BASELINE DATA REPORT

Section 8.0

Surface Water

MAY 2013

Replacement Section

Submitted To:

New Mexico Mining and Minerals Division
&
U.S. Forest Service (Cibola National Forest)
&
New Mexico Environment Department

Prepared by:

Roca Honda Resources, LLC
4001 Office Court, Suite 102, Santa Fe, NM 87507

Contents

Figures

Tables

Appendices

8.0 Surface Water

NMAC 19.10.6.602 D.13 (g)

Baseline data shall include, as applicable:

(g) Surface water information shall include the following:

- ***(i) A map indicating the location of surface waters and the location and size of watersheds in and adjacent to the proposed permit area. The map shall depict all watercourses, lakes, reservoirs, springs, and riparian and wetland areas. Streams shall be classified as ephemeral, intermittent, or perennial. The map shall identify all watercourses, lakes, springs, and riparian and wetland areas into which surface or pit drainage will be discharged or may possibly be expected to reach.***
- ***(ii) A description of surface drainage systems sufficient to identify the seasonal variations in surface water quantity and quality within the proposed permit and affected areas to the extent possible.***

- ***(v) A determination of the probable hydrologic consequences of the operation and reclamation, on both the permit and affected areas, with respect to the hydrologic regime, quantity and quality of surface and ground water systems that may be affected by the proposed operations, including the dissolved and suspended solids under seasonal flow conditions.***

8.1 Introduction

The RHR permit area lies within the middle portion of the watershed of San Mateo Creek, a small stream system that is tributary to the Rio San Jose, the Rio Puerco, and ultimately the Rio Grande (Figure 8-1). Because the stream is perennial only in its headwaters, and that flow is completely diverted for irrigation purposes, no permanent gaging station exists on the creek. The limited historical water quality and water quantity data for San Mateo Creek were collected either for the purpose of establishing baseline hydrologic conditions prior to development of the Gulf Mt. Taylor mine, or in response to subsequent mining and dewatering activities. These data include measurements from a stream flow gaging station that measured mine water discharge to San Mateo Creek above its confluence with Arroyo del Puerto (USGS gaging station 08342600), a short period of measurements for Arroyo del Puerto (USGS gaging station 08342700), water quality and quantity data collected in the middle and upper San Mateo Creek watershed by the New Mexico Environmental Institute (NMEI) in 1974, and streamflow gaging records for the Rio San Jose (USGS gaging station 08343000) just below its confluence with San Mateo Creek.

Since 2008, a significant amount of additional information concerning the surface water resources in the vicinity of the RHR permit area has been collected by RHR. RHR performed a Level 1 Stream Survey (SWQB, Hydrologic Protocol, 2011, p. 3.) of San Mateo Creek and classified the reaches of the creek as perennial, intermittent, and ephemeral. RHR has observed the creek for two years, and also collected water samples for chemical analysis from perennial and intermittent water within the stream basin and from stream bed sediments. The available data relevant to surface water are discussed in this section.

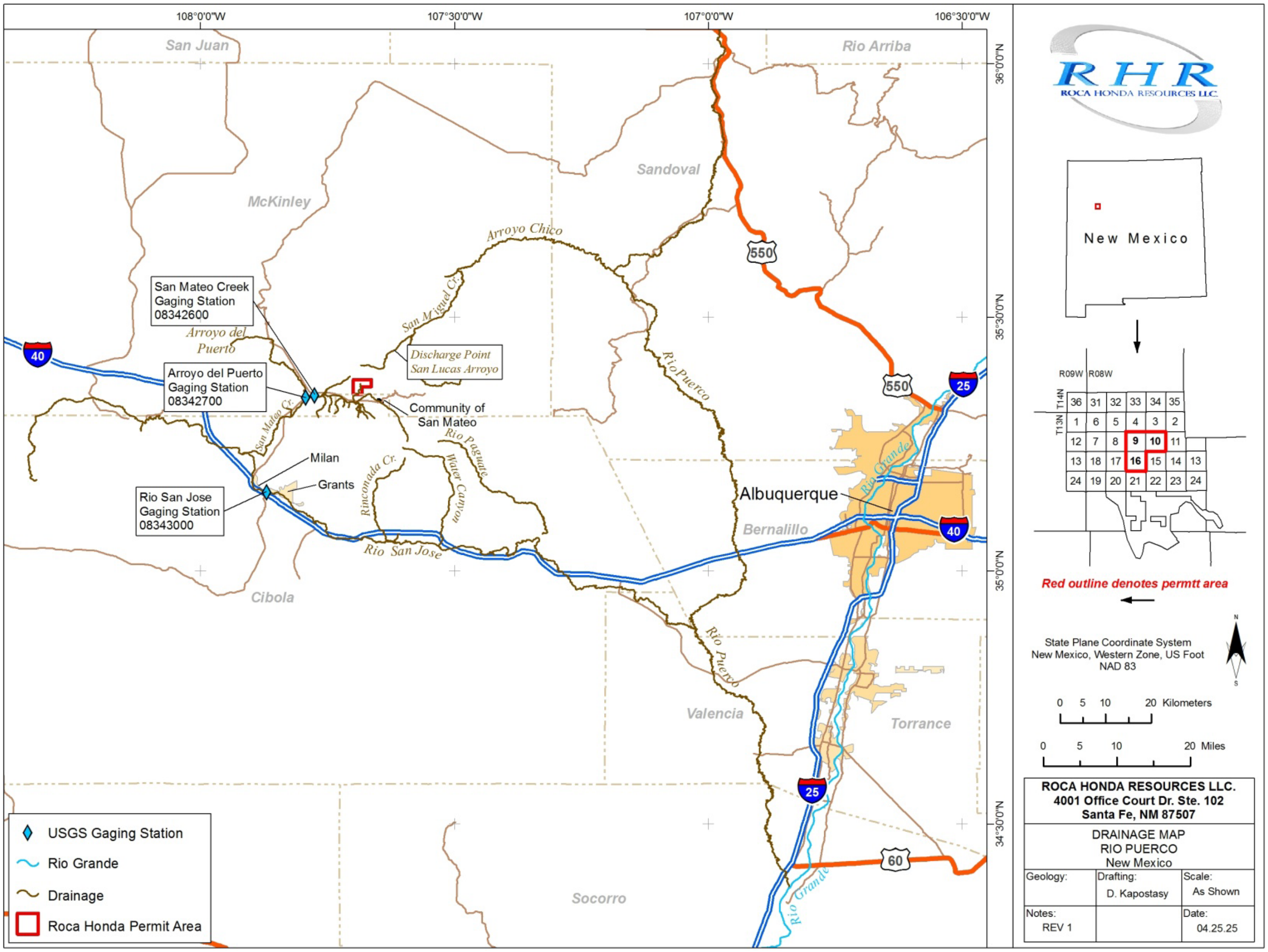

Figure 8-1. RHR Project Location within the Rio Puerco Basin

RHR's mine permit application and Discharge Plan application submitted to NM MMD and NMED, respectively, in 2009 proposed discharge of the treated effluent to San Mateo Creek. In response to agency comments and concerns RHR developed an alternative discharge location to allay those concerns. The discharge will occur on private property in the vicinity of Laguna Polvadera or into San Lucas Arroyo. At that location the water will be used for irrigating pasture land by the local rancher or may simply flow down the San Lucas Arroyo as a permitted discharge. Historical data exists for San Lucas Arroyo which is presented in Section 9, Appendix J of this BDR. RHR will conduct a Hydrology Protocol on the San Lucas Arroyo in accordance with the revised Protocol to determine ephemeral, intermittent, or perennial waters.

8.2 Regional Surface Water and Watersheds

The permit area lies within the middle portion of the San Mateo Creek Watershed. Figure 8-1 and Figure 8-2 identify the location of surface watercourses in and adjacent to the permit area and designate the location and size of the watersheds in and adjacent to the permit area. Watercourses in the vicinity of the RHR permit area are identified as ephemeral, intermittent or perennial in Figure 8-2.

San Mateo Creek is part of the Rio Grande drainage basin as a tributary of the Rio San Jose. The Rio San Jose joins the Rio Puerco west of the city of Las Lunas, and the Rio Puerco confluences with the Rio Grande near the community of Bernardo, south of the city of Belen.

The headwaters of San Mateo Creek are on the north flank of Mt. Taylor. One branch heads in San Mateo Canyon above the community of San Mateo and drains down San Mateo Canyon, while the other drains the San Mateo arch/Jesus mesa area via Marquez and Maruca canyons. Within the San Mateo Canyon branch, springs maintain a small perennial flow that is captured in San Mateo Reservoir, located above the community of San Mateo. Field investigations conducted by RHR during 2009 and 2010 have determined that from San Mateo downstream to a pond on the Lee Ranch, San Mateo Creek is an intermittent stream that has flow when water is being diverted from the reservoir for irrigation purposes and during high rainfall events. The creek is ephemeral downstream of the pond. *See* Appendix 8-A, "San Mateo Creek Level 1 Stream Survey."

During peak runoff from snow melt in the late spring or during heavy summer/fall rain storms, San Mateo Creek may flow west as far as a few miles beyond its confluence with Arroyo del Puerto, but according to previous investigators, flow rarely reached the Rio San Jose even thirty years ago. (Brod, 1979; Stone et al., 1983). Since that time, Homestake Mining Company diverted the channel of San Mateo Creek to the west and southwest around the Homestake Mill Superfund Site and directed it onto one of Homestake's center pivot irrigation areas. Field investigations determined that the channel of San Mateo Creek is presently indistinguishable from the surrounding countryside above its former confluence with the Rio San Jose and the creek may no longer join that stream except during very high flow events.[1]

The Rio San Jose is perennial in its upper reaches in the Zuni Mountains, but becomes ephemeral in the Malpais area of its lower reaches (Stone et al., 1983). It flows only occasionally above

[1] A local farmer who had lived in the area for over 70 years informed RHR field consultants that the lower reaches of San Mateo Creek had been plowed over many years ago.

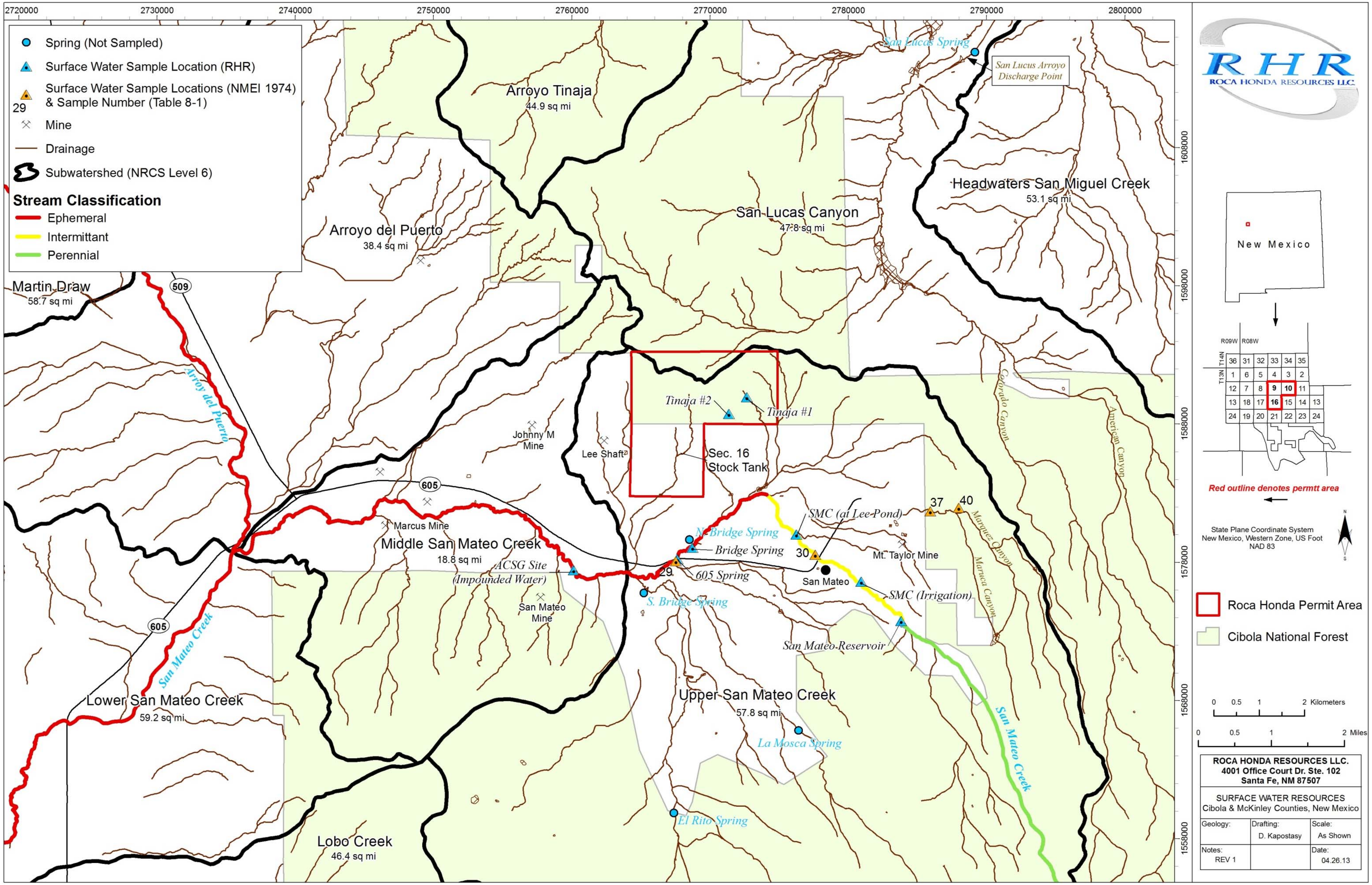

Figure 8-2. Permit Area Watershed and Water Resources

Grants. For years prior to 2003, the City of Grants discharged water from its wastewater treatment plant under Discharge Permit DP-695 into the Rio San Jose, augmenting the flow of the river. Discharge of wastewater into the river ceased in 2003; that treated water is now discharged to ponds on the City golf course.

According to Risser (1982), in pre-development times, the natural stream flow of the Rio San Jose at the western boundary of Acoma Pueblo was composed of water from runoff upstream of the pueblo, Horace Spring, and Ojo del Gallo Spring. Risser found that by 1980, the flow of Ojo del Gallo into the Rio San Jose had ceased, wastewater from the Grants municipal treatment augmented stream flow, and Horace Spring contributed the majority of the natural water entering the pueblo. He estimated that the flow of Horace Spring was about 3,600 acre-feet/year or 4.9 cfs, as calculated from records from 1959. Horace Spring still provides much of the perennial flow of the Rio San Jose. Neither San Mateo Creek nor the Rio San Jose contains Outstanding National Resource Water as defined in NMAC 20.6.4.

Although physically much wider and longer than the other water courses, the Rio Puerco is also an intermittent to ephemeral stream below the point where it is joined by the Rio San Jose, losing most if its water to the underlying alluvium except during periods of precipitation or snowmelt.

A surface water divide to the east and north of the San Mateo Creek watershed separates that watershed from the San Lucas Canyon watershed, which drains north into San Miguel Creek and then into Arroyo Chico, a tributary of the northern branch of the Rio Puerco. The San Lucas Canyon stream system includes the northward trending San Miguel Creek, and American, Colorado, Canones, and San Lucas canyons. These canyons and streams are for the most part ephemeral. After a rain, standing water can persist for a time in low areas of some short reaches. The Arroyo del Puerto watershed lies north of the western part of the San Mateo Creek watershed. Arroyo del Puerto, an ephemeral arroyo, drains into San Mateo Creek below the junction of State Highways 509 and 605.

A number of earthen tanks and reservoirs for watering of livestock or flood control exist outside the permit area. These hold water temporarily after rains. Field investigations conducted by RHR in 2010 found two man-made water impoundments in Canada de las Vacas, north of the permit area within the San Lucas watershed. Wetlands, springs, and perennial or intermittent stream flow were absent in that area. A shallow on-stream reservoir, San Mateo Reservoir, is present on upper San Mateo Creek above the community of San Mateo. The reservoir stores the small perennial flow of San Mateo Creek and runoff from precipitation events for irrigation purposes. Below the reservoir, the creek is intermittent for a few miles and then ephemeral.

Largely because of geologic controls, springs exist in the vicinity of the permit area during at least part of the year, though published reports and field investigations indicate that no springs are present within the permit area. Some springs flow from the volcanics and some at faults or the contact between two geologic formations. Figure 8-2 shows these surface water features. The volume of spring flow probably varies from year to year. Within the San Mateo Creek watershed (Figure 8-2), only the springs above San Mateo Reservoir and Bridge Spring flow perennially within San Lucas Canyon, only San Lucas Spring reportedly has perennial flow, measured at 0.04 cfs in 1973 (NMEI, 1974).

8.2.1 Permit Area Vicinity Surface Drainage Quantitative Characteristics

Data providing seasonal variation trends is available from gaging stations operated in the drainage path of the mine water discharge. Two USGS stream flow gaging stations that operated in the late 1970s and early 1980s provide historical flow data for San Mateo Creek and Arroyo del Puerto (which drains Ambrosia Lake Valley). The gaging stations, designated as San Mateo Creek near San Mateo, NM (Station 08342600) and Arroyo del Puerto near San Mateo, NM (Station 08342700), are approximately 1 mile apart. These locations are shown in Figure 8–1 on page 8-2. The San Mateo gaging station was located about 8 miles west of the community of San Mateo. It recorded daily flow of the creek from a watershed drainage area of 75.6 square miles from May 23, 1977 to October 7, 1982. Mean daily streamflow data for the 5-year operational period are shown on Figure 8-3. Mean monthly flow of San Mateo Creek is shown on Figure 8-4 for the same period. Elevated stream flows, which ranged from 2 to 12 cfs (900 to 5,400 gpm) prior to March 1978, reflect mine dewatering discharge during prior mining activities including the Johnny M mine and discharge during excavation of the Mt. Taylor mine shafts. Sporadic high flows of the creek after that period generally reflect high rainfall episodes during the summer/early fall and spring snowmelt runoff periods.

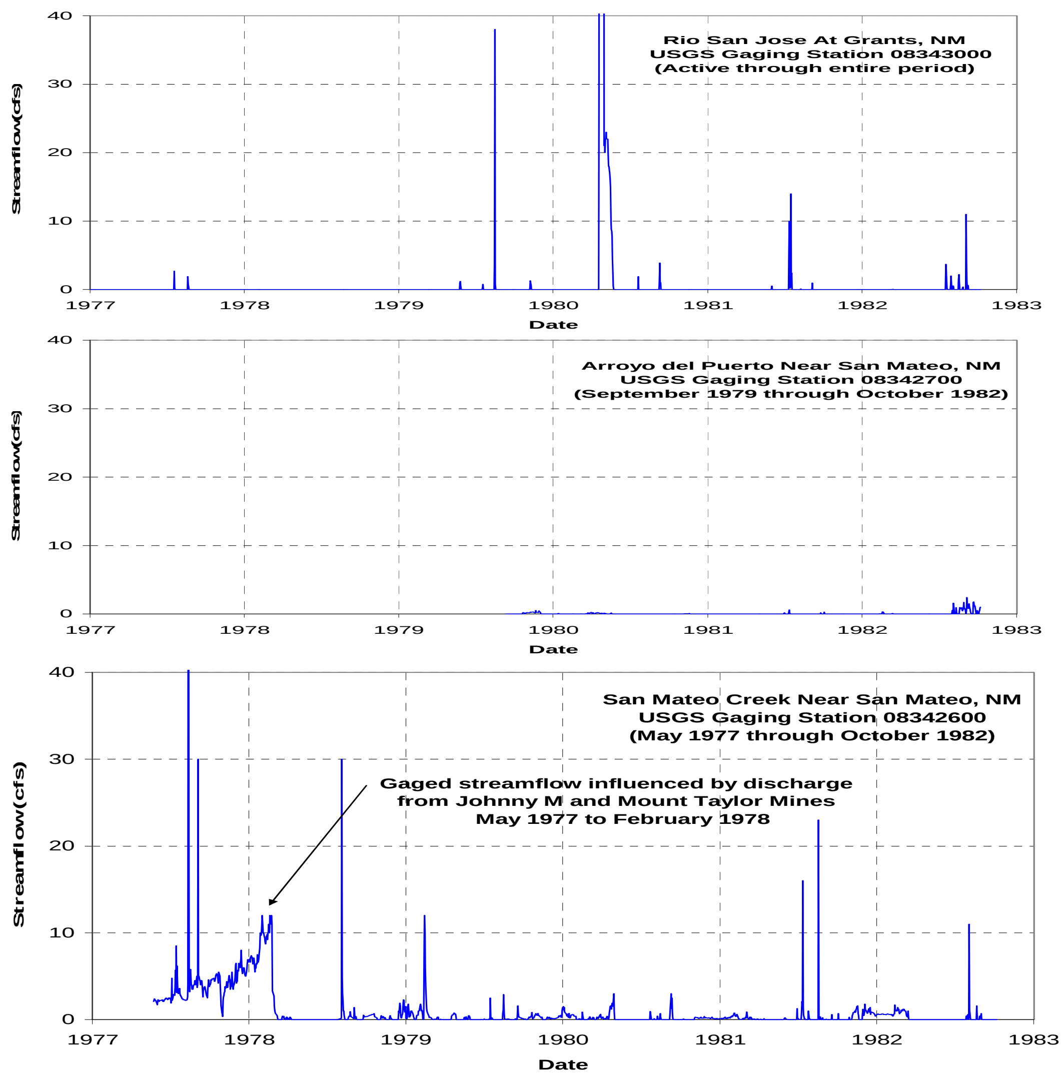

Figure 8-3. Mean Daily Stream Flow for San Mateo Creek, Arroyo del Puerto, and Rio San Jose 1977 through 1982

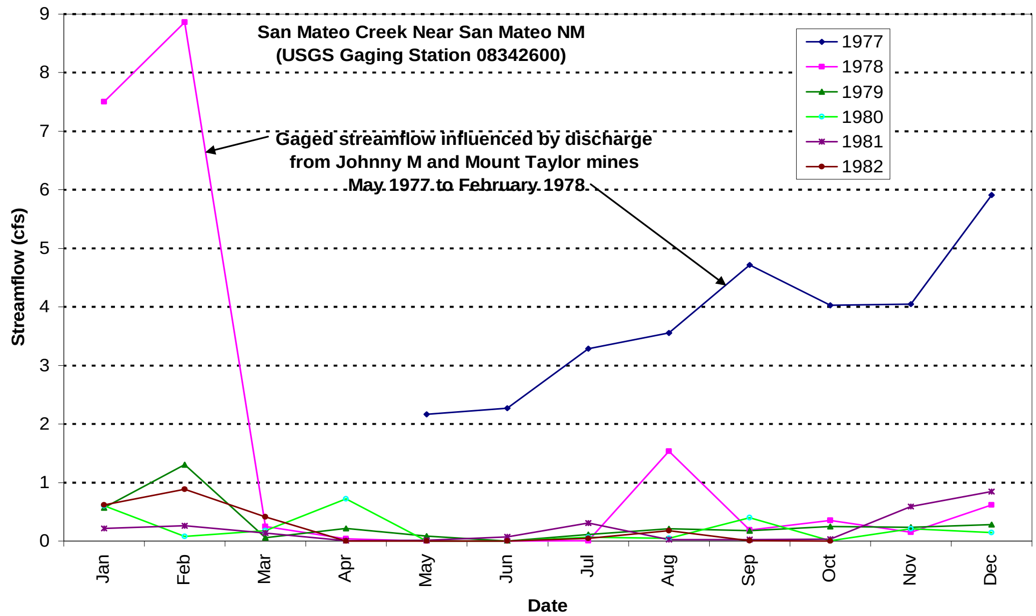

Figure 8-4. Mean Monthly Average Flow of San Mateo Creek

An investigation of the stream flow in San Mateo Creek was conducted in the early 1970s by the New Mexico Environmental Institute (NMEI) as part of the environmental baseline study of the Mt. Taylor area associated with the permitting of the proposed GMRC Mt. Taylor uranium mine by GMRC (NMEI 1974). Field data were collected during 1972 and 1973. Flow measurements were made in tributaries to San Mateo Canyon to determine the location and quantity of groundwater discharge into San Mateo Creek. Mean annual runoff of the creek was also calculated. NMEI concluded that the mean annual runoff of San Mateo Canyon was 1,800 ac-ft/yr, and that of this volume, about 0.5 cfs, or 360 ac-ft/yr, was contributed by spring and groundwater discharge, all of which entered San Mateo Creek in its upper watershed above San Mateo reservoir. The NMEI concluded that the perennial section of San Mateo Creek was limited to the reach above the reservoir (NMEI 1974).

The NMEI study distinguished between the characteristics of upper elevation (higher than 7,950 ft) and lower elevation locations within the watershed. The upper elevations generally contain snowpack for most of the winter and contributed snowmelt to the stream in late April and early May. Lower elevations receive runoff in mid to late March. Observing that three observed rainfall events of variable amounts (0.22 to 0.90 inch) caused stream flows of the same magnitude, the NMEI concluded that floods correlated with rainfall in time but not duration.

The Arroyo del Puerto gaging station was located about 0.1 mile north of the confluence of that drainage with San Mateo Creek. The station operated from mid September 1979 through early October 1982. Average daily streamflow data for this 3-year operational period are shown on Figure 8-3. Although the Arroyo del Puerto drains a large area, historical flows appear to mainly reflect discharge from prior mining activities in the Ambrosia Lake valley. The Arroyo del Puerto is presently ephemeral.

The Rio San Jose is gaged above and below Grants (Stations 08343000 and 08343500 respectively). The Rio San Jose was gaged below its confluence with San Mateo Creek at Grants over the period of October 1912 through September 2008. Mean daily stream flows are plotted for the 6-year period from 1977 through 1982 in Figure 8-3 and for the complete period of record in Figure 8-5. Elevated flow in this drainage generally reflects high rainfall episodes during the summer/early fall period. Mining discharge into San Mateo Creek from May 1977 to February 1978 had no apparent effect on flows in the Rio San Jose. It should also be noted that high peak flows of 30 to 40+ cfs at the San Mateo gaging station during the summers of 1977 and 1978 had little or no expression at the Rio San Jose Station.

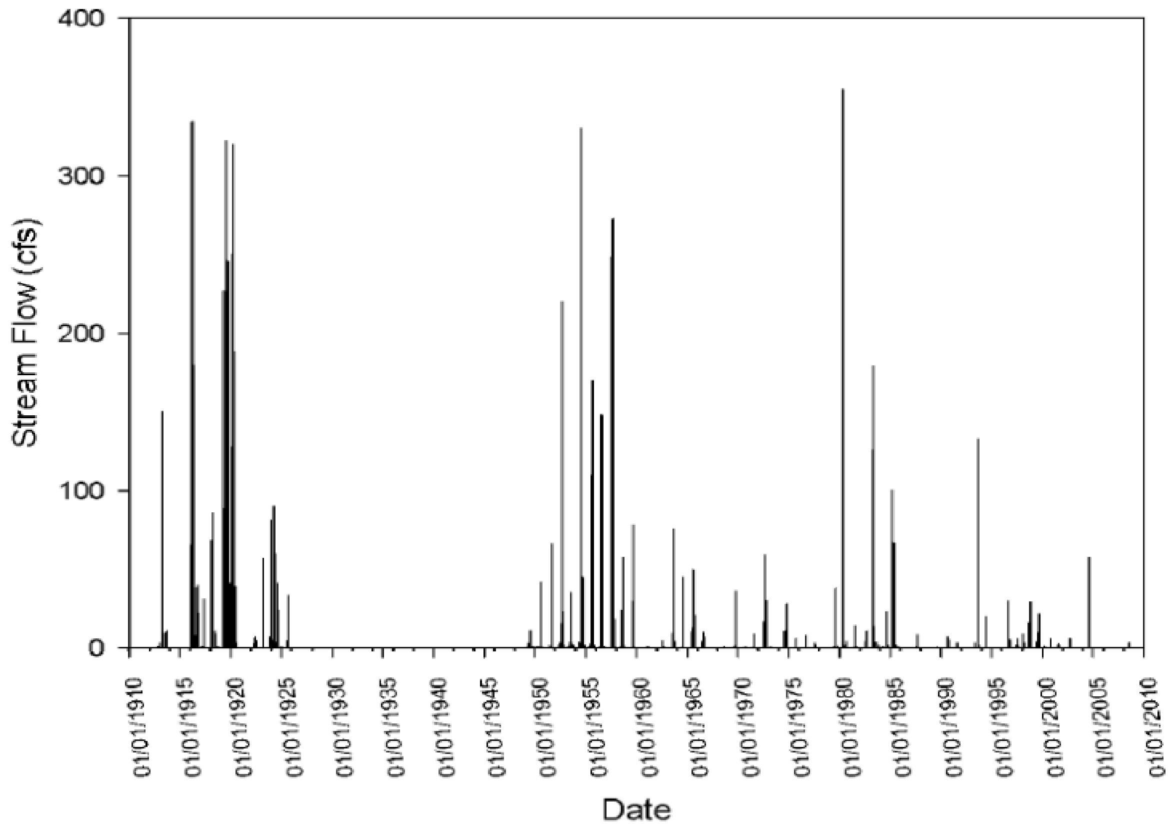

Figure 8-5. Daily Stream Flow from Rio San Jose at Grants (USGS Gaging Station 8343000)

The closest surface water gaging station to the San Lucas Arroyo discharge point is USGS gaging station 08340500, “Arroyo Chico Nr Guadalupe”, located about 35 miles downstream of the discharge point immediately upstream of the confluence of Arroyo Chico and Rio Puerco. The gaging results are shown in Figure 5 of Section 9, Appendix J page 10.

8.2.2 Permit Area Vicinity Stream Drainage Surface Water Quality

The 1974 NMEI baseline study collected data on surface water chemistry in the vicinity of the Roca Honda permit area. Samples were collected from springs and the perennial upper reach of San Mateo Creek, and from ephemeral water sources during rain or spring runoff events. The historical study did not target all of the chemical constituents of interest for licensing purposes, but does provide general information on water quality. Surface water collected from higher elevations tended to be lower in total dissolved solids (TDS), but more acidic and higher in sulfate than water from lower elevations. Water from high elevation springs was of the calcium-sulfate bicarbonate type, and water from low elevation areas was of the calcium-bicarbonate type. Samples from some locations near the community of San Mateo, exhibited high levels of sodium. High levels of suspended solids were associated with high flow rates (NMEI 1974).

NMEI collected surface water samples from upper San Mateo Creek and the Marquez Canyon drainages within the upper San Mateo Creek watershed. Table 8-1 tabulates chemistry data for two locations along San Mateo Creek south of and closest to the permit area (locations 29 and 30 on Figure 8-2 on page 8-4) and two locations (Nos. 37 and 40 on Figure 8-2) in Marquez Canyon. Marquez Canyon is drained by an ephemeral stream that flows as a result of snowmelt or heavy rainfalls during the summer/early fall period. Water flowed only periodically at these locations due to upstream diversion of stream flow for irrigation and loss of water to the streambed alluvium. It was estimated that the drainage in Marquez Canyon had an annual discharge of 7.5 ac-ft/yr (NMEI 1974).

Table 8-1. Range of Constituents from San Mateo Creek and Marquez Canyon Sample (See Figure 8-2 for Sample Locations)

Constituent	San Mateo Creek at State Highway 605 Bridge (Loc. 29)	San Mateo Creek at Marquez Ranch (Loc. 30)	Marquez Canyon (Loc. 37, 2 Samples)	Junction with Maruca Canyon (Loc. 40)
pH	8.62–8.97	8.16–8.45	9.17–9.18	8.46–8.69
Specific conductance (μmhos)	650–1090	187–241	522–526	405–1180
Calcium (mg/L)	24.53–93.76	22.98–88.01	5.98	61.01–102.5
Magnesium (mg/L)	16.12–30.40	4.32–6.21	1.46–2.13	11.38–33.75
Potassium (mg/L)	3.85–204	3.93–5.65	3.63–4.42	9.40–28.93
Sodium (mg/L)	148–281	11.83–19.89	127.1–129.5	67.48–249.0
Chloride (mg/L)	16.7–41.4	2.4–7.0	3.4–3.8	13.3–130
Sulfate (mg/L)	42–250	6–23	2	37–352
Phosphate (mg/L)	0.02–0.38	0.28–0.53	0.07–0.18	0.20–0.39
Nitrate (mg/L)	0.33–1.71	0.20–1.64	0.32–0.33	0.76–1.26
Bicarbonate (mg/L)	369.2–550.8	78.8–134.8	244.2–249.0	288.2–387.2
Alkalinity ($CaCO_3$) (mg/L)	336.8–469.7	64.6–112.5	244.2–246	256.0–350.3
Total dissolved solids (mg/L)	535–2020	180–620	640–896	850–7450

Data from NMEI 1974.

From late 2008 through 2010, RHR conducted field surveys that investigated the presence of surface water in the vicinity of the RHR permit area. The first survey was conducted in the early fall, the time of year when surface water would be likely to be present. Standing water was located in tinajas (seasonal water pockets in bedrock) along the eastern side of Section 10, ponded in San Mateo Creek, seeping from two springs along the creek, in San Mateo reservoir, and flowing in San Mateo Creek above the community of San Mateo. When these locations were revisited during different seasons, surface water was found only in the reservoir, as irrigation releases from the reservoir, and at Bridge spring. Appendix 8-B presents the water chemistry results for surface water in the vicinity of the RHR permit area. The sample locations are on Figure 8-2.

Jacobs Engineering drilled three hydrogeologic test wells across San Lucas Arroyo about a half a mile south of the point where the arroyo enters the north pond of Leopoldo Diversion Dam. One well was completed in the arroyo channel fill (SL-1), one in the Point Lookout Sandstone (SL-2), and one in the Menefee Formation (SL-3). A 24-hour aquifer test was conducted on all wells and samples were taken for quality analysis. A geologic cross-section is Figure 3 in Section 9, Appendix J and the chemistry data is Table 1 in Appendix J.

8.3 Permit Area Hydrologic Regime

The permit area is drained by a number of ephemeral arroyos which drain to San Mateo Creek. With the exception of a stock reservoir in Section 16 and seasonal tinajas on Section 10, no perennial or intermittent surface water systems, lakes, wetlands, reservoirs, or springs have been identified within the permit area. Field personnel have driven by the stock reservoir over a three-year period and have never observed standing water. A field survey found a number of tinajas within small, eastward draining arroyos on the east side of Section 10 to contain water in September of 2009, and water samples were later collected from the two largest. During the following summer the pools were dry.

8.3.1 General Monitoring Requirements for Drainages

The primary requirements for characterizing receiving drainages affected by discharges are identified in NMAC 20.6.4, which establishes water quality standards for surface waters and includes an anti-degradation policy. The general requirements for surveying the quality of the receiving drainage, including ephemeral, intermittent, and perennial water bodies, are established in NMAC 20.6.4.13 and include limits on the following:

- Suspended or settleable solids,
- Floating solids,
- Oil and grease,
- Color,
- Odor and taste of water,
- Concentrations of plant nutrients,
- Toxic pollutants,
- Radioactivity,
- Pathogens,
- Temperature,
- Turbidity,
- TDS, and
- Dissolved gases (nitrogen, oxygen, and ammonia)

8.3.2 Pollutant Requirements for Ephemeral Drainages

Ephemeral waters have designated uses of livestock watering, wildlife habitat, limited aquatic life, and secondary (human) contact. The standard for secondary (human) contact is a monthly geometric mean *Escherichia coli* (*E. coli*) bacterial concentration of 548 colony forming units (cfu)/100 mL and single sample of 2,507 cfu/100 mL. The acute requirements for aquatic habitats also include limits for ammonia and oxygen. The ammonia requirements are dependent on pH and temperature of the receiving drainage, and the dissolved oxygen requirements are dependent on elevation and temperature. Tables of both sets of values are included in NMAC 20.6.4.900 J, K, L, and M, and are not listed here.

8.3.3 Other Requirements for Intermittent and Perennial Surface Waters

The more stringent numerical criteria for intermittent and perennial receiving drainages require that they meet all standards for aquatic life, including chronic limits. The chronic limits are lower than the acute limits for 22 compounds, and the standards include one additional compound (polychlorinated biphenyls). The chronic criteria for aquatic habitats also include requirements for ammonia. The limits for ammonia are dependent on pH and temperature. There are no additional targeted analytes for intermittent or perennial waters, although the detection limits required are more stringent.

8.3.4 Pathway of Potential Discharge

Comments were voiced regarding potential negative impacts of discharge of water upon the San Mateo Creek drainage. In response, RHR committed to transporting the treated water to a location outside of the San Mateo Creek drainage for discharge. A pipeline will be positioned next to the haul road and the utility corridor in Sections 16, 15, 10 and 11. The pipeline will turn north along the road at the junction with the Section 11 haul road and proceed north for a distance of approximately six miles where the water will be discharged on private land as shown on Figure 8-6.

Surface water from the various arroyos that does not contact mine related activities will continue to San Mateo Creek. The remainder of this section provides baseline geology of the sub-cropping (underlying) bedrock units is shown in Figure 8–7. Normal faults affect the geologic units along the drainage pathway to the south through Section 16 and the NW¼ Section 21.

As the drainage continues southward into the SW¼ Section 21, sub-cropping geologic units are the Dalton Sandstone Member and the Gibson Coal Member of the Crevasse Canyon Formation. West of the confluence of the drainage with San Mateo Creek, the creek passes back over the Gibson Coal and Dalton Sandstone Members, crosses a fault, and passes over the increasingly older units of the Dilco Coal Member of the Crevasse Canyon Formation, Gallup Sandstone, and Mancos Shale.

After passing over a subcrop of Mancos Shale for approximately 4 miles, the course of the creek crosses the sub-crop of Dakota Sandstone on the nose of a north-trending anticline. For a short distance, the creek bed crosses sub-crop of the Mancos Shale before crossing the San Mateo normal fault. West of the fault to its confluence with Arroyo del Puerto, the drainage is over sub-crop of the Morrison Formation. All of the sub-cropping units may contain groundwater,

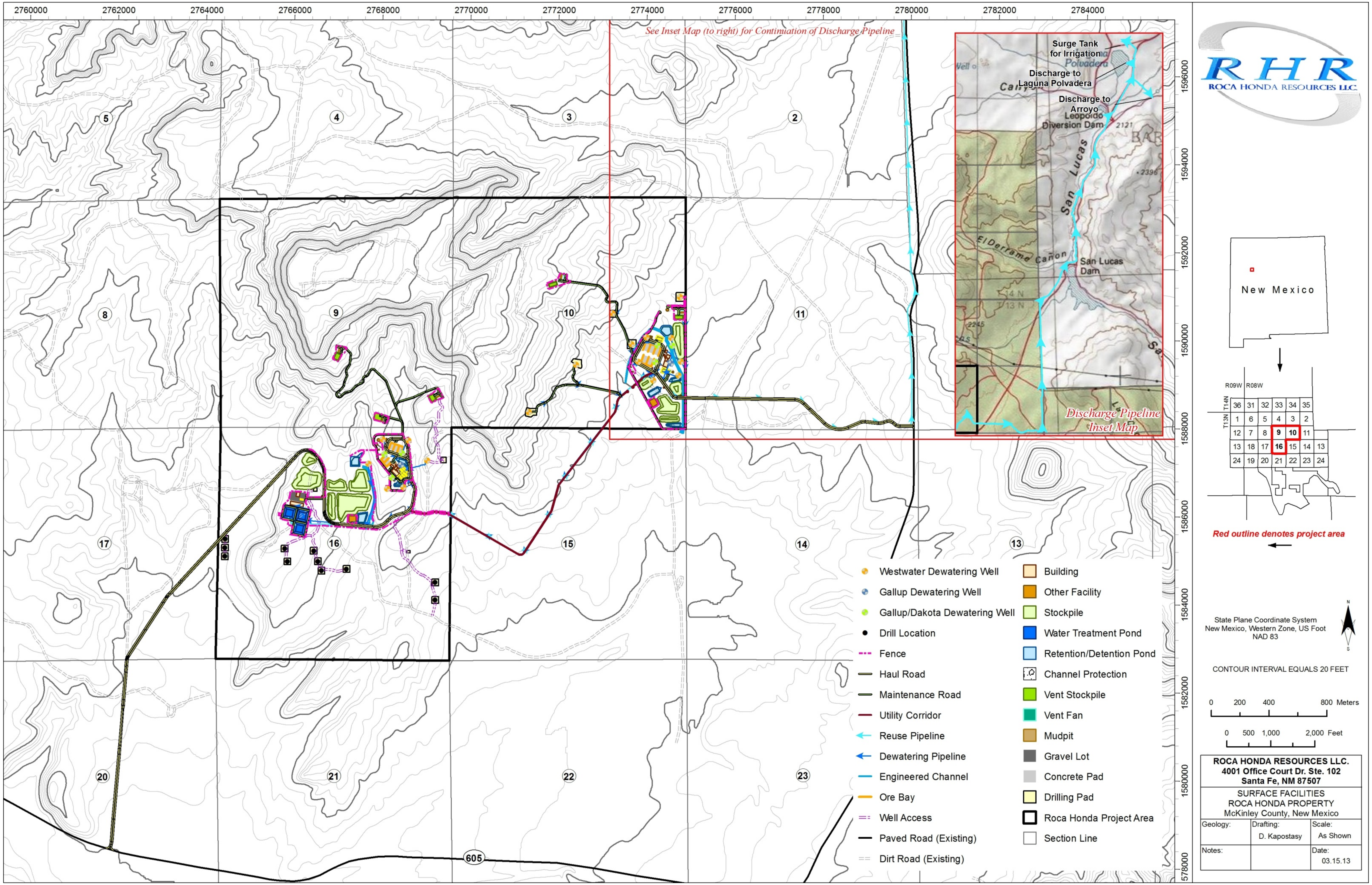

Figure 8-6. Reuse Pipeline Route

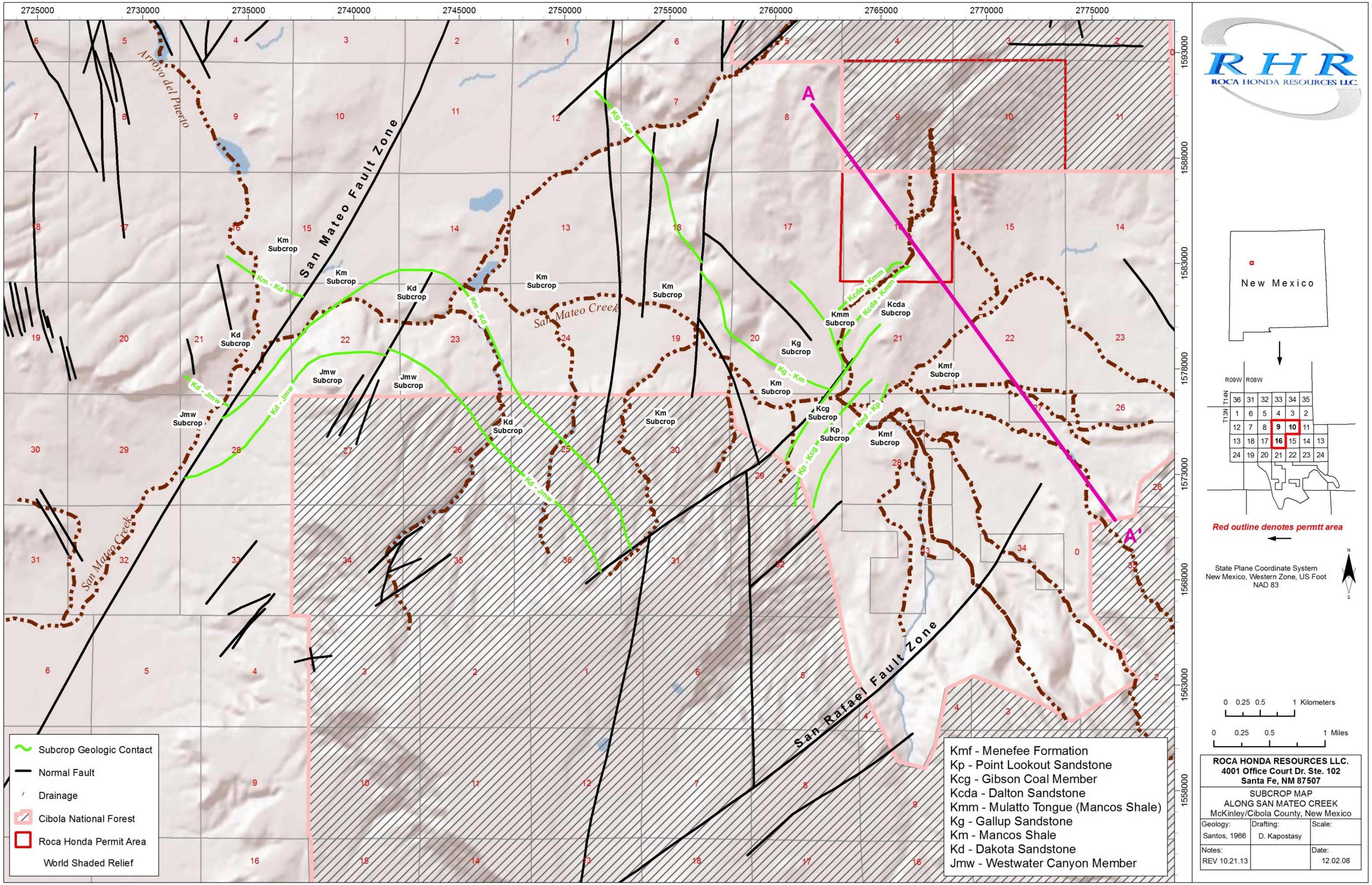

Figure 8-7. Subcrop Geology along the San Mateo Creek Draingage

although the Gibson Coal Member and the Mancos Shale are typically aquitards rather than aquifers, except where sandstone units occur in the Mancos Shale.

8.3.5 Sediments in Receiving Drainages

RHR determined the chemistry of sediments along the drainage from Section 16 and San Mateo Creek basin by collecting and analyzing sediment samples for a wide range of constituents. Sediment samples were also analyzed for grain size to help determine erosion potential and for correlation to chemical data. Figure 8-8 shows the sediment sampling locations. Appendix 8-C presents the results of chemical analysis on the eighteen samples collected along the drainage from Section 16 and San Mateo Creek. This data remains in this section as a baseline condition.

Increased flow in the Section 16 drainage and San Mateo Creek resulting from mine water discharge may increase the movement of sediments down-channel. Such movement depends on the grain size of the sediments, any existing and potential armoring of the stream bed, the quantity of water flowing under normal and flood conditions, and the slope of the stream bed. The slope of the stream bed is known from USGS topographic maps.

8.4 Baseline Springs Information

The NMEI (1974) identified three springs located in the San Mateo Creek watershed within a mile and a half southeast of the Roca Honda permit area: Bridge Spring, North Bridge Spring, and South Bridge Spring (Figure 8–2, page 8-4 and Table 8–2 below). In 2009, RHR field investigators walked the central channel of San Mateo Creek along the reach into which these springs discharged. They located Bridge Spring and also a perennial spring at the point where NM 605 crosses San Mateo Creek in the south central part of Section 21, T13N R8W (dubbed the “605 spring”). South Bridge Spring and North Bridge Spring are off-channel springs and have not yet been located. No other springs exist within two miles of the RHR permit area. NMEI reports that Bridge Spring gets its water from the Point Lookout Sandstone. Cross section A-A’, located on Figure 8-7, page 8-13 demonstrates that Bridge Spring and the spring at the bridge over San Mateo Creek are underlain by southeast-dipping bedrock of the lower part of the Menefee Formation (see Figure 8-9). No water rights claims are on file with the OSE for any springs in the vicinity of the permit area.

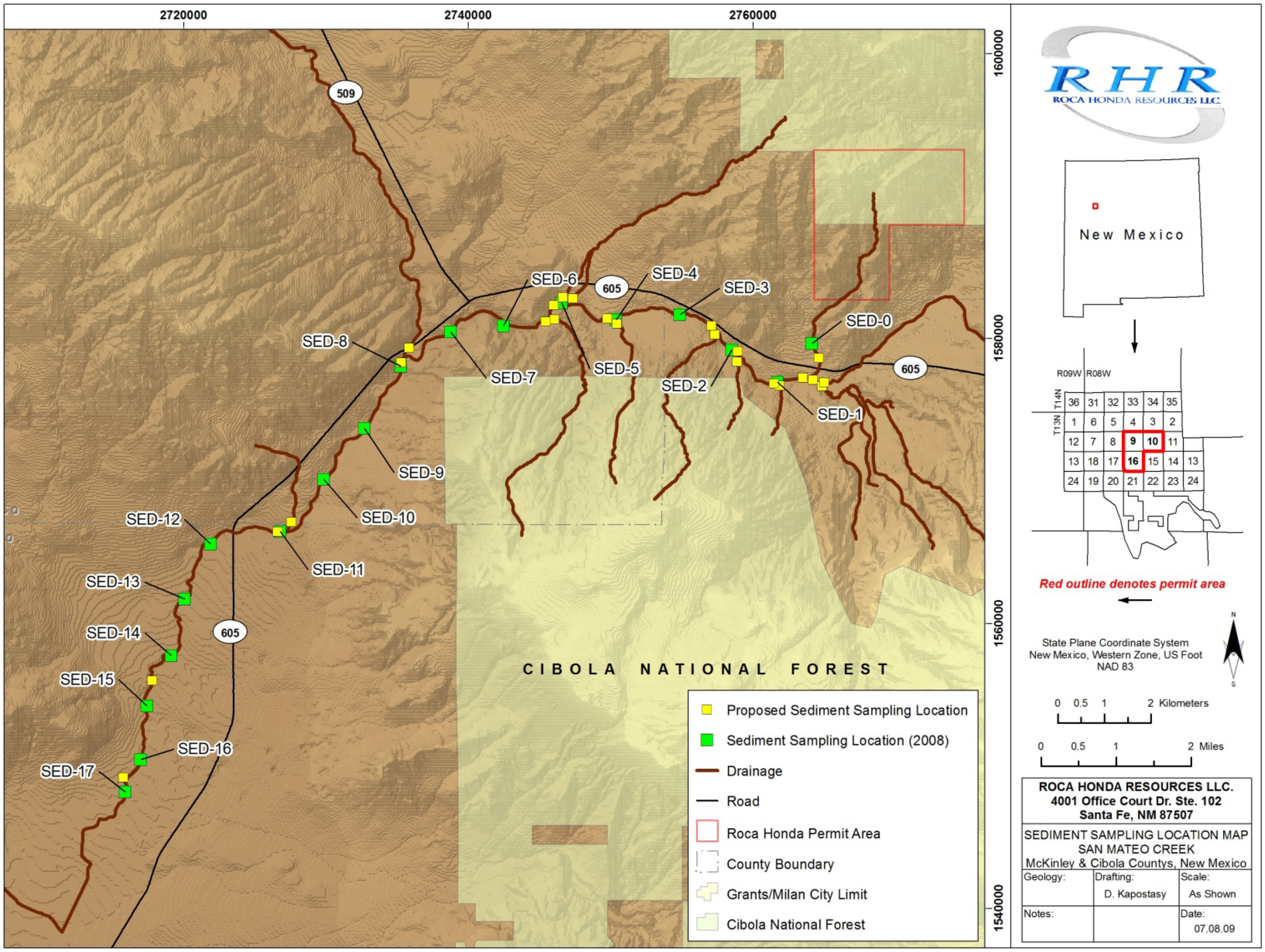

Figure 8-8. Sediment Sampling Locations along Receiving Drainages

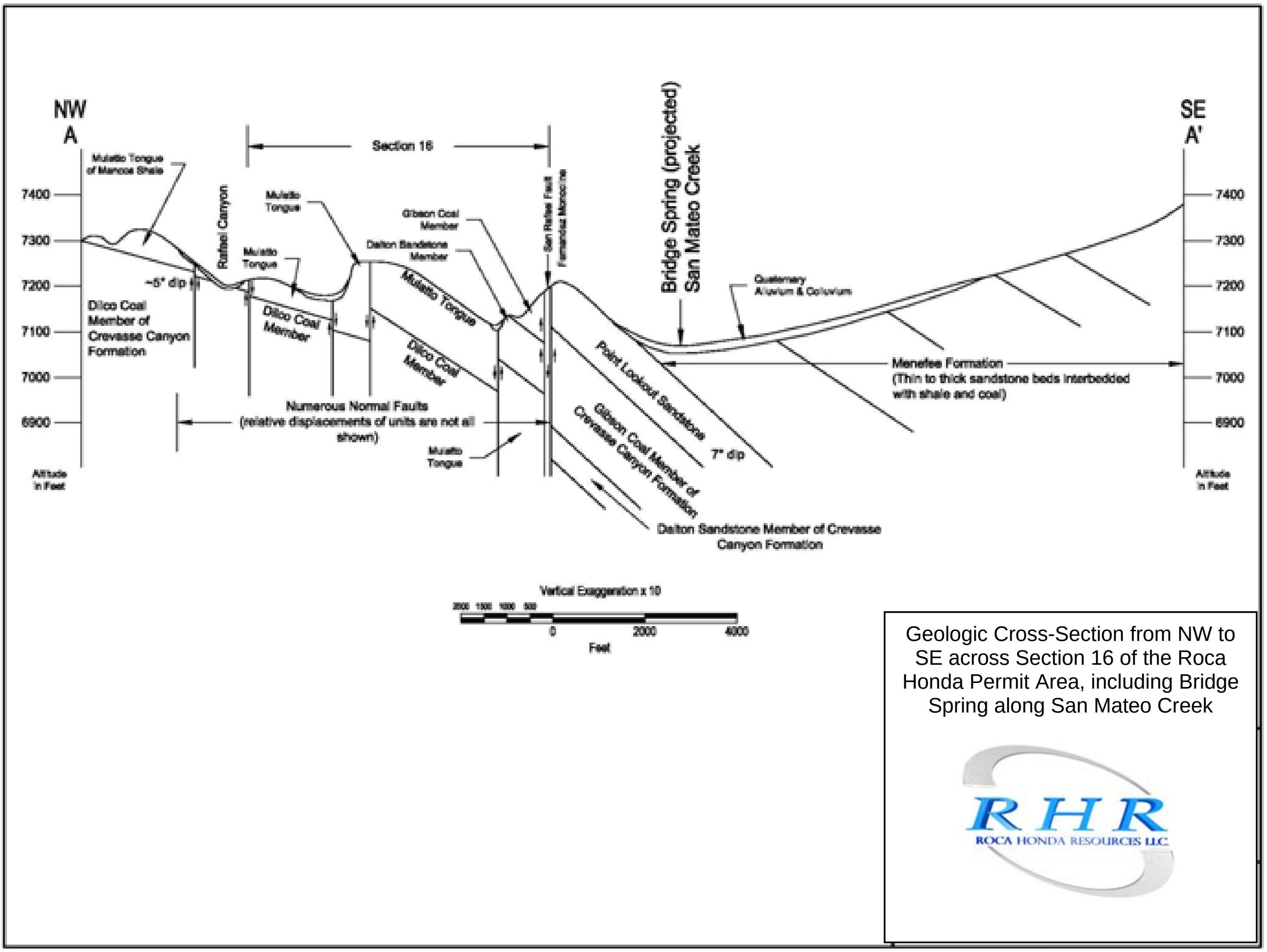

Figure 8-9. Geologic Cross-Section across Section 16 and San Mateo Creek

Table 8-2. Springs within 2 Miles of the Roca Honda Permit Area

Spring Designation	Northing*	Easting*	Watershed
Bridge Spring	1578077.9	2767354.4	Middle San Mateo Creek
North Bridge Spring	1579025.7	2767343.6	Middle San Mateo Creek
South Bridge Spring*	1575175.5	2764068.0	Middle San Mateo Creek

*NAD83 datum and State Plane New Mexico West projection.

Other springs are present within five miles of the RHR permit area, including El Rito and La Mosca Springs, but they get their water from volcanics of the north slope of Mt. Taylor across San Mateo Creek valley from the permit area (Figure 8-2). These springs are upgradient and outside of the drainage arroyo where the proposed mine water would discharge in Section 16, which is underlain mainly by the Mulatto Tongue of the Mancos Shale. Therefore, the discharge of mine water or dewatering operations will not have any surface impact on these springs.

Table 8–3 is a summary of the water chemistry data collected by the NMEI in October of 1974 from springs in the vicinity of the permit area. No springs have been identified within the permit area. It is clear from the limited available data that Bridge Spring and South Bridge Spring have their source from a very different groundwater system than do the other springs: the water is warmer, slightly more basic, and levels of all constituents except potassium are much higher. These differences in chemistry reflect the fact that the Bridge Spring gets it's source from the Mesa Verde Formation and has a longer residence time within siltstones and sandstones, whereas the La Mosca and El Rito Springs are probably water which entered the Mt. Taylor volcanics as precipitation and moved quickly through the rocks.

Table 8-3. Water Chemistry of Spring Samples (from NMEI, 1974, Table 7.7)

Constituent	Units	El Rito Spring	La Mosca Spring (a)	La Mosca Spring (b)	Bridge Spring	South Bridge Spring
pH		7.35	7.75	7.55	7.92	8.15
Specific conductance	µmhos	155	197	156	969	1252
Temperature	°C	13.2	11.0	12.5	20.2	
Calcium	mg/L	16.8	20.9	14.3	44.4	22.9
Magnesium	mg/L	4.5	4.6	2.4	23.9	22
Potassium	mg/L	4.1	5.0	3.2	5.0	6.9
Sodium	mg/L	8.3	14.0	14.0	168.0	268.0
Chloride	mg/L	6.0	8.0	8.0	33.0	40.0
Sulfate	mg/L	6.5	6.8	4.5	17.8	19.5
Nitrogen	mg/L	0.23	0.16	0.75	0.31	0.30
Bicarbonate	mg/L	90.3	117.1	73.2	608.0	749.0
Total solids	mg/L	213.7	267.6	208.6	940.5	940.5

RHR sampled the water of the "605 spring" on two occasions; the water chemistry results are presented in Appendix 8-B. The spring is located just north of a bridge that crosses NM 605 and contains accumulated debris that has accumulated over time including: a vacuum cleaner, a horse head, and various bottles and cans were noted by RHR field investigators. Effort was made to obtain water from the source of the spring, but the chemical results may be impacted by the presence of the trash. Bridge spring was sampled once: it was dry on all other occasions. The water chemistry results are presented in Appendix 8-B.

RHR attempted to sample San Lucas Spring but has not found water in the area where the spring is mapped by USGS. RHR staff will continue to search for the spring and grab a sample to establish baseline quality.

8.5 Existing Surface Water Rights within the San Mateo Creek Watershed

The Roca Honda permit area is located within the Rio Puerco drainage of the Rio Grande surface water basin. The area is included within the Bluewater Underground Water Basin as declared by the New Mexico State Engineer. Surface water rights on file with the OSE in the vicinity of the permit area within the San Mateo Creek watershed are limited to surface water rights from San Mateo Creek. No surface water rights are listed in the NMOSE WATERS data base as being associated with Bridge, South or North spring, or with any spring in the area of the proposed Roca Honda permit area.

The largest of the direct diversion surface water rights in the San Mateo Creek valley is SD 00966, a licensed water right originally filed in the name of the San Mateo Community Irrigation System to 960 ac-ft/yr for irrigation of 480 acres of land. This water right is sub-divided into individual sub-files SD 966-1 through SD 966-25. The point of diversion for this water right is San Mateo Creek near the community of San Mateo, several miles upstream of the proposed mine water discharge point. The direct diversion is supplemented with water from the San Mateo Reservoir, located in the same area, permitted by the OSE under SP-02528. Runoff from Mt. Taylor and spring flow are the sources of supply for these water rights. Discharge of mine water or dewatering operations will not have any impact on the availability of water to these water rights.

Fernandez Company has drilled well B-01442 into the Gallup Sandstone as a supplemental point of diversion to surface water diverted under sub-file SD-00966-13. This well is over 1,000 ft in depth and will not be impacted by discharge of mine water. Fernandez Company also holds water right SD 00971 for 353.4 ac-ft/yr, and SD 00972 for 184 ac-ft/yr. The diversion points for these water rights are located upstream of the proposed point of mine water discharge. Precipitation runoff is the source of supply for these water rights. Discharge of mine water or dewatering operations will not have any impact on these surface water rights.

RHR searched the Rio Puerco drainage basin as declared by the New Mexico State Engineer and found no surface water rights on file with the OSE from the discharge point to the Rio Grande.

8.6 Potential Impacts to the Hydrologic Regime

RHR will transport the treated mine water approximately eight miles northeast of the mine site to private land (see Figure 8-6). The 20 inch HDPE welded pipe will be laid on the surface. An estimated width of 20 feet was assumed to be disturbed during the placement of the pipeline for a distance of 28,919 feet which totals 13.3 acres, 2.5 acres on forest land and 10.8 acres on private land. The primary discharge point will be a large above ground steel tank which serves as a pump storage tank for the irrigation system. The secondary discharge point is the natural Laguna Polvadera which provides additional storage. The third discharge option would be the San Lucas Arroyo under an NPDES permit.

Impacts to the surface water hydrologic balance at the discharge point will depend on the use of the water. It is anticipated that the water will be used for irrigating pasture land by the local rancher. In that case the water will be distributed onto aerable land to grow a food crop for cattle or to improve native grasses.

While the expectation is that all of the water will be used for irrigation some of the water may be allowed to flow down the otherwise ephemeral drainage. That water would recharge the shallow alluvial system or the various formations outcropping in the arroyo bed. It may also eventually reach the Rio Puerco drainage on the east side of Mt. Taylor. Whatever the ultimate disposition of the water, the impact to the hydrologic balance will be relatively short-term as the water will no longer be available for irrigation or recharge once mine dewatering ceases.

RHR estimates that dewatering of the proposed Roca Honda mine may result in a range from 2,500 to 4,500 gpm (5.6 to 10 cfs). The estimate of mine water discharge rate is based on experience at previous uranium mines that dewatered the Westwater Canyon Member of the Morrison Formation such as the Gulf Mt. Taylor mine, Kerr McGee's Ambrosia Lake mines, and the Nose Rock mine. For example, Rio Grande Resources Company (RGRC 1994) discharged groundwater at a rate of 5.6 to 11.1 cfs (2,500 to 5,000 gpm) from the Mt. Taylor mine when it was in operation. RHR performed an aquifer test of the Westwater Canyon Member in order to determine whether the hydrogeologic characteristics in the RHR permit area were similar to those calculated for that geologic unit in the area of other mines for which discharge rates were known. (The aquifer test and the analysis of the test data are discussed in Appendix 9-I of Section 9 of this revised BDR.) The results of that test indicated that the storage properties and transmissivity of the Westwater Canyon Member are in the mid-range of reported values, an indication that volumes of water similar to those produced by earlier mines can be expected at the RHR mine. The test values were also used to refine RHR's groundwater flow model and estimate the volume of mine discharge.

The discharge into San Lucas Arroyo may impact the morphology of the streambed by causing erosion. The Arroyo has been surveyed from the potential discharge location to a point 750 feet downstream. The longitudinal cross-section, 17 cross-sections and a plan view of the Arroyo are in Appendix 8-E to this section. This baseline description of the San Lucas Arroyo can be used to determine erosion over the life of the discharge and thereby establish reclamation needs if any. An engineered discharge structure to dissipate the energy of the discharge has been designed and may be found in the Mine Operations Plan, Section 5.6.

Mine dewatering will not reduce spring flow from springs within or outside of the permit area. Mine dewatering will occur in the Westwater Canyon Member of the Morrison Formation, over 2,200 ft below the surface. The geologic strata from which the springs get their source of water are the Mt. Taylor volcanics, the Menefee Formation and the Point Lookout Sandstone, all of which are unsaturated within the permit area. These strata are 1,000 to 1,800 ft above the geologic strata to be dewatered and are separated from them by 600 to 800 feet of Mancos Shale. Because the springs get their water 1) up-channel of the mine water discharge point; 2) from a shallow groundwater system that is absent in the area of the permit area; and 3) from a shallow groundwater system that is unconnected to the deep aquifers which will be dewatered and separated from them by hundreds of feet of shale, RHR considers it unlikely that the springs will be adversely impacted by mine dewatering operations. This conclusion is discussed further in Section 9.0, Groundwater, of this revised BDR. For the same reasons, groundwater withdrawal within the permit area will not affect the water quality of the springs. Additional information on hydrologic impacts may be found in Section 9 Appendix J.

During mine operations, surface water detention basins and/or retention ponds will capture surface runoff from the permit area facilities and control surface water flow into the area. The detention basins will be designed to capture and temporarily hold surface water runoff that will then be released in a controlled manner. Because they will be capturing water upgradient of the RHR facility and will be empty most of the time, the detention basins will not impact groundwater. The released water will not cross the operational areas and will not require treatment. This water will continue through the existing channels to San Mateo Creek. The detention basins and surrounding area will be reclaimed to match the surrounding area. The retention ponds will be located so as to capture whatever water and sediment might drain from the mine facilities. The ponds will be lined and monitored with groundwater wells and vadose instrumentation to ensure that captured water does not enter groundwater. The captured water will be pumped to the water treatment plant. During reclamation, the sludge in the bottom of the ponds and the liner will be removed for proper disposal. The evaporation ponds will then be re-contoured, graded and reclaimed.

8.7 References

Brod, R.C., and Stone, W.J., 1981, *Hydrogeology and water resources of the Ambrosia Lake-San Mateo area, McKinley and Valencia Counties, New Mexico:* M.S. thesis, New Mexico Institute of Mining and Technology.

NMAC (New Mexico Administrative Code) 20.6.4. *New Mexico Administrative Code* Title 20, "Environmental Protection," Chapter 6 "Water Quality," Part 4 "Standards for Interstate and Intrastate Surface Waters," Water Quality Control Commission.

NMED (New Mexico Environment Department), 2009. "Geochemical Analysis and Interpretation of Ground Water Data Collected as a Part of the Anaconda Company Bluewater Uranium Mill Site Investigation (CERCLIS ID NMD007106891) and San Mateo Creek Site Legacy Uranium Sites Investigation (CERCLIS ID NMN00060684)."

NMEI (New Mexico Environmental Institute), 1974. *An Environmental Baseline Study of the Mount Taylor Project Area of New Mexico*, prepared by Whitson, M.A., and Study Team for Gulf Mineral Resources Company, March.

RGRC (Rio Grande Resources Corporation), 1994. Environmental Site Assessment, Mt. Taylor Uranium Mine Operation, June.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, *Hydrogeology and water resources of San Juan Basin, New Mexico*: New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6.

SWQB of NMED, May 2011, *Hydrology Protocol for the Determination of Uses Supported by Ephemeral, Intermittent, and Perennial Waters*.

Appendix 8-A

San Mateo Creek Level 1 Stream Survey

Appendix 8-B

Chemistry of Surface Water and Springs in RHR area

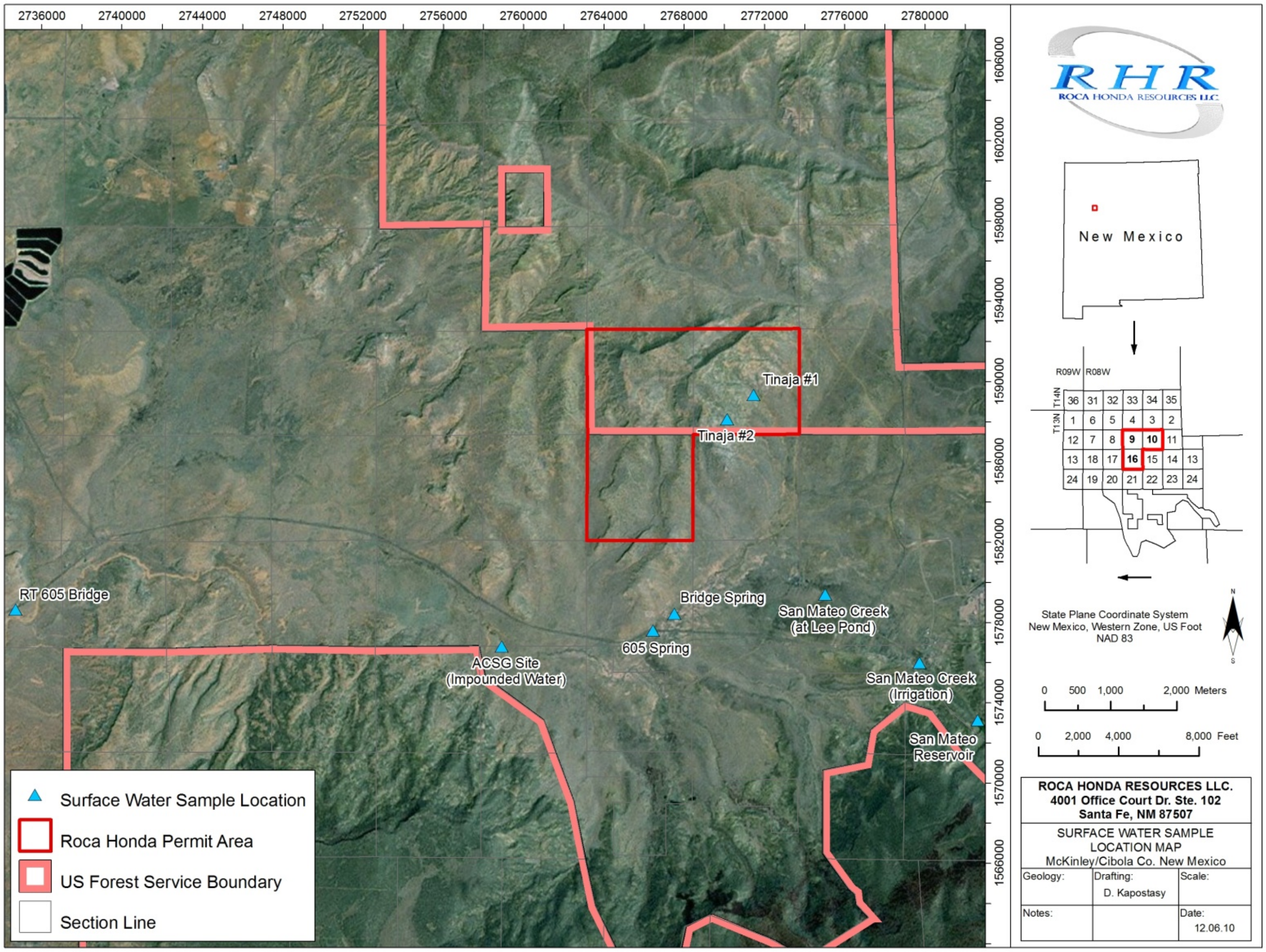

Figure 8-B-1. Surface Water Sampling Locations

Table B-1. Surface Water Sampling Results (Page 1 of 7)

Location Name	RT 605 Bridge	San Mateo Reservoir		San Mateo Creek (Irrigation)		San Mateo Creek (at Lee Pond)		ACSG Site (Impounded Water)		605 Spring		Bridge Spring		Sec. 10 Tinaja #1		Sec. 10 Tinaja #2		UNITS	R.L.	METHOD
Date	**9/16/2008**	**5/6/2010**	**10/7/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/25/2010**	**5/6/2010**	**10/7/2010**	**5/6/2010**	**10/7/2010**			
Sample ID	**605 Bridge SW1**	**RH10-SW-0001**	**RH10-SW-0006**	**RH10-SW-0005**	**RH10-SW-0009**	**No Sample**	**No Sample**	**No Sample**	**RH10-SW-0008**	**RH10-SW-0004**	**RH10-SW-0007**	**No Sample**	**RH10-SW-0010**	**RH10-SW-0002**	**No Sample**	**RH10-SW-0003**	**No Sample**			
Condition (Wet/Dry)	**Wet**	**Wet**	**Wet**	**Wet**	**Wet**	**Dry**	**Dry**	**Dry**	**Wet**	**Wet**	**Wet**	**Dry**	**Wet**	**Wet**	**Dry**	**Wet**	**Dry**			
FIELD MEASUREMENTS																				
pH	-	7.92	7.65	8.24	8.27	-	-	-	7.30	9.22	8.86	-	8.38	8.30	-	8.31	-	s.u.		HANNA Multi-meter
Conductivity	-	169	229	181	147	-	-	-	1076	1800	1149	-	585	95	-	91	-	umhos/cm		HANNA Multi-meter
Temperature	-	51.47	48.31	51.81	52.29	-	-	-	50.42	40.31	52.92	-	47.70	48.14	-	56.56	-	degrees F		HANNA Multi-meter
Dissolved Oxygen	-	31.1	8.2	41.6	34	-	-	-	19.7	40	38.7	-	100.3	37.7	-	42.7	-	%		HANNA Multi-meter
Total Dissolved Solids, TDS	-	85	115	91	73	-	-	-	538	900	575	-	293	47	-	46	-	mg/l		HANNA Multi-meter
Salinity	-	-	0.11	0.09	0.07	-	-	-	0.54	0.91	0.58	-	0.29	-	-	0.04	-	%		HANNA Multi-meter
Turbidity	-	16.57	189	19.19	17.63	-	-	-	>1000	78	84	-	757	15.73	-	26.39	-	t.u.		HANNA Multi-meter
MICROBIOLOGICAL																				
Bacteria, E-Coli Coliform	-	<1	860	20.1	27.5	-	-	-	>4839.2	195.6	-	-	2176	<1	-	<1	-	MPN/100mL	1.0	A9223 B
Bacteria, Total Coliform	-	1553	>24196	>2419.6	>2419.6	-	-	-	>4839.2	365.4	-	-	>12098	613.1	-	>2419.6	-	MPN/100mL	1.0	A9223 B
MAJOR IONS																				
Alkalinity, Phenolphthalein as CaCO3	-	ND	ND	ND	ND	-	-	-	ND	31	6	-	ND	ND	-	ND	-	mg/L	5	A2320 B
Alkalinity, Total as CaCO3	260	87	142	99	81	-	-	-	520	542	356	-	206	37	-	43	-	mg/L	5	A2320 B
Carbonate as CO3	-	ND	ND	ND	ND	-	-	-	ND	37	7	-	ND	ND	-	ND	-	mg/L	5	A2320 B
Bicarbonate as HCO3	-	106	173	120	98	-	-	-	634	587	419	-	252	46	-	52	-	mg/L	5	A2320 B
Calcium	72	17	34	22	15	-	-	-	78	43	43	-	13	14	-	16	-	mg/L	1	E200.7
Chloride	-	2	3	2	2	-	-	-	47	160	66	-	25	1	-	ND	-	mg/L	1	E300.0
Fluoride	-	0.2	0.3	0.2	0.2	-	-	-	0.9	2.0	1.2	-	1.2	ND	-	ND	-	mg/L	0.1	A4500-F C
Magnesium	14	4	6	5	3	-	-	-	19	20	12	-	4	1	-	1	-	mg/L	1	E200.7
Nitrogen, Kjeldahl, Total as N	2.0	0.6	5.5	ND	ND	-	-	-	18	1.4	1.8	-	8	0.6	-	0.7	-	mg/L	0.5	E351.2
Nitrogen, Nitrate as N	-	ND	ND	ND	ND	-	-	-	ND	ND	-	-	ND	ND	-	ND	-	mg/L	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	ND	ND	ND	ND	0.01	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.1	E353.2
Nitrogen, Nitrite as N	ND	ND	ND	ND	ND	-	-	-	ND	ND	-	-	ND	ND	-	ND	-	mg/L	0.1	A4500-NO2 B
Phosphate, Total	-	0.580	5.06	0.583	0.140	-	-	-	43.8	1.32	0.555	-	19.3	0.205	-	0.258	-	mg/L	0.003	Calc.
Phosphorus, Total as P	0.26	0.189	1.65	0.190	0.040	-	-	-	14.3	0.43	0.181	-	6.3	0.067	-	0.084	-	mg/L	0.005	E365.1
Potassium	11	5	6	4	3	-	-	-	15	8	6	-	5	2	-	2	-	mg/L	1	E200.7
Sulfate	39	2	4	6	2	-	-	-	74	207	183	-	85	7	-	4	-	mg/L	1	E300.0
NON-METALS																				
Cyanide, Total	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.005	Kelada mod
PHYSICAL PROPERTIES																				
Color	5.0	50.0	20.0	10.0	10.0	-	-	-	60.0	200	-	-	100.0	30.0	-	50.0	-	c.u.	5.0	A2120 B
Conductivity	-	166	261	191	147	-	-	-	1160	1770	1190	-	609	93	-	92	-	umhos/cm	1	A2510 B
Hardness as CaCO3	235	58	108	75	51	-	-	-	273	190	157	-	51	41	-	45	-	mg/L	1	A2340 B
Odor	NOO	2	8	NOO	NOO	-	-	-	50	NOO	-	-	NOO	NOO	-	NOO	-	T.O.N	1	A2150 B
pH	8.10	7.00	7.40	7.75	8.22	-	-	-	7.77	8.75	8.46	-	8.25	7.33	-	7.42	-	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	-	110	166	147	126	-	-	-	787	1170	882	-	496	36	-	62	-	mg/L	10	A2540 C
Solids, Total Settleable	-	1.5	-	ND	ND	-	-	-	72.0	ND	ND	-	110	1.0	-	ND	-	mL/L	0.5	A2540 F

Table B-1. Surface Water Sampling Results (Page 2 of 7)

Location Name	**RT 605 Bridge**	**San Mateo Reservoir**		**San Mateo Creek (Irrigation)**		**San Mateo Creek (at Lee Pond)**		**ACSG Site (Impounded Water)**		**605 Spring**		**Bridge Spring**		**Sec. 10 Tinaja #1**		**Sec. 10 Tinaja #2**		**UNITS**	**R.L.**	**METHOD**
Date	**9/16/2008**	**5/6/2010**	**10/7/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/25/2010**	**5/6/2010**	**10/7/2010**	**5/6/2010**	**10/7/2010**			
Sample ID	**605 Bridge SW1**	**RH10-SW-0001**	**RH10-SW-0006**	**RH10-SW-0005**	**RH10-SW-0009**	**No Sample**	**No Sample**	**No Sample**	**RH10-SW-0008**	**RH10-SW-0004**	**RH10-SW-0007**	**No Sample**	**RH10-SW-0010**	**RH10-SW-0002**	**No Sample**	**RH10-SW-0003**	**No Sample**			
Condition (Wet/Dry)	**Wet**	**Wet**	**Wet**	**Wet**	**Wet**	**Dry**	**Dry**	**Dry**	**Wet**	**Wet**	**Wet**	**Dry**	**Wet**	**Wet**	**Dry**	**Wet**	**Dry**			
METALS-DISSOLVED																				
Aluminum	ND	ND	0.1	ND	ND	-	-	-	0.1	ND	0.2	-	1.2	ND	-	0.2	-	mg/L	0.1	E200.8
Antimony	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.05	E200.8
Arsenic	0.011	0.001	0.013	0.001	0.001	-	-	-	0.016	0.013	0.003	-	0.015	ND	-	0.001	-	mg/L	0.001	E200.8
Barium	0.1	ND	0.1	ND	ND	-	-	-	0.2	ND	ND	-	ND	ND	-	ND	-	mg/L	0.1	E200.8
Beryllium	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.01	E200.8
Boron	0.1	ND	ND	ND	ND	-	-	-	0.1	0.3	0.2	-	0.1	ND	-	ND	-	mg/L	0.1	E200.7
Cadmium	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.01	E200.8
Copper	ND	ND	ND	ND	ND	-	-	-	ND	0.02	ND	-	0.02	ND	-	ND	-	mg/L	0.01	E200.8
Iron	ND	ND	0.08	ND	0.06	-	-	-	0.10	0.12	0.12	-	1.41	0.07	-	0.13	-	mg/L	0.03	E200.7
Lead	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.05	E200.8
Manganese	0.02	ND	0.09	ND	ND	-	-	-	0.90	ND	ND	-	0.02	ND	-	ND	-	mg/L	0.01	E200.8
Molybdenum	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.05	E200.8
Silver	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.1	E200.8
Uranium	0.0087	ND	0.0035	ND	0.0005	-	-	-	0.0256	0.0325	0.0174	-	0.0071	ND	-	ND	-	mg/L	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	0.1	E200.8
Zinc	0.01	ND	ND	0.01	ND	-	-	-	ND	0.01	ND	-	0.01	ND	-	ND	-	mg/L	0.01	E200.8
METALS-TOTAL																				
Mercury	ND	ND	ND	ND	ND	-	-	-	0.0008	ND	ND	-	0.0004	ND	-	ND	-	mg/L	0.0001	E245.1
Uranium	-	ND	0.0016	ND	0.0003	-	-	-	0.0614	0.0324	0.0189	-	0.0226	0.0003	-	ND	-	mg/L	0.0003	E200.8
METALS-TOTAL RECOVERABLE																				
Selenium	0.002	ND	ND	ND	ND	-	-	-	0.008	0.003	ND	-	0.0040	ND	-	ND	-	mg/L	0.001	E200.8

Table B-1. Surface Water Sampling Results (Page 3 of 7)

Location Name	**RT 605 Bridge**	**San Mateo Reservoir**		**San Mateo Creek (Irrigation)**		**San Mateo Creek (at Lee Pond)**		**ACSG Site (Impounded Water)**		**605 Spring**		**Bridge Spring**		**Sec. 10 Tinaja #1**		**Sec. 10 Tinaja #2**		**UNITS**	**R.L.**	**METHOD**
Date	**9/16/2008**	**5/6/2010**	**10/7/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/25/2010**	**5/6/2010**	**10/7/2010**	**5/6/2010**	**10/7/2010**			
Sample ID	**605 Bridge SW1**	**RH10-SW-0001**	**RH10-SW-0006**	**RH10-SW-0005**	**RH10-SW-0009**	**No Sample**	**No Sample**	**No Sample**	**RH10-SW-0008**	**RH10-SW-0004**	**RH10-SW-0007**	**No Sample**	**RH10-SW-0010**	**RH10-SW-0002**	**No Sample**	**RH10-SW-0003**	**No Sample**			
Condition (Wet/Dry)	**Wet**	**Wet**	**Wet**	**Wet**	**Wet**	**Dry**	**Dry**	**Dry**	**Wet**	**Wet**	**Wet**	**Dry**	**Wet**	**Wet**	**Dry**	**Wet**	**Dry**			
RADIONUCLIDES-TOTAL																				
Gross Alpha	-	-0.3	-0.7	-0.5	-2.0	-	-	-	24.2	46.3	12.8	-	12.1	1.1	-	2.9	-	pCi/L		E900.0
Gross Alpha precision (+/-)	-	1.1	8.9	1.1	1.2	-	-	-	15.4	7.9	5.0	-	4.9	1	-	1.1	-	pCi/L		E900.0
Gross Alpha MDC	-	1.9	15.1	2.0	2.3	-	-	-	23.6	8.6	7.3	-	7.0	1.5	-	1.5	-	pCi/L		E900.0
Radium 226	-	-0.09	1.4	-0.2	-0.10	-	-	-	0.93	0.24	0.11	-	1.20	0.06	-	-0.007	-	pCi/L		E903.0
Radium 226 precision (+/-)	-	0.06	0.29	0.09	0.06	-	-	-	0.20	0.17	0.11	-	0.25	0.09	-	0.08	-	pCi/L		E903.0
Radium 226 MDC	-	0.14	0.21	0.21	0.16	-	-	-	0.15	0.22	0.16	-	0.19	0.15	-	0.15	-	pCi/L		E903.0
Radium 228	-	0.2	2.3	0.16	-0.2	-	-	-	2.1	0.70	0.55	-	2.2	0.22	-	0.17	-	pCi/L		RA-05
Radium 228 precision (+/-)	-	0.52	0.92	0.62	0.60	-	-	-	0.87	0.68	0.61	-	0.77	0.56	-	0.55	-	pCi/L		RA-05
Radium 228 MDC	-	0.89	1.4	1.0	1.0	-	-	-	1.3	1.1	0.99	-	1.1	0.93	-	0.92	-	pCi/L		RA-05
Radium 226+Radium 228	-	-0.3	3.6	0.007	-0.3	-	-	-	3.1	0.9	0.7	-	3.4	0.3	-	0.2	-	pCi/L		A7500-RA
Radium 226+Radium 228 precision (+/-)	-	0.3	0.5	0.3	0.3	-	-	-	0.4	0.3	0.3	-	0.4	0.3	-	0.3	-	pCi/L		A7500-RA
Radium 226+Radium 228 MDC	-	0.9	1.4	1.1	1.0	-	-	-	1.3	1.1	1.0	-	1.1	0.9	-	0.9	-	pCi/L		A7500-RA
Radon 222	-	191	65.3	291	49.9	-	-	-	45.5	152	33.6	-	3	-80.7	-	256	-	pCi/L	100	D5072-92
Radon 222 precision (+/-)	-	72.9	39.9	86.8	38.3	-	-	-	38.8	84.7	79.7	-	47.5	66.8	-	73.1	-	pCi/L		D5072-92
Strontium 90	1.1	-0.1	-0.8	0.4	-0.2	-	-	-	0.8	0.4	0.6	-	0.8	0.6	-	-0.1	-	pCi/L		E905.0
Strontium 90 precision (+/-)	2.7	0.9	2.1	0.9	1.5	-	-	-	2.3	0.9	2.3	-	4.5	0.9	-	0.9	-	pCi/L		E905.0
Strontium 90 MDC	-	1.2	3.0	1.2	2.1	-	-	-	3.3	1.1	4.0	-	6.8	1.1	-	1.1	-	pCi/L		E905.0
Thorium 228	-0.1	0.03	0.4	0.2	0.03	-	-	-	0.3	0.3	0.08	-	0.07	0.09	-	0.1	-	pCi/L		E907.0
Thorium 228 precision (+/-)	0.2	0.1	0.2	0.2	0.07	-	-	-	0.2	0.2	0.09	-	0.1	0.1	-	0.1	-	pCi/L		E907.0
Thorium 228 MDC	-	0.3	0.2	0.3	0.1	-	-	-	0.2	0.2	0.1	-	0.2	0.2	-	0.2	-	pCi/L		E907.0
Thorium 230	0.2	-0.2	0.05	0.1	-0.1	-	-	-	0.1	0.09	0.02	-	0.08	-0.03	-	0.01	-	pCi/L		E907.0
Thorium 230 precision (+/-)	0.1	0.2	0.2	0.2	0.1	-	-	-	0.2	0.2	0.1	-	0.2	0.1	-	0.1	-	pCi/L		E907.0
Thorium 230 MDC	-	0.4	0.2	0.3	0.1	-	-	-	0.2	0.3	0.1	-	0.3	0.2	-	0.2	-	pCi/L		E907.0
Thorium 232	0.0	-0.04	0.07	0.03	0.03	-	-	-	0.05	0.3	0.05	-	0.07	0.06	-	-0.003	-	pCi/L		E907.0
Thorium 232 precision (+/-)	0.1	0.1	0.1	0.1	0.06	-	-	-	0.1	0.2	0.09	-	0.1	0.09	-	0.08	-	pCi/L		E907.0
Thorium 232 MDC	-	0.3	0.2	0.3	0.1	-	-	-	0.3	0.3	0.1	-	0.2	0.1	-	0.2	-	pCi/L		E907.0
Tritium	-69.5	42.8	-361.5	68.9	-210.4	-	-	-	381.2	-530	-310.4	-	-531.6	-9.5	-	19	-	pCi/L	1200	E906.0
Tritium precision (+/-)	720	480	280	480	310.0	-	-	-	320.0	460	300	-	320.0	480	-	480	-	pCi/L		E906.0
DATA QUALITY																				
A/C Balance (+/- 5)	-	-3.12	-4.29	1.74	-7.06	-	-	-	-3.57	1.24	-2.63	-	-1.14	-0.654	-	0.541	-	%		Calc.
Anions	-	1.85	3.03	2.16	1.72	-	-	-	13.3	19.8	12.8	-	6.68	0.937	-	0.970	-	meq/L		Calc.
Cations	-	1.74	2.78	2.23	1.50	-	-	-	12.4	20.3	12.2	-	6.53	0.925	-	0.981	-	meq/L		Calc.
Solids, Total Dissolved Calc.	-	156	195	172	1.49	-	-	-	707	1150	733	-	401	53.0	-	54.0	-	mg/L		Calc.
TDS Balance (0.80 - 1.20)	-	0.710	0.850	0.850	0.850	-	-	-	1.11	1.02	1.20	-	1.24	0.680	-	1.15	-			Calc.

Table B-1. Surface Water Sampling Results (Page 4 of 7)

Location Name	RT 605 Bridge	San Mateo Reservoir		San Mateo Creek (Irrigation)		San Mateo Creek (at Lee Pond)		ACSG Site (Impounded Water)		605 Spring		Bridge Spring		Sec. 10 Tinaja #1		Sec. 10 Tinaja #2		UNITS	R.L.	METHOD
Date	9/16/2008	5/6/2010	10/7/2010	5/11/2010	10/18/2010	5/11/2010	10/14/2010	5/11/2010	10/18/2010	5/11/2010	10/14/2010	5/11/2010	10/25/2010	5/6/2010	10/7/2010	5/6/2010	10/7/2010			
Sample ID	605 Bridge SW1	RH10-SW-0001	RH10-SW-0006	RH10-SW-0005	RH10-SW-0009	No Sample	No Sample	No Sample	RH10-SW-0008	RH10-SW-0004	RH10-SW-0007	No Sample	RH10-SW-0010	RH10-SW-0002	No Sample	RH10-SW-0003	No Sample			
Condition (Wet/Dry)	Wet	Wet	Wet	Wet	Wet	Dry	Dry	Dry	Wet	Wet	Wet	Dry	Wet	Wet	Dry	Wet	Dry			
VOLATILE ORGANIC COMPOUNDS																				
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,1-Dichloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,1-Dichloroethene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,1-Dichloropropene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,2-Dibromoethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,2-Dichloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,2-Dichloropropane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,3-Dichloropropane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
2,2-Dichloropropane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
2-Chloroethyl vinyl ether	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
2-Chlorotoluene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
4-Chlorotoluene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Acetone	ND	ND	ND	ND	ND	-	-	-	53.6	ND	ND	-	ND	ND	-	ND	-	ug/L	20.0	E624
Acetonitrile	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10.0	E624
Acrolein	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10.0	E624
Acrylonitrile	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10.0	E624
Benzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Bromobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Bromochloromethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Bromodichloromethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Bromoform	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Bromomethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Carbon disulfide	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Carbon tetrachloride	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Chlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Chlorodibromomethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Chloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Chloroform	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Chloromethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Dibromomethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Dichlorodifluoromethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Ethylbenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
m+p-Xylenes	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624

Table B-1. Surface Water Sampling Results (Page 5 of 7)

Location Name	**RT 605 Bridge**	**San Mateo Reservoir**		**San Mateo Creek (Irrigation)**		**San Mateo Creek (at Lee Pond)**		**ACSG Site (Impounded Water)**		**605 Spring**		**Bridge Spring**		**Sec. 10 Tinaja #1**		**Sec. 10 Tinaja #2**		**UNITS**	**R.L.**	**METHOD**
Date	**9/16/2008**	**5/6/2010**	**10/7/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/18/2010**	**5/11/2010**	**10/14/2010**	**5/11/2010**	**10/25/2010**	**5/6/2010**	**10/7/2010**	**5/6/2010**	**10/7/2010**			
Sample ID	**605 Bridge SW1**	**RH10-SW-0001**	**RH10-SW-0006**	**RH10-SW-0005**	**RH10-SW-0009**	**No Sample**	**No Sample**	**No Sample**	**RH10-SW-0008**	**RH10-SW-0004**	**RH10-SW-0007**	**No Sample**	**RH10-SW-0010**	**RH10-SW-0002**	**No Sample**	**RH10-SW-0003**	**No Sample**			
Condition (Wet/Dry)	**Wet**	**Wet**	**Wet**	**Wet**	**Wet**	**Dry**	**Dry**	**Dry**	**Wet**	**Wet**	**Wet**	**Dry**	**Wet**	**Wet**	**Dry**	**Wet**	**Dry**			
VOLATILE ORGANIC COMPOUNDS (Continued)																				
Methyl ethyl ketone	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	20.0	E624
Methyl isobutyl ketone	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	20.0	E624
Methyl tert-butyl ether (MTBE)	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	2.00	E624
Methylene chloride	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Naphthalene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
o-Xylene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Styrene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Tetrachloroethene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Toluene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Trichloroethene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Trichlorofluoromethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Vinyl acetate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Vinyl chloride	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Xylenes, Total	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	1.00	E624
Surr: 1,2-Dichlorobenzene-d4	106	105	134	105	135	-	-	-	118	106	134	-	103	105	-	106	-	% REC	80-120	E624
Surr: Dibromofluormethane	128	113	94.0	111	92.0	-	-	-	94.0	109	94.0	-	96	110	-	105	-	% REC	80-120	E624
Surr: p-Bromofluorobenzene	100	110	115	118	114	-	-	-	98.0	119	114	-	105	111	-	110	-	% REC	80-120	E624
Surr: Toluene-d8	100	101	97.0	106	95.0	-	-	-	97.0	107	96.0	-	102	101	-	101	-	% REC	80-120	E624
ORGANIC CHARACTERISTICS																				
Oil & Grease (HEM)	-	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	mg/L	10	E1664A
SYNTHETIC ORGANIC COMPOUNDS																				
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2,4-Dichlorophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2,4-Dimethylphenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2,4-Dinitrophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2-Chloronaphthalene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2-Chlorophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
2-Nitrophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	50	E625
4-Bromophenyl phenyl ether	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
4-Chlorophenyl phenyl ether	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
4-Nitrophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	50	E625

Location Name	RT 605 Bridge	San Mateo Reservoir		San Mateo Creek (Irrigation)		San Mateo Creek (at Lee Pond)		ACSG Site (Impounded Water)		605 Spring		Bridge Spring		Sec. 10 Tinaja #1		Sec. 10 Tinaja #2		UNITS	R.L.	METHOD
Date	9/16/2008	5/6/2010	10/7/2010	5/11/2010	10/18/2010	5/11/2010	10/14/2010	5/11/2010	10/18/2010	5/11/2010	10/14/2010	5/11/2010	10/25/2010	5/6/2010	10/7/2010	5/6/2010	10/7/2010			
Sample ID	605 Bridge SW1	RH10-SW-0001	RH10-SW-0006	RH10-SW-0005	RH10-SW-0009	No Sample	No Sample	No Sample	RH10-SW-0008	RH10-SW-0004	RH10-SW-0007	No Sample	RH10-SW-0010	RH10-SW-0002	No Sample	RH10-SW-0003	No Sample			
Condition (Wet/Dry)	Wet	Wet	Wet	Wet	Wet	Dry	Dry	Dry	Wet	Wet	Wet	Dry	Wet	Wet	Dry	Wet	Dry			
SYNTHETIC ORGANIC COMPOUNDS (Continued)																				
Acenaphthene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Acenaphthylene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Anthracene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Azobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Benzidine	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	20	E625
Benzo(a)anthracene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Benzo(a)pyrene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Benzo(k)fluorathene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
bis(-2-chloroethoxy)Methane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
bis(-2-chloroethyl)Ether	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
bis(2-chloroisopropyl)Ether	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
bis(2-ethylhexyl)Phthalate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Butylbenzylphthalate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Chrysene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Diethyl phthalate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Dimethyl phthalate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Di-n-butyl phthalate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Di-n-octyl phthalate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Fluoranthene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Fluorene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Hexachlorobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Hexachlorobutadiene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Hexachloroethane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Ideno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Isophorone	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Naphthalene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Nitrobenzene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
n-Nitrosodimethylamine	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
n-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
n-Nitrosodiphenylamine	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Pentachlorophenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	50	E625
Phenanthrene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Phenol	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Pyrene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	10	E625
Surr: 2,4,6-Tribromophenol	86.0	33.0	43.0	45.0	43.0	-	-	-	35.0	44.0	46.0	-	49.0	44.0	-	38.0	-	% REC	26-116	E625
Surr: 2-Fluorobiphenyl	72.0	30.0	32.0	46.0	38.0	-	-	-	26.0	45.0	40.0	-	40.0	40.0	-	38.0	-	% REC	25-94	E625
Surr: 2-Fluorophenol	48.0	21.0	28.0	24.0	23.0	-	-	-	21.0	26.0	27.0	-	27.0	21.0	-	21.0	-	% REC	11-67	E625
Surr: Nitrobenzene-d5	71.0	26.0	41.0	42.0	45.0	-	-	-	30.0	49.0	41.0	-	46.0	37.0	-	37.0	-	% REC	19-102	E625
Surr: Phenol-d5	39.0	18.0	24.0	22.0	21.0	-	-	-	23.0	21.0	23.0	-	23.0	17.0	-	18.0	-	% REC	15-54	E625
Surr: Terphenyl-d14	39.0	27.0	15.0	28.0	39.0	-	-	-	17.0	28.0	24.0	-	17.0	41.0	-	37.0	-	% REC	39-106	E625

Table B-1. Surface Water Sampling Results (Page 7 of 7)

Location Name	RT 605 Bridge	San Mateo Reservoir		San Mateo Creek (Irrigation)		San Mateo Creek (at Lee Pond)		ACSG Site (Impounded Water)		605 Spring		Bridge Spring		Sec. 10 Tinaja #1		Sec. 10 Tinaja #2		UNITS	R.L.	METHOD
Date	9/16/2008	5/6/2010	10/7/2010	5/11/2010	10/18/2010	5/11/2010	10/14/2010	5/11/2010	10/18/2010	5/11/2010	10/14/2010	5/11/2010	10/25/2010	5/6/2010	10/7/2010	5/6/2010	10/7/2010			
Sample ID	605 Bridge SW1	RH10-SW-0001	RH10-SW-0006	RH10-SW-0005	RH10-SW-0009	No Sample	No Sample	No Sample	RH10-SW-0008	RH10-SW-0004	RH10-SW-0007	No Sample	RH10-SW-0010	RH10-SW-0002	No Sample	RH10-SW-0003	No Sample			
Condition (Wet/Dry)	Wet	Wet	Wet	Wet	Wet	Dry	Dry	Dry	Wet	Wet	Wet	Dry	Wet	Wet	Dry	Wet	Dry			
PESTICIDES																				
4,4'-DDD	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
4,4'-DDE	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
4,4'-DDT	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Aldrin	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
alpha-BHC	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
alpha-Chlordane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
beta-BHC	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Chlordane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
delta-BHC	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Dieldrin	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Endosulfan I	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Endosulfan II	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Endosulfan sulfate	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Endrin	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Endrin aldehyde	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Endrin Ketone	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
gamma-BHC (Lindane)	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
gamma-Chlordane	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Heptachlor	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Heptachlor epoxide	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Methoxychlor	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.050	E608
Toxaphene	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	2.5	E608
Aroclor 1016	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1221	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1232	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1242	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1248	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1254	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1260	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1262	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Aroclor 1268	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	ug/L	0.50	E608
Surr: Decachlorobiphenyl	64.0	104	60.0	85.0	89.0	-	-	-	72.0	80.0	49.0	-	48.0	102	-	101	-	% REC	44-119	E608
Surr: Tetrachloro-m-xylene	61.0	86.0	63.0	75.0	87.0	-	-	-	78.0	63.0	64.0	-	78.0	82.0	-	82.0	-	% REC	40-120	E608
DIOXIN																				
2,3,7,8-TCDD	-	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	ND	-	pg/L	5.0	1613B

Appendix 8-C

Baseline Sediment Chemistry from Receiving Drainage
Section 16
And San Mateo Creek

Table C-1. Baseline Sediment Chemistry – Receiving Drainage (Sec. 16 and San Mateo Creek) – 1st Sample Set[2]
(Page 1 of 6)

Sample ID	SED-0a	SED-1a	SED-2a	SED-3a	SED-4a	SED-5a	SED-6a	SED-7a	SED-8a	SED-9a	SED-10a	SED-11a	SED-12a	SED-13a	SED-14a	SED-15a	SED-16a	SED-17a	**Units**	**Method**
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
AGRONOMIC PROPERTIES																				
pH, sat. paste	7.6	8.1	8.0	7.8	7.2	7.4	7.3	7.4	7.8	7.3	7.3	7.4	7.4	7.6	7.3	7.5	7.7	7.6	s.u.	ASAM 10-3.2
Moisture	5.4	12.3	20.1	6.8	7.3	4.3	0.9	0.5	ND	1.0	13.8	4.4	0.9	4.0	6.7	4.1	2.7	2.3	%	USDA26
Total Kjeldahl Nitrogen	948	1020	702	601	786	585	396	394	449	566	1620	1290	848	1180	2040	993	748	803	mg/kg-dry	ASA31-3
PARTICLE SIZE ANALYSIS/TEXTURE																				
Sand	67	29	73	69	47	63	88	88	89	70	12	22	70	12	20	4	32	50	%	ASA15-5
Silt	13	37	9	11	15	13	2	2	1	12	18	28	18	32	28	24	22	12	%	ASA15-5
Clay	20	34	18	20	38	24	10	10	10	18	70	50	12	56	52	72	46	38	%	ASA15-5
Texture	SL-SCL	CL	SL	SL-SCL	SC	SCL	LS	LS	LS	SL	C	C	SL	C	C	C	C	SC		ASA15-5
METALS – TOTAL																				
Aluminum	5480	17600	6070	8670	13700	8000	2480	1860	2430	4380	25200	16100	6800	21500	11600	25900	18200	11200	mg/kg-dry	SW6010B
Antimony	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8	ND	ND	ND	mg/kg-dry	SW6020
Arsenic	4.2	5.0	3.1	3.1	4.6	3.0	1.9	2.0	2.3	3.9	9.0	6.4	3.1	6.3	6.5	9.1	6.4	3.9	mg/kg-dry	SW6020
Barium	64.9	159	59.5	75.0	110	72.7	30.4	23.9	29	89.1	237	229	95.6	202	171	200	146	103	mg/kg-dry	SW6020
Beryllium	0.7	0.9	ND	ND	0.7	ND	ND	ND	ND	0.6	1.6	1.2	ND	1.2	1.2	1.2	0.7	0.5	mg/kg-dry	SW6020
Boron	13.8	11.6	ND	ND	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW6010B
Cadmium	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9	ND	ND	ND	mg/kg-dry	SW6020
Calcium	5380	12000	7480	5670	8520	5430	2440	2370	2300	6760	16000	17600	7440	16000	8210	16800	11600	7860	mg/kg-dry	SW6010B
Chromium	4.7	12.4	5.1	6.8	10.3	6.2	2.0	1.6	2.3	5.3	17.0	11.4	4.4	12.1	12.3	16.1	11.4	7.7	mg/kg-dry	SW6020
Cobalt	4.3	6.9	2.9	3.9	6.0	3.6	1.0	0.9	1.4	3.3	9.3	7.5	2.8	6.0	7.9	9.0	6.1	4.5	mg/kg-dry	SW6020
Copper	6.4	15.1	5.3	7.6	11.7	6.8	1.4	1.4	2.0	5.4	16.9	13.5	5.1	16.3	16.8	18.9	11.7	8.8	mg/kg-dry	SW6020
Iron	10900	21500	9720	11500	17200	10700	3540	3510	3720	8620	27700	16800	8510	24100	13500	27300	18000	12300	mg/kg-dry	SW6010B
Lead	7.5	14.1	5.7	7.4	12.3	7.2	2.4	2.4	3.0	7.2	22.3	17.8	7.2	18.0	18.3	20.1	12.8	9.6	mg/kg-dry	SW6020
Magnesium	2050	6040	2170	2730	4180	2470	799	581	763	1930	6030	4750	2390	6610	4020	7790	5730	3520	mg/kg-dry	SW6010B
Manganese	147	325	152	179	253	162	64.1	70.8	49.7	165	354	444	155	300	364	372	285	211	mg/kg-dry	SW6010B
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW7471A
Molybdenum	0.5	0.7	ND	ND	0.5	ND	ND	ND	ND	ND	0.7	0.9	ND	0.9	1.1	0.8	1.0	1.4	mg/kg-dry	SW6020
Nickel	5.3	11.2	4.6	5.7	9.5	5.6	1.6	1.4	2.0	4.9	15.0	10.8	4.4	13.1	12.0	15.3	10.2	7.2	mg/kg-dry	SW6020
Potassium	1570	3630	1360	1890	3110	1760	506	388	482	1260	4510	3520	1740	5570	4250	5660	4790	3160	mg/kg-dry	SW6010B
Selenium	0.8	0.6	ND	ND	ND	ND	ND	ND	ND	0.6	0.8	1.1	ND	1.1	1.5	0.5	ND	0.6	mg/kg-dry	SW6020
Silver	0.8	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	0.7	ND	ND	ND	mg/kg-dry	SW6020
Sodium	ND	952	162	232	180	ND	ND	ND	ND	ND	431	ND	ND	120	101	375	193	217	mg/kg-dry	SW6010B
Thallium	0.7	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	1	ND	ND	ND	mg/kg-dry	SW6020
Uranium	1.0	1.1	1.1	0.7	1.1	0.7	ND	ND	1.2	1.1	2.1	4.9	1.8	7.9	5.1	4.0	2.1	4.2	mg/kg-dry	SW6020
Vanadium	12.7	30.0	14.9	17.8	20.8	14.6	6.1	6.9	5.9	13.1	31.0	29.5	14.7	28.0	28.3	32.7	24.7	17.9	mg/kg-dry	SW6020
Zinc	34.8	69.4	23.7	32.9	46.8	30.0	8.1	8.0	9.9	23.8	75.1	54.7	24.7	67.0	66.5	80.2	49.6	38.7	mg/kg-dry	SW6020

[2] Surface sediments (0-2”) were collected from several areas within each sample location and composited into a single sample representing each sample location. These composited samples are identified with an “a” after the Sample ID number (i.e., Sample ID SED-0a).

Sample ID	SED-0a	SED-1a	SED-2a	SED-3	SED-4a	SED-5a	SED-6a	SED-7a	SED-8a	SED-9a	SED-10a	SED-11a	SED-12a	SED-13a	SED-14a	SED-15a	SED-16a	SED-17a	**Units**	**Method**
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
RADIONUCLIDES - TOTAL																				
Gross Alpha	3.4	8.4	8.3	4.2	9.2	7.1	2.5	6.7	1.6	2.7	22.4	16.7	6.9	25.1	14.4	18.3	12.6	7.4	pCi/g-dry	E900.0
Gross Alpha precision (+/-)	0.6	0.7	0.7	0.6	0.7	0.7	0.5	0.7	0.7	0.7	1.1	1	0.8	1.1	0.9	1.0	0.9	0.8	pCi/g-dry	E900.0
Gross Alpha minus Rn & U	0.7	2.1	2.1	1.0	3.2	2.3	0.9	1.1	0.7	1.2	3.7	4.3	2.1	6.98	6.3	5.2	3.4	2.8	pCi/g-dry	E900.1
Gross Alpha minus Rn & U precision (+/-)	0.2	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.573	0.5	0.5	0.4	0.4	pCi/g-dry	E900.1
Gross Alpha minus Rn & U MDC	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.168	0.2	0.2	0.2	0.2	pCi/g-dry	E900.1
Gross Beta	27.7	39.6	23.3	21.5	32.8	26.9	15.0	17.2	13.3	12.1	27.3	35.4	21.4	50.8	35.2	35.5	29.1	25.5	pCi/g-dry	E900.0
Gross Beta precision (+/-)	1	1.1	1	0.9	1.0	1	0.9	0.9	0.9	0.9	1.0	1.1	1	1.2	1.1	1.1	1.0	1.0	pCi/g-dry	E900.0
Radium 226	0.3	1.1	0.8	0.6	1.0	0.7	0.3	0.1	-0.06	0.4	1.5	2.6	1.6	4.2	4.2	2.8	1.7	1.6	pCi/g-dry	E903.0
Radium 226 precision (+/-)	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.06	0.09	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	pCi/g-dry	E903.0
Radium 226 MDC	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	pCi/g-dry	E903.0
Radium 228	0.9	1.2	0.7	0.3	1.7	1.5	1.6	0.6	0.3	1.5	1.3	1.1	0.1	1.0	2.3	1.2	0.8	1.2	pCi/g-dry	RA-05
Radium 228 precision (+/-)	0.7	0.7	0.7	0.7	0.8	0.7	1	0.4	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	pCi/g-dry	RA-05
Radium 228 MDC	1.2	1.2	1.1	1.2	1.2	1.1	1.5	0.6	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	pCi/g-dry	RA-05
Strontium 90	-0.4	-0.5	-0.2	0.0	0.0	0.3	-0.2	0.2	0.2	-0.2	0.8	0.0	0.1	-0.2	-0.3	0.1	0.0	0.0	pCi/g-dry	E905.0
Strontium 90 precision (+/-)	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.383	0.4	0.4	0.4	0.4	pCi/g-dry	E905.0
Thorium 228	0.4	1.1	0.5	0.4	0.8	0.4	0.1	0.2	0.2	0.5	1.2	1.2	0.5	0.9	0.6	1	0.9	0.4	pCi/g-dry	E907.0
Thorium 228 precision (+/-)	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.3	0.2	pCi/g-dry	E907.0
Thorium 230	0.3	0.8	1.2	0.6	0.8	0.9	0.3	0.3	-0.6	0.5	1.3	2.7	2.0	2.7	3.6	0.7	0.9	0.4	pCi/g-dry	E907.0
Thorium 230 precision (+/-)	0.03	0.04	0.05	0.03	0.04	0.04	0.03	0.03	0.03	0.05	0.06	0.07	0.06	0.07	0.08	0.05	0.06	0.05	pCi/g-dry	E907.0
Thorium 232	0.4	0.7	0.4	0.3	0.6	0.5	0.1	0.1	0.2	0.3	0.8	0.6	0.6	1.2	0.7	1.0	1	0.5	pCi/g-dry	E907.0
Thorium 232 precision (+/-)	0.03	0.04	0.03	0.02	0.04	0.03	0.009	0.02	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.03	pCi/g-dry	E907.0
VOLITILE ORGANIC COMPOUNDS																				
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2-Chloroethyl vinyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
4-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B

Sample ID	SED-0a	SED-1a	SED-2a	SED-3a	SED-4a	SED-5a	SED-6a	SED-7a	SED-8a	SED-9a	SED-10a	SED-11a	SED-12a	SED-13a	SED-14a	SED-15a	SED-16a	SED-17a	Units	Method
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
VOLITILE ORGANIC COMPOUNDS (Continued)																				
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
m+p-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Methyl ethyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Surr: 1,2-Dichlorobenzene-d4	97.0	97.0	100	99.0	101	99.0	102	103	98.0	98.0	98.0	99.0	100	104	105	102	103	103	%REC	SW8260B
Surr: Dibromofluoromethane	88.0	92.0	94.0	94.0	102	99.0	101	107	90.0	90.0	94.0	96.0	104	93.0	118	109	114	113	%REC	SW8260B
Surr: p-Bromofluorobenzene	99.0	99.0	100	100	99.0	101	100	102	101	100	99.0	100	102	97.0	105	101	102	101	%REC	SW8260B
Surr: Toluene-d8	98.0	98.0	98.0	98.0	98.0	99.0	100	100	99.0	86.0	98.0	98.0	116	97.0	100	98.0	98.0	100	%REC	SW8260B

Sample ID Collection Date Collection Time	SED-0a 9/11/2008 14:49	SED-1a 9/11/2008 15:38	SED-2a 9/11/2008 16:20	SED-3a 9/11/2008 17:01	SED-4a 9/12/2008 9:43	SED-5a 9/12/2008 10:51	SED-6a 9/12/2008 11:50	SED-7a 9/12/2008 12:39	SED-8a 9/15/2008 14:26	SED-9a 9/15/2008 15:04	SED-10a 9/15/2008 15:53	SED-11a 9/15/2008 16:49	SED-12a 9/16/2008 12:52	SED-13a 9/16/2008 19:20	SED-14a 9/16/2008 16:05	SED-15a 9/16/2008	SED-16a 9/16/2008	SED-17a 9/16/2008	Units	Method
ORGANIC CHARACTERISTICS																				
Diesel Range Organics (DRO)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8015M
Total Extractable Hydrocarbons	37	10	14	14	28	16	15	ND	ND	14	14	22	23	25.0	36	15	21	14	mg/kg	SW8015M
Surr: o-Terphenyl	101	93.0	99.0	98.0	89.0	93.0	102	94.0	95.0	92.0	100	95.0	105	98.0	102	101	96.0	97.0	%REC	SW8015M
SYNTHETIC ORGANIC COMPOUNDS																				
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Bromophenyl phenyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Chlorophenyl phenyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Azobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(k)fluorathene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(-2-chloroethoxy)Methane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(-2-chloroethyl)Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(2-chloroisopropyl)Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(2-ethylhexyl)Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Diethyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Dimethyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C

Sample ID Collection Date Collection Time	SED-0a 9/11/2008 14:49	SED-1a 9/11/2008 15:38	SED-2a 9/11/2008 16:20	SED-3a 9/11/2008 17:01	SED-4a 9/12/2008 9:43	SED-5a 9/12/2008 10:51	SED-6a 9/12/2008 11:50	SED-7a 9/12/2008 12:39	SED-8a 9/15/2008 14:26	SED-9a 9/15/2008 15:04	SED-10a 9/15/2008 15:53	SED-11a 9/15/2008 16:49	SED-12a 9/16/2008 12:52	SED-13a 9/16/2008 19:20	SED-14a 9/16/2008 16:05	SED-15a 9/16/2008	SED-16a 9/16/2008	SED-17a 9/16/2008	Units	Method
SYNTHETIC ORGANIC COMPOUNDS (Continued)																				
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Isophorone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
m+p-Cresols	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
n-Nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
n-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
n-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
o-Cresol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Pyridine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Surr: 2,4,6-Tribromophenol	106	107	107	116	91.0	95.0	86.0	88.0	82.0	91.0	81.0	76.0	88.0	80.0	84.0	85.0	88.0	88.0	%REC	SW8270C
Surr: 2-Fluorobiphenyl	75.0	79.0	81.0	82.0	82.0	72.0	78.0	81.0	82.0	87.0	85.0	79.0	76.0	73.0	74.0	76.0	75.0	77.0	%REC	SW8270C
Surr: 2-Fluorophenol	78.0	76.0	84.0	88.0	78.0	74.0	75.0	82.0	92.0	89.0	80.0	84.0	83.0	76.0	81.0	69.0	74.0	79.0	%REC	SW8270C
Surr: Nitrobenzene-d5	82.0	76.0	79.0	86.0	75.0	71.0	84.0	84.0	83.0	79.0	80.0	78.0	74.0	81.0	85.0	86.0	86.0	89.0	%REC	SW8270C
Surr: Phenol-d5	86.0	86.0	86.0	91.0	96.0	73.0	80.0	91.0	88.0	92.0	77.0	82.0	76.0	84.0	84.0	72.0	77.0	76.0	%REC	SW8270C
Surr: Terphenyl-d14	91.0	91.0	94.0	98.0	92.0	81.0	95.0	89.0	129	100	106	100	87.0	87.0	79.0	87.0	94.0	86.0	%REC	SW8270C

Sample ID	SED-0a	SED-1a	SED-2a	SED-3a	SED-4a	SED-5a	SED-6a	SED-7a	SED-8a	SED-9a	SED-10a	SED-11a	SED-12a	SED-13a	SED-14a	SED-15a	SED-16	SED-17a	**Units**	**Method**
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
ORGANOCHLORINE PESTICIDES																				
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
4,4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
4,4'-DDT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
alpha-Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
gamma-BHC (Lindane)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
gamma-Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Surr: Decachlorobiphenyl	94.0	97.0	96.0	89.0	92.0	97.0	97.0	108	103	95.0	91.0	92.0	93.0	52.0	90.0	94.0	99.0	94.0	%REC	SW8081A
Surr: Tetrachloro-m-xylene	79.0	80.0	74.0	70.0	68.0	73.0	75.0	98.0	91.0	84.0	79.0	75.0	84.0	43.0	71.0	79.0	90.0	83.0	%REC	SW8081A
POLYCHLORINATED BIPHENYLS (PCBs)																				
Aroclor 1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1262	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Surr: Decachlorobiphenyl	79.0	84.0	82.0	78.0	87.0	88.0	87.0	77.0	74.0	72.0	69.0	74.0	73.0	79.0	71.0	75.0	79.0	74.0	%REC	SW8082
Surr: Tetrachloro-m-xylene	65.0	71.0	72.0	62.0	60.0	63.0	59.0	82.0	80.0	75.0	71.0	69.0	66.0	68.0	66.0	70.0	80.0	75.0	%REC	SW8082
DIOXINS																				
2,3,7,8-TCDD	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ng/kg	8290

Table C-2. Baseline Sediment Chemistry – Receiving Drainages (Sec. 16 and San Mateo Creek) - 2^{nd} Sample Set[3]
(Page 1 of 6)

Sample ID	SED-0b	SED-1b	SED-2b	SED-3b	SED-4b	SED-5b	SED-6b	SED-7b	SED-8b	SED-9b	SED-10b	SED-11b	SED-12b	SED-13b	SED-14b	SED-15b	SED-16b	SED-17b	**Units**	**Method**
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
AGRONOMIC PROPERTIES																				
pH, sat. paste	7.8	8.1	8.0	7.7	7.3	7.4	7.3	7.4	7.5	7.3	7.3	7.4	7.5	7.5	7.3	7.7	7.7	7.6	s.u.	ASAM 10-3.2
Moisture	4.5	14.1	7.9	7.4	7.6	4.1	1.0	0.5	0.2	0.9	11.4	5.1	0.7	4.3	2.4	3.6	2.4	1.5	%	USDA26
Total Kjeldahl Nitrogen	939	978	608	605	1270	643	453	394	449	565	1450	1240	734	1180	1660	930	746	683	mg/kg-dry	ASA31-3
PARTICLE SIZE ANALYSIS/TEXTURE																				
Sand	59	23	71	73	45	73	91	92	91	76	10	24	62	10	22	8	34	51	%	ASA15-5
Silt	17	39	9	11	19	9	1	ND	5	10	20	26	14	30	26	18	16	15	%	ASA15-5
Clay	24	38	20	16	36	18	8	8	4	14	70	50	24	60	52	74	50	34	%	ASA15-5
Texture	SCL	CL	SL-SCL	SL	CL-SC	SL	S	S	S	SL	C	C	SCL	C	C	C	C	SCL		ASA15-5
METALS - TOTAL																				
Aluminum	6060	25900	6760	6260	12600	8390	2840	1890	1610	3770	ND	18300	6330	22100	13400	25600	18400	11800	mg/kg-dry	SW6010B
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW6020
Arsenic	4.1	5.1	3.2	2.8	4.6	3.6	2.0	1.8	2.0	3.1	9.8	5.9	2.7	6.0	6.8	8.4	4.9	3.8	mg/kg-dry	SW6020
Barium	77.6	260	62.1	70.8	107	79.9	34.5	22.8	36.1	80.4	248	206	89.3	202	170	217	155	97.6	mg/kg-dry	SW6020
Beryllium	0.5	1.2	ND	ND	0.6	ND	ND	ND	ND	ND	1.6	1.1	ND	1.0	0.9	1.1	0.7	0.7	mg/kg-dry	SW6020
Boron	ND	18.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW6010B
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW6020
Calcium	5880	17400	8190	4130	8030	5670	3150	1840	2100	5540	ND	19200	7990	16400	8080	16500	11500	8020	mg/kg-dry	SW6010B
Chromium	5.3	16.8	4.9	6.3	9.8	6.6	2.3	1.8	2.3	4.6	17.9	10.7	4.3	12.5	12.4	18.1	10.5	7.2	mg/kg-dry	SW6020
Cobalt	5.3	8.9	3.3	3.1	5.5	3.8	1.1	1.1	1.2	2.7	9.7	6.9	2.7	6.2	7.6	9.4	5.8	4.2	mg/kg-dry	SW6020
Copper	7.8	20.0	5.7	5.7	10.9	7.5	1.7	1.6	1.6	4.5	17.8	12.3	4.9	17.0	16.5	20.1	11.3	8.1	mg/kg-dry	SW6020
Iron	11500	26500	10500	10800	15900	12000	4070	3770	3400	7320	ND	18800	7910	24200	15600	26700	18100	12400	mg/kg-dry	SW6010B
Lead	8.6	18.4	6.2	5.9	11.2	8.0	2.8	2.6	2.7	6.1	23.9	16.5	6.7	18.3	17.8	21.3	12.8	9.1	mg/kg-dry	SW6020
Magnesium	2260	8320	2500	1960	3840	2640	952	562	673	1720	ND	5310	2260	6800	4520	7680	5720	3810	mg/kg-dry	SW6010B
Manganese	182	368	163	155	237	165	74.9	64.2	54.9	138	370	410	154	307	366	376	279	183	mg/kg-dry	SW6010B
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW7471A
Molybdenum	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	0.7	0.8	ND	1.1	0.9	1	1.0	4.1	mg/kg-dry	SW6020
Nickel	6.3	14.0	4.7	4.6	8.9	5.9	1.9	1.6	1.8	4.2	15.9	10.1	4.2	13.5	11.8	16.4	9.6	7.1	mg/kg-dry	SW6020
Potassium	1860	5100	1450	1400	2950	1880	567	395	427	1090	ND	3960	1640	5770	4170	5600	4890	3350	mg/kg-dry	SW6010B
Selenium	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	0.9	0.9	0.6	0.9	1	ND	ND	ND	mg/kg-dry	SW6020
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW6020
Sodium	ND	1320	184	120	102	ND	ND	ND	ND	ND	ND	ND	ND	292	146	306	194	211	mg/kg-dry	SW6010B
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg-dry	SW6020
Uranium	0.7	1.1	1.7	0.6	1	0.9	ND	ND	0.8	1.1	2.1	4.6	1.9	8.2	4.3	4.3	2.1	3.7	mg/kg-dry	SW6020
Vanadium	14.3	38.7	14.0	16.3	20.3	15.7	6.6	6.8	7.2	11.8	32.5	27.5	13.4	28.7	28.0	36.5	22.8	17.6	mg/kg-dry	SW6020
Zinc	34.3	83.4	27.1	25.0	43.6	35.1	9.5	8.7	8.6	20.3	78.8	50.9	22.9	69.3	66.2	85.7	48.6	37.5	mg/kg-dry	SW6020

[3] A second set of surface sediments (0-2") was collected from several areas within each sample location (not the same areas as for the 1^{st} set of samples summarized in Table 8-C-1) and composited into a single sample representing each sample location. This second set of composited samples is identified with a "b" after the Sample ID number (i.e., Sample ID SED-0b).

Sample ID	SED-0b	SED-1b	SED-2b	SED-3b	SED-4b	SED-5b	SED-6b	SED-7b	SED-8b	SED-9b	SED-10b	SED-11b	SED-12b	SED-13b	SED-14b	SED-15b	SED-16b	SED-17b		
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	**Units**	**Method**
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
RADIONUCLIDES - TOTAL																				
Gross Alpha	4.2	6.7	5.5	2.9	8.8	10.8	2.9	1.6	1.8	7.3	16.5	14.8	14.9	18.0	16.8	14.9	14.5	9.2	pCi/g-dry	E900.0
Gross Alpha precision (+/-)	0.6	0.7	0.6	0.5	0.7	0.8	0.5	0.5	0.7	0.8	1.0	0.9	0.9	0.9	1	0.9	0.9	0.8	pCi/g-dry	E900.0
Gross Alpha minus Rn & U	1.1	2.7	1.6	1.7	3.4	2.3	1.6	0.5	0.7	1.3	3.9	4.7	2.4	6.17	6.9	5.0	3.3	2.5	pCi/g-dry	E900.1
Gross Alpha minus Rn & U precision (+/-)	0.3	0.4	0.3	0.3	0.5	0.4	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.536	0.6	0.5	0.4	0.3	pCi/g-dry	E900.1
Gross Alpha minus Rn & U MDC	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.166	0.2	0.2	0.2	0.2	pCi/g-dry	E900.1
Gross Beta	25.6	36.1	19.0	17.1	29.3	29.5	21.8	12.7	13.4	16.2	27.7	39.9	28.7	49.0	43.5	29.3	31.4	25.6	pCi/g-dry	E900.0
Gross Beta precision (+/-)	1	1	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.9	1.0	1.1	1.0	1.1	1.1	1.0	1.0	1.0	pCi/g-dry	E900.0
Radium 226	0.7	0.9	0.8	0.4	1.2	0.8	0.3	0.2	0.2	0.6	1.7	3.0	1.3	4.4	5.0	2.8	1.7	1.6	pCi/g-dry	E903.0
Radium 226 precision (+/-)	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.4	0.5	0.4	0.3	0.3	pCi/g-dry	E903.0
Radium 226 MDC	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	pCi/g-dry	E903.0
Radium 228	0.6	1.5	0.8	1.6	2.3	1.4	1.5	0.4	0.5	0.9	1.6	1	0.4	0.9	0.9	1.1	0.4	0.3	pCi/g-dry	RA-05
Radium 228 precision (+/-)	0.7	0.7	0.7	0.8	0.8	0.7	0.9	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	pCi/g-dry	RA-05
Radium 228 MDC	1.2	1.1	1.1	1.2	1.2	1.1	1.5	1.2	1.0	1.1	1.0	1.1	1.1	0.9	0.9	0.9	0.9	0.9	pCi/g-dry	RA-05
Strontium 90	0.0	0.2	-0.2	-0.4	-0.1	-0.1	0.0	-0.3	-0.1	-0.2	0.0	0.6	0.3	-0.2	0.3	0.3	-0.2	0.4	pCi/g-dry	E905.0
Strontium 90 precision (+/-)	0.5	0.6	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.377	0.4	0.4	0.4	0.4	pCi/g-dry	E905.0
Thorium 228	0.4	1.1	0.4	0.1	1.3	0.7	0.2	0.1	0.1	0.5	1.3	1	0.3	1.1	0.5	1.0	0.9	0.5	pCi/g-dry	E907.0
Thorium 228 precision (+/-)	0.2	0.2	0.2	0.04	0.5	0.3	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	pCi/g-dry	E907.0
Thorium 230	0.7	0.6	0.8	0.1	0.6	0.5	0.2	0.2	-0.3	0.2	0.8	2.7	1.2	2.5	2.5	0.9	0.8	0.5	pCi/g-dry	E907.0
Thorium 230 precision (+/-)	0.04	0.04	0.04	0.009	0.05	0.04	0.03	0.03	0.03	0.04	0.05	0.08	0.06	0.07	0.08	0.06	0.05	0.05	pCi/g-dry	E907.0
Thorium 232	0.4	0.7	0.4	0.0	0.6	0.7	0.1	0.1	0.1	0.4	0.9	0.8	0.2	0.8	0.6	1.0	0.9	0.6	pCi/g-dry	E907.0
Thorium 232 precision (+/-)	0.03	0.03	0.03	0.009	0.04	0.04	0.02	0.02	0.02	0.03	0.04	0.04	0.02	0.04	0.03	0.04	0.04	0.03	pCi/g-dry	E907.0
VOLITILE ORGANIC COMPOUNDS																				
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,1-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2-Chloroethyl vinyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
4-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B

Sample ID	SED-0b	SED-1b	SED-2b	SED-3b	SED-4b	SED-5b	SED-6b	SED-7b	SED-8b	SED-9b	SED-10b	SED-11b	SED-12b	SED-13b	SED-14b	SED-15b	SED-16b	SED-17b	Units	Method
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
VOLITILE ORGANIC COMPOUNDS (Continued)																				
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
m+p-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Methyl ethyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8260B
Surr: 1,2-Dichlorobenzene-d4	96.0	100	100	99.0	99.0	101	99.0	102	100	100	99.0	100	102	103	102	103	102	104	%REC	SW8260B
Surr: Dibromofluoromethane	92.0	96.0	100	98.0	102	102	99.0	102	93.0	94.0	98.0	94.0	106	89.0	132	103	108	110	%REC	SW8260B
Surr: p-Bromofluorobenzene	100	100	101	102	100	101	101	100	102	100	102	102	103	97.0	102	102	102	103	%REC	SW8260B
Surr: Toluene-d8	100	99.0	100	100	99.0	100	100	100	99.0	98.0	98.0	84.0	82.0	98.0	115	100	100	100	%REC	SW8260B

Sample ID **Collection Date** **Collection Time**	SED-0b 9/11/2008 14:49	SED-1b 9/11/2008 15:38	SED-2b 9/11/2008 16:20	SED-3b 9/11/2008 17:01	SED-4b 9/12/2008 9:43	SED-5b 9/12/2008 10:51	SED-6b 9/12/2008 11:50	SED-7b 9/12/2008 12:39	SED-8b 9/15/2008 14:26	SED-9b 9/15/2008 15:04	SED-10b 9/15/2008 15:53	SED-11b 9/15/2008 16:49	SED-12b 9/16/2008 12:52	SED-13b 9/16/2008 19:20	SED-14b 9/16/2008 16:05	SED-15b 9/16/2008	SED-16b 9/16/2008	SED-17b 9/16/2008	**Units**	**Method**
ORGANIC CHARACTERISTICS																				
Diesel Range Organics (DRO)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8015M
Total Extractable Hydrocarbons	12	11	15	16	16	23	ND	ND	ND	14	15	22	16	17.0	39	13	12	ND	mg/kg	SW8015M
Surr: o-Terphenyl	99.0	94.0	100	91.0	98.0	98.0	96.0	106	99.0	100	100	96.0	101	97.0	99.0	96.0	95.0	100	%REC	SW8015M
SYNTHETIC ORGANIC COMPOUNDS																				
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4,6-Dinitro-2-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Bromophenyl phenyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Chlorophenyl phenyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Azobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Benzo(k)fluorathene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(-2-chloroethoxy)Methane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(-2-chloroethyl)Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(2-chloroisopropyl)Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
bis(2-ethylhexyl)Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Diethyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Dimethyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C

Sample ID	SED-0b	SED-1b	SED-2b	SED-3b	SED-4b	SED-5b	SED-6b	SED-7b	SED-8b	SED-9b	SED-10b	SED-11b	SED-12b	SED-13b	SED-14b	SED-15b	SED-16b	SED-17b	**Units**	**Method**
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
SYNTHETIC ORGANIC COMPOUNDS (Continued)																				
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Isophorone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
m+p-Cresols	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
n-Nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
n-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
n-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
o-Cresol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Pyridine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8270C
Surr: 2,4,6-Tribromophenol	102	100	111	111	85.0	107	91.0	80.0	68.0	87.0	91.0	86.0	92.0	86.0	76.0	86.0	86.0	95.0	%REC	SW8270C
Surr: 2-Fluorobiphenyl	73.0	78.0	79.0	74.0	71.0	83.0	86.0	75.0	70.0	77.0	77.0	73.0	79.0	74.0	67.0	80.0	76.0	81.0	%REC	SW8270C
Surr: 2-Fluorophenol	71.0	71.0	79.0	74.0	73.0	83.0	80.0	73.0	78.0	87.0	88.0	77.0	79.0	66.0	72.0	92.0	72.0	85.0	%REC	SW8270C
Surr: Nitrobenzene-d5	78.0	77.0	83.0	85.0	73.0	86.0	82.0	69.0	62.0	85.0	86.0	83.0	90.0	86.0	77.0	92.0	86.0	90.0	%REC	SW8270C
Surr: Phenol-d5	80.0	83.0	85.0	79.0	86.0	85.0	82.0	84.0	75.0	81.0	91.0	75.0	75.0	64.0	74.0	93.0	74.0	81.0	%REC	SW8270C
Surr: Terphenyl-d14	86.0	92.0	88.0	94.0	93.0	90.0	97.0	84.0	99.0	92.0	80.0	93.0	92.0	87.0	71.0	82.0	86.0	83.0	%REC	SW8270C

Sample ID	SED-0b	SED-1b	SED-2b	SED-3b	SED-4b	SED-5b	SED-6b	SED-7b	SED-8b	SED-9b	SED-10b	SED-11b	SED-12b	SED-13b	SED-14b	SED-15b	SED-16b	SED-17b	**Units**	**Method**
Collection Date	9/11/2008	9/11/2008	9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	9/15/2008	9/15/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008	9/16/2008		
Collection Time	14:49	15:38	16:20	17:01	9:43	10:51	11:50	12:39	14:26	15:04	15:53	16:49	12:52	19:20	16:05					
ORGANOCHLORINE PESTICIDES																				
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
4,4'-DDE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
4,4'-DDT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
alpha-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
alpha-Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
beta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Dieldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
gamma-BHC (Lindane)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
gamma-Chlordane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8081A
Surr: Decachlorobiphenyl	92.0	102	97.0	91.0	98.0	98.0	102	98.0	94.0	94.0	93.0	96.0	92.0	87.0	97.0	95.0	96.0	93.0	%REC	SW8081A
Surr: Tetrachloro-m-xylene	77.0	73.0	76.0	78.0	79.0	80.0	79.0	88.0	76.0	80.0	88.0	86.0	73.0	75.0	86.0	84.0	75.0	67.0	%REC	SW8081A
POLYCHLORINATED BIPHENYLS (PCBs)																				
Aroclor 1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1262	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Aroclor 1268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/kg	SW8082
Surr: Decachlorobiphenyl	79.0	84.0	79.0	83.0	90.0	88.0	90.0	65.0	68.0	73.0	73.0	81.0	84.0	71.0	76.0	75.0	71.0	73.0	%REC	SW8082
Surr: Tetrachloro-m-xylene	66.0	63.0	65.0	67.0	70.0	71.0	62.0	70.0	66.0	72.0	79.0	78.0	80.0	68.0	79.0	80.0	68.0	60.0	%REC	SW8082
DIOXINS																				
2,3,7,8-TCDD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ng/kg	8290

Appendix 8-D

Riparian Assessment Report

Appendix 8-E

Baseline Survey of San Lucas Arroyo