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ENGINEERING AND ARCHITECTURAL SERVICES DEPARTMENT



1997-98 STORM WATER MONITORING PROGRAM

Summary Report

DATA VALIDATION AND POLLUTANT LOAD ANALYSIS

SEPTEMBER 29, 1998

NCS
Narasimhan Consulting Services
P.O. Box 44382
Phoenix, Arizona 85064
(602) 286-6551

Narasimhan Consulting Services

September 29, 1998

Ms. Lori Sundstrom
Environmental Affairs Supervisor
City of Phoenix
Engineering and Architectural Services Department
200 W. Washington St., 7th Floor
Phoenix, Arizona 85003

RE: Final Summary Report – Storm Water Data Validation and Pollutant Load Analysis

Dear Ms. Sundstrom:

This transmits the Summary Report for the Data Validation and Pollutant Load Analysis projects. The report contains all work products previously transmitted to the City along with a text summary of the project and conclusions. I hope this report serves a useful reference document in your program. It has been a pleasure working with you and your staff of this project. Please call me at (602) 286-6551 if you have any questions.

Sincerely,



Ramesh Narasimhan, P.E.
Principal Engineer

C: Blaine Work, City of Phoenix

CITY OF PHOENIX
ENGINEERING AND ARCHITECTURAL SERVICES DEPARTMENT



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SUMMARY REPORT – DATA VALIDATION AND POLLUTANT LOAD ANALYSIS

September 29, 1998

INTRODUCTION

Under the conditions of National Pollutant Discharge Elimination System (NPDES) Permit No. AZS000003 the City of Phoenix is required to report storm water quality data from qualifying rainfall events and provide an estimate of citywide pollutant loads. Monitoring is performed by the Maricopa County Flood Control District (MCFCD) and the United States Geological Survey on behalf of the City. The City submits an annual report to the United States Environmental Protection Agency (USEPA) that summarizes the monitoring results, pollutant loads, and other activities in the storm water program. To assist the City in preparing the 1997-98 annual report, Narasimhan Consulting Services (NCS) was retained to review and validate storm water quality (SWQ) data and develop estimates of Citywide pollutant loads.

The primary goal of the validation effort was to verify that all data that is submitted to the USEPA for compliance purposes meet the data quality objectives of the NPDES program.

REPRESENTATIVE STORM ASSESSMENT

Rainfall and storm flow data provided by the MCFCD were reviewed to determine the storms that qualified as representative events for which monitoring results must be submitted. Representative events are defined as follows¹:

- Winter storms (Oct-March) between 0.2"-0.7" rainfall with a duration of 5.2-15.6 hours.
- Summer storms (Apr-Sept) between 0.2"-0.8" rainfall with a duration of 2.2-6.5 hours.

This assessment indicated that 10 storms could potentially be considered as representative storm events (as shown in the shaded areas of Table 1). Of these 10 events, runoff was measured for seven events (dark shaded areas). For the other three events, while runoff was not measured, the rain gage measurements indicate that the storm was representative, even though total runoff was not measured (lightly shaded areas).

DATA VALIDATION REPORTS

The initial step in the data validation process was to perform a review of the analytical methods used in the SWQ monitoring program to identify parameters that are critical in validating the data (sample collection methods, holding times, and sample transport).

Table 1 - Representative Storm Assessment

| SR-03 - North Bank of Salt River at 35th Avenue | | | | | | | | |
|---|--------|--------|---------|----------|--------|---------|---------|---------|
| Date of Sampling | 8/3/97 | 9/3/97 | 12/7/97 | 12/21/97 | 2/4/98 | 2/15/98 | 2/24/98 | 3/26/98 |
| Representative Storm Event | N | N | N | Y | Y | N | N | N |
| Storm Duration (minutes) (DRN) | 111 | 258 | 282 | 417 | 460 | 267 | 103 | 294 |
| Total Storm Rainfall (inch) | 0.34 | 0.10 | 0.21 | 0.46 | 0.56 | 0.80 | 0.28 | 0.45 |

| SR-45 - South Bank of Salt River at 40th Street | | | | | | | |
|---|---------|---------|---------|--------|---------|---------|--------|
| Date of Sampling | 12/1/97 | 12/7/97 | 1/10/98 | 2/4/98 | 2/24/98 | 3/26/98 | 4/1/98 |
| Representative Storm Event | N | N | Y | Y | Y | N | N |
| Storm Duration (minutes) (DRN) | 480 | 232 | 340 | 664 | 395 | 274 | 104 |
| Total Storm Rainfall (inch) | 0.11 | 0.28 | 0.47 | 0.54 | 0.48 | 0.41 | 0.30 |

| SR-49 - North Bank of Salt River at 67th Avenue | |
|---|---------|
| Date of Sampling | 4/12/98 |
| Representative Storm Event | N |
| Storm Duration (minutes) (DRN) | 107 |
| Total Storm Rainfall (inch) | 0.10 |
| Rainfall Sampled (inch) (TRN) | 0.10 |

| IB-08 - North Bank of Indian Bend Wash at 40th Street | | | | | | | | |
|---|---------|---------|----------|---------|--------|---------|---------|--------|
| Date of Sampling | 8/30/97 | 12/7/97 | 12/21/97 | 1/10/98 | 2/4/98 | 2/15/98 | 3/26/98 | 4/1/98 |
| Representative Storm Event | N | N | N | N | N | N | N | N |
| Storm Duration (minutes) (DRN) | 67 | 243 | UA | 278 | 625 | 244 | 260 | 106 |
| Total Storm Rainfall (inch) | 0.11 | 0.32 | 0.78 | 0.29 | 1.13 | 0.75 | 0.58 | 0.24 |

| 27th Avenue at south bank of Salt River | | | | |
|---|--------|--------|----------|--------|
| Date of Sampling | 8/3/97 | 8/8/97 | 12/22/97 | 2/4/98 |
| Representative Storm Event | N | N | Y | Y |
| Storm Duration (minutes) (DRN) | 114 | 66 | 624 | 396 |
| Rainfall Sampled (inch) (TRN) | 0.3 | 0.31 | 0.28 | 0.37 |

| ACDC at 43rd Avenue | | | | |
|--------------------------------|---------|--------|----------|--------|
| Date of Sampling | 7/19/97 | 8/3/97 | 12/27/97 | 2/4/98 |
| Representative Storm Event | N | Y | Y | Y |
| Storm Duration (minutes) (DRN) | 84 | 330 | 486 | 474 |
| Total Storm Rainfall (inch) | UA | UA | UA | UA |
| Total Rainfall Sampled (inch) | 0.16 | 0.26 | 0.43 | 0.67 |

1. Criteria for winter storms (Oct-March) are 0.2"-0.7" rainfall with a duration of 5.2-15.6 hours.
2. Criteria for summer storms (Apr-Sept) are 0.2"-0.8" rainfall with a duration of 2.2-6.5 hours.

Original laboratory reports and the corresponding chain of custody forms were reviewed to determine if the reports meet the data quality objectives of the SWQ monitoring program. Evaluation criteria that were evaluated include holding times, duplicate results, field blank results, method blank results, matrix spike results, equipment calibration information, and sample collection and transport information (to the extent practicable).

Tables 2 through 11 provide monitoring results from 10 representative storm events along with the results of the data validation process (due to the voluminous nature of these tables, they are enclosed at the end of this document). The tables identify all data quality objectives that were not met in the SWQ monitoring program and identify those samples that should be invalidated and not be considered for submittal to regulatory agencies. The dark shaded areas in the tables are indicative of results that did not meet data quality objectives for either sampling or laboratory quality assurance/quality control (QA/QC). This data may not be suitable for compliance reporting purposes. Reasons for identifying data as questionable are as follows:

- Inappropriate sample collection methods for volatile organic chemicals and certain synthetic organic chemicals.
- Dissolved oxygen and pH analyses were performed in the lab instead of the field.
- Inappropriate analytical methods for chemical oxygen demand.
- Laboratory data qualifiers for QA/QC samples (recovery of continuous calibration, matrix spike or surrogate compounds outside acceptable ranges).
- In many instances duplicate sample information was not available because such data was not specified as part of the QA/QC program. Although the City's monitoring program specifies QA/QC requirements for duplicate samples (in the Part 2 NPDES Permit Application), data was not invalidated on this basis alone as long as all other QA/QC requirements were met. However, more stringent guidelines need to be developed for the laboratories in the future for duplicate samples and QA/QC documentation.

Additionally, monitoring for certain parameters was not performed, as discussed below:

- Temperature and pH were not recorded at the time of sampling for monitoring performed at outfall SR-03 (North Bank of Salt River at 35th Avenue) and outfall SR-45 (South Bank of Salt River at 40th Street).
- Analysis for total petroleum hydrocarbons was not performed at any of the outfalls.
- Analyses for fecal coliform, fecal streptococci, biochemical oxygen demand, and DDE were not performed at the outfalls located at 27th Avenue at the South Bank of Salt River and 43rd Avenue at the Arizona Canal Diversion Channel.

POLLUTANT LOAD ANALYSIS

Seasonal and annual pollutant loads were developed for all 10 of the City's hydrologic basins for the period of July 1, 1997 through June 30, 1998. Winter, summer, and total annual loads were computed for all water quality parameters where sufficient validated data was available. The "Simple Method" as described in EPA's guidance documents was used in performing this analysis.²

The following methodology was used in developing pollutant loads:

1. Land use information for each catchment area within the 10 basins was obtained from the *City of Phoenix Part 2 NPDES Permit Application*.
2. Weighted average runoff coefficients ("C" factors) were developed for each catchment based on published literature values that were adjusted for local conditions.³

The weighted average C value for each catchment was obtained as follows:

$$C_{\text{weighted}} = \frac{(C_{\text{res.}} \times \text{Area}_{\text{res.}} + C_{\text{comm.}} \times \text{Area}_{\text{comm.}} + C_{\text{ind.}} \times \text{Area}_{\text{ind.}} + C_{\text{open}} \times \text{Area}_{\text{open}})}{\text{Area}_{\text{total}}}$$

Where:

C_{weighted} = weighted runoff coefficient,
 $C_{\text{res.}}$ = coefficient for residential areas, $\text{Area}_{\text{res.}}$ = residential acreage,
 $C_{\text{comm.}}$ = coefficient for commercial areas; $\text{Area}_{\text{comm.}}$ = commercial acreage,
 $C_{\text{ind.}}$ = coefficient for industrial areas, $\text{Area}_{\text{ind.}}$ = industrial acreage,
 C_{open} = coefficient for open space, $\text{Area}_{\text{open}}$ = open space acreage, and
 $\text{Area}_{\text{total}}$ = Total acreage of catchment

Runoff coefficients that were utilized for each land use are as follows:

- Industrial: 0.4 (published range 0.4-0.9)
- Commercial: 0.4 (published range 0.4-0.95)
- Residential: 0.3 (published range 0.3-0.75)
- Open Space: 0.05 (published range 0.05-0.3)

The C values listed above were obtained by adjusting the published ranges of values to obtain runoff volumes that correlated with previously measured values from the City's NPDES Permit application. Runoff volumes were calculated using the formula $Q = C \times I \times A$, where Q is the runoff volume in acre-inch, C is the weighted average runoff coefficient, and A is the catchment area in acres. The correlation between measured and calculated values is presented in Table 12 and Figures 1 and 2.

Table 12 - Measured vs. Calculated Runoff Rates

| Location | Event 1 (1/3/1992) | Event 2 (2/6/1992) | Event 3 (3/2/1992) | Event 4 (8/22/1992) |
|--------------------|--------------------|--------------------|--------------------|---------------------|
| SR 03 - Measured | 622,600 | | 272,500 | 118,800 |
| SR 03 - Calculated | 775,006 | | 775,006 | 775,006 |
| SR 33 - Measured | 622,600 | | | 980,500 |
| SR 33 - Calculated | 756,273 | | | 1,381,652 |
| AC05 - Measured | | | | 48,200 |
| AC05 - Calculated | | | | 63,570 |
| SR45 - Measured | 692,000 | 629,000 | 974,000 | |
| SR45 - Calculated | 693,172 | 894,822 | 1,096,472 | |
| SR21 - Measured | 327,600 | 213,000 | 570,300 | |
| SR21 - Calculated | 351,861 | 342,601 | 601,867 | |
| IB-8 - Measured | 157,000 | 98,200 | 220,300 | |
| IB-8 - Calculated | 253,202 | 229,649 | 370,971 | |
| IB11 - Measured | 442,100 | 265,000 | 437,800 | |
| IB11 - Calculated | 1,242,002 | 895,397 | 1,126,467 | |

Figure 1 - Runoff Rate Comparison

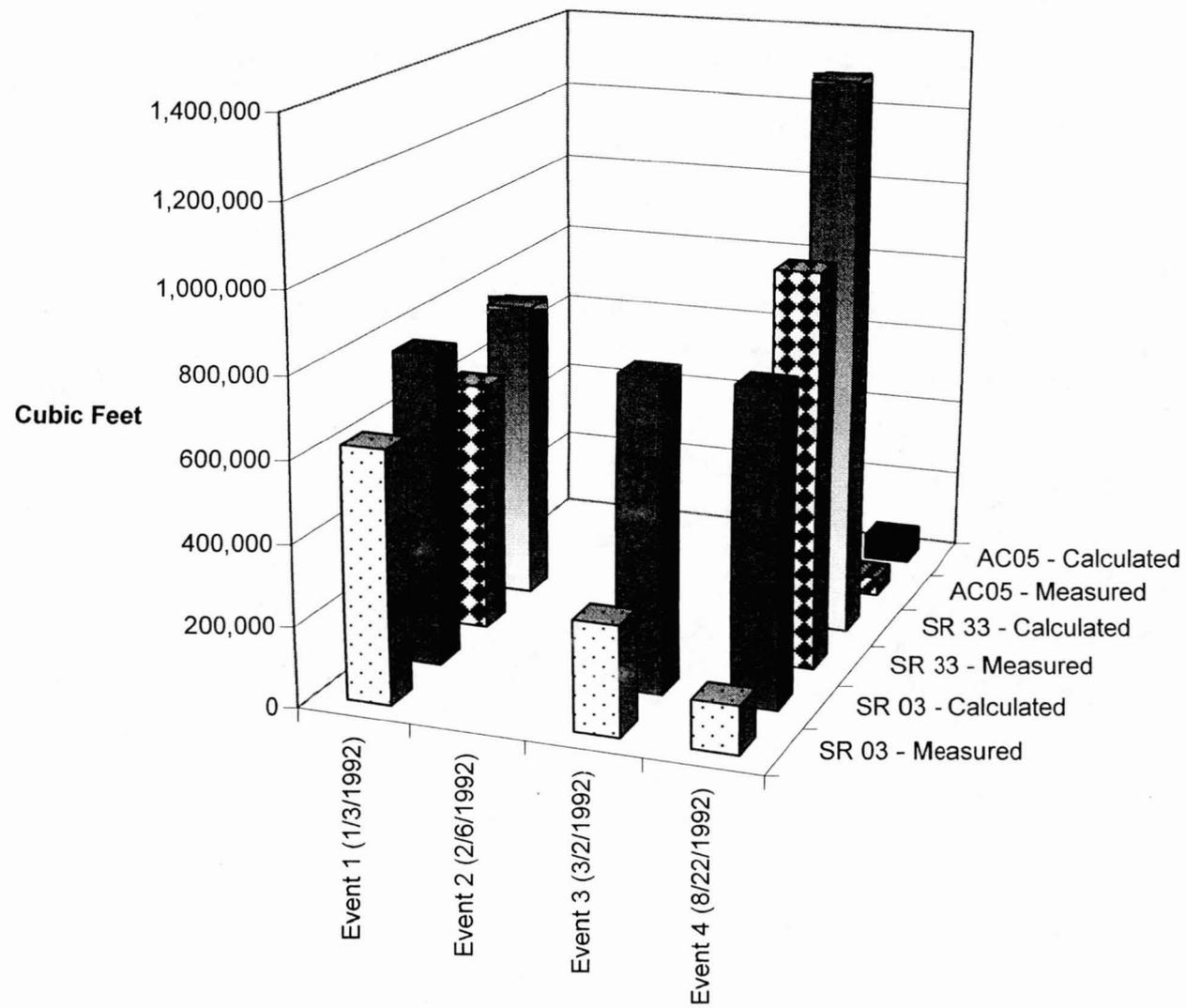
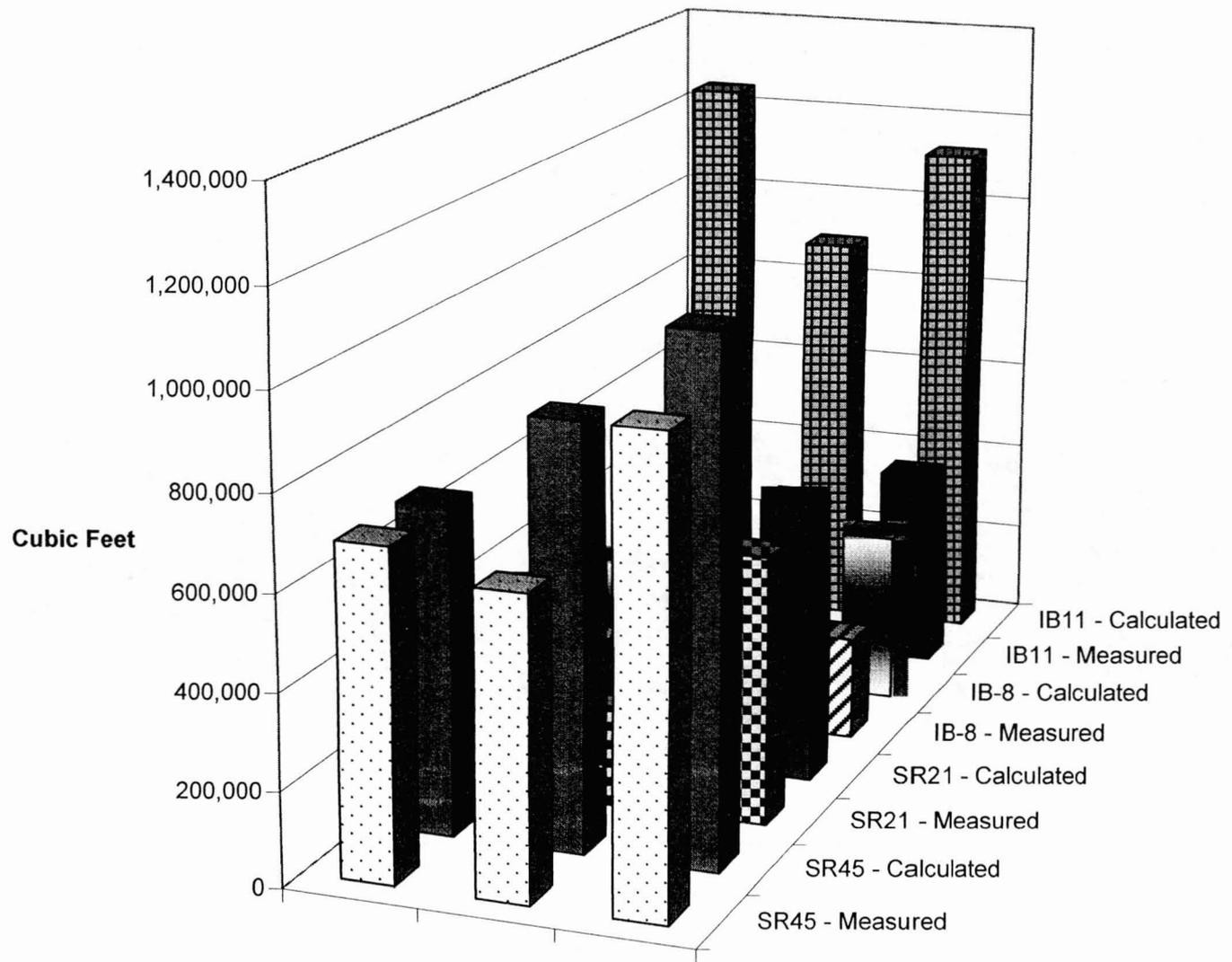


Figure 2 - Runoff Rate Comparison



1. Monthly rainfall data from July 1997 to June 1998 was obtained for 28 rain gauges in the Phoenix area from the Maricopa County Flood Control District's Internet web page. For each catchment a corresponding rain gauge that was most representative of rainfall within the area was identified. Where necessary, the average of two or three rain gauge measurements was used to obtain representative rainfall data for a particular catchment.
2. Using the data from steps 2 and 3 listed above, seasonal runoff volumes for each catchment were determined. Winter runoff volumes were computed using rainfall data for the months of October through March. Summer runoff volumes were computed using rainfall data for the months of April through September. Seasonal runoff volumes were calculated using the formula $Q = 0.9 \times C \times I \times A$. This is similar to the formula discussed earlier except that EPA guidance recommends that the seasonal runoff totals be adjusted by a 0.9 factor to account for events where no runoff occurs.¹ To obtain runoff volumes for the 10 major basins, individual catchment flows within each basin were added.
3. Several statistical methods were evaluated to correlate measured pollutant concentrations to land uses. Multiple regression models and matrix solution methods were used to determine the relationship between land use and measured pollutant concentrations. However, due to the limited data set, the broad range of measured values for a contaminant, and other hydrologic variables such as antecedent rainfall conditions and storm intensity; these common statistical methods did not provide realistic solutions (negative numbers for many values). Therefore an alternative statistical approach was used.

Flow weighted average pollutant concentrations were developed for the following catchments with homogeneous land uses (all results that were below method detection levels were considered as values at one-half of the detection level):

- Arizona Canal Diversion Channel (ACDC) at 43rd Avenue – pollutant concentrations from this outfall were assumed to be representative of commercial activity.
 - 27th Avenue at South Bank of Salt River (27th Ave. at SR) – pollutant concentrations from this outfall were assumed to be representative of industrial activity.
4. Pollutant concentrations for residential activities were developed using flow-weighted averages of measured values from the North Bank of Indian Bend Wash and 40th Street outfall (catchment IB-08) and the ACDC at 43rd Ave. data. Since the IB-08 catchment is comprised of residential and commercial land uses, pollutant concentrations for residential activities were obtained using the following equation:

$$PC_{\text{residential}} = \frac{(PC_{\text{IB-08}} - PC_{\text{commercial}} \times \% \text{Commercial Land Use})}{\% \text{Residential Land Use}}$$

Where:

- $PC_{\text{residential}}$ = pollutant concentration representative of residential activity
 $PC_{\text{IB-08}}$ = flow weighted average of measured pollutant concentrations at IB-08
 $PC_{\text{commercial}}$ = pollutant concentration representative of commercial activity
(from ACDC at 43rd Ave. data)
%Commercial Land Use = percent of area in IB-08 that has commercial uses
%Residential Land Use = percent of area in IB-08 that has residential uses

5. Pollutant concentrations for open spaces were developed using flow-weighted averages of measured values from the South Bank of the Salt River and 40th Street outfall (catchment SR-45) and the 27th Ave. at SR data. Since the SR-45 catchment is comprised of industrial areas and open space, pollutant concentrations for open spaces were obtained using the following equation:

$$PC_{\text{open}} = \frac{(PC_{\text{SR-45}} - PC_{\text{industrial}} \times \% \text{Industrial Land Use})}{\% \text{Open Space}}$$

Where:

- PC_{open} = pollutant concentration representative of open space
 $PC_{\text{SR-45}}$ = flow weighted average of measured pollutant concentrations at SR-45
 $PC_{\text{industrial}}$ = pollutant concentration representative of industrial activity
(from 27th Ave. at SR data)
%Industrial Land Use = percent of area in SR-45 that has industrial uses
%Open Space = percent of area in SR-45 that is open space

6. The statistical approach discussed above was used to estimate pollutant concentrations for industrial, residential, and commercial land uses and open spaces, as summarized in Table 13. It is recognized that pollutant concentrations for certain parameters in the open space category were computed as zero. This is a result of the limited data set that prevented solutions to certain equations. These estimates can be improved in the future when additional data is obtained. Additionally, a comparison of estimated and measured pollutant concentrations from several sources is presented in Table 14.
7. To evaluate the validity of the statistical approach, pollutant concentrations for catchments with mixed land use were estimated and compared with measured concentrations. The following equation was used to determine pollutant concentrations for a catchment with mixed land uses:

$$PC_{\text{Land Use Weighted}} = PC_{\text{industrial}} \times \% \text{Industrial Land Use} + PC_{\text{open}} \times \% \text{Open Space} \\ + PC_{\text{commercial}} \times \% \text{Commercial Land Use} \\ + PC_{\text{residential}} \times \% \text{Residential Land Use}$$

Table 13 - Land Use Specific Pollutant Concentrations

| Parameter | Open Space Pollutant Concentrations | Residential Land Use Pollutant Concentrations | Industrial Land Use Pollutant Concentrations | Comercial Land Use Pollutant Concentrations |
|---|---|--|--|---|
| BOD5 (mg/l) | 0.00 | 44.94 | 348.00 | 32.00 |
| COD High Level (mg/l) | 304.08 | 245.78 | 244.67 | 112.80 |
| Chloride (mg/l as Cl) | 0.00 | 13.94 | 37.67 | 3.94 |
| Cyanide Total (mg/l as Cn) | 0.00 | 0.00 | 0.02 | 0.03 |
| Fecal Coliform (CFU/100mL) | 102,847.70 | 1,357.30 | 6,832.00 | 400.00 |
| Fecal Streptococci (CFU/100mL) | 299,636.54 | 8,558.02 | 17,911.00 | 454.00 |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 0.00 | 130.66 | 523.47 | 102.60 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 0.00 | 658.41 | 501.07 | 105.80 |
| Nitrogen No2 + No3, Total (mg/l as N) | 0.00 | 1.65 | 2.67 | 0.86 |
| Nitrogen, Ammonia + Organic, Total (mg/l) | 0.00 | 2.21 | 38.97 | 3.31 |
| Nitrogen Nitrate Total (mg/l as N) | 0.00 | 1.65 | 2.38 | 0.83 |
| Nitrogen Nitrite Total (mg/l as N) | 0.00 | 0.06 | 0.29 | 0.03 |
| Nitrogen Ammonia Total (mg/l as N) | 0.00 | 2.29 | 19.55 | 1.81 |
| Phosphorous Total (mg/l as P) | 2.46 | 0.99 | 1.33 | 0.44 |
| Phosphorous Ortho (mg/l as P) | 0.22 | 0.26 | 0.30 | 0.20 |
| Sulfate Dissolved (mg/l) | 51.94 | 30.03 | 34.93 | 9.93 |
| Phenols Total Recoverable (ug/l) | 223.80 | 117.75 | 9.93 | 8.30 |
| Oil and Grease Total Recoverable (mg/l) | 0.00 | 4.23 | 10.47 | 20.30 |
| Organic Carbon, Total (mg/l) | 0.00 | 38.15 | 218.67 | 34.18 |
| Arsenic Total (ug/l as As) | 0.00 | 6.30 | 14.93 | 2.35 |
| Beryllium Total Recoverable (ug/l as Be) | 0.00 | 0.15 | 5.00 | 4.00 |
| Cadmium Total Recoverable (ug/l as Cd) | 5.37 | 0.65 | 2.47 | 0.55 |
| Chromium Total Recoverable (ug/l as Cr) | 15.78 | 22.28 | 21.07 | 3.40 |
| Copper, Total Recoverable, (ug/l as Cu) | 566.70 | 41.22 | 151.20 | 15.60 |
| Lead, Total Recoverable, (ug/l as Pb) | 0.00 | 35.06 | 272.67 | 6.90 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.43 | 0.21 | 0.05 | 0.04 |
| Nickel, Total Recoverable, (ug/l as Ni) | 0.00 | 17.26 | 43.93 | 8.90 |
| Selenium, Total, (ug/l as Se) | 8.19 | 3.09 | 0.50 | 0.40 |
| Silver, Total Recoverable, (ug/l as Ag) | 94.73 | 31.94 | 0.50 | 0.40 |
| Zinc, Total Recoverable, (ug/l as Zn) | 247.13 | 185.39 | 522.00 | 160.00 |

Table 14 - Measured and Estimated Pollutant Concentrations

| | Fecal Coliform | Fecal Streptococi | BOD | COD | TSS | Ammonia, as N | Ammonia + Organic N | NO3+NO2 | Phosphorous, T | Chloride | Lead, total | Copper, total | Zinc, total |
|---|----------------|-------------------|-------|--------|--------|---------------|---------------------|---------|----------------|----------|-------------|---------------|-------------|
| Residential Uses | | | | | | | | | | | | | |
| Lazybrook Street Storm Sewer, Houston, Texas | | | | | 99.70 | | 3.29 | 1.09 | 1.18 | 7.28 | | | |
| Lincoln Creek @ 54th St., Milwaukee, Wisconsin | | | | 149.95 | 254.60 | 0.47 | 2.79 | 0.88 | 0.72 | 17.97 | 0.46 | | 0.44 |
| Median Values from NURP Study | | | 10.00 | 73.00 | 101.00 | | | 0.74 | 0.38 | | 0.14 | 0.03 | 0.14 |
| Estimated Values from NPDES Permit Application | 5,711.00 | 20,231.00 | 10.40 | 62.60 | 102.70 | 0.54 | | 0.40 | 0.31 | | 0.02 | 0.02 | 0.09 |
| Estimated Values from 1997-1998 Monitoring Data | 1,357.00 | 8,558.00 | 44.94 | 245.78 | 658.41 | 2.29 | 2.21 | 1.65 | 0.99 | 13.94 | 0.04 | 0.04 | 0.19 |
| Commercial Uses | | | | | | | | | | | | | |
| Lincoln Creek Tributary, Milwaukee, Wisconsin | | | | 78.57 | 94.74 | 0.55 | 1.05 | 0.89 | 0.30 | 15.52 | 0.22 | | 0.29 |
| Median Values from NURP Study | | | 9.30 | 57 | 69 | | | 0.57 | 0.201 | | 0.104 | 0.029 | 0.226 |
| Estimated Values from NPDES Permit Application | 5,179 | 16,592 | 12.3 | 72 | 26.9 | 0.481 | | 0.5 | 0.18 | | 0.012 | 0.014 | 0.064 |
| Phoenix Estimated Values | 400 | 454 | 32 | 112.8 | 105.8 | 1.81 | 3.31 | 0.86 | 0.44 | 3.94 | 0.069 | 0.0156 | 0.16 |
| Open Space | | | | | | | | | | | | | |
| Median Values from NURP Study | | | | 40 | 70 | | | 0.543 | 0.121 | | 0.03 | | 0.195 |
| Phoenix Estimated Values | 102,847 | 299,636 | | 304 | | | | | 2.46 | | | 0.566 | 0.247 |
| Industrial Uses | | | | | | | | | | | | | |
| Estimated Values from NPDES Permit Application | 16,248 | 51,763 | 12.5 | 81.7 | 64.5 | 0.537 | | 0.897 | 0.264 | | 0.011 | 0.039 | 0.078 |
| Phoenix Estimated Values | 6,832 | 17,911 | 348 | 244.67 | 501.7 | 19.55 | | 2.67 | 1.33 | 37.67 | 0.272 | 0.151 | 0.522 |

NOTE

Blank areas indicate that sufficient data is not available to develop estimates.

Where:

$PC_{\text{Land Use Weighted}} =$ Estimated pollutant concentration for a catchment
with mixed land uses

All other terms as previously defined

A comparison of predicted versus measured pollutant concentrations is presented in Table 15 for Catchment SR-03, which has multiple land uses. An initial observation of the data presented in Table 14 indicated that all the estimated concentrations correlated moderately well to the flow-weighted averages of the measured values, with the exception of nitrogen (ammonia and organic) and fecal streptococci. To statistically evaluate the accuracy of the estimates, a linear regression analysis was performed to compare the estimated values with actual measurements. All parameters except fecal coliform and fecal streptococci were used in the regression analysis. Fecal coliform and fecal streptococci were not included in the regression analysis because the estimated and measured values for these two parameters are several magnitudes greater than the other pollutants, a factor that would significantly skew the statistical evaluation. Results from the regression analysis, shown Figure 3, indicate that the estimated values correlated moderately well with the measured values with a correlation coefficient (R^2) value of 0.80. The equation of the best-fit line through the data points was $Y = 0.80 \times X$ (the ideal equation is $Y = X$).

- Using the equation presented in step 9, land use weighted average pollutant concentrations were developed for each of the 10 basins. These concentrations and the runoff volumes determined under step 4 were used to compute seasonal and annual pollutant loads. Pollutant loads for each basin and the City wide total are presented in Table 4-2 through 4-12 (enclosed at the end of this document; table numbers were formatted to meet the requirements of the City's annual storm water report to EPA).

The approach presented above represents the simple method for determining seasonal and annual pollutant loads, as per EPA's guidance criteria. Results from the City's 1997 and 1998 monitoring data were used to correlate pollutant concentrations with land uses for 10 hydrologic basins in Phoenix.

CONCLUSIONS

Storm water monitoring data from qualifying events during 1997-98 were reviewed and validated to ensure that the data quality objectives of the NPDES monitoring program were satisfied. Data that did not meet the appropriate QA/QC requirements are identified in the enclosed tables. To reduce the number of invalid results from future sampling events the following recommendations have been developed:

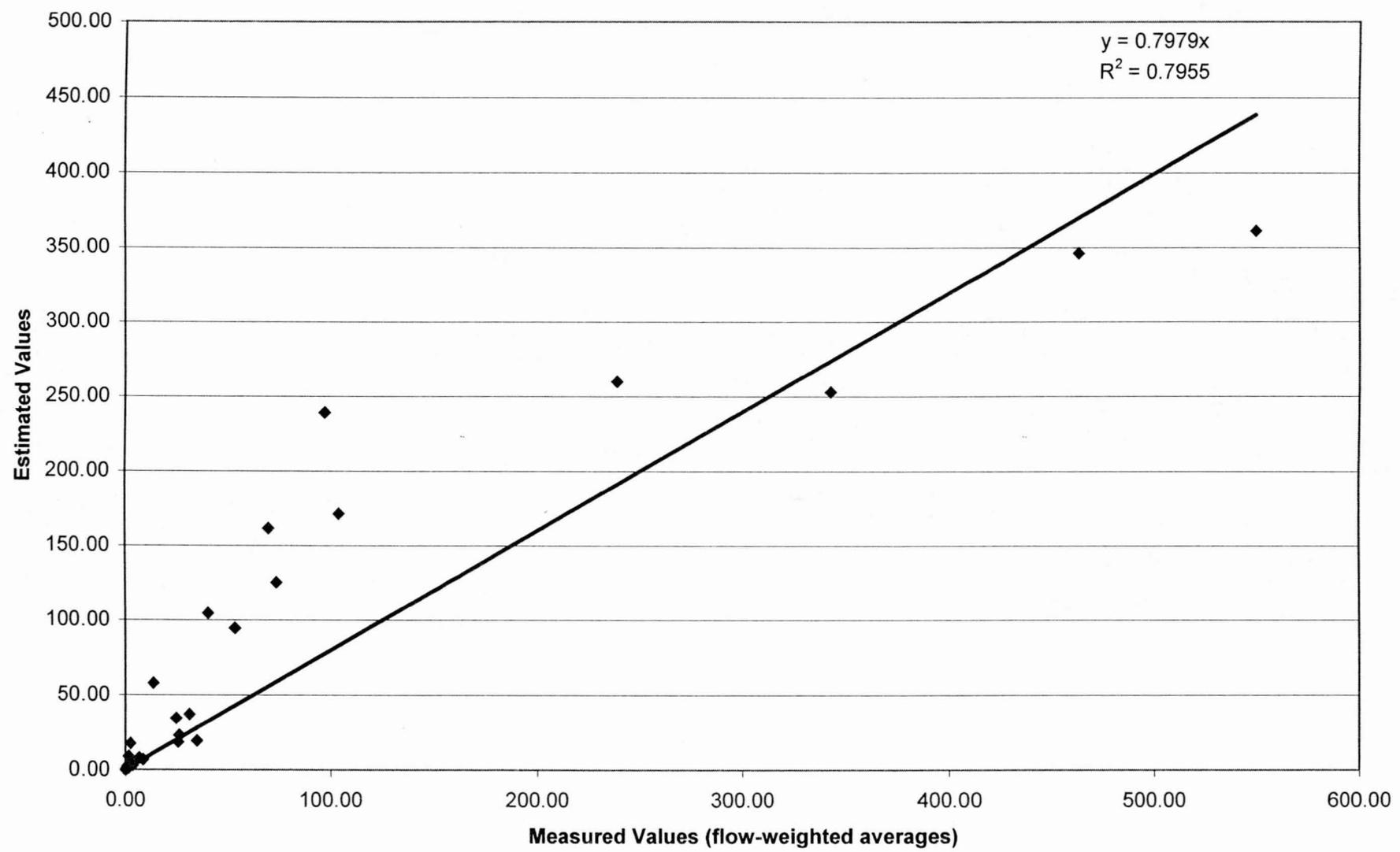
- Standardize sample collection procedures at all locations. Identify those parameters for which grab samples should be collected (microbiological, VOCs, SOC method 525).
- Utilize approved test kits to analyze for pH and dissolved oxygen in the field.

Table 15 - Estimated vs. Measured Pollutant Concentrations (SR-03)

| <u>Pollutant</u> | <u>Measured Concentration (1)</u> | <u>Estimated Concentration</u> |
|--|-----------------------------------|--------------------------------|
| BOD5 (mg/l) | 70.07 | 161.32 |
| COD High Level (mg/l) | 342.82 | 252.90 |
| Chloride (mg/l as Cl) | 35.13 | 19.40 |
| Cyanide Total (mg/l as Cn) | 0.01 | 0.01 |
| Fecal Coliform (CFU/100mL) | 28,775.32 | 33,076.63 |
| Fecal Streptococci (CFU/100mL) | 48,586.51 | 96,425.29 |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 238.91 | 259.71 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 549.55 | 361.13 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.11 | 1.55 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 2.61 | 17.45 |
| Nitrogen Nitrate Total (mg/l as N) | 1.03 | 1.43 |
| Nitrogen Nitrite Total (mg/l as N) | 0.07 | 0.14 |
| Nitrogen Ammonia Total (mg/l as N) | 1.66 | 9.01 |
| Phosphorous Total (mg/l as P) | 1.87 | 1.52 |
| Phosphorous Dissolved (mg/l as P) | 0.48 | 0.89 |
| Phosphorous Ortho (mg/l as P) | 0.35 | 0.26 |
| Sulfate Dissolved (mg/l) | 31.48 | 37.09 |
| Phenols Total Recoverable (ug/l) | 53.70 | 94.48 |
| Oil and Grease Total Recoverable (mg/l) | 8.76 | 6.81 |
| Organic Carbon, Total (mg/l) | 40.71 | 104.43 |
| Arsenic Total (ug/l as As) | 6.92 | 7.91 |
| Beryllium Total Recoverable (ug/l as Be) | 1.00 | 2.46 |
| Cadmium Total Recoverable (ug/l as Cd) | 3.69 | 2.79 |
| Chromium Total Recoverable (ug/l as Cr) | 25.84 | 18.55 |
| Copper, Total Recoverable, (ug/l as Cu) | 97.00 | 239.11 |
| Copper, Dissolved, (ug/l as Cu) | 13.92 | 57.90 |
| Lead, Total Recoverable, (ug/l as Pb) | 73.90 | 125.09 |
| Nickel, Total Recoverable, (ug/l as Ni) | 26.37 | 23.14 |
| Selenium, Total, (ug/l as Se) | 2.50 | 3.27 |
| Silver, Total Recoverable, (ug/l as Ag) | 25.00 | 34.42 |
| Zinc, Total Recoverable, (ug/l as Zn) | 463.39 | 346.26 |
| Zinc, Dissolved, (ug/l as Zn) | 104.19 | 171.15 |

1. Flow-weighted averages of samples collected in 1997 and 1998.

Figure 3 - Estimated vs. Measured Pollutant Concentrations



- Develop a standard list of parameters for which monitoring is required by permit conditions. Presently, monitoring for several parameters not required by the permit is being performed, particularly for VOCs, SOCs and many dissolved inorganic chemicals.
- Develop guidance for QA/QC and duplicate samples for the laboratories to follow that is consistent with the requirements of the original permit application.

REFERENCES

1. *City of Phoenix Part 2 NPDES Permit Application*, November 10, 1992.
2. *Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer System*, November 1992
3. Viessman (1972) and Viessman et al. (1977), *Urban Stormwater Hydrology*

DATA VALIDATION TABLES

- Tables 2 – 6 (MCFCF Data)
- Tables 7 – 11 (USGS Data)

Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--------|--------|-----------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|---|
| Sample Temperature (deg. C) | 2550B | 4 | | | | Immediate | | | | | | | Lab Temperature, not field |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | NM | | | | | | | | | | | |
| pH, Effluent (standard units) | | NM | | | | | | | <15 | n/a | | | no sample or duplicate |
| pH, Lab (standard units) | 150.1 | 7.2 | Std. Unit | | 12/22/97 | Immediate | | | | | | | Field analysis not performed |
| Specific Conductance, FIELD (us/cm) | | - | | | | | | | | | | | |
| Specific Conductance, LAB (us/cm) | | - | | | | | | | | | | | |
| Oxygen Dissolved (% saturation) | | - | | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 7.4 | mg/l | | 12/22/97 | Immediate | | | | | | | Analysis not performed in the field |
| Electrical Conductivity (umhos/cm) | 2510B | 400 | umhos | | 12/29/97 | 20 days | | | | | | | |
| BOD5 (mg/l) | 405.1 | 13 | mg/l | 1 | 12/22/97 | 48 hrs | | | <30 | n/a | | | no sample duplicate |
| COD High Level (mg/l) | 410.4 | 700 | mg/l | 1 | 12/30/97 | 28 days | | 5.02 | <30 | n/a | | | no sample duplicate |
| Chloride (mg/l as Cl) | 4500 | 35 | mg/l | | 1/5/98 | 28 days | | | | | | | |
| Cyanide Total (mg/l as Cn) | 4500 | 0.03 | mg/l | | 12/31/97 | 14 days | | | | | | | |
| Fecal Coliform (CFU/100mL) | 9221D | 1,600 | CFU/100ml | 2 | 12/22/97 | 6 hrs | | | <30 | n/a | | | no sample duplicate |
| Fecal Streptococci (CFU/100mL) | 9230B | 9,000 | CFU/100ml | 2 | 12/22/97 | 6hrs | | | <30 | n/a | | | no sample duplicate |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 2540C | 227 | mg/l | 10 | 12/29/97 | 7 days | | | <15 | n/a | | | no sample duplicate |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 160.2 | 1360 | mg/l | 10 | 12/29/97 | 7 days | | | <15 | n/a | | | no sample duplicate |
| Nitrogen No2 + No3, Total (mg/l as N) | calc. | 1 | mg/l | 0.05 | | | | 2.06 | <15 | n/a | | | no sample duplicate |
| TKN Nitrogen (mg/l as N) | 351.3 | 4.47 | mg/l | | 12/29/97 | 28 days | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | calc. | 4.47 | mg/l | | | | | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | 300 | 1 | mg/l | | 12/22/97 | 48 hours | | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | 300 | 0.1 | mg/l | | 12/22/97 | 48 hours | | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | 350.2 | 1.54 | mg/l | | 12/30/97 | 28 days | | | | | | | |
| Nitrogen Organic Total (mg/l as N) | calc. | 2.93 | mg/l | | | | | | | | | | past holding time |
| Phosphorous Total (mg/l as P) | 365.3 | 0.9 | mg/l | 0.05 | 1/2/98 | 28 days | | 8.9 | <15 | | | | no sample duplicate |
| Phosphorous Dissolved (mg/l as P) | 365.3 | 0.52 | mg/l | | 12/22/97 | 28 days | | | | | | | |
| Phosphorous Ortho (mg/l as P) | 4500P | 0.31 | mg/l | 0.05 | 12/22/97 | 48 hrs | | 3.67 | <15 | | | | no sample duplicate |
| Sulfate Dissolved (mg/l) | 300 | 31 | mg/l | | 1/16/98 | 28 days | | | | | | | |
| Hexavalent Chromium Total (mg/l) | 3500- | <0.010 | mg/l | | 12/22/97 | 24 hours | | | | | | | |
| Phenolics Total Recoverable (ug/l) | 420.1 | 550 | ug/l | | 1/6/98 | 28 days | | | | | | | |
| Oil and Grease Total Recoverable (mg/l) | 413.1 | <10.0 | mg/l | 0.2 | 1/5/98 | 28 days | <30 | n/a | <50 | n/a | | | Matrix spike may not be possible; no sample duplicate |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|---------------------|
| Organic Carbon, Total (mg/l) | 5310C | 31 | mg/l | | 12/29/97 | 28 days | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | |
| Carbonate Water Field (mg/l as CO ₃) | | -- | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as CO ₃) | | -- | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCO ₃) | | -- | | | | | | | | | | | |
| Alkalinity Dissolved Water Field Total (mg/l as CaCO ₃) | | -- | | | | | | | | | | | |
| Alkalinity LAB (mg/l as CaCO ₃) | 2320B | 148 | mg/l | | 12/30/97 | 14 days | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | |
| Hardness (mg/l) | 2340B | 172 | mg/l | 1 | 1/6/98 | 6 months | | | <15 | n/a | | | no sample duplicate |
| Antimony (ug/l as Sb) | 3113B | <5 | ug/l | | 12/22/97 | 6 months | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | 200.9 | <4 | ug/l | | 12/22/97 | 6 months | | | | | | | |
| Arsenic Total (ug/l as As) | 3113B | 8 | ug/l | | 12/31/97 | 6 months | | | | | | | |
| Arsenic Dissolved (ug/l as As) | 200.9 | 5 | ug/l | | 12/30/97 | 6 months | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | 200.7 | <2 | ug/l | | 1/6/98 | 6 months | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | 200.7 | <2 | ug/l | | 1/5/98 | 6 months | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | 7131 | 1.8 | ug/l | 0.2 | 1/13/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Cadmium Dissolved (ug/l as Cd) | 7131 | 0.78 | ug/l | | 1/13/98 | 6 months | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | 7191 | 26 | ug/l | 1 | 1/14/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Chromium Dissolved (ug/l as Cr) | 7191 | 6.1 | ug/l | | 1/14/98 | 6 months | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | 3113B | 63 | ug/l | 1 | 1/6/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Copper, Dissolved, (ug/l as Cu) | 200.9 | 22 | ug/l | | 1/6/98 | 6 months | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | 3113B | 70 | ug/l | 1 | 1/5/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Lead, Dissolved, (ug/l as Pb) | 200.9 | 20 | ug/l | | 1/5/98 | 6 months | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | | |
| Mercury, Total Recoverable, (ug/l as Hg) | 245.1 | <0.2 | ug/l | | 12/29/97 | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | 245.1 | <0.2 | ug/l | | 12/24/97 | 6 months | | | | | | | |

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Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|
| Molybdenum, Dissolved, (ug/l as Mo) | | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | | 249.2 | 26 | ug/l | 2 | 1/13/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Nickel, Dissolved, (ug/l as Ni) | | 249.2 | 9.7 | ug/l | | 1/13/98 | 6 months | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | | 3113B | <5 | ug/l | | 1/2/98 | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | 200.9 | <5 | ug/l | | 1/2/98 | 6 months | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 1/5/98 | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 12/29/97 | 6 months | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 12/24/97 | 6 months | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 12/24/97 | 6 months | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | | 200.7 | 490 | ug/l | 1 | 1/5/98 | 6 months | <25 | 1 | <35 | n/a | | no sample duplicate | |
| Zinc, Dissolved, (ug/l as Zn) | | 200.7 | <20 | ug/l | | 12/29/97 | 6 months | | | | | | | |
| Diazinon, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| BHC - ALPHA, (ug/l) | | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| BHC - DELTA, (ug/l) | | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1016, PCB, Total, (ug/l) | | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1221, PCB, Total, (ug/l) | | 608 | <10 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1232, PCB, Total, (ug/l) | | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |

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Table 2 - Data Validation Report (SR-03 12/22/97)

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|--|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|---|---------------------|------------|
| Aroclor 1242, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1248, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1254, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1260, PCB, Total, (ug/L) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Chlordane, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| P,P' DDD, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| P,P' DDE, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| P, P' DDT, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Dieldrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endo-Sulfan Alpha, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endo-Sulfan Beta, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endo-Sulfan Sulfate, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endrin Aldehyde, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | Cont. Calibration above method control limits | | |
| Endrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Heptachlor, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Heptachlor Epoxide, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Toxaphene, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Methoxychlor, Total, (ug/l) | | - | | | | | | | | | | | |
| Beta Benzene Hexachloride, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| 1,1,2-Tetrachloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | see note 1, changed result on spreadsheet | | |
| 1,1,1,2-Tetrachloroethane, Total, (ug/l) | | -- | | | | | | | | | | | |
| Tetrachloroethane, PCE, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,1,1-Trichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,1,2-Trichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Trichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,1-Dichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,2-Dichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,2-Dichloropropane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 2-Chloroethylvinyl Ether, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| cis-1,2-Dichloropropene, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| trans-1,2-Dichloropropene, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| trans-1,3-Dichloropropene, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |

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|--|--|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|------------|
| Benzene, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Bromodichloromethane, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Bromoform, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Carbon Tetrachloride, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chlorobenzene, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chloroethane, (ug/l) | | 624 | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chloroform, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Ethyl-Benzene, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Methylene Chloride, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Toluene, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Trichlorofluoromethane, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Vinyl Chloride, Total, (ug/l) | | 624 | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chlorodibromomethane, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L) | | | -- | | | | | | | | | | | |
| Acetone, Total, (ug/l) | | 624 | <250 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 2-Butanone, (ug/l) | | 624 | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Carbon Disulfide, Total, (ug/l) | | 624 | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,2 Dichloroethene, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Xylenes, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 2-Hexanone, Total, (ug/l) | | 624 | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Styrene, Total, (ug/l) | | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Acrolein, Total, (ug/l) | | 624 | <500 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Acrylonitrile, Total, (ug/l) | | 624 | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Bromobenzene, Water Whole, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 1,3-Dichloropropane, Water Whole, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Bromide, Total, (ug/l) | | 624 | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Methyl Chloride, Total, (ug/l) | | 624 | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Parachloro Toluene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Dibromoethane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Acenaphthene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 12/30/97 | 40 days | | | | | | | |
| Acenaphthylene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 12/30/97 | 40 days | | | | | | | |
| Anthracene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 12/30/97 | 40 days | | | | | | | |
| Benzidine, Total, (ug/l) | | 625 | <50 | ug/l | | 12/30/97 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | | | | | | | | | | | | |
|--|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|-------------------------------|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Benzoic Acid, Total, (ug/l) | 625 | <5 | ug/l | 12/30/97 | 40 days | | | | | | | changed result on spreadsheet |
| Benzo (a) Anthracene, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Benzo (b) Fluoranthene, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/07 | 40 days | | | | | | | |
| Benzo (k) Fluoranthene, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Benzo (ghi) Perylene, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Benzo (a) Pyrene, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Benzyl Alcohol, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Bis-(2-Chloroethoxy)-Methane, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Bis-(2-Chloroethyl)-Ether, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l) | 625 | <10 | ug/l | 12/30/97 | 40 days | | | | | | | changed result on spreadsheet |
| Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l) | 625 | 42 | ug/l | 12/30/97 | 40 days | | | | | | | see note 2 |
| 4-Bromo-Phenyl Phenyl Ether, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Butyl Benzyl Phthalate, Total, (ug/l) | 625 | <10 | ug/l | 12/30/97 | 40 days | | | | | | | changed result on spreadsheet |
| 2-Chloronaphthalene, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 2-Chlorophenol, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 4-Chloro-Phenyl Phenyl Ether, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Chrysene, Total, (ug/l) | 625 | <5 | ug/l | 12/30/97 | 40 days | | | | | | | changed result on spreadsheet |
| Dibenzo-[a,h]-Anthracene, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Di-N-Butyl Phthalate, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 1,3- Dichlorobenzene, Total, (ug/l) | 624 | <3.0 | ug/l | 12/30/97 | 14 days | | | | | | | see note 1 |
| 1,4- Dichlorobenzene, Total, (ug/l) | 624 | <3.0 | ug/l | 12/30/97 | 14 days | | | | | | | see note 1 |
| 1,2- Dichlorobenzene, Total, (ug/l) | 624 | <3.0 | ug/l | 12/30/97 | 14 days | | | | | | | see note 1 |
| 3,3'- Dichlorobenzidine, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 2,4- Dichlorophenol, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Diethyl Phthalate, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 2,4- Dimethylphenol, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Dimethyl Phthalate, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 2-Methyl-4,6-Dinitrophenol, Total, (ug/l) | 625 | <10 | ug/l | 12/30/97 | 40 days | | | | | | | changed result on spreadsheet |
| 2,4- Dinitrophenol, Total, (ug/l) | 625 | <10 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 2,4- Dinitrotoluene, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| 2,6- Dinitrotoluene, Total, (ug/l) | 625 | <5.0 | ug/l | 12/30/97 | 40 days | | | | | | | |
| Di-N-Octyl-Phthalate, Total, (ug/l) | 625 | 3.4 | ug/l | 12/30/97 | 40 days | | | | | | | see note 2 |
| Fluoranthene, Total, (ug/l) | 625 | <3.0 | ug/l | 12/30/97 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|-----|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|
| Fluorene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Hexachlorobenzene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Hexachlorobutadiene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Hexachlorocyclopentadiene, Total, (ug/l) | 625 | <10 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Hexachloroethane, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Indeno (1,2,3-CD) Pyrene, Total, (ug/l) | 625 | <5.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Isophorone, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Naphthalene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Nitrobenzene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| 2-Nitrophenol, Total, (ug/l) | 625 | <5.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| 4-Nitrophenol, Total, (ug/l) | 625 | <5.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| N-Nitrosodiphenylamine, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| N-Nitrosodi-N-Propylamine, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Pentachlorophenol, Total, (ug/l) | 625 | <5.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Phenanthrene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Phenol, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| Pyrene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| 1,2,4-Trichlorobenzene, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40days | | | | | | | |
| 2,4,5- Trichlorophenol, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| 2,4,6- Trichlorophenol, Total, (ug/l) | 625 | <3.0 | ug/l | | | 12/30/97 | 40 days | | | | | | | |
| N-Nitrosodimethylamine, Total, (ug/l) | | -- | | | | | | | | | | | | |
| 1,2- Diphenylhydrazine, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Dichlorodifluoromethane, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Parachloro-Meta-Cresol, Total, (ug/l) | | -- | | | | | | | | | | | | |

NOTES:

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Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | | | | | | | | | | | | | |
|---|-----------|----------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|--|--|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments | |
| Sample Temperature (deg. C) | 2550B | 4 | deg. C | | Immediate | | | | | | | Analysis performed in lab | |
| Effluent Temperature (deg. C) | 2550B | 10.4 | deg. C | | Immediate | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | NM | | | | | | | | | | | |
| pH, Effluent (standard units) | 150.1 | 8.3 | std.unit | 2/5/98 | Immediate | | | <15 | n/a | | | No sample duplicate | |
| pH, Lab (standard units) | 150.1 | 8.3 | Std. Unit | 2/5/98 | Immediate | | | | | | | Analysis performed in lab | |
| Specific Conductance, FIELD (us/cm) | | -- | | | | | | | | | | | |
| Specific Conductance, LAB (us/cm) | | -- | | | | | | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 6.7 | mg/l | 2/4/98 | Immediate | | | | | | | Analysis not performed in the field | |
| Electrical Conductivity (umhos/cm) | 2510B | 682 | umhos | 2/5/98 | 20 days | | | | | | | | |
| BOD5 (mg/l) | 405.1 | 73 | mg/l | 2/4/98 | 48 hrs | | | <30 | n/a | | | No sample duplicate | |
| COD High Level (mg/l) | 410.4 | 174 | mg/l | 2/6/98 | 28 days | | 3.92 | <30 | n/a | | | No sample duplicate | |
| Chloride (mg/l as Cl) | 4500 | 69 | mg/l | 2/5/98 | 28 days | | | | | | | | |
| Cyanide Total (mg/l as Cn) | 4500 | <0.01 | mg/l | 2/16/98 | 14 days | | | | | | | | |
| Fecal Coliform (CFU/100mL) | 9221D | >160,000 | CFU/100ml | 2 | 2/4/98 | 6 hrs | | <30 | n/a | | | Beyond normal dilution limits; no sample duplicate | |
| Fecal Streptococci (CFU/100mL) | 9230B | 90,000 | CFU/100ml | 2 | 2/4/98 | 6 hrs | | <30 | n/a | | | No sample duplicate | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 2540C | 444 | mg/l | 10 | 2/5/98 | 7 days | | <15 | n/a | | | No sample duplicate | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 160.2 | 132 | mg/l | 10 | 2/5/98 | 7 days | | <15 | n/a | | | No sample duplicate | |
| Nitrogen No2 + No3, Total (mg/l as N) | 4500NO3E | 0.44 | mg/l | 0.05 | 2/4/98 | 28 days | 4.4 | <15 | n/a | | | No sample duplicate | |
| TKN Nitrogen (mg/l as N) | 351.3 | 1.4 | mg/l | | 2/17/98 | 28 days | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | calc. | 3 | mg/l | | | 28 days | | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 0.44 | mg/l | | | 48 hours | | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | 4500 | <0.1 | mg/l | | 2/4/98 | 48 hours | | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | 350.2 | 3 | mg/l | | 2/6/98 | 28 days | | | | | | | |
| Nitrogen Organic Total (mg/l as N) | calc. | <0.01 | mg/l | | 2/23/98 | 28 days | | | | | | | |
| Phosphorous Total (mg/l as P) | 365.3 | 1.0 | mg/l | 0.05 | 2/16/98 | 28 days | 4.5 | <15 | | | | No sample duplicate | |
| Phosphorous Dissolved (mg/l as P) | 365.3 | 0.84 | mg/l | | 2/9/98 | 28 days | | | | | | | |
| Phosphorous Ortho (mg/l as P) | 4500PE | 0.72 | mg/l | 0.05 | 2/5/98 | 48 hrs | 5.6 | <15 | | | | No sample duplicate | |
| Sulfate Dissolved (mg/l) | 300 | 60 | mg/l | | 2/18/98 | 28 days | | | | | | | |
| Hexavalent Chromium Total (mg/l) | 3500-CR D | <0.010 | mg/l | | 2/5/98 | 24 hours | | | | | | | |
| Phenolics Total Recoverable (ug/l) | 420.1 | 54 | ug/l | | 2/17/98 | 28 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | | | | | | | | | | | | | |
|---|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|----------|----------------------------------|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments | |
| Oil and Grease Total Recoverable (mg/l) | 413.1 | <10.0 | mg/l | 0.2 | 2/16/98 | 28 days | <30 | n/a | <50 | n/a | | | Matrix spike may not be possible |
| Organic Carbon, Total (mg/l) | 5310C | 27 | mg/l | | 2/6/98 | 28 days | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCo3) | | -- | | | | | | | | | | | |
| Bicarbonate Dissolved, Field (mg/l as HCo3) | | -- | | | | | | | | | | | |
| Carbonate Water Field (mg/l as Co3) | | -- | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co3) | | -- | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCo3) | | -- | | | | | | | | | | | |
| Alkalinity Dissolved Water Field Total (mg/l as CaCo3) | | -- | | | | | | | | | | | |
| Alkalinity LAB (mg/l as CaCo3) | 2320B | 158 | mg/l | | 2/5/98 | 14 days | | | | | | | |
| Silica Dissolved (mg/l as SiO2) | | -- | | | | | | | | | | | |
| Hardness (mg/l) | 2340B | 230 | mg/l | 1 | 2/6/98 | 6 months | | | <15 | n/a | | | No sample duplicate |
| Antimony (ug/l as Sb) | 3113B | <5 | ug/l | | 2/25/98 | 6 months | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | 200.9 | <4 | ug/l | | 2/24/98 | 6 months | | | | | | | |
| Arsenic Total (ug/l as As) | 3113B | <5 | ug/l | | 2/17/98 | 6 months | | | | | | | |
| Arsenic Dissolved (ug/l as As) | 200.9 | 5 | ug/l | | 2/16/98 | 6 months | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | 200.7 | <2 | ug/l | | 2/6/98 | 6 months | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | 200.7 | <2 | ug/l | | 2/18/98 | 6 months | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | 213.2 | 1.3 | ug/l | 0.2 | 2/11/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Cadmium Dissolved (ug/l as Cd) | 213.2 | 2.5 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | 218.2 | 14 | ug/l | 1 | 2/11/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Chromium Dissolved (ug/l as Cr) | 218.2 | 2.2 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | 3113B | 59 | ug/l | 1 | 3/2/98 | 6 months | <25 | 15 | <35 | <20 | | | |
| Copper, Dissolved, (ug/l as Cu) | 200.9 | 10 | ug/l | | 3/2/98 | 6 months | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | 3113B | 38 | ug/l | 1 | 2/12/98 | 6 months | <25 | 10 | <35 | <20 | | | |
| Lead, Dissolved, (ug/l as Pb) | 200.9 | <5 | ug/l | | 2/12/98 | 6 months | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|---------------------|
| Mercury, Total Recoverable, (ug/l as Hg) | | 245.1 | <0.2 | ug/l | | 2/5/98 | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | 245.1 | 0.6 | ug/l | | 2/10/98 | 6 months | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | | 249.2 | 14 | ug/l | 2 | 2/11/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Nickel, Dissolved, (ug/l as Ni) | | 249.2 | 11 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | | 3113B | <5 | ug/l | | 2/19/98 | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | 200.9 | <5 | ug/l | | 2/19/98 | 6 months | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 2/10/98 | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 2/19/98 | 6 months | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 2/20/98 | 6 months | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 2/20/98 | 6 months | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | | 200.7 | 310 | ug/l | 1 | 2/11/98 | 6 months | <25 | 2 | <35 | n/a | | | No sample duplicate |
| Zinc, Dissolved, (ug/l as Zn) | | 200.7 | 180 | ug/l | | 2/18/98 | 6 months | | | | | | | |
| Diazinon, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| BHC - ALPHA, (ug/l) | | | -- | | | | | | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | | | -- | | | | | | | | | | | |
| BHC - DELTA, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1016, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|-----|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|------------|
| Aroclor 1221, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1232, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1242, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1248, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1254, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1260, PCB, Total, (ug/L) | | | -- | | | | | | | | | | | |
| Chlordane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| P,P' DDD, Total, (ug/l) | | | -- | | | | | | | | | | | |
| P,P' DDE, Total, (ug/l) | | | -- | | | | | | | | | | | |
| P, P' DDT, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Dieldrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endo-Sulfan Alpha, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endo-Sulfan Beta, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endo-Sulfan Sulfate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endrin Aldehyde, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Heptachlor, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Heptachlor Epoxide, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Toxaphene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methoxychlor, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Beta Benzene Hexachloride, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1,1,2-Tetrachloroethane, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Tetrachloroethene, PCE, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1,1- Trichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1,2- Trichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Trichloroethene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1- Dichloroethene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,2- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,2- Dichloropropane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 2- Chloroethylvinyl Ether, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| cis-1,3-Dichloropropene, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|-------------------------------|
| trans-1,2- Dichloroethene, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| trans-1,3- Dichloropropene, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Benzene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Bromodichloromethane, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Bromoform, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Carbon Tetrachloride, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chloroethane, (ug/l) | | 624 | <100 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chloroform, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Ethyl-Benzene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Methylene Chloride, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Toluene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Trichlorofluoromethane, Total, (ug/l) | | 624 | <100 | ug/l | | 2/12/98 | 14 days | | | | | see note 1 | | changed result on spreadsheet |
| Vinyl Chloride, Total, (ug/l) | | 624 | <100 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chlorodibromomethane, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L) | | | -- | | | | | | | | | | | |
| Acetone, Total, (ug/l) | | 624 | <500 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 2-Butanone, (ug/l) | | 624 | <200 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Carbon Disulfide, Total, (ug/l) | | 624 | <200 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,2 Dichloroethene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Xylenes, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 2-Hexanone, Total, (ug/l) | | 624 | <200 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Styrene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Acrolein, Total, (ug/l) | | 624 | <1000 | ug/l | | 2/12/98 | 14 days | | | | | see note 3 | | see note 1 |
| Acrylonitrile, Total, (ug/l) | | 624 | <200 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Bromobenzene, Water Whole, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 1,3-Dichloropropane, Water Whole, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Bromide, Total, (ug/l) | | 624 | <100 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Methyl Chloride, Total, (ug/l) | | 624 | <100 | ug/l | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Parachloro Toluene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Dibromoethane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Acenaphthene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Acenaphthylene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|-------------------------------|
| Anthracene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzidine, Total, (ug/l) | 625 | <100 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzoic Acid, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzo (a) Anthracene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzo (b) Fluoranthene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzo (k) Fluoranthene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzo (ghi) Perylene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzo (a) Pyrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Benzyl Alcohol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Bis-(2-Chloroethoxy)-Methane, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Bis-(2-Chloroethyl)-Ether, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l) | 625 | <20 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Bis-(2-Ethyl Hexyl) Phthalate, Total, (ug/l) | 625 | 20 | ug/l | | 2/16/98 | 40 days | | | | | | | see note 2 |
| 4-Bromo-Phenyl Phenyl Ether, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Butyl Benzyl Phthalate, Total, (ug/l) | 625 | <20 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2-Chloronaphthalene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2-Chlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 4-Chloro-Phenyl Phenyl Ether, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Chrysene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Dibenzo-[a,h]-Anthracene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Di-N-Butyl Phthalate, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 1,3- Dichlorobenzene, Total, (ug/l) | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | see note 1 | | changed result on spreadsheet |
| 1,4- Dichlorobenzene, Total, (ug/l) | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | see note 1 | | changed result on spreadsheet |
| 1,2- Dichlorobenzene, Total, (ug/l) | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | see note 1 | | changed result on spreadsheet |
| 3,3'- Dichlorobenzidine, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2,4- Dichlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Diethyl Phthalate, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2,4- Dimethylphenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| Dimethyl Phthalate, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2-Methyl-4,6-Dinitrophenol, Total, (ug/l) | 625 | <20 | ug/l | | 2/16/98 | 40 days | | | | | | | changed result on spreadsheet |
| 2,4- Dinitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2,4- Dinitrotoluene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |
| 2,6- Dinitrotoluene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 3 - Data Validation Report (SR-03 2/4/98)

| SR-03 - North Bank of Salt River at 35th Avenue Sample date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|-----|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|-------------------------------|
| Di-N-Octyl-Phthalate, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Fluoranthene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Fluorene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Hexachlorobenzene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Hexachlorobutadiene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Hexachlorocyclopentadiene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Hexachloroethane, Total, (ug/l) | 625 | <20 | ug/l | | 2/16/98 | 40 days | | | | | | | | changed result on spreadsheet |
| Indeno (1,2,3-CD) Pyrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Isophorone, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Naphthalene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Nitrobenzene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| 2-Nitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| 4-Nitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| N-Nitrosodiphenylamine, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| N-Nitrosodi-N-Propylamine, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Pentachlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Phenanthrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Phenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| Pyrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| 1,2,4-Trichlorobenzene, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40days | | | | | | | | |
| 2,4,5- Trichlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| 2,4,6- Trichlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/16/98 | 40 days | | | | | | | | |
| N-Nitrosodimethylamine, Total, (ug/l) | | -- | | | | | | | | | | | | |
| 1,2- Diphenylhydrazine, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Dichlorodifluoromethane, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Parachloro-Meta-Cresol, Total, (ug/l) | | -- | | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | | | | | | | | | | | | |
|--|-----------|---------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|---|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Sample Temperature (deg. C) | 2550B | 4 | deg. C | | Immediate | | | | | | | Analysis not performed in field |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | NM | | | | | | | | | | |
| pH, Effluent (standard units) | | NM | | | | | | | | | | |
| pH, Lab (standard units) | 150.1 | 7.1 | Std. Unit | 1/13/98 | Immediate | | | <15 | | | | no sample duplicate, field analysis not performed |
| Specific Conductance, FIELD (us/cm) | | -- | | | | | | | | | | |
| Specific Conductance, LAB (us/cm) | | -- | | | | | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 6.3 | mg/l | 1/10/98 | Immediate | | | | | | | Analysis not performed in the field |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | |
| BOD5 (mg/l) | 405.1 | >155 | mg/l | 1/12/98 | 48 hrs | | | <30 | | | | Beyond normal dilution; no sample duplicate |
| COD High Level (mg/l) | 410.4 | 328 | mg/l | 1/19/98 | 28 days | | 14 | <30 | | | | No sample duplicate |
| Chloride (mg/l as Cl) | 4500 | 17 | mg/l | 1/13/98 | 28 days | | | | | | | |
| Cyanide Total (mg/l as Cn) | | -- | | | | | | | | | | |
| Fecal Coliform (CFU/100mL) | 9221D | 50,000 | CFU/100ml | 1/10/98 | 6 hrs | | | <30 | n/a | | | No sample duplicate |
| Fecal Streptococci (CFU/100mL) | 9230B | 160,000 | CFU/100ml | 1/10/98 | 6hrs | | | <30 | n/a | | | No sample duplicate |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 2540C | 167 | mg/l | 1/15/98 | 7 days | | | <15 | n/a | | | No sample duplicate |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 160.2 | 328 | mg/l | 1/14/98 | 7 days | | | <15 | n/a | | | No sample duplicate |
| Nitrogen No2 + No3, Total (mg/l as N) | 4500 NO3E | 0.6 | mg/l | 0.05 | 1/13/98 | 28 days | 2.3 | <15 | n/a | | | No sample duplicate |
| TKN Nitrogen (mg/l as N) | 351.3 | 3.65 | mg/l | | 1/19/98 | 28 days | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | calc. | 3.65 | mg/l | | | | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 0.4 | mg/l | | | | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | 4500 NO2B | 0.22 | mg/l | | 1/13/98 | 48 hours | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | 350.2 | 1.07 | mg/l | | 1/16/98 | 28 days | | | | | | |
| Nitrogen Organic Total (mg/l as N) | calc. | 2.58 | mg/l | | | | | | | | | |
| Phosphorous Total (mg/l as P) | 365.3 | 1.5 | mg/l | 0.05 | 1/23/98 | 28 days | 3.2 | <15 | n/a | | | No sample duplicate |
| Phosphorous Dissolved (mg/l as P) | 365.3 | 1.13 | mg/l | | 1/19/98 | 28 days | | | | | | |
| Phosphorous Ortho (mg/l as P) | 4500PE | 0.22 | mg/l | 0.05 | 1/13/98 | 48 hrs | 6.2 | <15 | n/a | | | No sample duplicate |
| Sulfate Dissolved (mg/l) | 300 | 27 | mg/l | | 1/16/98 | 28 days | | | | | | |
| Hexavalent Chromium Total (mg/l) | 3500-CR D | <0.010 | mg/l | | 1/13/98 | 24 hours | | | | | | |
| Phenolics Total Recoverable (ug/l) | 420.2 | 66 | ug/l | | 1/21/98 | 28 days | | | | | | |
| Oil and Grease Total Recoverable (mg/l) | | -- | | 0.2 | | | <30 | <50 | n/a | | | Matrix spike may not be possible; no sample duplicate |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | | | | | | | | | | | | | | |
|--|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|---|--|--|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments | | |
| Organic Carbon, Total (mg/l) | 5310C | 27 | mg/l | 1/14/98 | 28 days | | | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | | |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | | |
| Carbonate Water Field (mg/l as Co ₃) | | -- | | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co ₃) | | -- | | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCo ₃) | | -- | | | | | | | | | | | | |
| Alkalinity Dissolved Water Field Total (mg/l as CaCo ₃) | | -- | | | | | | | | | | | | |
| Alkalinity LAB (mg/l as CaCo ₃) | 2320B | 68 | mg/l | 1/15/98 | 14 days | | | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | | |
| Hardness (mg/l) | 2340B | 128 | mg/l | 1/14/98 | 6 months | 1 | | <15 | n/a | | | No sample duplicate | | |
| Antimony (ug/l as Sb) | 3113B | <5 | ug/l | 1/16/98 | 6 months | | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | 200.9 | <4 | ug/l | 1/15/98 | 6 months | | | | | | | | | |
| Arsenic Total (ug/l as As) | 3113B | 6 | ug/l | 1/21/98 | 6 months | | | | | | | | | |
| Arsenic Dissolved (ug/l as As) | 200.9 | <5 | ug/l | 1/13/98 | 6 months | | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | 200.7 | <2 | ug/l | 1/14/98 | 6 months | | | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | 200.7 | <2 | ug/l | 1/14/98 | 6 months | | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | 213.2 | 1.9 | ug/l | 1/20/98 | 6 months | 0.2 | <25 | <20 | <35 | <20 | | | | |
| Cadmium Dissolved (ug/l as Cd) | 213.2 | 0.47 | ug/l | 1/20/98 | 6 months | | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | 218.2 | 20 | ug/l | 1/22/98 | 6 months | 1 | <25 | <20 | <35 | <20 | | | | |
| Chromium Dissolved (ug/l as Cr) | 218.2 | 3.4 | ug/l | 1/22/98 | 6 months | | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | 3113B | 209 | ug/l | 1/22/98 | 6 months | 1 | <25 | <20 | <35 | <20 | | Matrix spike was outside the laboratory acceptance limit. | | |
| Copper, Dissolved, (ug/l as Cu) | 200.9 | 34 | ug/l | 1/22/98 | 6 months | | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | 3113B | 61 | ug/l | 1/19/98 | 6 months | 1 | <25 | 0 | <35 | <20 | | | | |
| Lead, Dissolved, (ug/l as Pb) | 200.9 | 9 | ug/l | 1/19/98 | 6 months | | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | | | |
| Mercury, Total Recoverable, (ug/l as Hg) | 245.1 | 0.2 | ug/l | 1/15/98 | 6 months | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | | | | | | | | | | | | |
|--|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|---------------------|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Mercury, Dissolved, (ug/l as Hg) | 245.1 | <0.2 | ug/l | 1/15/98 | 6 months | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | 249.2 | 22 | ug/l | 2 | 1/21/98 | 6 months | <25 | <20 | <35 | <20 | | |
| Nickel, Dissolved, (ug/l as Ni) | 249.2 | <10 | ug/l | | 1/21/98 | 6 months | | | | | | |
| Potassium, Dissolved, (mg/l as K) | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | 3113B | <5 | ug/l | | 1/20/98 | 6 months | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | 200.9 | <5 | ug/l | | 1/20/98 | 6 months | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | 200.7 | <50 | ug/l | | 1/14/98 | 6 months | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | 200.7 | <50 | ug/l | | 1/14/98 | 6 months | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | 200.9 | <1 | ug/l | | 1/23/98 | 6 months | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | 200.9 | <1 | ug/l | | 1/14/98 | 6 months | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | 200.7 | 370 | ug/l | 1 | 1/14/98 | 6 months | <25 | 1 | <35 | n/a | | No sample duplicate |
| Zinc, Dissolved, (ug/l as Zn) | 200.7 | 90 | ug/l | | 1/14/98 | 6 months | | | | | | |
| Diazinon, Total, (ug/l) | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | |
| BHC - ALPHA, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | |
| BHC - DELTA, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | |
| Aroclor 1016, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | |
| Aroclor 1221, PCB, Total, (ug/l) | 608 | <10 | ug/l | | 1/24/98 | 40 days | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other OA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|---|---------------------|------------|
| Aroclor 1232, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Aroclor 1242, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Aroclor 1248, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Aroclor 1254, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Aroclor 1260, PCB, Total, (ug/L) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Chlordane, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 4,4' DDD, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 4,4' DDE, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 4,4' DDT, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Dieldrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Endo-Sulfan Alpha, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Endo-Sulfan Beta, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Endo-Sulfan Sulfate, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Endrin Aldehyde, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Endrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Heptachlor, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Heptachlor Epoxide, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Toxaphene, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Methoxychlor, Total, (ug/l) | | | | | | | | | | | | | |
| Beta Benzene Hexachloride, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 1,1,2,2-Tetrachloroethane, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | see note 1; changed result on spreadsheet | | |
| 1,1,1,2-Tetrachloroethane, Total, (ug/l) | | -- | | | | | | | | | | | |
| Tetrachloroethene, PCE, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,1,1- Trichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,1,2- Trichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Trichloroethene, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,1- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,1- Dichloroethene, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,2- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,2- Dichloropropane, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 2- Chloroethylvinyl Ether, Total, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| cis-1,2-Dichloropropene, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| trans-1,2- Dichloroethene, (ug/l) | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |

NOTES:

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Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | | | | | | | | | | | | |
|--|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|------------|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of Spec) | Field Blank Detects | Comments |
| trans-1,3- Dichloropropene, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Benzene, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Bromodichloromethane, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Bromoform, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Carbon Tetrachloride, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Chlorobenzene, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Chloroethane, (ug/l) | <100 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Chloroform, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Ethyl-Benzene, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Methylene Chloride, Total, (ug/l) | -- | | | | | | | | | | | |
| Toluene, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Trichlorofluoromethane, Total, (ug/l) | <100 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Vinyl Chloride, Total, (ug/l) | <100 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Chlorodibromomethane, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L) | -- | | | | | | | | | | | |
| Acetone, Total, (ug/l) | <500 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 2-Butanone, (ug/l) | <200 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Carbon Disulfide, Total, (ug/l) | <200 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| cis, 1,2 Dichloroethene, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Xylenes, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 2-Hexanone, Total, (ug/l) | <200 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Styrene, Total, (ug/l) | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Acrolein, Total, (ug/l) | <1000 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Acrylonitrile, Total, (ug/l) | <200 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Bromobenzene, Water Whole, Total, (ug/l) | -- | | | | | | | | | | | |
| 1,3-Dichloropropane, Water Whole, Total, (ug/l) | -- | | | | | | | | | | | |
| Methyl Bromide, Total, (ug/l) | <100 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Methyl Chloride, Total, (ug/l) | <100 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| Parachloro Toluene, Total, (ug/l) | -- | | | | | | | | | | | |
| Dibromoethane, Total, (ug/l) | -- | | | | | | | | | | | |
| Acenaphthene, Total, (ug/l) | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Acenaphthylene, Total, (ug/l) | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Anthracene, Total, (ug/l) | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |

NOTES:

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2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|-------------------------------|
| Benzidine, Total, (ug/l) | | 625 | <50 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Benzoic Acid, Total, (ug/l) | | 625 | <5 | ug/l | | 1/24/98 | 40 days | | | | | | | changed result on spreadsheet |
| Benzo (a) Anthracene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Benzo (b) Fluoranthene, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Benzo (k) Fluoranthene, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Benzo (ghi) Perylene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Benzo (a) Pyrene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Benzyl Alcohol, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Bis-(2-Chloroethoxy)-Methane, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Bis-(2-Chloroethyl)-Ether, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l) | | 625 | <10 | ug/l | | 1/24/98 | 40 days | | | | | | | changed result on spreadsheet |
| Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l) | | 625 | 49 | ug/l | | 1/24/98 | 40 days | | | | | | | See note 2 |
| 4-Bromo-Phenyl Phenyl Ether, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Butyl Benzyl Phthalate, Total, (ug/l) | | 625 | <10 | ug/l | | 1/24/98 | 40 days | | | | | | | changed result on spreadsheet |
| 2-Chloronaphthalene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 2-Chlorophenol, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 4-Chloro-Phenyl Phenyl Ether, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Chrysene, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Dibenzo-[a,h]-Anthracene, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Di-N-Butyl Phthalate, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 1,3- Dichlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,4- Dichlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 1,2- Dichlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 1/20/98 | 14 days | | | | | | | See note 1 |
| 3,3'- Dichlorobenzidine, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 2,4- Dichlorophenol, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Diethyl Phthalate, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 2,4- Dimethylphenol, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| Dimethyl Phthalate, Total, (ug/l) | | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 2-Methyl-4,6-Dinitrophenol, Total, (ug/l) | | 625 | <10 | ug/l | | 1/24/98 | 40 days | | | | | | | changed result on spreadsheet |
| 2,4- Dinitrophenol, Total, (ug/l) | | 625 | <10 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 2,4- Dinitrotoluene, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |
| 2,6- Dinitrotoluene, Total, (ug/l) | | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 4 - Data Validation Report (SR-45 1/10/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 1/10/98 (Grab), 1/12/98 (composite) | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of Spec) | Field Blank Detects | Comments |
|--|-----|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|------------|
| Di-N-Octyl-Phthalate, Total, (ug/l) | 625 | 18.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | See note 2 |
| Fluoranthene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Fluorene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Hexachlorobenzene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Hexachlorobutadiene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Hexachlorocyclopentadiene, Total, (ug/l) | 625 | <10 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Hexachloroethane, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Indeno (1,2,3-CD) Pyrene, Total, (ug/l) | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Isophorone, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Naphthalene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Nitrobenzene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| 2-Nitrophenol, Total, (ug/l) | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| 4-Nitrophenol, Total, (ug/l) | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| N-Nitrosodiphenylamine, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| N-Nitrosodi-N-Propylamine, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Pentachlorophenol, Total, (ug/l) | 625 | <5.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Phenanthrene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Phenol, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| Pyrene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| 1,2,4-Trichlorobenzene, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| 2,4,5- Trichlorophenol, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| 2,4,6- Trichlorophenol, Total, (ug/l) | 625 | <3.0 | ug/l | | 1/24/98 | 40 days | | | | | | | | |
| N-Nitrosodimethylamine, Total, (ug/l) | | -- | | | | | | | | | | | | |
| 1,2- Diphenylhydrazine, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Dichlorodifluoromethane, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Parachloro-Meta-Cresol, Total, (ug/l) | | -- | | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--|-----------|----------|------------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|--|
| Sample Temperature (deg. C) | | | | | | | | | | | | | | |
| Effluent Temperature (deg. C) | | 2550B | 9.7 | | | 2/4/98 | Immediate | | | | | | | |
| Ambient Temperature (deg. C) | | | NM | | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | | NM | | | | | | | | | | | |
| pH, Effluent (standard units) | | | | | | | | | | <15 | n/a | | | No sample or duplicate |
| pH, Lab (standard units) | | 150.1 | 7.7 | Std. Limit | | 2/5/98 | Immediate | | | | | | | Field analysis not performed |
| Specific Conductance, FIELD (us/cm) | | | -- | | | | | | | | | | | |
| Specific Conductance, LAB (us/cm) | | | -- | | | | | | | | | | | |
| Oxygen Dissolved (% saturation) | | | -- | | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | | 360.1 | 7.3 | mg/l | | 2/4/98 | Immediate | | | | | | | Analysis not performed in the field |
| Electrical Conductivity (umhos/cm) | | 2510B | 348 | umhos | | 2/5/98 | 20 days | | | | | | | |
| BOD5 (mg/l) | | 405.1 | 328 | mg/l | 1 | 2/4/98 | 48 hrs | | | <30 | n/a | | | no sample duplicate |
| COD High Level (mg/l) | | 410.4 | 453 | mg/l | 1 | 2/6/98 | 28 days | 3.92 | | <30 | n/a | | | no sample duplicate |
| Chloride (mg/l as Cl) | | 4500-CLB | 29 | mg/l | | 2/5/98 | 28 days | | | | | | | |
| Cyanide Total (mg/l as Cn) | | 4500-CN | <0.01 | mg/l | | 2/18/98 | 14 days | | | | | | | |
| Fecal Coliform (CFU/100mL) | | 9221D | 50,000 | CFU/100ml | 2 | 2/4/98 | 6 hrs | | | <30 | n/a | | | no sample duplicate |
| Fecal Streptococci (CFU/100mL) | | 9230B | >160,000 | CFU/100ml | 2 | 2/4/98 | 6hrs | | | <30 | n/a | | | Dilution beyond normal limits; no sample duplicate |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | | 2540C | 243 | mg/l | 10 | 2/5/98 | 7 days | | | <15 | n/a | | | no sample duplicate |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | | 160.2 | 462 | mg/l | 10 | 2/5/98 | 7 days | | | <15 | n/a | | | no sample duplicate |
| Nitrogen No2 + No3, Total (mg/l as N) | | 4500 NO3E | 0.45 | mg/l | 0.05 | 2/4/98 | 28 days | 4.44 | | <15 | n/a | | | no sample duplicate |
| TKN Nitrogen (mg/l as N) | | 351.3 | 2.1 | mg/l | | 2/17/98 | 28 days | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | | calc. | 4.07 | mg/l | | | | | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | | calc. | 0.3 | mg/l | | | | | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | | 4500-NO2B | 0.15 | mg/l | | 2/4/98 | 48 hours | | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | | 350.2 | 4.07 | mg/l | | 2/6/98 | 28 days | | | | | | | |
| Nitrogen Organic Total (mg/l as N) | | calc. | <0.01 | mg/l | | | | | | | | | | |
| Phosphorous Total (mg/l as P) | | 365.3 | 0.9 | mg/l | 0.05 | 2/16/98 | 28 days | 4.5 | | <15 | | | | no sample duplicate |
| Phosphorous Dissolved (mg/l as P) | | 365.3 | 0.71 | mg/l | | 2/9/98 | 28 days | | | | | | | |
| Phosphorous Ortho (mg/l as P) | | 4500PE | 0.38 | mg/l | 0.05 | 2/5/98 | 48 hrs | 5.6 | | <15 | | | | no sample duplicate |
| Sulfate Dissolved (mg/l) | | 300 | 64 | mg/l | | 2/18/98 | 28 days | | | | | | | |
| Hexavalent Chromium Total (mg/l) | | 3500-CR D | <0.010 | mg/l | | 2/5/98 | 24 hours | | | | | | | |
| Phenolics Total Recoverable (ug/l) | | 420.1 | 99 | ug/l | | 2/17/98 | 28 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|---------------------|
| Oil and Grease Total Recoverable (mg/l) | 413.1 | <10.0 | mg/l | 0.2 | 2/16/98 | 28 days | <30 | n/a | <50 | n/a | Matrix spike may not be possible | | |
| Organic Carbon, Total (mg/l) | 5310C | 60 | mg/l | | 2/6/98 | 28 days | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | |
| Carbonate Water Field (mg/l as CO ₃) | | -- | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as CO ₃) | | -- | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCO ₃) | | -- | | | | | | | | | | | |
| Alkalinity Dissolved Water Field Total (mg/l as CaCO ₃) | | -- | | | | | | | | | | | |
| Alkalinity LAB (mg/l as CaCO ₃) | 2320B | 60 | mg/l | | 2/5/98 | 14 days | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | |
| Hardness (mg/l) | 2340B | 262 | mg/l | 1 | 2/6/98 | 6 months | | | <15 | n/a | | | no sample duplicate |
| Antimony (ug/l as Sb) | 3113B | 8 | ug/l | | 2/25/98 | 6 months | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | 200.9 | 4 | ug/l | | 2/24/98 | 6 months | | | | | | | |
| Arsenic Total (ug/l as As) | 3113B | 8 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Arsenic Dissolved (ug/l as As) | 200.9 | <5 | ug/l | | 2/16/98 | 6 months | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | 200.7 | <2 | ug/l | | 2/9/98 | 6 months | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | 200.7 | <2 | ug/l | | 2/18/98 | 6 months | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | 213.2 | 4.1 | ug/l | 0.2 | 2/11/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Cadmium Dissolved (ug/l as Cd) | 213.2 | 0.87 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | 218.2 | 20 | ug/l | 1 | 2/11/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Chromium Dissolved (ug/l as Cr) | 218.2 | 4.6 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | 3113B | 314 | ug/l | 1 | 3/2/98 | 6 months | <25 | 15 | <35 | <20 | | | |
| Copper, Dissolved, (ug/l as Cu) | 200.9 | 61 | ug/l | | 3/2/98 | 6 months | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | 3113B | 81 | ug/l | 1 | 2/12/98 | 6 months | <25 | 5 | <35 | <20 | | | |
| Lead, Dissolved, (ug/l as Pb) | 200.9 | 12 | ug/l | | 2/12/98 | 6 months | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | | |

NOTES:

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2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|----------|
| Manganese, Dissolved, (ug/l as Mn) | | | -- | | | | | | | | | | | |
| Mercury, Total Recoverable, (ug/l as Hg) | | 245.1 | <0.2 | ug/l | | 2/5/98 | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | 245.1 | 0.8 | ug/l | | 2/10/98 | 6 months | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | | 249.2 | 17 | ug/l | 2 | 2/11/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Nickel, Dissolved, (ug/l as Ni) | | 249.2 | 7 | ug/l | | 2/11/98 | 6 months | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | | 3113B | <5 | ug/l | | 2/19/98 | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | 200.9 | <5 | ug/l | | 2/19/98 | 6 months | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 2/10/98 | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 2/10/98 | 6 months | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 2/20/98 | 6 months | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 2/20/98 | 6 months | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | | 200.7 | 520 | ug/l | 1 | 2/11/98 | 6 months | <25 | 2 | <35 | n/a | | no sample duplicate | |
| Zinc, Dissolved, (ug/l as Zn) | | 200.7 | 170 | ug/l | | 2/18/98 | 6 months | | | | | | | |
| Diazinon, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | 608 | <1.0 | ug/l | | 2/11/98 | 40 days | | | | | | | |
| BHC - ALPHA, (ug/l) | | 608 | <1.0 | ug/l | | 2/11/98 | 40 days | | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | | 608 | <1.0 | ug/l | | 2/11/98 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|-----|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|---|
| BHC - DELTA, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1016, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1221, PCB, Total, (ug/l) | 608 | <10 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1232, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1242, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1248, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1254, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Aroclor 1260, PCB, Total, (ug/L) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Chlordane, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| 4,4'DDD, Total (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| 4,4' DDE, Total (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| 4,4' DDT, Total (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Dieldrin, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Endo-Sulfan Alpha, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Endo-Sulfan Beta, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Endo-Sulfan Sulfate, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Endrin Aldehyde, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Endrin, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Heptachlor, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Heptachlor Epoxide, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Toxaphene, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| Methoxychlor, Total, (ug/l) | | | | | | | | | | | | | | |
| Beta Benzene Hexachloride, Total, (ug/l) | 608 | <1.0 | ug/l | | | 2/11/98 | 40 days | | | | | | | |
| 1,1,2-Tetrachloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1; changed result on spreadsheet |
| 1,1,1,2-Tetrachloroethane, Total,(ug/l) | | -- | | | | | | | | | | | | |
| Tetrachloroethene, PCE, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1,1- Trichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1,2- Trichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Trichloroethene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,1- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 1,2- Dichloroethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|-----|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|------------|
| 1,2-Dichloropropane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 2-Chloroethylvinyl Ether, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| cis-1,3-Dichloropropene, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| trans-1,2-Dichloroethene, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| trans-1,3-Dichloropropene, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Benzene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Bromodichloromethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Bromoform, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Carbon Tetrachloride, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chlorobenzene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chloroethane, (ug/l) | 624 | <100 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chloroform, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Ethyl-Benzene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Methylene Chloride, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Toluene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Trichlorofluoromethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Vinyl Chloride, Total, (ug/l) | 624 | <100 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Chlorodibromomethane, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 4-Methyl, 2-Pentanone, (MIBK), Total, (ug/L) | | -- | | | | | | | | | | | | |
| Acetone, Total, (ug/l) | 624 | <500 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 2-Butanone, (ug/l) | 624 | <200 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Carbon Disulfide, Total, (ug/l) | 624 | <200 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| cis, 1,2-Dichloroethene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Xylenes, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| 2-Hexanone, Total, (ug/l) | 624 | <200 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Styrene, Total, (ug/l) | 624 | <40 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Acrolein, Total, (ug/l) | 624 | <1000 | ug/l | | | 2/12/98 | 14 days | | | | | see note 3 | | see note 1 |
| Acrylonitrile, Total, (ug/l) | 624 | <200 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Bromobenzene, Water Whole, Total, (ug/l) | | -- | | | | | | | | | | | | |
| 1,3-Dichloropropane, Water Whole, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Methyl Bromide, Total, (ug/l) | 624 | <100 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |
| Methyl Chloride, Total, (ug/l) | 624 | <100 | ug/l | | | 2/12/98 | 14 days | | | | | | | see note 1 |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|------------|
| Parachloro Toluene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Dibromoethane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Acenaphthene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Acenaphthylene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Anthracene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzidine, Total, (ug/l) | | 625 | <100 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzoic Acid, Total, (ug/l) | | 625 | 18 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzo (a) Anthracene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzo (b) Fluoranthene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzo (k) Fluoranthene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzo (ghi) Perylene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzo (a) Pyrene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Benzyl Alcohol, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Bis-(2-Chloroethoxy)-Methane, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Bis-(2-Chloroethyl)-Ether, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l) | | 625 | <20 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l) | | 625 | 50 | ug/l | | 2/17/98 | 40 days | | | | | | | see note 2 |
| 4-Bromo-Phenyl Phenyl Ether, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Butyl Benzyl Phthalate, Total, (ug/l) | | 625 | <20 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2-Chloronaphthalene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2-Chlorophenol, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 4-Chloro-Phenyl Phenyl Ether, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Chrysene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Dibenzo-[a,h]-Anthracene, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Di-N-Butyl Phthalate, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 1,3-Dichlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | changed result on spreadsheet | | see note 1 |
| 1,4-Dichlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | changed result on spreadsheet | | see note 1 |
| 1,2-Dichlorobenzene, Total, (ug/l) | | 624 | <40 | ug/l | | 2/12/98 | 14 days | | | | | changed result on spreadsheet | | see note 1 |
| 3,3'- Dichlorobenzidine, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2,4-Dichlorophenol, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Diethyl Phthalate, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2,4-Dimethylphenol, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Dimethyl Phthalate, Total, (ug/l) | | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 5 - Data Validation Report (SR-45 2/4/98)

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/4/98 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--------|--------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--------------------------------------|--|---------------------|---|
| 2-Methyl-4,6-Dinitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2,4- Dinitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2,4- Dinitrotoluene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2,6- Dinitrotoluene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Di-N-Octyl-Phthalate, Total, (ug/l) | 625 | 17.0 | ug/l | | 2/17/98 | 40 days | | | | | | | changed result on spreadsheet see note 2 |
| Fluoranthene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Fluorene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Hexachlorobenzene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Hexachlorobutadiene, Total, (ug/l) | 625 | <20 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Hexachlorocyclopentadiene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Hexachloroethane, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Indeno (1,2,3-CD) Pyrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Isophorone, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Naphthalene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Nitrobenzene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2-Nitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 4-Nitrophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| N-Nitrosodiphenylamine, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| N-Nitrosodi-N-Propylamine, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Pentachlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Phenanthrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Phenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| Pyrene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 1,2,4-Trichlorobenzene, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40days | | | | | | | |
| 2,4,5- Trichlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| 2,4,6- Trichlorophenol, Total, (ug/l) | 625 | <10 | ug/l | | 2/17/98 | 40 days | | | | | | | |
| N-Nitrosodimethylamine, Total, (ug/l) | | -- | | | | | | | | | | | |
| 1,2- Diphenylhydrazine, Total, (ug/l) | | -- | | | | | | | | | | | |
| Dichlorodifluoromethane, Total, (ug/l) | | -- | | | | | | | | | | | |
| Parachloro-Meta-Cresol, Total, (ug/l) | | -- | | | | | | | | | | | |

Additional Note: 3. Result based on a tentatively identified compound search.

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | | | | | | | | | | | |
|--|----------|---------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|--|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Sample Temperature (deg. C) | 2550B | 4 | deg. C | | Immediate | | | | | | | Analysis not performed in field |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | NM | | | | | | | | | | |
| pH, Effluent (standard units) | | NM | | | | | | <15 | n/a | | | no sample or duplicate |
| pH, Lab (standard units) | 150.1 | 7.6 | Std. Unit | 2/25/98 | Immediate | | | | | | | Field analysis not performed |
| Specific Conductance, FIELD (us/cm) | | -- | | | | | | | | | | |
| Specific Conductance, LAB (us/cm) | | -- | | | | | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 3.9 | mg/l | 2/25/98 | Immediate | | | | | | | Analysis not performed in the field |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | |
| BOD5 (mg/l) | 405.1 | >152 | mg/l | 1 | 2/25/98 | 48 hrs | | <30 | n/a | | | Beyond normal dilution limits; no sample duplicate |
| COD High Level (mg/l) | 410.4 | 1061 | mg/l | 1 | 2/27/98 | 28 days | 9.52 | <30 | n/a | | | no sample duplicate |
| Chloride (mg/l as Cl) | 300 | 10 | mg/l | | 2/27/98 | 28 days | | | | | | |
| Cyanide Total (mg/l as Cn) | | -- | | | | | | | | | | |
| Fecal Coliform (CFU/100mL) | 9221D | 900 | CFU/100ml | 2 | 2/24/98 | 6 hrs | | <30 | n/a | | | no sample duplicate |
| Fecal Streptococci (CFU/100mL) | 9230B | 160,000 | CFU/100ml | 2 | 2/24/98 | 6hrs | | <30 | n/a | | | no sample duplicate |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 2540C | 123 | mg/l | 10 | 3/3/98 | 7 days | | <15 | n/a | | | no sample duplicate |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 160.2 | 596 | mg/l | 10 | 2/26/98 | 7 days | | <15 | n/a | | | no sample duplicate |
| Nitrogen No2 + No3, Total (mg/l as N) | calc. | 0.7 | mg/l | 0.05 | | | 1.77 | <15 | n/a | | | no sample duplicate |
| TKN Nitrogen (mg/l as N) | 351.3 | 0.9 | mg/l | | 3/6/98 | 28 days | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | calc. | 0.86 | mg/l | | | | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | 300 | 0.7 | mg/l | | 2/25/98 | 48 hours | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | 300 | <0.1 | mg/l | | 2/25/98 | 48 hours | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | 350.2 | 0.76 | mg/l | | 2/27/98 | 28 days | | | | | | |
| Nitrogen Organic Total (mg/l as N) | calc. | 0.1 | mg/l | | | | | | | | | |
| Phosphorous Total (mg/l as P) | 365.3 | 1.1 | mg/l | 0.05 | 3/9/98 | 28 days | 12.8 | <15 | | | | no sample duplicate |
| Phosphorous Dissolved (mg/l as P) | 365.3 | 1 | mg/l | | 3/10/98 | 28 days | | | | | | |
| Phosphorous Ortho (mg/l as P) | 4500PE | 0.22 | mg/l | 0.05 | 2/25/98 | 48 hrs | 0 | <15 | | | | no sample duplicate |
| Sulfate Dissolved (mg/l) | 300 | 15 | mg/l | | 2/25/98 | 28 days | | | | | | |
| Hexavalent Chromium Total (mg/l) | 3500-CRD | <0.010 | mg/l | | 2/25/98 | 24 hours | | | | | | |
| Phenolics Total Recoverable (ug/l) | | -- | | | | | | | | | | |

NOTES:

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Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|-------|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|-------------------------------|----------|
| Oil and Grease Total Recoverable (mg/l) | 413.1 | <10.0 | mg/l | 0.2 | 3/12/98 | 28 days | <30 | n/a | <50 | n/a | Matrix spike may not be possible | | | |
| Organic Carbon, Total (mg/l) | | -- | | | | | | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | | |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | -- | | | | | | | | | | | | |
| Carbonate Water Field (mg/l as CO ₃) | | -- | | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as CO ₃) | | -- | | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCO ₃) | | -- | | | | | | | | | | | | |
| Alkalinity Dissolved Water Field Total (mg/l as CaCO ₃) | | -- | | | | | | | | | | | | |
| Alkalinity LAB (mg/l as CaCO ₃) | 2320B | 59 | mg/l | | 2/27/98 | 14 days | | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | | |
| Hardness (mg/l) | 2340B | 148 | mg/l | 1 | 3/2/98 | 6 months | | | <15 | n/a | | | no sample duplicate | |
| Antimony (ug/l as Sb) | 3113B | <5 | ug/l | | 3/6/98 | 6 months | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | 200.9 | <4 | ug/l | | 3/6/98 | 6 months | | | | | | | | |
| Arsenic Total (ug/l as As) | 3113B | 10 | ug/l | | 3/3/98 | 6 months | | | | | | | | |
| Arsenic Dissolved (ug/l as As) | 200.9 | <5 | ug/l | | 3/3/98 | 6 months | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | 200.7 | <2 | ug/l | | 3/2/98 | 6 months | | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | 200.7 | <2 | ug/l | | 3/2/98 | 6 months | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | 7131 | 1.8 | ug/l | 0.2 | 3/4/98 | 6 months | <25 | <20 | <35 | <20 | | | | |
| Cadmium Dissolved (ug/l as Cd) | 7131 | 0.37 | ug/l | | 3/4/98 | 6 months | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | 7191 | 37 | ug/l | 1 | 3/4/98 | 6 months | <25 | <20 | <35 | <20 | | | Changed result on spreadsheet | |
| Chromium Dissolved (ug/l as Cr) | 7191 | 3.3 | ug/l | | 3/4/98 | 6 months | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | 200.7 | 206 | ug/l | 1 | 3/2/98 | 6 months | <25 | 5 | <35 | <20 | | | | |
| Copper, Dissolved, (ug/l as Cu) | 200.9 | 36 | ug/l | | 3/2/98 | 6 months | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | 3113B | 69 | ug/l | 1 | 3/4/98 | 6 months | <25 | 5 | <35 | <20 | | | no sample duplicate | |
| Lead, Dissolved, (ug/l as Pb) | 200.9 | 8 | ug/l | | 2/27/98 | 6 months | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | | | |

NOTES:

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Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|----------|
| Mercury, Total Recoverable, (ug/l as Hg) | | 245.1 | <0.2 | ug/l | | 3/3/98 | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | 245.1 | <0.2 | ug/l | | 3/3/98 | 6 months | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | | 249.2 | 38 | ug/l | 2 | 3/4/98 | 6 months | <25 | <20 | <35 | <20 | | | |
| Nickel, Dissolved, (ug/l as Ni) | | 249.2 | 7.3 | ug/l | | 3/4/98 | 6 months | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | | 3113B | <5 | ug/l | | 3/5/98 | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | 200.9 | <5 | ug/l | | 3/5/98 | 6 months | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 3/2/98 | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | 200.7 | <50 | ug/l | | 3/2/98 | 6 months | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 3/4/98 | 6 months | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | 200.9 | <1 | ug/l | | 3/4/98 | 6 months | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | | 200.7 | 470 | ug/l | 1 | 3/2/98 | 6 months | <25 | 1 | <35 | n/a | | no sample duplicate | |
| Zinc, Dissolved, (ug/l as Zn) | | 200.7 | 100 | ug/l | | 3/2/98 | 6 months | | | | | | | |
| Diazinon, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| BHC - ALPHA, (ug/l) | | | -- | | | | | | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | | | -- | | | | | | | | | | | |
| BHC - DELTA, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1016, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|---|---------------------|------------|
| Aroclor 1242, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1248, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1254, PCB, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Aroclor 1260, PCB, Total, (ug/L) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Chlordane, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| P,P' DDD, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| P,P' DDE, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| P, P' DDT, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Dieldrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endo-Sulfan Alpha, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endo-Sulfan Beta, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endo-Sulfan Sulfate, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Endrin Aldehyde, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | Cont. Calibration above method control limits | | |
| Endrin, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Heptachlor, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Heptachlor Epoxide, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Toxaphene, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| Methoxychlor, Total, (ug/l) | | - | | | | | | | | | | | |
| Beta Benzene Hexachloride, Total, (ug/l) | 608 | <1.0 | ug/l | | 1/14/98 | 40 days | | | | | | | |
| 1,1,2-Tetrachloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | see note 1, changed result on spreadsheet | | |
| 1,1,1,2-Tetrachloroethane, Total, (ug/l) | | -- | | | | | | | | | | | |
| Tetrachloroethane, PCE, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,1,1-Trichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,1,2-Trichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Trichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,1-Dichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,2-Dichloroethane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,2-Dichloropropane, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 2-Chloroethylvinyl Ether, Total, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| cis-1,2-Dichloropropene, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| trans-1,2-Dichloropropene, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| trans-1,3-Dichloropropene, (ug/l) | 624 | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 2 - Data Validation Report (SR-03 12/22/97)

| SR-03 - North Bank of Salt River at 35th Avenue - Sample date 12/22/97 | | | | | | | | | | | | |
|--|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|------------|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Benzene, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Bromodichloromethane, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Bromoform, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Carbon Tetrachloride, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chlorobenzene, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chloroethane, (ug/l) | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chloroform, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Ethyl-Benzene, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Methylene Chloride, Total, (ug/l) | -- | | | | | | | | | | | |
| Toluene, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Trichlorofluoromethane, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Vinyl Chloride, Total, (ug/l) | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Chlorodibromomethane, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L) | -- | | | | | | | | | | | |
| Acetone, Total, (ug/l) | <250 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 2-Butanone, (ug/l) | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Carbon Disulfide, Total, (ug/l) | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 1,2 Dichloroethene, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Xylenes, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| 2-Hexanone, Total, (ug/l) | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Styrene, Total, (ug/l) | <20 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Acrolein, Total, (ug/l) | <500 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Acrylonitrile, Total, (ug/l) | <100 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Bromobenzene, Water Whole, Total, (ug/l) | -- | | | | | | | | | | | |
| 1,3-Dichloropropane, Water Whole, Total, (ug/l) | -- | | | | | | | | | | | |
| Methyl Bromide, Total, (ug/l) | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Methyl Chloride, Total, (ug/l) | <50 | ug/l | | 12/23/97 | 14 days | | | | | | | see note 1 |
| Parachloro Toluene, Total, (ug/l) | -- | | | | | | | | | | | |
| Dibromoethane, Total, (ug/l) | -- | | | | | | | | | | | |
| Acenaphthene, Total, (ug/l) | <3.0 | ug/l | | 12/30/97 | 40 days | | | | | | | |
| Acenaphthylene, Total, (ug/l) | <3.0 | ug/l | | 12/30/97 | 40 days | | | | | | | |
| Anthracene, Total, (ug/l) | <3.0 | ug/l | | 12/30/97 | 40 days | | | | | | | |
| Benzidine, Total, (ug/l) | <50 | ug/l | | 12/30/97 | 40 days | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|-----|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|---|
| Aroclor 1221, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1232, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1242, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1248, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1254, PCB, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Aroclor 1260, PCB, Total, (ug/L) | | | -- | | | | | | | | | | | |
| Chlordane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| P,P' DDD, Total, (ug/l) | | | -- | | | | | | | | | | | |
| P,P' DDE, Total, (ug/l) | | | -- | | | | | | | | | | | |
| P, P' DDT, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Dieldrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endo-Sulfan Alpha, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endo-Sulfan Beta, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endo-Sulfan Sulfate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endrin Aldehyde, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Endrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Heptachlor, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Heptachlor Epoxide, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Toxaphene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methoxychlor, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Beta Benzene Hexachloride, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1; changed result on spreadsheet |
| 1,1,1,2-Tetrachloroethane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Tetrachloroethene, PCE, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 1,1,1- Trichloroethane, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 1,1,2- Trichloroethane, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Trichloroethene, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 1,1- Dichloroethane, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 1,1- Dichloroethene, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 1,2- Dichloroethane, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 1,2- Dichloropropane, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 2- Chloroethylnyl Ether, Total, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |
| cis-1,3-Dichloropropene, (ug/l) | 624 | | <40 | ug/l | | 3/7/98 | 14 days | | | | | | | see note 1 |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of Spec) | Field Blank Detects | Comments |
|--|-----|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|---|---------------------|------------|
| trans-1,2- Dichloroethene, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| trans-1,3- Dichloropropene, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Benzene, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Bromodichloromethane, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Bromoform, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Carbon Tetrachloride, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Chlorobenzene, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Chloroethane, (ug/l) | 624 | <100 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Chloroform, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Ethyl-Benzene, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Methylene Chloride, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Toluene, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Trichlorofluoromethane, Total, (ug/l) | 624 | <100 | ug/l | | | 3/7/98 | 14 days | | | | | Changed result on spreadsheet; see note 1 | | |
| Vinyl Chloride, Total, (ug/l) | 624 | <100 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Chlorodibromomethane, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| 4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L) | | -- | | | | | | | | | | | | |
| Acetone, Total, (ug/l) | 624 | <500 | ug/l | | | 3/7/98 | 14 days | | | | | see notes 3 & 4 | | see note 1 |
| 2-Butanone, (ug/l) | 624 | <200 | ug/l | | | 3/7/98 | 14 days | | | | | see notes 3 & 4 | | see note 1 |
| Carbon Disulfide, Total, (ug/l) | 624 | <200 | ug/l | | | 3/7/98 | 14 days | | | | | see notes 3 & 4 | | see note 1 |
| cis, 1,2 Dichloroethene, Total (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Xylenes, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | see note 4 | | see note 1 |
| 2-Hexanone, Total, (ug/l) | 624 | <200 | ug/l | | | 3/7/98 | 14 days | | | | | see notes 3 & 4 | | see note 1 |
| Styrene, Total, (ug/l) | 624 | <40 | ug/l | | | 3/7/98 | 14 days | | | | | see note 4 | | see note 1 |
| Acrolein, Total, (ug/l) | 624 | <1000 | ug/l | | | 3/7/98 | 14 days | | | | | see notes 3 & 4 | | see note 1 |
| Acrylonitrile, Total, (ug/l) | 624 | <200 | ug/l | | | 3/7/98 | 14 days | | | | | see notes 3 & 4 | | see note 1 |
| Bromobenzene, Water Whole, Total, (ug/l) | | -- | | | | | | | | | | | | |
| 1,3-Dichloropropane, Water Whole, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Methyl Bromide, Total, (ug/l) | 624 | <100 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Methyl Chloride, Total, (ug/l) | 624 | <100 | ug/l | | | 3/7/98 | 14 days | | | | | | | see note 1 |
| Parachloro Toluene, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Dibromoethane, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Acenaphthene, Total, (ug/l) | | -- | | | | | | | | | | | | |
| Acenaphthylene, Total, (ug/l) | | -- | | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|------------|
| | Anthracene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzidine, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzoic Acid, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzo (a) Anthracene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzo (b) Fluoranthene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzo (k) Fluoranthene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzo (ghi) Perylene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzo (a) Pyrene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Benzyl Alcohol, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Bis-(2-Chloroethoxy)-Methane, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Bis-(2-Chloroethyl)-Ether, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 4-Bromo-Phenyl Phenyl Ether, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Butyl Benzyl Phthalate, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2-Chloronaphthalene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2-Chlorophenol, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 4-Chloro-Phenyl Phenyl Ether, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Chrysene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Dibenzo-[a,h]-Anthracene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Di-N-Butyl Phthalate, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 1,3- Dichlorobenzene, Total, (ug/l) | 624 | <3.0 | ug/l | | | 14 days | | | | | | | see note 1 |
| | 1,4- Dichlorobenzene, Total, (ug/l) | 624 | <3.0 | ug/l | | | 14 days | | | | | | | see note 1 |
| | 1,2- Dichlorobenzene, Total, (ug/l) | 624 | <3.0 | ug/l | | | 14 days | | | | | | | see note 1 |
| | 3,3'- Dichlorobenzidine, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2,4- Dichlorophenol, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Diethyl Phthalate, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2,4- Dimethylphenol, Total, (ug/l) | | -- | | | | | | | | | | | |
| | Dimethyl Phthalate, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2-Methyl-4,6-Dinitrophenol, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2,4- Dinitrophenol, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2,4- Dinitrotoluene, Total, (ug/l) | | -- | | | | | | | | | | | |
| | 2,6- Dinitrotoluene, Total, (ug/l) | | -- | | | | | | | | | | | |

NOTES:

1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 6 - Data Validation SR-45 2/24/98

| SR-45 - South Bank of Salt River at 40th Street Sample Date 2/24/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--|--------|---------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|----------|
| Di-N-Octyl-Phthalate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fluoranthene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fluorene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Hexachlorobenzene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Hexachlorobutadiene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Hexachlorocyclopentadiene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Hexachloroethane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Indeno (1,2,3-CD) Pyrene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Isophorone, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Naphthalene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Nitrobenzene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 2-Nitrophenol, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 4-Nitrophenol, Total, (ug/l) | | | -- | | | | | | | | | | | |
| N-Nitrosodiphenylamine, Total, (ug/l) | | | -- | | | | | | | | | | | |
| N-Nitrosodi-N-Propylamine, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Pentachlorophenol, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phenanthrene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phenol, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Pyrene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 2,4,5- Trichlorophenol, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 2,4,6- Trichlorophenol, Total, (ug/l) | | | -- | | | | | | | | | | | |
| N-Nitrosodimethylamine, Total, (ug/l) | | | -- | | | | | | | | | | | |
| 1,2- Diphenylhydrazine, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Dichlorodifluoromethane, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Parachloro-Meta-Cresol, Total, (ug/l) | | | -- | | | | | | | | | | | |

Additional notes:

- 3. Result based on a tentatively identified compound search.
- 4. Compound not listed in cited method.

NOTES:

- 1. Questionable sample collection methods - grab VOC sample collected in auto sampler (not headspace free).
- 2. Questionable sample collection methods - tygon tubing in sampler likely caused contamination.

Table 7 - Data Validation Report (27th Ave. @ Salt River 12/22/97)

| 27th Avenue at Salt River 12/22/97 | | | | | | | | | | | | |
|--|--------------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|---------------------------------|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Sample Temperature (deg. C) | 2550B | 15 | deg.C | | ok | Immediate | | | | | | |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | 726 | mmHg | | | Immediate | | | | | | Not an effluent parameter |
| pH, Effluent (standard units) | | 7.7 | Std. Unit | | | Immediate | | <15 | n/a | | | |
| pH, Lab (standard units) | I-2587-85 | 6.8 | Std. Unit | | ok | Immediate | | | | | | Lab analysis not for compliance |
| Specific Conductance, FIELD (us/cm) | | 599 | us/cm | | ok | Immediate | | | | | | No method cited |
| Specific Conductance, LAB (us/cm) | I-2781-85 | 918 | us/cm | | ok | Immediate | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 5.2 | mg/l | | ok | Immediate | | | | | | |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | |
| BOD5 (mg/l) | | -- | | 1 | | | | <30 | n/a | | | |
| COD High Level (mg/l) | HACH | 161 | mg/l | 1 | ok | 28 days | | <30 | n/a | | | Not an approved method |
| Chloride (mg/l as Cl) | I-2057-85 | 23 | mg/l | | ok | 28 days | | | | | | |
| Cyanide Total (mg/l as Cn) | I-4302-85 | 0.019 | mg/l | | ok | 14 days | | | | | | |
| Fecal Coliform (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Fecal Streptococci (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | I-1750-85 | 1289 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | I-3765-85 | 125 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Nitrogen No2 + No3, Total (mg/l as N) | I-4545-85 | 0.96 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| TKN Nitrogen (mg/l as N) | | -- | | | | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | I-4552-85 | 120 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 0.25 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | I-4540-85 | 0.71 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | I-4522-85 | 64 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Organic Total (mg/l as N) | | -- | | | | | | | | | | |
| Phosphorous Total (mg/l as P) | I-4600-85 | 0.96 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| Phosphorous Dissolved (mg/l as P) | I-2600-85 | 0.3 | mg/l | | ok | 28 days | | | | | | |
| Phosphorous Ortho (mg/l as P) | I-4601-85 | 0.62 | mg/l | 0.05 | ok | 48 hrs | | <15 | ok | | | |
| Sulfate Dissolved (mg/l) | I-2057-85 IC | 63 | mg/l | | ok | 28 days | | | | | | |
| Hexavalent Chromium Total (mg/l) | | -- | | | | | | | | | | |
| Phenolics Total Recoverable (ug/l) | O-3110-83 | 19 | ug/l | | ok | 28 days | | | | | | |
| Oil and Grease Total Recoverable (mg/l) | EPA 1664 | 14 | mg/l | 0.2 | ok | 28 days | <30 | n/a | <50 | n/a | | |

Table 7 - Data Validation Report (27th Ave. @ Salt River 12/22/97)

| 27th Avenue at Salt River 12/22/97 | | | | | | | | | | | | |
|---|--------------------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|-----------------|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Organic Carbon, Total (mg/l) | O-311083 | 670 | mg/l | ok | 28 days | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | 229 | mg/l | ok | Immediate | | | | | | | No method cited |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | 173 | mg/l | ok | Immediate | | | | | | | No method cited |
| Carbonate Water Field (mg/l as Co ₃) | | -- | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co ₃) | | -- | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCo ₃) | | 188 | mg/l | ok | Immediate | | | | | | | No method cited |
| Alkalinity Dissolved Water Field Total (mg/l as CaCo ₃) | | 142 | mg/l | ok | Immediate | | | | | | | No method cited |
| Alkalinity LAB (mg/l as CaCo ₃) | I-2030-85 | 187 | mg/l | ok | 14 days | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | |
| Hardness (mg/l) | calc. | 170 | | 1 | | | | <15 | ok | | | |
| Antimony (ug/l as Sb) | | -- | | | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | | -- | | | | | | | | | | |
| Arsenic Total (ug/l as As) | EPA 200.9 | 13 | ug/l | ok | 6 months | | | | | | | |
| Arsenic Dissolved (ug/l as As) | | -- | | | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | I-3095-85 AA-FLAME | <10 | ug/l | ok | 6 months | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | | -- | | | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | I-4138-89 GFAA | 3 | ug/l | 0.2 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Cadmium Dissolved (ug/l as Cd) | | -- | | | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | I-3233-93 GFAA | 25 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Chromium Dissolved (ug/l as Cr) | | -- | | | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | I-4274-89 GFAA | 335 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Copper, Dissolved, (ug/l as Cu) | | -- | | | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | I-4403-89 GFAA | 456 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Lead, Dissolved, (ug/l as Pb) | | -- | | | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | |

Table 7 - Data Validation Report (27th Ave. @ Salt River 12/22/97)

| 27th Avenue at Salt River 12/22/97 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|------------------------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|
| Mercury, Total Recoverable, (ug/l as Hg) | I-3462-85 | <0.10 | ug/l | | ok | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | -- | | | | | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | I-4503-89 | 334 | ug/l | 2 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Nickel, Dissolved, (ug/l as Ni) | | -- | | | | | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | EPA 200.9 | <1 | ug/l | | ok | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | -- | | | | | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | I-4724-89 GFAA | <1 | ug/l | | ok | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | -- | | | | | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | -- | | | | | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | -- | | | | | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | I-3900-85 AA- FLAME | 660 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Zinc, Dissolved, (ug/l as Zn) | | -- | | | | | | | | | | | |
| Diazinon, Total, (ug/l) | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | -- | | | | | | | | | | | |
| BHC - ALPHA, (ug/l) | | -- | | | | | | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | | -- | | | | | | | | | | | |
| BHC - DELTA, (ug/l) | | -- | | | | | | | | | | | |

Table 8 - Data Validation Report (27th Ave. @ Salt River 2/4/98)

| 27th Avenue at Salt River 2/4/98 | | | | | | | | | | | | |
|--|--------------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|---------------------------------|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Sample Temperature (deg. C) | 2550B | 14.5 | deg. C | | ok | Immediate | | | | | | |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | 731 | mmHg | | ok | Immediate | | | | | | Not an effluent parameter |
| pH, Effluent (standard units) | | 7.9 | std. unit | | ok | Immediate | | <15 | n/a | | | |
| pH, Lab (standard units) | I-2587-85 | 8 | Std. Unit | | ok | Immediate | | | | | | Lab analysis not for compliance |
| Specific Conductance, FIELD (us/cm) | | 212 | us/cm | | ok | Immediate | | | | | | No method cited |
| Specific Conductance, LAB (us/cm) | I-2781-85 | 274 | us/cm | | ok | Immediate | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 9.1 | mg/l | | ok | Immediate | | | | | | |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | |
| BOD5 (mg/l) | | -- | | 1 | | | | <30 | n/a | | | |
| COD High Level (mg/l) | HACH | 258 | mg/l | 1 | ok | 28 days | | <30 | n/a | | | Not an approved method |
| Chloride (mg/l as Cl) | I-2057-85 | 22 | mg/l | | ok | 28 days | | | | | | |
| Cyanide Total (mg/l as Cn) | I-4302-85 | -- | | | | | | | | | | |
| Fecal Coliform (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Fecal Streptococci (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | I-1750-85 | 236 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | I-3765-85 | 304 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Nitrogen No2 + No3, Total (mg/l as N) | I-4545-85 | 3.6 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| TKN Nitrogen (mg/l as N) | | -- | | | | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | I-4552-85 | 12 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 3.4 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | I-4540-85 | 0.2 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | I-4522-85 | 5.2 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Organic Total (mg/l as N) | | -- | | | | | | | | | | |
| Phosphorous Total (mg/l as P) | I-4600-85 | 0.8 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| Phosphorous Dissolved (mg/l as P) | I-2600-85 | 0.14 | mg/l | | ok | 28 days | | | | | | |
| Phosphorous Ortho (mg/l as P) | I-4601-85 | 0.14 | mg/l | 0.05 | ok | 48 hrs | | <15 | ok | | | |
| Sulfate Dissolved (mg/l) | I-2057-85 IC | 22 | mg/l | | ok | 28 days | | | | | | |
| Hexavalent Chromium Total (mg/l) | | -- | | | | | | | | | | |
| Phenolics Total Recoverable (ug/l) | O-3110-83 | 9 | ug/l | | ok | 28 days | | | | | | |

Table 8 - Data Validation Report (27th Ave. @ Salt River 2/4/98)

| 27th Avenue at Salt River 2/4/98 | | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--------------------|--------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|-----------------|
| Oil and Grease Total Recoverable (mg/l) | EPA 1664 | 11 | mg/l | 0.2 | ok | 28 days | <30 | n/a | <50 | n/a | | | | |
| Organic Carbon, Total (mg/l) | O-311083 | 79 | mg/l | | ok | 28 days | | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | 85 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | 45 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Carbonate Water Field (mg/l as Co ₃) | | -- | | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co ₃) | | -- | | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCO ₃) | | 70 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Alkalinity Dissolved Water Field Total (mg/l as CaCO ₃) | | 37 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Alkalinity LAB (mg/l as CaCO ₃) | I-2030-85 | 73 | mg/l | | ok | 14 days | | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | | |
| Hardness (mg/l) | calc. | 14 | | 1 | | | | | <15 | ok | | | | |
| Antimony (ug/l as Sb) | | -- | | | | | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | | -- | | | | | | | | | | | | |
| Arsenic Total (ug/l as As) | EPA 200.9 | 12 | ug/l | | ok | 6 months | | | | | | | | |
| Arsenic Dissolved (ug/l as As) | | -- | | | | | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | I-3095-85 AA-FLAME | <10 | ug/l | | ok | 6 months | | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | | -- | | | | | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | I-4138-89 GFAA | 1 | ug/l | 0.2 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Cadmium Dissolved (ug/l as Cd) | | -- | | | | | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | I-3233-93 GFAA | 12 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Chromium Dissolved (ug/l as Cr) | | -- | | | | | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | I-4274-89 GFAA | 107 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Copper, Dissolved, (ug/l as Cu) | | -- | | | | | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | I-4403-89 GFAA | 128 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Lead, Dissolved, (ug/l as Pb) | | -- | | | | | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | | |

Table 8 - Data Validation Report (27th Ave. @ Salt River 2/4/98)

| 27th Avenue at Salt River 2/4/98 | Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|------------------------|--------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|
| Magnesium, Dissolved, (mg/l as Mg) | | -- | | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | | |
| Mercury, Total Recoverable, (ug/l as Hg) | I-3462-85 | <0.10 | ug/l | | ok | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | -- | | | | | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | I-4503-89 | 23 | ug/l | 2 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Nickel, Dissolved, (ug/l as Ni) | | -- | | | | | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | EPA 200.9 | <1 | ug/l | | ok | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | -- | | | | | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | I-4724-89 GFAA | <1 | ug/l | | ok | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | -- | | | | | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | -- | | | | | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | -- | | | | | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | I-3900-85 AA- FLAME | 265 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Zinc, Dissolved, (ug/l as Zn) | | -- | | | | | | | | | | | |
| Diazinon, Total, (ug/l) | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | -- | | | | | | | | | | | |
| BHC - ALPHA, (ug/l) | | -- | | | | | | | | | | | |

Table 9 - Data Validation Report (ACDC @ 43rd Ave. 8/3/97)

| ACDC @ 43rd Avenue 8/3/97 | | | | | | | | | | | | |
|--|--------------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|---------------------------------|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Sample Temperature (deg. C) | 2550B | 29.5 | deg. C | | ok | Immediate | | | | | | |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | 732 | mmHg | | ok | Immediate | | | | | | Not an effluent parameter |
| pH, Effluent (standard units) | | 6.9 | Std. Unit | | ok | Immediate | | <15 | n/a | | | |
| pH, Lab (standard units) | I-2587-85 | 6.1 | Std. Unit | | ok | Immediate | | | | | | Lab analysis not for compliance |
| Specific Conductance, FIELD (us/cm) | | 123 | us/cm | | ok | Immediate | | | | | | No method cited |
| Specific Conductance, LAB (us/cm) | I-2781-85 | 162 | us/cm | | ok | Immediate | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 6.7 | mg/l | | ok | Immediate | | | | | | |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | |
| BOD5 (mg/l) | | -- | | 1 | | | | <30 | n/a | | | |
| COD High Level (mg/l) | HACH | 310 | mg/l | 1 | ok | 28 days | | <30 | n/a | | | Not an approved method |
| Chloride (mg/l as Cl) | I-2057-85 | 4.9 | mg/l | | ok | 28 days | | | | | | |
| Cyanide Total (mg/l as Cn) | I-4302-85 | 0.014 | mg/l | | ok | 14 days | | | | | | |
| Fecal Coliform (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Fecal Streptococci (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | I-1750-85 | 224 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | I-3765-85 | 60 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Nitrogen No2 + No3, Total (mg/l as N) | I-4545-85 | 2.1 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| TKN Nitrogen (mg/l as N) | | -- | | | | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | I-4552-85 | 8.9 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 2.05 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | I-4540-85 | 0.052 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | I-4522-85 | 4.1 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Organic Total (mg/l as N) | | -- | | | | | | | | | | |
| Phosphorous Total (mg/l as P) | I-4600-85 | 0.7 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| Phosphorous Dissolved (mg/l as P) | I-2600-85 | 0.73 | mg/l | | ok | 28 days | | | | | | |
| Phosphorous Ortho (mg/l as P) | I-4601-85 | 0.44 | mg/l | 0.05 | ok | 48 hrs | | <15 | ok | | | |
| Sulfate Dissolved (mg/l) | I-2057-85 IC | 16 | mg/l | | ok | 28 days | | | | | | |
| Hexavalent Chromium Total (mg/l) | | -- | | | | | | | | | | |
| Phenolics Total Recoverable (ug/l) | O-3110-83 | 13 | ug/l | | ok | 28 days | | | | | | |
| Oil and Grease Total Recoverable (mg/l) | EPA 1664 | 60 | mg/l | 0.2 | ok | 28 days | <30 | n/a | <50 | n/a | | |

Table 9 - Data Validation Report (ACDC @ 43rd Ave. 8/3/97)

| ACDC @ 43rd Avenue 8/3/97 | | | | | | | | | | | | |
|---|--------------------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|-----------------|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Organic Carbon, Total (mg/l) | O-311083 | 8.8 | mg/l | ok | 28 days | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | 9 | mg/l | ok | Immediate | | | | | | | No method cited |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | 6 | mg/l | ok | Immediate | | | | | | | No method cited |
| Carbonate Water Field (mg/l as Co ₃) | | -- | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co ₃) | | -- | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCo ₃) | | 7 | mg/l | ok | Immediate | | | | | | | No method cited |
| Alkalinity Dissolved Water Field Total (mg/l as CaCo ₃) | | 5 | mg/l | ok | Immediate | | | | | | | No method cited |
| Alkalinity LAB (mg/l as CaCo ₃) | I-2030-85 | 41 | mg/l | ok | 14 days | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | |
| Hardness (mg/l) | calc. | 17 | | 1 | | | | <15 | ok | | | |
| Antimony (ug/l as Sb) | | -- | | | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | | -- | | | | | | | | | | |
| Arsenic Total (ug/l as As) | EPA 200.9 | 3 | ug/l | ok | 6 months | | | | | | | |
| Arsenic Dissolved (ug/l as As) | | -- | | | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | I-3095-85 AA-FLAME | <10 | ug/l | ok | 6 months | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | | -- | | | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | I-4138-89 GFAA | <1 | ug/l | 0.2 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Cadmium Dissolved (ug/l as Cd) | | -- | | | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | 17 | mg/l | ok | 6 months | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | I-3233-93 GFAA | 3 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Chromium Dissolved (ug/l as Cr) | | -- | | | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | I-4274-89 GFAA | 25 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Copper, Dissolved, (ug/l as Cu) | | -- | | | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | I-4403-89 GFAA | 5 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | |
| Lead, Dissolved, (ug/l as Pb) | | -- | | | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | |
| Magnesium, Dissolved, (mg/l as Mg) | | 2.4 | mg/l | ok | 6 months | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | | -- | | | | | | | | | | |

Table 9 - Data Validation Report (ACDC @ 43rd Ave. 8/3/97)

| ACDC @ 43rd Avenue 8/3/97 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|--|--|------------------------|---------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|
| Mercury, Total Recoverable, (ug/l as Hg) | | I-3462-85 | 0.1 | ug/l | | ok | 6 months | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | | -- | | | | | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | | I-4503-89 | 14 | ug/l | 2 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Nickel, Dissolved, (ug/l as Ni) | | | -- | | | | | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | | 3 | mg/l | | ok | 6 months | | | | | | | |
| Selenium, Total, (ug/l as Se) | | EPA 200.9 | <1 | ug/l | | ok | 6 months | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | | -- | | | | | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | | I-4724-89 GFAA | <1 | ug/l | | ok | 6 months | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | | -- | | | | | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | | 6.3 | mg/l | | ok | 6 months | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | | -- | | | | | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | | -- | | | | | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | | I-3900-85 AA- FLAME | 314 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Zinc, Dissolved, (ug/l as Zn) | | | -- | | | | | | | | | | | |
| Diazinon, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | | -- | | | | | | | | | | | |
| BHC - ALPHA, (ug/l) | | | -- | | | | | | | | | | | |
| BHC - Gamma (Lindane), (ug/l) | | | -- | | | | | | | | | | | |
| BHC - DELTA, (ug/l) | | | -- | | | | | | | | | | | |

Table 10 - Data Validation Report (ACDC @ 43rd Ave. 12/22/97)

| ACDC at 43rd Avenue 12/22/97 | | | | | | | | | | | | | |
|--|--------------|--------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|---------------------------------|--|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments | |
| Sample Temperature (deg. C) | 2550B | 14.5 | deg.C | ok | Immediate | | | | | | | | |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | 724 | mmHg | ok | Immediate | | | | | | | Not an effluent parameter | |
| pH, Effluent (standard units) | | 7.4 | Std. Unit | ok | Immediate | | | <15 | n/a | | | | |
| pH, Lab (standard units) | I-2587-85 | 6.5 | Std. Unit | ok | Immediate | | | | | | | Lab analysis not for compliance | |
| Specific Conductance, FIELD (us/cm) | | 89 | us/cm | ok | Immediate | | | | | | | No method cited | |
| Specific Conductance, LAB (us/cm) | I-2781-85 | 75 | us/cm | ok | Immediate | | | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | -- | | | | | | | | | | | |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | | |
| BOD5 (mg/l) | | -- | | 1 | | | | <30 | n/a | | | | |
| COD High Level (mg/l) | HACH | 145 | mg/l | 1 | ok | 28 days | | <30 | n/a | | | Not an approved method | |
| Chloride (mg/l as Cl) | I-2057-85 | 5.3 | mg/l | | ok | 28 days | | | | | | | |
| Cyanide Total (mg/l as Cn) | I-4302-85 | <0.010 | mg/l | | ok | 14 days | | | | | | | |
| Fecal Coliform (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | | |
| Fecal Streptococci (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | I-1750-85 | 66 | mg/l | 10 | ok | 7 days | | <15 | ok | | | | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | I-3765-85 | 178 | mg/l | 10 | ok | 7 days | | <15 | ok | | | | |
| Nitrogen No2 + No3, Total (mg/l as N) | I-4545-85 | 0.52 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | | |
| TKN Nitrogen (mg/l as N) | | -- | | | | | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | I-4552-85 | 3.1 | mg/l | | ok | 28days | | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 0.476 | mg/l | | ok | 48 hours | | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | I-4540-85 | 0.044 | mg/l | | ok | 48 hours | | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | I-4522-85 | 0.97 | mg/l | | ok | 28 days | | | | | | | |
| Nitrogen Organic Total (mg/l as N) | | -- | | | | | | | | | | | |
| Phosphorous Total (mg/l as P) | I-4600-85 | 0.3 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | | |
| Phosphorous Dissolved (mg/l as P) | I-2600-85 | 0.09 | mg/l | | ok | 28 days | | | | | | | |
| Phosphorous Ortho (mg/l as P) | I-4601-85 | 0.12 | mg/l | 0.05 | ok | 48 hrs | | <15 | ok | | | | |
| Sulfate Dissolved (mg/l) | I-2057-85 IC | 8.3 | mg/l | | ok | 28 days | | | | | | | |
| Hexavalent Chromium Total (mg/l) | | -- | | | | | | | | | | | |
| Phenolics Total Recoverable (ug/l) | O-3110-83 | 6 | ug/l | | ok | 28 days | | | | | | | |

Table 10 - Data Validation Report (ACDC @ 43rd Ave. 12/22/97)

| ACDC at 43rd Avenue 12/22/97 | | | | | | | | | | | | | |
|---|------------------------|-------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|-----------------|--|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments | |
| Oil and Grease Total Recoverable (mg/l) | EPA 1664 | 28 | mg/l | 0.2 | ok | 28 days | <30 | n/a | <50 | n/a | | | |
| Organic Carbon, Total (mg/l) | O-311083 | 29 | mg/l | | ok | 28 days | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | 16 | mg/l | | ok | Immediate | | | | | | No method cited | |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | 14 | mg/l | | ok | Immediate | | | | | | No method cited | |
| Carbonate Water Field (mg/l as Co ₃) | | -- | mg/l | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co ₃) | | -- | mg/l | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCo ₃) | | 13 | mg/l | | ok | Immediate | | | | | | No method cited | |
| Alkalinity Dissolved Water Field Total (mg/l as CaCo ₃) | | 11 | mg/l | | ok | Immediate | | | | | | No method cited | |
| Alkalinity LAB (mg/l as CaCo ₃) | I-2030-85 | 17 | mg/l | | ok | 14 days | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | |
| Hardness (mg/l) | calc. | 17 | | 1 | | | | <15 | ok | | | | |
| Antimony (ug/l as Sb) | | -- | | | | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | | -- | | | | | | | | | | | |
| Arsenic Total (ug/l as As) | EPA 200.9 | 4 | ug/l | | ok | 6 months | | | | | | | |
| Arsenic Dissolved (ug/l as As) | | -- | | | | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | I-3095-85 AA- FLAME | <10 | ug/l | | ok | 6 months | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | | -- | | | | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | I-4138-89 GFAA | <1 | ug/l | 0.2 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Cadmium Dissolved (ug/l as Cd) | | -- | | | | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | I-3233-93 GFAA | 5 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Chromium Dissolved (ug/l as Cr) | | -- | | | | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | I-4274-89 GFAA | 18 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Copper, Dissolved, (ug/l as Cu) | | -- | | | | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | I-4403-89 GFAA | 10 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Lead, Dissolved, (ug/l as Pb) | | -- | | | | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | |

Table 10 - Data Validation Report (ACDC @ 43rd Ave. 12/22/97)

| ACDC at 43rd Avenue 12/22/97 | | | | | | | | | | | | | |
|--|------------------------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|--|
| Method | Result | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments | |
| Magnesium, Dissolved, (mg/l as Mg) | -- | | | | | | | | | | | | |
| Manganese, Dissolved, (ug/l as Mn) | -- | | | | | | | | | | | | |
| Mercury, Total Recoverable, (ug/l as Hg) | I-3462-85 | <0.10 | ug/l | ok | 6 months | | | | | | | | |
| Mercury, Dissolved, (ug/l as Hg) | | -- | | | | | | | | | | | |
| Molybdenum, Dissolved, (ug/l as Mo) | | -- | | | | | | | | | | | |
| Nickel, Total Recoverable, (ug/l as Ni) | I-4503-89 | 10 | ug/l | 2 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Nickel, Dissolved, (ug/l as Ni) | | -- | | | | | | | | | | | |
| Potassium, Dissolved, (mg/l as K) | | -- | | | | | | | | | | | |
| Selenium, Total, (ug/l as Se) | EPA 200.9 | <1 | ug/l | ok | 6 months | | | | | | | | |
| Selenium, Dissolved, (ug/l as Se) | | -- | | | | | | | | | | | |
| Silver, Total Recoverable, (ug/l as Ag) | I-4724-89 GFAA | <1 | ug/l | ok | 6 months | | | | | | | | |
| Silver, Dissolved, (ug/l as Ag) | | -- | | | | | | | | | | | |
| Sodium, Dissolved, (mg/l as Na) | | -- | | | | | | | | | | | |
| Strontium, Dissolved, (ug/l as Sr) | | -- | | | | | | | | | | | |
| Thallium, Total, (ug/l as Tl) | | -- | | | | | | | | | | | |
| Thallium, Dissolved, (ug/l as Tl) | | -- | | | | | | | | | | | |
| Vanadium, Dissolved, (ug/l as V) | | -- | | | | | | | | | | | |
| Zinc, Total Recoverable, (ug/l as Zn) | I-3900-85 AA- FLAME | 141 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| Zinc, Dissolved, (ug/l as Zn) | | -- | | | | | | | | | | | |
| Diazinon, Total, (ug/l) | | -- | | | | | | | | | | | |
| Ethion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Malathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Methyl Parathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Parathion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Trithion, Total, (ug/l) | | -- | | | | | | | | | | | |
| Di-syston, Total, (ug/l) | | -- | | | | | | | | | | | |
| Phorate, Total, (ug/l) | | -- | | | | | | | | | | | |
| Chlorpyrifos, Total, (ug/l) | | -- | | | | | | | | | | | |
| DEF, Total, (ug/l) | | -- | | | | | | | | | | | |
| Fonofos(Dy-fonate), WWT, (ug/l) | | -- | | | | | | | | | | | |
| Aldrin, Total, (ug/l) | | -- | | | | | | | | | | | |
| BHC - ALPHA, (ug/l) | | -- | | | | | | | | | | | |

Table 11 - Data Validation Report (ACDC @ 43rd Ave. 2/4/98)

| ACDC at 43rd Avenue 2/4/98 | | | | | | | | | | | | |
|--|--------------|--------|------------------------------------|---------------|---------------------------|-------------------------------------|-----------------------------------|--|--|--|---------------------|---------------------------------|
| Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
| Sample Temperature (deg. C) | 2550B | 11.5 | deg. C | | ok | Immediate | | | | | | |
| Effluent Temperature (deg. C) | | NM | | | | | | | | | | |
| Ambient Temperature (deg. C) | | NM | | | | | | | | | | |
| Barometric Pressure (mm Hg) | | 733 | mmHg | | ok | Immediate | | | | | | Not an effluent parameter |
| pH, Effluent (standard units) | | 6.5 | Std. Unit | | ok | Immediate | | <15 | n/a | | | |
| pH, Lab (standard units) | I-2587-85 | 6.6 | Std. Unit | | ok | Immediate | | | | | | Lab analysis not for compliance |
| Specific Conductance, FIELD (us/cm) | | 51 | (us/cm) | | ok | | | | | | | No method cited |
| Specific Conductance, LAB (us/cm) | I-2781-85 | 57 | (us/cm) | | ok | | | | | | | |
| Oxygen Dissolved (% saturation) | | -- | | | | | | | | | | |
| Oxygen Dissolved (mg/l) | 360.1 | 10 | mg/l | | ok | Immediate | | | | | | |
| Electrical Conductivity (umhos/cm) | | -- | | | | | | | | | | |
| BOD5 (mg/l) | | -- | | 1 | | | | <30 | n/a | | | |
| COD High Level (mg/l) | HACH | 97 | mg/l | 1 | ok | 28 days | | <30 | n/a | | | Not an approved method |
| Chloride (mg/l as Cl) | I-2057-85 | 2.2 | mg/l | | ok | 28 days | | | | | | |
| Cyanide Total (mg/l as Cn) | I-4302-85 | <0.010 | mg/l | | ok | 14days | | | | | | |
| Fecal Coliform (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Fecal Streptococci (CFU/100mL) | | -- | | 2 | | | | <30 | n/a | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | I-1750-85 | 56 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | I-3765-85 | 64 | mg/l | 10 | ok | 7 days | | <15 | ok | | | |
| Nitrogen No2 + No3, Total (mg/l as N) | I-4545-85 | 0.35 | mg/l | 0.05 | ok | 28days | | <15 | ok | | | |
| TKN Nitrogen (mg/l as N) | | -- | | | | | | | | | | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | I-4552-85 | 2.2 | mg/l | | ok | 28days | | | | | | |
| Nitrogen Nitrate Total (mg/l as N) | calc. | 0.316 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Nitrite Total (mg/l as N) | I-4540-85 | 0.034 | mg/l | | ok | 48 hours | | | | | | |
| Nitrogen Ammonia Total (mg/l as N) | I-4522-85 | 1.1 | mg/l | | ok | 28 days | | | | | | |
| Nitrogen Organic Total (mg/l as N) | | -- | | | | | | | | | | |
| Phosphorous Total (mg/l as P) | I-4600-85 | 0.21 | mg/l | 0.05 | ok | 28 days | | <15 | ok | | | |
| Phosphorous Dissolved (mg/l as P) | I-2600-85 | 0.11 | mg/l | | ok | 28 days | | | | | | |
| Phosphorous Ortho (mg/l as P) | I-4601-85 | 0.06 | mg/l | 0.05 | ok | 48 hrs | | <15 | ok | | | |
| Sulfate Dissolved (mg/l) | I-2057-85 IC | 5.8 | mg/l | | ok | 28 days | | | | | | |
| Hexavalent Chromium Total (mg/l) | | -- | | | | | | | | | | |
| Phenolics Total Recoverable (ug/l) | O-3110-83 | 10 | ug/l | | ok | 28days | | | | | | |

Table 11 - Data Validation Report (ACDC @ 43rd Ave. 2/4/98)

| ACDC at 43rd Avenue 2/4/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|---|--------------------|--------|---------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|-----------------|
| Oil and Grease Total Recoverable (mg/l) | EPA 1664 | 17 | mg/l | 0.2 | ok | 28 days | <30 | n/a | <50 | n/a | | | | |
| Organic Carbon, Total (mg/l) | O-311083 | 22 | mg/l | | ok | 28days | | | | | | | | |
| Bicarbonate Whole Field (mg/l as HCO ₃) | | 13 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Bicarbonate Dissolved, Field (mg/l as HCO ₃) | | 12 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Carbonate Water Field (mg/l as Co ₃) | | -- | mg/l | | | | | | | | | | | |
| Carbonate Water Dissolved, Field, (mg/l as Co ₃) | | -- | mg/l | | | | | | | | | | | |
| Alkalinity Water Field Total (mg/l as CaCo ₃) | | 11 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Alkalinity Dissolved Water Field Total (mg/l as CaCo ₃) | | 10 | mg/l | | ok | Immediate | | | | | | | | No method cited |
| Alkalinity LAB (mg/l as CaCo ₃) | I-2030-85 | 14 | mg/l | | ok | 14 days | | | | | | | | |
| Silica Dissolved (mg/l as SiO ₂) | | -- | | | | | | | | | | | | |
| Hardness (mg/l) | calc. | 14 | | 1 | | | | | <15 | 0 | | | | |
| Antimony (ug/l as Sb) | | -- | | | | | | | | | | | | |
| Antimony Dissolved (ug/l as Sb) | | -- | | | | | | | | | | | | |
| Arsenic Total (ug/l as As) | EPA 200.9 | <1 | ug/l | | ok | 6 months | | | | | | | | |
| Arsenic Dissolved (ug/l as As) | | -- | | | | | | | | | | | | |
| Barium Dissolved (ug/l as Ba) | | -- | | | | | | | | | | | | |
| Beryllium Total Recoverable (ug/l as Be) | I-3095-85 AA-FLAME | <10 | ug/l | | ok | 6 months | | | | | | | | |
| Beryllium Dissolved (ug/l as Be) | | -- | | | | | | | | | | | | |
| Cadmium Total Recoverable (ug/l as Cd) | I-4138-89 GFAA | <1 | ug/l | 0.2 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Cadmium Dissolved (ug/l as Cd) | | -- | | | | | | | | | | | | |
| Calcium Dissolved (mg/l as Ca) | | -- | | | | | | | | | | | | |
| Chromium Total Recoverable (ug/l as Cr) | I-3233-93 GFAA | 2 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Chromium Dissolved (ug/l as Cr) | | -- | | | | | | | | | | | | |
| Cobalt Dissolved (ug/l as Co) | | -- | | | | | | | | | | | | |
| Copper, Total Recoverable, (ug/l as Cu) | I-4274-89 GFAA | 8 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Copper, Dissolved, (ug/l as Cu) | | -- | | | | | | | | | | | | |
| Iron, Dissolved, (ug/l as Fe) | | -- | | | | | | | | | | | | |
| Lead, Total Recoverable, (ug/l as Pb) | I-4403-89 GFAA | 4 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | | |
| Lead, Dissolved, (ug/l as Pb) | | -- | | | | | | | | | | | | |
| Lithium, Dissolved, (ug/l as Li) | | -- | | | | | | | | | | | | |

Table 11 - Data Validation Report (ACDC @ 43rd Ave. 2/4/98)

| ACDC at 43rd Avenue 2/4/98 | | Method | Results | Units | Required Method Detection Limit | Date Analyzed | Allowable Holding Time | Required MS/MSD Precision (%RPD) | Actual MS/MSD Precision (%RPD) | Required Sample Duplicate Precision (%RPD) | Actual Sample Duplicate Precision (%RPD) | Other QA/QC Comments (out of spec) | Field Blank Detects | Comments |
|----------------------------|--|--|---------|-------|---------------------------------|---------------|------------------------|----------------------------------|--------------------------------|--|--|------------------------------------|---------------------|----------|
| | | Magnesium, Dissolved, (mg/l as Mg) | -- | | | | | | | | | | | |
| | | Manganese, Dissolved, (ug/l as Mn) | -- | | | | | | | | | | | |
| | | Mercury, Total Recoverable, (ug/l as Hg) | <0.10 | ug/l | | ok | 6 months | | | | | | | |
| | | Mercury, Dissolved, (ug/l as Hg) | -- | | | | | | | | | | | |
| | | Molybdenum, Dissolved, (ug/l as Mo) | -- | | | | | | | | | | | |
| | | Nickel, Total Recoverable, (ug/l as Ni) | 4 | ug/l | 2 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| | | Nickel, Dissolved, (ug/l as Ni) | -- | | | | | | | | | | | |
| | | Potassium, Dissolved, (mg/l as K) | -- | | | | | | | | | | | |
| | | Selenium, Total, (ug/l as Se) | <1 | ug/l | | ok | 6 months | | | | | | | |
| | | Selenium, Dissolved, (ug/l as Se) | -- | | | | | | | | | | | |
| | | Silver, Total Recoverable, (ug/l as Ag) | <1 | ug/l | | ok | 6 months | | | | | | | |
| | | Silver, Dissolved, (ug/l as Ag) | -- | | | | | | | | | | | |
| | | Sodium, Dissolved, (mg/l as Na) | -- | | | | | | | | | | | |
| | | Strontium, Dissolved, (ug/l as Sr) | -- | | | | | | | | | | | |
| | | Thallium, Total, (ug/l as Tl) | -- | | | | | | | | | | | |
| | | Thallium, Dissolved, (ug/l as Tl) | -- | | | | | | | | | | | |
| | | Vanadium, Dissolved, (ug/l as V) | -- | | | | | | | | | | | |
| | | Zinc, Total Recoverable, (ug/l as Zn) | 70 | ug/l | 1 | ok | 6 months | <25 | n/a | <35 | n/a | | | |
| | | Zinc, Dissolved, (ug/l as Zn) | -- | | | | | | | | | | | |
| | | Diazinon, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Ethion, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Malathion, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Methyl Parathion, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Parathion, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Trithion, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Di-syston, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Phorate, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Chlorpyrifos, Total, (ug/l) | -- | | | | | | | | | | | |
| | | DEF, Total, (ug/l) | -- | | | | | | | | | | | |
| | | Fonofos(Dy-fonate), WWT, (ug/l) | -- | | | | | | | | | | | |
| | | Aldrin, Total, (ug/l) | -- | | | | | | | | | | | |
| | | BHC - ALPHA, (ug/l) | -- | | | | | | | | | | | |

POLLUTANT LOAD ANALYSIS TABLES

- Tables 4-2 through 4-11 (Individual Basins)
- Table 4-12 (Citywide summary)

Table 4-2: Scatter Wash Basin Pollutant Loadings

| TOTAL AREA: 135.97 acres | | Residential: 66.82% | Industrial: 22.92% | Undeveloped: 0.66% | Commercial: 9.61% |
|---|----------------------------------|--|--------------------------------|--------------------------------------|-------------------|
| Total summer (Apr-Sept) Runoff, cubic feet: 318,154 | | Total Winter (Oct-Mar) Runoff, cubic feet: 1,181,715 | | | |
| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) | |
| BOD5 (mg/l) | 112.87 | 2,240 | 8,320 | 10,561 | |
| COD High Level (mg/l) | 233.16 | 4,628 | 17,188 | 21,816 | |
| Chloride (mg/l as Cl) | 18.33 | 364 | 1,351 | 1,715 | |
| Cyanide Total (mg/l as Cn) | 0.01 | 0 | 1 | 1 | |
| Fecal Coliform (CFU/100mL) | 3,190.08 | | | | |
| Fecal Streptococci (CFU/100mL) | 11,844.90 | | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 217.15 | 4,310 | 16,008 | 20,318 | |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 564.96 | 11,213 | 41,649 | 52,862 | |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.79 | 36 | 132 | 168 | |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 10.72 | 213 | 791 | 1,003 | |
| Nitrogen Nitrate Total (mg/l as N) | 1.73 | 34 | 127 | 161 | |
| Nitrogen Nitrite Total (mg/l as N) | 0.11 | 2 | 8 | 10 | |
| Nitrogen Ammonia Total (mg/l as N) | 6.18 | 123 | 456 | 579 | |
| Phosphorous Total (mg/l as P) | 1.02 | 20 | 75 | 96 | |
| Phosphorous Ortho (mg/l as P) | 0.26 | 5 | 19 | 25 | |
| Sulfate Dissolved (mg/l) | 29.37 | 583 | 2,165 | 2,748 | |
| Phenols Total Recoverable (ug/l) | 83.23 | 2 | 6 | 8 | |
| Oil and Grease Total Recoverable (mg/l) | 7.18 | 142 | 1 | 143 | |
| Organic Carbon, Total (mg/l) | 78.90 | 1,566 | 5,816 | 7,382 | |
| Arsenic Total (ug/l as As) | 7.86 | 0 | 1 | 1 | |
| Beryllium Total Recoverable (ug/l as Be) | 1.63 | 0 | 0 | 0 | |
| Cadmium Total Recoverable (ug/l as Cd) | 1.09 | 0 | 0 | 0 | |
| Chromium Total Recoverable (ug/l as Cr) | 20.15 | 0 | 1 | 2 | |
| Copper, Total Recoverable, (ug/l as Cu) | 67.44 | 1 | 5 | 6 | |
| Lead, Total Recoverable, (ug/l as Pb) | 86.58 | 2 | 6 | 8 | |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.16 | 0 | 0 | 0 | |
| Nickel, Total Recoverable, (ug/l as Ni) | 22.45 | 0 | 2 | 2 | |
| Selenium, Total, (ug/l as Se) | 2.27 | 0 | 0 | 0 | |
| Silver, Total Recoverable, (ug/l as Ag) | 22.12 | 0 | 2 | 2 | |
| Zinc, Total Recoverable, (ug/l as Zn) | 260.53 | 5 | 19 | 24 | |

Table 4-3: East Fork of Cave Creek Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| TOTAL AREA: 3179.82 acres Residential: 45.21% Industrial: 5.80% Undeveloped: 36.54% Commercial: 2.45% Total summer (Apr-Sept) Runoff, cubic feet: 5,357,072 Total Winter (Oct-Mar) Runoff, cubic feet: 21,438,719 | | | | |
| BOD5 (mg/l) | 41.29 | 13,797 | 55,217 | 69,014 |
| COD High Level (mg/l) | 239.18 | 79,933 | 319,888 | 399,821 |
| Chloride (mg/l as Cl) | 8.58 | 2,869 | 11,481 | 14,350 |
| Cyanide Total (mg/l as Cn) | 0.003 | 1 | 4 | 4 |
| Fecal Coliform (CFU/100mL) | 38,600.24 | | | |
| Fecal Streptococci (CFU/100mL) | 114,406.23 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 91.95 | 30,728 | 122,971 | 153,699 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 329.32 | 110,057 | 440,441 | 550,498 |
| Nitrogen No2 + No3, Total (mg/l as N) | 0.92 | 307 | 1,230 | 1,538 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 3.34 | 1,116 | 4,465 | 5,581 |
| Nitrogen Nitrate Total (mg/l as N) | 0.90 | 302 | 1,207 | 1,508 |
| Nitrogen Nitrite Total (mg/l as N) | 0.04 | 15 | 58 | 73 |
| Nitrogen Ammonia Total (mg/l as N) | 2.21 | 740 | 2,960 | 3,700 |
| Phosphorous Total (mg/l as P) | 1.43 | 479 | 1,918 | 2,397 |
| Phosphorous Ortho (mg/l as P) | 0.22 | 73 | 293 | 366 |
| Sulfate Dissolved (mg/l) | 34.83 | 11,638 | 46,576 | 58,214 |
| Phenols Total Recoverable (ug/l) | 135.79 | 45 | 182 | 227 |
| Oil and Grease Total Recoverable (mg/l) | 3.02 | 1,008 | 4 | 1,012 |
| Organic Carbon, Total (mg/l) | 30.77 | 10,282 | 41,149 | 51,432 |
| Arsenic Total (ug/l as As) | 3.77 | 1 | 5 | 6 |
| Beryllium Total Recoverable (ug/l as Be) | 0.46 | 0 | 1 | 1 |
| Cadmium Total Recoverable (ug/l as Cd) | 2.42 | 1 | 3 | 4 |
| Chromium Total Recoverable (ug/l as Cr) | 17.14 | 6 | 23 | 29 |
| Copper, Total Recoverable, (ug/l as Cu) | 234.86 | 78 | 314 | 393 |
| Lead, Total Recoverable, (ug/l as Pb) | 31.83 | 11 | 43 | 53 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.25 | 0 | 0 | 0 |
| Nickel, Total Recoverable, (ug/l as Ni) | 10.57 | 4 | 14 | 18 |
| Selenium, Total, (ug/l as Se) | 4.43 | 1 | 6 | 7 |
| Silver, Total Recoverable, (ug/l as Ag) | 49.09 | 16 | 66 | 82 |
| Zinc, Total Recoverable, (ug/l as Zn) | 208.31 | 70 | 279 | 348 |

Table 4-4: Grand Canal Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|---|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| TOTAL AREA: 313.5 acres Residential: 27.90% Industrial: 22.95% Undeveloped: 6.79% Commercial: 42.35% Total summer (Apr-Sept) Runoff, cubic feet: 895,062 Total Winter (Oct-Mar) Runoff, cubic feet: 2,569,694 | | | | |
| BOD5 (mg/l) | 105.96 | 5,916 | 16,985 | 22,902 |
| COD High Level (mg/l) | 193.14 | 10,784 | 30,962 | 41,746 |
| Chloride (mg/l as Cl) | 14.20 | 793 | 2,277 | 3,070 |
| Cyanide Total (mg/l as Cn) | 0.02 | 1 | 3 | 4 |
| Fecal Coliform (CFU/100mL) | 9,099.39 | | | |
| Fecal Streptococci (CFU/100mL) | 27,035.85 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 200.04 | 11,170 | 32,068 | 43,237 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 343.50 | 19,180 | 55,065 | 74,245 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.44 | 80 | 230 | 310 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 10.96 | 612 | 1,757 | 2,369 |
| Nitrogen Nitrate Total (mg/l as N) | 1.36 | 76 | 217 | 293 |
| Nitrogen Nitrite Total (mg/l as N) | 0.10 | 5 | 15 | 21 |
| Nitrogen Ammonia Total (mg/l as N) | 5.89 | 329 | 945 | 1,273 |
| Phosphorous Total (mg/l as P) | 0.93 | 52 | 150 | 202 |
| Phosphorous Ortho (mg/l as P) | 0.24 | 13 | 39 | 52 |
| Sulfate Dissolved (mg/l) | 24.13 | 1,347 | 3,868 | 5,215 |
| Phenols Total Recoverable (ug/l) | 53.84 | 3 | 9 | 12 |
| Oil and Grease Total Recoverable (mg/l) | 12.18 | 680 | 2 | 682 |
| Organic Carbon, Total (mg/l) | 75.30 | 4,205 | 12,072 | 16,276 |
| Arsenic Total (ug/l as As) | 6.18 | 0 | 1 | 1 |
| Beryllium Total Recoverable (ug/l as Be) | 2.88 | 0 | 0 | 1 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.35 | 0 | 0 | 0 |
| Chromium Total Recoverable (ug/l as Cr) | 13.56 | 1 | 2 | 3 |
| Copper, Total Recoverable, (ug/l as Cu) | 91.29 | 5 | 15 | 20 |
| Lead, Total Recoverable, (ug/l as Pb) | 75.28 | 4 | 12 | 16 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.11 | 0 | 0 | 0 |
| Nickel, Total Recoverable, (ug/l as Ni) | 18.67 | 1 | 3 | 4 |
| Selenium, Total, (ug/l as Se) | 1.70 | 0 | 0 | 0 |
| Silver, Total Recoverable, (ug/l as Ag) | 15.63 | 1 | 3 | 3 |
| Zinc, Total Recoverable, (ug/l as Zn) | 256.06 | 14 | 41 | 55 |

Table 4-5: Indian Bend Wash Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| TOTAL AREA: 6985.37 acres Residential: 73.55% Industrial: 0.00% Undeveloped: 13.24% Commercial: 13.20% Total summer (Apr-Sept) Runoff, cubic feet: 15,924,107 Total Winter (Oct-Mar) Runoff, cubic feet: 52,308,787 | | | | |
| BOD5 (mg/l) | 37.28 | 37,032 | 121,647 | 158,679 |
| COD High Level (mg/l) | 235.92 | 234,366 | 769,865 | 1,004,232 |
| Chloride (mg/l as Cl) | 10.77 | 10,703 | 35,159 | 45,863 |
| Cyanide Total (mg/l as Cn) | 0.01 | 5 | 17 | 22 |
| Fecal Coliform (CFU/100mL) | 14,668.13 | | | |
| Fecal Streptococci (CFU/100mL) | 46,026.23 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 109.64 | 108,920 | 357,791 | 466,711 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 498.23 | 494,939 | 1,625,814 | 2,120,753 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.32 | 1,315 | 4,321 | 5,636 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 2.06 | 2,045 | 6,718 | 8,764 |
| Nitrogen Nitrate Total (mg/l as N) | 1.32 | 1,310 | 4,305 | 5,615 |
| Nitrogen Nitrite Total (mg/l as N) | 0.05 | 47 | 153 | 200 |
| Nitrogen Ammonia Total (mg/l as N) | 1.92 | 1,911 | 6,277 | 8,188 |
| Phosphorous Total (mg/l as P) | 1.11 | 1,103 | 3,623 | 4,725 |
| Phosphorous Ortho (mg/l as P) | 0.25 | 245 | 806 | 1,051 |
| Sulfate Dissolved (mg/l) | 30.27 | 30,074 | 98,790 | 128,864 |
| Phenols Total Recoverable (ug/l) | 117.33 | 117 | 383 | 499 |
| Oil and Grease Total Recoverable (mg/l) | 5.79 | 5,753 | 19 | 5,772 |
| Organic Carbon, Total (mg/l) | 32.57 | 32,356 | 106,286 | 138,643 |
| Arsenic Total (ug/l as As) | 4.94 | 5 | 16 | 21 |
| Beryllium Total Recoverable (ug/l as Be) | 0.64 | 1 | 2 | 3 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.26 | 1 | 4 | 5 |
| Chromium Total Recoverable (ug/l as Cr) | 18.92 | 19 | 62 | 81 |
| Copper, Total Recoverable, (ug/l as Cu) | 107.41 | 107 | 351 | 457 |
| Lead, Total Recoverable, (ug/l as Pb) | 26.70 | 27 | 87 | 114 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.21 | 0 | 1 | 1 |
| Nickel, Total Recoverable, (ug/l as Ni) | 13.87 | 14 | 45 | 59 |
| Selenium, Total, (ug/l as Se) | 3.41 | 3 | 11 | 15 |
| Silver, Total Recoverable, (ug/l as Ag) | 36.09 | 36 | 118 | 154 |
| Zinc, Total Recoverable, (ug/l as Zn) | 190.19 | 189 | 621 | 810 |

Table 4-6: Old Cross Cut Canal Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| TOTAL AREA: <u>1683.13</u> acres Residential: <u>64.39%</u> Industrial: <u>5.71%</u> Undeveloped: <u>15.88%</u> Commercial: <u>14.01%</u> Total summer (Apr-Sept) Runoff, cubic feet: <u>3,335,291</u> Total Winter (Oct-Mar) Runoff, cubic feet: <u>9,311,775</u> | | | | |
| BOD5 (mg/l) | 53.29 | 11,088 | 30,957 | 42,045 |
| COD High Level (mg/l) | 236.32 | 49,171 | 137,279 | 186,450 |
| Chloride (mg/l as Cl) | 11.68 | 2,430 | 6,785 | 9,215 |
| Cyanide Total (mg/l as Cn) | 0.01 | 1 | 4 | 5 |
| Fecal Coliform (CFU/100mL) | 17,652.33 | | | |
| Fecal Streptococci (CFU/100mL) | 54,179.11 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 128.40 | 26,715 | 74,586 | 101,301 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 467.39 | 97,247 | 271,504 | 368,751 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.33 | 277 | 774 | 1,051 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 4.11 | 855 | 2,387 | 3,242 |
| Nitrogen Nitrate Total (mg/l as N) | 1.31 | 273 | 762 | 1,035 |
| Nitrogen Nitrite Total (mg/l as N) | 0.06 | 12 | 34 | 46 |
| Nitrogen Ammonia Total (mg/l as N) | 2.84 | 592 | 1,652 | 2,244 |
| Phosphorous Total (mg/l as P) | 1.16 | 242 | 676 | 919 |
| Phosphorous Ortho (mg/l as P) | 0.25 | 51 | 144 | 195 |
| Sulfate Dissolved (mg/l) | 30.97 | 6,444 | 17,990 | 24,434 |
| Phenols Total Recoverable (ug/l) | 113.09 | 24 | 66 | 89 |
| Oil and Grease Total Recoverable (mg/l) | 6.17 | 1,283 | 4 | 1,286 |
| Organic Carbon, Total (mg/l) | 41.84 | 8,705 | 24,304 | 33,010 |
| Arsenic Total (ug/l as As) | 5.24 | 1 | 3 | 4 |
| Beryllium Total Recoverable (ug/l as Be) | 0.94 | 0 | 1 | 1 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.49 | 0 | 1 | 1 |
| Chromium Total Recoverable (ug/l as Cr) | 18.53 | 4 | 11 | 15 |
| Copper, Total Recoverable, (ug/l as Cu) | 127.36 | 26 | 74 | 100 |
| Lead, Total Recoverable, (ug/l as Pb) | 39.11 | 8 | 23 | 31 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.21 | 0 | 0 | 0 |
| Nickel, Total Recoverable, (ug/l as Ni) | 14.87 | 3 | 9 | 12 |
| Selenium, Total, (ug/l as Se) | 3.38 | 1 | 2 | 3 |
| Silver, Total Recoverable, (ug/l as Ag) | 35.69 | 7 | 21 | 28 |
| Zinc, Total Recoverable, (ug/l as Zn) | 210.84 | 44 | 122 | 166 |

Table 4-7: Arizona Canal Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| TOTAL AREA: <u>10640.67</u> acres Residential: <u>63.28%</u> Industrial : <u>4.82%</u> Undeveloped: <u>15.79%</u> Commercial: <u>16.11%</u> Total summer (Apr-Sept) Runoff, cubic feet: <u>18,709,013</u> Total Winter (Oct-Mar) Runoff, cubic feet: <u>77,635,717</u> | | | | |
| BOD5 (mg/l) | 50.37 | 58,786 | 243,939 | 302,725 |
| COD High Level (mg/l) | 233.51 | 272,538 | 1,130,935 | 1,403,472 |
| Chloride (mg/l as Cl) | 11.27 | 13,157 | 54,596 | 67,753 |
| Cyanide Total (mg/l as Cn) | 0.01 | 8 | 32 | 40 |
| Fecal Coliform (CFU/100mL) | 17,492.30 | | | |
| Fecal Streptococci (CFU/100mL) | 53,664.57 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 124.44 | 145,240 | 602,694 | 747,935 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 457.84 | 534,358 | 2,217,393 | 2,751,750 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.31 | 1,527 | 6,338 | 7,866 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 3.81 | 4,444 | 18,439 | 22,883 |
| Nitrogen Nitrate Total (mg/l as N) | 1.29 | 1,505 | 6,243 | 7,748 |
| Nitrogen Nitrite Total (mg/l as N) | 0.06 | 65 | 270 | 335 |
| Nitrogen Ammonia Total (mg/l as N) | 2.68 | 3,132 | 12,995 | 16,127 |
| Phosphorous Total (mg/l as P) | 1.15 | 1,340 | 5,561 | 6,902 |
| Phosphorous Ortho (mg/l as P) | 0.25 | 287 | 1,190 | 1,477 |
| Sulfate Dissolved (mg/l) | 30.49 | 35,583 | 147,656 | 183,238 |
| Phenols Total Recoverable (ug/l) | 111.67 | 130 | 541 | 671 |
| Oil and Grease Total Recoverable (mg/l) | 6.45 | 7,530 | 31 | 7,561 |
| Organic Carbon, Total (mg/l) | 40.19 | 46,904 | 194,636 | 241,540 |
| Arsenic Total (ug/l as As) | 5.09 | 6 | 25 | 31 |
| Beryllium Total Recoverable (ug/l as Be) | 0.98 | 1 | 5 | 6 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.47 | 2 | 7 | 9 |
| Chromium Total Recoverable (ug/l as Cr) | 18.15 | 21 | 88 | 109 |
| Copper, Total Recoverable, (ug/l as Cu) | 125.37 | 146 | 607 | 754 |
| Lead, Total Recoverable, (ug/l as Pb) | 36.44 | 43 | 176 | 219 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.21 | 0 | 1 | 1 |
| Nickel, Total Recoverable, (ug/l as Ni) | 14.47 | 17 | 70 | 87 |
| Selenium, Total, (ug/l as Se) | 3.34 | 4 | 16 | 20 |
| Silver, Total Recoverable, (ug/l as Ag) | 35.26 | 41 | 171 | 212 |
| Zinc, Total Recoverable, (ug/l as Zn) | 207.27 | 242 | 1,004 | 1,246 |

Table 4-8: Cave Creek Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| BOD5 (mg/l) | 54.21 | 28,168 | 106,789 | 134,957 |
| COD High Level (mg/l) | 232.45 | 120,792 | 457,936 | 578,728 |
| Chloride (mg/l as Cl) | 10.84 | 5,633 | 21,357 | 26,991 |
| Cyanide Total (mg/l as Cn) | 0.01 | 4 | 15 | 19 |
| Fecal Coliform (CFU/100mL) | 22,257.53 | | | |
| Fecal Streptococci (CFU/100mL) | 67,049.98 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 125.76 | 65,352 | 247,759 | 313,111 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 408.76 | 212,407 | 805,261 | 1,017,667 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.23 | 640 | 2,427 | 3,067 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 4.50 | 2,337 | 8,860 | 11,198 |
| Nitrogen Nitrate Total (mg/l as N) | 1.21 | 627 | 2,375 | 3,002 |
| Nitrogen Nitrite Total (mg/l as N) | 0.06 | 30 | 113 | 142 |
| Nitrogen Ammonia Total (mg/l as N) | 2.92 | 1,518 | 5,755 | 7,273 |
| Phosphorous Total (mg/l as P) | 1.21 | 628 | 2,380 | 3,007 |
| Phosphorous Ortho (mg/l as P) | 0.24 | 126 | 478 | 604 |
| Sulfate Dissolved (mg/l) | 31.04 | 16,128 | 61,142 | 77,270 |
| Phenols Total Recoverable (ug/l) | 111.26 | 58 | 219 | 277 |
| Oil and Grease Total Recoverable (mg/l) | 6.84 | 3,552 | 13 | 3,566 |
| Organic Carbon, Total (mg/l) | 42.05 | 21,853 | 82,848 | 104,702 |
| Arsenic Total (ug/l as As) | 4.86 | 3 | 10 | 12 |
| Beryllium Total Recoverable (ug/l as Be) | 1.18 | 1 | 2 | 3 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.72 | 1 | 3 | 4 |
| Chromium Total Recoverable (ug/l as Cr) | 17.30 | 9 | 34 | 43 |
| Copper, Total Recoverable, (ug/l as Cu) | 151.15 | 79 | 298 | 376 |
| Lead, Total Recoverable, (ug/l as Pb) | 38.95 | 20 | 77 | 97 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.21 | 0 | 0 | 1 |
| Nickel, Total Recoverable, (ug/l as Ni) | 13.99 | 7 | 28 | 35 |
| Selenium, Total, (ug/l as Se) | 3.44 | 2 | 7 | 9 |
| Silver, Total Recoverable, (ug/l as Ag) | 36.62 | 19 | 72 | 91 |
| Zinc, Total Recoverable, (ug/l as Zn) | 216.37 | 112 | 426 | 539 |

TOTAL AREA: 4328.31 acres Residential: 53.80% Industrial: 6.89% Undeveloped: 20.40% Commercial: 18.91%
 Total summer (Apr-Sept) Runoff, cubic feet: 8,329,820 Total Winter (Oct-Mar) Runoff, cubic feet: 31,579,414

Table 4-9: Skunk Creek Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| TOTAL AREA: 2742.7 acres Residential: 45.95% Industrial: 12.39% Undeveloped: 32.66% Commercial: 9.00% Total summer (Apr-Sept) Runoff, cubic feet: 3,416,591 Total Winter (Oct-Mar) Runoff, cubic feet: 16,278,732 | | | | |
| BOD5 (mg/l) | 66.65 | 14,205 | 67,682 | 81,887 |
| COD High Level (mg/l) | 252.72 | 53,863 | 256,638 | 310,501 |
| Chloride (mg/l as Cl) | 11.43 | 2,436 | 11,605 | 14,041 |
| Cyanide Total (mg/l as Cn) | 0.01 | 1 | 6 | 7 |
| Fecal Coliform (CFU/100mL) | 35,096.23 | | | |
| Fecal Streptococci (CFU/100mL) | 104,053.73 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 134.13 | 28,588 | 136,212 | 164,800 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 374.15 | 79,744 | 379,952 | 459,696 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.16 | 248 | 1,182 | 1,431 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 6.14 | 1,309 | 6,235 | 7,544 |
| Nitrogen Nitrate Total (mg/l as N) | 1.13 | 240 | 1,143 | 1,383 |
| Nitrogen Nitrite Total (mg/l as N) | 0.06 | 14 | 66 | 80 |
| Nitrogen Ammonia Total (mg/l as N) | 3.64 | 775 | 3,694 | 4,469 |
| Phosphorous Total (mg/l as P) | 1.46 | 312 | 1,485 | 1,796 |
| Phosphorous Ortho (mg/l as P) | 0.25 | 52 | 249 | 302 |
| Sulfate Dissolved (mg/l) | 35.98 | 7,670 | 36,543 | 44,213 |
| Phenols Total Recoverable (ug/l) | 129.18 | 28 | 131 | 159 |
| Oil and Grease Total Recoverable (mg/l) | 5.07 | 1,080 | 5 | 1,085 |
| Organic Carbon, Total (mg/l) | 47.70 | 10,166 | 48,439 | 58,606 |
| Arsenic Total (ug/l as As) | 4.96 | 1 | 5 | 6 |
| Beryllium Total Recoverable (ug/l as Be) | 1.05 | 0 | 1 | 1 |
| Cadmium Total Recoverable (ug/l as Cd) | 2.41 | 1 | 2 | 3 |
| Chromium Total Recoverable (ug/l as Cr) | 18.31 | 4 | 19 | 22 |
| Copper, Total Recoverable, (ug/l as Cu) | 224.16 | 48 | 228 | 275 |
| Lead, Total Recoverable, (ug/l as Pb) | 50.51 | 11 | 51 | 62 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.24 | 0 | 0 | 0 |
| Nickel, Total Recoverable, (ug/l as Ni) | 14.17 | 3 | 14 | 17 |
| Selenium, Total, (ug/l as Se) | 4.19 | 1 | 4 | 5 |
| Silver, Total Recoverable, (ug/l as Ag) | 45.71 | 10 | 46 | 56 |
| Zinc, Total Recoverable, (ug/l as Zn) | 244.97 | 52 | 249 | 301 |

Table 4-10: Papago Diversion Channel Basin Pollutant Loadings

| Constituent | Land Use weighted concentrations | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|----------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| BOD5 (mg/l) | 60.27 | 162,089 | 533,409 | 695,498 |
| COD High Level (mg/l) | 241.05 | 648,325 | 2,133,531 | 2,781,855 |
| Chloride (mg/l as Cl) | 12.68 | 34,114 | 112,262 | 146,376 |
| Cyanide Total (mg/l as Cn) | 0.01 | 15 | 49 | 64 |
| Fecal Coliform (CFU/100mL) | 16,835.31 | | | |
| Fecal Streptococci (CFU/100mL) | 51,923.34 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 138.57 | 372,705 | 1,226,511 | 1,599,216 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 492.56 | 1,324,767 | 4,359,592 | 5,684,359 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.40 | 3,765 | 12,391 | 16,156 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 4.82 | 12,957 | 42,640 | 55,598 |
| Nitrogen Nitrate Total (mg/l as N) | 1.37 | 3,696 | 12,163 | 15,859 |
| Nitrogen Nitrite Total (mg/l as N) | 0.06 | 173 | 569 | 741 |
| Nitrogen Ammonia Total (mg/l as N) | 3.23 | 8,684 | 28,578 | 37,262 |
| Phosphorous Total (mg/l as P) | 1.18 | 3,171 | 10,436 | 13,607 |
| Phosphorous Ortho (mg/l as P) | 0.25 | 675 | 2,223 | 2,898 |
| Sulfate Dissolved (mg/l) | 31.66 | 85,155 | 280,231 | 365,386 |
| Phenols Total Recoverable (ug/l) | 114.30 | 307 | 1,012 | 1,319 |
| Oil and Grease Total Recoverable (mg/l) | 5.69 | 15,301 | 50 | 15,351 |
| Organic Carbon, Total (mg/l) | 45.95 | 123,592 | 406,722 | 530,315 |
| Arsenic Total (ug/l as As) | 5.63 | 15 | 50 | 65 |
| Beryllium Total Recoverable (ug/l as Be) | 0.89 | 2 | 8 | 10 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.49 | 4 | 13 | 17 |
| Chromium Total Recoverable (ug/l as Cr) | 19.32 | 52 | 171 | 223 |
| Copper, Total Recoverable, (ug/l as Cu) | 125.57 | 338 | 1,111 | 1,449 |
| Lead, Total Recoverable, (ug/l as Pb) | 45.29 | 122 | 401 | 523 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.21 | 1 | 2 | 2 |
| Nickel, Total Recoverable, (ug/l as Ni) | 15.89 | 43 | 141 | 183 |
| Selenium, Total, (ug/l as Se) | 3.38 | 9 | 30 | 39 |
| Silver, Total Recoverable, (ug/l as Ag) | 35.73 | 96 | 316 | 412 |
| Zinc, Total Recoverable, (ug/l as Zn) | 217.96 | 586 | 1,929 | 2,515 |

TOTAL AREA: 20605.56 acres Residential: 67.34% Industrial: 7.70% Undeveloped: 14.93% Commercial: 10.02%
 Total summer (Apr-Sept) Runoff, cubic feet: 43,113,547 Total Winter (Oct-Mar) Runoff, cubic feet: 141,879,680

Table 4-11: Salt River Basin Pollutant Loadings

| Constituent | weighted | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|--|-----------|--------------------------------|--------------------------------|--------------------------------------|
| BOD5 (mg/l) | 88.12 | 786,820 | 2,403,303 | 3,190,123 |
| COD High Level (mg/l) | 234.76 | 2,096,127 | 6,402,515 | 8,498,642 |
| Chloride (mg/l as Cl) | 14.26 | 127,367 | 389,037 | 516,405 |
| Cyanide Total (mg/l as Cn) | 0.01 | 75 | 228 | 303 |
| Fecal Coliform (CFU/100mL) | 18,589.83 | | | |
| Fecal Streptococci (CFU/100mL) | 56,066.64 | | | |
| Solids Residue at 180 Deg. C (TDS) (mg/l) | 173.19 | 1,546,330 | 4,723,188 | 6,269,519 |
| Residue, Total at 105 Deg. C (TSS) (mg/l) | 440.38 | 3,932,006 | 12,010,117 | 15,942,123 |
| Nitrogen No2 + No3, Total (mg/l as N) | 1.44 | 12,828 | 39,183 | 52,011 |
| Nitrogen, Ammonia + Organic, Total (mg/l as N) | 8.38 | 74,800 | 228,473 | 303,273 |
| Nitrogen Nitrate Total (mg/l as N) | 1.38 | 12,338 | 37,687 | 50,026 |
| Nitrogen Nitrite Total (mg/l as N) | 0.08 | 751 | 2,295 | 3,047 |
| Nitrogen Ammonia Total (mg/l as N) | 4.83 | 43,142 | 131,775 | 174,917 |
| Phosphorous Total (mg/l as P) | 1.20 | 10,732 | 32,781 | 43,514 |
| Phosphorous Ortho (mg/l as P) | 0.25 | 2,241 | 6,845 | 9,086 |
| Sulfate Dissolved (mg/l) | 31.36 | 280,023 | 855,316 | 1,135,339 |
| Phenols Total Recoverable (ug/l) | 99.59 | 889 | 2,716 | 3,605 |
| Oil and Grease Total Recoverable (mg/l) | 7.07 | 63,157 | 193 | 63,350 |
| Organic Carbon, Total (mg/l) | 62.60 | 558,921 | 1,707,196 | 2,266,118 |
| Arsenic Total (ug/l as As) | 6.17 | 55 | 168 | 223 |
| Beryllium Total Recoverable (ug/l as Be) | 1.55 | 14 | 42 | 56 |
| Cadmium Total Recoverable (ug/l as Cd) | 1.72 | 15 | 47 | 62 |
| Chromium Total Recoverable (ug/l as Cr) | 18.14 | 162 | 495 | 657 |
| Copper, Total Recoverable, (ug/l as Cu) | 141.42 | 1,263 | 3,857 | 5,120 |
| Lead, Total Recoverable, (ug/l as Pb) | 66.20 | 591 | 1,805 | 2,396 |
| Mercury, Total Recoverable, (ug/l as Hg) | 0.19 | 2 | 5 | 7 |
| Nickel, Total Recoverable, (ug/l as Ni) | 17.80 | 159 | 486 | 645 |
| Selenium, Total, (ug/l as Se) | 3.06 | 27 | 83 | 111 |
| Silver, Total Recoverable, (ug/l as Ag) | 31.86 | 284 | 869 | 1,153 |
| Zinc, Total Recoverable, (ug/l as Zn) | 249.75 | 2,230 | 6,811 | 9,041 |

TOTAL AREA: 72349.39 acres Residential: 51.27% Industrial: 17.30% Undeveloped: 16.19% Commercial: 15.24%
 Total summer (Apr-Sept) Runoff, cubic feet: 143,127,149 Total Winter (Oct-Mar) Runoff, cubic feet: 437,174,732

Table 4-12: City of Phoenix Total Pollutant Loadings (all basins)

| Constituent | Summer Pollutant Load (pounds) | Winter Pollutant Load (pounds) | Total Annual Pollutant Load (pounds) |
|------------------------------------|--------------------------------|--------------------------------|--------------------------------------|
| BOD5 | 1,120,143 | 3,588,249 | 4,708,391 |
| COD High Level | 3,570,526 | 11,656,737 | 15,227,263 |
| Chloride | 199,866 | 645,911 | 845,778 |
| Cyanide Total | 111 | 358 | 469 |
| Fecal Coliform | | | |
| Fecal Streptococci | | | |
| Solids Residue at 180 Deg. C (TDS) | 2,340,058 | 7,539,787 | 9,879,846 |
| Residue, Total at 105 Deg. C (TSS) | 6,815,917 | 22,206,786 | 29,022,703 |
| Nitrogen No2 + No3, Total | 21,025 | 68,210 | 89,235 |
| Nitrogen, Ammonia + Organic, Total | 100,687 | 320,766 | 421,454 |
| Nitrogen Nitrate Total | 20,400 | 66,230 | 86,630 |
| Nitrogen Nitrite Total | 1,114 | 3,581 | 4,695 |
| Nitrogen Ammonia Total | 60,945 | 195,087 | 256,032 |
| Phosphorous Total | 18,080 | 59,085 | 77,165 |
| Phosphorous Ortho | 3,770 | 12,286 | 16,057 |
| Sulfate Dissolved | 474,644 | 1,550,276 | 2,024,921 |
| Phenols Total Recoverable | 1,602 | 5,264 | 6,866 |
| Oil and Grease Total Recoverable | 99,487 | 322 | 99,809 |
| Organic Carbon, Total | 818,552 | 2,629,470 | 3,448,022 |
| Arsenic Total | 88 | 283 | 371 |
| Beryllium Total Recoverable | 19 | 62 | 82 |
| Cadmium Total Recoverable | 25 | 81 | 106 |
| Chromium Total Recoverable | 278 | 905 | 1,183 |
| Copper, Total Recoverable | 2,091 | 6,859 | 8,950 |
| Lead, Total Recoverable | 838 | 2,682 | 3,519 |
| Mercury, Total Recoverable | 3 | 10 | 13 |
| Nickel, Total Recoverable | 251 | 811 | 1,062 |
| Selenium, Total | 49 | 160 | 209 |
| Silver, Total Recoverable | 511 | 1,683 | 2,194 |
| Zinc, Total Recoverable | 3,545 | 11,501 | 15,046 |