediation | \$ 247.32 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 273 | | ELLIS SYSTEMS INC | 535 | 4/19/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 274 | | QWEST | 6022539179APR04 | 4/19/04 | Telecom | Remediation | \$ 62.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 275 | | TRANSWEST GEOCHEM | 404152 | 4/20/04 | Lab | Investigation/Remediation | \$ 370.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 276 | | HEBER MINING EXPLORATION CO | 241880 | 4/22/04 | Drilling contractor | Investigation/Remediation | \$ 8,530.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 277 | | GM CLEMENT & ASSOCIATES INC | 4005A | 4/23/04 | Environmental contractor | Investigation/Remediation | \$8,176.96 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 278 | | GM CLEMENT & ASSOCIATES INC | 4005B | 4/26/04 | Environmental contractor | Investigation/Remediation | \$553.20 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 279 | | GEOTRANS INC | INV0000066498 | 4/29/04 | Environmental contractor | Investigation/Remediation | \$ 27.17 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 280 | | POLLUTION CONTROL INDUSTRIES | TN0016644 | 5/5/04 | Remediation system vendor | Remediation | \$ 550.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 281 | | TRANSWEST GEOCHEM | 404364 | 5/11/04 | Lab | Investigation/Remediation | \$ 881.79 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 282 | | ELLIS SYSTEMS INC | 540 | 5/13/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 283 | | TRANSWEST GEOCHEM | 404385 | 5/13/04 | Lab | Investigation/Remediation | \$ 175.10 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 284 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAY04 | 5/14/04 | Utility | Remediation | \$ 256.12 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 285 | | QWEST | 6022539179MAY04 | 5/19/04 | Telecom | Remediation | \$ 43.76 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 286 | | GM CLEMENT & ASSOCIATES INC | 4006A | 5/20/04 | Environmental contractor | Investigation/Remediation | \$4,809.37 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 287 | | GM CLEMENT & ASSOCIATES INC | 4006B | 5/21/04 | Environmental contractor | Investigation/Remediation | \$112.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 288 | | TRANSWEST GEOCHEM | 405302 | 5/26/04 | Lab | Investigation/Remediation | \$ 555.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 289 | | ARIZONA PUBLIC SERVICE CO. | 247654287JUN04 | 6/15/04 | Utility | Remediation | \$ 325.95 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 290 | | QWEST | 6022539179JUN04 | 6/19/04 | Telecom | Remediation | \$ 42.83 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 291 | | US FILTER | 0160756IN | 6/22/04 | Remediation filters/treatment | Remediation | \$ 8,467.52 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 292 | | GM CLEMENT & ASSOCIATES INC | 4007A | 7/7/04 | Environmental contractor | Investigation/Remediation | \$8,427.93 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--------------------------------|-----------------|--------------|-------------------------------|---------------------------|---------------|----------------|--|
| 293 | | ELLIS SYSTEMS INC | 549A | 7/7/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 294 | | GM CLEMENT & ASSOCIATES INC | 4007B | 7/8/04 | Environmental contractor | Investigation/Remediation | \$1,072.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 295 | | ARIZONA PUBLIC SERVICE CO. | 247654287JUL04 | 7/15/04 | Utility | Remediation | \$ 234.38 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 296 | | GM CLEMENT & ASSOCIATES INC | 4008A | 7/18/04 | Environmental contractor | Investigation/Remediation | \$5,581.10 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 297 | | GM CLEMENT & ASSOCIATES INC | 4008B | 7/19/04 | Environmental contractor | Investigation/Remediation | \$1,362.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 298 | | QWEST | 6022539179JUL04 | 7/19/04 | Telecom | Remediation | \$ 42.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 299 | | TRANSWEST GEOCHEM | 407158 | 7/23/04 | Lab | Investigation/Remediation | \$ 2,220.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 300 | | TRANSWEST GEOCHEM | 407105 | 8/2/04 | Lab | Investigation/Remediation | \$ 555.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 301 | | ELLIS SYSTEMS INC | 557 | 8/11/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 302 | | ARIZONA PUBLIC SERVICE CO. | 247654287AUG04 | 8/13/04 | Utility | Remediation | \$ 251.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 303 | | GM CLEMENT & ASSOCIATES INC | 4009A | 8/16/04 | Environmental contractor | Investigation/Remediation | \$2,680.40 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 304 | | GM CLEMENT & ASSOCIATES INC | 4009B | 8/17/04 | Environmental contractor | Investigation/Remediation | \$833.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 305 | | QWEST | 6022539179AUG04 | 8/19/04 | Telecom | Remediation | \$ 42.42 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 306 | | TRANSWEST GEOCHEM | 408312 | 8/27/04 | Lab | Investigation/Remediation | \$ 555.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 307 | | QWEST | 6022508602SEP04 | 9/1/04 | Telecom | Remediation | \$ 219.97 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 308 | | ARIZONA PUBLIC SERVICE CO. | 247654287SEP04 | 9/14/04 | Utility | Remediation | \$ 283.35 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 309 | | QWEST | 6022539179SEP04 | 9/19/04 | Telecom | Remediation | \$ 42.52 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 310 | | GM CLEMENT & ASSOCIATES INC | 4010A | 9/24/04 | Environmental contractor | Investigation/Remediation | \$1,983.92 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 311 | | GM CLEMENT & ASSOCIATES INC | 4010B | 9/24/04 | Environmental contractor | Investigation/Remediation | \$390.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 312 | | TRANSWEST GEOCHEM | 409043 | 9/27/04 | Lab | Investigation/Remediation | \$ 1,657.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 313 | | QWEST | 6022508602OCT04 | 10/1/04 | Telecom | Remediation | \$ 41.30 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 314 | | ELLIS SYSTEMS INC | 569 | 10/11/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 315 | | GEOMATRIX CONSULTANTS | 0032830 | 10/11/04 | Environmental contractor | Investigation/Remediation | \$ 1,751.83 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 316 | | QWEST | 6022539179OCT04 | 10/19/04 | Telecom | Remediation | \$ 42.52 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 317 | | ARIZONA PUBLIC SERVICE CO. | 247654287OCT04 | 10/21/04 | Utility | Remediation | \$ 290.77 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 318 | | GM CLEMENT & ASSOCIATES INC | 4011A | 10/28/04 | Environmental contractor | Investigation/Remediation | \$4,932.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 319 | | GM CLEMENT & ASSOCIATES INC | 4011B | 10/29/04 | Environmental contractor | Investigation/Remediation | \$1,181.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 320 | | QWEST | 6022508602NOV04 | 11/1/04 | Telecom | Remediation | \$ 42.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 321 | | SAGUARO ENVIRONMENTAL SERVICES | 544226 | 11/3/04 | Environmental Services | Investigation/Remediation | \$ 209.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 322 | | BRANOM INSTRUMENT CO. | 265764 | 11/9/04 | Process Instruments | Investigation/Remediation | \$ 134.56 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 323 | | GM CLEMENT & ASSOCIATES INC | 4012A | 11/10/04 | Environmental contractor | Investigation/Remediation | \$1,653.32 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 324 | | GM CLEMENT & ASSOCIATES INC | 4012B | 11/11/04 | Environmental contractor | Investigation/Remediation | \$285.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 325 | | ELLIS SYSTEMS INC | 575 | 11/15/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 326 | | MARICOPA COUNTY | 020174 | 11/15/04 | Permits | Remediation | \$ 1,350.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 327 | | ARIZONA PUBLIC SERVICE CO. | 247654287NOV04 | 11/15/04 | Utility | Remediation | \$ 171.72 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 328 | | US FILTER | 0165357IN | 11/17/04 | Remediation filters/treatment | Remediation | \$ 8,276.40 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 329 | | QWEST | 6022539179NOV04 | 11/19/04 | Telecom | Remediation | \$ 42.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 330 | | QWEST | 6022508602DEC04 | 12/1/04 | Telecom | Remediation | \$ 42.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 331 | | SAGUARO ENVIRONMENTAL SERVICES | 20016510DEC04 | 12/2/04 | Environmental Services | Investigation/Remediation | \$ 226.13 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 332 | | TRANSWEST GEOCHEM | 411186 | 12/8/04 | Lab | Investigation/Remediation | \$ 270.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 333 | | GM CLEMENT & ASSOCIATES INC | 0413B | 12/12/04 | Environmental contractor | Investigation/Remediation | \$82.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 334 | | GM CLEMENT & ASSOCIATES INC | 4013A | 12/13/04 | Environmental contractor | Investigation/Remediation | \$1,737.08 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--------------------------------|-----------------|--------------|-------------------------------|---------------------------|---------------|----------------|--|
| 335 | | ELLIS SYSTEMS INC | 580 | 12/14/04 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 336 | | ARIZONA PUBLIC SERVICE CO. | 247654287DEC04 | 12/16/04 | Utility | Remediation | \$ 178.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 337 | | QWEST | 6022539179DEC04 | 12/19/04 | Telecom | Remediation | \$ 42.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 338 | | QWEST | 6022508602JAN05 | 1/1/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 339 | | ELLIS SYSTEMS INC | 583 | 1/11/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 340 | | TRANSWEST GEOCHEM | 0501099 | 1/13/05 | Lab | Investigation/Remediation | \$ 510.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 341 | | ARIZONA PUBLIC SERVICE CO. | 247654287JAN05 | 1/19/05 | Utility | Remediation | \$ 213.64 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 342 | | QWEST | 6022539179JAN05 | 1/19/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 343 | | QWEST | 6022508602FEB05 | 2/1/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 344 | | GM CLEMENT & ASSOCIATES INC | 5001A | 2/3/05 | Environmental contractor | Investigation/Remediation | \$3,405.89 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 345 | | GM CLEMENT & ASSOCIATES INC | 5001B | 2/3/05 | Environmental contractor | Investigation/Remediation | \$1,079.10 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 346 | | ELLIS SYSTEMS INC | 589 | 2/14/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 347 | | ARIZONA PUBLIC SERVICE CO. | 247654287FEB05 | 2/16/05 | Utility | Remediation | \$ 169.52 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 348 | | QWEST | 6022539179FEB05 | 2/19/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 349 | | QWEST | 6022508602MAR05 | 3/1/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 350 | | ELLIS SYSTEMS INC | 596 | 3/8/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 351 | | US FILTER | 0168207IN | 3/8/05 | Remediation filters/treatment | Remediation | \$ 7,858.40 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 352 | | GM CLEMENT & ASSOCIATES INC | 5002A | 3/15/05 | Environmental contractor | Investigation/Remediation | \$1,866.34 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 353 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAR05 | 3/17/05 | Utility | Remediation | \$ 173.91 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 354 | | MP ENVIRONMENTAL SERVICES INC. | 0526279 | 3/18/05 | Environmental services | Investigation/Remediation | \$ 221.63 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 355 | | QWEST | 6022539179MAR05 | 3/19/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 356 | | TRANSWEST GEOCHEM | 0503321 | 3/28/05 | Lab | Investigation/Remediation | \$ 225.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 357 | | BLOOMQUIST PUMP SERVICE | 6111 | 3/29/05 | Wells | Investigation/Remediation | \$ 2,779.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 358 | | QWEST | 6022508602APR05 | 4/1/05 | Telecom | Remediation | \$ 42.65 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 359 | | GEOMECHANICS SOUTHWEST, INC. | 510253 | 4/4/05 | Drilling & Well Services | Investigation/Remediation | \$ 8,876.47 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 360 | | GM CLEMENT & ASSOCIATES INC | 5003A | 4/11/05 | Environmental contractor | Investigation/Remediation | \$9,322.52 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 361 | | GM CLEMENT & ASSOCIATES INC | 5003B | 4/11/05 | Environmental contractor | Investigation/Remediation | \$592.90 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 362 | | MP ENVIRONMENTAL SERVICES INC. | 0529402 | 4/13/05 | Environmental services | Investigation/Remediation | \$ 411.13 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 363 | | ARIZONA PUBLIC SERVICE CO. | 247654287APR05 | 4/15/05 | Utility | Remediation | \$ 218.06 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 364 | | ELLIS SYSTEMS INC | 603 | 4/18/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 365 | | QWEST | 6022539179APR05 | 4/19/05 | Telecom | Remediation | \$ 42.65 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 366 | | TRANSWEST GEOCHEM | 0503423 | 4/27/05 | Lab | Investigation/Remediation | \$ 3,504.74 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 367 | | QWEST | 6022508602MAY05 | 5/1/05 | Telecom | Remediation | \$ 42.65 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 368 | | ELLIS SYSTEMS INC | 608 | 5/12/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 369 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAY05 | 5/16/05 | Utility | Remediation | \$ 179.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 370 | | QWEST | 6022539179MAY05 | 5/19/05 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 371 | | GM CLEMENT & ASSOCIATES INC | 5004A | 5/24/05 | Environmental contractor | Investigation/Remediation | \$2,386.18 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 372 | | QWEST | 6022508602JUN05 | 6/1/05 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 373 | | GM CLEMENT & ASSOCIATES INC | 5005A | 6/13/05 | Environmental contractor | Investigation/Remediation | \$2,049.44 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 374 | | GM CLEMENT & ASSOCIATES INC | 5005B | 6/13/05 | Environmental contractor | Investigation/Remediation | \$760.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 375 | | ELLIS SYSTEMS INC | 614 | 6/15/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 376 | | ARIZONA PUBLIC SERVICE CO. | 247654287JUN05 | 6/15/05 | Utility | Remediation | \$ 315.45 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|-----------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 377 | | QWEST | 6022539179JUN05 | 6/19/05 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 378 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 54597 | 6/30/05 | Arizona | Remediation | \$ 40.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 379 | | QWEST | 6022508602JUL05 | 7/1/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 380 | | ARIZONA PUBLIC SERVICE CO. | 247654287JUL05 | 7/15/05 | Utility | Remediation | \$ 173.93 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 381 | | ELLIS SYSTEMS INC | 622 | 7/18/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 382 | | QWEST | 6022539179JUL05 | 7/19/05 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 383 | | QWEST | 6022508602AUG05 | 8/1/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 384 | | ARIZONA PUBLIC SERVICE CO. | 247654287AUG05 | 8/15/05 | Utility | Remediation | \$ 116.20 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 385 | | ELLIS SYSTEMS INC | 626 | 8/17/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 386 | | QWEST | 6022539179AUG05 | 8/19/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 387 | | GM CLEMENT & ASSOCIATES INC | 5006A | 8/20/05 | Environmental contractor | Investigation/Remediation | \$1,466.13 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 388 | | TRANSWEST GEOCHEM | 0508136 | 8/23/05 | Lab | Investigation/Remediation | \$ 555.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 389 | | QWEST | 6022508602SEP05 | 9/1/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 390 | | GM CLEMENT & ASSOCIATES INC | 5007A | 9/12/05 | Environmental contractor | Investigation/Remediation | \$1,500.78 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 391 | | ARIZONA PUBLIC SERVICE CO. | 247654287SEP05 | 9/14/05 | Utility | Remediation | \$ 158.11 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 392 | | ELLIS SYSTEMS INC | 632 | 9/19/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 393 | | QWEST | 6022539179SEP05 | 9/19/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 394 | | QWEST | 6022508602OCT05 | 10/1/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 395 | | GM CLEMENT & ASSOCIATES INC | 5008A | 10/10/05 | Environmental contractor | Investigation/Remediation | \$3,654.81 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 396 | | ARIZONA PUBLIC SERVICE CO. | 247654287OCT05 | 10/14/05 | Utility | Remediation | \$ 118.15 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 397 | | QWEST | 6022539179OCT05 | 10/19/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 398 | | ELLIS SYSTEMS INC | 640 | 10/24/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 399 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 54799 | 10/28/05 | Arizona | Remediation | \$ 40.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 400 | | TRANSWEST GEOCHEM | 0509352 | 11/1/05 | Lab | Investigation/Remediation | \$ 1,160.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 401 | | QWEST | 6022508602NOV05 | 11/1/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 402 | | ELLIS SYSTEMS INC | 644 | 11/9/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 403 | | GM CLEMENT & ASSOCIATES INC | 5009A | 11/10/05 | Environmental contractor | Remediation | \$827.77 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 404 | | ARIZONA PUBLIC SERVICE CO. | 247654287NOV05 | 11/15/05 | Utility | Remediation | \$ 110.99 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 405 | | QWEST | 6022539179NOV05 | 11/19/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 406 | | QWEST | 6022508602DEC05 | 12/1/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 407 | | GM CLEMENT & ASSOCIATES INC | 5010B | 12/5/05 | Environmental contractor | Investigation/Remediation | \$412.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 408 | | GM CLEMENT & ASSOCIATES INC | 5010A | 12/6/05 | Environmental contractor | Investigation/Remediation | \$2,152.83 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 409 | | MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT | 020174DEC05 | 12/7/05 | Permits | Remediation | \$ 1,660.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 410 | | ELLIS SYSTEMS INC | 652 | 12/12/05 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 411 | | ARIZONA PUBLIC SERVICE CO. | 247654287DEC05 | 12/16/05 | Utility | Remediation | \$ 144.83 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 412 | | QWEST | 6022539179DEC05 | 12/19/05 | Telecom | Remediation | \$ 42.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 413 | | QWEST | 6022508602JAN06 | 1/1/06 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 414 | | ELLIS SYSTEMS INC | 660 | 1/19/06 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 415 | | ARIZONA PUBLIC SERVICE CO. | 247654287JAN06 | 1/19/06 | Utility | Remediation | \$ 129.45 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 416 | | QWEST | 6022539179JAN06 | 1/19/06 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|-----------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 417 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 57326 | 1/30/06 | Arizona | Remediation | \$ 260.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 418 | | QWEST | 6022508602FEB06 | 2/1/06 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 419 | | GM CLEMENT & ASSOCIATES INC | 6001A | 2/6/06 | Environmental contractor | Investigation/Remediation | \$3,206.68 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 420 | | GM CLEMENT & ASSOCIATES INC | 6001B | 2/6/06 | Environmental contractor | Investigation/Remediation | \$1,545.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 421 | | ELLIS SYSTEMS INC | 670 | 2/9/06 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 422 | | GM CLEMENT & ASSOCIATES INC | 6002A | 2/14/06 | Environmental contractor | Investigation/Remediation | \$2,185.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 423 | | GM CLEMENT & ASSOCIATES INC | 6002B | 2/14/06 | Environmental contractor | Investigation/Remediation | \$1,460.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 424 | | QWEST | 6022539179FEB06 | 2/19/06 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 425 | | ARIZONA PUBLIC SERVICE CO. | 247654287FEB06 | 2/20/06 | Utility | Remediation | \$ 27.06 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 426 | | QWEST | 6022508602MAR06 | 3/1/06 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 427 | | GM CLEMENT & ASSOCIATES INC | 6003A | 3/13/06 | Environmental contractor | Investigation/Remediation | \$1,912.69 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 428 | | ELLIS SYSTEMS INC | 684 | 3/14/06 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 429 | | QWEST | 6022539179MAR06 | 3/19/06 | Telecom | Remediation | \$ 42.62 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 430 | | BLOOMQUIST PUMP SERVICE | 6082 | 3/20/06 | Wells | Investigation/Remediation | \$ 737.46 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 431 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAR06 | 3/20/06 | Utility | Remediation | \$ 29.60 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 432 | | QWEST | 6022508602APR06 | 4/1/06 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 433 | | TRANSWEST GEOCHEM | 0621555 | 4/5/06 | Lab | Investigation/Remediation | \$ 3,149.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 434 | | GM CLEMENT & ASSOCIATES INC | 6004A | 4/10/06 | Environmental contractor | Investigation/Remediation | \$4,850.90 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 435 | | GM CLEMENT & ASSOCIATES INC | 6004B | 4/10/06 | Environmental contractor | Investigation/Remediation | \$577.19 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 436 | | ARIZONA PUBLIC SERVICE CO. | 247654287APR06 | 4/18/06 | Utility | Remediation | \$ 25.61 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 437 | | QWEST | 6022539179APR06 | 4/19/06 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 438 | | QWEST | 6022508602MAY06 | 5/1/06 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 439 | | GM CLEMENT & ASSOCIATES INC | 6005A | 5/15/06 | Environmental contractor | Investigation/Remediation | \$4,621.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 440 | | ARIZONA PUBLIC SERVICE CO. | 247654287MAY06 | 5/16/06 | Utility | Remediation | \$ 55.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 441 | | QWEST | 6022539179MAY06 | 5/19/06 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 442 | | QWEST | 6022508602JUN06 | 6/1/06 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 443 | | ELLIS SYSTEMS INC | 712 | 6/5/06 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 444 | | TRANSWEST GEOCHEM | 0622768 | 6/5/06 | Lab | Investigation/Remediation | \$ 555.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 445 | | GM CLEMENT & ASSOCIATES INC | 6006A | 6/12/06 | Environmental contractor | Investigation/Remediation | \$1,261.99 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 446 | | ARIZONA PUBLIC SERVICE CO. | 247654287JUN06 | 6/15/06 | Utility | Remediation | \$ 197.51 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 447 | | ARIZONA PUBLIC SERVICE CO. | M | 6/15/06 | Utility | Remediation | (\$ 3.82) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 448 | | QWEST | 6022539179JUN06 | 6/19/06 | Telecom | Remediation | \$ 42.66 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 449 | | SIEMENS WATER TECHNOLOGIES CORP | 1832104 | 6/26/06 | Environmental services | Remediation | \$ 8,076.48 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 450 | | QWEST | 6022508602JUL06 | 7/1/06 | Telecom | Remediation | \$ 42.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 451 | | SAGUARO ENVIRONMENTAL SERVICES | 771586 | 7/5/06 | Environmental Services | Investigation/Remediation | \$ 253.72 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 452 | | SAGUARO ENVIRONMENTAL SERVICES | 771586CR | 7/5/06 | Environmental Services | Investigation/Remediation | (\$ 253.72) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 453 | | ELLIS SYSTEMS INC | 724 | 7/10/06 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 454 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 57927 | 7/18/06 | Arizona | Remediation | \$ 37.50 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 455 | | ARIZONA PUBLIC SERVICE CO. | 247654287JUL06 | 7/19/06 | Utility | Remediation | \$ 419.94 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 456 | | QWEST | 6022539179JUL06 | 7/19/06 | Telecom | Remediation | \$ 42.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|-----------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 457 | | GM CLEMENT & ASSOCIATES INC | 6007A | 7/27/06 | Environmental contractor | Investigation/Remediation | \$2,339.75 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 458 | | QWEST | 6022508602AUG06 | 8/1/06 | Telecom | Remediation | \$ 43.18 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 459 | | ELLIS SYSTEMS INC | 731 | 8/15/06 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 460 | | TRANSWEST GEOCHEM | 0623967 | 8/15/06 | Lab | Investigation/Remediation | \$ 606.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 461 | | ARIZONA PUBLIC SERVICE CO. | 247654287AUG06 | 8/15/06 | Utility | Remediation | \$ 336.44 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 462 | | QWEST | 6022539179AUG06 | 8/19/06 | Telecom | Remediation | \$ 42.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 463 | | QWEST | 6022508602SEP06 | 9/1/06 | Telecom | Remediation | \$ 43.18 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 464 | | GM CLEMENT & ASSOCIATES INC | 6008A | 9/5/06 | Environmental contractor | Investigation/Remediation | \$2,609.23 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 465 | | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 5684 | 9/11/06 | Environmental services | Investigation/Remediation | \$ 2,956.29 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 466 | | GM CLEMENT & ASSOCIATES INC | 6009A | 9/13/06 | Environmental contractor | Investigation/Remediation | \$6,961.17 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 467 | | ARIZONA PUBLIC SERVICE CO. | 247654287SEP06 | 9/14/06 | Utility | Remediation | \$ 49.90 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 468 | | GM CLEMENT & ASSOCIATES INC | 6009B | 9/14/06 | Environmental contractor | Investigation/Remediation | \$596.60 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 469 | | QWEST | 6022539179SEP06 | 9/19/06 | Telecom | Remediation | \$ 42.54 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 470 | | MOTION INDUSTRIES | AZ51810568 | 9/29/06 | Industrial supplies | Investigation/Remediation | \$ 2,577.23 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 471 | | QWEST | 6022508602OCT06 | 10/1/06 | Telecom | Remediation | \$ 43.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 472 | | GM CLEMENT & ASSOCIATES INC | 6010A | 10/4/06 | Environmental contractor | Investigation/Remediation | \$6,541.57 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 473 | | GM CLEMENT & ASSOCIATES INC | 6010B | 10/4/06 | Environmental contractor | Investigation/Remediation | \$594.10 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 474 | | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 5730 | 10/9/06 | Environmental services | Investigation/Remediation | \$ 2,075.77 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 475 | | ARIZONA PUBLIC SERVICE CO. | 247654287OCT06 | 10/13/06 | Utility | Remediation | \$ 71.96 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 476 | | TRANSWEST GEOCHEM | 0625063 | 10/17/06 | Lab | Investigation/Remediation | \$ 1,534.25 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 477 | | QWEST | 6022539179OCT06 | 10/19/06 | Telecom | Remediation | \$ 42.45 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 478 | | QWEST | 6022508602NOV06 | 11/1/06 | Telecom | Remediation | \$ 43.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 479 | | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 5789 | 11/8/06 | Environmental services | Investigation/Remediation | \$ 1,545.34 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 480 | | ARIZONA PUBLIC SERVICE CO. | 247654287NOV06 | 11/14/06 | Utility | Remediation | \$ 258.87 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 481 | | GM CLEMENT & ASSOCIATES INC | 6011A | 11/16/06 | Environmental contractor | Investigation/Remediation | \$4,582.23 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 482 | | GM CLEMENT & ASSOCIATES INC | 6011B | 11/17/06 | Environmental contractor | Investigation/Remediation | \$1,054.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 483 | | QWEST | 6022539179NOV06 | 11/19/06 | Telecom | Remediation | \$ 42.45 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 484 | | QWEST | 6022508602DEC06 | 12/1/06 | Telecom | Remediation | \$ 43.09 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 485 | | MARICOPA COUNTY | 120406 | 12/4/06 | Permits | Remediation | \$ 1,710.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 486 | | GM CLEMENT & ASSOCIATES INC | 6012A | 12/5/06 | Environmental contractor | Investigation/Remediation | \$2,417.37 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 487 | | GM CLEMENT & ASSOCIATES INC | 6012B | 12/5/06 | Environmental contractor | Investigation/Remediation | \$1,653.42 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 488 | | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 5843 | 12/13/06 | Environmental services | Investigation/Remediation | \$ 213.15 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 489 | | ARIZONA PUBLIC SERVICE CO. | 247654287DEC06 | 12/15/06 | Utility | Remediation | \$ 314.87 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 490 | | QWEST | 6022539179DEC06 | 12/19/06 | Telecom | Remediation | \$ 42.45 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 491 | | QWEST | 6022508602JAN07 | 1/1/07 | Telecom | Remediation | \$ 42.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 492 | | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 5888 | 1/8/07 | Environmental services | Investigation/Remediation | \$ 106.58 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 493 | | ARIZONA PUBLIC SERVICE CO. | 247654287JAN07 | 1/18/07 | Utility | Remediation | \$ 300.60 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 494 | | QWEST | 6022539179JAN07 | 1/19/07 | Telecom | Remediation | \$ 42.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 495 | | QWEST | 6022508602FEB07 | 2/1/07 | Telecom | Remediation | \$ 42.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 496 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 60774 | 2/9/07 | Arizona | Remediation | \$ 300.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 497 | | GM CLEMENT & ASSOCIATES INC | 7001A | 2/11/07 | Environmental contractor | Investigation/Remediation | \$1,736.33 | \$0.00 | No Invoice provided - lacks sufficient documentation |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|------------------|--------------|----------------------------|---------------------------|---------------|----------------|--|
| 498 | | GM CLEMENT & ASSOCIATES INC | 7001B | 2/11/07 | Environmental contractor | Investigation/Remediation | \$555.21 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 499 | | TRANSWEST GEOCHEM | 0626863 | 2/14/07 | Lab | Investigation/Remediation | \$ 185.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 500 | | TRANSWEST GEOCHEM | 0626864 | 2/14/07 | Lab | Investigation/Remediation | \$ 185.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 501 | | ARIZONA PUBLIC SERVICE CO. | 247654287FEB07 | 2/15/07 | Utility | Remediation | \$ 298.20 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 502 | | QWEST | 60225391798FEB07 | 2/19/07 | Telecom | Remediation | \$ 42.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 503 | | QWEST | 6022508602MAR07 | 3/1/07 | Telecom | Remediation | \$ 42.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 504 | 0001 | ARIZONA PUBLIC SERVICE CO. | 247654287mar07 | 3/16/07 | Utility | Remediation | \$ 62.10 | \$62.10 | |
| 505 | 0002 | GM CLEMENT & ASSOCIATES INC | 7002a | 3/16/07 | Environmental contractor | Investigation/Remediation | \$4,931.48 | \$4,931.48 | |
| 506 | | QWEST | 6022539179 | 3/19/07 | Telecom | Remediation | \$ 42.49 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 507 | | TRANSWEST GEOCHEM | 0627558 | 3/21/07 | Lab | Investigation/Remediation | \$ 185.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 508 | | TRANSWEST GEOCHEM | 0627559 | 3/21/07 | Lab | Investigation/Remediation | \$ 370.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 509 | 0003 | QUARLES & BRADY LLP | 1321150 | 3/23/07 | Legal | Investigation/Remediation | \$ 55.00 | \$0.00 | Not appropriate for cost credit |
| 510 | | SIEMENS WATER TECHNOLOGIES CORP | 2081599 | 3/29/07 | Environmental services | Remediation | \$ 9,334.86 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 511 | | TRANSWEST GEOCHEM | 0627736 | 3/30/07 | Lab | Investigation/Remediation | \$ 1,326.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 512 | | SIEMENS WATER TECHNOLOGIES CORP | 2083925 | 3/30/07 | Environmental services | Remediation | \$ 494.04 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 513 | | QWEST | 6022508602APR07 | 4/1/07 | Telecom | Remediation | \$ 42.63 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 514 | 0004 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 6069 | 4/11/07 | Environmental services | Investigation/Remediation | \$ 657.72 | \$ 657.72 | |
| 515 | 0005 | ARIZONA PUBLIC SERVICE CO. | 247654287apr07 | 4/17/07 | Utility | Remediation | \$ 265.01 | \$265.01 | |
| 516 | 0006 | QWEST | 6022539179apr07 | 4/19/07 | Telecom | Remediation | \$ 42.63 | \$42.63 | |
| 517 | 0007 | GM CLEMENT & ASSOCIATES INC | 7003a | 4/23/07 | Environmental contractor | Investigation/Remediation | \$5,478.69 | \$5,478.69 | |
| 518 | 0008 | GM CLEMENT & ASSOCIATES INC | 7003b | 4/23/07 | Environmental contractor | Investigation/Remediation | \$540.06 | \$540.06 | |
| 519 | 0009 | QUARLES & BRADY LLP | 1327660 | 4/25/07 | Legal | Investigation/Remediation | \$ 82.50 | \$0.00 | Not appropriate for cost credit |
| 520 | | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 6099 | 4/30/07 | Environmental services | Investigation/Remediation | \$ 164.43 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 521 | 0010 | QWEST | 6022508602may07 | 5/1/07 | Telecom | Remediation | \$ 42.63 | \$42.63 | |
| 522 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 60927 | 5/7/07 | Arizona | Remediation | \$ 40.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 523 | 0011 | ARIZONA PUBLIC SERVICE CO. | 247654287may07 | 5/16/07 | Utility | Remediation | \$ 168.97 | \$168.97 | |
| 524 | 0012 | QWEST | 6022539179 | 5/19/07 | Telecom | Remediation | \$ 42.63 | \$42.63 | |
| 525 | 0013 | GM CLEMENT & ASSOCIATES INC | 7004a | 5/20/07 | Environmental contractor | Investigation/Remediation | \$2,570.12 | \$2,570.12 | |
| 526 | 0014 | QWEST | 6022508602jun07 | 6/1/07 | Telecom | Remediation | \$ 43.27 | \$43.27 | |
| 527 | 0015 | XCHANGER INC | 13399 | 6/8/07 | Remediation Heat Exchanger | Remediation | \$ 3,620.00 | \$3,620.00 | |
| 528 | 0016 | ARIZONA PUBLIC SERVICE CO. | 247654287JUN07 | 6/15/07 | Utility | Remediation | \$ 162.02 | \$ 162.02 | |
| 529 | 0017 | QWEST | 6022539179JUN07 | 6/19/07 | Telecom | Remediation | \$ 43.27 | \$43.27 | |
| 530 | 0018 | ELLIS SYSTEMS INC | 838 | 6/25/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 531 | 0019 | GM CLEMENT & ASSOCIATES INC | 7005A | 6/29/07 | Environmental contractor | Investigation/Remediation | \$4,273.67 | \$4,273.67 | |
| 532 | 0020 | QWEST | 6022508602JUL07 | 7/1/07 | Telecom | Remediation | \$ 41.37 | \$41.37 | |
| 533 | 0021 | GM CLEMENT & ASSOCIATES INC | 7006A | 7/15/07 | Environmental contractor | Investigation/Remediation | \$1,331.69 | \$1,331.69 | |
| 534 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 071707 | 7/17/07 | Arizona | Remediation | \$ 39.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 535 | 0022 | ARIZONA PUBLIC SERVICE CO. | 247654287JUL07 | 7/17/07 | Utility | Remediation | \$ 175.34 | \$ 175.34 | |
| 536 | 0023 | QWEST | 6022539179JUL07 | 7/19/07 | Telecom | Remediation | \$ 43.77 | \$43.77 | |
| 537 | 0024 | ELLIS SYSTEMS INC | 847 | 7/23/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 538 | 0025 | QWEST | 6022508602AUG07 | 8/1/07 | Telecom | Remediation | \$ 43.11 | \$43.11 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|-----------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 539 | 0026 | ELLIS SYSTEMS INC | 855 | 8/6/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 540 | | APS WATER SERVICES CORPORATION | 247654287AUG | 8/15/07 | Utility | Remediation | (\$ 188.65) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 541 | 0027 | APS WATER SERVICES CORPORATION | 247654287AUG07 | 8/15/07 | Utility | Remediation | \$ 188.65 | \$188.65 | |
| 542 | | APS WATER SERVICES CORPORATION | 247654287aug07 | 8/15/07 | Utility | Remediation | \$ 188.65 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 543 | 0028 | GM CLEMENT & ASSOCIATES INC | 7007A | 8/17/07 | Environmental contractor | Investigation/Remediation | \$2,948.90 | \$2,948.90 | |
| 544 | 0029 | QWEST | 6022539179AUG07 | 8/19/07 | Telecom | Remediation | \$ 43.13 | \$43.13 | |
| 545 | 0030 | QWEST | 6202508602SEP07 | 9/1/07 | Telecom | Remediation | \$ 43.62 | \$43.62 | |
| 546 | 0031 | GM CLEMENT & ASSOCIATES INC | 7008A | 9/7/07 | Environmental contractor | Investigation/Remediation | \$6,827.40 | \$6,827.40 | |
| 547 | | APS WATER SERVICES CORPORATION | 247654287SEP07 | 9/14/07 | Utility | Remediation | \$ 467.97 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 548 | 0032 | ELLIS SYSTEMS INC | 880 | 9/17/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 549 | 0033 | QWEST | 6022539179SEP07 | 9/19/07 | Telecom | Remediation | \$ 43.13 | \$43.13 | |
| 550 | 0034 | QWEST | 6022508602OCT07 | 10/1/07 | Telecom | Remediation | \$ 43.12 | \$43.12 | |
| 551 | 0035 | ELLIS SYSTEMS INC | 887 | 10/2/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 552 | 0036 | TRANSWEST GEOCHEM | 0631393 | 10/4/07 | Lab | Investigation/Remediation | \$ 2,652.00 | \$2,652.00 | |
| 553 | 0037 | TRANSWEST GEOCHEM | 0631501 | 10/10/07 | Lab | Investigation/Remediation | \$ 994.50 | \$994.50 | |
| 554 | 0038 | ARIZONA PUBLIC SERVICE CO. | 247654287OCT07 | 10/15/07 | Utility | Remediation | \$ 375.82 | \$375.82 | |
| 555 | 0039 | GM CLEMENT & ASSOCIATES INC | 7009A | 10/18/07 | Environmental contractor | Investigation/Remediation | \$10,863.25 | \$10,863.25 | |
| 556 | 0040 | QWEST | 6022539179OCT07 | 10/19/07 | Telecom | Remediation | \$ 43.13 | \$43.13 | |
| 557 | 0041 | GM CLEMENT & ASSOCIATES INC | 7009B | 10/19/07 | Environmental contractor | Investigation/Remediation | \$1,391.98 | \$1,391.98 | |
| 558 | 0042 | QWEST | 6022508602NOV07 | 11/1/07 | Telecom | Remediation | \$ 42.49 | \$42.49 | |
| 559 | 0043 | GM CLEMENT & ASSOCIATES INC | 7010A | 11/5/07 | Environmental contractor | Investigation/Remediation | \$1,526.86 | \$1,526.86 | |
| 560 | 0044 | GM CLEMENT & ASSOCIATES INC | 7010B | 11/6/07 | Environmental contractor | Investigation/Remediation | \$331.66 | \$331.66 | |
| 561 | 0045 | ARIZONA PUBLIC SERVICE CO. | 247654287NOV07 | 11/14/07 | Utility | Remediation | \$ 179.47 | \$ 179.47 | |
| 562 | 0046 | QWEST | 6022539179NOV07 | 11/19/07 | Telecom | Remediation | \$ 43.11 | \$43.11 | |
| 563 | 0047 | ELLIS SYSTEMS INC | 902 | 11/26/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 564 | | MARICOPA COUNTY AIR QUALITY DEPT | 020174DEC07 | 11/29/07 | Permits | Remediation | \$ 1,780.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 565 | 0048 | TRANSWEST GEOCHEM | 0632586 | 11/30/07 | Lab | Investigation/Remediation | \$ 510.00 | \$510.00 | |
| 566 | 0049 | QWEST | 6022508602DEC07 | 12/1/07 | Telecom | Remediation | \$ 42.47 | \$42.47 | |
| 567 | 0050 | ELLIS SYSTEMS INC | 911 | 12/11/07 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 568 | 0051 | GM CLEMENT & ASSOCIATES INC | 7011A | 12/17/07 | Environmental contractor | Investigation/Remediation | \$2,529.26 | \$2,529.26 | |
| 569 | 0052 | GM CLEMENT & ASSOCIATES INC | 7011B | 12/17/07 | Environmental contractor | Investigation/Remediation | \$541.02 | \$541.02 | |
| 570 | 0053 | QWEST | 6022539179DEC07 | 12/19/07 | Telecom | Remediation | \$ 43.11 | \$43.11 | |
| 571 | 0054 | ELLIS SYSTEMS INC | 916 | 1/7/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 572 | 0055 | GM CLEMENT & ASSOCIATES INC | 8001A | 2/5/08 | Environmental contractor | Investigation/Remediation | \$4,365.71 | \$4,365.71 | |
| 573 | 0056 | GM CLEMENT & ASSOCIATES INC | 8001B | 2/5/08 | Environmental contractor | Investigation/Remediation | \$874.00 | \$874.00 | |
| 574 | 0057 | ELLIS SYSTEMS INC | 922 | 2/11/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 575 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 64293 | 2/11/08 | Arizona | Remediation | \$ 300.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 576 | | QWEST | 6022539179FEB08 | 2/19/08 | Telecom | Remediation | \$ 43.06 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 577 | 0058 | GM CLEMENT & ASSOCIATES INC | 8002A | 2/20/08 | Environmental contractor | Investigation/Remediation | \$6,881.53 | \$6,881.53 | |
| 578 | 0059 | GM CLEMENT & ASSOCIATES INC | 8002B | 2/20/08 | Environmental contractor | Investigation/Remediation | \$3,210.43 | \$3,210.43 | |
| 579 | 0060 | QWEST | 6022539179MAR08 | 3/19/08 | Telecom | Remediation | \$ 43.71 | \$43.71 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|---|-----------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 580 | 0061 | GM CLEMENT & ASSOCIATES INC | 8003B | 3/23/08 | Environmental contractor | Investigation/Remediation | \$1,521.33 | \$1,521.33 | |
| 581 | 0062 | GM CLEMENT & ASSOCIATES INC | 8003A | 3/24/08 | Environmental contractor | Investigation/Remediation | \$4,596.54 | \$4,596.54 | |
| 582 | 0063 | ELLIS SYSTEMS INC | 935 | 3/25/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 583 | 0064 | GM CLEMENT & ASSOCIATES INC | 8004B | 4/21/08 | Environmental contractor | Investigation/Remediation | \$573.27 | \$573.27 | |
| 584 | 0065 | GM CLEMENT & ASSOCIATES INC | 8004A | 4/22/08 | Environmental contractor | Investigation/Remediation | \$4,281.61 | \$4,281.61 | |
| 585 | 0066 | ELLIS SYSTEMS INC | 946 | 4/28/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 586 | 0067 | COLUMBIA ANALYTICAL SERVICES INC. | 0640225 | 4/30/08 | Lab | Investigation/Remediation | \$ 246.50 | \$246.50 | |
| 587 | 0068 | COLUMBIA ANALYTICAL SERVICES INC. | 0635064 | 5/9/08 | Lab | Investigation/Remediation | \$ 994.50 | \$994.50 | |
| 588 | 0069 | GM CLEMENT & ASSOCIATES INC | 8005A | 5/19/08 | Environmental contractor | Investigation/Remediation | \$2,867.90 | \$2,867.90 | |
| 589 | 0070 | ELLIS SYSTEMS INC | 951 | 5/20/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 590 | | QWEST | 6022539179JUN08 | 6/2/08 | Telecom | Remediation | \$ 53.33 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 591 | 0071 | GM CLEMENT & ASSOCIATES INC | 8006A | 6/3/08 | Environmental contractor | Investigation/Remediation | \$11,174.21 | \$11,174.21 | |
| 592 | 0072 | ELLIS SYSTEMS INC | 958 | 6/9/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 593 | 0073 | SUNSET ANALYTICAL LABORATORY | 063008 | 6/30/08 | Lab | Investigation/Remediation | \$ 480.00 | \$480.00 | |
| 594 | 0074 | GM CLEMENT & ASSOCIATES INC | 8007A | 7/8/08 | Environmental contractor | Investigation/Remediation | \$2,877.38 | \$2,877.38 | |
| 595 | 0075 | ELLIS SYSTEMS INC | 975 | 7/14/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 596 | 0076 | SIEMENS WATER TECHNOLOGIES CORP | 2507803 | 7/14/08 | Environmental services | Remediation | \$ 8,103.76 | \$8,103.76 | |
| 597 | 0077 | ELLIS SYSTEMS INC | 987 | 8/8/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 598 | 0078 | GM CLEMENT & ASSOCIATES INC | 8008A | 8/19/08 | Environmental contractor | Investigation/Remediation | \$3,120.18 | \$3,120.18 | |
| 599 | 0079 | ELLIS SYSTEMS INC | 993 | 9/15/08 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 600 | 0080 | SUNSET ANALYTICAL LABORATORY | 1102 | 9/18/08 | Lab | Investigation/Remediation | \$ 3,375.00 | \$3,375.00 | |
| 601 | 0081 | GM CLEMENT & ASSOCIATES INC | 8010A | 10/6/08 | Environmental contractor | Investigation/Remediation | \$6,938.82 | \$6,938.82 | |
| 602 | | ELLIS SYSTEMS INC | 1000 | 10/9/08 | Remediation contractor | Remediation | \$ 250.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 603 | 0082 | GM CLEMENT & ASSOCIATES INC | 8009A | 10/9/08 | Environmental contractor | Investigation/Remediation | \$2,335.26 | \$2,335.26 | |
| 604 | 0083 | SUNSET ANALYTICAL LABORATORY | 101008 | 10/10/08 | Lab | Investigation/Remediation | \$ 125.00 | \$125.00 | |
| 605 | 0084 | GM CLEMENT & ASSOCIATES INC | 8010B | 10/16/08 | Environmental contractor | Investigation/Remediation | \$4,100.16 | \$4,100.16 | |
| 606 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 102008 | 10/20/08 | Arizona | Remediation | \$ 48.70 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 607 | 0085 | MARICOPA COUNTY | 020174 | 11/17/08 | Permits | Remediation | \$ 1,550.00 | \$1,550.00 | |
| 608 | 0086 | FIBER FORCE COMMUNICATIONS INC | 100852 | 12/8/08 | Contractor | Remediation | \$ 6,940.00 | \$6,940.00 | |
| 609 | 0087 | GM CLEMENT & ASSOCIATES INC | 8012A | 12/20/08 | Environmental contractor | Investigation/Remediation | \$2,829.25 | \$2,829.25 | |
| 610 | 0088 | GM CLEMENT & ASSOCIATES INC | 8012B | 12/20/08 | Environmental contractor | Investigation/Remediation | \$806.01 | \$806.01 | |
| 611 | 0089 | SUNSET ANALYTICAL LABORATORY | 1228 | 12/29/08 | Lab | Investigation/Remediation | \$ 525.00 | \$525.00 | |
| 612 | 0090 | ELLIS SYSTEMS INC | 1025 | 1/7/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 613 | 0091 | ELLIS SYSTEMS INC | 1026 | 1/7/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 614 | 0092 | GM CLEMENT & ASSOCIATES INC | 8011A | 1/14/09 | Environmental contractor | Investigation/Remediation | \$4,862.96 | \$4,862.96 | |
| 615 | 0093 | GM CLEMENT & ASSOCIATES INC | 9001A | 1/20/09 | Environmental contractor | Investigation/Remediation | \$6,746.21 | \$6,746.21 | |
| 616 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 65907 | 1/26/09 | Arizona | Remediation | \$ 49.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 617 | | ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY | 67072 | 1/26/09 | Arizona | Remediation | \$ 300.00 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 618 | 0094 | SUNSET ANALYTICAL LABORATORY | 1269 | 2/2/09 | Lab | Investigation/Remediation | \$ 1,600.00 | \$1,600.00 | |
| 619 | 0095 | ELLIS SYSTEMS INC | 1036 | 2/16/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|-----------------------------------|------------|--------------|--------------------------|---------------------------|---------------|----------------|---------------------------------|
| 620 | 0096 | GM CLEMENT & ASSOCIATES INC | 9001AA | 2/17/09 | Environmental contractor | Investigation/Remediation | \$4,496.40 | \$4,496.40 | |
| 621 | 0097 | GM CLEMENT & ASSOCIATES INC | 9003B | 3/15/09 | Environmental contractor | Investigation/Remediation | \$2,668.61 | \$2,668.61 | |
| 622 | 0098 | GM CLEMENT & ASSOCIATES INC | 9003A | 3/16/09 | Environmental contractor | Investigation/Remediation | \$9,853.95 | \$9,853.95 | |
| 623 | 0099 | ELLIS SYSTEMS INC | 1048 | 3/20/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 624 | 0100 | SUNSET ANALYTICAL LABORATORY | 1338 | 3/24/09 | Lab | Investigation/Remediation | \$ 1,000.00 | \$1,000.00 | |
| 625 | 0101 | ELLIS SYSTEMS INC | 1055 | 4/7/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 626 | 0102 | SUNSET ANALYTICAL LABORATORY | 1369 | 4/8/09 | Lab | Investigation/Remediation | \$ 250.00 | \$250.00 | |
| 627 | 0103 | QUARLES & BRADY LLP | 1491821 | 4/14/09 | Legal | Investigation/Remediation | \$ 585.00 | \$0.00 | Not appropriate for cost credit |
| 628 | | QUARLES & BRADY LLP | 1491821 | 4/14/09 | Legal | Investigation/Remediation | (\$ 585.00) | \$0.00 | Not appropriate for cost credit |
| 629 | 0104 | GM CLEMENT & ASSOCIATES INC | 9004B | 4/19/09 | Environmental contractor | Investigation/Remediation | \$778.25 | \$778.25 | |
| 630 | 0105 | GM CLEMENT & ASSOCIATES INC | 9004A | 4/20/09 | Environmental contractor | Investigation/Remediation | \$3,948.23 | \$3,948.23 | |
| 631 | 0106 | GM CLEMENT & ASSOCIATES INC | 9005A | 5/13/09 | Environmental contractor | Investigation/Remediation | \$4,356.87 | \$4,356.87 | |
| 632 | 0107 | ELLIS SYSTEMS INC | 1070 | 5/19/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 633 | 0108 | ELLIS SYSTEMS INC | 1076 | 6/17/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 634 | 0109 | GM CLEMENT & ASSOCIATES INC | 9006A | 6/23/09 | Environmental contractor | Investigation/Remediation | \$2,305.57 | \$2,305.57 | |
| 635 | 0110 | ELLIS SYSTEMS INC | 1088 | 6/29/09 | Remediation contractor | Remediation | \$ 3,629.59 | \$3,629.59 | |
| 636 | 0111 | ELLIS SYSTEMS INC | 1089 | 7/7/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 637 | 0112 | SUNSET ANALYTICAL LABORATORY | 1550 | 7/14/09 | Lab | Investigation/Remediation | \$ 525.00 | \$525.00 | |
| 638 | 0113 | GM CLEMENT & ASSOCIATES INC | 9007A | 7/15/09 | Environmental contractor | Investigation/Remediation | \$2,842.91 | \$2,842.91 | |
| 639 | 0114 | GM CLEMENT & ASSOCIATES INC | 9008A | 8/16/09 | Environmental contractor | Investigation/Remediation | \$4,016.55 | \$4,016.55 | |
| 640 | 0115 | ELLIS SYSTEMS INC | 1101 | 8/17/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 641 | 0116 | GM CLEMENT & ASSOCIATES INC | WVBA309 | 8/17/09 | Environmental contractor | Investigation/Remediation | \$728.97 | \$728.97 | |
| 642 | 0117 | GM CLEMENT & ASSOCIATES INC | 9009A | 9/8/09 | Environmental contractor | Investigation/Remediation | \$3,763.84 | \$3,763.84 | |
| 643 | 0118 | COLUMBIA ANALYTICAL SERVICES INC. | 0650189 | 9/30/09 | Lab | Investigation/Remediation | \$ 2,023.00 | \$2,023.00 | |
| 644 | 0119 | ELLIS SYSTEMS INC | 1119 | 10/6/09 | Remediation contractor | Remediation | \$ 500.00 | \$500.00 | |
| 645 | 0120 | GM CLEMENT & ASSOCIATES INC | 9010A | 10/12/09 | Environmental contractor | Investigation/Remediation | \$4,741.31 | \$4,741.31 | |
| 646 | 0121 | GM CLEMENT & ASSOCIATES INC | 9010B | 10/13/09 | Environmental contractor | Investigation/Remediation | \$2,702.64 | \$2,702.64 | |
| 647 | 0122 | ELLIS SYSTEMS INC | 1126 | 11/9/09 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 648 | 0123 | GM CLEMENT & ASSOCIATES INC | 9011A | 11/9/09 | Environmental contractor | Investigation/Remediation | \$2,614.59 | \$2,614.59 | |
| 649 | 0124 | GM CLEMENT & ASSOCIATES INC | 9011B | 11/9/09 | Environmental contractor | Investigation/Remediation | \$434.57 | \$434.57 | |
| 650 | 0125 | MARICOPA COUNTY AIR QUALITY DEPT | 020174 | 11/16/09 | Permits | Remediation | \$ 1,550.00 | \$1,550.00 | |
| 651 | 0126 | GM CLEMENT & ASSOCIATES INC | 9012A | 12/4/09 | Environmental contractor | Investigation/Remediation | \$1,985.32 | \$1,985.32 | |
| 652 | 0127 | GM CLEMENT & ASSOCIATES INC | 9012B | 12/4/09 | Environmental contractor | Investigation/Remediation | \$684.41 | \$684.41 | |
| 653 | 0128 | GM CLEMENT & ASSOCIATES INC | 1001A | 1/7/10 | Environmental contractor | Investigation/Remediation | \$1,969.84 | \$1,969.84 | |
| 654 | 0129 | COLUMBIA ANALYTICAL SERVICES INC. | 0652534 | 1/18/10 | Lab | Investigation/Remediation | \$ 510.00 | \$510.00 | |
| 655 | 0130 | GM CLEMENT & ASSOCIATES INC | 1002A | 2/8/10 | Environmental contractor | Investigation/Remediation | \$3,676.97 | \$3,676.97 | |
| 656 | 0131 | GM CLEMENT & ASSOCIATES INC | 1002B | 2/8/10 | Environmental contractor | Investigation/Remediation | \$1,917.20 | \$1,917.20 | |
| 657 | 0132 | GM CLEMENT & ASSOCIATES INC | 1003A | 3/7/10 | Environmental contractor | Investigation/Remediation | \$1,428.16 | \$1,428.16 | |
| 658 | 0133 | GM CLEMENT & ASSOCIATES INC | 1003B | 3/7/10 | Environmental contractor | Investigation/Remediation | \$306.06 | \$306.06 | |
| 659 | 0134 | ELLIS SYSTEMS INC | 1160 | 3/15/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 660 | 0135 | SIEMENS WATER TECHNOLOGIES CORP | 3034295 | 3/30/10 | Environmental services | Remediation | \$ 6,256.09 | \$6,256.09 | |
| 661 | 0136 | STATE OF ARIZONA | 73626 | 3/31/10 | AZDEQ Waste Permit Fee | Investigation/Remediation | \$ 25.00 | \$25.00 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|----------------------------------|----------------|--------------|--------------------------|---------------------------|---------------|----------------|-------|
| 662 | 0137 | GM CLEMENT & ASSOCIATES INC | 1004A | 4/8/10 | Environmental contractor | Investigation/Remediation | \$5,699.94 | \$5,699.94 | |
| 663 | 0138 | GM CLEMENT & ASSOCIATES INC | 1004B | 4/8/10 | Environmental contractor | Investigation/Remediation | \$545.18 | \$545.18 | |
| 664 | 0139 | ELLIS SYSTEMS INC | 1170 | 4/13/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 665 | 0140 | GM CLEMENT & ASSOCIATES INC | 1005A | 5/5/10 | Environmental contractor | Investigation/Remediation | \$1,773.76 | \$1,773.76 | |
| 666 | 0141 | ELLIS SYSTEMS INC | 1174 | 5/18/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 667 | 0142 | SUNSET ANALYTICAL LABORATORY | 2140 | 6/8/10 | Lab | Investigation/Remediation | \$ 525.00 | \$525.00 | |
| 668 | 0143 | GM CLEMENT & ASSOCIATES INC | 1006A | 6/8/10 | Environmental contractor | Investigation/Remediation | \$1,885.05 | \$1,885.05 | |
| 669 | 0144 | ELLIS SYSTEMS INC | 1185 | 7/8/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 670 | 0145 | GM CLEMENT & ASSOCIATES INC | 1007A | 7/11/10 | Environmental contractor | Investigation/Remediation | \$1,318.51 | \$1,318.51 | |
| 671 | 0146 | GM CLEMENT & ASSOCIATES INC | 1008A | 8/15/10 | Environmental contractor | Investigation/Remediation | \$1,316.62 | \$1,316.62 | |
| 672 | 0147 | ELLIS SYSTEMS INC | 1213 | 8/23/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 673 | 0148 | GM CLEMENT & ASSOCIATES INC | 1009A | 9/8/10 | Environmental contractor | Investigation/Remediation | \$3,499.92 | \$3,499.92 | |
| 674 | 0149 | ELLIS SYSTEMS INC | 1209 | 9/20/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 675 | 0150 | GM CLEMENT & ASSOCIATES INC | 1010B | 10/12/10 | Environmental contractor | Investigation/Remediation | \$3,109.31 | \$3,109.31 | |
| 676 | 0151 | GM CLEMENT & ASSOCIATES INC | 1010A | 10/13/10 | Environmental contractor | Investigation/Remediation | \$4,478.26 | \$4,478.26 | |
| 677 | 0152 | GM CLEMENT & ASSOCIATES INC | WVB1011 | 11/4/10 | Environmental contractor | Investigation/Remediation | \$5,857.79 | \$5,857.79 | |
| 678 | 0153 | GM CLEMENT & ASSOCIATES INC | 1011A | 11/8/10 | Environmental contractor | Investigation/Remediation | \$1,673.22 | \$1,673.22 | |
| 679 | 0154 | ELLIS SYSTEMS INC | 1227 | 11/17/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 680 | 0155 | MARICOPA COUNTY AIR QUALITY DEPT | 020174NOV10 | 11/29/10 | Permits | Remediation | \$ 1,550.00 | \$1,550.00 | |
| 681 | 0156 | GM CLEMENT & ASSOCIATES INC | 1012A | 12/7/10 | Environmental contractor | Investigation/Remediation | \$1,977.47 | \$1,977.47 | |
| 682 | 0157 | ELLIS SYSTEMS INC | 1230 | 12/21/10 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 683 | 0158 | GM CLEMENT & ASSOCIATES INC | 1011B | 1/6/11 | Environmental contractor | Investigation/Remediation | \$651.48 | \$651.48 | |
| 684 | 0159 | GM CLEMENT & ASSOCIATES INC | 1101A | 1/6/11 | Environmental contractor | Investigation/Remediation | \$3,193.84 | \$3,193.84 | |
| 685 | 0160 | ELLIS SYSTEMS INC | 1234 | 1/7/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 686 | 0161 | APS WATER SERVICES CORPORATION | 247654287JAN11 | 1/19/11 | Utility | Remediation | \$ 244.01 | \$244.01 | |
| 687 | 0162 | TRANS WEST ANALYTICAL | 237036 | 1/20/11 | Lab | Investigation/Remediation | \$ 1,615.00 | \$1,615.00 | |
| 688 | 0163 | STATE OF ARIZONA | 81525 | 2/7/11 | AZDEQ Waste Permit Fee | Investigation/Remediation | \$ 300.00 | \$300.00 | |
| 689 | 0164 | ELLIS SYSTEMS INC | 1238 | 2/8/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 690 | 0165 | GM CLEMENT & ASSOCIATES INC | 1102A | 2/8/11 | Environmental contractor | Investigation/Remediation | \$4,554.36 | \$4,554.36 | |
| 691 | 0166 | GM CLEMENT & ASSOCIATES INC | 1102B | 2/8/11 | Environmental contractor | Investigation/Remediation | \$1,869.83 | \$1,869.83 | |
| 692 | 0167 | GM CLEMENT & ASSOCIATES INC | 1103A | 3/3/11 | Environmental contractor | Investigation/Remediation | \$4,986.41 | \$4,986.41 | |
| 693 | 0168 | GM CLEMENT & ASSOCIATES INC | 1103B | 3/3/11 | Environmental contractor | Investigation/Remediation | \$241.10 | \$241.10 | |
| 694 | 0169 | ELLIS SYSTEMS INC | 1245 | 3/8/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 695 | 0170 | TRANS WEST ANALYTICAL | 243989 | 3/28/11 | Lab | Investigation/Remediation | \$ 850.00 | \$850.00 | |
| 696 | 0171 | GM CLEMENT & ASSOCIATES INC | 1104A | 4/11/11 | Environmental contractor | Investigation/Remediation | \$4,807.97 | \$4,807.97 | |
| 697 | 0172 | ELLIS SYSTEMS INC | 1256 | 4/18/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 698 | 0173 | CITY OF PHOENIX | 400653776 | 4/25/11 | Permits | Investigation/Remediation | \$ 658.10 | \$658.10 | |
| 699 | 0174 | ELLIS SYSTEMS INC | 1264 | 5/16/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 700 | 0175 | GM CLEMENT & ASSOCIATES INC | 1105A | 5/30/11 | Environmental contractor | Investigation/Remediation | \$1,483.55 | \$1,483.55 | |
| 701 | 0176 | GM CLEMENT & ASSOCIATES INC | 1106A | 6/6/11 | Environmental contractor | Investigation/Remediation | \$2,547.27 | \$2,547.27 | |
| 702 | 0177 | SUNSET ANALYTICAL LABORATORY | 2731 | 6/7/11 | Lab | Investigation/Remediation | \$ 525.00 | \$525.00 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--|-------------|--------------|--------------------------|---------------------------|---------------|----------------|---------------------------------|
| 703 | 0178 | ELLIS SYSTEMS INC | 1273 | 6/17/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 704 | 0179 | GM CLEMENT & ASSOCIATES INC | 1107A | 7/8/11 | Environmental contractor | Investigation/Remediation | \$1,527.68 | \$1,527.68 | |
| 705 | 0180 | ELLIS SYSTEMS INC | 1280 | 7/18/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 706 | 0181 | GM CLEMENT & ASSOCIATES INC | 1108A | 8/8/11 | Environmental contractor | Investigation/Remediation | \$1,453.63 | \$1,453.63 | |
| 707 | 0182 | ELLIS SYSTEMS INC | 1285 | 8/17/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 708 | 0183 | GM CLEMENT & ASSOCIATES INC | 1109A | 9/6/11 | Environmental contractor | Investigation/Remediation | \$2,507.49 | \$2,507.49 | |
| 709 | 0184 | ELLIS SYSTEMS INC | 1292 | 9/19/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 710 | 0185 | TRANS WEST ANALYTICAL | 260923 | 9/22/11 | Lab | Investigation/Remediation | \$ 1,615.00 | \$1,615.00 | |
| 711 | 0186 | ELLIS SYSTEMS INC | 1296 | 10/6/11 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 712 | 0187 | GM CLEMENT & ASSOCIATES INC | 1110A | 10/8/11 | Environmental contractor | Investigation/Remediation | \$3,884.48 | \$3,884.48 | |
| 713 | 0188 | GM CLEMENT & ASSOCIATES INC | 1110B | 10/9/11 | Environmental contractor | Investigation/Remediation | \$2,538.36 | \$2,538.36 | |
| 714 | 0189 | GM CLEMENT & ASSOCIATES INC | 1111A | 11/4/11 | Environmental contractor | Investigation/Remediation | \$1,410.06 | \$1,410.06 | |
| 715 | 0190 | MARICOPA COUNTY AIR QUALITY DEPT | 020174NOV11 | 11/15/11 | Permits | Remediation | \$ 1,580.00 | \$1,580.00 | |
| 716 | 0191 | GM CLEMENT & ASSOCIATES INC | 1112A | 12/7/11 | Environmental contractor | Investigation/Remediation | \$946.87 | \$946.87 | |
| 717 | 0192 | GM CLEMENT & ASSOCIATES INC | 1201A | 1/10/12 | Environmental contractor | Investigation/Remediation | \$4,103.22 | \$4,103.22 | |
| 718 | 0193 | GEOSYNTEC CONSULTANTS | 2112016 | 1/11/12 | Environmental contractor | Investigation/Remediation | \$ 993.44 | \$0.00 | Not appropriate for cost credit |
| 719 | 0194 | ELLIS SYSTEMS INC | 1314 | 1/13/12 | Remediation contractor | Remediation | \$ 750.00 | \$750.00 | |
| 720 | 0195 | XENCO LABORATORIES | 268056 | 1/17/12 | Lab | Investigation/Remediation | \$ 375.00 | \$375.00 | |
| 721 | 0196 | ELLIS SYSTEMS INC | 1319 | 2/6/12 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 722 | 0197 | GM CLEMENT & ASSOCIATES INC | 1202B | 2/6/12 | Environmental contractor | Investigation/Remediation | \$855.33 | \$855.33 | |
| 723 | 0198 | GM CLEMENT & ASSOCIATES INC | 1202A | 2/7/12 | Environmental contractor | Investigation/Remediation | \$2,675.82 | \$2,675.82 | |
| 724 | 0199 | GM CLEMENT & ASSOCIATES INC | 1203A | 3/9/12 | Environmental contractor | Investigation/Remediation | \$2,044.85 | \$2,044.85 | |
| 725 | 0200 | ELLIS SYSTEMS INC | 1329 | 3/12/12 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 726 | 0201 | XENCO LABORATORIES | 273191 | 4/9/12 | Lab | Investigation/Remediation | \$ 765.00 | \$765.00 | |
| 727 | 0202 | GM CLEMENT & ASSOCIATES INC | 1205A | 5/9/12 | Environmental contractor | Investigation/Remediation | \$1,407.30 | \$1,407.30 | |
| 728 | 0203 | GEOSYNTEC CONSULTANTS | 2112387 | 5/10/12 | Environmental contractor | Investigation/Remediation | \$ 903.31 | \$0.00 | Not appropriate for cost credit |
| 729 | 0204 | MARICOPA COUNTY AIR QUALITY DEPT | 040015MAY12 | 5/22/12 | Permits | Remediation | \$ 1,610.00 | \$1,610.00 | |
| 730 | 0205 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 10221 | 5/31/12 | Environmental services | Investigation/Remediation | \$ 473.28 | \$473.28 | |
| 731 | 0206 | GM CLEMENT & ASSOCIATES INC | 1206A | 6/5/12 | Environmental contractor | Investigation/Remediation | \$3,783.89 | \$3,783.89 | |
| 732 | 0207 | CITY OF PHOENIX | 400691422 | 6/11/12 | Permits | Investigation/Remediation | \$ 658.10 | \$658.10 | |
| 733 | 0208 | TRANS WEST ANALYTICAL | 277156 | 6/21/12 | Lab | Investigation/Remediation | \$ 375.00 | \$375.00 | |
| 734 | 0209 | GM CLEMENT & ASSOCIATES INC | 1207A | 7/3/12 | Environmental contractor | Investigation/Remediation | \$2,887.63 | \$2,887.63 | |
| 735 | 0210 | ELLIS SYSTEMS INC | 1347 | 7/6/12 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 736 | 0211 | GM CLEMENT & ASSOCIATES INC | 1208A | 8/9/12 | Environmental contractor | Investigation/Remediation | \$1,496.86 | \$1,496.86 | |
| 737 | 0212 | TRANS WEST ANALYTICAL | 280224 | 8/15/12 | Lab | Investigation/Remediation | \$ 250.00 | \$250.00 | |
| 738 | 0213 | GM CLEMENT & ASSOCIATES INC | 1209A | 9/1/12 | Environmental contractor | Investigation/Remediation | \$4,367.44 | \$4,367.44 | |
| 739 | 0214 | TRANS WEST ANALYTICAL | 282255 | 9/26/12 | Lab | Investigation/Remediation | \$ 1,785.00 | \$1,785.00 | |
| 740 | 0215 | TRANS WEST ANALYTICAL | 282259 | 9/26/12 | Lab | Investigation/Remediation | \$ 125.00 | \$125.00 | |
| 741 | 0216 | BASCOR ENVIRONMENTAL, INC. | 1209280 | 9/28/12 | Environmental Consultant | Investigation/Remediation | \$ 1,378.00 | \$1,378.00 | |
| 742 | 0217 | GM CLEMENT & ASSOCIATES INC | 1210A | 10/8/12 | Environmental contractor | Investigation/Remediation | \$5,622.37 | \$5,622.37 | |
| 743 | 0218 | GM CLEMENT & ASSOCIATES INC | 1210B | 10/9/12 | Environmental contractor | Investigation/Remediation | \$2,891.83 | \$2,891.83 | |
| 744 | 0219 | ELLIS SYSTEMS INC | 1367 | 10/15/12 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|--|------------|--------------|--------------------------|---------------------------|---------------|----------------|--|
| 745 | 0220 | BASCOR ENVIRONMENTAL, INC. | 1210280 | 11/1/12 | Environmental Consultant | Investigation/Remediation | \$ 436.94 | \$436.94 | |
| 746 | 0221 | GM CLEMENT & ASSOCIATES INC | 1211A | 11/12/12 | Environmental contractor | Investigation/Remediation | \$4,514.44 | \$4,514.44 | |
| 747 | 0222 | ELLIS SYSTEMS INC | 1375 | 11/20/12 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 748 | 0223 | GM CLEMENT & ASSOCIATES INC | 1212A | 12/9/12 | Environmental contractor | Investigation/Remediation | \$2,995.90 | \$2,995.90 | |
| 749 | 0224 | GM CLEMENT & ASSOCIATES INC | 1212B | 12/10/12 | Environmental contractor | Investigation/Remediation | \$597.21 | \$597.21 | |
| 750 | 0225 | ELLIS SYSTEMS INC | 1385 | 12/17/12 | Remediation contractor | Remediation | \$ 250.00 | \$250.00 | |
| 751 | 0226 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 10644 | 12/31/12 | Environmental services | Investigation/Remediation | \$ 1,290.30 | \$1,290.30 | |
| 752 | 0227 | GM CLEMENT & ASSOCIATES INC | 1301A | 1/5/13 | Environmental contractor | Investigation/Remediation | \$4,664.94 | \$4,664.94 | |
| 753 | | GM CLEMENT & ASSOCIATES INC | 1301AA | 1/5/13 | Environmental contractor | Investigation/Remediation | \$4,719.99 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 754 | | GM CLEMENT & ASSOCIATES INC | 1301ADM | 1/5/13 | Environmental contractor | Investigation/Remediation | (\$4,534.79) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 755 | 0228 | CITY OF PHOENIX | 400711118 | 2/1/13 | Permits | Investigation/Remediation | \$ 658.10 | \$658.10 | |
| 756 | 0229 | GM CLEMENT & ASSOCIATES INC | 1302A | 2/10/13 | Environmental contractor | Investigation/Remediation | \$2,813.11 | \$2,813.11 | |
| 757 | 0230 | GM CLEMENT & ASSOCIATES INC | 1302B | 2/10/13 | Environmental contractor | Investigation/Remediation | \$1,633.68 | \$1,633.68 | |
| 758 | 0231 | GEOSYNTEC CONSULTANTS | 2113168 | 3/7/13 | Environmental contractor | Investigation/Remediation | \$ 669.50 | \$0.00 | Not appropriate for cost credit |
| 759 | 0232 | GM CLEMENT & ASSOCIATES INC | 1303A | 3/10/13 | Environmental contractor | Investigation/Remediation | \$3,564.32 | \$3,564.32 | |
| 760 | 0233 | TRANS WEST ANALYTICAL | 292087 | 3/20/13 | Lab | Investigation/Remediation | \$ 680.00 | \$680.00 | |
| 761 | 0234 | GM CLEMENT & ASSOCIATES INC | 1304A | 4/11/13 | Environmental contractor | Investigation/Remediation | \$3,434.05 | \$3,434.05 | |
| 762 | 0235 | GM CLEMENT & ASSOCIATES INC | 1305A | 5/14/13 | Environmental contractor | Investigation/Remediation | \$874.58 | \$874.58 | |
| 763 | 0236 | GM CLEMENT & ASSOCIATES INC | 1306A | 6/12/13 | Environmental contractor | Investigation/Remediation | \$1,090.36 | \$1,090.36 | |
| 764 | 0237 | ELLIS SYSTEMS INC | 1393 | 6/26/13 | Remediation contractor | Remediation | \$ 750.00 | \$750.00 | |
| 765 | 0238 | TRANS WEST ANALYTICAL | 298876 | 7/10/13 | Lab | Investigation/Remediation | \$ 140.00 | \$140.00 | |
| 766 | 0239 | GM CLEMENT & ASSOCIATES INC | 1307A | 7/17/13 | Environmental contractor | Investigation/Remediation | \$1,268.23 | \$1,268.23 | |
| 767 | 0240 | GM CLEMENT & ASSOCIATES INC | 1308A | 8/11/13 | Environmental contractor | Investigation/Remediation | \$1,823.45 | \$1,823.45 | |
| 768 | 0241 | GM CLEMENT & ASSOCIATES INC | 1309A | 9/4/13 | Environmental contractor | Investigation/Remediation | \$2,346.61 | \$2,346.61 | |
| 769 | 0242 | TRANS WEST ANALYTICAL | 302278 | 9/5/13 | Lab | Investigation/Remediation | \$ 140.00 | \$140.00 | |
| 770 | 0243 | TRANS WEST ANALYTICAL | 303905 | 10/2/13 | Lab | Investigation/Remediation | \$ 850.00 | \$850.00 | |
| 771 | 0244 | GM CLEMENT & ASSOCIATES INC | 1310A | 10/11/13 | Environmental contractor | Investigation/Remediation | \$4,855.10 | \$4,855.10 | |
| 772 | 0245 | ELLIS SYSTEMS INC | 1406 | 10/16/13 | Remediation contractor | Remediation | \$ 750.00 | \$750.00 | |
| 773 | 0246 | GM CLEMENT & ASSOCIATES INC | 1311A | 11/5/13 | Environmental contractor | Investigation/Remediation | \$2,535.72 | \$2,535.72 | |
| 774 | 0247 | GM CLEMENT & ASSOCIATES INC | 1312A | 12/6/13 | Environmental contractor | Investigation/Remediation | \$2,336.79 | \$2,336.79 | |
| 775 | 0248 | ARCADIS US INC | 0566764 | 1/3/14 | Environmental contractor | Investigation | \$2,061.85 | \$2,061.85 | |
| 776 | | GM CLEMENT & ASSOCIATES INC | 1401A | 1/12/14 | Environmental contractor | Investigation | \$6,395.92 | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 777 | 0249 | GM CLEMENT & ASSOCIATES INC | 1401A | 1/12/14 | Environmental contractor | Investigation | \$6,395.92 | \$6,395.92 | |
| 778 | | GM CLEMENT & ASSOCIATES INC | 1401ACR | 1/12/14 | Environmental contractor | Investigation | (\$6,395.92) | \$0.00 | No Invoice provided - lacks sufficient documentation |
| 779 | 0250 | CITY OF PHOENIX | 400741233 | 1/23/14 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 780 | 0251 | GM CLEMENT & ASSOCIATES INC | 1402A | 2/19/14 | Environmental contractor | Investigation | \$2,897.85 | \$2,897.85 | |
| 781 | 0252 | GM CLEMENT & ASSOCIATES INC | 1403A | 3/10/14 | Environmental contractor | Investigation | \$288.27 | \$288.27 | |
| 782 | 0253 | VERIS | 3133 | 6/4/14 | Legal | Investigation | \$ 630.50 | \$0.00 | Not appropriate for cost credit |
| 783 | 0254 | ARCADIS US INC | 0600852 | 6/20/14 | Environmental contractor | Investigation | \$57,606.67 | \$57,606.67 | |
| 784 | 0255 | ARCADIS US INC | 0601183 | 6/26/14 | Environmental contractor | Investigation | \$11,157.29 | \$11,157.29 | |
| 785 | 0256 | ARCADIS US INC | 0607139 | 7/29/14 | Environmental contractor | Investigation | \$8,823.50 | \$8,823.50 | |
| 786 | 0257 | VERIS | 3431 | 8/6/14 | Legal | Investigation | \$ 315.00 | \$0.00 | Not appropriate for cost credit |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|-----------------|------------|--------------|-----------------------------|---------------|---------------|----------------|---------------------------------|
| 787 | 0258 | ARCADIS US INC | 0614152 | 8/29/14 | Environmental contractor | Investigation | \$7,408.73 | \$7,408.73 | |
| 788 | 0259 | VERIS | 3563 | 9/8/14 | Legal | Investigation | \$ 434.00 | \$0.00 | Not appropriate for cost credit |
| 789 | 0260 | ARCADIS US INC | 0620020 | 9/30/14 | Environmental contractor | Investigation | \$25,663.92 | \$25,663.92 | |
| 790 | 0261 | ARCADIS US INC | 0625319 | 10/23/14 | Environmental contractor | Investigation | \$18,730.49 | \$18,730.49 | |
| 791 | 0262 | ARCADIS US INC | 0631424 | 12/2/14 | Environmental contractor | Investigation | \$6,913.04 | \$6,913.04 | |
| 792 | 0263 | ARCADIS US INC | 638788 | 1/12/15 | Environmental contractor | Investigation | \$9,478.32 | \$9,478.32 | |
| 793 | 0264 | CITY OF PHOENIX | 400772010 | 1/12/15 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 794 | 0265 | ARCADIS US INC | 0642034 | 1/30/15 | Environmental contractor | Investigation | \$1,239.58 | \$1,239.58 | |
| 795 | 0266 | ARCADIS US INC | 0702816 | 2/24/15 | Environmental contractor | Investigation | \$520.27 | \$520.27 | |
| 796 | 0267 | ARCADIS US INC | 0709020 | 3/31/15 | Environmental contractor | Investigation | \$7,230.62 | \$7,230.62 | |
| 797 | 0268 | ARCADIS US INC | 0714660 | 4/29/15 | Environmental contractor | Investigation | \$6,919.44 | \$6,919.44 | |
| 798 | 0269 | ARCADIS US INC | 0719928 | 5/29/15 | Environmental contractor | Investigation | \$10,294.52 | \$10,294.52 | |
| 799 | 0270 | ARCADIS US INC | 0725812 | 6/25/15 | Environmental contractor | Investigation | \$8,635.40 | \$8,635.40 | |
| 800 | 0271 | ARCADIS US INC | 0731524 | 7/23/15 | Environmental contractor | Investigation | \$6,586.98 | \$6,586.98 | |
| 801 | 0272 | ARCADIS US INC | 0736664 | 8/28/15 | Environmental contractor | Investigation | \$15,242.71 | \$15,242.71 | |
| 802 | 0273 | ARCADIS US INC | 0742433 | 9/30/15 | Environmental contractor | Investigation | \$21,617.38 | \$21,617.38 | |
| 803 | 0274 | SGS ACCUTEST | CX35508 | 10/7/15 | Lab | Investigation | \$ 450.00 | \$450.00 | |
| 804 | 0275 | ARCADIS US INC | 0748025 | 10/29/15 | Environmental contractor | Investigation | \$17,181.86 | \$17,181.86 | |
| 805 | 0276 | ARCADIS US INC | 0753816 | 12/2/15 | Environmental contractor | Investigation | \$31,360.39 | \$31,360.39 | |
| 806 | 0277 | ARCADIS US INC | 0759477 | 12/29/15 | Environmental contractor | Investigation | \$6,123.93 | \$6,123.93 | |
| 807 | 0278 | ARCADIS US INC | 0763910 | 1/29/16 | Environmental contractor | Investigation | \$6,181.42 | \$6,181.42 | |
| 808 | 0279 | CITY OF PHOENIX | 400803482 | 2/3/16 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 809 | 0280 | ARCADIS US INC | 0769263 | 3/2/16 | Environmental contractor | Investigation | \$5,491.23 | \$5,491.23 | |
| 810 | 0281 | ARCADIS US INC | 0775068 | 4/1/16 | Environmental contractor | Investigation | \$20,774.30 | \$20,774.30 | |
| 811 | 0282 | ARCADIS US INC | 0780225 | 4/29/16 | Environmental contractor | Investigation | \$22,622.49 | \$22,622.49 | |
| 812 | 0283 | ARCADIS US INC | 0785075 | 5/25/16 | Environmental contractor | Investigation | \$9,176.33 | \$9,176.33 | |
| 813 | 0284 | ARCADIS US INC | 0790739 | 7/1/16 | Environmental contractor | Investigation | \$14,244.19 | \$14,244.19 | |
| 814 | 0285 | ARCADIS US INC | 0795956 | 7/26/16 | Environmental contractor | Investigation | \$2,568.31 | \$2,568.31 | |
| 815 | 0286 | ARCADIS US INC | 0800636 | 8/23/16 | Environmental contractor | Investigation | \$4,778.41 | \$4,778.41 | |
| 816 | 0287 | ARCADIS US INC | 0806378 | 9/28/16 | Environmental contractor | Investigation | \$8,605.15 | \$8,605.15 | |
| 817 | 0288 | SGS ACCUTEST | TX111621 | 10/11/16 | Lab | Investigation | \$ 360.00 | \$360.00 | |
| 818 | 0289 | ARCADIS US INC | 0811538 | 10/28/16 | Environmental contractor | Investigation | \$13,229.81 | \$13,229.81 | |
| 819 | 0290 | ARCADIS US INC | 0817743 | 11/30/16 | Environmental contractor | Investigation | \$14,709.03 | \$14,709.03 | |
| 820 | 0291 | ARCADIS US INC | 0822885 | 1/5/17 | Environmental contractor | Investigation | \$3,331.76 | \$3,331.76 | |
| 821 | 0292 | ARCADIS US INC | 0826400 | 1/24/17 | Environmental contractor | Investigation | \$2,724.56 | \$2,724.56 | |
| 822 | 0293 | CITY OF PHOENIX | 400834978 | 2/7/17 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 823 | 0294 | ARCADIS US INC | 0831453 | 2/27/17 | Environmental contractor | Investigation | \$2,310.28 | \$2,310.28 | |
| 824 | 0295 | ARCADIS US INC | 0836680 | 3/29/17 | Environmental contractor | Investigation | \$8,250.54 | \$8,250.54 | |
| 825 | 0296 | ARCADIS US INC | 0841364 | 5/2/17 | Environmental contractor | Investigation | \$8,999.03 | \$8,999.03 | |
| 826 | 0297 | ARCADIS US INC | 0846394 | 5/25/17 | Environmental contractor | Investigation | \$7,900.60 | \$7,900.60 | |
| 827 | 0298 | ENFOS, INC. | 200484 | 6/13/17 | Document/project management | Investigation | \$ 760.61 | \$760.61 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|-----------------|--------------|--------------|-----------------------------|---------------|---------------|----------------|---------------------------------|
| 828 | 0299 | ARCADIS US INC | 0852051 | 6/22/17 | Environmental contractor | Investigation | \$7,291.20 | \$7,291.20 | |
| 829 | 0300 | ARCADIS US INC | 0857025 | 7/27/17 | Environmental contractor | Investigation | \$3,515.70 | \$3,515.70 | |
| 830 | 0301 | ARCADIS US INC | 0861257 | 8/29/17 | Environmental contractor | Investigation | \$5,624.88 | \$5,624.88 | |
| 831 | 0302 | ARCADIS US INC | 0867330 | 9/29/17 | Environmental contractor | Investigation | \$6,794.04 | \$6,794.04 | |
| 832 | 0303 | SGS ACCUTEST | 52140126748 | 10/31/17 | Lab | Investigation | \$ 360.00 | \$360.00 | |
| 833 | 0304 | ARCADIS US INC | 0873160 | 11/3/17 | Environmental contractor | Investigation | \$12,257.72 | \$12,257.72 | |
| 834 | 0305 | SGS ACCUTEST | 52140128022 | 11/15/17 | Lab | Investigation | \$ 90.00 | \$90.00 | |
| 835 | 0306 | SGS ACCUTEST | 52140128051 | 11/15/17 | Lab | Investigation | \$ 67.50 | \$67.50 | |
| 836 | 0307 | ARCADIS US INC | 0878152 | 11/30/17 | Environmental contractor | Investigation | \$20,887.04 | \$20,887.04 | |
| 837 | 0308 | City of Phoenix | 400862613A | 12/1/17 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 838 | 0309 | SGS | 52140128839A | 1/5/18 | Lab | Investigation | \$ 45.00 | \$45.00 | |
| 839 | 0310 | ARCADIS US INC | 884441 | 1/10/18 | Environmental contractor | Investigation | \$3,839.49 | \$3,839.49 | |
| 842 | 0313 | ARCADIS US INC | 889106 | 1/30/18 | Environmental contractor | Investigation | \$7,420.18 | \$7,420.18 | |
| 844 | 0315 | ENFOS | FEB201853 | 2/13/18 | Document/project management | Investigation | \$ 117.73 | \$117.73 | |
| 845 | 0316 | ARCADIS US INC | 892451 | 2/15/18 | Environmental contractor | Investigation | \$4,009.18 | \$4,009.18 | |
| 846 | 0317 | ENFOS | MAR201821 | 3/16/18 | Document/project management | Investigation | \$ 760.61 | \$760.61 | |
| 847 | 0318 | ARCADIS US INC | 897939 | 3/28/18 | Environmental contractor | Investigation | \$9,094.96 | \$9,094.96 | |
| 850 | 0321 | ARCADIS US INC | 904238 | 4/26/18 | Environmental contractor | Investigation | \$7,278.50 | \$7,278.50 | |
| 853 | 0324 | ARCADIS US INC | 909094 | 5/23/18 | Environmental contractor | Investigation | \$9,707.06 | \$9,707.06 | |
| 856 | 0327 | ARCADIS US INC | 914567 | 6/25/18 | Environmental contractor | Investigation | \$6,933.60 | \$6,933.60 | |
| 859 | 0330 | ARCADIS US INC | 919517 | 7/23/18 | Environmental contractor | Investigation | \$7,793.39 | \$7,793.39 | |
| 862 | 0333 | ARCADIS US INC | 925734 | 8/27/18 | Environmental contractor | Investigation | \$14,931.53 | \$14,931.53 | |
| 866 | 0337 | ARCADIS US INC | 930306 | 9/24/18 | Environmental contractor | Investigation | \$16,654.12 | \$16,654.12 | |
| 868 | 0339 | SGS | 40141846 | 10/12/18 | Lab | Investigation | \$ 450.00 | \$450.00 | |
| 869 | 0340 | ARCADIS US INC | 935277 | 10/24/18 | Environmental contractor | Investigation | \$12,404.27 | \$12,404.27 | |
| 872 | 0343 | City of Phoenix | 400888706 | 12/1/18 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 873 | 0344 | ARCADIS US INC | 943686 | 12/7/18 | Environmental contractor | Investigation | \$18,832.77 | \$18,832.77 | |
| 876 | 0347 | ARCADIS US INC | 948388 | 1/3/19 | Environmental contractor | Investigation | \$3,349.72 | \$3,349.72 | |
| 879 | 0350 | ARCADIS US INC | 953352 | 1/29/19 | Environmental contractor | Investigation | \$9,379.28 | \$9,379.28 | |
| 881 | 0352 | ARCADIS US INC | 958019 | 3/1/19 | Environmental contractor | Investigation | \$12,632.37 | \$12,632.37 | |
| 884 | 0355 | ENFOS | MAR201960 | 3/18/19 | Document/project management | Investigation | \$ 742.50 | \$ 742.50 | |
| 885 | 0356 | ARCADIS US INC | 963213 | 3/26/19 | Environmental contractor | Investigation | \$22,135.07 | \$22,135.07 | |
| 888 | 0359 | ARCADIS US INC | 969391 | 4/26/19 | Environmental contractor | Investigation | \$17,825.98 | \$17,825.98 | |
| 891 | 0362 | ARCADIS US INC | 974814 | 5/29/19 | Environmental contractor | Investigation | \$20,382.82 | \$20,382.82 | |
| 893 | 0364 | ARCADIS US INC | 980941 | 6/20/19 | Environmental contractor | Investigation | \$14,889.77 | \$14,889.77 | |
| 896 | 0367 | ARCADIS US INC | 34119995 | 9/6/19 | Environmental contractor | Investigation | \$31,672.12 | \$31,672.12 | |
| 898 | 0369 | SGS | 52140156214 | 9/26/19 | Lab | Investigation | \$ 405.00 | \$405.00 | |
| 899 | 0370 | Veris Law Group | 11524 | 9/30/19 | Legal | Investigation | \$ 1,942.54 | \$0.00 | Not appropriate for cost credit |
| 900 | 0371 | ARCADIS US INC | 34125532 | 10/11/19 | Environmental contractor | Investigation | \$24,233.75 | \$24,233.75 | |
| 903 | 0374 | ARCADIS US INC | 34126392 | 10/17/19 | Environmental contractor | Investigation | \$30,077.78 | \$30,077.78 | |
| 906 | 0377 | SGS | 52140157505 | 10/31/19 | Lab | Investigation | \$ 267.75 | \$267.75 | |
| 907 | 0378 | SGS | 52140157503 | 10/31/19 | Lab | Investigation | \$ 2,100.00 | \$2,100.00 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|----------|-----------------------|-----------------|-------------|--------------|-----------------------------|---------------|---------------|----------------|---------------------------------|
| 908 | 0379 | Veris Law Group | 11680 | 10/31/19 | Legal | Investigation | \$ 135.24 | \$0.00 | Not appropriate for cost credit |
| 909 | 0380 | ARCADIS US INC | 34128589 | 10/31/19 | Environmental contractor | Investigation | \$40,260.42 | \$40,260.42 | |
| 913 | 0384 | SGS | 52140158038 | 11/13/19 | Lab | Investigation | \$ 297.00 | \$297.00 | |
| 914 | 0385 | SGS | 52140158164 | 11/19/19 | Lab | Investigation | \$ 450.00 | \$450.00 | |
| 915 | 0386 | SGS | 52140158053 | 11/20/19 | Lab | Investigation | \$ 1,350.00 | \$1,350.00 | |
| 916 | 0387 | City of Phoenix | 400918069 | 12/1/19 | Permits | Investigation | \$ 658.10 | \$658.10 | |
| 917 | 0388 | ARCADIS US INC | 34134372 | 12/6/19 | Environmental contractor | Investigation | \$188,182.66 | \$188,182.66 | |
| 920 | 0391 | Veris Law Group | 11908 | 12/31/19 | Legal | Investigation | \$ 1,221.00 | \$0.00 | Not appropriate for cost credit |
| 921 | 0392 | SGS | 52140161124 | 1/31/20 | Lab | Investigation | \$ 675.00 | \$675.00 | |
| 922 | 0393 | ARCADIS US INC | 34143669 | 1/31/20 | Environmental contractor | Investigation | \$27,413.05 | \$27,413.05 | |
| 925 | 0396 | ARCADIS US INC | 34151209 | 3/16/20 | Environmental contractor | Investigation | \$10,369.89 | \$10,369.89 | |
| 928 | 0399 | ARCADIS US INC | 34153034 | 3/26/20 | Environmental contractor | Investigation | \$13,202.07 | \$13,202.07 | |
| 930 | 0401 | ARCADIS US INC | 34157052 | 4/15/20 | Environmental contractor | Investigation | \$17,145.53 | \$17,145.53 | |
| 933 | 0404 | ENFOS | MAY202062 | 5/11/20 | Document/project management | Investigation | \$ 839.15 | \$839.15 | |
| 934 | 0405 | ARCADIS US INC | 34164332 | 5/27/20 | Environmental contractor | Investigation | \$18,750.00 | \$18,750.00 | |
| 937 | 0408 | Veris Law Group | 12550 | 6/16/20 | Legal | Investigation | \$ 172.32 | \$0.00 | Not appropriate for cost credit |
| 938 | 0409 | ARCADIS US INC | 34169404 | 6/18/20 | Environmental contractor | Investigation | \$9,254.93 | \$9,254.93 | |
| 941 | 0412 | ARCADIS US INC | 34175254 | 7/16/20 | Environmental contractor | Investigation | \$6,120.51 | \$6,120.51 | |
| 944 | 0415 | ARCADIS US INC | 34181879 | 8/20/20 | Environmental contractor | Investigation | \$4,070.38 | \$4,070.38 | |
| 947 | 0418 | ARCADIS US INC | 34188955 | 9/24/20 | Environmental contractor | Investigation | \$12,937.42 | \$12,937.42 | |
| 950 | 0421 | SGS | 52140169256 | 9/29/20 | Lab | Investigation | \$ 720.00 | \$720.00 | |
| 951 | 0422 | ARCADIS US INC | 34194865 | 10/26/20 | Environmental contractor | Investigation | \$14,764.66 | \$14,764.66 | |
| 954 | 0425 | ARCADIS US INC | 34201526 | 11/30/20 | Environmental contractor | Investigation | \$16,898.63 | \$16,898.63 | |
| 957 | | City of Phoenix | 400936876 | 12/1/20 | Permits | Investigation | \$658.10 | \$658.10 | |
| 958 | | Arcadis US Inc | 34212619 | 1/27/21 | Environmental contractor | Investigation | \$13,414.24 | \$13,414.24 | |
| 959 | | Veris Law Group | 13401 | 2/19/21 | Legal | Investigation | \$2,172.50 | \$0.00 | Not appropriate for cost credit |
| 960 | | Arcadis US Inc | 34217836 | 2/25/21 | Environmental contractor | Investigation | \$22,844.25 | \$22,844.25 | |
| 961 | | Arcadis US Inc | 34222585 | 3/19/21 | Environmental contractor | Investigation | \$16,773.83 | \$16,773.83 | |
| 962 | | Veris Law Group | 13571 | 3/31/21 | Legal | Investigation | \$2,172.50 | \$0.00 | Not appropriate for cost credit |
| 963 | | Veris Law Group | 13639 | 4/11/21 | Legal | Investigation | \$13,469.50 | \$0.00 | Not appropriate for cost credit |
| 964 | | Arcadis US Inc | 34228807 | 4/26/21 | Environmental contractor | Investigation | \$14,205.42 | \$14,205.42 | |
| 965 | | ENFOS* | MAY202162 | 5/7/21 | Document/project management | Investigation | \$870.24 | \$870.24 | |
| 966 | | Veris Law Group | 13778 | 5/19/21 | Legal | Investigation | \$237.00 | \$0.00 | Not appropriate for cost credit |
| 967 | | Arcadis US Inc | 34234055 | 5/21/21 | Environmental contractor | Investigation | \$5,552.08 | \$5,552.08 | |
| 968 | | Arcadis US Inc | 34239531 | 6/21/21 | Environmental contractor | Investigation | \$2,908.44 | \$2,908.44 | |
| 969 | | Veris Law Group | 13995 | 7/13/21 | Legal | Investigation | \$79.00 | \$0.00 | Not appropriate for cost credit |
| 970 | | Arcadis US Inc | 34245693 | 7/27/21 | Environmental contractor | Investigation | \$5,492.35 | \$5,492.35 | |
| 971 | | Arcadis US Inc | 34250898 | 8/24/21 | Environmental contractor | Investigation | \$3,221.72 | \$3,221.72 | |
| 972 | | Arcadis US Inc | 34255049 | 9/15/21 | Environmental contractor | Investigation | \$4,383.05 | \$4,383.05 | |
| 973 | | Arcadis US Inc | 34261637 | 10/19/21 | Environmental contractor | Investigation | \$9,562.38 | \$9,562.38 | |
| 974 | | SGS | 52140181909 | 10/22/21 | Lab | Investigation | \$630.00 | \$630.00 | |
| 975 | | Arcadis US Inc | 34268173 | 11/24/21 | Environmental contractor | Investigation | \$10,458.05 | \$10,458.05 | |

Appendix D: Univar Solutions Historical Cost Credit for West Central Phoenix - East Grand Avenue WQARF Site

| Item No. | Invoice Reference No. | Vendor | Invoice ID | Invoice Date | Contractor Description | Task | Invoice Total | Approved Costs | Notes |
|--------------|-----------------------|----------------|------------|--------------|--------------------------|--|-----------------------|-----------------------|-------|
| 976 | | Arcadis US Inc | 34278129 | 1/21/22 | Environmental contractor | Investigation/Remediation | \$9,506.92 | \$9,506.92 | |
| 977 | | Arcadis US Inc | 34283167 | 2/18/22 | Environmental contractor | Investigation/Remediation | \$11,229.46 | \$11,229.46 | |
| 978 | | Arcadis US Inc | 34288707 | 3/22/22 | Environmental contractor | Investigation/Remediation | \$11,895.90 | \$11,895.90 | |
| 979 | | Arcadis US Inc | 34294334 | 4/22/22 | Environmental contractor | Investigation/Remediation | \$80,181.08 | \$80,181.08 | |
| 980 | | Arcadis US Inc | 34299039 | 5/18/22 | Environmental contractor | Investigation/Remediation | \$3,159.90 | \$3,159.90 | |
| 981 | | Arcadis US Inc | 34304456 | 6/16/22 | Environmental contractor | Investigation/Remediation | \$2,465.73 | \$2,465.73 | |
| 982 | | Arcadis US Inc | 34311092 | 7/27/22 | Environmental contractor | Investigation/Remediation | \$5,691.16 | \$5,691.16 | |
| 983 | | Arcadis US Inc | 34316497 | 8/25/22 | Environmental contractor | Investigation | \$5,329.20 | \$5,329.20 | |
| 984 | | Arcadis US Inc | 34321339 | 9/22/22 | Environmental contractor | Investigation | \$4,659.00 | \$4,659.00 | |
| 985 | | Arcadis US Inc | 34328458 | 10/31/22 | Environmental contractor | Investigation | \$7,197.13 | \$7,197.13 | |
| 986 | | Arcadis US Inc | 34333977 | 11/29/22 | Environmental contractor | Investigation | \$8,091.20 | \$8,091.20 | |
| 987 | | Arcadis US Inc | 34331306 | 12/9/22 | Environmental contractor | Credit to invoice #34143669 dated Jan 31, 2020 for duplicate subcontractor charge submitted in previous package. | (\$3,881.64) | (\$3,881.64) | |
| 988 | | Arcadis US Inc | 34344202 | 1/20/23 | Environmental contractor | Investigation | \$1,510.70 | \$1,510.70 | |
| 989 | | Arcadis US Inc | 34349392 | 2/21/23 | Environmental contractor | Investigation | \$2,025.25 | \$2,025.25 | |
| 990 | | Arcadis US Inc | 34355364 | 3/23/23 | Environmental contractor | Investigation | \$1,684.28 | \$1,684.28 | |
| 991 | | Arcadis US Inc | 34361046 | 4/25/23 | Environmental contractor | Investigation | \$1,159.00 | \$1,159.00 | |
| 992 | | Arcadis US Inc | 34366526 | 5/23/23 | Environmental contractor | Investigation | \$828.21 | \$828.21 | |
| 993 | | Arcadis US Inc | 34372128 | 6/20/23 | Environmental contractor | Investigation | \$772.30 | \$772.30 | |
| 994 | | Arcadis US Inc | 34377362 | 7/18/23 | Environmental contractor | Investigation | \$4,547.07 | \$4,547.07 | |
| 995 | | Arcadis US Inc | 34384321 | 8/22/23 | Environmental contractor | Investigation | \$4,902.38 | \$4,902.38 | |
| 996 | | Arcadis US Inc | 34387882 | 9/13/23 | Environmental contractor | Investigation | \$10,818.66 | \$10,818.66 | |
| 997 | | Arcadis US Inc | 34396004 | 10/20/23 | Environmental contractor | Investigation | \$6,960.64 | \$6,960.64 | |
| 998 | | Arcadis US Inc | 34401001 | 11/15/23 | Environmental contractor | Investigation | \$9,642.05 | \$9,642.05 | |
| 999 | | SGS | 5217093008 | 9/20/23 | Lab | Investigation | \$585.00 | \$585.00 | |
| TOTAL | | | | | | | \$2,917,736.81 | \$1,921,034.12 | |

APPENDIX E

DETAILED FUTURE COST SUMMARY

Appendix E: Detailed Future Cost Summary

Monitored Natural Attenuation (Year 1)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|---|-------------|------------------|-----------------|----------------------|
| 1 | Semi-Annual Well Monitoring & Sampling (VOCs and MNA) | Wells | \$ 2,000.00 | 20 | \$ 40,000.00 |
| 2 | Semi-Annual Reporting | Each | \$ 15,000.00 | 2 | \$ 30,000.00 |
| 3 | Remedial Work Plan | Each | \$ 30,000.00 | 1 | \$ 30,000.00 |
| 4 | Abandonment & Replacement of WCP-201* | Lump | \$ 100,000.00 | 1 | \$ 100,000.00 |
| 5 | Project Management | Percent | 10% | 1 | \$ 20,000.00 |
| Subtotal (Cost per year) | | | | | \$ 220,000.00 |

Monitored Natural Attenuation (Year 2)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|---|-------------|------------------|-----------------|---------------------|
| 1 | Semi-Annual Well Monitoring & Sampling (VOCs and MNA) | Wells | \$ 2,000.00 | 20 | \$ 40,000.00 |
| 2 | Semi-Annual Reporting | Each | \$ 15,000.00 | 2 | \$ 30,000.00 |
| 3 | Periodic Site Review | Each | \$ 10,000.00 | 1 | \$ 10,000.00 |
| 4 | Project Management | Percent | 10% | 1 | \$ 8,000.00 |
| Subtotal (Cost per year) | | | | | \$ 88,000.00 |

Monitored Natural Attenuation (Year 3)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|--|-------------|------------------|-----------------|---------------------|
| 1 | Annual Well Monitoring & Sampling (VOCs) | Wells | \$ 1,500.00 | 10 | \$ 15,000.00 |
| 2 | Annual Reporting | Each | \$ 15,000.00 | 1 | \$ 15,000.00 |
| 3 | Project Management | Percent | 10% | 1 | \$ 3,000.00 |
| Subtotal (Cost per year) | | | | | \$ 33,000.00 |

Monitored Natural Attenuation (Years 4, 6)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|--|-------------|------------------|-----------------|---------------------|
| 1 | Annual Well Monitoring & Sampling (VOCs) | Wells | \$ 1,500.00 | 10 | \$ 15,000.00 |
| 2 | Annual Reporting | Each | \$ 15,000.00 | 1 | \$ 15,000.00 |
| 3 | Periodic Site Review | Each | \$ 10,000.00 | 1 | \$ 10,000.00 |
| 4 | Project Management | Percent | 10% | 1 | \$ 4,000.00 |
| Subtotal (Cost per year) | | | | | \$ 44,000.00 |

Monitored Natural Attenuation (Year 5)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|--|-------------|------------------|-----------------|---------------------|
| 1 | Annual Well Monitoring & Sampling (VOCs and MNA) | Wells | \$ 2,000.00 | 10 | \$ 20,000.00 |
| 2 | Annual Reporting | Each | \$ 15,000.00 | 1 | \$ 15,000.00 |
| 3 | Project Management | Percent | 10% | 1 | \$ 3,500.00 |
| Subtotal (Cost per year) | | | | | \$ 38,500.00 |

Monitored Natural Attenuation (Year 7)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|---|-------------|------------------|-----------------|---------------------|
| 1 | Semi-Annual Well Monitoring & Sampling (VOCs) | Wells | \$ 1,500.00 | 20 | \$ 30,000.00 |
| 2 | Semi-Annual Report | Each | \$ 15,000.00 | 2 | \$ 30,000.00 |
| 3 | Project Management | Percent | 10% | 1 | \$ 6,000.00 |
| Subtotal (Cost per year) | | | | | \$ 66,000.00 |

Appendix E: Detailed Future Cost Summary

Monitored Natural Attenuation (Year 8)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|---|-------------|------------------|-----------------|---------------------|
| 1 | Semi-Annual Well Monitoring & Sampling (VOCs) | Wells | \$ 1,500.00 | 20 | \$ 30,000.00 |
| 2 | Semi-Annual Report | Each | \$ 15,000.00 | 2 | \$ 30,000.00 |
| 3 | Closure Report | Each | \$ 30,000.00 | 1 | \$ 30,000.00 |
| 4 | Project Management | Percent | 10% | 1 | \$ 9,000.00 |
| Subtotal (Cost per year) | | | | | \$ 99,000.00 |

Monitored Natural Attenuation (Year 9)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|--|-------------|------------------|-----------------|----------------------|
| 1 | Well Abandonment of 39 Wells & Reporting** | Lump | \$ 233,000.00 | 1 | \$ 233,000.00 |
| 2 | Project Management | Percent | 10% | 1 | \$ 23,300.00 |
| Subtotal (Cost per year) | | | | | \$ 256,300.00 |

Inflation (Years 1 to 9)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|-----------------|--------------------|-------------|------------------|-----------------|----------------------|
| 1 | Inflation (3%) | - | \$ 124,508.00 | 1 | \$ 124,508.00 |
| Subtotal | | | | | \$ 124,508.00 |

Remedy Subtotal **\$ 1,013,308.00**

Contingency

Monitored Natural Attenuation (four additional years)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|---------------------------------|--|-------------|------------------|-----------------|----------------------|
| 1 | Annual Well Monitoring & Sampling (VOCs) | Wells | \$ 1,500.00 | 40 | \$ 60,000.00 |
| 2 | Annual Reporting | Each | \$ 15,000.00 | 4 | \$ 60,000.00 |
| 3 | Periodic Site Review | Each | \$ 10,000.00 | 2 | \$ 20,000.00 |
| 4 | Project Management | Percent | 10% | 1 | \$ 14,000.00 |
| Subtotal (Cost per year) | | | | | \$ 154,000.00 |

Inflation (Contingency)

| <i>Item</i> | <i>Description</i> | <i>Unit</i> | <i>Unit Cost</i> | <i>Quantity</i> | <i>Total</i> |
|-----------------|--------------------|-------------|------------------|-----------------|---------------------|
| 1 | Inflation (3%) | - | \$ 55,715.00 | 1 | \$ 55,715.00 |
| Subtotal | | | | | \$ 55,715.00 |

Contingency Subtotal **\$ 209,715.00**

Remedy Total **\$ 1,223,023.00**

Notes:

*Drilling costs are \$500/foot [permits, driller, waste disposal, oversight, & reporting] and abandonment of WCP-201 is \$10,000

**Abandonment costs are \$37/foot [permits, driller, waste disposal, oversight, & reporting]. Total well footage is 6,295 feet