

DOCKETED

Docket Number:	17-SPPE-01
Project Title:	McLaren Backup Generating Facility
TN #:	222041-7
Document Title:	Application for Small Power Plant Exemption for McLaren Backup Generating Facility - Appendix B Part 6
Description:	N/A
Filer:	Marie Fleming
Organization:	DayZen LLC
Submitter Role:	Applicant Representative
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Docketed Date:	12/21/2017

UST System Removal

On February 23, 2005, MARCOR uncovered the 2,000-gallon capacity UST. On the same day the contents of the UST were removed by Decon Environmental Services, Inc. (Decon) and transported to the Romic Environmental Technologies Corporation (Romic) facility in East Palo Alto, California. A copy of the uniform hazardous waste manifest documenting disposal of 2,000 gallons of fuel from the UST and 400 gallons of water from the pit is attached with this report (manifest number 24104925).

It is P&D's understanding that an estimated 30 gallons of diesel fuel from the UST was spilled during Decon's removal of liquid from the UST. The area of the spill was for a radius of approximately 10 feet around the fill port at the north end of the UST, including the UST pit and surrounding paved surfaces. It is P&D's understanding that the diesel was spilled by accidental pressurization of the tank followed by rapid depressurization of the tank through the fill port with associated spraying of diesel fuel over the affected area. Cleanup of the diesel fuel spill was reported to have been immediately accomplished by use of hydrocarbon adsorbents and removal of UST pit water. Over-excavation of petroleum-affected soil and additional pumping of UST pit water were subsequently performed as described below.

On February 24, 2005, the UST atmosphere was inerted with dry ice, and evaluated using an oxygen and LEL meter. Prior to removal of the UST from the UST pit, both the oxygen content and LEL of the UST atmosphere were reported to be less than 10 percent. Inspector Kurt Swart of the SCFD was on site at the time of UST removal to observe UST removal activities, the condition of the UST, and to specify laboratory analysis for all UST-related environmental samples. Immediately prior to removal, the UST was observed to be floating on groundwater that had accumulated in the UST pit.

Following removal, the UST was visually inspected for evidence of holes, cracks, or corrosion. The UST was observed to be constructed of double wall, fiberglass coated steel. The UST exterior was observed to have no evidence of holes, cracks, pits, or leakage. The UST was measured to be approximately five feet in diameter and twelve feet in length. The UST was surrounded in the UST pit by pea gravel. The bottom of the UST was located at a depth of approximately 8.5 feet below the ground surface. Immediately following removal of the UST, the water level in the UST pit was measured as 5 feet 4 inches below the ground surface.

Following visual inspection, the UST was loaded onto a truck and transported by MARCOR using a uniform hazardous waste manifest (number 22765418) to the Ecology Control, Inc. (ECI) facility in Richmond, California for destruction. MARCOR is a State-Certified Hazardous Waste Hauler. The ECI Richmond facility is a State-Certified UST Transportation Storage and Disposal Facility. Copies of the hazardous waste manifest and certificate of tank destruction (listed as tank number 32361) are attached with this report.

On February 25, 2005 after the UST had been removed from the UST pit, groundwater that had accumulated in the UST pit was removed by a vacuum truck and loose mud in the bottom of the pit was removed to a depth of approximately 9 feet below the ground surface. At the former location of the center of the UST, soil from the bottom of the UST pit was removed by a backhoe to a depth of approximately 11 feet below the ground surface. One soil sample designated as T1-11.0 was collected

into a 6-inch long, 2-inch diameter brass or stainless steel tube from relatively undisturbed soil in the backhoe bucket. The soil had been obtained from a depth of approximately 11 feet below the ground surface, as approved via telephone by Mr. Kurt Swart of the SCFD. After the tube had been filled with soil, the ends of the tube were sequentially covered with aluminum foil and plastic endcaps. The tube was subsequently labeled and stored in a cooler with ice pending delivery to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-Accredited Hazardous Waste Testing Laboratory. Chain of custody procedures were observed for all sample handling. The sample collection location is shown in Figure 2.

On February 25, 2005, UST system piping that formerly contained diesel fuel was pulled from its secondary containment by MARCOR. Following removal of the piping from its secondary containment, MARCOR excavated to below the former piping at the western edge of the pipe trench, at a location immediately adjacent to the concrete berm around the boiler area, which was located approximately 20 feet from the edge of the former UST. The depth to the bottom of the UST system piping was measured by P&D personnel to be approximately 1.7 feet below the surrounding concrete surface. Pipe trench soil sample PT1-2.7 was collected by P&D personnel in native soil approximately one foot below the former UST system piping. The pipe trench soil sample was obtained by first removing soil with a hand auger to a depth of approximately six inches below the bottom of the pipe trench. A stainless steel sampler lined with a stainless steel or brass tube was then driven with a slide hammer into the soil at the bottom of the hand augered borehole. Following soil sample collection, the tube containing the soil sample was removed from the sampler, and the sample was capped, labeled and stored in a cooler with ice as described above for the UST pit soil sample. The pipe trench soil sample collection location is shown in Figure 2.

UST Pit Over-Excavation

On February 24 and 25, 2005, the UST pit was over-excavated by MARCOR. Over-excavation activities consisted of enlarging the UST pit approximately one foot on the north, east and west sides of the pit and approximately two feet as shown by the hatched area on the attached Site Plan, Figure 2.

On February 25, 2005 following over-excavation, P&D personnel collected a total of four over-excavation confirmation soil samples designated as C1-5.5, C2-5.5, C3-5.2, and C4-5.5. One confirmation soil sample was collected from each of the UST pit sidewalls, as specified via telephone by Mr. Kurt Swart of the SCFD. For confirmation soil sample collection, MARCOR personnel obtained relatively undisturbed soil in the backhoe bucket from the pit sidewalls at depths of approximately 5.5 feet below ground surface. P&D personnel collected and preserved the samples from relatively undisturbed soil in the backhoe bucket using the same methods described above for collection of the UST pit bottom soil sample. The over-excavation confirmation soil sample collection locations are shown in Figure 2.

Soil Management

P&D personnel collected one four-point composite soil stockpile sample for waste characterization purposes from each of two soil stockpiles designated as Stockpile A and Stockpile B that were created during UST removal and over-excavation. Stockpile A consisted

of soil excavated before the February 23, 2005 diesel fuel spill described above, and Stockpile B consisted of soil excavated after the spill. On February 24, 2005 one composite soil sample designated as COMP A was collected from Stockpile A.

At the request of Mr. Swart of the SCFD, one of the four sample containers for composite sample COMP B was collected on February 24, 2005 from soil from Stockpile B that exhibited obvious petroleum hydrocarbon staining and odors. The remaining three sample containers for composite sample COMP B were collected from Stockpile B following completion of over-excavation on February 25, 2005. All soil stockpile samples were collected into 6-inch long, 2-inch diameter brass or stainless steel tubes as follows. After excavating approximately one foot into the stockpile at each sample collection location, the tube was pushed directly into soil. The filled sample tubes were capped, labeled and preserved as described above. Sample locations were designated by Mr. Swart of the SCFD. The four sample containers for each soil stockpile sample were composited at the laboratory prior to analysis. The sample collection locations are shown in Figure 2.

Following receipt of laboratory analytical results for the soil stockpile samples, Decon disposed of both Stockpile A and Stockpile B at the Forward Landfill in Manteca, California. A total of three non-hazardous waste manifests (numbers 4672-1, 4672-2, and 4672-3) and three weight tickets (numbers 216401, 229101, 229126) dated March 9, 2005 provided by Decon documenting disposal of Stockpile A and Stockpile B (a total of 54.7 tons) are attached with this report.

Pit Water Management and Sampling

It is P&D's understanding that immediately following the diesel spill on February 23, 2005 personnel from Decon removed approximately 400 gallons of water and free product from the UST pit. The water and product were transported with the uniform hazardous waste manifest for the removal of the 2,000 gallons of fuel from the UST. It is P&D's understanding that subsequent pit water sampling and removal of diesel-impacted water from the UST pit occurred as follows. On February 24, 2005 immediately after removal of the UST from the UST pit, P&D personnel collected groundwater sample Pit Water-1 from the UST pit. Following collection of sample Pit Water-1, Decon removed additional pit water on February 24 and 25, 2005 due to the presence of hydrocarbon sheen on the groundwater in the UST pit. Following removal of UST pit water by Decon, P&D personnel collected groundwater sample Pit Water-2 from the UST pit on February 25, 2005. On March 2, 2005, Decon removed additional pit water to reduce the amount of dissolved diesel fuel in the pit water. Following removal of UST pit water on March 2 by Decon, P&D personnel collected groundwater sample Pitwater-3 from the UST pit on March 3, 2005.

All groundwater samples were collected with a clean Teflon bailer and transferred into one-liter amber bottles that were capped with Teflon-lined screwcaps, and stored in a cooler with ice pending delivery to McCampbell. Chain of custody procedures were observed for all sample handling. Manifests documenting disposal of pit water by Decon to Romic are attached with this report. Uniform hazardous waste manifests 95932354 dated February 24, 2005 and 24436858 and 24436859 dated February 25, 2005, and non-hazardous waste manifests 3205 and 3205-1

dated March 2, 2005 are attached with this report and contain notes showing disposal of 2200, 2415, 2797, 2780 and 2200 gallons, respectively.

Pit Backfilling

It is P&D's understanding that on March 8, 2005 the pit was backfilled with drain rock to a height equivalent with the water level in the pit. Filter fabric was subsequently placed on the drain rock, and baserock was then placed in the pit and compacted in one-foot lifts until the pit was completely backfilled.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U.S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E.J. Helley and K.R. Lajoie, 1979 the subject site is underlain by Fine-Grained Alluvium (Qhaf). The alluvium is described as typically consisting of unconsolidated plastic moderately to poorly sorted carbonaceous silt and clay.

The subsurface materials observed in the eastern wall of the UST pit following over-excavation on February 25, 2005 consisted of a surface layer of asphalt, sequentially underlain by a 6-inch thick baserock layer of gray gravelly silt, a 2-foot thick layer of blackish brown clayey silt, a 3-inch thick layer of orange silty clay, a 2-foot thick layer of gray silty clay, a 1-foot thick black silty clay layer, and a brownish gray silty clay layer to the groundwater surface at an approximate depth of 5 feet 9 inches. The total depth of the UST pit, including depth beneath groundwater, was approximately 9 feet below ground surface. No staining or evidence of petroleum hydrocarbon odors were detected in the UST pit sidewalls.

Immediately after the UST was removed on February 24, 2005, the depth to groundwater was measured in the UST pit at 5 feet 4 inches below ground surface. Following the pumping of water from the UST pit on February 24 and 25, 2005 the measured depth to water in the pit was approximately 5 feet 9 inches. The Guadalupe River is located approximately one mile east of the subject site. The Guadalupe River flows northwest to San Francisco Bay. The groundwater flow direction at the site is unknown, but based on the surrounding topography the groundwater flow direction is assumed to be northerly toward San Francisco Bay.

LABORATORY ANALYSIS

The UST pit bottom soil sample T1-11.0 and soil stockpile samples COMP A and COMP B were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D) using EPA Methods 3550C and 8015C; and for benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Methods 5030B, 8021B and modified EPA Method 8015C. Pipe trench soil sample PT1-2.7 and over-excavation confirmation soil samples C1-5.5, C2-5.5, C3-5.2 and C4-5.5 were analyzed for TPH-D using methods described above. UST pit water samples Pit Water-1, Pit Water-2, and Pitwater-3 were analyzed for TPH-D using EPA Methods 3510C and 8015C.

Review of the laboratory analytical results for tank pit bottom sample T1-11.0, pipe trench soil sample PT1-2.7, and confirmation soil samples C1-5.5, C2-5.5, C3-5.2 and C4-5.5 show that none of the target analytes were detected. Laboratory analytical results for the tank pit bottom sample are summarized in Table 1. Laboratory analytical results for pipe trench soil sample are summarized in Table 2. Laboratory analytical results for the over-excavation confirmation soil samples are summarized in Table 3.

Review of the laboratory analytical results for soil stockpile composite samples COMP A and COMP B show that none of the target analytes were detected, except for TPH-D at concentrations of 1.3 and 25 mg/kg, respectively, and 0.0095 mg/kg xylenes in COMP B. The laboratory report for sample COMP A notes that the TPH-D result consists of oil-range hydrocarbons, and that one to a few isolated peaks are present. Laboratory analytical results for the soil stockpile samples are summarized in Table 4.

Laboratory analytical results for UST pit water samples Pit Water-1, Pit Water-2, and Pitwater-3 show that TPH-D was detected at concentrations of 43, 8.0 and 0.084 mg/L, respectively. Laboratory analytical results for the soil stockpile samples are summarized in Table 5. Laboratory reports and chain of custody documentation for all samples are attached with this report.

DISCUSSION AND RECOMMENDATIONS

One double wall, fiberglass coated, steel 2,000-gallon capacity UST was uncovered and its contents removed on February 23, 2005. It is P&D's understanding that the UST was formerly used to store diesel fuel for a boiler at the subject site, and that approximately 30 gallons of diesel fuel was spilled during removal of fluids from the UST prior to UST removal.

The UST was removed from the subject site on February 24, 2005. Based on visual inspection of the UST at the time of removal, no evidence of holes, cracks, pits, or leakage was observed. On February 25, 2005, one UST pit bottom soil sample designated T1-11.0 and one pipe trench sample designated PT1-2.7 were collected from native soil below the former locations of the UST and associated piping. On February 24 and 25, 2005, the UST pit was over-excavated and on February 25, 2005 over-excavation confirmation soil samples C1-5.5, C2-5.5, C3-5.2, and C4-5.5 were collected from the UST pit sidewalls. The laboratory results for the soil samples show that no petroleum hydrocarbons were detected in any of the samples

Diesel-impacted groundwater associated with the diesel that was spilled while removing liquids from the UST was pumped from the UST pit and pit water samples were collected on February 24 and 25, and on March 3, 2005. TPH-D was detected in the pit water samples at concentrations of 43, 8.0 and 0.084 mg/L, respectively.

The absence of petroleum hydrocarbons in the soil samples indicates that petroleum hydrocarbons were not present beneath the UST and associated piping, and that spilled diesel was successfully removed from the soil. The reduction of TPH-D in the pit water samples indicates that the pumping of pit water successfully reduced the spilled TPH-D concentrations in the pit water to below the San Francisco Regional Water Quality Control Board February 2005 Environmental Screening Level Table A-1 (residential land use where groundwater is a current or potential

drinking water resource) and Table A-2 (commercial/industrial land use where groundwater is a current or potential drinking water resource) value of 0.1 mg/L.

It is P&D's understanding that all excavated soil was removed from the site and disposed of at the Altamont Landfill in Livermore, California.

Based on observations at the time of UST removal and the soil and pit water sample results, P&D recommends that no further action be performed.

DISTRIBUTION

Copies of this report should be sent to Mr. Kurt Swart of the City of Santa Clara Fire Department. Copies of the report should be accompanied by a transmittal letter signed by a representative of the property owner.

LIMITATIONS

This report was prepared solely for the use of MARCOR. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

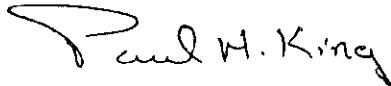
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

April 12, 2005
Report 0369.R1

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental



Paul H. King
President
California Registered Geologist #5901
Expires: 12/31/05

Attachments: Table 1 Tank Pit Bottom Soil Sample Laboratory Analytical Results
Table 2 Pipe Trench Soil Sample Laboratory Analytical Results
Table 3 Over-Excavation Confirmation Soil Sample Laboratory Analytical Results
Table 4 Soil Stockpile Composite Sample Laboratory Analytical Results
Table 5 UST Pit Water Sample Laboratory Analytical Results
Site Location Map (Figure 1)
Site Plan (Figure 2)
Uniform Hazardous Waste Manifest (#24104925) for disposal of 2,400 gallons of fuel
from the UST and liquid from the UST pit
Uniform Hazardous Waste Manifest (#22765418) for disposal of the UST
Certificate of Tank Destruction (tank #32361)
Non-Hazardous Waste Manifests (#4672-1, 4672-2, and 4672-3) for disposal of soil
Weight Tickets (#216401, 229101, 229126) for disposal of soil
Uniform Hazardous Waste Manifests (#95932354, 24436858, 24436859) for disposal
of pit water
Non-Hazardous Waste Manifests (#3205, 3205-1) for disposal of pit water
Laboratory Reports
Chain of Custody Documentation

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0369.R1

TABLE 1
TANK PIT BOTTOM SOIL SAMPLE
LABORATORY ANALYTICAL RESULTS
(Sample Collected February 25, 2005)

Sample Name	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
T1-11.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

Notes:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not detected.

Results are in milligrams per kilogram (mg/kg), unless otherwise noted.

April 12, 2005
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TABLE 2
PIPE TRENCH SOIL SAMPLE
LABORATORY ANALYTICAL RESULTS
(Sample Collected February 25, 2005)

Sample Name	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
PT1-2.7	ND<1.0	--	--	--	--

Notes:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

-- = Not analyzed.

Results are in milligrams per kilogram (mg/kg), unless otherwise noted.

April 12, 2005
Report 0369.R1

TABLE 3
OVER-EXCAVATION CONFIRMATION SOIL SAMPLE
LABORATORY ANALYTICAL RESULTS
(Samples Collected February 25, 2005)

Sample Name	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
C1-5.5	ND<1.0	--	--	--	--
C2-5.5	ND<1.0	--	--	--	--
C3-5.2	ND<1.0	--	--	--	--
C4-5.5	ND<1.0	--	--	--	--

Notes:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not detected.

-- = Not analyzed.

Results are in milligrams per kilogram (mg/kg), unless otherwise noted.

TABLE 4
SOIL STOCKPILE COMPOSITE SAMPLE
LABORATORY ANALYTICAL RESULTS
(Samples Collected February 24 and 25, 2005)

Sample Name	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
Comp A	1.3,a,b	ND<0.005	ND<0.005	ND<0.005	ND<0.005
Comp B	25	ND<0.005	ND<0.005	ND<0.005	0.0095

Notes:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not detected.

a = Laboratory report note: results reported as diesel consist of oil range compounds.

b = Laboratory report note: one to a few isolated peaks present.

Results are in milligrams per kilogram (mg/kg), unless otherwise noted.

April 12, 2005
Report 0369.R1

TABLE 5
UST PIT WATER SAMPLE
SUMMARY OF LABORATORY ANALYTICAL RESULTS
(Samples Collected February 24 and 25, and March 3, 2005)

Sample Name	Sample Date	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
Pit Water-1	2/24/05	43,c	--	--	--	--
Pit Water-2	2/25/05	8.0,c	--	--	--	--
Pitwater-3	3/03/05	0.084,d	--	--	--	--

Notes:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

ND = Not detected.

-- = Not analyzed.

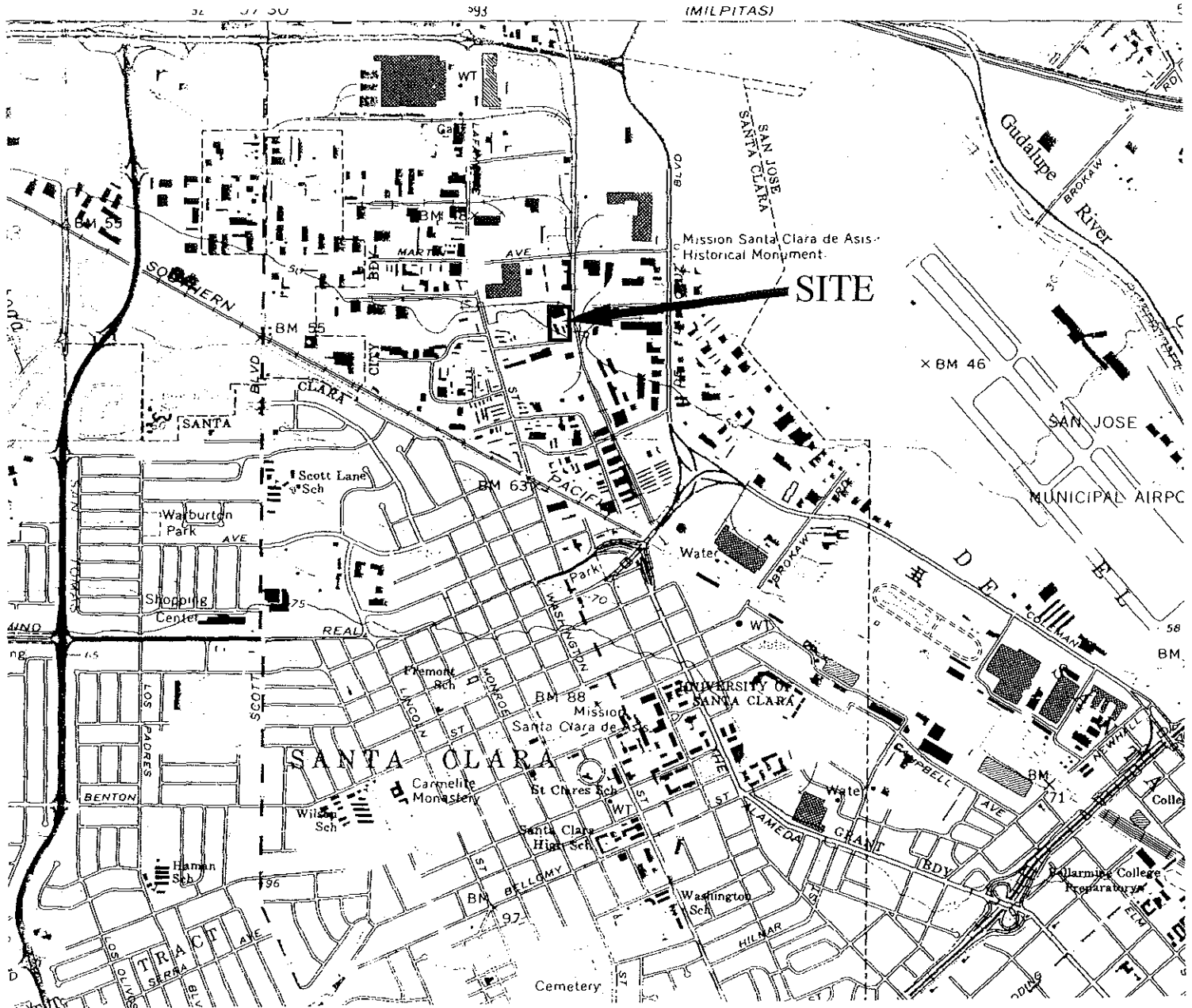
c = Laboratory report note: lighter than water immiscible sheen/product is present.

d = Laboratory report note: diesel range compounds are significant; no recognizable pattern.

Results are in milligrams per liter (mg/L), unless otherwise noted.

P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916



Base Map From:
U.S. Geological Survey
San Jose West Calif.
7.5 Minute Series (Topographic)
Photorevised 1980

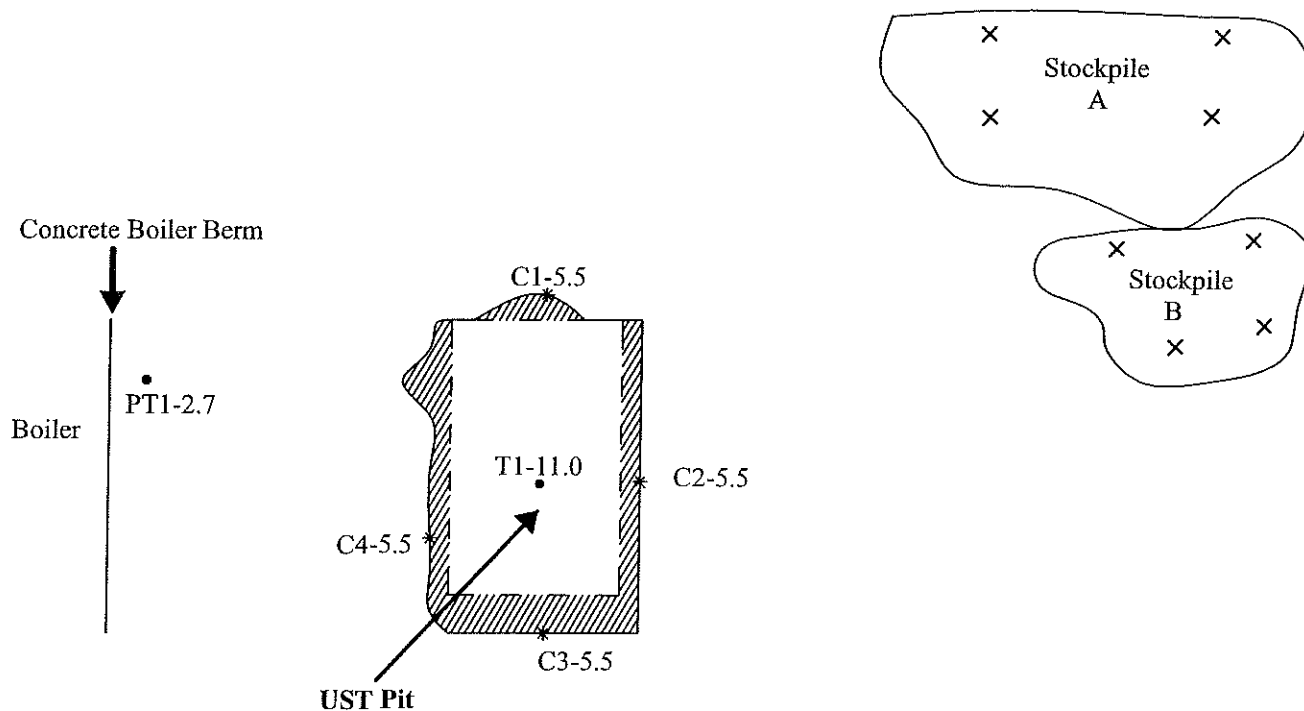
0 1000 2000
Scale In Feet



Figure 1
Site Location Map
Diana Fruit
657 Mathew Street
Santa Clara, California

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4020 Panama Court
Oakland, CA 94611
(510) 658-6916



LEGEND

- Former perimeter of excavation during UST removal on February 24, 2005.
- ▨ Area of over-excavation
- T1-11.0 Tank pit bottom and pipe trench sampling location
- * C1-5.5 Over-excavation confirmation sampling location
- x Soil stockpile sampling location

Base Map:
Prepared by P & D Environmental
February 25, 2005
Using a steel tape

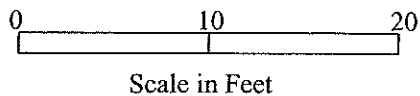


Figure 2
Site Plan
Diana Fruit
657 Mathew Street
Santa Clara, California

State of California—Environmental Protection Agency
 Approved Form No. 2030-0039 (Expires 9-30-99)
 Use print or type. Form designed for use on slide (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
 Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address CEANA FRUIT PROCESSING CO 651 HATHEN STREET SANTA CLARA, CA 95050		4. Generator's Phone () () () () () ()		A. State Manifest Document Number 24100823	
5. Transporter 1 Company Name DROM ENVIRONMENTAL		6. US EPA ID Number 1 0 0 9 8 1 4 6 8 1 0			
7. Transporter 2 Company Name		8. US EPA ID Number			
9. Designated Facility Name and Site Address DROM ENVIRONMENTAL YSCU 2681 BAY ROAD SANTO PALO ALTO, CA 94301		10. US EPA ID Number 1 0 0 9 8 1 4 6 8 1 0			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	
a. HAZARDOUS WASTE, MIXED, (DIBRE)		001 TT	02400	G	
b.					
c.					
d.					
15. Special Handling Instructions and Additional Information NO. HAZARDOUS WASTE					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name		Signature		Month Day Year	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name VAMON WILLIAMS		Signature		Month Day Year 02 23 05	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year 02 23 05	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest as noted in Item 19. Printed/Typed Name TERRY LANEY					
Signature		Signature		Month Day Year 02 23 05	

Informant Number: X 8880010

DO NOT WRITE BELOW THIS LINE.

Form approved by EPA. Form designed for use on a line (12-pitch) typewriter.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Diana Fruit Company 651 Mathew Street Santa Clara, CA 95050		A. State Manifest Document Number 22765418			
4. Generator's Phone (408) 7-9521 x1222 ext. Steven Nunes		B. State Generator ID			
5. Transporter 1 Company Name MARCOR Remediation, Inc.		C. State Transporter ID			
6. US EPA ID Number M D R 0 0 0 0 1 2 0 5 4		D. Transporter Name			
7. Transporter 2 Company Name		E. State Transporter ID			
8. US EPA ID Number		F. Transporter Name			
9. Designated Facility Name and Site Address PACIFIC CONTROLS INDUSTRIES 235 Parr Blvd. Richmond, CA 94801		10. US EPA ID Number 22765		G. State Facility ID	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type		13. Total Quantity	
a. NON-RCRA Hazardous Waste Solid Waste Empty Storage Tank		0101 T R		02000	
b.					
c.					
d.					
14. Special Handling Instructions and Additional Information FI Emergency Contact: 800-888-9501 MARCOR Job#: 22-04248-001 Job Site: Same as generator above		15. Material Description and Material Name		16. Material Quantity	
17. Generator's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name Steven Nunes		Signature [Signature]		Month Day Year 01/21/05	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Rajeev D. Kulkarni		Signature [Signature]		Month Day Year 01/21/05	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name CHRIS WISE		Signature [Signature]		Month Day Year 01/21/05	

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

DAY OR NIGHT

TELEPHONE

(510) 235-1393

CERTIFIED SERVICES COMPANY

255 Parr Boulevard - Richmond, California 94801

CUSTOMER Marcor

JOB. NO. 52T1676

651 Mathew Street
Santa Clara, CA 95050FOR: ECOLOGY CONTROL INC.TANK NO. 32361LOCATION: RICHMONDDATE: 4/5/05 TIME: 3:00pmTEST METHOD: VISUAL GASTECH/1314 SMPNLAST PRODUCT: Diesel

This is to certify that I have personally determined that this is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE: 2,000CONDITION: SAFE FOR FIREREMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ECOLOGY CONTROL INDUSTRIES

HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED

AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.

ECOLOGY CONTROL INDUSTRIES HAS THE APPROPRIATE PERMITS FOR AND HAS ACCEPTED

THE TANK SHIPPED TO US FOR PROCESSING.

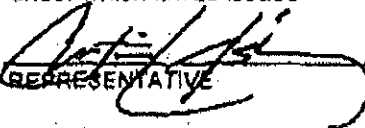
In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or it in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector's certificate

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) in the judgment of the Inspector, the residues are not capable of producing a higher concentration than permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.


REPRESENTATIVE
TITLE
INSPECTOR

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on 8 1/2 x 11 inch typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 4672-1	2. Page 1 of 1
3. Generator's Name and Mailing Address DIANA FRUIT PRESERVING CO 651 MATTHEW ST. SANTA CLARA, CA. 95050					
4. Generator's Phone (408) 727 9631					
5. Transporter 1 Company Name JULIAN CARBIA		6. US EPA ID Number		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone	
9. Designated Facility Name and Site Address FORWARD LANDFILL 4999 SOUTH AUSTIN RD. MANTERCA, CA 95336		10. US EPA ID Number CAL000190080		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone (209) 982-4299	
11. WASTE DESCRIPTION		12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol.
NON HAZARDOUS WASTE SOLID (SOIL WITH DISSEAL CONTAMINATION)		01 TF 22 AT		6020	Y
15. Special Handling Instructions and Additional Information CAUTION: WEAR APPROPRIATE PPE WHEN HANDLING DECON 4672 IN CASE OF EMERGENCY CONTACT: DECON ENVIRONMENTAL SERVICES, INC @ (510) 475-2901 PROFILE # 5305					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Steven Nunes		Signature <i>Steven Nunes</i>		Date Month Day Year 8 19 05	
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name		Signature		Date Month Day Year	
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name		Signature		Date Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 16. Printed/Typed Name Signature Date					

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on site (12 inch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 4672-6	2. Page 1 of 1
3. Generator's Name and Mailing Address DIANA FRUIT PROCESSING CO. 651 MARTIN ST. SANTA CLARA, CA 95050					
4. Generator's Phone (408) 777 9431					
5. Transporter 1 Company Name ROMERO TRUCKING		6. US EPA ID Number		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone (408) 951 1500	
9. Designated Facility Name and Site Address FORWARD LANDFILL 9999 SOUTH AUSTIN RD. MANTERCA, CA 95336		10. US EPA ID Number CAL000190050		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone (209) 952 4295	
11. WASTE DESCRIPTION			12. Containers	13. Total Quantity	14. Unit Wt/Vol
NON HAZARDOUS WASTE SOLID. (SOIL WITH DIESEL CONTAMINATION)			No. 01 Type TP	00020	YD
H. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information CAUTION! WEAR APPROPRIATE PPE WITHIN HANDLING DESIGN 4672 IN CASE OF EMERGENCY CONTACT: PRION ENVIRONMENTAL PROFILE # 5305 SERVICES, INC. @ (410) 475-2901					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Steven Nunes		Signature (Signature)		Date Month Day Year 10/19/05	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Curtis Sykes		Signature (Signature)		Date Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature (Signature)		Date Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 18.					
Printed/Typed Name Maurice Dominguez		Signature (Signature)		Date Month Day Year 3/2/05	

NON-HAZARDOUS WASTE

FACILITY

NON-HAZARDOUS WASTE MANIFEST

Please print or type (form designed for use on site (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 4672-3	2. Page 1 of 1
3. Generator's Name and Mailing Address DIANA FRUIT PRESERVING CO. 651 MATTHEW ST. SANTA CLARA, CA. 95050		4. Generator's Phone (408) 777-9631			
5. Transporter 1 Company Name ADAMS TRUCKING		6. US EPA ID Number		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone (510) 252-1800	
9. Designated Facility Name and Site Address FORWARD LANDFILL 4999 SOUTH AMSTIN RD. MANTILCA, CA. 95326		10. US EPA ID Number CAL 000190080		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone (209) 952-4296	
11. WASTE DESCRIPTION		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
NON HAZARDOUS WASTE SOLID (SOIL WITH OIL/GREASE CONTAMINATION)		01	TL	0020	YD
15. Additional Description of Materials Listed Above		16. Handling Order to Vehicle Listed Above			
17. Special Handling Instructions and Additional Information CAUTION: W/GR. APPROPRIATE PPE WITH HANDLING. URGENT 4672 IN CASE OF EMERGENCY CONTACT: DECION ENVIRONMENTAL PROFILES # 5305 SERVICES, INC. (510) 475-2901					
18. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Steven Nunes		Signature <i>Steven Nunes</i>		Date Month Day Year 3 9 05	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>Julian Carranza</i>		Date Month Day Year	
Printed/Typed Name Julian Carranza		Signature		Date	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Date	
Printed/Typed Name		Signature		Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name Martina		Signature <i>Martina</i>		Date Month Day Year 3 9 05	

NON-HAZARDOUS WASTE

FORWARD INCORPORATED

9791 South Austin Road
Manteca, CA 95230
Tel: (209) 982-4125 Fax: (209) 982-1009
Resource Recovery (209) 982-4935

P.O. Box 6336
Stockton, CA 95206
Main Office: (209) 466-4482
Fax: (209) 465-0631

DATE: 1/19/05

TRUCK NO: 5305

TRUCK NO: 31105

TRAILER: III

BILL TO: DECON ENVIR

SIZE	DESCRIPTION	QUANTITY	NOTES
	<input type="checkbox"/> WASTE		
	<input type="checkbox"/> TREATED WOOD		
	<input type="checkbox"/> SLUDGE		
	<input type="checkbox"/> GARB		
	<input type="checkbox"/> ASBESTOS		
	<input type="checkbox"/> NON-FIBRILE ASBESTOS		
	<input type="checkbox"/> OTHER		
	<input type="checkbox"/> DUST		
	<input type="checkbox"/> TOTAL		

215491

6/1/01

76680 GROSS

7520 TARE

64160 NET

2008 TONS

IN _____ A.M./P.M.

OUT _____ A.M./P.M.

FORWARD INCORPORATED

9999 South Austin Road
Manhasset, CA 95336
Landfill: (209) 982-4298 Fax: (209) 982-1009
Resource Recovery: (209) 982-4336

P.O. Box 6336
Stockton, CA 95206
Main Office: (209) 466-4482
Fax: (209) 465-0631

DATE: 2/19/05

TRUCK LIC. # _____

CUSTOMER NO. 5305 TRUCK NO. 257 TRAILER LIC. # _____

BILL TO: Decor Envir

SIZE YDS.	DESCRIPTION	AMOUNT	NOTES
	<input type="checkbox"/> REFUSE		
	<input type="checkbox"/> TREATED WOOD		
	<input type="checkbox"/> SLUDGE		
	<input type="checkbox"/> ASH		
	<input type="checkbox"/> ASBESTOS		
	<input type="checkbox"/> NON-FIBRABLE ASBESTOS		
	<input type="checkbox"/> FILL		
	<input type="checkbox"/> BEDROCK SOIL		
	<input type="checkbox"/> STOCKPILE		
	TOTAL		

166800 GROSS

31040 TARE

35740 NET

17.88 TONS

IN _____ A.M./P.M.

OUT _____ A.M./P.M.

229101

FOI INCORPORATED

9999 South
Menlo Park, CA
Landfill: (209) 982-4936
Resource Recovery: (209) 982-4936

P.O. Box 6336
Stockton, CA 95206
Main Office: (209) 466-4482
Fax: (209) 465-0631

DATE 6-6-16

TRUCK LIC.# _____

CUSTOMER NO. 5305 TRUCK NO. 3103 TRAILER LIC.# _____

BILL TO: _____ (MARTINEZ)

SIZE YDS	DESCRIPTION	AMOUNT	NOTES
	<input type="checkbox"/> REFUSE <input type="checkbox"/> TREATED WOOD		1019.80 GROSS
	<input type="checkbox"/> SLUDGE <input type="checkbox"/> ASH		325.00 TARE
	<input type="checkbox"/> ASBESTOS <input type="checkbox"/> NON-FRANABLE ASBESTOS		29480.3 NET
	<input type="checkbox"/> E-SOIL <input type="checkbox"/> S-SOIL <input type="checkbox"/> COVER SOIL <input type="checkbox"/> STOCKPILE		14.74 TONS
	TOTAL		

IN _____ A.M./P.M.

OUT _____ A.M./P.M.

229126

95932354
IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		Generator ID# 059175878 Manifest Document No. 323541 of 1		2. Page 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DIANA FRUIT PRESERVING CO. 651 MATHEWS SANTA CLARA CA. 95050		4. Generator's Phone ()		5. Transporter 1, Company Name DECON ENVIRONMENTAL CO SERVICES		6. US EPA ID Number CAAD9824168183	
7. Transporter 2 Company Name		8. US EPA ID Number		9. Designated Facility Name and Site Address ROMIC Environmental Technologies Corporation 2081 Bay Road East Palo Alto, CA 94303		10. US EPA ID Number C A D 0 0 9 4 5 2 6 5 7	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. NON-RCRA HAZARDOUS WASTE, liquid (water, DIESEL FUEL) Profile 366732		12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol	
b.		001 TT		02000 G			
c.							
d.							
15. Special Handling Instructions and Additional Information Gloves, Goggles, and Protective Clothing. D.O.T. ERG #:							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name DEREK JANICH		Signature 		Month 01		Day 24	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DAMON WILLIAMS		Signature 		Month 01		Day 24	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month		Day	
19. Discrepancy Indication Space							
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name Lisa Murray or Lemelle Bates							
Signature 		Month 01		Day 25		Year 05	

DO NOT WRITE BELOW THIS LINE.

24436858
IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1	Information in the shaded areas
		C A D 0 0 9 1 7 5 8 7 8	36858	1 of 1	FIELD SERVICES
3. Generator's Name and Mailing Address DIANA FRUIT PRESERVING CO 651 MATHEN STREET SANTA CLARA, CA 95050 4. Generator's Phone () Contact:		A. State Manifest Document Number 24436858		B. State Generator's ID	
5. Transporter 1 Company Name DECON ENVIRONMENTAL		6. US EPA ID Number C A D 9 8 2 4 6 8 1 8 3		C. State Transporter's ID [Reserved]	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone (510)732-6444	
9. Designated Facility Name and Site Address RONIC ENVIRONMENTAL TECH 2081 BAY ROAD EAST PALO ALTO, CA 94303		10. US EPA ID Number C A D 0 0 9 4 5 2 6 5 7		E. State Transporter's ID [Reserved]	
				F. Transporter's Phone	
				G. State Facility's ID C A D 0 0 9 4 5 2 6 5 7	
				H. Facility's Phone (650)324-1638	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type		13. Total Quantity	14. Unit Wt/Val
a. NON-RCRA HAZARDOUS WASTE, LIQUID (WATER, DIESEL FUEL) Prill # E 366732 ERG#		001 T1 02200 G			
b.					I. Waste Number State 133 EPA/Other NONE
c.					State EPA/Other
d.					State EPA/Other
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above			
		a. 01 b. c. d.			
15. Special Handling Instructions and Additional Information OFF LOADED 2415g		24 HR. EMERGENCY RESPONSE #:			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name Steven Nunes		Signature Steven Nunes		Month Day Year 01/22/51015	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DAMON WILLIAMS		Signature Damon Williams		Month Day Year 01/22/51015	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name Annex LANEY					
Signature Annex Laney					
Month Day Year 01/22/51015					

Reference Number: E 800878387

DO NOT WRITE BELOW THIS LINE.

See instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

24436859
IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802: WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. C A D 0 0 9 1 7 5 8 7 8		Manifest Document No. 36859		2. Page 1 of 1		FIELD SERVICES					
3. Generator's Name and Mailing Address DIANA FRUIT PRESERVING CO 651 MATHEW STREET SANTA CLARA, CA 95050						A. State Manifest Document Number 24436859							
4. Generator's Phone () Contact:						B. State Generator's ID							
5. Transporter 1 Company Name DECON ENVIRONMENTAL						C. State Transporter's ID (Reserved)							
6. US EPA ID Number C A D 9 8 2 4 6 8 1 8 3						D. Transporter's Phone (510)732-6444							
7. Transporter 2 Company Name						E. State Transporter's ID (Reserved)							
8. US EPA ID Number						F. Transporter's Phone							
9. Designated Facility Name and Site Address RONIC ENVIRONMENTAL TECH 2081 BAY ROAD EAST PALO ALTO, CA 94303						G. State Facility's ID C A D 0 0 9 4 5 2 6 5 7							
10. US EPA ID Number C A D 0 0 9 4 5 2 6 5 7						H. Facility's Phone (650)324-1638							
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. NON-RCRA HAZARDOUS WASTE, LIQUID (WATER, DIESEL FUEL) Prfl# E 366732 EDC#						12. Containers		13. Total Quantity		14. Unit Wt/Val		I. Waste Number	
						No. Type						State 133 EPA/Other NONE	
b.												State EPA/Other	
c.												State EPA/Other	
d.												State EPA/Other	
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above a. 01 b. c. d.							
15. Special Handling Instructions and Additional Information 24 HR. EMERGENCY RESPONSE #:													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name Mario Campos				Signature <i>Mario Campos</i>				Month 02		Day 25		Year 05	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DAMON WILLIAMS				Signature <i>Damon Williams</i>				Month 02		Day 25		Year 05	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Scott Maddy				Signature <i>Scott Maddy</i>				Month 02		Day 28		Year 05	
19. Discrepancy Indication Space PER GENERATOR OFF LOADED 2797 GAL AND LAY 2/28/05 DEREK JAVICH 510-632-9440													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19 Printed/Typed Name Andy Loney				Signature <i>Andy Loney</i>				Month 02		Day 28		Year 05	

Reference Number: E 000070307

DO NOT WRITE BELOW THIS LINE.

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CAD 009 175078 - Hazardous		Manifest Document No. 3205	2. Page 1 of 1
3. Generator's Name and Mailing Address Diana Fruit Preserving Company 651 Mathew Street, Santa Clara, CA 95050					
4. Generator's Phone (408) 727-9651					
5. Transporter 1 Company Name DECON Environmental Services		6. US EPA ID Number CAD982468183		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone (510) 732-6444	
9. Designated Facility Name and Site Address Romic Environmental Tech. 2681 Bay Rd, East Palo Alto Ca 94303		10. US EPA ID Number CAD 009 452 657		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID (650) 324-1638	
				F. Facility's Phone (650) 324-1638	
11. WASTE DESCRIPTION				12. Containers	13. Total Quantity
				No.	Unit
				Type	WL/Vol.
a. NON-Hazardous Waste Liquid (water with trace diesel fuel)				1	G
G. Additional Descriptions for Materials Listed Above				H. Handling Codes for Wastes Listed Above	
11a. Ground water contaminated with diesel fuel. See attached analytical Offloaded 2780 Gallons				HC 01	
15. Special Handling Instructions and Additional Information CAUTION: Wear protective clothing and respiratory protection when handling. In Case of emergency contact: DECON Environmental Services at (510) 475-2901 Site pick-up address: 651 Mathew St. Santa Clara					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Hehran Samimi				Signature <i>[Signature]</i>	
				Date 3/2/05	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name Scott Madali				Signature <i>[Signature]</i>	
				Date 3/2/05	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name				Signature	
				Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name ANDY LANEY				Signature <i>[Signature]</i>	
				Date 03/02/05	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST FIELD SERVICES

Please print or type (Form designed for use on 11x17 inch typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. AD009175878		Manifest Document No. 3205-1		2. Page 1 of 1	
3. Generator's Name and Mailing Address Diana Fruit Preserving Co 651 Mathew Street, Santa Clara, CA 95050							
4. Generator's Phone (408) 727-9631							
5. Transporter 1 Company Name DECON Environmental Svcs				9. US EPA ID Number CAD 982 468 183		A. State Transporter's ID	
7. Transporter 2 Company Name				6. US EPA ID Number		B. Transporter 1 Phone (510) 732-6444	
8. Designated Facility Name and Site Address Romic Environmental Tech 2681 Bay Road, E. Palo Alto CA., 94303				10. US EPA ID Number CAD 009 452 657		C. State Transporter's ID	
						D. Transporter 2 Phone	
						E. State Facility's ID (650) 324-1638	
						F. Facility's Phone (650) 324-1638	
11. WASTE DESCRIPTION						12. Containers	
						No.	Type
a. NON-Hazardous Waste Liquid (water with trace diesel fuel)						1	TT
							2200
							G
13. Additional Descriptions for Materials Listed Above						14. Handling Codes for Wastes Listed Above	
11a. Ground water contaminated with diesel fuel. See attached analytical							
15. Special Handling Instructions and Additional Information CAUTION: Wear protective clothing and respiratory protection when handling. In case of emergency contact: DECON Environmental Services at (510) 475-2901 Site pick-up address: 651 Mathew Street, Santa Clara, CA							
PROFILE # 366742							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
Printed/Typed Name MIGUEL LEAL				Signature <i>Miguel Leal</i>		Date Month Day Year 3/2/05	
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature <i>Scott Madh</i>		Date Month Day Year 5/2/05	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Date Month Day Year	
Printed/Typed Name				Signature		Date Month Day Year	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 18.							
Printed/Typed Name MARY LANEY				Signature <i>Mary Laney</i>		Date Month Day Year 03/02/05	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY



110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0502398

Reporting Limit for DF=1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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<p align="center">Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*</p>		
Extraction method: SW5030B	Analytical methods: SW8021B/8015Cm	Work Order: 0502398

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) results are reported by dry weight.



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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502398

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 15169		Spiked Sample ID: 0502393-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	0.60	88.5	89.6	1.29	90.7	89.8	1.00	70 - 130	70 - 130
MTBE	ND	0.10	83.6	86.5	3.49	83.2	82.8	0.411	70 - 130	70 - 130
Benzene	ND	0.10	87.6	97.6	10.8	90.8	88.1	2.96	70 - 130	70 - 130
Toluene	ND	0.10	90.2	99.1	9.41	93.3	90.5	3.03	70 - 130	70 - 130
Ethylbenzene	ND	0.10	93.4	102	8.98	97.6	95.1	2.63	70 - 130	70 - 130
Xylenes	ND	0.30	91.7	103	12.0	99.7	95.3	4.44	70 - 130	70 - 130
%SS:	91	0.10	89	106	17.1	92	95	3.10	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502398

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 15162		Spiked Sample ID: 0502399-001A			
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	ND	150	104	104	0	106	106	0	70 - 130	70 - 130
%SS:	109	50	118	117	1.06	118	117	0.742	70 - 130	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.


% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

McC Campbell Analytical, Inc.



110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502398

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: Diana Fruit Santa Clara
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005

Date Printed: 02/25/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502398-001	T1-11.0	Soil	2/25/05	<input type="checkbox"/>	A	A													

Test Legend:

1	G-MBTX_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

200

050 2398

RUSH

PAGE 1 OF 1

[illegible]



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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502399

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 15162		Spiked Sample ID: 0502399-001A			
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	ND	150	104	104	0	106	106	0	70 - 130	70 - 130
%SS:	109	50	118	117	1.06	118	117	0.742	70 - 130	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.


% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

McC Campbell Analytical, Inc.



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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502399

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: Diana Fruit Santa Clara
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005

Date Printed: 02/25/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502399-001	PT1-2.7	Soil	2/25/05	<input type="checkbox"/>	A														

Test Legend:

1	TPH(D)_S	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

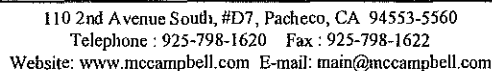
Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

RUSH

PAGE 1 OF 1

PROJECT NUMBER:		PROJECT NAME:		NUMBER OF CONTAINERS	ANALYSIS(ES):	PRESERVATIVE	REMARKS
SAMPLED BY: (PRINTED AND SIGNATURE)							
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION			
PT 1 -2.7	2/25/05		Soil	Pipe trench	1	X	ICE 24 Hour Rust
ICE/GOOD CONDITION							
HEAD SPACE ABSENT							
DECHLORINATED IN LAB							
PRESERVATION							
VOAS							
O&G							
METALS							
OTHER							
RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)
				2/25	1:45 PM		1
RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF CONTAINERS (THIS SHIPMENT)
							1
RELINQUISHED BY: (SIGNATURE)				DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	LABORATORY CONTACT:
							LABORATORY PHONE NUMBER:
							1925) 798 1620
							SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES X NO
				REMARKS:			



Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0502411

Reporting Limit for DF=1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502411

EPA Method: SW8015C		Extraction: SW3550C		BatchID: 15162		Spiked Sample ID: 0502399-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	ND	150	104	104	0	106	106	0	70 - 130	70 - 130
%SS:	109	50	118	117	1.06	118	117	0.742	70 - 130	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.


% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

McC Campbell Analytical, Inc.



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Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502411

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0369; Diana Fruit Santa Clara
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005

Date Printed: 02/28/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502411-001	C1-5.5	Soil	2/25/05	<input type="checkbox"/>	A														
0502411-002	C2-5.5	Soil	2/25/05	<input type="checkbox"/>	A														
0502411-003	C3-5.2	Soil	2/25/05	<input type="checkbox"/>	A														
0502411-004	C4-5.5	Soil	2/25/05	<input type="checkbox"/>	A														

Test Legend:

1	TPH(D)_S	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Maria Venegas

Comments: COC Received 2/28/05 on a Same Day Rush

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

LOC Received 2/28/05



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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502393

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 15169		Spiked Sample ID: 0502393-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	0.60	88.5	89.6	1.29	90.7	89.8	1.00	70 - 130	70 - 130
MTBE	ND	0.10	83.6	86.5	3.49	83.2	82.8	0.411	70 - 130	70 - 130
Benzene	ND	0.10	87.6	97.6	10.8	90.8	88.1	2.96	70 - 130	70 - 130
Toluene	ND	0.10	90.2	99.1	9.41	93.3	90.5	3.03	70 - 130	70 - 130
Ethylbenzene	ND	0.10	93.4	102	8.98	97.6	95.1	2.63	70 - 130	70 - 130
Xylenes	ND	0.30	91.7	103	12.0	99.7	95.3	4.44	70 - 130	70 - 130
%SS:	91	0.10	89	106	17.1	92	95	3.10	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502393

EPA Method: SW8015C		Extraction: SW3550C		BatchID: 15162		Spiked Sample ID: 0502399-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	ND	150	104	104	0	106	106	0	70 - 130	70 - 130
%SS:	109	50	118	117	1.06	118	117	0.742	70 - 130	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

McC Campbell Analytical, Inc.



110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502393

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0369; Diana Fruit, 22-04248
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005

Date Printed: 02/25/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502393-001	Comp A	Soil	2/24/05	<input type="checkbox"/>	A	A													

Test Legend:

1	G-MBTX_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

0502393

CHAIN OF CUSTODY RECORD

RUSH

PAGE 1 OF 1

[illegible]

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0369; Diana Fruite Santa Clara	Date Sampled: 02/24/05
		Date Received: 02/25/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 02/25/05
	Client P.O.:	Date Analyzed: 02/25/05

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C

Analytical methods: SW8015C

Work Order: 0502397

[illegible]

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502397

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 15169		Spiked Sample ID: 0502393-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	0.60	88.5	89.6	1.29	90.7	89.8	1.00	70 - 130	70 - 130
MTBE	ND	0.10	83.6	86.5	3.49	83.2	82.8	0.411	70 - 130	70 - 130
Benzene	ND	0.10	87.6	97.6	10.8	90.8	88.1	2.96	70 - 130	70 - 130
Toluene	ND	0.10	90.2	99.1	9.41	93.3	90.5	3.03	70 - 130	70 - 130
Ethylbenzene	ND	0.10	93.4	102	8.98	97.6	95.1	2.63	70 - 130	70 - 130
Xylenes	ND	0.30	91.7	103	12.0	99.7	95.3	4.44	70 - 130	70 - 130
%SS:	91	0.10	89	106	17.1	92	95	3.10	70 - 130	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0502397

EPA Method: SW8015C		Extraction: SW3550C		BatchID: 15162		Spiked Sample ID: 0502399-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	ND	150	104	104	0	106	106	0	70 - 130	70 - 130
%SS:	109	50	118	117	1.06	118	117	0.742	70 - 130	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.


% Recovery = $100 * (MS - Sample) / (Amount Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

McC Campbell Analytical, Inc.



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(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502397

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0369; Diana Fruite Santa Clara
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005

Date Printed: 02/25/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502397-001	Comp B	Soil	2/24/05	<input type="checkbox"/>	A	A													

Test Legend:

1	G-MBTX_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Oakland, CA 94610
(510) 658-6916

CHAIN OF CUSTODY RECORD

RUSH

PAGE 1 OF 1

[illegible]

P & D Environmental 55 Santa Clara, Ste.240 Oakland, CA 94610	Client Project ID: #0369; Diana Fruit, 22-04248	Date Sampled: 02/24/05
		Date Received: 02/25/05
	Client Contact: Wilhelm Welzenbach	Date Extracted: 02/25/05
	Client P.O.:	Date Analyzed: 02/25/05

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C

Analytical methods: SW8015C

Work Order: 0502392

[illegible]

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0502392

EPA Method: SW8015C		Extraction: SW3510C		BatchID: 15166		Spiked Sample ID: N/A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	7500	N/A	N/A	N/A	108	109	0.401	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	116	117	0.368	N/A	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

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Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502392

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0369; Diana Fruit, 22-04248
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005*Date Printed:* 02/25/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502392-001	Pit Water-1	Water	2/24/05	<input type="checkbox"/>	A														

Test Legend:

1	TPH(D)_W	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles**Comments:**

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

POLE

0502392

RUSH

PAGE 1 OF 1

[illegible]



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Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0502400

EPA Method: SW8015C		Extraction: SW3510C		BatchID: 15166		Spiked Sample ID: N/A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	7500	N/A	N/A	N/A	108	109	0.401	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	116	117	0.368	N/A	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0502400

ClientID: PDEO

Report to:

Wilhelm Welzenbach
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: Diana Fruit Santa Clara
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 02/25/2005

Date Printed: 02/25/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502400-001	Pit Water	Water	2/25/05	<input type="checkbox"/>	A														

Test Legend:

1	TPH(D)_W	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

P & D ENVIRONMENTAL

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(510) 658-6916

080 2400

CHAIN OF CUSTODY RECORD

RUSH

PAGE 1 OF 1

PROJECT NUMBER: 0369		PROJECT NAME: Diamondfruit, Santa Clara			NUMBER OF CONTAINERS 7	ANALYSIS(ES): TPH-D							PRESERVATIVE Ice	REMARKS 24 Hour Rush
SAMPLED BY: (PRINTED AND SIGNATURE) Wilhelm Welzenbach														
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION										
Pit Water-2	2/25/05		water											
ICE/° <input checked="" type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> HEAD SPACE ABSENT <input checked="" type="checkbox"/> DECHLORINATED IN LAB <input checked="" type="checkbox"/> PRESERVATION <input checked="" type="checkbox"/>					APPROPRIATE <input checked="" type="checkbox"/> CONTAINERS <input checked="" type="checkbox"/> PRESERVED IN LAB <input checked="" type="checkbox"/> VOAS <input checked="" type="checkbox"/> O&G <input checked="" type="checkbox"/> METALS <input checked="" type="checkbox"/> OTHER <input checked="" type="checkbox"/>									
RELINQUISHED BY: (SIGNATURE) Wilhelm Welzenbach					DATE 2/25	TIME 1:52	RECEIVED BY: (SIGNATURE) [Signature]			TOTAL NO. OF SAMPLES (THIS SHIPMENT) 1		LABORATORY: McC Campbell		
RELINQUISHED BY: (SIGNATURE)					DATE	TIME	RECEIVED BY: (SIGNATURE)			TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 7		LABORATORY CONTACT: LABORATORY PHONE NUMBER: 925) 798-1620		
RELINQUISHED BY: (SIGNATURE)					DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)			SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES (X) NO				
					REMARKS: VOAs preserved to HCE									



P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Client P.O.:

Date Analyzed: 03/03/05

Work Order: 0503075

Reporting Limit for DF =1;
ND means not detected at or
above the reporting limit

W

50

 $\mu\text{g/L}$

S

NA

NA

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0503075

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 15237			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	116	118	1.21	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	112	114	1.19	N/A	70 - 130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

BATCH 15237 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0503075-001A	3/03/05 2:20 PM	3/03/05 5:07 PM	3/03/05 8:24 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.


% Recovery = $100 * (MS - Sample) / (Amount Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

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55 Santa Clara Ave, Suite 240
Oakland, CA 94610
(510) 658-6916

pdlo 0503045

ICE/1* ☒
 GOOD CONDITION ☒ APPROPRIATE ☒
 HEAD SPACE ABSENT ☒ CONTAINERS ☒
 DECHLORINATED IN LAB ☒ PRESERVED IN LAB ☒
 VOAS | O&G | METALS | OTHER |

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

[illegible]

McC Campbell Analytical, Inc.



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Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0503075

ClientID: PDEO

Report to:

Eric Olson
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

TEL: (510) 658-6916
FAX: 510-834-0152
ProjectNo: #0369; Dianna Fruite, Santa Clara
PO:

Bill to:

Accounts Payable
P & D Environmental
55 Santa Clara, Ste.240
Oakland, CA 94610

Requested TAT:

1 day

Date Received: 03/03/2005

Date Printed: 03/03/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0503075-001	Pitwater-3	Water	3/3/05 2:20:00 PM	<input type="checkbox"/>	A														

Test Legend:

1	TPH(D)_W	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

APPENDIX P
Previous Underground Storage Tank Reports
725 Mathew Street

March 18, 1996

Mr. Val Gangi
Gangi Brothers Truck Company
P.O. Box 518
Santa Clara, CA 95052

Dear Mr. Gangi:

Subject: Underground Storage Tank Case Closure—Gangi Brothers Trucking Company, 725 Mathew Street, Santa Clara, CA; Case No. 12-075

This letter confirms the completion of site investigation and remedial action for the underground storage tank(s) formerly located at the above-described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721(e).

Please contact Mr. Lane Davis at the Santa Clara Valley Water District's Camden Office, (408) 927-0710, extension 2698, if you have any questions in this matter.

Sincerely,

ORIGINAL SIGNED BY

James S. Crowley, P.E.
Associate Civil Engineer
Leaking Underground Storage Tank Oversight Program

Enclosure

cc: Ms. Lori Casias (w/enc)
State Water Resources Control Board
Division of Clean Water Program
P.O. Box 944212
Sacramento, CA 94244-2120

Mr. John West (w/enc)
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Larry Monette, Ph.D.
Santa Clara Fire Department
777 Benton Street
Santa Clara, CA 95050

J. Crowley, L. Davis (w/original enc), Database (enc)

LD:lbg:FL9482qx

March 4, 1996

Mr. John West
Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, CA 94612

Dear Mr. West:

Subject: Request for Case Closure Concurrence—Underground Storage Tank Program Case No. 12-075, Gangi Brothers Trucking Company, 725 Mathew Street, Santa Clara, CA

This requests your concurrence on case closure for the subject fuel leak case. Enclosed for your review is a case closure summary. Please provide comment to the Santa Clara Valley Water District (District) casehandler within 30 days from the receipt of this letter. If we have not received comment from you within that time frame, the District will issue a case closure letter for the subject case.

As you know, the District has entered into agreement with the State Water Resources Control Board to provide regulatory oversight for leaking underground fuel storage tanks. The terms of the agreement require the District to issue case closure letters after appropriate remediation for cases where soil and/or groundwater has been impacted. District evaluation of case closure is consistent with the San Francisco Bay Region, Regional Water Quality Control Board Water Quality Control Plan (Basin Plan) requirements and guidance.

Please contact Mr. Lane Davis at the Camden Office, (408) 927-0710, extension 2698, with any questions or comments that arise as you proceed with review of this proposed case closure.

Sincerely,

ORIGINAL SIGNED BY

James S. Crowley, P.E.
Associate Civil Engineer
Leaking Underground Storage Tank Oversight Program

Enclosure

cc: Larry Monette, Ph.D.
Santa Clara Fire Department
777 Benton Street
Santa Clara, CA 95050

J. Crowley, L. Dorn, Database, L. Davis (w/original enc)

LD:cdh:FL9484dy

CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK PROGRAM

I. AGENCY INFORMATION

Date: February 29, 1996

Agency Name: Santa Clara Valley Water District	Address: 5750 Almaden Expressway
City/State/Zip: San Jose, CA 95118	Phone: (408) 265-2600
Responsible Staff Person: Lane R. Davis	Title: Assistant Engineer

II. CASE INFORMATION

Site Facility Name: Gangi Brothers Trucking Company		
Site Facility Address: 725 Mathew Street, Santa Clara, CA		
RB LUSTIS Case No.: —	Local Case No.: 06S1W35M02f	LOP Case No.: 12-075
URF Filing Date: 8/20/91	SWEEPS No.: —	APN No.: 224-40-002
Responsible Parties	Addresses	Phone Numbers
Mr. Val Gangi Gangi Brothers Truck Company	P.O. Box 518 Santa Clara, CA 95052	(408) 727-6252

Tank I.D. No	Size in Gallons	Contents	Closed In-Place/Removed?	Date
1, 2	3,000	Gasoline	Removed	7/7/93
3	4,000	Heating Oil	Removed	7/7/93
Piping			Removed	7/7/93

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: —	
Monitoring wells installed? Yes	Number: 1	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 5	Lowest Depth: 15	Flow Direction: —
Most Sensitive Current Use: Potential drinking water		

Summary of Production Wells in Vicinity: Two production wells were located at this site. One production well was found adjacent to the heating oil tank upon excavation. This well was destroyed as per District guidelines. It is not considered to be a likely receptor. This well was artesian at the time of destruction. Total well depth was 400 feet. No other production wells are located dowgradient of this site.

Are drinking water wells affected? No Aquifer Name: Santa Clara Valley Groundwater Basin

Is surface water affected? No Nearest SW Name: —

Off-Site Beneficial Use Impacts (Addresses/Locations): None

Reports on file? Yes Where are reports filed? Santa Clara Valley Water District

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	Three steel	Disposal, destination not reported	7/93
Piping	Not reported	Disposal, destination not reported	7/93
Free Product	None	—	—
Soil	200 cubic yards	Disposal, destination not reported	7/93
Groundwater	Not reported	Disposal by sampling contractor	—
Barrels	Not reported	Disposal by sampling contractor	—

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS—BEFORE AND AFTER CLEANUP (Please see Attachments 2 and 3 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)		Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before ¹	After		Before	After	Before	After
TPH (Gas)	ND	ND	5,100	ND	Xylene	ND	ND	8	ND
TPH (Diesel)	6,883	ND ²	1,661	ND	Ethylbenzene	ND	ND	0.9	ND
Benzene	ND	ND	0.8	ND	Oil & Grease	—	—	—	—
Toluene	ND	ND	0.9	ND	Heavy Metals	—	—	—	—
Other (8240/8270)	—	—	—	—	Other	—	—	—	—

Description of Interim Remediation Activities: Overexcavation of 200 cubic yards of soil from heating oil tank pit. Soil from gas tank pit did not contain detectable levels of Total Petroleum Hydrocarbons as Gasoline (TPHG) or Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX).

¹Tank pit water

²Samples were not analyzed for Total Petroleum Hydrocarbons as Diesel (TPHD); however, letter from lab states that no diesel was noted in chromatograms.

ND = below detection limit

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? District staff does not make specific determinations concerning public health risk. However, it does not appear that the release would present a risk to human health.		
Site Management Requirements: None		
Should corrective action be reviewed if land use changes? No		
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 1	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:
1991- Two hundred seventy parts per billion (ppb) TPHG and 130 ppb Benzene was detected in a groundwater sample retrieved in June.
1993- Three underground storage tanks (two 3,000-gallon gasoline tanks and one 4,000-gallon heating oil tank) were removed in July; the tanks were placed in separate tank pits. No TPHG or BTEX was detected in soil beneath the gas tanks; however 5,100 ppb TPHG and 0.8 ppb Benzene were detected in a groundwater grab sample from the tank pit. A maximum of 6,883 ppm TPHD was detected beneath the heating oil tank, no BTEX was detected. TPHD at 1,661 ppb was detected in a groundwater grab sample from the tank pit, no BTEX was detected. The heating oil tank pit was overexcavated to a depth of 15 feet below ground surface. No TPHG, TPHD, or BTEX was detected in soil. The soil samples were analyzed for TPHG and BTEX. Prior to pursuing closure for this site, the laboratory was contacted and, according to the lab, no TPHD was not seen in the chromatograms for these samples.
1995- Groundwater was sampled from a monitoring well next to the gas tank pit, no TPHG or BTEX was detected. Groundwater was also sampled from a production well adjacent to the heating oil tank, no TPHD or BTEX was detected. The production well was destroyed according to District guidelines. The monitoring well was also properly destroyed at this time.
Conclusion: Based upon source removal activities and groundwater monitoring data, it appears that the petroleum-impacted soils have been removed. Based upon groundwater monitoring data collected in January 1, 1995, it does not appear that groundwater is impacted at this site. The investigation was performed in accordance with state and local guidelines. District staff has concluded that a threat to groundwater does not exist at this site and that Regional Water Quality Control Board objectives have not been compromised. District staff recommends closure of this case.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Lane R. Davis	Title: Assistant Engineer
Signature: <i>[Signature]</i>	Date: 3-1-96
Approved by: James S. Crowley, P.E.	Title: Associate Civil Engineer
Signature: <i>[Signature]</i>	Date: 3-1-96

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: John West	Title: E.S. III
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 3-12-96
Signature: <i>[Signature]</i>	Date: 3-12-96

Attachments:

1. Site Maps
2. Analytical Results

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.



Environmental
Technical
Services

GANGI

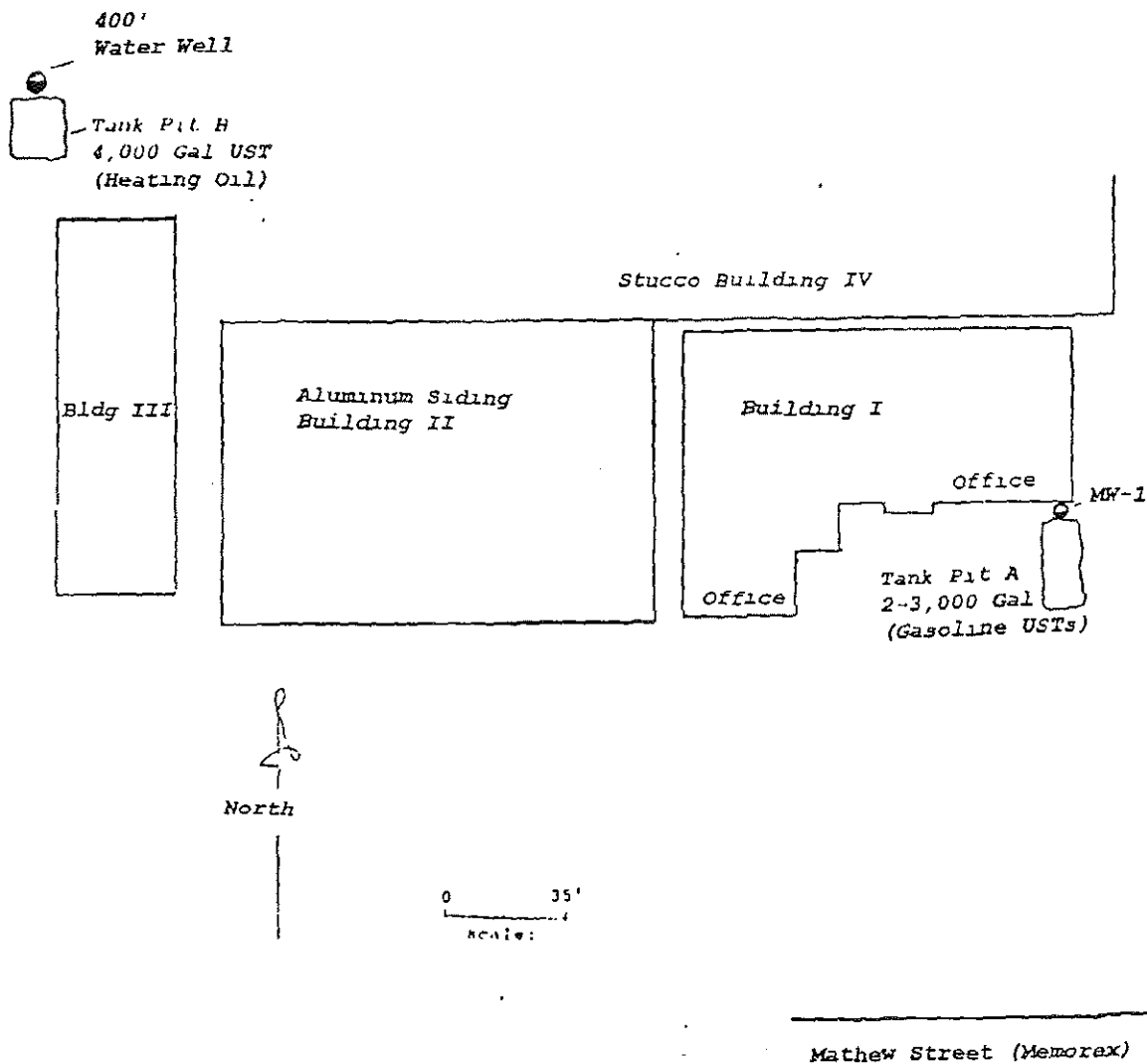
725 MATHEW DR.

SANTA CLARA CALIF.

Figure 1

SITE LOCATION MAP

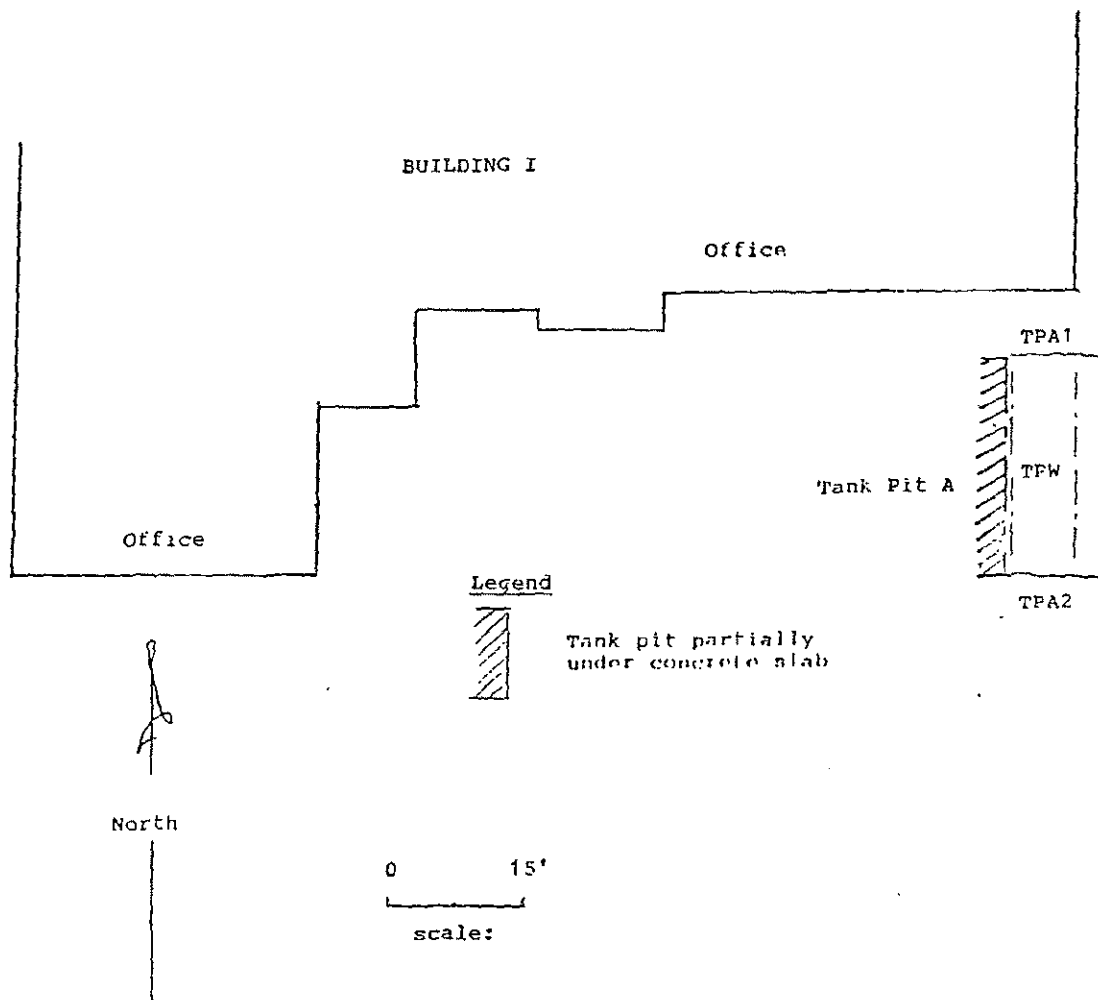
ATTACHMENT 1a



Environmental
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GANGI BROS.
725 MATHIEW STREET
SANTA CLARA, CA

Figure 7
WELL LOCATIONS



Environmental
Technical
Services

GANGI BROS.

725 MATHEW STREET

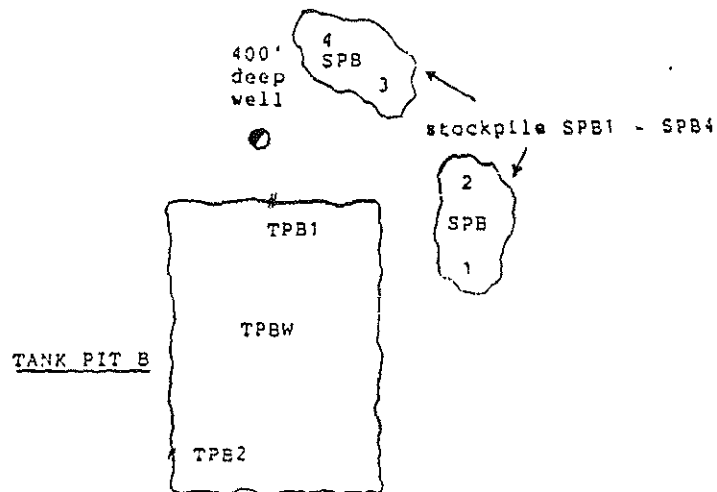
SANTA CLARA, CA

Figure 3

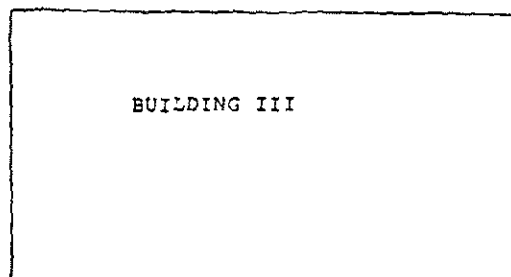
TANK PIT A

SAMPLE LOCATION MAP

ATTACHMENT 2a



0 5' 10'
scale:



Environmental
Technical
Services

GANGI BROS.

725 MATHEW STREET

SANTA CLARA, CA

Figure 4

TANK PIT B

SAMPLE LOCATION MAP

ANALYTICAL RESULTS

TABLE IA
ORIGINAL TANK REMOVAL
TWO 3,000-GALLON GASOLINE UST'S
SOIL SAMPLE ANALYTICAL RESULTS
Total Petroleum Hydrocarbons as Gasoline
Benzene, Toluene, Ethylbenzene, and Total Xylenes
July 07, 1993

TPHg results reported in mg/Kg
BTEX results reported in ug/L

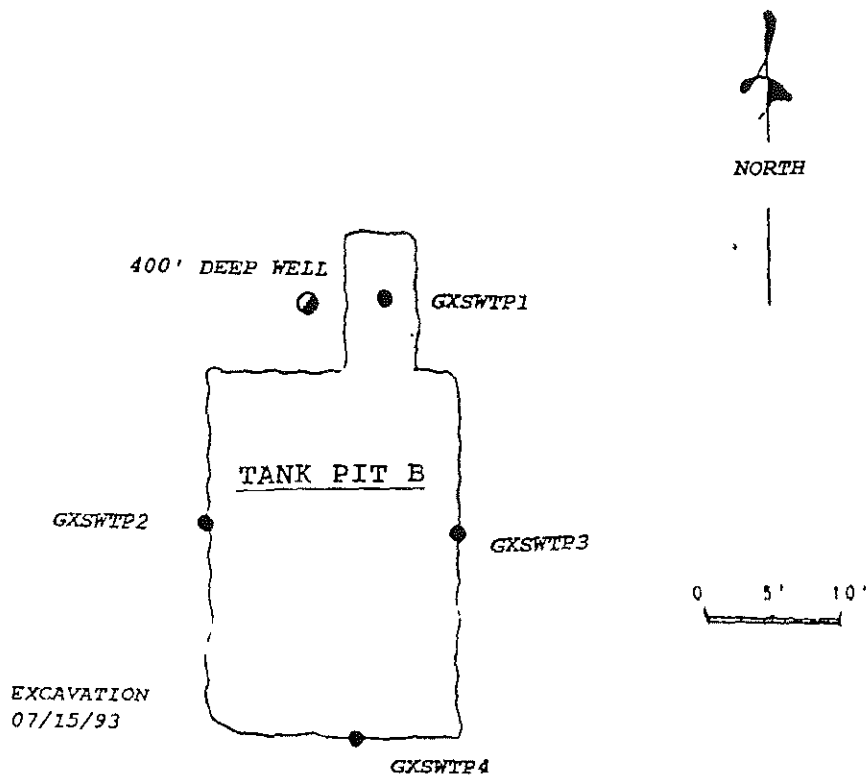
<u>Sample#</u>	<u>TPHg</u> ppm	<u>B</u> ppb	<u>T</u> ppb	<u>E</u> ppb	<u>X</u> ppb
TPA-1	ND	ND	ND	ND	ND
TPA-2	ND	ND	ND	ND	ND

TABLE IB
ORIGINAL TANK REMOVAL
ONE 4,000-GALLON HEATING OIL UST
SOIL SAMPLE ANALYTICAL RESULTS
Total Petroleum Hydrocarbons as Diesel
Benzene, Toluene, Ethylbenzene, and Total Xylenes
July 07, 1993

TPHd results reported in mg/Kg
BTEX results reported in ug/L

<u>Sample#</u>	<u>TPHd</u> ppm	<u>B</u> ppb	<u>T</u> ppb	<u>E</u> ppb	<u>X</u> ppb
TPB-1	3575.0	ND	ND	ND	ND
TPB-2	6883.0	ND	ND	ND	ND
Stockpile sample					
SPB1-4	4042.0	ND	ND	ND	ND

ND = not detected at lower detection limit for this compound



Environmental
Technical
Services

GANGI BROS.

725 MATHEW DRIVE

SAN JOSE, CALIF.

Figure 5

EXCAVATION AND SAMPLING

MAP, TANK PIT B

TABLE II
ADDITIONAL EXCAVATION
SIDEWALL SAMPLE ANALYTICAL RESULTS
Total Petroleum Hydrocarbons as Diesel, Gasoline
Benzene, Toluene, Ethylbenzene, and Total Xylenes
July 15, 1993

TPHG and TPHD results reported in mg/Kg
BTEX results reported in ug/L
See Figure 5

<u>Sample#</u>	<u>TPHg</u> ppm	<u>TPHd</u> ppm	<u>B</u> ppb	<u>T</u> ppb	<u>E</u> ppb	<u>X</u> ppb
GXSWTP1	ND	ND	ND	ND	ND	ND
GXSWTP2	ND	ND	ND	ND	ND	ND
GXSWTP3	ND	ND	ND	ND	ND	ND
GXSWTP4	ND	ND	ND	ND	ND	ND

ND = not detected at lower detection limit for this compound

TABLE III
ADDITIONAL EXCAVATION
STOCKPILE SOIL SAMPLE ANALYTICAL RESULTS
Total Petroleum Hydrocarbons as Diesel
July 16, 1993

TPHd results reported in mg/Kg
See Figure 6

<u>Sample#</u>	<u>Total Petroleum Hydrocarbons as Diesel</u>
GXSPB2 1-4	1202.0 ppm
GXSPB3 1-4	322.0 ppm
GXSPB4 1-4	985.0 ppm

ND = not detected at lower detection limit for this compound

TABLE IC
ORIGINAL TANK REMOVAL
GROUND WATER ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Gasoline and Diesel
Benzene, Toluene, Ethylbenzene, and Total Xylenes
July 07, 1993

TPHg and BTEX results reported in ug/L

<u>Sample#</u>	<u>TPHg</u> ppb	<u>B</u> ppb	<u>T</u> ppb	<u>E</u> ppb	<u>X</u> ppb
TPA-W	5100.0	0.8	0.9	0.9	8.0
<u>Sample#</u>	<u>TPHd</u> ppb	<u>B</u> ppb	<u>T</u> ppb	<u>E</u> ppb	<u>X</u> ppb
TPB-W	1661.0	ND	ND	ND	ND

ND = not detected at lower detection limit for this compound

EXCAVATION - TANK PIT B

Additional excavation was performed on July 15, 1993. Approximately 150 cubic yards of fill was removed from the tank pit using heavy earth moving equipment. Tank pit B was excavated to a total depth of 15'. Subsequent to excavation, a soil sample was collected from the west, east and south sidewall within the vadose/saturated capillary zone. A 400-foot ground water well was located four-feet from the north wall. A trench was excavated adjacent to the well to determine the lateral migration of total petroleum hydrocarbons in this direction. Sidewall soil sample, GXSWTP1, was collected from the north end of the trench within the vadose/saturated capillary zone.

Soil removed from the excavation was stockpiled on Visqueen and covered pending analysis. The stockpile was divided into three sections. Three random soil samples were collected within each section to be composited as one sample for analysis representing one section.

3.3 Groundwater Analysis

The groundwater sample collected from MW-1 was analyzed for total petroleum hydrocarbons as gasoline using EPA Method 5030/8015 with benzene, toluene, ethylbenzene, and total xylenes using EPA Method 602.

The groundwater sample collected from the 400-foot well was analyzed for total petroleum hydrocarbons as diesel using EPA Method 3510/8015.

3.4 Groundwater Analytical Results

TABLE IV
GROUNDWATER DEVELOPMENT
ANALYTICAL RESULTS
Total Petroleum Hydrocarbons as Gasoline
Benzene, Toluene, Ethylbenzene, and Total Xylenes
January 30, 1995

TPHG results reported in ug/L
BTEX results reported in ug/L

<u>Sample#</u>	<u>TPHg</u> ppb	<u>B</u> ppb	<u>T</u> ppb	<u>E</u> ppb	<u>X</u> ppb
MW-1	ND	ND	ND	ND	ND

ND = not detected at lower detection limit for this compound

TABLE V
GROUNDWATER DEVELOPMENT
ANALYTICAL RESULTS
Total Petroleum Hydrocarbons as Diesel
February 1, 1995

TPHd results reported in ug/L

<u>Sample#</u>	<u>Total Petroleum Hydrocarbons as Diesel</u> ppb
400' Product	ND
400' Well	ND

ND = not detected at lower detection limit for this compound

APPENDIX E:
OTHER REFERENCE INFORMATION
(copies retained in TRC files)

**APPENDIX F:
PHOTOGRAPH LOG**

PHASE I ENVIRONMENTAL ASSESSMENT PHOTO LOG
651, 705-795, 825 Mathew Street
Santa Clara, CA



Photo #1: View looking northwest at Mathew Street, pole mounted transformers, and the southern portion of the 651 and 705-795 Mathew Street property.



Photo #2: View looking north at 651 Mathew Street office (to the left) and maintenance shop (to the right) on south portion of the property.



Photo #3: View looking north at 705-795 Mathew Street property entrance at southeastern area.



Photo #4: View looking northeast at 705-795 Mathew Street property of former tomato canning factory building (745 Mathew St) and transportation services vehicles.



Photo #5: View looking northeast at wastewater treatment sodium hydroxide ASTs in secondary containment at 651 Mathew Street near former diesel UST.



Photo #6: View looking north at liquid sugar AST, natural gas propane AST, and area of former reported gasoline UST at 651 Mathew Street.

PHASE I ENVIRONMENTAL ASSESSMENT PHOTO LOG
651, 705-795, 825 Mathew Street
Santa Clara, CA

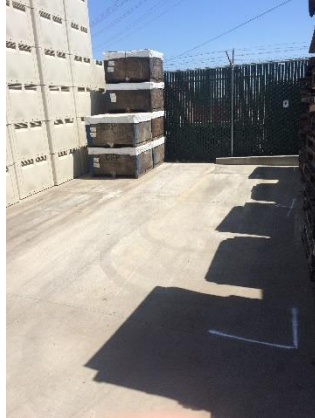


Photo #7: View looking northeast at former SPRR rail spur, and current empty fruit bin storage area at 651 Mathew Street.



Photo #8: Looking east at brine and fruit processing buildings on 651 Mathew Street.



Photo #9: Looking south at empty fruit storage bins and entrance office at 651 Mathew Street.



Photo #10: Looking south at former diesel UST area at 651 Mathew Street.



Photo #11: Looking south at sample collection in former diesel UST area at 651 Mathew Street.



Photo #12: Looking west at lube storage shed adjacent to boiler room at 651 Mathew Street.

PHASE I ENVIRONMENTAL ASSESSMENT PHOTO LOG
651, 705-795, 825 Mathew Street
Santa Clara, CA



Photo #13: Looking south at citric acid, sodium bisulfite, and brining solution ASTs in brining area warehouse at 651 Mathew Street.



Photo #14: Looking southwest at bleaching warehouse at 651 Mathew Street.



Photo #15: Looking southeast at former SPRR rail spur area (gravel) and 765 to 755 Mathew Street warehouse buildings.



Photo #16: Inside of 765 Mathew Street warehouse building.



Photo #17: Looking southeast at area of former heating oil UST, tomato cannery factory, and filled in concrete drains at 745 Mathew Street.



Photo #18: View looking northwest at area of former gasoline UST at 705 Mathew Street.

PHASE I ENVIRONMENTAL ASSESSMENT PHOTO LOG
651, 705-795, 825 Mathew Street
Santa Clara, CA



Photo #19: Looking north at former tomato cannery factory at 745 Mathew Street.



Photo #20: Looking east at truck scale at 705 Mathew Street.



Photo #21: Looking northwest at former wash area.



Photo #22: Looking at furniture warehouse and paint and chemical storage locker at 765 Mathew Street.



Photo #23: Looking east at former clarifier area at 705 Mathew Street.



Photo #24: Looking at staining inside former cannery factory at 745 Mathew Street.

APPENDIX G:
TRC STAFF AND ENVIRONMENTAL PROFESSIONAL QUALIFICATIONS/RESUMES

□ACOB P. ZEPEDA

EDUCATION

B.S. Earth Sciences, University of California Santa Cruz (1998)

AREAS OF E□PERTISE

Mr. Zepeda has expertise in the following general areas:

- Phase I and II Site Assessments
- Remedial Investigation and Feasibility Studies
- Remedial Action Workplans
- GPS/GIS Projects
- Geotechnical Engineering Earthwork Observation and Testing
- Geotechnical Engineering Oversight of Landslide Removal/Repairs
- Geotechnical Engineering Foundations and Pier Drilling Observation and Testing
- Geotechnical Engineering Concrete Observation and Testing
- Geotechnical Engineering Laboratory Analysis
- Environmental Laboratory Analysis (Wet Chemistry)
- Water Well and Monitoring Well Installation Oversight and Groundwater Protection with the Santa Clara Valley Water District

REPRESENTATIVE E□PERIENCE

Jacob Zepeda has ten years of practical experience in the environmental field, including analysis, characterization, and remediation of near-surface soil and vadose zone soil impacts, groundwater impacts, groundwater flow and contaminant transport at numerous regulated sites within the San Francisco Bay Area. He also has one year of practical experience in groundwater basin protection in the Santa Clara Valley Groundwater Basin, and six months of practical experience working in an environmental analytical laboratory.

During this time, he has been involved in various interdisciplinary environmental projects, including preparation and implementation of Feasibility Studies and Remedial Action Plans, Remedial Action Plan Implementation Reports, Corrective Action Plans, Feasibility Studies, In-Situ Pilot Studies, Soil Vapor Extraction Pilot Studies and Remediation Installation and Startup Reports, Phase I Environmental Site Assessments and Phase II Site Investigation Reports, and Groundwater Monitoring Reports. He has also been responsible for field coordination and oversight of soil excavation, underground fuel tank excavations and remediation activities, monitoring well installations and destructions, soil gas investigations, groundwater monitoring, and operation, optimization, and maintenance of ozone sparging and soil vapor extraction systems. His experience also includes hydrogeologic analysis and interpretation of groundwater flow and contaminant transport. He also has experience in drafting of site plans, groundwater contour maps, and contaminant concentration maps in ArcView, AutoCAD, and Surfer. He has trained staff personnel in soil vapor sampling, soil sampling, groundwater sampling, lithologic logging and interpretation, and underground storage tank

oversight and removal. He has experience in GPS data collection, surveying, and analysis, and has trained staff personnel in data collection.

Mr. Zepeda also has five years of geotechnical experience performing earthwork observation and testing services for numerous municipal, commercial, industrial, and residential developments ranging from single-unit residences to large industrial parks, apartment complexes and high-rise buildings. He has experience assisting with fault trench investigations, inclinometer measurements for lateral spreading and surcharge projects in bay margins, and performing nuclear density testing for various phases of earthwork construction including mass grading, slope and landslide repair, retaining wall and utility trench backfill, pavement subgrade and aggregate base compaction. He has experience working on projects containing Bay Mud, expansive clays, and liquefiable soil deposits, and has practical field experience with soil stabilization geotextiles, drilled pier foundations, and lime-treatment operations. He also has trained lab personnel, field technicians, and staff personnel on geotechnical laboratory and field methods.

CEME □ Davenport □ CA □ Project Geologist □ 2012 – Present □

As part of a team of environmental professionals, Mr. Zepeda performed a historical background and current environmental site assessment, and a hazardous materials review and assessment for mitigation and closure of an industrial cement plant which has been operating since the early 1900's over an area of 110-acres. Our team prepared a hazardous materials closure plan while working closely with our client and the local environmental health oversight agency. Our approach to this investigation created a safe and professional working environment for both client representatives and environmental agency inspectors. His continuing duties include directing routine groundwater monitoring at two on-site landfills, continued assessment of areas of potential concern, assessment of hazardous materials for biennial reporting to the County of Santa Cruz Environmental Health, and assessment of National Pollutant Discharge Elimination System (NPDES) permits and the General Industrial Waste Discharge Requirements for the two CKD landfills at the project site for reporting to the Central Coast Regional Water Quality Control Board (RWQCB).

Alameda Commercial Properties □ Alameda □ CA □ Project Geologist □ 2014 – Present □

Mr. Zepeda directs characterization activities and groundwater sampling activities at a facility impacted with petroleum hydrocarbons and fuel additives at former UST areas. His duties have included oversight of soil, soil vapor, and groundwater investigations incorporating LIF UVOST technology, and coordination of well installations and abandonments at the facility. His duties have led to characterization of a NAPL plume at a former UST area within the facility under RWQCB oversight.

BNSF Pittsburg □ Pittsburg □ CA □ Project Geologist □ 2015 □

Mr. Zepeda constructed a geologic model from detailed cone penetration test (CPT), membrane interface probe (MIP), and Waterloo Advanced Profiling System (APS) electrical conductivity and hydraulic conductivity data to gain a detailed

conceptual understanding of the subsurface groundwater transport mechanisms beneath the facility.

**Industrial Food Manufacturing Facility □ Teasdale □ Quality Foods - Atwater □ CA
□ Project Geologist □ 2009 – Present □**

Mr. Zepeda directs an in-situ remediation project at an active food processing facility and cannery impacted with total petroleum hydrocarbons. In preparing TRC's Corrective Action Plan, the vertical and lateral extent of soil and groundwater impacts were characterized, and a follow up in-situ chemical oxidation (ISCO) injection pilot study and remediation program was performed. He directed in-situ injection field work and analysis of remedial progress during the remediation process. He currently coordinates closely with the food processing facility, the responsible party, and oversight agencies (Central Valley RWQCB) for the project moving towards regulatory case closure.

**Phase I Environmental Site Assessment and Limited Material Compliance
Review of large Industrial Food Processing and Distribution Facilities –
Hayward □ CA □ Project Geologist □ 2012 □**

Investigation and completion of two Phase I ESA's and Limited Material Compliance Reviews of two 6-acre food processing, distribution, and manufacturing facilities. Identification of nearby recognized environmental conditions and the potential environmental impact to the facilities. Identification of environmental material compliance, and recommendations for obtaining environmental permits for future air and water discharges to nearby public storm and sewer systems.

**Phase I ESA and Lead/Asbestos/Mold Testing Services Portfolio for a national
retail store chain □ throughout United States □ Project Coordinator □ 2011- 2013 □**

Directs and coordinates a national portfolio of projects for environmental services including Phase I Environmental Site Assessments and hazardous materials testing services including asbestos, lead, and mold. Estimation of cost and scope of work per requests from client Assistant Coordinator for Construction Services and Regional Vice President of Construction Services. Reports issues and ensures all final process documents are reviewed for quality assurance and quality control by a panel of certified environmental professionals.

Derby/the Estuary □ Oakland □ CA □ Staff Geologist □ 2004 – 2005 □

Assisted in remediation activities and provided oversight of geotechnical observation and testing services for a former bulk fuel terminal contaminated with hydrocarbons and mixed and semi-volatile organic compound (VOC/SVOC) under the San Francisco Bay Regional Water Quality Control Board (RWQCB) oversight. Performance included oversight of the backfill and compaction of the removed UST areas with cleanfill, and observation and testing services for new construction within the new building areas. Additional tasks included routine groundwater monitoring and testing and oversight of soil gas testing at the project.

Santa Clara Valley Water District Wells and Water Production Unit
Hydrologic Systems Analyst I 1999

Performed oversight and inspection of monitoring and water supply wells throughout Santa Clara County for groundwater protection of the Santa Clara Valley Groundwater Basin and associated sub-basins. Coordination and performance of GPS survey information on water supply and groundwater monitoring wells with SCVWD's Land Survey and GIS Department.

SPECIALIZED TRAINING

- Princeton Groundwater Pollution and Hydrology Course, February 2007
- Princeton Groundwater Remediation Course, March 2007
- EPA Seminar on Capture Zone Analysis, September 2007
- EDR Due Diligence at Dawn Phase I ESA Seminar, November 2007
- WDC Drilling 101 Seminar, January 2008
- PG&E Humboldt Bay Power Plant Safety Training, October 2008
- PG&E Humboldt Bay Repowering Project Environmental Training, October 2008
- Advanced Technologies for Contaminated Site Remediation and Gas Vapor Intrusion Management Seminar, Regenesys, May 2010
- Excellence in Project Management Seminar, TRC, January 2011
- California Surveying Drafting and Supply GPS Training Seminar, August 2011
- Forty Hour OSHA Health and Safety Training Update, September 2014

MEMBERSHIPS

California Groundwater Resources Association

Glenn S. Young, PG, LEED AP

EDUCATION

M.S., Environmental Management, University of San Francisco, 1993

B.S., Geology, University of Colorado, Boulder, 1987

PROFESSIONAL REGISTRATIONS

Professional Geologist, California #6406

AREAS OF EXPERTISE

Mr. Young has expertise in the following areas:

- Environmental Site Assessments, Phase I & Phase II
- Remedial Investigations and Site Characterization
- Vapor Intrusion and Soil Vapor Characterization
- Soil and Groundwater Remediation
- Brownfield Redevelopment
- Risk-Based Site Closures

REPRESENTATIVE EXPERIENCE

Mr. Young has over 25 years environmental consulting experience focusing on geologic and hydrogeologic characterization, risk management, and remediation for public, private, and governmental sector clients. He has a history of providing safe, timely, and fiscally responsible consulting services for contaminated soil, soil-vapor, and groundwater sites.

Mr. Young has managed a full range of environmental consulting projects, including large and small multi-disciplinary projects, planning, estimating, contract procurement, construction management, public outreach, and the negotiations with both clients, regulatory, and various resource agencies. Projects typically involve Brownfield redevelopment, infrastructure support, facility improvement and/or closures, firing ranges, dry cleaners, UST sites, park lands, and wetland restoration. Mr. Young has also served as Program Manager for several high profile As-Needed environmental consultation projects, including contracts for SFIA, SFPDW, SFPUC, and OPWD. Recent peer review services have required significant strategic and timely discussion with a variety of stakeholders, responsible parties, resource agencies (Coastal Commission, USDFW, NOAA, CDFG, USCOE), as well as State and local regulators (DTSC and RWQCB).

The following are example projects for Mr. Young.

San Francisco As-Needed Risk Management Services, SFPDW, California. As Program Manager for several “on-call” contract with the City of San Francisco Department of Public Works, Mr. Young has managed hazardous materials investigations for water distribution, roadway improvement, library, school, park, and redevelopment projects. He was instrumental in negotiating the cleanup approach with DTSC and

successfully managed the Remedial Action at the former Sharp Park Rifle Range Project in Pacifica. Other projects completed on behalf of the SFDPW include, the Octavia Boulevard Improvement Project; hydrogeologic and water quality investigation at the Upper Islais Valley and the Westside Basin for SFPUC's Groundwater Protection Division; stormwater program consultation, habitat restoration, and UST investigations and closure for a dozen SFFD stations. Recent investigations include Maher characterizations for the Civic Center Plaza and proposed Office of the Chief Medical Examiner.

Georgia Pacific Mill Site□Fort Bragg□California. Peer review services to the City of Fort Bragg regarding the hazardous materials investigation, remedial, risk assessment, remediation, and redevelopment activities at the former Mill Site. This property is approximately 25 percent of the total land currently incorporated within the City of Fort Bragg. Mr. Young is also participating in regular stakeholder meetings as well as community workshops designed to inform the general public of findings and answer questions regarding the chemicals detected at the site

Oakland As-Needed Environmental Services□Oakland□California. Program Manager for several "as-needed" contracts with the City of Oakland. Mr. Young has managed numerous traffic improvement, school, library, infrastructure improvement, and redevelopment projects requiring Phase I and II site assessments, UST upgrade, and risk assessment services. He has managed site assessments, groundwater investigations, remedial actions, facility closures, and UST projects. Directed numerous environmental projects involving community participation and has routinely negotiated with State and local regulatory agencies regarding all phases of investigation, risk assessment, remediation, and case closure.

Taylor □ard Redevelopment Parcel□Los Angeles□California. Coordinated the Phase II soil and soil-vapor site characterization for this mixed-use redevelopment at the former Metropolitan Transportation Authority (MTA) property. Results of the investigation identified "hot spots" that warranted remediation. Remedial action to remove soil with elevated PAHs, hydrocarbons, arsenic, and lead resulted in No Further Action determination from the DTSC.

Stulsaft Park Mercury Mine□Redwood City□California. Conducted the comprehensive records review, site investigation, and risk assessment of this former open pit mercury mining operation. City and neighborhood groups were preparing to build a tot-lot within the City park when they discovered the historical mercury mine operations. Mr. Young fast-tracked the investigation by coordinating with the USGS, DTSC, and San Mateo County to confirm that residual mercury impacts in soil, sediment, and ambient air posed no significant risk to the community. Investigation included air monitoring for volatile mercury at the tot-lot and proposed ball fields as well as participation in public meetings.

Caterpillar Inc.□San Leandro□California. Managed operations, maintenance, and groundwater treatment systems at a former heavy equipment manufacturing facility. He conducted high-resolution subsurface evaluations for contaminant delineation, well siting, and hydraulic containment activities. He operated and maintained three treatment systems in accordance with NPDES and BAAQMD permits. Mr. Young conducted routine and non-routine maintenance activities, including evaluation of pump curves, and contaminant loading on GAC and resin adsorption vessels.

PG&E Gas Gathering Facilities □ Northern California. Investigation manager responsible for implementing the Site Characterization Work Plans at numerous gas gathering facilities in the Delta and northern California regions. Investigations involved coordination with local PG&E staff to locate, access, implement programmatic soil and groundwater sampling activities. Interpreted results and prepared reports for review and consideration by PG&E technical staff. Managed field staff and drilling contractors, sample handling, laboratory reporting, and waste characterization to meet PG&E requirements.

Former Mission Village Dry Cleaners□Fairfield□California. Managed the investigation, strategic planning, corrective action plan and implementation, and groundwater remediation services. Services included high-resolution site characterization using CPT and MIP technologies, preparation of the Conceptual Site Model and Feasibility Study to determine the cost and effectiveness of in situ enhancement for the biodegradation of dry cleaner solvents at the site, and Corrective Action Plan. Procured Case Closure using the RWQCB's low risk closure process for chlorinated solvents.

City of Livermore Downtown Redevelopment Area □ Brownfields Grant□Livermore□California. Assisted the City of Livermore with the Brownfields Grants from the USEPA that they had won to characterize the Downtown Redevelopment Area. Managed the project that included a number of Phase 1 ESAs for prioritized sites. Based on those findings, Mr. Young developed a scope of soil, groundwater, and soil-gas testing to evaluate the presence, extent, and potential human health risk associated with historical sites uses. Key to the process was negotiating with Alameda County Health Services, the RWQCB, and the USEPA to provide the City with efficient consulting services as well as to strategize about the various agency concerns in the Downtown Core area. Prepared the detailed Sampling and Analysis Plan (SAP) as required by the EPA, including the appropriate discussion regarding Data Quality Objectives (DQOs) and Indicators (DQIs).

E□□on Company□U.S.A□Benicia□California. Project manager for the soil and groundwater investigation for the entire refinery. He compiled available subsurface data and prepared a Work Plan to satisfy Waste Discharge Requirements established by the RWQCB for the refinery. He

oversaw hydrogeological and contaminant characterizations for the entire refinery, including the wastewater treatment area, bulk storage fields, and waste piles. Mr. Young managed a large, multi-disciplinary project team, interacted with refinery managers, conducted presentations and negotiations with regulatory agencies, and prepared assessment reports.

CDCR Prison Sites - Vacaville, Folsom and Stockton, California. Principal in Charge for the investigation/assessment of areas within and surrounding three existing prison facilities. Coordinated Phase I and II ESA's for the Stockton prison including extensive hazardous building materials surveys for demolition of the existing 19 buildings. Participated in both regulatory and design team discussions of the potential environmental issues at each facility. At the Stockton site provided subsequent consultation regarding impacted groundwater below the site resulting from releases from an up gradient landfill site.

Citation Homes Central, San Leandro, California. Construction manager for site investigation and remediation at former explosives manufacturing facility (nitrostarch) in preparation for residential development and wetlands restoration. He prepared and implemented the *Site Investigation Work Plan* and prepared the *Investigation Completion Reports, Engineering Evaluation/Cost Analysis (EE/CA)* to select a remedial alternative for the site. Mr. Young also conducted soil remediation and air monitoring as required. He participated in public meetings as part of EE/CA and CEQA processes including numerous local, state and federal agencies. He routinely reported findings and negotiated with RWQCB and DTSC caseworkers and procured regulatory closure from DTSC.

Cottage Hospital, Santa Barbara, California. Managed the environmental cleanup and reporting requirements during construction of the new power plant facility at the hospital. To comply with the Office of Statewide Health Planning & Development (OSHPD), Cottage Hospital reconstructed the hospital as a completely new facility on and around the existing facility. Mr. Young prepared and implemented a Soil Management Plan to comply with certain Deed Restriction requirements for the former UST area, coordinated with the contractor, and provided field observations, mapping, soil sampling, and analytical services during excavation. He assisted the hospital with certain soil reuse and disposal activities and obtained NoFA status on behalf of the hospital.

Former Maskell Oil Facility, San Leandro, California. Project Manager responsible for the development and implementation of a Corrective Action Plan to remediate hydrocarbon-containing soil and groundwater at this bulk petroleum fuel and vehicle maintenance property. To expedite construction of a new post office, he assisted the San Leandro Development Services Agency, the U.S. Postal Service (USPS) with obtaining RWQCB and DTSC's approval of a remediation plan that focused on mass removal of

chemical contaminant, rather than one based on regulatory numerical cleanup goals. A risk-based closure based on the intended institutional land use of the site was achieved. When remediation was completed, the Agency and USPS received the qualified immunity provisions of the Polanco Act.

Summer Del Caribe Lead Remediation Project, Richmond, California:

Operations manager for the remedial action at this former lead recovery facility. Remedial services involved the excavation, stabilization, and offsite disposal of treated lead waste. Activities included decontamination of the existing structures, oversight of a comprehensive excavation and confirmation testing program, mechanical screening, stabilization, trucking, and site restoration involving a number of remedial subcontractors. My. Young was instrumental in arranging disposal of non-spec treated waste as well as tracking pay quantities for the subcontractors.

On Broadway Redevelopment Project, Redwood City, California.

Managed the hazardous materials investigations and completed soil characterization activities to allow the offsite reuse of soil from this project at a nearby marina project. These services were provided to the developer with subsequent interaction with the City of Redwood City, which owns and operates the below-ground parking structure at the Site. A UST and impacted soil were removed during the construction activities. Investigation and soil reuse work was done in conformance with County and RWQCB requirements.

Big Break Marina, Oakley, California. Managed site assessment services for EB Parks to evaluate sediment, soil, and groundwater conditions at the site. Site assessment activities focused on conditions near former USTs and sediments previously dredged from the site, surface soil that may have been impacted by marine servicing and storage activities. Results of sediment analyses were compared to beneficial upland reuse criteria established by the RWQCB.

Shareholder Properties Limited, Benicia, California. Construction manager for a \$2.5 million turnkey soil remediation project involving characterization, excavation, stabilization/fixation, and placement of over 11,000 tons of lead-contaminated soil into an onsite repository. His responsibilities included oversight of all operations during soil remediation, including dust control, odor abatement, site security, compliance with all permits and Work Plan requirements, and was the primary point of contact for all regulatory oversight during the remedial action. He prepared closure documentation and negotiated regulatory closure for the site from the DTSC.

SPECIALIZED TRAINING

- 40-hour Safety Training Course (29 CFR 1910.120)
- 8-hour Hazardous Materials Supervisory Course
 - Bay Area Training Trust (BATT) – dormant

PROFESSIONAL AFFILIATIONS

- California Groundwater Resources Association
- 1995 CELSOC Engineering Excellence Honor Award – Parcel 2-4A Lead Remediation

**APPENDIX H:
ENVIRONMENTAL PROFESSIONAL STATEMENT**

DEFINITION OF ENVIRONMENTAL PROFESSIONAL AND RELEVANT EXPERIENCE THERETO PURSUANT TO 40 CFR 312

(1) a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases (see §312.1(c)) on, at, in, or to a property, sufficient to meet the objectives and performance factors in §312.20(e) and (f).

(2) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in §312.21 and have the equivalent of three (3) years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iv) have the equivalent of ten (10) years of full-time relevant experience.

(3) An environmental professional should remain current in his or her field through participation in continuing education or other activities.

(4) The definition of environmental professional provided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration laws to the activities to be undertaken as part of the inquiry identified in §312.21(b).

(5) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

Relevant experience, as used in the definition of environmental professional in this section, means: participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analyses, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases (see §312.1(c)) to the Site. TRC personnel resume(s) are included in **Appendix G**.

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 CFR 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Signature of
Environmental
Professional:



Date: 7/22/2016

**APPENDIX I:
LOGS OF BORINGS**



SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B1		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/7/16 - 7/7/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE 7.0	DATE OF GW MEASUREMENT 7/7/16		NORTHING/EASTING /

Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		CL	Gravelly Clay (CL), greenish grey (10Y 4/1) with 3/4" angular gravel (fill), moist. @1' becomes black (10YR 2/1), medium stiff, gravelly. (Fill)	.....	B1-2.0	0.8 ppm	
.....		CL	Silty Clay (CL), black, soft, moist. Trace medium sand (gray) rounded. (fill)	.....		2.5 ppm	
.....		CL	Clay (CH), gray (10YR 5/1), medium stiff, moist. Trace orange mottling	.....		1.6 ppm	
5			@8.5' color change to dark gray (10YR 4/1)	5		2.5 ppm	
.....			@9.5' color change to brown (10YR 5/3)	.....		
.....		CH	@11' color change to grayish brown (10YR 5/2). Trace gravel and orange mottling, becomes soft, moist.	.....		1.6 ppm	
10				10		1.4 ppm	
.....					1.4 ppm	
15				15			
.....						
.....		SP	Sand (SP), gray (10YR 5/1), fine, wet. Mottled orange.	.....		0.6 ppm	
.....		SC	Clayey Sand (SC), gray, wet.	.....		
.....		SP	Sand (SP), grayish brown (10YR 5/2), medium, wet.	.....		
20		CL	Clay (CL), gray (10YR 5/1), soft, moist. @20' wood debris (roots 1" dia.)	20		0.4 ppm	
.....		CL	Gravelly Clay (CL), dark yellowish brown (10YR 4/4), subrounded fine gravel, medium stiff clay, very moist.	.....		
.....		SP	@21.5' becomes orange	.....		
.....		CL	Sand (SP), grayish brown (10YR 5/2), fine, medium dense, very moist to wet.	.....	B1-23	0.4 ppm	
.....		GW	Clayey Sand (CL), very dark gray (10YR 3/1), soft. Sand (SP) very dark gray (10YR 3/1), medium stiff. With roots.	.....		
25			@23' becomes dark yellowish brown (10YR 3/4).	25			
.....		CL	Gravelly Sand (GW), dark yellowish brown (10YR 3/4), dense.	.....		
.....		SP	Clay (CL), gray (10YR 5/1), soft, wet. Trace subangular fine gravel.	.....		0.1 ppm	
.....		CL	@26.5' becomes dark yellowish brown (10YR 3/4).	.....		
.....		CL	Sand (SP), medium dark brown (10YR 2/3), medium dense, wet.	.....		
30		CL-SC	Gravelly Clay (CL), dark brown (10YR 3/3), medium stiff, wet.	30			
.....		CL	Clay (CL), gray (10YR 5/1), very moist to wet.	.....		
.....			Sandy Clay-Clayey Sand (CL-SC), gray (10YR 5/1), wet.	.....		
.....			Clay (CL), gray (10YR 5/1).			
.....			@30.5' Trace subangular gravel with 1" dia.			
.....			Bottom of borehole at 32 feet.			

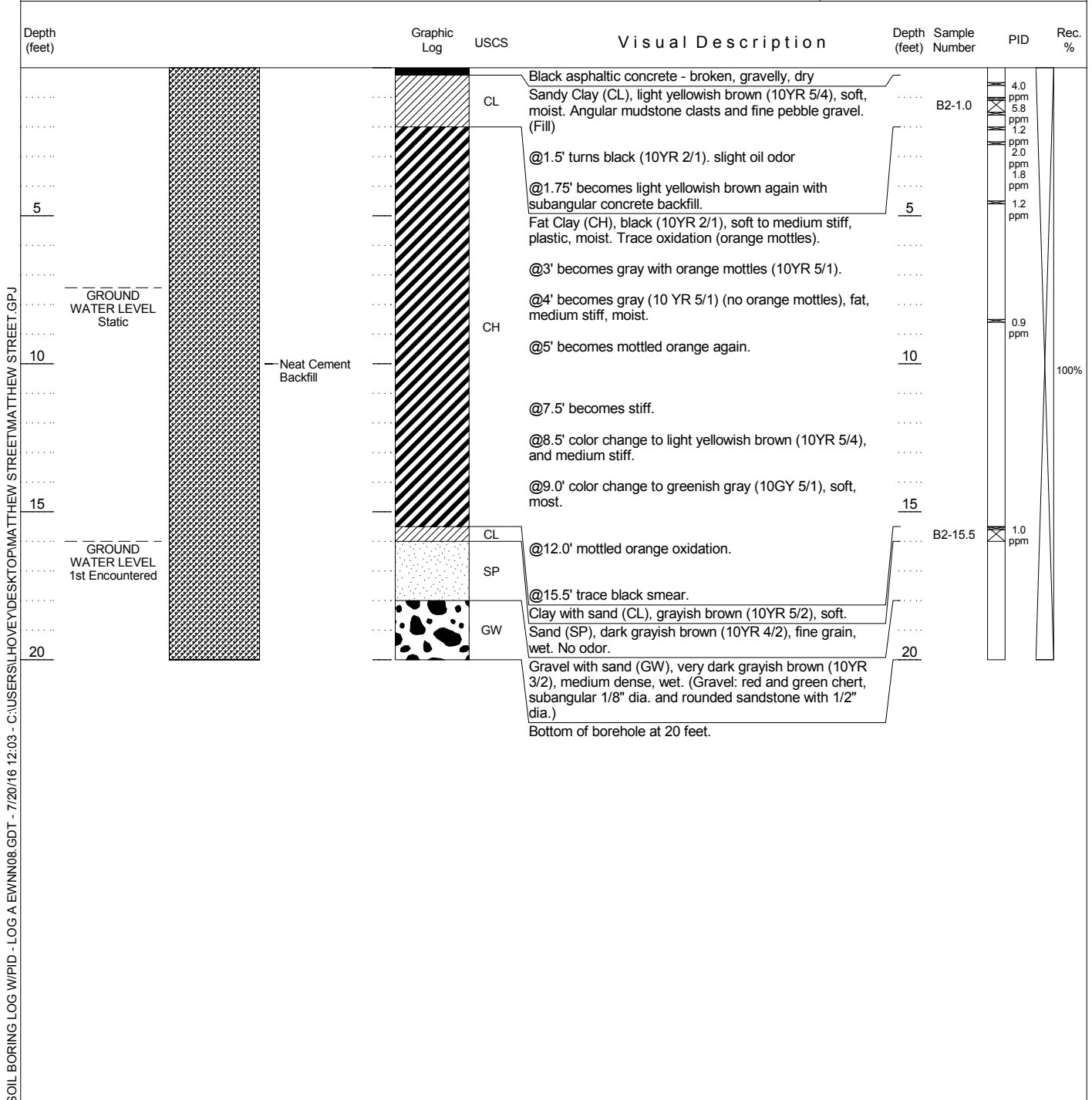
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SOIL BORING LOG

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BOREHOLE NUMBER B2		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/7/16 - 7/7/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE 7.4	DATE OF GW MEASUREMENT 7/7/16		NORTHING/EASTING /

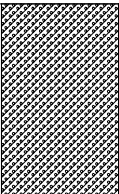
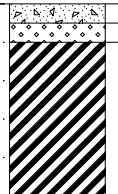

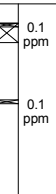




SOIL BORING LOG

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BOREHOLE NUMBER B3		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/7/16 - 7/7/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

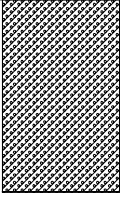
Depth (feet)		Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....			Concrete	.....	B3-0.5			
.....			SW	Silty Sand (SW), black with fine gravel. (Fill)				.....
.....				Black Clay (CH), gley (1/N/2.5), fat, stiff, moist.				.....
.....			CH	@3' becomes very dark gray (10YR 3/1), with black mottles. @3.8' color change to grayish brown (10YR 5/2), with orange mottles.				.....
5				Bottom of borehole at 5 feet.				5



SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B4		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/7/16 - 7/7/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		Concrete					
.....		SP	Silty Sand with fine gravel (SP), very dark grayish brown (2.5Y 3/2), loose, moist.	.....	B4-0.5	0.0 ppm	100%
.....		SP	Silty Sand with clay (SP), dark yellowish brown (10YR 3/4), medium dense, moist. (Fill)	.....	B4-1.5	0.0 ppm	
.....		CH	Fat Black Clay (CH), (10YR 2/1), medium stiff, moist. (native)	.....	B4-3.0	0.0 ppm	
5			@4' color change to gray (10YR 5/1). Bottom of borehole at 5 feet.	5			

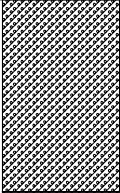


SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B5		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16

ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT	NORTHING/EASTING /
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Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		SP	Sand, very dark grayish brown (2.5Y 3/2), fine, loose, dry. (fill)	.....		
.....		CL	Concrete	.....	B5-1.5	1.8 ppm	
.....		CH	Gravelly Clay (CL), yellowish brown (10YR 5/4), moist. Sub-angular gravel 1/4" dia. (Fill)	.....	B5-2.0		
.....			@2' Trace lense of greenish gray sandy clay.	.....	B5-3.0		
.....			Black Clay (CH), (10YR 2/1), stiff, moist. @3' color change to gray (10YR 5/1).	.....		
5			@4.8' color change to black, (10YR 2/1). Bottom of borehole at 5 feet.	5		0.7 ppm	65%



SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B6		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....	GP	Cobble 2" rounded, loose, dry. (Fill)	.....	.....	0.7 ppm	.....
.....	SP	Sand, very dark grayish brown (10YR 3/2), loose with angular gravel and black clay. (Fill)	.....	B6-1.0	0.6 ppm	.....
.....	Fat Black Clay (CH), (10YR 2/1), stiff, moist, with angular gravel 1" dia.	.....	.....	0.5 ppm	100%
.....	@3' color change to yellowish brown (10YR 4/4), oxidized.	.....	.....	0.6 ppm	.....
5	CH	@4.5' color change to black (10YR 2/1).	5	.....	.....	80%
.....	Silty Clay with Sand (CL), light yellowish brown (10YR 5/4), stiff, moist, with orange mottling.	.....	.....	0.7 ppm	60%
10	CL	@11' streak of light gray sand.	10	.....	.....	.....
.....	Clay (CH), light yellowish brown (10YR 5/4), stiff, moist, with orange mottling.	.....	.....	0.4 ppm	100%
15	CH	.....	15	.....	.....	.....
.....	SP	Sand (SP), gray (10YR 5/1), medium dense to dense	.....	B6-17.0	0.5 ppm	.....
.....	SM	@18.5 wet	.....	.....	.....	.....
.....	Silty Sand (SM), yellowish brown, oxidized.	20	.....	.....	.....
20	Sand (SP), gray (10YR 5/1), fine, dense, very moist.	20	B6-20.0	.....	.....
.....	SP	@21' wet	.....	.....	.....	.....
.....	@22' becomes soft, very wet	.....	.....	.....	.....
.....	GW	@23' medium sand	.....	.....	.....	.....
.....	Gravel, gray (10YR 5/1), loose (subangular 3/4" dia.), wet.
.....	Bottom of borehole at 24 feet.

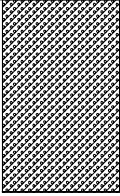
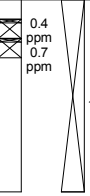
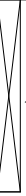
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SOIL BORING LOG

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BOREHOLE NUMBER B7		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

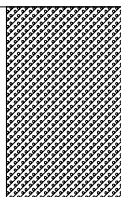
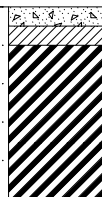
Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		CH	Concrete	.....	B7-0.5		
.....		CL	Gravelly Clay (CL), yellowish brown (10YR 5/4), stiff, most. Subangular gravel 1/4" dia. (Fill)	.....	B7-1.0		
.....			Fat Black Clay (CH), (10YR 2/1), stiff, moist. Trace gray mottling	.....		
.....		CH	@2.5' color change to grayish brown (10YR 5/2) with orange mottling	.....		
5			@4.5' color change to black (10YR 2/1), medium stiff. Bottom of borehole at 5 feet.	5			



SOIL BORING LOG

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BOREHOLE NUMBER B8		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

Depth (feet)	Graphic Log			USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
..... 5			CL	Concrete	Fat Black Clay (CH), (10YR 2/1), medium stiff to stiff, moist. @2' color change to grayish brown (10YR 5/2) with orange mottles, stiff. @4.5 color change to black (10YR 2/1), medium stiff to stiff. Bottom of borehole at 5 feet. 5	B8-0.5 B8-1.0	0.9 ppm	100%
				Clay with angular gravel (CL), black to grayish brown, stiff. (Fill)				0.7 ppm	
								0.8 ppm	

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SOIL BORING LOG

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BOREHOLE NUMBER B10		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE 7.0	DATE OF GW MEASUREMENT 7/8/16		NORTHING/EASTING /

Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....	Asphaltic concrete 7" thick	.....	.....	.....	.....
.....	GW	Gravel with Sand and Clay (GW), dark grayish brown (10YR 4/2), medium dense, moist. (angular to subangular gravel 1"dia.) (Fill)	.....	.....	1.5 ppm	100%
.....	@2' trace red oxidation staining	.....	.....	3.1 ppm	.....
.....	1.7 ppm	.....
5	CL	Clay with pea gravel (CL), dark yellowish brown (10 YR 4/4), soft, very moist. @4.5 color change to gray (10YR 5/1).	5	.....	.....	30%
.....
.....	CL	Gravelly Clay (CL), very dark grayish brown (10YR 4/2), soft, very moist. (subangular pea gravel size)	10	.....	1.5 ppm	30%
10	10	B10-10.0	.....	.....
.....	GP	Gravel (GP), very dark grayish brown (10YR 4/2), medium dense to loose, wet.	.....	.....	1.3 ppm	.....
.....	CH	Clay (CH), light yellowish brown (10YR 5/4), stiff, with orange mottling. @14' becomes silty, medium stiff.	15	.....	.....	.....
15	15	.....	.....	.....
.....	CL	Silty Clay (CL), light yellowish brown (10YR 5/4), soft, with orange mottling. @16.5 wet @19' becomes medium stiff	20	.....	.....	100%
20	20	.....	.....	.....
.....	SP	Sand (SP), light yellowish brown (10 YR 5/4), medium dense, fine, wet. @23' becomes very fine	.....	.....	.....	.....
.....
25	CL	Silty Clay with Sand (CL), light yellowish brown (10YR 5/4), very moist to wet.	25	B10-24.5	2.4 ppm	.....
.....	SP	Sand (SP), light yellowish brown (10YR 5/4), fine, wet. @26.5' becomes gravelly	.....	.....	.....	.....
.....	GW	Sandy Gravel (GW), light yellowish brown to yellowish (10YR 5/4), dense.
.....	Bottom of borehole at 28 feet.

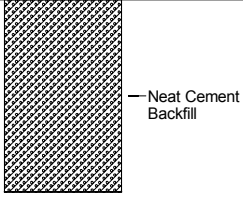
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SOIL BORING LOG

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BOREHOLE NUMBER B11		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/7/16 - 7/7/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

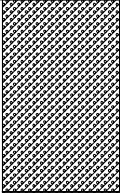
Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		GW	Gravel, light gray (10YR 7/1), angular 3/4" dia. with fabric down to 6". @0.5' becomes very dark grayish brown (10YR 3/2), moist. (Fill)	.....	B11-1.0	0.0 ppm	100%
.....		SW	Gravelly Sand (SW), very dark grayish brown (10YR 3/2), medium dense, moist. (Fill)	.....	B11-3.5	0.4 ppm	
.....		CL	Silty Clay (CL), yellowish brown (10YR 5/4), medium stiff, moist. (Fill)	.....		
5		CH	Fat Black Clay (CH), (10 YR 2/1), stiff, moist. Bottom of borehole at 5 feet.	5			



SOIL BORING LOG

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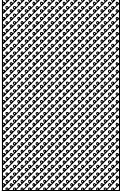
BOREHOLE NUMBER B12		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/7/16 - 7/7/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /

Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		GW	Gravel (GW), light gray (10YR 7/1), loose, dry. (Fill)	.....		
.....			@1' becomes very dark grayish brown (10YR 3/2).	.....		
.....		SW	Gravelly Sand (SW), very dark grayish brown (10YR 3/2), medium dense, moist. (Fill)	.....	B12-2.5	0.4 ppm	100%
.....		CL	Silty Clay (CL), yellowish brown (10YR 5/4), medium stiff, moist. (Fill)	.....	B12-3.5	0.4 ppm	
5		CH	Fat Black Clay (CH), (10 YR 2/1), stiff, moist.	5			
			Bottom of borehole at 5 feet.				



SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B13		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street				
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda				
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16			
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /			
Depth (feet)	Graphic Log	USCS	Visual Description		Depth (feet)	Sample Number	PID	Rec. %
.....		.....	Concrete 3"	.....	.....	.....	.....	90%
.....		CL	Gravelly Clay (CL), yellowish brown (10YR 4/4), stiff. (Fill)	.....			
.....			Fat Black Clay (CH), (10YR 2/1), stiff, trace greenish.	.....			
.....		CH	@2.5' color change to gray (10YR 5/1) with orange mottles.	.....			
.....			@4' color change to black (10YR 2/1).	.....			
5				Bottom of borehole at 5 feet.	5			

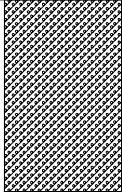
SOIL BORING LOG W/PID - LOG A EWNN08.GDT - 7/20/16 12:03 - C:\USERS\HONEYDESKTOP\MATTHEW STREET\MATTHEW STREET.GPJ



SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B14		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE	DATE OF GW MEASUREMENT		NORTHING/EASTING /













Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		SP	Fill - Fine sand, loose, with concrete debris.	.....		
.....			Concrete 12"	.....		
.....		CL	Gravelly Clay (CL), yellowish brown (10YR 5/4).	.....	B14-1.5	12.2 ppm	
.....			Black Clay (CH), (10YR 2/1), medium stiff, trace fine angular gravel, trace fine gray sand.	.....	B14-2.5	8.1 ppm	
.....		CH	@3' color change to gray (10YR 5/1).	.....		18.9 ppm	100%
5			@4.5' color change to black (10YR 2/1). Bottom of borehole at 5 feet.	5			



SOIL BORING LOG

Page 1 of 1

BOREHOLE NUMBER B15		PROJECT NUMBER / NAME 260770 / Mathew Street		LOCATION 651 Mathew Street	
APPROVED BY Glenn Young, PG		DRILLING CONTRACTOR / DRILLER Cascade / NA		LOGGED BY Jake Zepeda	
DRILLING EQUIPMENT / METHOD Track Rig 7720 DT / Direct Push		BIT SIZE / BIT TYPE 2.25"		SAMPLING METHOD Continuous	START-FINISH DATE 7/8/16 - 7/8/16
ELEVATION OF: (FT.)	GROUND SURFACE NA	GW SURFACE 7.5	DATE OF GW MEASUREMENT 7/8/16		NORTHING/EASTING /

Depth (feet)	Graphic Log	USCS	Visual Description	Depth (feet)	Sample Number	PID	Rec. %
.....		GW	Asphalt	.....	.....	.....	.....
.....		GW	Sandy Gravel (GW), brown (10YR 4/3).	.....	B15-1.0	1 ppm	60%
.....		CH	Fat Black Clay (CH), (10YR 2/1), stiff, moist.	.....	.....	.....	.....
.....		CH	@2.5' color change to yellowish grayish brown, with orange mottling.	.....	.....	.....	.....
5		CH	@5.5' color change to black (10YR 2/1), orange oxidation.	5	.....	.....	.....
.....		CH	@6.5' color change to very dark grayish brown (10YR 3/2).	.....	B15-5.5	.....	80%
.....		CL	Silty Clay (CL), grayish brown (10YR 5/2), soft, very moist, with orange mottling.	10	.....	.....	60%
10		CL	.....	.....	.....	.....	.....
.....		GW	Sandy Gravel (GW), grayish brown (10YR 5/2), dense, moist.	.....	B15-15.5	.....	100%
15		GW	@16' wet	.....	.....	.....	.....
.....		GW	.....	.....	.....	.....	.....
20		GW	.....	20	.....	.....	.....

Bottom of borehole at 20 feet.

SOIL BORING LOG W/PID - LOG A EWNN08.GDT - 7/20/16 12:03 - C:\USERS\HONEYDESK\TOP\MATTHEW STREET\MATTHEW STREET.GPJ

**APPENDIX J:
LABORATORY REPORTS**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1607379 **Amended:** 07/15/2016

Report Created for: TRC

2300 Clayton Road, Suite 610
Concord, CA 94520

Project Contact: Glenn Young

Project P.O.:

Project Name: 260770; Mathew Street Project

Project Received: 07/11/2016

Analytical Report reviewed & approved for release on 07/14/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: TRC
Project: 260770; Mathew Street Project
WorkOrder: 1607379

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
e	spike reference value above calibration level
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: TRC
Project: 260770; Mathew Street Project
WorkOrder: 1607379

Analytical Qualifiers

B	analyte detected in the associated Method Blank and in the sample
J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
a3	sample diluted due to high organic content.
c8	sample pH is greater than 2
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
e11	stoddard solvent/mineral spirit (?)

Quality Control Qualifiers

F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.
F10	MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.
F13	Indigenous sample results too high for a representative matrix spike analysis.



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-0.5	1607379-005A	Soil	07/07/2016 13:24	GC23	123520

Analytes	Result	MDL	RL	DE	Date Analyzed
Aldrin	ND	0.00027	0.0010	1	07/13/2016 21:41
a-BHC	ND	0.00010	0.0010	1	07/13/2016 21:41
b-BHC	ND	0.00025	0.0010	1	07/13/2016 21:41
d-BHC	ND	0.00037	0.0010	1	07/13/2016 21:41
g-BHC	ND	0.000097	0.0010	1	07/13/2016 21:41
Chlordane (Technical)	ND	0.016	0.025	1	07/13/2016 21:41
a-Chlordane	ND	0.00047	0.0010	1	07/13/2016 21:41
g-Chlordane	ND	0.00021	0.0010	1	07/13/2016 21:41
p,p-DDD	ND	0.00014	0.0010	1	07/13/2016 21:41
p,p-DDE	ND	0.00032	0.0010	1	07/13/2016 21:41
p,p-DDT	ND	0.00043	0.0010	1	07/13/2016 21:41
Dieldrin	ND	0.00033	0.0010	1	07/13/2016 21:41
Endosulfan I	ND	0.00065	0.0010	1	07/13/2016 21:41
Endosulfan II	ND	0.00020	0.0010	1	07/13/2016 21:41
Endosulfan sulfate	ND	0.00063	0.0010	1	07/13/2016 21:41
Endrin	ND	0.00042	0.0010	1	07/13/2016 21:41
Endrin aldehyde	ND	0.00020	0.0010	1	07/13/2016 21:41
Endrin ketone	ND	0.00013	0.0010	1	07/13/2016 21:41
Heptachlor	ND	0.00021	0.0010	1	07/13/2016 21:41
Heptachlor epoxide	ND	0.00020	0.0010	1	07/13/2016 21:41
Hexachlorobenzene	ND	0.00027	0.010	1	07/13/2016 21:41
Hexachlorocyclopentadiene	ND	0.00040	0.020	1	07/13/2016 21:41
Methoxychlor	ND	0.00089	0.0010	1	07/13/2016 21:41
Toxaphene	ND	0.035	0.050	1	07/13/2016 21:41
Aroclor1016	ND	0.0051	0.050	1	07/13/2016 21:41
Aroclor1221	ND	0.011	0.050	1	07/13/2016 21:41
Aroclor1232	ND	0.0063	0.050	1	07/13/2016 21:41
Aroclor1242	ND	0.0067	0.050	1	07/13/2016 21:41
Aroclor1248	ND	0.0040	0.050	1	07/13/2016 21:41
Aroclor1254	ND	0.0068	0.050	1	07/13/2016 21:41
Aroclor1260	ND	0.0061	0.050	1	07/13/2016 21:41
PCBs, total	ND	0.0040	0.050	1	07/13/2016 21:41

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	94	70-130	07/13/2016 21:41

Analyst(s): CK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	GC22	123555

Analytes	Result	MDL	RL	DE	Date Analyzed
Aldrin	ND	0.00027	0.0010	1	07/12/2016 15:10
a-BHC	ND	0.00010	0.0010	1	07/12/2016 15:10
b-BHC	ND	0.00025	0.0010	1	07/12/2016 15:10
d-BHC	ND	0.00037	0.0010	1	07/12/2016 15:10
g-BHC	ND	0.000097	0.0010	1	07/12/2016 15:10
Chlordane (Technical)	ND	0.016	0.025	1	07/12/2016 15:10
a-Chlordane	ND	0.00047	0.0010	1	07/12/2016 15:10
g-Chlordane	ND	0.00021	0.0010	1	07/12/2016 15:10
p,p-DDD	ND	0.00014	0.0010	1	07/12/2016 15:10
p,p-DDE	ND	0.00032	0.0010	1	07/12/2016 15:10
p,p-DDT	ND	0.00043	0.0010	1	07/12/2016 15:10
Dieldrin	ND	0.00033	0.0010	1	07/12/2016 15:10
Endosulfan I	ND	0.00065	0.0010	1	07/12/2016 15:10
Endosulfan II	ND	0.00020	0.0010	1	07/12/2016 15:10
Endosulfan sulfate	ND	0.00063	0.0010	1	07/12/2016 15:10
Endrin	ND	0.00042	0.0010	1	07/12/2016 15:10
Endrin aldehyde	ND	0.00020	0.0010	1	07/12/2016 15:10
Endrin ketone	ND	0.00013	0.0010	1	07/12/2016 15:10
Heptachlor	ND	0.00021	0.0010	1	07/12/2016 15:10
Heptachlor epoxide	ND	0.00020	0.0010	1	07/12/2016 15:10
Hexachlorobenzene	ND	0.00027	0.010	1	07/12/2016 15:10
Hexachlorocyclopentadiene	ND	0.00040	0.020	1	07/12/2016 15:10
Methoxychlor	ND	0.00089	0.0010	1	07/12/2016 15:10
Toxaphene	ND	0.035	0.050	1	07/12/2016 15:10
Aroclor1016	ND	0.0051	0.050	1	07/12/2016 15:10
Aroclor1221	ND	0.011	0.050	1	07/12/2016 15:10
Aroclor1232	ND	0.0063	0.050	1	07/12/2016 15:10
Aroclor1242	ND	0.0067	0.050	1	07/12/2016 15:10
Aroclor1248	ND	0.0040	0.050	1	07/12/2016 15:10
Aroclor1254	ND	0.0068	0.050	1	07/12/2016 15:10
Aroclor1260	ND	0.0061	0.050	1	07/12/2016 15:10
PCBs, total	ND	0.0040	0.050	1	07/12/2016 15:10

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	93	70-130	07/12/2016 15:10

Analyst(s): CK



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3620B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs w/ Florisil Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-1.0	1607379-022A	Soil	07/07/2016 14:53	GC22	123603

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.0027	0.010	10	07/13/2016 09:00
a-BHC	ND		0.0010	0.010	10	07/13/2016 09:00
b-BHC	ND		0.0025	0.010	10	07/13/2016 09:00
d-BHC	ND		0.0037	0.010	10	07/13/2016 09:00
g-BHC	ND		0.00097	0.010	10	07/13/2016 09:00
Chlordane (Technical)	ND		0.16	0.25	10	07/13/2016 09:00
a-Chlordane	ND		0.0047	0.010	10	07/13/2016 09:00
g-Chlordane	0.0036	J	0.0021	0.010	10	07/13/2016 09:00
p,p-DDD	ND		0.0014	0.010	10	07/13/2016 09:00
p,p-DDE	0.0062	J	0.0032	0.010	10	07/13/2016 09:00
p,p-DDT	0.047		0.0043	0.010	10	07/13/2016 09:00
Dieldrin	0.0036	J	0.0033	0.010	10	07/13/2016 09:00
Endosulfan I	ND		0.0065	0.010	10	07/13/2016 09:00
Endosulfan II	ND		0.0020	0.010	10	07/13/2016 09:00
Endosulfan sulfate	ND		0.0063	0.010	10	07/13/2016 09:00
Endrin	ND		0.0042	0.010	10	07/13/2016 09:00
Endrin aldehyde	ND		0.0020	0.010	10	07/13/2016 09:00
Endrin ketone	ND		0.0013	0.010	10	07/13/2016 09:00
Heptachlor	ND		0.0021	0.010	10	07/13/2016 09:00
Heptachlor epoxide	ND		0.0020	0.010	10	07/13/2016 09:00
Hexachlorobenzene	ND		0.0027	0.10	10	07/13/2016 09:00
Hexachlorocyclopentadiene	ND		0.0040	0.20	10	07/13/2016 09:00
Methoxychlor	ND		0.0089	0.010	10	07/13/2016 09:00
Toxaphene	ND		0.35	0.50	10	07/13/2016 09:00
Aroclor1016	ND		0.051	0.50	10	07/13/2016 09:00
Aroclor1221	ND		0.11	0.50	10	07/13/2016 09:00
Aroclor1232	ND		0.063	0.50	10	07/13/2016 09:00
Aroclor1242	ND		0.067	0.50	10	07/13/2016 09:00
Aroclor1248	ND		0.040	0.50	10	07/13/2016 09:00
Aroclor1254	ND		0.068	0.50	10	07/13/2016 09:00
Aroclor1260	ND		0.061	0.50	10	07/13/2016 09:00
PCBs, total	ND		0.040	0.50	10	07/13/2016 09:00

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	95	70-130	07/13/2016 09:00

Analyst(s): CK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3620B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs w/ Florisil Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-2.5	1607379-024A	Soil	07/07/2016 15:10	GC23	123603

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.014	0.050	50	07/13/2016 22:19
a-BHC	ND	0.0050	0.050	50	07/13/2016 22:19
b-BHC	ND	0.012	0.050	50	07/13/2016 22:19
d-BHC	ND	0.018	0.050	50	07/13/2016 22:19
g-BHC	ND	0.0048	0.050	50	07/13/2016 22:19
Chlordane (Technical)	ND	0.80	1.2	50	07/13/2016 22:19
a-Chlordane	ND	0.024	0.050	50	07/13/2016 22:19
g-Chlordane	ND	0.010	0.050	50	07/13/2016 22:19
p,p-DDD	ND	0.0070	0.050	50	07/13/2016 22:19
p,p-DDE	ND	0.016	0.050	50	07/13/2016 22:19
p,p-DDT	ND	0.022	0.050	50	07/13/2016 22:19
Dieldrin	ND	0.016	0.050	50	07/13/2016 22:19
Endosulfan I	ND	0.032	0.050	50	07/13/2016 22:19
Endosulfan II	ND	0.010	0.050	50	07/13/2016 22:19
Endosulfan sulfate	ND	0.032	0.050	50	07/13/2016 22:19
Endrin	ND	0.021	0.050	50	07/13/2016 22:19
Endrin aldehyde	ND	0.010	0.050	50	07/13/2016 22:19
Endrin ketone	ND	0.0065	0.050	50	07/13/2016 22:19
Heptachlor	ND	0.010	0.050	50	07/13/2016 22:19
Heptachlor epoxide	ND	0.010	0.050	50	07/13/2016 22:19
Hexachlorobenzene	ND	0.014	0.50	50	07/13/2016 22:19
Hexachlorocyclopentadiene	ND	0.020	1.0	50	07/13/2016 22:19
Methoxychlor	ND	0.044	0.050	50	07/13/2016 22:19
Toxaphene	ND	1.8	2.5	50	07/13/2016 22:19
Aroclor1016	ND	0.26	2.5	50	07/13/2016 22:19
Aroclor1221	ND	0.55	2.5	50	07/13/2016 22:19
Aroclor1232	ND	0.32	2.5	50	07/13/2016 22:19
Aroclor1242	ND	0.34	2.5	50	07/13/2016 22:19
Aroclor1248	ND	0.20	2.5	50	07/13/2016 22:19
Aroclor1254	ND	0.34	2.5	50	07/13/2016 22:19
Aroclor1260	ND	0.30	2.5	50	07/13/2016 22:19
PCBs, total	ND	0.20	2.5	50	07/13/2016 22:19

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	128	70-130	07/13/2016 22:19

Analyst(s): CK

Analytical Comments: a3



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-2.0	1607379-001A	Soil	07/07/2016 10:50	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	07/13/2016 20:12
tert-Amyl methyl ether (TAME)	ND		0.0050	1	07/13/2016 20:12
Benzene	ND		0.0050	1	07/13/2016 20:12
Bromobenzene	ND		0.0050	1	07/13/2016 20:12
Bromochloromethane	ND		0.0050	1	07/13/2016 20:12
Bromodichloromethane	ND		0.0050	1	07/13/2016 20:12
Bromoform	ND		0.0050	1	07/13/2016 20:12
Bromomethane	ND		0.0050	1	07/13/2016 20:12
2-Butanone (MEK)	ND		0.020	1	07/13/2016 20:12
t-Butyl alcohol (TBA)	ND		0.050	1	07/13/2016 20:12
n-Butyl benzene	ND		0.0050	1	07/13/2016 20:12
sec-Butyl benzene	ND		0.0050	1	07/13/2016 20:12
tert-Butyl benzene	ND		0.0050	1	07/13/2016 20:12
Carbon Disulfide	ND		0.0050	1	07/13/2016 20:12
Carbon Tetrachloride	ND		0.0050	1	07/13/2016 20:12
Chlorobenzene	ND		0.0050	1	07/13/2016 20:12
Chloroethane	ND		0.0050	1	07/13/2016 20:12
Chloroform	ND		0.0050	1	07/13/2016 20:12
Chloromethane	ND		0.0050	1	07/13/2016 20:12
2-Chlorotoluene	ND		0.0050	1	07/13/2016 20:12
4-Chlorotoluene	ND		0.0050	1	07/13/2016 20:12
Dibromochloromethane	ND		0.0050	1	07/13/2016 20:12
1,2-Dibromo-3-chloropropane	ND		0.0040	1	07/13/2016 20:12
1,2-Dibromoethane (EDB)	ND		0.0040	1	07/13/2016 20:12
Dibromomethane	ND		0.0050	1	07/13/2016 20:12
1,2-Dichlorobenzene	ND		0.0050	1	07/13/2016 20:12
1,3-Dichlorobenzene	ND		0.0050	1	07/13/2016 20:12
1,4-Dichlorobenzene	ND		0.0050	1	07/13/2016 20:12
Dichlorodifluoromethane	ND		0.0050	1	07/13/2016 20:12
1,1-Dichloroethane	ND		0.0050	1	07/13/2016 20:12
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	07/13/2016 20:12
1,1-Dichloroethene	ND		0.0050	1	07/13/2016 20:12
cis-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 20:12
trans-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 20:12
1,2-Dichloropropane	ND		0.0050	1	07/13/2016 20:12
1,3-Dichloropropane	ND		0.0050	1	07/13/2016 20:12
2,2-Dichloropropane	ND		0.0050	1	07/13/2016 20:12

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-2.0	1607379-001A	Soil	07/07/2016 10:50	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	07/13/2016 20:12
cis-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 20:12
trans-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 20:12
Diisopropyl ether (DIPE)	ND		0.0050	1	07/13/2016 20:12
Ethylbenzene	ND		0.0050	1	07/13/2016 20:12
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	07/13/2016 20:12
Freon 113	ND		0.0050	1	07/13/2016 20:12
Hexachlorobutadiene	ND		0.0050	1	07/13/2016 20:12
Hexachloroethane	ND		0.0050	1	07/13/2016 20:12
2-Hexanone	ND		0.0050	1	07/13/2016 20:12
Isopropylbenzene	ND		0.0050	1	07/13/2016 20:12
4-Isopropyl toluene	ND		0.0050	1	07/13/2016 20:12
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	07/13/2016 20:12
Methylene chloride	ND		0.0050	1	07/13/2016 20:12
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	07/13/2016 20:12
Naphthalene	ND		0.0050	1	07/13/2016 20:12
n-Propyl benzene	ND		0.0050	1	07/13/2016 20:12
Styrene	ND		0.0050	1	07/13/2016 20:12
1,1,1,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 20:12
1,1,2,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 20:12
Tetrachloroethene	ND		0.0050	1	07/13/2016 20:12
Toluene	ND		0.0050	1	07/13/2016 20:12
1,2,3-Trichlorobenzene	ND		0.0050	1	07/13/2016 20:12
1,2,4-Trichlorobenzene	ND		0.0050	1	07/13/2016 20:12
1,1,1-Trichloroethane	ND		0.0050	1	07/13/2016 20:12
1,1,2-Trichloroethane	ND		0.0050	1	07/13/2016 20:12
Trichloroethene	ND		0.0050	1	07/13/2016 20:12
Trichlorofluoromethane	ND		0.0050	1	07/13/2016 20:12
1,2,3-Trichloropropane	ND		0.0050	1	07/13/2016 20:12
1,2,4-Trimethylbenzene	ND		0.0050	1	07/13/2016 20:12
1,3,5-Trimethylbenzene	ND		0.0050	1	07/13/2016 20:12
Vinyl Chloride	ND		0.0050	1	07/13/2016 20:12
Xylenes, Total	ND		0.0050	1	07/13/2016 20:12

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-2.0	1607379-001A	Soil	07/07/2016 10:50	GC10	123518

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	103	70-130		07/13/2016 20:12
Toluene-d8	107	70-130		07/13/2016 20:12
4-BFB	95	70-130		07/13/2016 20:12
Benzene-d6	100	60-140		07/13/2016 20:12
Ethylbenzene-d10	112	60-140		07/13/2016 20:12
1,2-DCB-d4	91	60-140		07/13/2016 20:12

Analyst(s): KF



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-1.0	1607379-003A	Soil	07/07/2016 09:05	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	07/13/2016 17:14
tert-Amyl methyl ether (TAME)	ND		0.0050	1	07/13/2016 17:14
Benzene	ND		0.0050	1	07/13/2016 17:14
Bromobenzene	ND		0.0050	1	07/13/2016 17:14
Bromochloromethane	ND		0.0050	1	07/13/2016 17:14
Bromodichloromethane	ND		0.0050	1	07/13/2016 17:14
Bromoform	ND		0.0050	1	07/13/2016 17:14
Bromomethane	ND		0.0050	1	07/13/2016 17:14
2-Butanone (MEK)	ND		0.020	1	07/13/2016 17:14
t-Butyl alcohol (TBA)	ND		0.050	1	07/13/2016 17:14
n-Butyl benzene	ND		0.0050	1	07/13/2016 17:14
sec-Butyl benzene	ND		0.0050	1	07/13/2016 17:14
tert-Butyl benzene	ND		0.0050	1	07/13/2016 17:14
Carbon Disulfide	ND		0.0050	1	07/13/2016 17:14
Carbon Tetrachloride	ND		0.0050	1	07/13/2016 17:14
Chlorobenzene	ND		0.0050	1	07/13/2016 17:14
Chloroethane	ND		0.0050	1	07/13/2016 17:14
Chloroform	ND		0.0050	1	07/13/2016 17:14
Chloromethane	ND		0.0050	1	07/13/2016 17:14
2-Chlorotoluene	ND		0.0050	1	07/13/2016 17:14
4-Chlorotoluene	ND		0.0050	1	07/13/2016 17:14
Dibromochloromethane	ND		0.0050	1	07/13/2016 17:14
1,2-Dibromo-3-chloropropane	ND		0.0040	1	07/13/2016 17:14
1,2-Dibromoethane (EDB)	ND		0.0040	1	07/13/2016 17:14
Dibromomethane	ND		0.0050	1	07/13/2016 17:14
1,2-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:14
1,3-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:14
1,4-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:14
Dichlorodifluoromethane	ND		0.0050	1	07/13/2016 17:14
1,1-Dichloroethane	ND		0.0050	1	07/13/2016 17:14
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	07/13/2016 17:14
1,1-Dichloroethene	ND		0.0050	1	07/13/2016 17:14
cis-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 17:14
trans-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 17:14
1,2-Dichloropropane	ND		0.0050	1	07/13/2016 17:14
1,3-Dichloropropane	ND		0.0050	1	07/13/2016 17:14
2,2-Dichloropropane	ND		0.0050	1	07/13/2016 17:14

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-1.0	1607379-003A	Soil	07/07/2016 09:05	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	07/13/2016 17:14
cis-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 17:14
trans-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 17:14
Diisopropyl ether (DIPE)	ND		0.0050	1	07/13/2016 17:14
Ethylbenzene	ND		0.0050	1	07/13/2016 17:14
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	07/13/2016 17:14
Freon 113	ND		0.0050	1	07/13/2016 17:14
Hexachlorobutadiene	ND		0.0050	1	07/13/2016 17:14
Hexachloroethane	ND		0.0050	1	07/13/2016 17:14
2-Hexanone	ND		0.0050	1	07/13/2016 17:14
Isopropylbenzene	ND		0.0050	1	07/13/2016 17:14
4-Isopropyl toluene	ND		0.0050	1	07/13/2016 17:14
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	07/13/2016 17:14
Methylene chloride	ND		0.0050	1	07/13/2016 17:14
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	07/13/2016 17:14
Naphthalene	ND		0.0050	1	07/13/2016 17:14
n-Propyl benzene	ND		0.0050	1	07/13/2016 17:14
Styrene	ND		0.0050	1	07/13/2016 17:14
1,1,1,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 17:14
1,1,2,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 17:14
Tetrachloroethene	ND		0.0050	1	07/13/2016 17:14
Toluene	ND		0.0050	1	07/13/2016 17:14
1,2,3-Trichlorobenzene	ND		0.0050	1	07/13/2016 17:14
1,2,4-Trichlorobenzene	ND		0.0050	1	07/13/2016 17:14
1,1,1-Trichloroethane	ND		0.0050	1	07/13/2016 17:14
1,1,2-Trichloroethane	ND		0.0050	1	07/13/2016 17:14
Trichloroethene	ND		0.0050	1	07/13/2016 17:14
Trichlorofluoromethane	ND		0.0050	1	07/13/2016 17:14
1,2,3-Trichloropropane	ND		0.0050	1	07/13/2016 17:14
1,2,4-Trimethylbenzene	ND		0.0050	1	07/13/2016 17:14
1,3,5-Trimethylbenzene	ND		0.0050	1	07/13/2016 17:14
Vinyl Chloride	ND		0.0050	1	07/13/2016 17:14
Xylenes, Total	ND		0.0050	1	07/13/2016 17:14

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-1.0	1607379-003A	Soil	07/07/2016 09:05	GC10	123518

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	109	70-130		07/13/2016 17:14
Toluene-d8	108	70-130		07/13/2016 17:14
4-BFB	95	70-130		07/13/2016 17:14
Benzene-d6	90	60-140		07/13/2016 17:14
Ethylbenzene-d10	94	60-140		07/13/2016 17:14
1,2-DCB-d4	81	60-140		07/13/2016 17:14

Analyst(s): KF



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6-17.0	1607379-013A	Soil	07/08/2016 10:15	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	07/13/2016 20:53
tert-Amyl methyl ether (TAME)	ND		0.0050	1	07/13/2016 20:53
Benzene	ND		0.0050	1	07/13/2016 20:53
Bromobenzene	ND		0.0050	1	07/13/2016 20:53
Bromochloromethane	ND		0.0050	1	07/13/2016 20:53
Bromodichloromethane	ND		0.0050	1	07/13/2016 20:53
Bromoform	ND		0.0050	1	07/13/2016 20:53
Bromomethane	ND		0.0050	1	07/13/2016 20:53
2-Butanone (MEK)	ND		0.020	1	07/13/2016 20:53
t-Butyl alcohol (TBA)	ND		0.050	1	07/13/2016 20:53
n-Butyl benzene	ND		0.0050	1	07/13/2016 20:53
sec-Butyl benzene	ND		0.0050	1	07/13/2016 20:53
tert-Butyl benzene	ND		0.0050	1	07/13/2016 20:53
Carbon Disulfide	ND		0.0050	1	07/13/2016 20:53
Carbon Tetrachloride	ND		0.0050	1	07/13/2016 20:53
Chlorobenzene	ND		0.0050	1	07/13/2016 20:53
Chloroethane	ND		0.0050	1	07/13/2016 20:53
Chloroform	ND		0.0050	1	07/13/2016 20:53
Chloromethane	ND		0.0050	1	07/13/2016 20:53
2-Chlorotoluene	ND		0.0050	1	07/13/2016 20:53
4-Chlorotoluene	ND		0.0050	1	07/13/2016 20:53
Dibromochloromethane	ND		0.0050	1	07/13/2016 20:53
1,2-Dibromo-3-chloropropane	ND		0.0040	1	07/13/2016 20:53
1,2-Dibromoethane (EDB)	ND		0.0040	1	07/13/2016 20:53
Dibromomethane	ND		0.0050	1	07/13/2016 20:53
1,2-Dichlorobenzene	ND		0.0050	1	07/13/2016 20:53
1,3-Dichlorobenzene	ND		0.0050	1	07/13/2016 20:53
1,4-Dichlorobenzene	ND		0.0050	1	07/13/2016 20:53
Dichlorodifluoromethane	ND		0.0050	1	07/13/2016 20:53
1,1-Dichloroethane	ND		0.0050	1	07/13/2016 20:53
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	07/13/2016 20:53
1,1-Dichloroethene	ND		0.0050	1	07/13/2016 20:53
cis-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 20:53
trans-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 20:53
1,2-Dichloropropane	ND		0.0050	1	07/13/2016 20:53
1,3-Dichloropropane	ND		0.0050	1	07/13/2016 20:53
2,2-Dichloropropane	ND		0.0050	1	07/13/2016 20:53

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6-17.0	1607379-013A	Soil	07/08/2016 10:15	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	07/13/2016 20:53
cis-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 20:53
trans-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 20:53
Diisopropyl ether (DIPE)	ND		0.0050	1	07/13/2016 20:53
Ethylbenzene	ND		0.0050	1	07/13/2016 20:53
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	07/13/2016 20:53
Freon 113	ND		0.0050	1	07/13/2016 20:53
Hexachlorobutadiene	ND		0.0050	1	07/13/2016 20:53
Hexachloroethane	ND		0.0050	1	07/13/2016 20:53
2-Hexanone	ND		0.0050	1	07/13/2016 20:53
Isopropylbenzene	ND		0.0050	1	07/13/2016 20:53
4-Isopropyl toluene	ND		0.0050	1	07/13/2016 20:53
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	07/13/2016 20:53
Methylene chloride	ND		0.0050	1	07/13/2016 20:53
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	07/13/2016 20:53
Naphthalene	ND		0.0050	1	07/13/2016 20:53
n-Propyl benzene	ND		0.0050	1	07/13/2016 20:53
Styrene	ND		0.0050	1	07/13/2016 20:53
1,1,1,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 20:53
1,1,2,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 20:53
Tetrachloroethene	ND		0.0050	1	07/13/2016 20:53
Toluene	ND		0.0050	1	07/13/2016 20:53
1,2,3-Trichlorobenzene	ND		0.0050	1	07/13/2016 20:53
1,2,4-Trichlorobenzene	ND		0.0050	1	07/13/2016 20:53
1,1,1-Trichloroethane	ND		0.0050	1	07/13/2016 20:53
1,1,2-Trichloroethane	ND		0.0050	1	07/13/2016 20:53
Trichloroethene	ND		0.0050	1	07/13/2016 20:53
Trichlorofluoromethane	ND		0.0050	1	07/13/2016 20:53
1,2,3-Trichloropropane	ND		0.0050	1	07/13/2016 20:53
1,2,4-Trimethylbenzene	ND		0.0050	1	07/13/2016 20:53
1,3,5-Trimethylbenzene	ND		0.0050	1	07/13/2016 20:53
Vinyl Chloride	ND		0.0050	1	07/13/2016 20:53
Xylenes, Total	ND		0.0050	1	07/13/2016 20:53

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6-17.0	1607379-013A	Soil	07/08/2016 10:15	GC10	123518

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	105	70-130		07/13/2016 20:53
Toluene-d8	107	70-130		07/13/2016 20:53
4-BFB	94	70-130		07/13/2016 20:53
Benzene-d6	98	60-140		07/13/2016 20:53
Ethylbenzene-d10	107	60-140		07/13/2016 20:53
1,2-DCB-d4	87	60-140		07/13/2016 20:53

Analyst(s): KF



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10.0	1607379-020A	Soil	07/08/2016 08:45	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	07/13/2016 21:33
tert-Amyl methyl ether (TAME)	ND		0.0050	1	07/13/2016 21:33
Benzene	ND		0.0050	1	07/13/2016 21:33
Bromobenzene	ND		0.0050	1	07/13/2016 21:33
Bromochloromethane	ND		0.0050	1	07/13/2016 21:33
Bromodichloromethane	ND		0.0050	1	07/13/2016 21:33
Bromoform	ND		0.0050	1	07/13/2016 21:33
Bromomethane	ND		0.0050	1	07/13/2016 21:33
2-Butanone (MEK)	ND		0.020	1	07/13/2016 21:33
t-Butyl alcohol (TBA)	ND		0.050	1	07/13/2016 21:33
n-Butyl benzene	ND		0.0050	1	07/13/2016 21:33
sec-Butyl benzene	ND		0.0050	1	07/13/2016 21:33
tert-Butyl benzene	ND		0.0050	1	07/13/2016 21:33
Carbon Disulfide	ND		0.0050	1	07/13/2016 21:33
Carbon Tetrachloride	ND		0.0050	1	07/13/2016 21:33
Chlorobenzene	ND		0.0050	1	07/13/2016 21:33
Chloroethane	ND		0.0050	1	07/13/2016 21:33
Chloroform	ND		0.0050	1	07/13/2016 21:33
Chloromethane	ND		0.0050	1	07/13/2016 21:33
2-Chlorotoluene	ND		0.0050	1	07/13/2016 21:33
4-Chlorotoluene	ND		0.0050	1	07/13/2016 21:33
Dibromochloromethane	ND		0.0050	1	07/13/2016 21:33
1,2-Dibromo-3-chloropropane	ND		0.0040	1	07/13/2016 21:33
1,2-Dibromoethane (EDB)	ND		0.0040	1	07/13/2016 21:33
Dibromomethane	ND		0.0050	1	07/13/2016 21:33
1,2-Dichlorobenzene	ND		0.0050	1	07/13/2016 21:33
1,3-Dichlorobenzene	ND		0.0050	1	07/13/2016 21:33
1,4-Dichlorobenzene	ND		0.0050	1	07/13/2016 21:33
Dichlorodifluoromethane	ND		0.0050	1	07/13/2016 21:33
1,1-Dichloroethane	ND		0.0050	1	07/13/2016 21:33
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	07/13/2016 21:33
1,1-Dichloroethene	ND		0.0050	1	07/13/2016 21:33
cis-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 21:33
trans-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 21:33
1,2-Dichloropropane	ND		0.0050	1	07/13/2016 21:33
1,3-Dichloropropane	ND		0.0050	1	07/13/2016 21:33
2,2-Dichloropropane	ND		0.0050	1	07/13/2016 21:33

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10.0	1607379-020A	Soil	07/08/2016 08:45	GC10	123518
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	07/13/2016 21:33
cis-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 21:33
trans-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 21:33
Diisopropyl ether (DIPE)	ND		0.0050	1	07/13/2016 21:33
Ethylbenzene	ND		0.0050	1	07/13/2016 21:33
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	07/13/2016 21:33
Freon 113	ND		0.0050	1	07/13/2016 21:33
Hexachlorobutadiene	ND		0.0050	1	07/13/2016 21:33
Hexachloroethane	ND		0.0050	1	07/13/2016 21:33
2-Hexanone	ND		0.0050	1	07/13/2016 21:33
Isopropylbenzene	ND		0.0050	1	07/13/2016 21:33
4-Isopropyl toluene	ND		0.0050	1	07/13/2016 21:33
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	07/13/2016 21:33
Methylene chloride	ND		0.0050	1	07/13/2016 21:33
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	07/13/2016 21:33
Naphthalene	ND		0.0050	1	07/13/2016 21:33
n-Propyl benzene	ND		0.0050	1	07/13/2016 21:33
Styrene	ND		0.0050	1	07/13/2016 21:33
1,1,1,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 21:33
1,1,2,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 21:33
Tetrachloroethene	ND		0.0050	1	07/13/2016 21:33
Toluene	ND		0.0050	1	07/13/2016 21:33
1,2,3-Trichlorobenzene	ND		0.0050	1	07/13/2016 21:33
1,2,4-Trichlorobenzene	ND		0.0050	1	07/13/2016 21:33
1,1,1-Trichloroethane	ND		0.0050	1	07/13/2016 21:33
1,1,2-Trichloroethane	ND		0.0050	1	07/13/2016 21:33
Trichloroethene	ND		0.0050	1	07/13/2016 21:33
Trichlorofluoromethane	ND		0.0050	1	07/13/2016 21:33
1,2,3-Trichloropropane	ND		0.0050	1	07/13/2016 21:33
1,2,4-Trimethylbenzene	ND		0.0050	1	07/13/2016 21:33
1,3,5-Trimethylbenzene	ND		0.0050	1	07/13/2016 21:33
Vinyl Chloride	ND		0.0050	1	07/13/2016 21:33
Xylenes, Total	ND		0.0050	1	07/13/2016 21:33

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10.0	1607379-020A	Soil	07/08/2016 08:45	GC10	123518

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	104	70-130		07/13/2016 21:33
Toluene-d8	107	70-130		07/13/2016 21:33
4-BFB	94	70-130		07/13/2016 21:33
Benzene-d6	102	60-140		07/13/2016 21:33
Ethylbenzene-d10	111	60-140		07/13/2016 21:33
1,2-DCB-d4	92	60-140		07/13/2016 21:33

Analyst(s): KF



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC16	123607
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	07/13/2016 17:25
tert-Amyl methyl ether (TAME)	ND		0.0050	1	07/13/2016 17:25
Benzene	ND		0.0050	1	07/13/2016 17:25
Bromobenzene	ND		0.0050	1	07/13/2016 17:25
Bromochloromethane	ND		0.0050	1	07/13/2016 17:25
Bromodichloromethane	ND		0.0050	1	07/13/2016 17:25
Bromoform	ND		0.0050	1	07/13/2016 17:25
Bromomethane	ND		0.0050	1	07/13/2016 17:25
2-Butanone (MEK)	ND		0.020	1	07/13/2016 17:25
t-Butyl alcohol (TBA)	ND		0.050	1	07/13/2016 17:25
n-Butyl benzene	ND		0.0050	1	07/13/2016 17:25
sec-Butyl benzene	ND		0.0050	1	07/13/2016 17:25
tert-Butyl benzene	ND		0.0050	1	07/13/2016 17:25
Carbon Disulfide	ND		0.0050	1	07/13/2016 17:25
Carbon Tetrachloride	ND		0.0050	1	07/13/2016 17:25
Chlorobenzene	ND		0.0050	1	07/13/2016 17:25
Chloroethane	ND		0.0050	1	07/13/2016 17:25
Chloroform	ND		0.0050	1	07/13/2016 17:25
Chloromethane	ND		0.0050	1	07/13/2016 17:25
2-Chlorotoluene	ND		0.0050	1	07/13/2016 17:25
4-Chlorotoluene	ND		0.0050	1	07/13/2016 17:25
Dibromochloromethane	ND		0.0050	1	07/13/2016 17:25
1,2-Dibromo-3-chloropropane	ND		0.0040	1	07/13/2016 17:25
1,2-Dibromoethane (EDB)	ND		0.0040	1	07/13/2016 17:25
Dibromomethane	ND		0.0050	1	07/13/2016 17:25
1,2-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,3-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,4-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:25
Dichlorodifluoromethane	ND		0.0050	1	07/13/2016 17:25
1,1-Dichloroethane	ND		0.0050	1	07/13/2016 17:25
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	07/13/2016 17:25
1,1-Dichloroethene	ND		0.0050	1	07/13/2016 17:25
cis-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 17:25
trans-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 17:25
1,2-Dichloropropane	ND		0.0050	1	07/13/2016 17:25
1,3-Dichloropropane	ND		0.0050	1	07/13/2016 17:25
2,2-Dichloropropane	ND		0.0050	1	07/13/2016 17:25

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC16	123607
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	07/13/2016 17:25
cis-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 17:25
trans-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 17:25
Diisopropyl ether (DIPE)	ND		0.0050	1	07/13/2016 17:25
Ethylbenzene	ND		0.0050	1	07/13/2016 17:25
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	07/13/2016 17:25
Freon 113	ND		0.0050	1	07/13/2016 17:25
Hexachlorobutadiene	ND		0.0050	1	07/13/2016 17:25
Hexachloroethane	ND		0.0050	1	07/13/2016 17:25
2-Hexanone	ND		0.0050	1	07/13/2016 17:25
Isopropylbenzene	ND		0.0050	1	07/13/2016 17:25
4-Isopropyl toluene	ND		0.0050	1	07/13/2016 17:25
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	07/13/2016 17:25
Methylene chloride	ND		0.0050	1	07/13/2016 17:25
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	07/13/2016 17:25
Naphthalene	ND		0.0050	1	07/13/2016 17:25
n-Propyl benzene	ND		0.0050	1	07/13/2016 17:25
Styrene	ND		0.0050	1	07/13/2016 17:25
1,1,1,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 17:25
1,1,2,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 17:25
Tetrachloroethene	ND		0.0050	1	07/13/2016 17:25
Toluene	ND		0.0050	1	07/13/2016 17:25
1,2,3-Trichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,2,4-Trichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,1,1-Trichloroethane	ND		0.0050	1	07/13/2016 17:25
1,1,2-Trichloroethane	ND		0.0050	1	07/13/2016 17:25
Trichloroethene	ND		0.0050	1	07/13/2016 17:25
Trichlorofluoromethane	ND		0.0050	1	07/13/2016 17:25
1,2,3-Trichloropropane	ND		0.0050	1	07/13/2016 17:25
1,2,4-Trimethylbenzene	ND		0.0050	1	07/13/2016 17:25
1,3,5-Trimethylbenzene	ND		0.0050	1	07/13/2016 17:25
Vinyl Chloride	ND		0.0050	1	07/13/2016 17:25
Xylenes, Total	ND		0.0050	1	07/13/2016 17:25

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC16	123607

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	93	70-130		07/13/2016 17:25
Toluene-d8	105	70-130		07/13/2016 17:25
4-BFB	95	70-130		07/13/2016 17:25
Benzene-d6	116	60-140		07/13/2016 17:25
Ethylbenzene-d10	137	60-140		07/13/2016 17:25
1,2-DCB-d4	93	60-140		07/13/2016 17:25

Analyst(s): KF



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1	1607379-033C	Water	07/07/2016 11:45	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	07/11/2016 21:28
tert-Amyl methyl ether (TAME)	ND		0.50	1	07/11/2016 21:28
Benzene	ND		0.50	1	07/11/2016 21:28
Bromobenzene	ND		0.50	1	07/11/2016 21:28
Bromochloromethane	ND		0.50	1	07/11/2016 21:28
Bromodichloromethane	ND		0.50	1	07/11/2016 21:28
Bromoform	ND		0.50	1	07/11/2016 21:28
Bromomethane	ND		0.50	1	07/11/2016 21:28
2-Butanone (MEK)	ND		2.0	1	07/11/2016 21:28
t-Butyl alcohol (TBA)	ND		2.0	1	07/11/2016 21:28
n-Butyl benzene	ND		0.50	1	07/11/2016 21:28
sec-Butyl benzene	ND		0.50	1	07/11/2016 21:28
tert-Butyl benzene	ND		0.50	1	07/11/2016 21:28
Carbon Disulfide	ND		0.50	1	07/11/2016 21:28
Carbon Tetrachloride	ND		0.50	1	07/11/2016 21:28
Chlorobenzene	ND		0.50	1	07/11/2016 21:28
Chloroethane	ND		0.50	1	07/11/2016 21:28
Chloroform	ND		0.50	1	07/11/2016 21:28
Chloromethane	ND		0.50	1	07/11/2016 21:28
2-Chlorotoluene	ND		0.50	1	07/11/2016 21:28
4-Chlorotoluene	ND		0.50	1	07/11/2016 21:28
Dibromochloromethane	ND		0.50	1	07/11/2016 21:28
1,2-Dibromo-3-chloropropane	ND		0.20	1	07/11/2016 21:28
1,2-Dibromoethane (EDB)	ND		0.50	1	07/11/2016 21:28
Dibromomethane	ND		0.50	1	07/11/2016 21:28
1,2-Dichlorobenzene	ND		0.50	1	07/11/2016 21:28
1,3-Dichlorobenzene	ND		0.50	1	07/11/2016 21:28
1,4-Dichlorobenzene	ND		0.50	1	07/11/2016 21:28
Dichlorodifluoromethane	ND		0.50	1	07/11/2016 21:28
1,1-Dichloroethane	ND		0.50	1	07/11/2016 21:28
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	07/11/2016 21:28
1,1-Dichloroethene	ND		0.50	1	07/11/2016 21:28
cis-1,2-Dichloroethene	ND		0.50	1	07/11/2016 21:28
trans-1,2-Dichloroethene	ND		0.50	1	07/11/2016 21:28
1,2-Dichloropropane	ND		0.50	1	07/11/2016 21:28
1,3-Dichloropropane	ND		0.50	1	07/11/2016 21:28
2,2-Dichloropropane	ND		0.50	1	07/11/2016 21:28

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1	1607379-033C	Water	07/07/2016 11:45	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	07/11/2016 21:28
cis-1,3-Dichloropropene	ND		0.50	1	07/11/2016 21:28
trans-1,3-Dichloropropene	ND		0.50	1	07/11/2016 21:28
Diisopropyl ether (DIPE)	ND		0.50	1	07/11/2016 21:28
Ethylbenzene	ND		0.50	1	07/11/2016 21:28
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	07/11/2016 21:28
Freon 113	ND		0.50	1	07/11/2016 21:28
Hexachlorobutadiene	ND		0.50	1	07/11/2016 21:28
Hexachloroethane	ND		0.50	1	07/11/2016 21:28
2-Hexanone	ND		0.50	1	07/11/2016 21:28
Isopropylbenzene	ND		0.50	1	07/11/2016 21:28
4-Isopropyl toluene	ND		0.50	1	07/11/2016 21:28
Methyl-t-butyl ether (MTBE)	ND		0.50	1	07/11/2016 21:28
Methylene chloride	ND		0.50	1	07/11/2016 21:28
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	07/11/2016 21:28
Naphthalene	ND		0.50	1	07/11/2016 21:28
n-Propyl benzene	ND		0.50	1	07/11/2016 21:28
Styrene	ND		0.50	1	07/11/2016 21:28
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/11/2016 21:28
1,1,2,2-Tetrachloroethane	ND		0.50	1	07/11/2016 21:28
Tetrachloroethene	ND		0.50	1	07/11/2016 21:28
Toluene	ND		0.50	1	07/11/2016 21:28
1,2,3-Trichlorobenzene	ND		0.50	1	07/11/2016 21:28
1,2,4-Trichlorobenzene	ND		0.50	1	07/11/2016 21:28
1,1,1-Trichloroethane	ND		0.50	1	07/11/2016 21:28
1,1,2-Trichloroethane	ND		0.50	1	07/11/2016 21:28
Trichloroethene	ND		0.50	1	07/11/2016 21:28
Trichlorofluoromethane	ND		0.50	1	07/11/2016 21:28
1,2,3-Trichloropropane	ND		0.50	1	07/11/2016 21:28
1,2,4-Trimethylbenzene	ND		0.50	1	07/11/2016 21:28
1,3,5-Trimethylbenzene	ND		0.50	1	07/11/2016 21:28
Vinyl Chloride	ND		0.50	1	07/11/2016 21:28
Xylenes, Total	ND		0.50	1	07/11/2016 21:28

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1	1607379-033C	Water	07/07/2016 11:45	GC18	123595

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	124	70-130		07/11/2016 21:28
Toluene-d8	107	70-130		07/11/2016 21:28
4-BFB	95	70-130		07/11/2016 21:28
<u>Analyst(s):</u> MW				



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2	1607379-034C	Water	07/07/2016 10:05	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	07/11/2016 22:07
tert-Amyl methyl ether (TAME)	ND		0.50	1	07/11/2016 22:07
Benzene	ND		0.50	1	07/11/2016 22:07
Bromobenzene	ND		0.50	1	07/11/2016 22:07
Bromochloromethane	ND		0.50	1	07/11/2016 22:07
Bromodichloromethane	ND		0.50	1	07/11/2016 22:07
Bromoform	ND		0.50	1	07/11/2016 22:07
Bromomethane	ND		0.50	1	07/11/2016 22:07
2-Butanone (MEK)	ND		2.0	1	07/11/2016 22:07
t-Butyl alcohol (TBA)	ND		2.0	1	07/11/2016 22:07
n-Butyl benzene	ND		0.50	1	07/11/2016 22:07
sec-Butyl benzene	ND		0.50	1	07/11/2016 22:07
tert-Butyl benzene	ND		0.50	1	07/11/2016 22:07
Carbon Disulfide	1.9		0.50	1	07/11/2016 22:07
Carbon Tetrachloride	ND		0.50	1	07/11/2016 22:07
Chlorobenzene	ND		0.50	1	07/11/2016 22:07
Chloroethane	ND		0.50	1	07/11/2016 22:07
Chloroform	ND		0.50	1	07/11/2016 22:07
Chloromethane	ND		0.50	1	07/11/2016 22:07
2-Chlorotoluene	ND		0.50	1	07/11/2016 22:07
4-Chlorotoluene	ND		0.50	1	07/11/2016 22:07
Dibromochloromethane	ND		0.50	1	07/11/2016 22:07
1,2-Dibromo-3-chloropropane	ND		0.20	1	07/11/2016 22:07
1,2-Dibromoethane (EDB)	ND		0.50	1	07/11/2016 22:07
Dibromomethane	ND		0.50	1	07/11/2016 22:07
1,2-Dichlorobenzene	ND		0.50	1	07/11/2016 22:07
1,3-Dichlorobenzene	ND		0.50	1	07/11/2016 22:07
1,4-Dichlorobenzene	ND		0.50	1	07/11/2016 22:07
Dichlorodifluoromethane	ND		0.50	1	07/11/2016 22:07
1,1-Dichloroethane	ND		0.50	1	07/11/2016 22:07
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	07/11/2016 22:07
1,1-Dichloroethene	ND		0.50	1	07/11/2016 22:07
cis-1,2-Dichloroethene	ND		0.50	1	07/11/2016 22:07
trans-1,2-Dichloroethene	ND		0.50	1	07/11/2016 22:07
1,2-Dichloropropane	ND		0.50	1	07/11/2016 22:07
1,3-Dichloropropane	ND		0.50	1	07/11/2016 22:07
2,2-Dichloropropane	ND		0.50	1	07/11/2016 22:07

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2	1607379-034C	Water	07/07/2016 10:05	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	07/11/2016 22:07
cis-1,3-Dichloropropene	ND		0.50	1	07/11/2016 22:07
trans-1,3-Dichloropropene	ND		0.50	1	07/11/2016 22:07
Diisopropyl ether (DIPE)	ND		0.50	1	07/11/2016 22:07
Ethylbenzene	ND		0.50	1	07/11/2016 22:07
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	07/11/2016 22:07
Freon 113	ND		0.50	1	07/11/2016 22:07
Hexachlorobutadiene	ND		0.50	1	07/11/2016 22:07
Hexachloroethane	ND		0.50	1	07/11/2016 22:07
2-Hexanone	ND		0.50	1	07/11/2016 22:07
Isopropylbenzene	ND		0.50	1	07/11/2016 22:07
4-Isopropyl toluene	ND		0.50	1	07/11/2016 22:07
Methyl-t-butyl ether (MTBE)	ND		0.50	1	07/11/2016 22:07
Methylene chloride	ND		0.50	1	07/11/2016 22:07
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	07/11/2016 22:07
Naphthalene	ND		0.50	1	07/11/2016 22:07
n-Propyl benzene	ND		0.50	1	07/11/2016 22:07
Styrene	ND		0.50	1	07/11/2016 22:07
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/11/2016 22:07
1,1,2,2-Tetrachloroethane	ND		0.50	1	07/11/2016 22:07
Tetrachloroethene	ND		0.50	1	07/11/2016 22:07
Toluene	ND		0.50	1	07/11/2016 22:07
1,2,3-Trichlorobenzene	ND		0.50	1	07/11/2016 22:07
1,2,4-Trichlorobenzene	ND		0.50	1	07/11/2016 22:07
1,1,1-Trichloroethane	ND		0.50	1	07/11/2016 22:07
1,1,2-Trichloroethane	ND		0.50	1	07/11/2016 22:07
Trichloroethene	ND		0.50	1	07/11/2016 22:07
Trichlorofluoromethane	ND		0.50	1	07/11/2016 22:07
1,2,3-Trichloropropane	ND		0.50	1	07/11/2016 22:07
1,2,4-Trimethylbenzene	ND		0.50	1	07/11/2016 22:07
1,3,5-Trimethylbenzene	ND		0.50	1	07/11/2016 22:07
Vinyl Chloride	ND		0.50	1	07/11/2016 22:07
Xylenes, Total	ND		0.50	1	07/11/2016 22:07

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2	1607379-034C	Water	07/07/2016 10:05	GC18	123595

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	126	70-130		07/11/2016 22:07
Toluene-d8	105	70-130		07/11/2016 22:07
4-BFB	96	70-130		07/11/2016 22:07
<u>Analyst(s):</u> MW	<u>Analytical Comments:</u> c8			



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6	1607379-035C	Water	07/08/2016 10:10	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	07/11/2016 22:45
tert-Amyl methyl ether (TAME)	ND		0.50	1	07/11/2016 22:45
Benzene	ND		0.50	1	07/11/2016 22:45
Bromobenzene	ND		0.50	1	07/11/2016 22:45
Bromochloromethane	ND		0.50	1	07/11/2016 22:45
Bromodichloromethane	ND		0.50	1	07/11/2016 22:45
Bromoform	ND		0.50	1	07/11/2016 22:45
Bromomethane	ND		0.50	1	07/11/2016 22:45
2-Butanone (MEK)	ND		2.0	1	07/11/2016 22:45
t-Butyl alcohol (TBA)	ND		2.0	1	07/11/2016 22:45
n-Butyl benzene	ND		0.50	1	07/11/2016 22:45
sec-Butyl benzene	ND		0.50	1	07/11/2016 22:45
tert-Butyl benzene	ND		0.50	1	07/11/2016 22:45
Carbon Disulfide	ND		0.50	1	07/11/2016 22:45
Carbon Tetrachloride	ND		0.50	1	07/11/2016 22:45
Chlorobenzene	ND		0.50	1	07/11/2016 22:45
Chloroethane	ND		0.50	1	07/11/2016 22:45
Chloroform	ND		0.50	1	07/11/2016 22:45
Chloromethane	ND		0.50	1	07/11/2016 22:45
2-Chlorotoluene	ND		0.50	1	07/11/2016 22:45
4-Chlorotoluene	ND		0.50	1	07/11/2016 22:45
Dibromochloromethane	ND		0.50	1	07/11/2016 22:45
1,2-Dibromo-3-chloropropane	ND		0.20	1	07/11/2016 22:45
1,2-Dibromoethane (EDB)	ND		0.50	1	07/11/2016 22:45
Dibromomethane	ND		0.50	1	07/11/2016 22:45
1,2-Dichlorobenzene	ND		0.50	1	07/11/2016 22:45
1,3-Dichlorobenzene	ND		0.50	1	07/11/2016 22:45
1,4-Dichlorobenzene	ND		0.50	1	07/11/2016 22:45
Dichlorodifluoromethane	ND		0.50	1	07/11/2016 22:45
1,1-Dichloroethane	ND		0.50	1	07/11/2016 22:45
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	07/11/2016 22:45
1,1-Dichloroethene	ND		0.50	1	07/11/2016 22:45
cis-1,2-Dichloroethene	ND		0.50	1	07/11/2016 22:45
trans-1,2-Dichloroethene	ND		0.50	1	07/11/2016 22:45
1,2-Dichloropropane	ND		0.50	1	07/11/2016 22:45
1,3-Dichloropropane	ND		0.50	1	07/11/2016 22:45
2,2-Dichloropropane	ND		0.50	1	07/11/2016 22:45

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6	1607379-035C	Water	07/08/2016 10:10	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	07/11/2016 22:45
cis-1,3-Dichloropropene	ND		0.50	1	07/11/2016 22:45
trans-1,3-Dichloropropene	ND		0.50	1	07/11/2016 22:45
Diisopropyl ether (DIPE)	ND		0.50	1	07/11/2016 22:45
Ethylbenzene	ND		0.50	1	07/11/2016 22:45
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	07/11/2016 22:45
Freon 113	ND		0.50	1	07/11/2016 22:45
Hexachlorobutadiene	ND		0.50	1	07/11/2016 22:45
Hexachloroethane	ND		0.50	1	07/11/2016 22:45
2-Hexanone	ND		0.50	1	07/11/2016 22:45
Isopropylbenzene	ND		0.50	1	07/11/2016 22:45
4-Isopropyl toluene	ND		0.50	1	07/11/2016 22:45
Methyl-t-butyl ether (MTBE)	ND		0.50	1	07/11/2016 22:45
Methylene chloride	ND		0.50	1	07/11/2016 22:45
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	07/11/2016 22:45
Naphthalene	ND		0.50	1	07/11/2016 22:45
n-Propyl benzene	ND		0.50	1	07/11/2016 22:45
Styrene	ND		0.50	1	07/11/2016 22:45
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/11/2016 22:45
1,1,2,2-Tetrachloroethane	ND		0.50	1	07/11/2016 22:45
Tetrachloroethene	ND		0.50	1	07/11/2016 22:45
Toluene	ND		0.50	1	07/11/2016 22:45
1,2,3-Trichlorobenzene	ND		0.50	1	07/11/2016 22:45
1,2,4-Trichlorobenzene	ND		0.50	1	07/11/2016 22:45
1,1,1-Trichloroethane	ND		0.50	1	07/11/2016 22:45
1,1,2-Trichloroethane	ND		0.50	1	07/11/2016 22:45
Trichloroethene	ND		0.50	1	07/11/2016 22:45
Trichlorofluoromethane	ND		0.50	1	07/11/2016 22:45
1,2,3-Trichloropropane	ND		0.50	1	07/11/2016 22:45
1,2,4-Trimethylbenzene	ND		0.50	1	07/11/2016 22:45
1,3,5-Trimethylbenzene	ND		0.50	1	07/11/2016 22:45
Vinyl Chloride	ND		0.50	1	07/11/2016 22:45
Xylenes, Total	ND		0.50	1	07/11/2016 22:45

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6	1607379-035C	Water	07/08/2016 10:10	GC18	123595

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	125	70-130		07/11/2016 22:45
Toluene-d8	106	70-130		07/11/2016 22:45
4-BFB	94	70-130		07/11/2016 22:45

Analyst(s): MW



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10	1607379-036C	Water	07/08/2016 08:30	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	07/11/2016 23:25
tert-Amyl methyl ether (TAME)	ND		0.50	1	07/11/2016 23:25
Benzene	ND		0.50	1	07/11/2016 23:25
Bromobenzene	ND		0.50	1	07/11/2016 23:25
Bromochloromethane	ND		0.50	1	07/11/2016 23:25
Bromodichloromethane	ND		0.50	1	07/11/2016 23:25
Bromoform	ND		0.50	1	07/11/2016 23:25
Bromomethane	ND		0.50	1	07/11/2016 23:25
2-Butanone (MEK)	ND		2.0	1	07/11/2016 23:25
t-Butyl alcohol (TBA)	ND		2.0	1	07/11/2016 23:25
n-Butyl benzene	ND		0.50	1	07/11/2016 23:25
sec-Butyl benzene	ND		0.50	1	07/11/2016 23:25
tert-Butyl benzene	ND		0.50	1	07/11/2016 23:25
Carbon Disulfide	1.4		0.50	1	07/11/2016 23:25
Carbon Tetrachloride	ND		0.50	1	07/11/2016 23:25
Chlorobenzene	ND		0.50	1	07/11/2016 23:25
Chloroethane	ND		0.50	1	07/11/2016 23:25
Chloroform	ND		0.50	1	07/11/2016 23:25
Chloromethane	ND		0.50	1	07/11/2016 23:25
2-Chlorotoluene	ND		0.50	1	07/11/2016 23:25
4-Chlorotoluene	ND		0.50	1	07/11/2016 23:25
Dibromochloromethane	ND		0.50	1	07/11/2016 23:25
1,2-Dibromo-3-chloropropane	ND		0.20	1	07/11/2016 23:25
1,2-Dibromoethane (EDB)	ND		0.50	1	07/11/2016 23:25
Dibromomethane	ND		0.50	1	07/11/2016 23:25
1,2-Dichlorobenzene	ND		0.50	1	07/11/2016 23:25
1,3-Dichlorobenzene	ND		0.50	1	07/11/2016 23:25
1,4-Dichlorobenzene	ND		0.50	1	07/11/2016 23:25
Dichlorodifluoromethane	ND		0.50	1	07/11/2016 23:25
1,1-Dichloroethane	ND		0.50	1	07/11/2016 23:25
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	07/11/2016 23:25
1,1-Dichloroethene	ND		0.50	1	07/11/2016 23:25
cis-1,2-Dichloroethene	ND		0.50	1	07/11/2016 23:25
trans-1,2-Dichloroethene	ND		0.50	1	07/11/2016 23:25
1,2-Dichloropropane	ND		0.50	1	07/11/2016 23:25
1,3-Dichloropropane	ND		0.50	1	07/11/2016 23:25
2,2-Dichloropropane	ND		0.50	1	07/11/2016 23:25

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10	1607379-036C	Water	07/08/2016 08:30	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	07/11/2016 23:25
cis-1,3-Dichloropropene	ND		0.50	1	07/11/2016 23:25
trans-1,3-Dichloropropene	ND		0.50	1	07/11/2016 23:25
Diisopropyl ether (DIPE)	ND		0.50	1	07/11/2016 23:25
Ethylbenzene	ND		0.50	1	07/11/2016 23:25
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	07/11/2016 23:25
Freon 113	ND		0.50	1	07/11/2016 23:25
Hexachlorobutadiene	ND		0.50	1	07/11/2016 23:25
Hexachloroethane	ND		0.50	1	07/11/2016 23:25
2-Hexanone	ND		0.50	1	07/11/2016 23:25
Isopropylbenzene	ND		0.50	1	07/11/2016 23:25
4-Isopropyl toluene	ND		0.50	1	07/11/2016 23:25
Methyl-t-butyl ether (MTBE)	ND		0.50	1	07/11/2016 23:25
Methylene chloride	ND		0.50	1	07/11/2016 23:25
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	07/11/2016 23:25
Naphthalene	ND		0.50	1	07/11/2016 23:25
n-Propyl benzene	ND		0.50	1	07/11/2016 23:25
Styrene	ND		0.50	1	07/11/2016 23:25
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/11/2016 23:25
1,1,2,2-Tetrachloroethane	ND		0.50	1	07/11/2016 23:25
Tetrachloroethene	ND		0.50	1	07/11/2016 23:25
Toluene	ND		0.50	1	07/11/2016 23:25
1,2,3-Trichlorobenzene	ND		0.50	1	07/11/2016 23:25
1,2,4-Trichlorobenzene	ND		0.50	1	07/11/2016 23:25
1,1,1-Trichloroethane	ND		0.50	1	07/11/2016 23:25
1,1,2-Trichloroethane	ND		0.50	1	07/11/2016 23:25
Trichloroethene	ND		0.50	1	07/11/2016 23:25
Trichlorofluoromethane	ND		0.50	1	07/11/2016 23:25
1,2,3-Trichloropropane	ND		0.50	1	07/11/2016 23:25
1,2,4-Trimethylbenzene	ND		0.50	1	07/11/2016 23:25
1,3,5-Trimethylbenzene	ND		0.50	1	07/11/2016 23:25
Vinyl Chloride	ND		0.50	1	07/11/2016 23:25
Xylenes, Total	ND		0.50	1	07/11/2016 23:25

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10	1607379-036C	Water	07/08/2016 08:30	GC18	123595

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	125	70-130		07/11/2016 23:25
Toluene-d8	105	70-130		07/11/2016 23:25
4-BFB	95	70-130		07/11/2016 23:25
<u>Analyst(s):</u> MW	<u>Analytical Comments:</u> c8			



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15	1607379-037C	Water	07/08/2016 13:45	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	07/12/2016 00:04
tert-Amyl methyl ether (TAME)	ND		0.50	1	07/12/2016 00:04
Benzene	ND		0.50	1	07/12/2016 00:04
Bromobenzene	ND		0.50	1	07/12/2016 00:04
Bromochloromethane	ND		0.50	1	07/12/2016 00:04
Bromodichloromethane	ND		0.50	1	07/12/2016 00:04
Bromoform	ND		0.50	1	07/12/2016 00:04
Bromomethane	ND		0.50	1	07/12/2016 00:04
2-Butanone (MEK)	ND		2.0	1	07/12/2016 00:04
t-Butyl alcohol (TBA)	ND		2.0	1	07/12/2016 00:04
n-Butyl benzene	ND		0.50	1	07/12/2016 00:04
sec-Butyl benzene	ND		0.50	1	07/12/2016 00:04
tert-Butyl benzene	ND		0.50	1	07/12/2016 00:04
Carbon Disulfide	ND		0.50	1	07/12/2016 00:04
Carbon Tetrachloride	ND		0.50	1	07/12/2016 00:04
Chlorobenzene	ND		0.50	1	07/12/2016 00:04
Chloroethane	ND		0.50	1	07/12/2016 00:04
Chloroform	ND		0.50	1	07/12/2016 00:04
Chloromethane	ND		0.50	1	07/12/2016 00:04
2-Chlorotoluene	ND		0.50	1	07/12/2016 00:04
4-Chlorotoluene	ND		0.50	1	07/12/2016 00:04
Dibromochloromethane	ND		0.50	1	07/12/2016 00:04
1,2-Dibromo-3-chloropropane	ND		0.20	1	07/12/2016 00:04
1,2-Dibromoethane (EDB)	ND		0.50	1	07/12/2016 00:04
Dibromomethane	ND		0.50	1	07/12/2016 00:04
1,2-Dichlorobenzene	ND		0.50	1	07/12/2016 00:04
1,3-Dichlorobenzene	ND		0.50	1	07/12/2016 00:04
1,4-Dichlorobenzene	ND		0.50	1	07/12/2016 00:04
Dichlorodifluoromethane	ND		0.50	1	07/12/2016 00:04
1,1-Dichloroethane	ND		0.50	1	07/12/2016 00:04
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	07/12/2016 00:04
1,1-Dichloroethene	ND		0.50	1	07/12/2016 00:04
cis-1,2-Dichloroethene	ND		0.50	1	07/12/2016 00:04
trans-1,2-Dichloroethene	ND		0.50	1	07/12/2016 00:04
1,2-Dichloropropane	ND		0.50	1	07/12/2016 00:04
1,3-Dichloropropane	ND		0.50	1	07/12/2016 00:04
2,2-Dichloropropane	ND		0.50	1	07/12/2016 00:04

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15	1607379-037C	Water	07/08/2016 13:45	GC18	123595
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	07/12/2016 00:04
cis-1,3-Dichloropropene	ND		0.50	1	07/12/2016 00:04
trans-1,3-Dichloropropene	ND		0.50	1	07/12/2016 00:04
Diisopropyl ether (DIPE)	ND		0.50	1	07/12/2016 00:04
Ethylbenzene	ND		0.50	1	07/12/2016 00:04
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	07/12/2016 00:04
Freon 113	ND		0.50	1	07/12/2016 00:04
Hexachlorobutadiene	ND		0.50	1	07/12/2016 00:04
Hexachloroethane	ND		0.50	1	07/12/2016 00:04
2-Hexanone	ND		0.50	1	07/12/2016 00:04
Isopropylbenzene	ND		0.50	1	07/12/2016 00:04
4-Isopropyl toluene	ND		0.50	1	07/12/2016 00:04
Methyl-t-butyl ether (MTBE)	ND		0.50	1	07/12/2016 00:04
Methylene chloride	ND		0.50	1	07/12/2016 00:04
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	07/12/2016 00:04
Naphthalene	ND		0.50	1	07/12/2016 00:04
n-Propyl benzene	ND		0.50	1	07/12/2016 00:04
Styrene	ND		0.50	1	07/12/2016 00:04
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/12/2016 00:04
1,1,2,2-Tetrachloroethane	ND		0.50	1	07/12/2016 00:04
Tetrachloroethene	ND		0.50	1	07/12/2016 00:04
Toluene	ND		0.50	1	07/12/2016 00:04
1,2,3-Trichlorobenzene	ND		0.50	1	07/12/2016 00:04
1,2,4-Trichlorobenzene	ND		0.50	1	07/12/2016 00:04
1,1,1-Trichloroethane	ND		0.50	1	07/12/2016 00:04
1,1,2-Trichloroethane	ND		0.50	1	07/12/2016 00:04
Trichloroethene	ND		0.50	1	07/12/2016 00:04
Trichlorofluoromethane	ND		0.50	1	07/12/2016 00:04
1,2,3-Trichloropropane	ND		0.50	1	07/12/2016 00:04
1,2,4-Trimethylbenzene	ND		0.50	1	07/12/2016 00:04
1,3,5-Trimethylbenzene	ND		0.50	1	07/12/2016 00:04
Vinyl Chloride	ND		0.50	1	07/12/2016 00:04
Xylenes, Total	ND		0.50	1	07/12/2016 00:04

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16-7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15	1607379-037C	Water	07/08/2016 13:45	GC18	123595

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	125	70-130		07/12/2016 00:04
Toluene-d8	105	70-130		07/12/2016 00:04
4-BFB	96	70-130		07/12/2016 00:04
<u>Analyst(s):</u> MW				



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-0.5	1607379-005A	Soil	07/07/2016 13:24	GC17	123564

Analytes	Result	MDL	RL	DE	Date Analyzed
Acenaphthene	ND	0.0026	0.010	1	07/14/2016 13:59
Acenaphthylene	ND	0.0034	0.010	1	07/14/2016 13:59
Anthracene	ND	0.0029	0.010	1	07/14/2016 13:59
Benzo (a) anthracene	ND	0.0017	0.010	1	07/14/2016 13:59
Benzo (a) pyrene	ND	0.0027	0.010	1	07/14/2016 13:59
Benzo (b) fluoranthene	ND	0.0015	0.010	1	07/14/2016 13:59
Benzo (g,h,i) perylene	ND	0.0033	0.010	1	07/14/2016 13:59
Benzo (k) fluoranthene	ND	0.0016	0.010	1	07/14/2016 13:59
Chrysene	ND	0.0024	0.010	1	07/14/2016 13:59
Dibenzo (a,h) anthracene	ND	0.0050	0.010	1	07/14/2016 13:59
Fluoranthene	ND	0.0040	0.010	1	07/14/2016 13:59
Fluorene	ND	0.0060	0.010	1	07/14/2016 13:59
Indeno (1,2,3-cd) pyrene	ND	0.0049	0.010	1	07/14/2016 13:59
1-Methylnaphthalene	ND	0.0029	0.010	1	07/14/2016 13:59
2-Methylnaphthalene	ND	0.0020	0.010	1	07/14/2016 13:59
Naphthalene	ND	0.0016	0.010	1	07/14/2016 13:59
Phenanthrene	ND	0.0035	0.010	1	07/14/2016 13:59
Pyrene	ND	0.0045	0.010	1	07/14/2016 13:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>			
1-Fluoronaphthalene	69	30-130			07/14/2016 13:59
2-Fluorobiphenyl	70	30-130			07/14/2016 13:59

Analyst(s): REB



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	GC17	123564

Analytes	Result	MDL	RL	DE	Date Analyzed
Acenaphthene	ND	0.0026	0.010	1	07/14/2016 14:29
Acenaphthylene	ND	0.0034	0.010	1	07/14/2016 14:29
Anthracene	ND	0.0029	0.010	1	07/14/2016 14:29
Benzo (a) anthracene	ND	0.0017	0.010	1	07/14/2016 14:29
Benzo (a) pyrene	ND	0.0027	0.010	1	07/14/2016 14:29
Benzo (b) fluoranthene	ND	0.0015	0.010	1	07/14/2016 14:29
Benzo (g,h,i) perylene	ND	0.0033	0.010	1	07/14/2016 14:29
Benzo (k) fluoranthene	ND	0.0016	0.010	1	07/14/2016 14:29
Chrysene	ND	0.0024	0.010	1	07/14/2016 14:29
Dibenzo (a,h) anthracene	ND	0.0050	0.010	1	07/14/2016 14:29
Fluoranthene	ND	0.0040	0.010	1	07/14/2016 14:29
Fluorene	ND	0.0060	0.010	1	07/14/2016 14:29
Indeno (1,2,3-cd) pyrene	ND	0.0049	0.010	1	07/14/2016 14:29
1-Methylnaphthalene	ND	0.0029	0.010	1	07/14/2016 14:29
2-Methylnaphthalene	ND	0.0020	0.010	1	07/14/2016 14:29
Naphthalene	ND	0.0016	0.010	1	07/14/2016 14:29
Phenanthrene	ND	0.0035	0.010	1	07/14/2016 14:29
Pyrene	ND	0.0045	0.010	1	07/14/2016 14:29

Surrogates	REC (%)	Limits	
1-Fluoronaphthalene	70	30-130	07/14/2016 14:29
2-Fluorobiphenyl	72	30-130	07/14/2016 14:29

Analyst(s): REB

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-1.0	1607379-022A	Soil	07/07/2016 14:53	GC35	123564

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acenaphthene	ND		0.013	0.050	5	07/15/2016 16:26
Acenaphthylene	0.082		0.017	0.050	5	07/15/2016 16:26
Anthracene	0.22		0.014	0.050	5	07/15/2016 16:26
Benzo (a) anthracene	0.093		0.0085	0.050	5	07/15/2016 16:26
Benzo (a) pyrene	0.11		0.014	0.050	5	07/15/2016 16:26
Benzo (b) fluoranthene	0.25		0.0075	0.050	5	07/15/2016 16:26
Benzo (g,h,i) perylene	0.41		0.016	0.050	5	07/15/2016 16:26
Benzo (k) fluoranthene	0.12		0.0080	0.050	5	07/15/2016 16:26
Chrysene	0.11		0.012	0.050	5	07/15/2016 16:26
Dibenzo (a,h) anthracene	0.042	JB	0.025	0.050	5	07/15/2016 16:26
Fluoranthene	0.11		0.020	0.050	5	07/15/2016 16:26
Fluorene	ND		0.030	0.050	5	07/15/2016 16:26
Indeno (1,2,3-cd) pyrene	0.20		0.024	0.050	5	07/15/2016 16:26
1-Methylnaphthalene	ND		0.014	0.050	5	07/15/2016 16:26
2-Methylnaphthalene	ND		0.010	0.050	5	07/15/2016 16:26
Naphthalene	ND		0.0080	0.050	5	07/15/2016 16:26
Phenanthrene	0.038	J	0.018	0.050	5	07/15/2016 16:26
Pyrene	0.11		0.022	0.050	5	07/15/2016 16:26

Surrogates	REC (%)	Limits
1-Fluoronaphthalene	116	30-130
2-Fluorobiphenyl	117	30-130

Analyst(s): REB



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-2.5	1607379-024A	Soil	07/07/2016 15:10	GC17	123564

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Acenaphthene	ND		0.013	0.050	5	07/14/2016 14:59
Acenaphthylene	0.023	J	0.017	0.050	5	07/14/2016 14:59
Anthracene	0.045	J	0.014	0.050	5	07/14/2016 14:59
Benzo (a) anthracene	0.059		0.0085	0.050	5	07/14/2016 14:59
Benzo (a) pyrene	0.071		0.014	0.050	5	07/14/2016 14:59
Benzo (b) fluoranthene	0.045	J	0.0075	0.050	5	07/14/2016 14:59
Benzo (g,h,i) perylene	0.073		0.016	0.050	5	07/14/2016 14:59
Benzo (k) fluoranthene	0.014	JB	0.0080	0.050	5	07/14/2016 14:59
Chrysene	0.026	J	0.012	0.050	5	07/14/2016 14:59
Dibenzo (a,h) anthracene	0.033	JB	0.025	0.050	5	07/14/2016 14:59
Fluoranthene	0.030	J	0.020	0.050	5	07/14/2016 14:59
Fluorene	ND		0.030	0.050	5	07/14/2016 14:59
Indeno (1,2,3-cd) pyrene	0.029	J	0.024	0.050	5	07/14/2016 14:59
1-Methylnaphthalene	ND		0.014	0.050	5	07/14/2016 14:59
2-Methylnaphthalene	0.018	J	0.010	0.050	5	07/14/2016 14:59
Naphthalene	0.014	J	0.0080	0.050	5	07/14/2016 14:59
Phenanthrene	0.019	J	0.018	0.050	5	07/14/2016 14:59
Pyrene	0.031	J	0.022	0.050	5	07/14/2016 14:59
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>		
1-Fluoronaphthalene	62			30-130		07/14/2016 14:59
2-Fluorobiphenyl	62			30-130		07/14/2016 14:59

Analyst(s): REB



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-2.0	1607379-001A	Soil	07/07/2016 10:50	ICP-MS3	123529
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.72		0.50	1	07/12/2016 21:40
Arsenic	8.3		0.50	1	07/12/2016 21:40
Barium	150		5.0	1	07/12/2016 21:40
Beryllium	ND		0.50	1	07/12/2016 21:40
Cadmium	0.32		0.25	1	07/12/2016 21:40
Chromium	49		0.50	1	07/12/2016 21:40
Cobalt	11		0.50	1	07/12/2016 21:40
Copper	32		0.50	1	07/12/2016 21:40
Lead	15		0.50	1	07/12/2016 21:40
Mercury	0.40		0.050	1	07/12/2016 21:40
Molybdenum	0.72		0.50	1	07/12/2016 21:40
Nickel	71		0.50	1	07/12/2016 21:40
Selenium	ND		0.50	1	07/12/2016 21:40
Silver	ND		0.50	1	07/12/2016 21:40
Thallium	ND		0.50	1	07/12/2016 21:40
Vanadium	42		0.50	1	07/12/2016 21:40
Zinc	130		5.0	1	07/12/2016 21:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		07/12/2016 21:40
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-1.0	1607379-003A	Soil	07/07/2016 09:05	ICP-MS1	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	1.1		0.50	1	07/12/2016 17:57
Arsenic	33		0.50	1	07/12/2016 17:57
Barium	91		5.0	1	07/12/2016 17:57
Beryllium	ND		0.50	1	07/12/2016 17:57
Cadmium	ND		0.25	1	07/12/2016 17:57
Chromium	43		0.50	1	07/12/2016 17:57
Cobalt	7.2		0.50	1	07/12/2016 17:57
Copper	23		0.50	1	07/12/2016 17:57
Lead	7.7		0.50	1	07/12/2016 17:57
Mercury	0.060		0.050	1	07/12/2016 17:57
Molybdenum	0.85		0.50	1	07/12/2016 17:57
Nickel	50		0.50	1	07/12/2016 17:57
Selenium	ND		0.50	1	07/12/2016 17:57
Silver	ND		0.50	1	07/12/2016 17:57
Thallium	ND		0.50	1	07/12/2016 17:57
Vanadium	43		0.50	1	07/12/2016 17:57
Zinc	63		5.0	1	07/12/2016 17:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		07/12/2016 17:57
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-0.5	1607379-005A	Soil	07/07/2016 13:24	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/12/2016 21:46
Arsenic	12		0.50	1	07/12/2016 21:46
Barium	390		5.0	1	07/12/2016 21:46
Beryllium	ND		1.0	1	07/12/2016 21:46
Cadmium	0.35		0.25	1	07/12/2016 21:46
Chromium	48		0.50	1	07/12/2016 21:46
Cobalt	12		0.50	1	07/12/2016 21:46
Copper	38		0.50	1	07/12/2016 21:46
Lead	10		0.50	1	07/12/2016 21:46
Mercury	0.072		0.050	1	07/12/2016 21:46
Molybdenum	1.5		0.50	1	07/12/2016 21:46
Nickel	64		0.50	1	07/12/2016 21:46
Selenium	0.61		0.50	1	07/12/2016 21:46
Silver	ND		0.50	1	07/12/2016 21:46
Thallium	ND		0.50	1	07/12/2016 21:46
Vanadium	37		0.50	1	07/12/2016 21:46
Zinc	91		5.0	1	07/12/2016 21:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	102		70-130		07/12/2016 21:46
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/12/2016 21:52
Arsenic	3.8		0.50	1	07/12/2016 21:52
Barium	99		5.0	1	07/12/2016 21:52
Beryllium	ND		0.50	1	07/12/2016 21:52
Cadmium	ND		0.25	1	07/12/2016 21:52
Chromium	52		0.50	1	07/12/2016 21:52
Cobalt	11		0.50	1	07/12/2016 21:52
Copper	29		0.50	1	07/12/2016 21:52
Lead	5.1		0.50	1	07/12/2016 21:52
Mercury	0.092		0.050	1	07/12/2016 21:52
Molybdenum	0.55		0.50	1	07/12/2016 21:52
Nickel	64		0.50	1	07/12/2016 21:52
Selenium	ND		0.50	1	07/12/2016 21:52
Silver	ND		0.50	1	07/12/2016 21:52
Thallium	ND		0.50	1	07/12/2016 21:52
Vanadium	54		0.50	1	07/12/2016 21:52
Zinc	52		5.0	1	07/12/2016 21:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		07/12/2016 21:52
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B5-1.5	1607379-009A	Soil	07/07/2016 12:04	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.52		0.50	1	07/12/2016 21:58
Arsenic	5.3		0.50	1	07/12/2016 21:58
Barium	200		5.0	1	07/12/2016 21:58
Beryllium	ND		1.0	1	07/12/2016 21:58
Cadmium	ND		0.25	1	07/12/2016 21:58
Chromium	57		0.50	1	07/12/2016 21:58
Cobalt	13		0.50	1	07/12/2016 21:58
Copper	41		0.50	1	07/12/2016 21:58
Lead	66		0.50	1	07/12/2016 21:58
Mercury	0.44		0.050	1	07/12/2016 21:58
Molybdenum	0.84		0.50	1	07/12/2016 21:58
Nickel	73		0.50	1	07/12/2016 21:58
Selenium	ND		0.50	1	07/12/2016 21:58
Silver	ND		0.50	1	07/12/2016 21:58
Thallium	ND		0.50	1	07/12/2016 21:58
Vanadium	56		0.50	1	07/12/2016 21:58
Zinc	160		5.0	1	07/12/2016 21:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		07/12/2016 21:58
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6-17.0	1607379-013A	Soil	07/08/2016 10:15	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/12/2016 22:23
Arsenic	3.9		0.50	1	07/12/2016 22:23
Barium	97		5.0	1	07/12/2016 22:23
Beryllium	ND		1.0	1	07/12/2016 22:23
Cadmium	ND		0.25	1	07/12/2016 22:23
Chromium	30		0.50	1	07/12/2016 22:23
Cobalt	6.9		0.50	1	07/12/2016 22:23
Copper	17		0.50	1	07/12/2016 22:23
Lead	5.8		0.50	1	07/12/2016 22:23
Mercury	0.20		0.050	1	07/12/2016 22:23
Molybdenum	ND		0.50	1	07/12/2016 22:23
Nickel	33		0.50	1	07/12/2016 22:23
Selenium	3.3		0.50	1	07/12/2016 22:23
Silver	ND		0.50	1	07/12/2016 22:23
Thallium	ND		0.50	1	07/12/2016 22:23
Vanadium	33		0.50	1	07/12/2016 22:23
Zinc	39		5.0	1	07/12/2016 22:23
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		07/12/2016 22:23
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-0.5	1607379-017A	Soil	07/08/2016 11:05	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/12/2016 22:29
Arsenic	5.2		0.50	1	07/12/2016 22:29
Barium	170		5.0	1	07/12/2016 22:29
Beryllium	ND		1.0	1	07/12/2016 22:29
Cadmium	ND		0.25	1	07/12/2016 22:29
Chromium	36		0.50	1	07/12/2016 22:29
Cobalt	7.6		0.50	1	07/12/2016 22:29
Copper	26		0.50	1	07/12/2016 22:29
Lead	5.8		0.50	1	07/12/2016 22:29
Mercury	0.074		0.050	1	07/12/2016 22:29
Molybdenum	0.62		0.50	1	07/12/2016 22:29
Nickel	49		0.50	1	07/12/2016 22:29
Selenium	0.69		0.50	1	07/12/2016 22:29
Silver	ND		0.50	1	07/12/2016 22:29
Thallium	ND		0.50	1	07/12/2016 22:29
Vanadium	45		0.50	1	07/12/2016 22:29
Zinc	58		5.0	1	07/12/2016 22:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	107		70-130		07/12/2016 22:29

Analyst(s): DVH

(Cont.)



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10.0	1607379-020A	Soil	07/08/2016 08:45	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/12/2016 22:35
Arsenic	4.3		0.50	1	07/12/2016 22:35
Barium	220		5.0	1	07/12/2016 22:35
Beryllium	ND		0.50	1	07/12/2016 22:35
Cadmium	ND		0.25	1	07/12/2016 22:35
Chromium	38		0.50	1	07/12/2016 22:35
Cobalt	7.7		0.50	1	07/12/2016 22:35
Copper	22		0.50	1	07/12/2016 22:35
Lead	6.8		0.50	1	07/12/2016 22:35
Mercury	ND		0.050	1	07/12/2016 22:35
Molybdenum	0.64		0.50	1	07/12/2016 22:35
Nickel	55		0.50	1	07/12/2016 22:35
Selenium	ND		0.50	1	07/12/2016 22:35
Silver	ND		0.50	1	07/12/2016 22:35
Thallium	ND		0.50	1	07/12/2016 22:35
Vanadium	29		0.50	1	07/12/2016 22:35
Zinc	52		5.0	1	07/12/2016 22:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	106		70-130		07/12/2016 22:35
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-1.0	1607379-022A	Soil	07/07/2016 14:53	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.73		0.50	1	07/12/2016 22:41
Arsenic	4.0		0.50	1	07/12/2016 22:41
Barium	96		5.0	1	07/12/2016 22:41
Beryllium	ND		0.50	1	07/12/2016 22:41
Cadmium	0.27		0.25	1	07/12/2016 22:41
Chromium	17		0.50	1	07/12/2016 22:41
Cobalt	9.8		0.50	1	07/12/2016 22:41
Copper	84		0.50	1	07/12/2016 22:41
Lead	48		0.50	1	07/12/2016 22:41
Mercury	0.11		0.050	1	07/12/2016 22:41
Molybdenum	0.97		0.50	1	07/12/2016 22:41
Nickel	15		0.50	1	07/12/2016 22:41
Selenium	ND		0.50	1	07/12/2016 22:41
Silver	ND		0.50	1	07/12/2016 22:41
Thallium	ND		0.50	1	07/12/2016 22:41
Vanadium	96		0.50	1	07/12/2016 22:41
Zinc	110		5.0	1	07/12/2016 22:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	105		70-130		07/12/2016 22:41
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-2.5	1607379-024A	Soil	07/07/2016 15:10	ICP-MS3	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/12/2016 22:48
Arsenic	3.0		0.50	1	07/12/2016 22:48
Barium	120		5.0	1	07/12/2016 22:48
Beryllium	ND		0.50	1	07/12/2016 22:48
Cadmium	ND		0.25	1	07/12/2016 22:48
Chromium	30		0.50	1	07/12/2016 22:48
Cobalt	12		0.50	1	07/12/2016 22:48
Copper	90		0.50	1	07/12/2016 22:48
Lead	20		0.50	1	07/12/2016 22:48
Mercury	0.12		0.050	1	07/12/2016 22:48
Molybdenum	0.95		0.50	1	07/12/2016 22:48
Nickel	38		0.50	1	07/12/2016 22:48
Selenium	ND		0.50	1	07/12/2016 22:48
Silver	ND		0.50	1	07/12/2016 22:48
Thallium	ND		0.50	1	07/12/2016 22:48
Vanadium	98		0.50	1	07/12/2016 22:48
Zinc	110		5.0	1	07/12/2016 22:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		07/12/2016 22:48
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	ICP-MS2	123554
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	07/14/2016 03:33
Arsenic	6.9		0.50	1	07/14/2016 03:33
Barium	250		5.0	1	07/14/2016 03:33
Beryllium	ND		0.50	1	07/14/2016 03:33
Cadmium	2.1		0.25	1	07/14/2016 03:33
Chromium	23		0.50	1	07/14/2016 03:33
Cobalt	6.8		0.50	1	07/14/2016 03:33
Copper	20		0.50	1	07/14/2016 03:33
Lead	18		0.50	1	07/14/2016 03:33
Mercury	0.19		0.050	1	07/14/2016 03:33
Molybdenum	2.9		0.50	1	07/14/2016 03:33
Nickel	31		0.50	1	07/14/2016 03:33
Selenium	ND		0.50	1	07/14/2016 03:33
Silver	ND		0.50	1	07/14/2016 03:33
Thallium	ND		0.50	1	07/14/2016 03:33
Vanadium	32		0.50	1	07/14/2016 03:33
Zinc	88		5.0	1	07/14/2016 03:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		07/14/2016 03:33
<u>Analyst(s):</u> DVH					



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-2.0	1607379-001A	Soil	07/07/2016 10:50	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 13:43
MTBE	ND	0.050	1	07/12/2016 13:43
Benzene	ND	0.0050	1	07/12/2016 13:43
Toluene	ND	0.0050	1	07/12/2016 13:43
Ethylbenzene	ND	0.0050	1	07/12/2016 13:43
Xylenes	ND	0.015	1	07/12/2016 13:43

Surrogates	REC (%)	Limits	
2-Fluorotoluene	90	70-130	07/12/2016 13:43

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-1.0	1607379-003A	Soil	07/07/2016 09:05	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 12:09
MTBE	ND	0.050	1	07/12/2016 12:09
Benzene	ND	0.0050	1	07/12/2016 12:09
Toluene	ND	0.0050	1	07/12/2016 12:09
Ethylbenzene	ND	0.0050	1	07/12/2016 12:09
Xylenes	ND	0.015	1	07/12/2016 12:09

Surrogates	REC (%)	Limits	
2-Fluorotoluene	86	70-130	07/12/2016 12:09

Analyst(s): IA

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-0.5	1607379-005A	Soil	07/07/2016 13:24	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 12:40
MTBE	ND	0.050	1	07/12/2016 12:40
Benzene	ND	0.0050	1	07/12/2016 12:40
Toluene	ND	0.0050	1	07/12/2016 12:40
Ethylbenzene	ND	0.0050	1	07/12/2016 12:40
Xylenes	ND	0.015	1	07/12/2016 12:40

Surrogates	REC (%)	Limits	
2-Fluorotoluene	88	70-130	07/12/2016 12:40

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 13:11
MTBE	ND	0.050	1	07/12/2016 13:11
Benzene	ND	0.0050	1	07/12/2016 13:11
Toluene	ND	0.0050	1	07/12/2016 13:11
Ethylbenzene	ND	0.0050	1	07/12/2016 13:11
Xylenes	ND	0.015	1	07/12/2016 13:11

Surrogates	REC (%)	Limits	
2-Fluorotoluene	91	70-130	07/12/2016 13:11

Analyst(s): IA

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B5-1.5	1607379-009A	Soil	07/07/2016 12:04	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	5.8	1.0	1	07/12/2016 14:46
MTBE	ND	0.050	1	07/12/2016 14:46
Benzene	ND	0.0050	1	07/12/2016 14:46
Toluene	ND	0.0050	1	07/12/2016 14:46
Ethylbenzene	ND	0.0050	1	07/12/2016 14:46
Xylenes	ND	0.015	1	07/12/2016 14:46

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	92	70-130	07/12/2016 14:46

Analyst(s): IA

Analytical Comments: d7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6-17.0	1607379-013A	Soil	07/08/2016 10:15	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 15:17
MTBE	ND	0.050	1	07/12/2016 15:17
Benzene	ND	0.0050	1	07/12/2016 15:17
Toluene	ND	0.0050	1	07/12/2016 15:17
Ethylbenzene	ND	0.0050	1	07/12/2016 15:17
Xylenes	ND	0.015	1	07/12/2016 15:17

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	90	70-130	07/12/2016 15:17

Analyst(s): IA

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-0.5	1607379-017A	Soil	07/08/2016 11:05	GC19	123524

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 15:49
MTBE	ND	0.050	1	07/12/2016 15:49
Benzene	ND	0.0050	1	07/12/2016 15:49
Toluene	ND	0.0050	1	07/12/2016 15:49
Ethylbenzene	0.014	0.0050	1	07/12/2016 15:49
Xylenes	0.075	0.015	1	07/12/2016 15:49
Surrogates	REC (%)	Limits		
2-Fluorotoluene	97	70-130		07/12/2016 15:49

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10.0	1607379-020A	Soil	07/08/2016 08:45	GC19	123553

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 11:07
MTBE	ND	0.050	1	07/12/2016 11:07
Benzene	ND	0.0050	1	07/12/2016 11:07
Toluene	ND	0.0050	1	07/12/2016 11:07
Ethylbenzene	ND	0.0050	1	07/12/2016 11:07
Xylenes	ND	0.015	1	07/12/2016 11:07
Surrogates	REC (%)	Limits		
2-Fluorotoluene	92	70-130		07/12/2016 11:07

Analyst(s): IA

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-1.0	1607379-022A	Soil	07/07/2016 14:53	GC19	123553

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 16:21
MTBE	ND	0.050	1	07/12/2016 16:21
Benzene	ND	0.0050	1	07/12/2016 16:21
Toluene	ND	0.0050	1	07/12/2016 16:21
Ethylbenzene	ND	0.0050	1	07/12/2016 16:21
Xylenes	ND	0.015	1	07/12/2016 16:21

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	92	70-130	07/12/2016 16:21

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-2.5	1607379-024A	Soil	07/07/2016 15:10	GC19	123553

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	07/12/2016 16:53
MTBE	ND	0.050	1	07/12/2016 16:53
Benzene	ND	0.0050	1	07/12/2016 16:53
Toluene	0.0070	0.0050	1	07/12/2016 16:53
Ethylbenzene	ND	0.0050	1	07/12/2016 16:53
Xylenes	0.023	0.015	1	07/12/2016 16:53

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	105	70-130	07/12/2016 16:53

Analyst(s): IA

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC19	123553
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	18		1.0	1	07/12/2016 17:56
MTBE	ND		0.050	1	07/12/2016 17:56
Benzene	ND		0.0050	1	07/12/2016 17:56
Toluene	ND		0.0050	1	07/12/2016 17:56
Ethylbenzene	ND		0.0050	1	07/12/2016 17:56
Xylenes	ND		0.015	1	07/12/2016 17:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	82		70-130		07/12/2016 17:56
<u>Analyst(s):</u> IA			<u>Analytical Comments:</u> d7		



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16-7/13/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1	1607379-033B	Water	07/07/2016 11:45	GC3	123597
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	07/12/2016 06:32
MTBE	ND		5.0	1	07/12/2016 06:32
Benzene	ND		0.50	1	07/12/2016 06:32
Toluene	ND		0.50	1	07/12/2016 06:32
Ethylbenzene	ND		0.50	1	07/12/2016 06:32
Xylenes	ND		1.5	1	07/12/2016 06:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	97		70-130		07/12/2016 06:32
<u>Analyst(s):</u> IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2	1607379-034B	Water	07/07/2016 10:05	GC3	123597
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	07/13/2016 04:25
MTBE	ND		5.0	1	07/13/2016 04:25
Benzene	ND		0.50	1	07/13/2016 04:25
Toluene	ND		0.50	1	07/13/2016 04:25
Ethylbenzene	ND		0.50	1	07/13/2016 04:25
Xylenes	ND		1.5	1	07/13/2016 04:25
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	93		70-130		07/13/2016 04:25
<u>Analyst(s):</u> IA					

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16-7/13/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6	1607379-035B	Water	07/08/2016 10:10	GC3	123597
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	07/12/2016 05:02
MTBE	ND		5.0	1	07/12/2016 05:02
Benzene	ND		0.50	1	07/12/2016 05:02
Toluene	ND		0.50	1	07/12/2016 05:02
Ethylbenzene	ND		0.50	1	07/12/2016 05:02
Xylenes	ND		1.5	1	07/12/2016 05:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	97		70-130		07/12/2016 05:02
<u>Analyst(s):</u> IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10	1607379-036B	Water	07/08/2016 08:30	GC3	123597
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	07/12/2016 05:32
MTBE	ND		5.0	1	07/12/2016 05:32
Benzene	ND		0.50	1	07/12/2016 05:32
Toluene	ND		0.50	1	07/12/2016 05:32
Ethylbenzene	ND		0.50	1	07/12/2016 05:32
Xylenes	ND		1.5	1	07/12/2016 05:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	96		70-130		07/12/2016 05:32
<u>Analyst(s):</u> IA					

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16-7/13/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15	1607379-037B	Water	07/08/2016 13:45	GC3	123597
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g)	ND		50	1	07/12/2016 09:04
MTBE	ND		5.0	1	07/12/2016 09:04
Benzene	ND		0.50	1	07/12/2016 09:04
Toluene	ND		0.50	1	07/12/2016 09:04
Ethylbenzene	ND		0.50	1	07/12/2016 09:04
Xylenes	ND		1.5	1	07/12/2016 09:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	100		70-130		07/12/2016 09:04
<u>Analyst(s):</u> IA					



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1-2.0	1607379-001A	Soil	07/07/2016 10:50	GC39A	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.5	1.0	1	07/12/2016 11:11
TPH-Motor Oil (C18-C36)	18	5.0	1	07/12/2016 11:11

Surrogates	REC (%)	Limits	
C9	88	70-130	07/12/2016 11:11

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-1.0	1607379-003A	Soil	07/07/2016 09:05	GC39A	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/12/2016 12:29
TPH-Motor Oil (C18-C36)	8.0	5.0	1	07/12/2016 12:29

Surrogates	REC (%)	Limits	
C9	88	70-130	07/12/2016 12:29

Analyst(s): TK

Analytical Comments: e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-0.5	1607379-005A	Soil	07/07/2016 13:24	GC39B	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/12/2016 13:07
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/12/2016 13:07

Surrogates	REC (%)	Limits	
C9	93	70-130	07/12/2016 13:07

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	GC39B	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/12/2016 11:49
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/12/2016 11:49

Surrogates	REC (%)	Limits	
C9	92	70-130	07/12/2016 11:49

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B5-1.5	1607379-009A	Soil	07/07/2016 12:04	GC9a	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	11	10	10	07/12/2016 14:49
TPH-Motor Oil (C18-C36)	150	50	10	07/12/2016 14:49

Surrogates	REC (%)	Limits	
C9	82	70-130	07/12/2016 14:49

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6-17.0	1607379-013A	Soil	07/08/2016 10:15	GC39B	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/12/2016 11:11
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/12/2016 11:11

Surrogates	REC (%)	Limits	
C9	92	70-130	07/12/2016 11:11

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-0.5	1607379-017A	Soil	07/08/2016 11:05	GC39B	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/12/2016 12:29
TPH-Motor Oil (C18-C36)	ND	5.0	1	07/12/2016 12:29

Surrogates	REC (%)	Limits	
C9	92	70-130	07/12/2016 12:29

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10.0	1607379-020A	Soil	07/08/2016 08:45	GC39A	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/12/2016 13:07
TPH-Motor Oil (C18-C36)	6.7	5.0	1	07/12/2016 13:07

Surrogates	REC (%)	Limits	
C9	88	70-130	07/12/2016 13:07

Analyst(s): TK

Analytical Comments: e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-2.5	1607379-024A	Soil	07/07/2016 15:10	GC39B	123526

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	10	10	07/12/2016 21:51
TPH-Motor Oil (C18-C36)	400	50	10	07/12/2016 21:51

Surrogates	REC (%)	Limits	
C9	95	70-130	07/12/2016 21:51

Analyst(s): TK

Analytical Comments: e7

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC39B	123551
<hr/>					
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	10		1.0	1	07/12/2016 07:16
TPH-Motor Oil (C18-C36)	12		5.0	1	07/12/2016 07:16
<hr/>					
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	93		70-130		07/12/2016 07:16
<hr/>					
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e11,e2		



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-1.0	1607379-022A	Soil	07/07/2016 14:53	GC11A	123526

Analytes	Result	MDL	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	22	7.4	10	10	07/15/2016 16:06
TPH-Motor Oil (C18-C36)	190	21	50	10	07/15/2016 16:06

Surrogates	REC (%)	Limits	
C9	93	70-130	07/15/2016 16:06

Analyst(s): TK

Analytical Comments: e7,e2



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3510C/3630C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/ Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B1	1607379-033A	Water	07/07/2016 11:45	GC39B	123548

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	07/12/2016 13:46
TPH-Motor Oil (C18-C36)	ND	250	1	07/12/2016 13:46

Surrogates	REC (%)	Limits	
C9	92	70-130	07/12/2016 13:46

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2	1607379-034A	Water	07/07/2016 10:05	GC11A	123548

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	57	50	1	07/12/2016 10:12
TPH-Motor Oil (C18-C36)	ND	250	1	07/12/2016 10:12

Surrogates	REC (%)	Limits	
C9	97	70-130	07/12/2016 10:12

Analyst(s): TK

Analytical Comments: e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B6	1607379-035A	Water	07/08/2016 10:10	GC11A	123548

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	07/12/2016 09:33
TPH-Motor Oil (C18-C36)	ND	250	1	07/12/2016 09:33

Surrogates	REC (%)	Limits	
C9	98	70-130	07/12/2016 09:33

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/11/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW3510C/3630C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/ Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10	1607379-036A	Water	07/08/2016 08:30	GC11B	123548

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	150	1	07/12/2016 08:54
TPH-Motor Oil (C18-C36)	ND	750	1	07/12/2016 08:54

Surrogates	REC (%)	Limits	
C9	92	70-130	07/12/2016 08:54

Analyst(s): TK

Analytical Comments: a3

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15	1607379-037A	Water	07/08/2016 13:45	GC11A	123548

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	07/12/2016 08:54
TPH-Motor Oil (C18-C36)	ND	250	1	07/12/2016 08:54

Surrogates	REC (%)	Limits	
C9	98	70-130	07/12/2016 08:54

Analyst(s): TK



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/14/16
Instrument: GC22
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123520
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-123520
1607360-005AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0459	0.00027	0.0010	0.050	-	92	70-130
a-BHC	ND	-	0.00010	0.0010	-	-	-	-
b-BHC	ND	-	0.00025	0.0010	-	-	-	-
d-BHC	ND	-	0.00037	0.0010	-	-	-	-
g-BHC	ND	0.0488	0.000097	0.0010	0.050	-	98	70-130
Chlordane (Technical)	ND	-	0.016	0.025	-	-	-	-
a-Chlordane	ND	-	0.00047	0.0010	-	-	-	-
g-Chlordane	ND	-	0.00021	0.0010	-	-	-	-
p,p-DDD	ND	-	0.00014	0.0010	-	-	-	-
p,p-DDE	ND	-	0.00032	0.0010	-	-	-	-
p,p-DDT	ND	0.0476	0.00043	0.0010	0.050	-	95	70-130
Dieldrin	ND	0.0502	0.00033	0.0010	0.050	-	100	70-130
Endosulfan I	ND	-	0.00065	0.0010	-	-	-	-
Endosulfan II	ND	-	0.00020	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.00063	0.0010	-	-	-	-
Endrin	ND	0.0456	0.00042	0.0010	0.050	-	91	70-130
Endrin aldehyde	ND	-	0.00020	0.0010	-	-	-	-
Endrin ketone	ND	-	0.00013	0.0010	-	-	-	-
Heptachlor	ND	0.0564	0.00021	0.0010	0.050	-	113	70-130
Heptachlor epoxide	ND	-	0.00020	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.00027	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.00040	0.020	-	-	-	-
Methoxychlor	ND	-	0.00089	0.0010	-	-	-	-
Toxaphene	ND	-	0.035	0.050	-	-	-	-
Aroclor1016	ND	-	0.0051	0.050	-	-	-	-
Aroclor1221	ND	-	0.011	0.050	-	-	-	-
Aroclor1232	ND	-	0.0063	0.050	-	-	-	-
Aroclor1242	ND	-	0.0067	0.050	-	-	-	-
Aroclor1248	ND	-	0.0040	0.050	-	-	-	-
Aroclor1254	ND	-	0.0068	0.050	-	-	-	-
Aroclor1260	ND	-	0.0061	0.050	-	-	-	-
PCBs, total	ND	-	0.0040	0.050	-	-	-	-
Surrogate Recovery								
Decachlorobiphenyl	0.0435	0.0465			0.050	87	93	70-130

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/14/16
Instrument: GC22
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123520
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-123520
1607360-005AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.0468	0.0453	0.050	ND	94	91	70-130	3.21	20
g-BHC	0.0515	0.0486	0.050	ND	103	97	70-130	5.70	20
p,p-DDT	0.0589	0.0566	0.050	ND	118	113	70-130	4.01	20
Dieldrin	0.0583	0.0542	0.050	ND	117	108	70-130	7.34	20
Endrin	0.0501	0.0426	0.050	ND	100	85	70-130	16.0	20
Heptachlor	0.0596	0.0571	0.050	ND	119	114	70-130	4.39	20
Surrogate Recovery									
Decachlorobiphenyl	0.0396	0.0445	0.050		79	89	70-130	11.6	20



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: GC22
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123555
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-123555
1607379-007AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0498	0.00027	0.0010	0.050	-	100	70-130
a-BHC	ND	-	0.00010	0.0010	-	-	-	-
b-BHC	ND	-	0.00025	0.0010	-	-	-	-
d-BHC	ND	-	0.00037	0.0010	-	-	-	-
g-BHC	ND	0.0506	0.000097	0.0010	0.050	-	101	70-130
Chlordane (Technical)	ND	-	0.016	0.025	-	-	-	-
a-Chlordane	ND	-	0.00047	0.0010	-	-	-	-
g-Chlordane	ND	-	0.00021	0.0010	-	-	-	-
p,p-DDD	ND	-	0.00014	0.0010	-	-	-	-
p,p-DDE	ND	-	0.00032	0.0010	-	-	-	-
p,p-DDT	ND	0.0525	0.00043	0.0010	0.050	-	105	70-130
Dieldrin	ND	0.0550	0.00033	0.0010	0.050	-	110	70-130
Endosulfan I	ND	-	0.00065	0.0010	-	-	-	-
Endosulfan II	ND	-	0.00020	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.00063	0.0010	-	-	-	-
Endrin	ND	0.0480	0.00042	0.0010	0.050	-	96	70-130
Endrin aldehyde	ND	-	0.00020	0.0010	-	-	-	-
Endrin ketone	ND	-	0.00013	0.0010	-	-	-	-
Heptachlor	ND	0.0609	0.00021	0.0010	0.050	-	122	70-130
Heptachlor epoxide	ND	-	0.00020	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.00027	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.00040	0.020	-	-	-	-
Methoxychlor	ND	-	0.00089	0.0010	-	-	-	-
Toxaphene	ND	-	0.035	0.050	-	-	-	-
Aroclor1016	ND	-	0.0051	0.050	-	-	-	-
Aroclor1221	ND	-	0.011	0.050	-	-	-	-
Aroclor1232	ND	-	0.0063	0.050	-	-	-	-
Aroclor1242	ND	-	0.0067	0.050	-	-	-	-
Aroclor1248	ND	-	0.0040	0.050	-	-	-	-
Aroclor1254	ND	-	0.0068	0.050	-	-	-	-
Aroclor1260	ND	-	0.0061	0.050	-	-	-	-
PCBs, total	ND	-	0.0040	0.050	-	-	-	-
Surrogate Recovery								
Decachlorobiphenyl	0.0471	0.0480			0.050	94	96	70-130

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: GC22
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123555
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-123555
1607379-007AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.0488	0.0482	0.050	ND	98	96	70-130	1.44	20
g-BHC	0.0491	0.0486	0.050	ND	98	97	70-130	0.860	20
p,p-DDT	0.0516	0.0508	0.050	ND	103	102	70-130	1.69	20
Dieldrin	0.0543	0.0531	0.050	ND	109	106	70-130	2.11	20
Endrin	0.0476	0.0471	0.050	ND	95	94	70-130	1.14	20
Heptachlor	0.0596	0.0585	0.050	ND	119	117	70-130	1.73	20
Surrogate Recovery									
Decachlorobiphenyl	0.0474	0.0481	0.050		95	96	70-130	1.47	20



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/14/16
Instrument: GC23
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123603
Extraction Method: SW3550B/3620B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-123603

QC Summary Report SW8081A/8082 w/Florisil Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0505	0.0010	0.050	-	101	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.0565	0.0010	0.050	-	113	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.0617	0.0010	0.050	-	123	70-130
Dieldrin	ND	0.0616	0.0010	0.050	-	123	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.0562	0.0010	0.050	-	113	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.0583	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	-	0.050	-	-	-	-
PCBs, total	ND	-	0.050	-	-	-	-
Surrogate Recovery							
Decachlorobiphenyl	0.0524	0.0506		0.050	105	101	70-130



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16 - 7/12/16
Instrument: GC10, GC18
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123518
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123518
1607361-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0428	0.0050	0.050	-	86	53-116
Benzene	ND	0.0546	0.0050	0.050	-	109	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.146	0.050	0.20	-	73	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0510	0.0050	0.050	-	102	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0452	0.0040	0.050	-	90	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0515	0.0040	0.050	-	103	58-135
1,1-Dichloroethene	ND	0.0526	0.0050	0.050	-	105	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16 - 7/12/16
Instrument: GC10, GC18
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123518
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123518
1607361-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0502	0.0050	0.050	-	100	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0475	0.0050	0.050	-	95	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0457	0.0050	0.050	-	91	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0531	0.0050	0.050	-	106	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0534	0.0050	0.050	-	107	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16 - 7/12/16
Instrument: GC10, GC18
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123518
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123518
1607361-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.145	0.133		0.12	116	106	70-130
Toluene-d8	0.146	0.141		0.12	117	113	70-130
4-BFB	0.0124	0.0121		0.012	99	97	70-130
Benzene-d6	0.104	0.116		0.10	104	116	60-140
Ethylbenzene-d10	0.120	0.129		0.10	120	129	60-140
1,2-DCB-d4	0.0989	0.0956		0.10	99	96	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0402	0.0411	0.050	ND	80	82	53-116	2.03	20
Benzene	0.0498	0.0515	0.050	ND	100	103	63-137	3.31	20
t-Butyl alcohol (TBA)	0.138	0.140	0.20	ND	69	70	41-135	1.59	20
Chlorobenzene	0.0470	0.0478	0.050	ND	94	96	77-121	1.53	20
1,2-Dibromoethane (EDB)	0.0416	0.0426	0.050	ND	83	85	67-119	2.28	20
1,2-Dichloroethane (1,2-DCA)	0.0472	0.0480	0.050	ND	94	96	58-135	1.57	20
1,1-Dichloroethene	0.0477	0.0494	0.050	ND	95	99	42-145	3.59	20
Diisopropyl ether (DIPE)	0.0460	0.0471	0.050	ND	92	94	52-129	2.34	20
Ethyl tert-butyl ether (ETBE)	0.0444	0.0451	0.050	ND	89	90	53-125	1.71	20
Methyl-t-butyl ether (MTBE)	0.0423	0.0433	0.050	ND	85	86	58-122	2.23	20
Toluene	0.0478	0.0489	0.050	ND	96	98	76-130	2.24	20
Trichloroethene	0.0490	0.0503	0.050	ND	98	101	72-132	2.59	20

Surrogate Recovery									
Dibromofluoromethane	0.133	0.132	0.12		107	106	70-130	0.732	20
Toluene-d8	0.139	0.138	0.12		111	111	70-130	0	20
4-BFB	0.0122	0.0123	0.012		97	98	70-130	0.636	20
Benzene-d6	0.108	0.110	0.10		108	110	60-140	1.75	20
Ethylbenzene-d10	0.118	0.118	0.10		118	118	60-140	0	20
1,2-DCB-d4	0.0915	0.0927	0.10		92	93	60-140	1.30	20



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123529
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-123529
1607362-039AMS/MSD
1607362-039APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	51.8	0.50	50	-	104	75-125
Arsenic	ND	52.2	0.50	50	-	104	75-125
Barium	ND	514	5.0	500	-	103	75-125
Beryllium	ND	49.2	0.50	50	-	98	75-125
Cadmium	ND	51.1	0.25	50	-	102	75-125
Chromium	ND	50.5	0.50	50	-	101	75-125
Cobalt	ND	45.8	0.50	50	-	92	75-125
Copper	ND	52.1	0.50	50	-	104	75-125
Lead	ND	50.4	0.50	50	-	101	75-125
Mercury	ND	1.31	0.050	1.25	-	105	75-125
Molybdenum	ND	47.8	0.50	50	-	96	75-125
Nickel	ND	51.3	0.50	50	-	103	75-125
Selenium	ND	51.9	0.50	50	-	104	75-125
Silver	ND	52.9	0.50	50	-	106	75-125
Thallium	ND	46.3	0.50	50	-	93	75-125
Vanadium	ND	49.9	0.50	50	-	100	75-125
Zinc	ND	515	5.0	500	-	103	75-125
Surrogate Recovery							
Terbium	514	469		500	103	94	70-130

(Cont.)



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123529
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-123529
1607362-039AMS/MSD
1607362-039APDS

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	47.0	50.8	50	ND	94	101	75-125	7.63	20
Arsenic	47.8	53.0	50	2.8	90	100	75-125	10.4	20
Barium	612	678	500	100	102	115	75-125	10.3	20
Beryllium	40.7	44.6	50	ND	81	89	75-125	9.11	20
Cadmium	48.2	52.1	50	1.0	94	102	75-125	7.82	20
Chromium	2390	2660	50	2400	0,F13	532,F13	75-125	NA	20
Cobalt	49.3	55.4	50	10	78	90	75-125	11.6	20
Copper	81.8	99.3	50	41	81	116	75-125	19.3	20
Lead	65.7	79.1	50	16	99	126,F10	75-125	18.5	20
Mercury	1.34	1.42	1.25	0.066	102	108	75-125	6.10	20
Molybdenum	44.2	48.3	50	0.50	87	96	75-125	8.96	20
Nickel	79.1	89.9	50	30	98	120	75-125	12.8	20
Selenium	45.9	50.4	50	ND	91	100	75-125	9.45	20
Silver	48.1	50.8	50	ND	96	101	75-125	5.50	20
Thallium	43.4	46.7	50	ND	87	93	75-125	7.33	20
Vanadium	98.8	114	50	58	82	113	75-125	14.7	20
Zinc	506	543	500	48	91	99	75-125	7.23	20

Surrogate Recovery

Terbium	431	474	500		86	95	70-130	9.44	20
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Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Lead	65.3	50	16	98	75-125

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	ND	-	-
Arsenic	3.18	2.8	13.6	-
Barium	96.8	100	3.20	-
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	1.0	-	-
Chromium		2400		-
Cobalt	10.7	10	7.00	-
Copper	41.3	41	0.732	20

(Cont.)



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123529
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-123529
1607362-039AMS/MSD
1607362-039APDS

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	15.7	16	1.88	20
Mercury	ND<0.25	0.066	-	-
Molybdenum	ND<2.5	0.50	-	-
Nickel	29.6	30	1.33	20
Selenium	ND<2.5	ND	-	-
Silver	ND<2.5	ND	-	-
Thallium	ND<2.5	ND	-	-
Vanadium	58.2	58	0.345	20
Zinc	47.6	48	0.833	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123554
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-123554
1607379-003AMS/MSD
1607379-003APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	51.0	0.50	50	-	102	75-125
Arsenic	ND	51.0	0.50	50	-	102	75-125
Barium	ND	510	5.0	500	-	102	75-125
Beryllium	ND	47.5	0.50	50	-	95	75-125
Cadmium	ND	50.0	0.25	50	-	100	75-125
Chromium	ND	49.9	0.50	50	-	100	75-125
Cobalt	ND	46.2	0.50	50	-	92	75-125
Copper	ND	51.7	0.50	50	-	103	75-125
Lead	ND	50.1	0.50	50	-	100	75-125
Mercury	ND	1.25	0.050	1.25	-	100	75-125
Molybdenum	ND	47.3	0.50	50	-	95	75-125
Nickel	ND	51.4	0.50	50	-	103	75-125
Selenium	ND	51.6	0.50	50	-	103	75-125
Silver	ND	52.9	0.50	50	-	106	75-125
Thallium	ND	46.2	0.50	50	-	92	75-125
Vanadium	ND	50.0	0.50	50	-	100	75-125
Zinc	ND	509	5.0	500	-	102	75-125
Surrogate Recovery							
Terbium	509	518		500	102	104	70-130

(Cont.)



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123554
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-123554
1607379-003AMS/MSD
1607379-003APDS

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	49.1	52.4	50	1.091	96	103	75-125	6.58	20
Arsenic	74.6	77.3	50	33.00	83	89	75-125	3.53	20
Barium	576	600	500	90.96	97	102	75-125	4.13	20
Beryllium	42.0	46.0	50	ND	83	91	75-125	8.91	20
Cadmium	47.7	50.6	50	ND	95	101	75-125	5.88	20
Chromium	73.0	78.9	50	42.55	61,F10	73,F10	75-125	7.87	20
Cobalt	46.4	49.3	50	7.207	78	84	75-125	5.96	20
Copper	64.1	66.7	50	23.48	81	86	75-125	3.87	20
Lead	53.1	56.1	50	7.739	91	97	75-125	5.55	20
Mercury	1.20	1.34	1.25	0.06020	92	102	75-125	10.4	20
Molybdenum	46.1	49.0	50	0.8533	90	96	75-125	6.02	20
Nickel	79.9	84.2	50	49.91	60,F10	68,F10	75-125	5.14	20
Selenium	48.2	51.7	50	ND	96	102	75-125	6.93	20
Silver	48.9	51.5	50	ND	98	103	75-125	5.16	20
Thallium	44.2	46.7	50	ND	88	93	75-125	5.56	20
Vanadium	70.2	73.0	50	42.84	55,F10	60,F10	75-125	3.86	20
Zinc	520	549	500	62.89	91	97	75-125	5.52	20

Surrogate Recovery

Terbium	507	544	500		101	109	70-130	6.93	20
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Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Chromium	88.8	50	42.55	93	75-125
Nickel	99.3	50	49.91	99	75-125
Vanadium	88.5	50	42.84	91	75-125

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	1.091	-	-
Arsenic	33.3	33.00	0.909	20
Barium	89.6	90.96	1.50	-
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	ND	-	-
Chromium	42.5	42.55	0.118	20

(Cont.)



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123554
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-123554
1607379-003AMS/MSD
1607379-003APDS

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Cobalt	7.40	7.207	2.68	-
Copper	23.7	23.48	0.937	20
Lead	7.60	7.739	1.80	-
Mercury	ND<0.25	0.06020	-	-
Molybdenum	ND<2.5	0.8533	-	-
Nickel	49.9	49.91	0.0200	20
Selenium	ND<2.5	ND	-	-
Silver	ND<2.5	ND	-	-
Thallium	ND<2.5	ND	-	-
Vanadium	42.9	42.84	0.140	20
Zinc	58.8	62.89	6.50	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16 - 7/14/16
Instrument: GC17, GC35
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123564
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg
Sample ID: MB/LCS-123564
1607224-013AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.180	0.010	0.20	-	90	23-129
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.163	0.010	0.20	-	81	38-104
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.186	0.010	0.20	-	93	59-106
2-Methylnaphthalene	ND	0.172	0.010	0.20	-	86	54-108
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.168	0.010	0.20	-	84	48-107
Pyrene	ND	0.173	0.010	0.20	-	87	40-104
Surrogate Recovery							
1-Fluoronaphthalene	0.438	0.363		0.50	88	73	63-123
2-Fluorobiphenyl	0.464	0.354		0.50	93	71	55-127

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		ND<0.1	NR	NR	-	NR	
Chrysene	NR	NR		ND<0.1	NR	NR	-	NR	
1-Methylnaphthalene	NR	NR		ND<0.1	NR	NR	-	NR	
2-Methylnaphthalene	NR	NR		ND<0.1	NR	NR	-	NR	
Phenanthrene	NR	NR		ND<0.1	NR	NR	-	NR	
Pyrene	NR	NR		ND<0.1	NR	NR	-	NR	
Surrogate Recovery									
1-Fluoronaphthalene	NR	NR			NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16
Instrument: GC18
Matrix: Water
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123595
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-123595
1607271-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	11.0	0.50	10	-	110	54-140
Benzene	ND	11.1	0.50	10	-	111	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	38.5	2.0	40	-	96	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	11.0	0.50	10	-	110	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	10.6	0.50	10	-	106	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	12.6	0.50	10	-	126, F2	66-125
1,1-Dichloroethene	ND	10.9	0.50	10	-	109	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16
Instrument: GC18
Matrix: Water
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123595
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-123595
1607271-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	10.3	0.50	10	-	103	57-136
Ethanol	ND	-	50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	11.0	0.50	10	-	110	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	11.0	0.50	10	-	110	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	10.8	0.50	10	-	108	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	11.8	0.50	10	-	118	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16
Instrument: GC18
Matrix: Water
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123595
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-123595
1607271-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	30.9	30.4		25	123	122	70-130
Toluene-d8	26.9	27.4		25	108	109	70-130
4-BFB	2.38	2.45		2.5	95	98	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	11.9	13.0	10	ND	119	130	69-139	8.58	20
Benzene	11.3	11.4	10	ND	113	114	69-141	1.35	20
t-Butyl alcohol (TBA)	44.7	54.6	40	ND	112	136	41-152	20.0	20
Chlorobenzene	11.1	11.3	10	ND	111	113	77-120	2.01	20
1,2-Dibromoethane (EDB)	11.5	12.0	10	ND	115	120	76-135	4.02	20
1,2-Dichloroethane (1,2-DCA)	13.7	13.7	10	ND	137	137	73-139	0	20
1,1-Dichloroethene	11.1	11.3	10	ND	111	113	59-140	1.88	20
Diisopropyl ether (DIPE)	10.9	11.1	10	ND	109	111	72-140	2.33	20
Ethyl tert-butyl ether (ETBE)	11.8	12.1	10	ND	118	121	71-140	2.70	20
Methyl-t-butyl ether (MTBE)	12.2	12.7	10	ND	122	127	73-139	3.93	20
Toluene	11.0	11.2	10	ND	109	111	71-128	1.68	20
Trichloroethene	11.9	12.1	10	ND	119	121	64-132	1.73	20
Surrogate Recovery									
Dibromofluoromethane	31.3	30.9	25		125	124	73-131	1.20	20
Toluene-d8	26.9	27.1	25		108	108	72-117	0	20
4-BFB	2.42	2.42	2.5		97	97	74-116	0	20



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: GC7
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123524
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-123524

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.575	0.40	0.60	-	96	70-130
MTBE	ND	0.0839	0.050	0.10	-	84	70-130
Benzene	ND	0.0962	0.0050	0.10	-	96	70-130
Toluene	ND	0.0826	0.0050	0.10	-	83	70-130
Ethylbenzene	ND	0.0926	0.0050	0.10	-	93	70-130
Xylenes	ND	0.288	0.015	0.30	-	96	70-130
Surrogate Recovery							
2-Fluorotoluene	0.105	0.104		0.10	105	105	70-130



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: GC7
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123553
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-123553

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.569	0.40	0.60	-	95	70-130
MTBE	ND	0.0808	0.050	0.10	-	81	70-130
Benzene	ND	0.100	0.0050	0.10	-	100	70-130
Toluene	ND	0.0858	0.0050	0.10	-	86	70-130
Ethylbenzene	ND	0.0954	0.0050	0.10	-	95	70-130
Xylenes	ND	0.296	0.015	0.30	-	99	70-130
Surrogate Recovery							
2-Fluorotoluene	0.105	0.107		0.10	105	107	70-130



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16
Instrument: GC3
Matrix: Water
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123597
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-123597
1607262-002AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	55.1	40	60	-	92	70-130
MTBE	ND	9.61	5.0	10	-	96	70-130
Benzene	ND	9.42	0.50	10	-	94	70-130
Toluene	ND	9.56	0.50	10	-	96	70-130
Ethylbenzene	ND	9.84	0.50	10	-	98	70-130
Xylenes	ND	29.3	1.5	30	-	98	70-130
Surrogate Recovery							
aaa-TFT	9.72	9.43		10	97	94	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		2800	NR	NR	-	NR	
MTBE	NR	NR		ND<50	NR	NR	-	NR	
Benzene	NR	NR		240	NR	NR	-	NR	
Toluene	NR	NR		670	NR	NR	-	NR	
Ethylbenzene	NR	NR		170	NR	NR	-	NR	
Xylenes	NR	NR		1100	NR	NR	-	NR	
Surrogate Recovery									
aaa-TFT	NR	NR			NR	NR	-	NR	



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16 - 7/12/16
Instrument: GC6B
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123526
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-123526
1607364-015AMS/MSD

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	45.2	1.0	40	-	113	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.9	21.9		25	95	88	62-139

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	40.5	41.6	40	ND	101	104	70-130	2.71	30
Surrogate Recovery									
C9	22.0	22.0	25		88	88	70-130	0	30



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/12/16
Instrument: GC9a
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123551
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-123551
1607379-028AMS/MSD

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.2	1.0	40	-	103	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	21.5	21.8		25	86	87	62-139

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	54.8	59.5	40	9.991	112	124	70-130	8.19	30
Surrogate Recovery									
C9	22.8	23.1	25		91	93	70-130	1.68	30



Quality Control Report

Client: TRC
Date Prepared: 7/11/16
Date Analyzed: 7/11/16
Instrument: GC39A
Matrix: Water
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123548
Extraction Method: SW3510C/3630C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS/LCSD-123548

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	587		625	94	65-122

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1160	1120	1000	116	112	61-157	3.55	30
Surrogate Recovery								
C9	577	582	625	92	93	65-122	0.927	30



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1607379

ClientCode: TRCC

QuoteID: 6211

☐ WaterTrax

☐ WriteOn

☐ EDF

☐ Excel

☐ EQUIS

☒ Email

☐ HardCopy

☐ ThirdParty

☐ J-flag

Report to:

Glenn Young
TRC
2300 Clayton Road, Suite 610
Concord, CA 94520
(925) 688-2479 FAX: (925) 688-0388

Email: GYoung@trcsolutions.com
cc/3rd Party:
PO:
ProjectNo: 260770; Mathew Street Project

Bill to:

Accounts Payable
TRC
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Requested TAT: 3 days;

Date Received: 07/11/2016

Date Logged: 07/11/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1607379-001	B1-2.0	Soil	7/7/2016 10:50	<input type="checkbox"/>		A				A	A		A			
1607379-003	B2-1.0	Soil	7/7/2016 9:05	<input type="checkbox"/>		A				A	A		A			
1607379-005	B3-0.5	Soil	7/7/2016 13:24	<input type="checkbox"/>	A			A	A	A	A		A			
1607379-006	B4-0.5	Soil	7/7/2016 13:55	<input type="checkbox"/>					A							
1607379-007	B4-1.5	Soil	7/7/2016 13:57	<input type="checkbox"/>	A			A	A	A	A		A			
1607379-009	B5-1.5	Soil	7/7/2016 12:04	<input type="checkbox"/>					A	A	A		A			
1607379-013	B6-17.0	Soil	7/8/2016 10:15	<input type="checkbox"/>		A				A	A		A			
1607379-017	B8-0.5	Soil	7/8/2016 11:05	<input type="checkbox"/>					A	A	A		A			
1607379-020	B10-10.0	Soil	7/8/2016 8:45	<input type="checkbox"/>		A				A	A		A			
1607379-022	B11-1.0	Soil	7/7/2016 14:53	<input type="checkbox"/>	A			A	A	A	A		A			
1607379-024	B12-2.5	Soil	7/7/2016 15:10	<input type="checkbox"/>	A			A	A	A	A		A			
1607379-028	B14-1.5	Soil	7/8/2016 11:45	<input type="checkbox"/>					A	A	A		A			
1607379-033	B1	Water	7/7/2016 11:45	<input type="checkbox"/>			C					B		A		
1607379-034	B2	Water	7/7/2016 10:05	<input type="checkbox"/>			C					B		A		
1607379-035	B6	Water	7/8/2016 10:10	<input type="checkbox"/>			C					B		A		

Test Legend:

1	8081PCB_ESL_S (J)
5	ASBEST400 (435 CARB)_S
9	TPH(DMO)WSG_S

2	8260B_S
6	CAM17MS_TTLC_S
10	TPH(DMO)WSG_W

3	8260B_W
7	G-MBTEx_S
11	

4	8270_PNA_S
8	G-MBTEx_W
12	

Prepared by: Briana Cutino

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

WorkOrder: 1607379

ClientCode: TRCC

QuoteID: 6211

☐ WaterTrax☐ WriteOn☐ EDF☐ Excel☐ EQulS☒ Email☐ HardCopy☐ ThirdParty☐ J-flag

Report to:

Glenn Young

TRC

2300 Clayton Road, Suite 610

Concord, CA 94520

(925) 688-2479 FAX: (925) 688-0388

Email: GYoung@trcsolutions.com

cc/3rd Party:

PO:

ProjectNo: 260770; Mathew Street Project

Bill to:

Accounts Payable

TRC

21 Griffin Road North

Windsor, CT 06095

apinvoiceapproval@trcsolutions.com

Requested TAT:

3 days;

Date Received:

07/11/2016

Date Logged:

07/11/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1607379-036	B10	Water	7/8/2016 8:30	<input type="checkbox"/>			C					B		A		
1607379-037	B15	Water	7/8/2016 13:45	<input type="checkbox"/>			C					B		A		
1607379-038	TRIP BLANK	Water	7/8/2016 12:26	<input type="checkbox"/>			A									

Test Legend:

1	8081PCB_ESL_S (J)
5	ASBEST400 (435 CARB)_S
9	TPH(DMO)WSG_S

2	8260B_S
6	CAM17MS_TTLC_S
10	TPH(DMO)WSG_W

3	8260B_W
7	G-MBTEx_S
11	

4	8270_PNA_S
8	G-MBTEx_W
12	

Prepared by: Briana Cutino

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

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Project: 260770; Mathew Street Project

Comments:

QC Level:

Client Contact: Glenn Young

Contact's Email: GYoung@trcsolutions.com

Work Order: 1607379

Date Logged: 7/11/2016

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☒ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-001A	B1-2.0	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 10:50	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
1607379-002A	B1-23	Soil		1	Acetate Liner	<input type="checkbox"/>	7/7/2016 11:50			<input checked="" type="checkbox"/>	
1607379-003A	B2-1.0	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 9:05	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
1607379-004A	B2-15.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/7/2016 9:42			<input checked="" type="checkbox"/>	
1607379-005A	B3-0.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 13:24	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			ESLs								

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

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Contact's Email: GYoung@trcsolutions.com

Work Order: 1607379

Date Logged: 7/11/2016

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-005A	B3-0.5	Soil		1	16OZ GJ	<input type="checkbox"/>	7/7/2016 13:24			<input type="checkbox"/>	
1607379-006A	B4-0.5	Soil	Asbestos, 435 CARB 400	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 13:55	3 days		<input type="checkbox"/>	SubOut
				1	16OZ GJ	<input type="checkbox"/>				<input type="checkbox"/>	
1607379-007A	B4-1.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 13:57	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs) ESLs			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
				1	16OZ GJ	<input type="checkbox"/>				<input type="checkbox"/>	
1607379-008A	B4-3.0	Soil		1	16OZ GJ	<input type="checkbox"/>	7/7/2016 13:46			<input checked="" type="checkbox"/>	
				1	Acetate Liner	<input type="checkbox"/>				<input checked="" type="checkbox"/>	
1607379-009A	B5-1.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 12:04	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut

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Contact's Email: GYoung@trcsolutions.com

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-010A	B5-2.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/7/2016 12:10			<input checked="" type="checkbox"/>	
1607379-011A	B5-3.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/7/2016 12:11			<input checked="" type="checkbox"/>	
1607379-012A	B6-1.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 10:20			<input checked="" type="checkbox"/>	
1607379-013A	B6-17.0	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/8/2016 10:15	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
1607379-014A	B6-20.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 10:17			<input checked="" type="checkbox"/>	
1607379-015A	B7-0.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 11:17			<input checked="" type="checkbox"/>	
1607379-016A	B7-1.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 11:18			<input checked="" type="checkbox"/>	
1607379-017A	B8-0.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/8/2016 11:05	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut
1607379-018A	B8-1.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 11:06			<input checked="" type="checkbox"/>	
1607379-019A	B9-1.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 7:30			<input checked="" type="checkbox"/>	

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-020A	B10-10.0	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/8/2016 8:45	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
1607379-021A	B10-24.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 8:40			<input checked="" type="checkbox"/>	
1607379-022A	B11-1.0	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 14:53	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs) ESLs			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
1607379-023A	B11-3.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/7/2016 14:45			<input checked="" type="checkbox"/>	
1607379-024A	B12-2.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 15:10	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-024A	B12-2.5	Soil	SW8270C (PAHs/PNAs)	1	Acetate Liner	<input type="checkbox"/>	7/7/2016 15:10	3 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs) ESLs			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
1607379-025A	B12-3.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/7/2016 15:05			<input checked="" type="checkbox"/>	
1607379-026A	B13-0.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 12:14			<input checked="" type="checkbox"/>	
1607379-027A	B13-1.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 12:16			<input checked="" type="checkbox"/>	
1607379-028A	B14-1.5	Soil	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	1	Acetate Liner	<input type="checkbox"/>	7/8/2016 11:45	3 days		<input type="checkbox"/>	
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		3 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		3 days		<input type="checkbox"/>	SubOut
1607379-029A	B14-2.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 11:49			<input checked="" type="checkbox"/>	
1607379-030A	B15-1.0	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 13:49			<input checked="" type="checkbox"/>	
1607379-031A	B15-5.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 13:57			<input checked="" type="checkbox"/>	
1607379-032A	B15-15.5	Soil		1	Acetate Liner	<input type="checkbox"/>	7/8/2016 13:51			<input checked="" type="checkbox"/>	
1607379-033A	B1	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOAs	<input type="checkbox"/>	7/7/2016 11:45	3 days	Trace	<input type="checkbox"/>	
1607379-033B	B1	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	<input type="checkbox"/>	7/7/2016 11:45	3 days	Trace	<input type="checkbox"/>	
1607379-033C	B1	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	7/7/2016 11:45	3 days	Trace	<input type="checkbox"/>	

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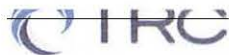
Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-034A	B2	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOAs	<input type="checkbox"/>	7/7/2016 10:05	3 days	Trace	<input type="checkbox"/>	
1607379-034B	B2	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	<input type="checkbox"/>	7/7/2016 10:05	3 days	Trace	<input type="checkbox"/>	
1607379-034C	B2	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	7/7/2016 10:05	3 days	Trace	<input type="checkbox"/>	
1607379-035A	B6	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOAs	<input type="checkbox"/>	7/8/2016 10:10	3 days	Trace	<input type="checkbox"/>	
1607379-035B	B6	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 10:10	3 days	Trace	<input type="checkbox"/>	
1607379-035C	B6	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 10:10	3 days	Trace	<input type="checkbox"/>	
1607379-036A	B10	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOAs	<input type="checkbox"/>	7/8/2016 8:30	3 days	Trace	<input type="checkbox"/>	
1607379-036B	B10	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 8:30	3 days	Trace	<input type="checkbox"/>	
1607379-036C	B10	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 8:30	3 days	Trace	<input type="checkbox"/>	
1607379-037A	B15	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOAs	<input type="checkbox"/>	7/8/2016 13:45	3 days	Trace	<input type="checkbox"/>	
1607379-037B	B15	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 13:45	3 days	Trace	<input type="checkbox"/>	
1607379-037C	B15	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 13:45	3 days	Trace	<input type="checkbox"/>	
1607379-038A	TRIP BLANK	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	7/8/2016 12:26	3 days	None	<input type="checkbox"/>	

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<input checked="" type="checkbox"/> McCampbell Analytical		SAMPLING COMPANY: TRC		COC ID: QUOTE ID: 62M	PURCHASE ORDER NO.: 97535	PROJECT ID: 260770	DATE: 7/11/16 PAGE: 1 of 3															
PROJECT CONTACT Report to: Glenn Young		GLOBAL ID NO.: —		SITE ADDRESS: Street and City 651 Mathew Street, Santa Clara, CA		PROJECT NAME: Mathew Street Project																
TELEPHONE: 925.688.2479	FAX: 925.688.0388	E-MAIL: jzepeda@trcsolutions.com		SAMPLER NAME(S) (Print): Jacob Zepeda																		
TURNAROUND TIME (STANDARD IS 5 CALENDAR DAYS): <input type="checkbox"/> RESULTS NEEDED <input type="checkbox"/> STD <input type="checkbox"/> 5 DAY <input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 24 HOURS ON WEEKEND				REQUESTED ANALYSIS																		
<input type="checkbox"/> RWQCB REPORT FORMAT <input type="checkbox"/> UST AGENCY:																						
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED <input type="checkbox"/> Please email EDD (excel spreadsheet), PDF (incl COC) analytical to J.Zepeda and G.Young. Include both MDL and RL RECEIPT VERIFICATION REQUESTED <input checked="" type="checkbox"/>				FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes Note: 72HR RUSH on All Samples (except HOLD samples)																		
FIELD POINT NAME	LAB ID Number	SAMPLING						MATRIX	NO. OF CONT.													
		DATE	TIME			TPHd and TPHmo (8015M w/ Silica Gel)	VOCs (8260)	TPHg w/ BTEX and MTBE (8015M/8020)	Title 22 Metals (6010/7000)	Organochlorine Pesticides & PCBs (to ESLs) (8081/8082)	PNAs (to ESLs) (8270)	Asbestos (CARB 435)	STLC WET Metals	TCLP Metals								
B1-2.0		7/7/16	10:50	S	1	X	X	X	X													
B1-23		7/7/16	11:50	S	1													HOLD				
B2-1.0		7/7/16	09:05	S	1	X	X	X	X													
B2-15.5		7/7/16	09:42	S	1													HOLD				
B3-0.5		7/7/16	1:24	S	2	X		X	X	X	X	X										
B4-0.5		7/7/16	1:55	S	2							X										
B4-1.5		7/7/16	1:57	S	1	X		X	X	X	X	X										
B4-3.0		7/7/16	1:46	S	1													HOLD				
B5-1.5		7/7/16	12:04	S	1	X		X	X			X										
B5-2.0		7/7/16	12:10	S	1													HOLD				
B5-3.0		7/7/16	12:11	S	1													HOLD				
B6-1.0		7/8/16	10:20	S	1													HOLD				
B6-17.0		7/8/16	10:15	S	1	X	X	X	X													
B6-20.0		7/8/16	10:17	S	1													HOLD				
Relinquished by: (Signature) 		Received by: (Signature) 				Date: 7/11/16				Time: 12:20												
Relinquished by: (Signature) 		Received by: (Signature) 				Date: 7-11-16				Time: 2:15												
Relinquished by: (Signature)		Received by: (Signature)				Date:				Time:												
Relinquished by: (Signature)		Received by: (Signature)				Date:				Time:												

LAB:



Chain Of Custody Record

2300 Clayton Rd, Suite 610, Concord, CA 94520

SAMPLING COMPANY: TRC		COC ID: <i>Quote ID: 6211</i>		PURCHASE ORDER NO.: <i>97535</i>		PROJECT ID: 260770		DATE: 7/11/16 PAGE: 2 of 3											
PROJECT CONTACT Report to: Glenn Young		GLOBAL ID NO.: —		SITE ADDRESS: Street and City 651 Mathew Street, Santa Clara, CA				PROJECT NAME: Mathew Street Project											
TELEPHONE: 925.688.2479	FAX: 925.688.0388	E-MAIL: jzepeda@trcsolutions.com		SAMPLER NAME(S) (Print): Jacob Zepeda				LAB USE ONLY											
TURNAROUND TIME (STANDARD IS 5 CALENDAR DAYS) <input type="checkbox"/> STD <input type="checkbox"/> 5 DAY <input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LA - RWQCB REPORT FORM <input type="checkbox"/> UST AGENCY:				REQUESTED ANALYSIS															
SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED <input type="checkbox"/> Please email EDD (excel spreadsheet), PDF (incl COC) analytical to J.Zepeda and G.Young. Include both MDL and RL				FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes Note: 72HR RUSH on All Samples <i>(except HOLD samples)</i>															
RECEIPT VERIFICATION REQUESTED <input checked="" type="checkbox"/>																			
FIELD POINT NAME	LAB ID Number	DATE	TIME	MATRIX	NO. OF CONT.	TPHd and TPHmo (8015M w/ Silica)	VOCs (8260)	TPHlg w/ BTEX and MTBE (8015M/8020)	Title 22 Metals (6010/7000)	Organochlorine Pesticides & PCBs (to ESLs) (8081/8082)	PNAs (to ESLs) (8270)	Asbestos (CARB 435)	STLC WET Metals	TCLP Metals					
B7-0.5		7/8/16	11:17	S	1														
B7-1.0		7/8/16	11:18	S	1														
B8-0.5		7/8/16	11:05	S	1	X		X	X			X							
B8-1.0		7/8/16	11:06	S	1														
B9-1.0		7/8/16	07:30	S	1														
B10-10.0		7/8/16	08:45	S	1	X	X	X	X										
B10-24.5		7/8/16	08:40	S	1														
B11-1.0		7/7/16	2:53	S	1	X		X	X	X	X	X							
B11-3.5		7/7/16	2:45	S	1														
B12-2.5		7/7/16	3:10	S	1	X		X	X	X	X	X							
B12-3.5		7/7/16	3:05	S	1														
B13-0.5		7/8/16	12:14	S	1														
B13-1.0		7/8/16	12:16	S	1														
B14-1.5		7/8/16	11:45	S	1	X		X	X			X							
Relinquished by: (Signature)						Received by: (Signature)				Date: 7/11/2016				Time: 12:30					
Relinquished by: (Signature)						Received by: (Signature)				Date: 7-11-16				Time: 2:15					
Relinquished by: (Signature)						Received by: (Signature)				Date:				Time:					
Relinquished by: (Signature)						Received by: (Signature)				Date:				Time:					



2300 Clayton Rd, Suite 610, Concord, CA 94520

DATE 7/11/16

QuoteID: 6211

97535

PAGE 3 of 3

Mathew Street Project

LAB USE ONLY

☐ UST AGENCY:RECEIPT VERIFICATION REQUESTED ☒

All

Container/Preservative
or PID Readings
or Laboratory Notes

Note: 72HR RUSH on All Samples

Hold
HOLD
Houly
Houly

	Time
--	------

Time:	
-------	--

Time:

	Time
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Sample Receipt Checklist

Client Name: **TRC**
Project Name: **260770; Mathew Street Project**
WorkOrder No: **1607379** Matrix: Soil/Water
Carrier: David Shaver (MAI Courier)

Date and Time Received: **7/11/2016 14:15**
Date Logged: **7/11/2016**
Received by: **Briana Cutino**
Logged by: **Briana Cutino**

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample/Temp Blank temperature	Temp: 2°C		NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Comments:



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McC Campbell Analytical, Inc.
Briana Cutino
1534 Willow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: N008391
Date Received: 07/12/16
Date Analyzed: 07/14/16
Date Printed: 07/14/16

Job ID/Site: 1607379, 260770 - Matthew Street Project

FALI Job ID: A31409

PLM Report Number: N/A

Total Samples Submitted: 8

Total Samples Analyzed: 8

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
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B3-0.5	11783636	Grey Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B4-0.5	11783637	Tan Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B4-1.5	11783638	Tan Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B5-1.5	11783639	Grey Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McCampbell Analytical, Inc.
Briana Cutino
1534 Willow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: N008391
Date Received: 07/12/16
Date Analyzed: 07/14/16
Date Printed: 07/14/16

Job ID/Site: 1607379, 260770 - Matthew Street Project

FALI Job ID: A31409

PLM Report Number: N/A

Total Samples Submitted: 8

Total Samples Analyzed: 8

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
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B8-0.5	11783640	Grey Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B11-1.0	11783641	Grey Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B12-2.5	11783642	Brown Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B14-1.5	11783643	Tan Soil
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Visual Estimation Results:

Matrix percentage of entire 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McC Campbell Analytical, Inc.
Briana Cutino
1534 Wilow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: N008391
Date Received: 07/12/16
Date Analyzed: 07/14/16
Date Printed: 07/14/16

Job ID/Site: 1607379, 260770 - Matthew Street Project

FALI Job ID: A31409

PLM Report Number: N/A

Total Samples Submitted: 8

Total Samples Analyzed: 8

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1607379 A

Report Created for: TRC

2300 Clayton Road, Suite 610
Concord, CA 94520

Project Contact: Glenn Young

Project P.O.:

Project Name: 260770; Mathew Street Project

Project Received: 07/11/2016

Analytical Report reviewed & approved for release on 07/14/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: TRC
Project: 260770; Mathew Street Project
WorkOrder: 1607379

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
e	spike reference value above calibration level
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: TRC
Project: 260770; Mathew Street Project
WorkOrder: 1607379

Analytical Qualifiers

J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
a3	sample diluted due to high organic content.
c8	sample pH is greater than 2
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
e11	stoddard solvent/mineral spirit (?)

Quality Control Qualifiers

F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.
F10	MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.
F13	Indigenous sample results too high for a representative matrix spike analysis.



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC16	123607
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	07/13/2016 17:25
tert-Amyl methyl ether (TAME)	ND		0.0050	1	07/13/2016 17:25
Benzene	ND		0.0050	1	07/13/2016 17:25
Bromobenzene	ND		0.0050	1	07/13/2016 17:25
Bromochloromethane	ND		0.0050	1	07/13/2016 17:25
Bromodichloromethane	ND		0.0050	1	07/13/2016 17:25
Bromoform	ND		0.0050	1	07/13/2016 17:25
Bromomethane	ND		0.0050	1	07/13/2016 17:25
2-Butanone (MEK)	ND		0.020	1	07/13/2016 17:25
t-Butyl alcohol (TBA)	ND		0.050	1	07/13/2016 17:25
n-Butyl benzene	ND		0.0050	1	07/13/2016 17:25
sec-Butyl benzene	ND		0.0050	1	07/13/2016 17:25
tert-Butyl benzene	ND		0.0050	1	07/13/2016 17:25
Carbon Disulfide	ND		0.0050	1	07/13/2016 17:25
Carbon Tetrachloride	ND		0.0050	1	07/13/2016 17:25
Chlorobenzene	ND		0.0050	1	07/13/2016 17:25
Chloroethane	ND		0.0050	1	07/13/2016 17:25
Chloroform	ND		0.0050	1	07/13/2016 17:25
Chloromethane	ND		0.0050	1	07/13/2016 17:25
2-Chlorotoluene	ND		0.0050	1	07/13/2016 17:25
4-Chlorotoluene	ND		0.0050	1	07/13/2016 17:25
Dibromochloromethane	ND		0.0050	1	07/13/2016 17:25
1,2-Dibromo-3-chloropropane	ND		0.0040	1	07/13/2016 17:25
1,2-Dibromoethane (EDB)	ND		0.0040	1	07/13/2016 17:25
Dibromomethane	ND		0.0050	1	07/13/2016 17:25
1,2-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,3-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,4-Dichlorobenzene	ND		0.0050	1	07/13/2016 17:25
Dichlorodifluoromethane	ND		0.0050	1	07/13/2016 17:25
1,1-Dichloroethane	ND		0.0050	1	07/13/2016 17:25
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	07/13/2016 17:25
1,1-Dichloroethene	ND		0.0050	1	07/13/2016 17:25
cis-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 17:25
trans-1,2-Dichloroethene	ND		0.0050	1	07/13/2016 17:25
1,2-Dichloropropane	ND		0.0050	1	07/13/2016 17:25
1,3-Dichloropropane	ND		0.0050	1	07/13/2016 17:25
2,2-Dichloropropane	ND		0.0050	1	07/13/2016 17:25

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC16	123607
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	07/13/2016 17:25
cis-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 17:25
trans-1,3-Dichloropropene	ND		0.0050	1	07/13/2016 17:25
Diisopropyl ether (DIPE)	ND		0.0050	1	07/13/2016 17:25
Ethylbenzene	ND		0.0050	1	07/13/2016 17:25
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	07/13/2016 17:25
Freon 113	ND		0.0050	1	07/13/2016 17:25
Hexachlorobutadiene	ND		0.0050	1	07/13/2016 17:25
Hexachloroethane	ND		0.0050	1	07/13/2016 17:25
2-Hexanone	ND		0.0050	1	07/13/2016 17:25
Isopropylbenzene	ND		0.0050	1	07/13/2016 17:25
4-Isopropyl toluene	ND		0.0050	1	07/13/2016 17:25
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	07/13/2016 17:25
Methylene chloride	ND		0.0050	1	07/13/2016 17:25
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	07/13/2016 17:25
Naphthalene	ND		0.0050	1	07/13/2016 17:25
n-Propyl benzene	ND		0.0050	1	07/13/2016 17:25
Styrene	ND		0.0050	1	07/13/2016 17:25
1,1,1,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 17:25
1,1,2,2-Tetrachloroethane	ND		0.0050	1	07/13/2016 17:25
Tetrachloroethene	ND		0.0050	1	07/13/2016 17:25
Toluene	ND		0.0050	1	07/13/2016 17:25
1,2,3-Trichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,2,4-Trichlorobenzene	ND		0.0050	1	07/13/2016 17:25
1,1,1-Trichloroethane	ND		0.0050	1	07/13/2016 17:25
1,1,2-Trichloroethane	ND		0.0050	1	07/13/2016 17:25
Trichloroethene	ND		0.0050	1	07/13/2016 17:25
Trichlorofluoromethane	ND		0.0050	1	07/13/2016 17:25
1,2,3-Trichloropropane	ND		0.0050	1	07/13/2016 17:25
1,2,4-Trimethylbenzene	ND		0.0050	1	07/13/2016 17:25
1,3,5-Trimethylbenzene	ND		0.0050	1	07/13/2016 17:25
Vinyl Chloride	ND		0.0050	1	07/13/2016 17:25
Xylenes, Total	ND		0.0050	1	07/13/2016 17:25

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/12/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-1.5	1607379-028A	Soil	07/08/2016 11:45	GC16	123607

Analytes	Result	RL	DE	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	93	70-130		07/13/2016 17:25
Toluene-d8	105	70-130		07/13/2016 17:25
4-BFB	95	70-130		07/13/2016 17:25
Benzene-d6	116	60-140		07/13/2016 17:25
Ethylbenzene-d10	137	60-140		07/13/2016 17:25
1,2-DCB-d4	93	60-140		07/13/2016 17:25

Analyst(s): KF



Quality Control Report

Client: TRC
Date Prepared: 7/12/16
Date Analyzed: 7/12/16 - 7/13/16
Instrument: GC10, GC16
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123607
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123607

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0447	0.0050	0.050	-	89	53-116
Benzene	ND	0.0541	0.0050	0.050	-	108	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.169	0.050	0.20	-	84	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0513	0.0050	0.050	-	103	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0461	0.0040	0.050	-	92	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0524	0.0040	0.050	-	105	58-135
1,1-Dichloroethene	ND	0.0522	0.0050	0.050	-	104	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/12/16
Date Analyzed: 7/12/16 - 7/13/16
Instrument: GC10, GC16
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123607
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123607

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0516	0.0050	0.050	-	103	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0497	0.0050	0.050	-	99	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0479	0.0050	0.050	-	96	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0515	0.0050	0.050	-	103	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0543	0.0050	0.050	-	109	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: TRC
Date Prepared: 7/12/16
Date Analyzed: 7/12/16 - 7/13/16
Instrument: GC10, GC16
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123607
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-123607

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.128	0.133		0.12	102	107	70-130
Toluene-d8	0.143	0.137		0.12	114	109	70-130
4-BFB	0.0113	0.0120		0.012	91	96	70-130
Benzene-d6	0.115	0.114		0.10	115	114	60-140
Ethylbenzene-d10	0.129	0.127		0.10	129	127	60-140
1,2-DCB-d4	0.0887	0.0979		0.10	89	98	60-140

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1607379 A

ClientCode: TRCC

QuoteID: 6211

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:

Glenn Young
TRC
2300 Clayton Road, Suite 610
Concord, CA 94520
(925) 688-2479 FAX: (925) 688-0388

Email: GYoung@trcsolutions.com
cc/3rd Party:
PO:
ProjectNo: 260770; Mathew Street Project

Bill to:

Accounts Payable
TRC
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Requested TAT:

3 days;

Date Received: 07/11/2016

Date Logged: 07/11/2016

Date Add-On: 07/12/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1607379-028	B14-1.5	Soil	7/8/2016 11:45	<input type="checkbox"/>	A											

Test Legend:

1	8260B_S	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Briana Cutino

Add-On Prepared By: Briana Cutino

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: TRC

Project: 260770; Mathew Street Project

Comments:

QC Level:

Client Contact: Glenn Young

Contact's Email: GYoung@trcsolutions.com

Work Order: 1607379

Date Logged: 7/11/2016

Date Add-On: 7/12/2016

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-028A	B14-1.5	Soil	SW8260B (VOCs)	1	Acetate Liner	7/8/2016 11:45	3 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

SAMPLING COMPANY: TRC		COC ID: <i>Quote ID: 6211</i>		PURCHASE ORDER NO.: <i>97535</i>		PROJECT ID: 260770		DATE: 7/11/16 PAGE: 2 of 3												
PROJECT CONTACT Report to: Glenn Young		GLOBAL ID NO.:		SITE ADDRESS: Street and City 651 Mathew Street, Santa Clara, CA				PROJECT NAME: Mathew Street Project												
TELEPHONE: 925.688.2479		FAX: 925.688.0388		E-MAIL: jzepeda@trcsolutions.com		SAMPLER NAME(S) (Print): Jacob Zepeda														
TURNAROUND TIME (STANDARD IS 5 CALENDAR DAYS) <input type="checkbox"/> STD <input type="checkbox"/> 5 DAY <input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 24 HOURS <input type="checkbox"/> LA - RWQCB REPORT FORM <input type="checkbox"/> UST AGENCY:		RESULTS NEEDED ON WEEKEND		REQUESTED ANALYSIS																
SPECIAL INSTRUCTIONS OR NOTES: Please email EDD (excel spreadsheet), PDF (incl COC) analytical to J.Zepeda and G.Young. Include both MDL and RL		CHECK BOX IF EDD IS NOT NEEDED <input type="checkbox"/>		FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes Note: 72HR RUSH on All Samples <i>(except HOLD samples)</i>																
RECEIPT VERIFICATION REQUESTED <input checked="" type="checkbox"/>																				
FIELD POINT NAME	LAB ID Number	SAMPLING		MATRIX	NO. OF CONT.	TPHd and TPHmo (8015M w/ Silica VOCs (8260) 7/12/16	TPHg w/ BTEX and MTBE (8015M/8020)	Title 22 Metals (60107000)	Organochlorine Pesticides & PCBs (to ESLs) (80818082)	PNAs (to ESLs) (8270)	Asbestos (CARB 435)	STLC WET Metals	TCLP Metals							
		DATE	TIME																	
B7-0.5		7/8/16	11:17	S	1															HOLD
B7-1.0		7/8/16	11:18	S	1															HOLD
B8-0.5		7/8/16	11:05	S	1	X	X	X			X									HOLD
B8-1.0		7/8/16	11:06	S	1															HOLD
B9-1.0		7/8/16	07:30	S	1															HOLD
B10-10.0		7/8/16	08:45	S	1	X	X	X	X											HOLD
B10-24.5		7/8/16	08:40	S	1															HOLD
B11-1.0		7/7/16	2:53	S	1	X	X	X	X	X	X									HOLD
B11-3.5		7/7/16	2:45	S	1															HOLD
B12-2.5		7/7/16	3:10	S	1	X	X	X	X	X	X									HOLD
B12-3.5		7/7/16	3:05	S	1															HOLD
B13-0.5		7/8/16	12:14	S	1															HOLD
B13-1.0		7/8/16	12:16	S	1															HOLD
B14-1.5		7/8/16	11:45	S	1	X	X	X			X									HOLD
Relinquished by: (Signature)						Received by: (Signature)				Date: 7/11/2016		Time: 12:20								
Relinquished by: (Signature)						Received by: (Signature)				Date: 7-11-16		Time: 2:15								
Relinquished by: (Signature)						Received by: (Signature)				Date:		Time:								
Relinquished by: (Signature)						Received by: (Signature)				Date:		Time:								



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1607379 B

Report Created for: TRC

2300 Clayton Road, Suite 610
Concord, CA 94520

Project Contact: Glenn Young

Project P.O.:

Project Name: 260770; Mathew Street Project

Project Received: 07/11/2016

Analytical Report reviewed & approved for release on 07/21/2016 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: TRC
Project: 260770; Mathew Street Project
WorkOrder: 1607379

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: TRC
Project: 260770; Mathew Street Project
WorkOrder: 1607379

Analytical Qualifiers

B	analyte detected in the associated Method Blank and in the sample
J	Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
a3	sample diluted due to high organic content.
c8	sample pH is greater than 2
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
e11	stoddard solvent/mineral spirit (?)

Quality Control Qualifiers

F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.
F10	MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.
F13	Indigenous sample results too high for a representative matrix spike analysis.



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/18/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

STLC Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	ICP-MS2	123947

<u>Analytes</u>	<u>Result</u>	<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.18	0.10	0.10	1	07/21/2016 12:51

Analyst(s): DVH



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/18/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW1311/SW3050B
Analytical Method: SW6020
Unit: mg/L

TCLP Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B4-1.5	1607379-007A	Soil	07/07/2016 13:57	ICP-MS1	123948

<u>Analytes</u>	<u>Result</u>	<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	ND	0.10	0.10	1	07/20/2016 12:36

Analyst(s): DVH



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/18/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

STLC Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B5-1.5	1607379-009A	Soil	07/07/2016 12:04	ICP-MS2	123947

Analytes	Result	MDL	RL	DF	Date Analyzed
Chromium	ND	0.10	0.10	1	07/21/2016 12:45
Lead	ND	0.10	0.10	1	07/21/2016 12:45

Analyst(s): DVH



Analytical Report

Client: TRC
Date Received: 7/11/16 14:15
Date Prepared: 7/18/16
Project: 260770; Mathew Street Project

WorkOrder: 1607379
Extraction Method: SW1311/SW3050B
Analytical Method: SW6020
Unit: mg/L

TCLP Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B5-1.5	1607379-009A	Soil	07/07/2016 12:04	ICP-MS1	123948

Analytes	Result	MDL	RL	DF	Date Analyzed
Chromium	ND	0.10	0.10	1	07/20/2016 12:42
Lead	ND	0.10	0.10	1	07/20/2016 12:42

Analyst(s): DVH



Quality Control Report

Client: TRC
Date Prepared: 7/18/16
Date Analyzed: 7/21/16
Instrument: ICP-MS2
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123947
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L
Sample ID: MB/LCS-123947
1607648-001AMS/MSD

QC Summary Report for Metals (STLC)

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	9.80	0.10	0.10	10	-	98	75-125
Lead	ND	9.92	0.10	0.10	10	-	99	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	9.75	9.62	10	0.1215	96	95	75-125	1.34	20
Lead	11.0	10.7	10	0.95	100	97	75-125	2.69	20



Quality Control Report

Client: TRC
Date Prepared: 7/18/16
Date Analyzed: 7/20/16
Instrument: ICP-MS1
Matrix: Soil
Project: 260770; Mathew Street Project

WorkOrder: 1607379
BatchID: 123948
Extraction Method: SW1311/SW3050B
Analytical Method: SW6020
Unit: mg/L
Sample ID: MB/LCS-123948
1607644-001AMS/MSD

QC Summary Report for Metals (TCLP)

Analyte	MB Result	LCS Result	MDL	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	9.59	0.10	0.10	10	-	96	75-125
Lead	ND	9.60	0.10	0.10	10	-	96	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	9.77	9.83	10	ND	98	98	75-125	0	20
Lead	9.45	9.73	10	ND	94	97	75-125	2.98	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1607379 **B**

ClientCode: TRCC

☐ WaterTrax☐ WriteOn☐ EDF☐ Excel☐ Fax☒ Email☐ HardCopy☐ ThirdParty☒ J-flag

Report to:

Glenn Young

TRC

2300 Clayton Road, Suite 610

Concord, CA 94520

(925) 688-2479 FAX: (925) 688-0388

Email: GYoung@trcsolutions.com

cc/3rd Party: jzepeda@trcsolutions.com;

PO:

ProjectNo: 260770; Mathew Street Project

Bill to:

Accounts Payable

TRC

21 Griffin Road North

Windsor, CT 06095

apinvoiceapproval@trcsolutions.com

Requested TAT:

1 day;

Date Received: 07/11/2016

Date Logged: 07/11/2016

Date Add-On: 07/18/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1607379-007	B4-1.5	Soil	7/7/2016 13:57	<input type="checkbox"/>	A	A										
1607379-009	B5-1.5	Soil	7/7/2016 12:04	<input type="checkbox"/>			A	A								

Test Legend:

1	CRMS_STLC_S
5	
9	

2	CRMS_TCLP_S
6	
10	

3	PBCRMS_STLC_S
7	
11	

4	PBCRMS_TCLP_S
8	
12	

Prepared by: Briana Cutino

Add-On Prepared By: Maria Venegas

Comments: 8260 added on sample #28, Trip blank cancelled per e-mail 07/12/16 STLC's & TCLP's added 7/18/16 Rush TAT.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: TRC

QC Level:

Work Order: 1607379

Project: 260770; Mathew Street Project

Client Contact: Glenn Young

Date Logged: 7/11/2016

Comments: 8260 added on sample #28, Trip blank cancelled per e-mail
07/12/16 STLC's & TCLP's added 7/18/16 Rush TAT.

Contact's Email: GYoung@trcsolutions.com

Date Add-On: 7/18/2016

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1607379-007A	B4-1.5	Soil	SW6020 (Chromium) (TCLP)	1	Acetate Liner	7/7/2016 13:57	1 day*		<input type="checkbox"/>	
			SW6020 (Chromium) (STLC)				1 day*			
1607379-009A	B5-1.5	Soil	SW6020 (Chromium & Lead) (TCLP)	1	Acetate Liner	7/7/2016 12:04	1 day*		<input type="checkbox"/>	
			SW6020 (Chromium & Lead) (STLC)				1 day*			

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

☒ MCcampbell Analytical

SAMPLING COMPANY:

COC ID:

PURCHASE ORDER NO.:	
---------------------	--

PROJECT ID:

DATE: 7/11/16

TRC

QUOTE ID: 62M

97535

260770

PAGE: 1 of 3

PROJECT CONTACT Report to:

GLOBAL ID NO.:

SITE ADDRESS: Street and City

PROJECT NAME:

Glenn Young

11

651 Mathew Street, Santa Clara, CA

Mathew Street Project

TELEPHONE:

FAX:

925.688.0388

E-MAIL:

izepeda@trcsolutions.com

SAMPLER NAME(S) (Print): Jacob Zepeda

LAB USE ONLY

TURNAROUND TIME (STANDARD IS 5 CALENDAR DAYS): ☐ RESULTS NEEDED

☐ STD ☐ 5 DAY ☒ 3 DAY ☐ 2 DAY ☐ 24 HOURS

ON WEEKEND

☐ RWOCB REPORT FORMAT☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES:

CHECK BOX IF EDD IS NOT NEEDED ☐

Please email EDD (excel spreadsheet), PDF (incl COC) analytical to J.Zepeda and G.Young. Include both MDL and RL

RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

FIELD NOTES:

Container/Preservative
or PID Readings
or Laboratory Notes

Note: 72HR RUSH on All Samples

(except HOLD samples)

[illegible]



MEMORANDUM

To: Belem Parra, Vantage Data Centers Management Company, LLC
c/o Michael Stoner, Lake Street Ventures

From: Mike Mowery, P.E.
Kimley-Horn and Associates, Inc.

Date: September 29, 2016

Subject: Santa Clara Vantage Data Center Traffic Evaluation

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Vantage Data Centers Management Company, LLC to evaluate potential traffic impacts for the proposed Vantage Data Center in Santa Clara, California. This memorandum documents the methodology, assumptions, and results of the traffic evaluation.

BACKGROUND

The proposed data center will be located on Mathew Street, east of Lafayette Street within the MH (Heavy Industrial) zone in Santa Clara. The proposed data center will consist of two main buildings, totaling 413,000 square feet, and a substation. The data center will be developed in four (4) separate phases. Phases 1 and 2 will be developed on 725 Mathew Street and Phases 3 and 4 on 651 Mathew Street. The substation will be constructed during Phase 1. The proposed project will have a total of 29 employees, with at most 16 employees working on site during the day. **Attachment A** shows the full build out site plan dated September 15, 2016.

INTERSECTION LEVEL OF SERVICE

Intersection level of service (LOS) analysis for the AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hour traffic was conducted for follow five (5) intersections:

1. Lafayette Street / Central Expressway
2. Lafayette Street / Walsh Avenue
3. Lafayette Street / Martin Avenue
4. Lafayette Street / Memorex Drive – Mathew Street
5. Lafayette Street / El Camino Real

Traffic conditions were evaluated for the following traffic conditions:

- Existing Conditions – Based on traffic counts from City Place Santa Clara Project Draft Environmental Impact Report (DEIR). Existing roadway geometry and traffic controls were used for this scenario.

- Existing Plus Project Conditions – Based on existing traffic volumes added to traffic generated by the proposed project. Existing roadway geometry and traffic controls were assumed for this scenario.

Intersection LOS analysis was evaluated following the Highway Capacity Manual (HCM) 2000 methodology within the *Traffix* software, which follows standards and methodologies set forth by the City of Santa Clara and Santa Clara County Congestion Management Program (CMP) administered by Santa Clara Valley Transportation Authority (VTA).

The LOS standard for a signalized intersection in the City of Santa Clara is LOS D or better during the AM or PM peak periods. Acceptable LOS for signalized intersections that are included in the Santa Clara County CMP is LOS E or better. Intersections that are included in the Santa Clara County CMP are Intersection #1 – Lafayette Street / Central Expressway and Intersection #5 – Lafayette Street / El Camino Real.

Significant impacts at signalized intersections would occur when the addition of the project traffic would result in the following conditions:

- If the intersection operates at an acceptable LOS without the project and degrades to an unacceptable LOS (i.e. LOS E or F for City intersections and LOS F for CMP intersections).
- If the intersection operates at an unacceptable LOS (LOS E or F for City intersections; LOS F for CMP intersections) without the project and the project increases the average control delay for the critical movements by four (4) or more seconds and increases the critical volume to capacity (v/c) by 0.01 or more.
 - If the addition of the project traffic reduces the amount of average control delay for a critical movement (i.e. negative change in delay) and the project increases the v/c by 0.01 or more.

EXISTING CONDITIONS

Weekday intersection turning movement volumes were taken from the City Place Santa Clara Project Draft Environmental Impact Report, which were collected in August 2014 and January 2015. Existing peak hour turning movements volumes are shown in **Attachment B**.

Results of the LOS analysis under the Existing Conditions are presented in **Table 1**. All study intersections function within acceptable LOS standards under this scenario. Analysis sheets are provided in **Attachment C**.

Table 1: Existing Intersection Level of Service Summary

#	Intersection	LOS Criteria	Existing							
			AM Peak				PM Peak			
			LOS	Delay (sec)	v/c Ratio	Crit. Delay	LOS	Delay (sec)	v/c Ratio	Crit. Delay
1	Lafayette Street / Central Expressway ¹	E	E+	59.0	0.483	67.9	E	62.3	0.790	62.2
2	Lafayette Street / Walsh Avenue	D	B	12.4	0.495	9.2	B-	18.6	0.642	19.2
3	Lafayette Street / Martin Avenue	D	B-	19.7	0.559	18.9	B-	19.4	0.559	16.7
4	Lafayette Street / Memorex Drive - Mathew Street	D	A	9.5	0.509	10.8	B+	10.0	0.503	11.5
5	Lafayette Street / El Camino Real ¹	E	D	41.1	0.754	46.6	D+	38.9	0.630	39.5

¹ Lafayette Street / Central Expressway (#1) and Lafayette Street / El Camino Real (#5) are CMP intersections with LOS E threshold

TRIP GENERATION

The number of project trips for the proposed project was estimated using the industry standard Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition*. This reference estimates project trips based on survey data for a land use category. For the proposed project, the average rates were used to estimate the number of project trips for ITE Land Use 160, Data Center. **Table 2** presents the trip generation for the proposed project. It should be noted that only square footage for the main buildings were used since the substation will be separate from the main building and would not generate any additional external trips.

Table 2: Trip Generation for Proposed Project

ITE Land Use Code	Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
160	Data Center	413	KSF	410	37	19	18	37	8	29

As shown in **Table 2**, the proposed project is projected to generate approximately 410 daily trips, 37 trips in the AM peak hour, and 37 trips in the PM peak hour. It should be noted that the number of trips the project will generate during the AM or PM peak hour is under the 100 net new peak hour trip threshold¹ to warrant the completion of a traffic impact analysis according to VTA guidelines. These trip generation results also warrant comparison to the employee estimates noted above, as the daytime employee count and delivery schedule should result in actual site trips less than the ITE estimate.

¹ Santa Clara Valley Transportation Authority. *Transportation Impact Analysis Guidelines*. Oct 2014.

TRIP DISTRIBUTION AND ASSIGNMENT

Project trip distribution was developed based on existing traffic count information and general orientation of population centers to the site. Project trips were assigned to the network based on the assumed trip distribution as shown in **Attachment D**.

EXISTING PLUS PROJECT CONDITIONS

Traffic operations were evaluated at the study intersections under existing conditions plus traffic generated by the project as shown in **Attachment E**. Results of the analysis are presented in **Table 3**. All study intersections function within acceptable LOS standards under this analysis scenario. Thus, the project has a less than significant impact at all study intersections and no mitigation measures are required. Analysis sheets are provided in **Attachment C**.

Table 3: Existing Plus Project Level of Service Summary

Intersection	LOS Criteria	Jurisdiction	Control	Existing Plus Project											
				AM Peak						PM Peak					
				LOS	Delay (sec)	v/c Ratio	v/c Var.	Crit. Delay	Crit. Delay Var.	LOS	Delay (sec)	v/c Ratio	v/c Var.	Crit. Delay	Crit. Delay Var.
Lafayette Street / Central Expressway ¹	E	County	Signal	E+	59.2	0.485	0.002	68.3	0.4	E	62.5	0.792	0.002	62.3	0.1
Lafayette Street / Walsh Avenue	D	City	Signal	B	12.4	0.498	0.003	9.2	0.0	B-	18.6	0.643	0.001	19.2	0.0
Lafayette Street / Martin Avenue	D	City	Signal	B-	19.7	0.561	0.002	18.9	0.0	B-	19.4	0.561	0.002	16.7	0.0
Lafayette Street / Memorex Drive - Mathew Street	D	City	Signal	A	9.8	0.523	0.014	11.2	0.4	B+	10.5	0.522	0.019	12.1	0.6
Lafayette Street / El Camino Real ¹	E	County	Signal	D	41.2	0.759	0.005	46.7	0.1	D+	39.0	0.634	0.004	39.5	0.0

Lafayette Street / Central Expressway (#1) and Lafayette Street / El Camino Real (#5) are CMP intersections with LOS E threshold

ON-SITE CIRCULATION, QUEUING, AND PARKING

On-site vehicular circulation, queuing, and parking for the site were reviewed.

ON-SITE CIRCULATION

As shown on the site plan, **Attachment A**, the full build out site for the project will have four gated driveways. Most vehicles will enter and exit the site through the two middle driveways. Service vehicles will utilize the service entry at the east and west ends of the site. The service vehicles will drive around the north end of the site and exit through the middle exit driveway. Truck turning movements at these driveways were checked and found to be adequate, as shown in **Attachment F**.

ON-SITE QUEUING

Queue lengths were evaluated for the southbound and eastbound approaches at the central project driveways. The queue length for the southbound approach at the project driveway was evaluated to determine if the driveway throat length is long enough to store potential queued vehicles exiting the site. Based on site plans dated September 15, 2016, the driveway throat length is approximately 95 feet or 4 vehicles (assuming a typical vehicle length of 25 feet). The queue length for the eastbound approach was also evaluated to determine if potential queuing due to vehicles making an eastbound left into the site could potentially block traffic along Mathew Street.

For the queuing analysis, the 95th percentile queue length for the southbound and eastbound approaches at the main driveway was determined by following the HCM 2000 methodology within the *Synchro* software. The 95th percentile queue was used to account for fluctuation in traffic and represent a condition where 95 percent of the time, traffic queues would be less than or equal to the queue determined by the analysis.

Table 4 summarizes the 95th percentile queue lengths at the project exit driveway. The 95th percentile queue lengths at the southbound approach are 1 vehicle during both the AM and PM peak which is less than the available storage of 4 vehicles. For the eastbound approach, the 95th percentile queue is 1 vehicle during the AM peak and there is no queue during the PM peak. Based on the queuing analysis, the queue lengths for both southbound and eastbound approaches are minimal, and therefore the project does not cause any queuing impacts. Analysis sheets are provided in **Attachment C**.

Table 4: 95th Percentile Queue Lengths

Approach	Storage Length	95 th Percentile Queue	
		AM Peak	PM Peak
Southbound	4 vehicles	1 vehicle	1 vehicle
Eastbound	-	1 vehicle	0 vehicle

PARKING

Section 18.74 of the Santa Clara City Code establishes minimum requirements for off-street parking.

Number of parking spaces

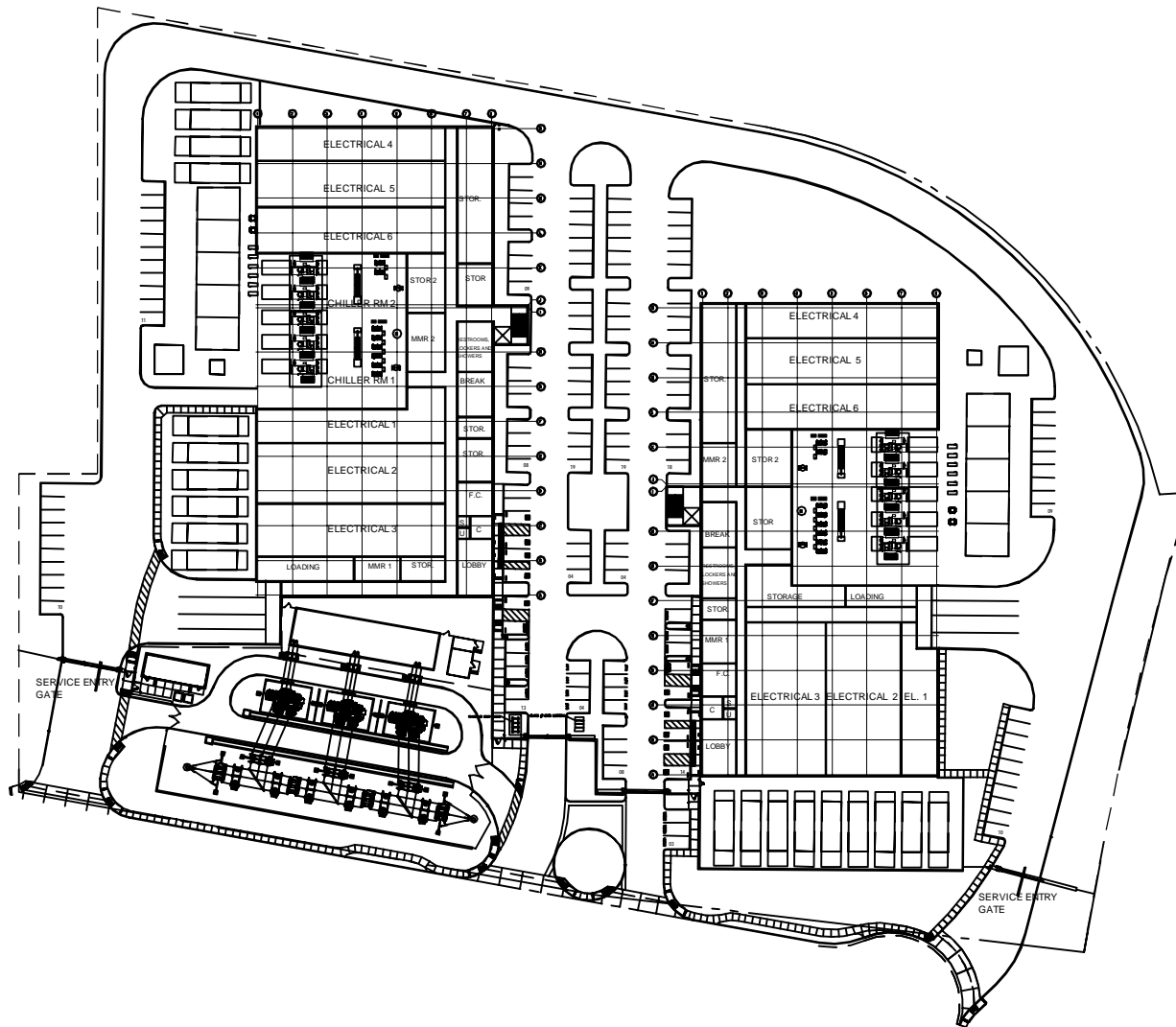
The Santa Clara City Code does not have a required minimum number of parking spaces for a data center, however the proposed project is estimated to provide enough parking for its employees and visitors. If it is conservatively assumed that each of the 29 employees all arrive on-site at the same time and each drives individually, this would require 29 parking spaces for the employees. The project proposes 162 parking spaces, which would allow for 133 parking spaces for visitors to the project site. It is not anticipated that 133 parking spaces will be necessary for visitors to the site on a consistent basis. Therefore, the proposed number of parking spaces is adequate.

Parking dimensions

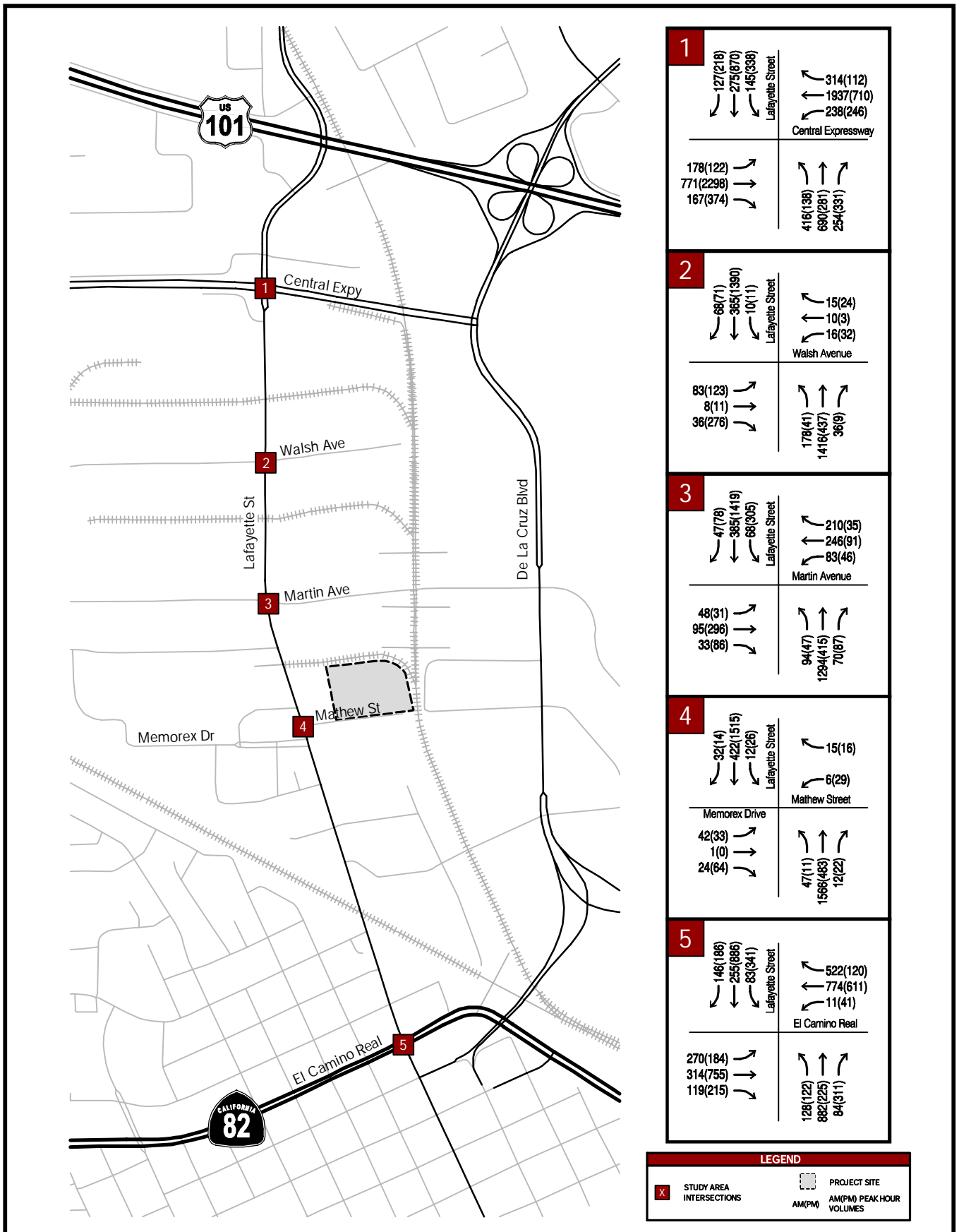
The parking spaces at the proposed site will be 90-degree parking stalls and according to section 18.74.030 of the City Code, standard 90-degree parking stalls must be a minimum of 9 feet wide by 18 feet long, with an aisle of 20 feet. The project proposes parking spaces that are 9 feet wide and 16.5 feet long stalls and 26 feet aisles. The City Code does allow for 2 feet of overhang, therefore, the proposed parking lot design does meet the City's requirements.

CONCLUSION

Based on the results of the traffic analysis, there is a less than significant transportation impact due to the proposed project. The proposed project will generate approximately 37 trips in the AM peak hour, and 37 trips in the PM peak hour, which are under VTA's 100-trip threshold to warrant a traffic impact analysis. The level of service (LOS) analysis concluded that the proposed data center will have a less than significant impact on the transportation network. On-site circulation was reviewed and determined that the site plan provides adequate space for trucks entering and leaving the site, as well as minimal queuing due to vehicles entering or leaving the site. The project provides 162 parking spaces, which is expected to accommodate the parking demand.



SOURCE: CAC ARCHITECTS

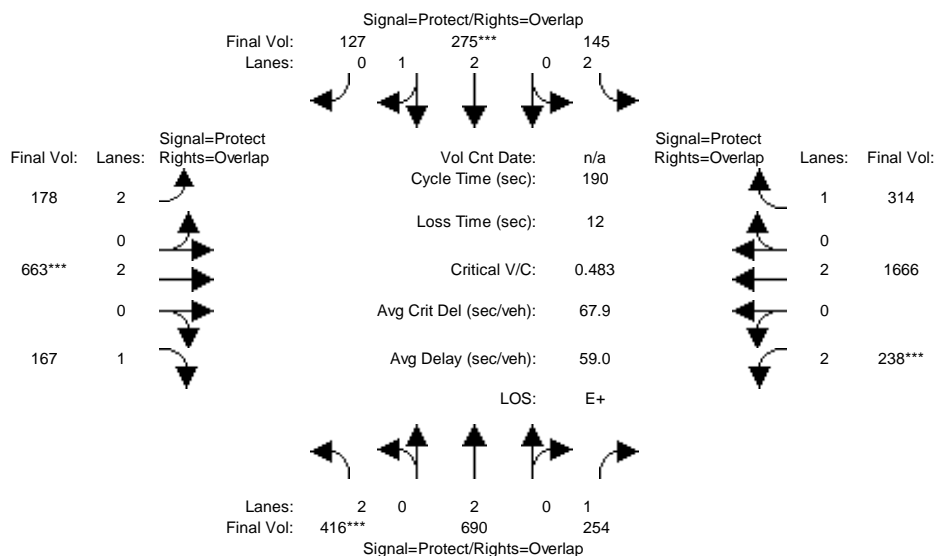


Attachment C: Analysis Outputs

City of Santa Clara
Vantage Data Center
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Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex AM Peak

Intersection #1: Lafayette St/Central Expy

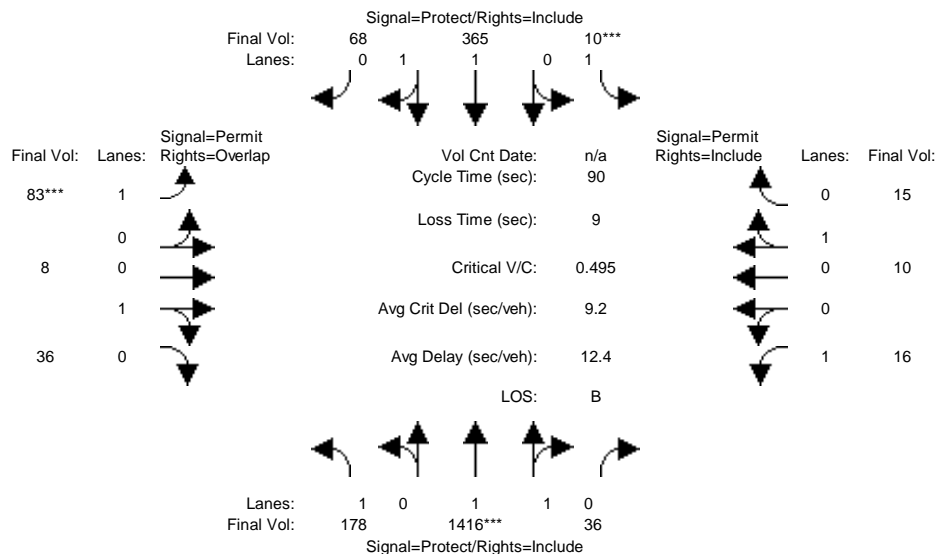


Street Name:	Lafayette St						Central Expy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	29	49	49	19	39	39	23	96	96	26	99	99
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	416	690	254	145	275	127	178	771	167	238	1937	314
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	416	690	254	145	275	127	178	771	167	238	1937	314
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	416	690	254	145	275	127	178	771	167	238	1937	314
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.00	1.00	0.86	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	416	690	254	145	275	127	178	663	167	238	1666	314
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	416	690	254	145	275	127	178	663	167	238	1666	314
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	416	690	254	145	275	127	178	663	167	238	1666	314
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.02	0.98	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3829	1768	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.18	0.15	0.05	0.07	0.07	0.06	0.17	0.10	0.08	0.44	0.18
Crit Moves:	****				****			****				
Green Time:	27.3	46.1	70.5	17.9	36.7	58.3	21.6	90.3	117.6	24.5	93.1	111.0
Volume/Cap:	0.92	0.75	0.39	0.49	0.37	0.23	0.50	0.37	0.15	0.59	0.89	0.31
Delay/Veh:	109.3	74.2	47.1	88.2	71.1	52.3	85.1	33.8	16.3	85.2	52.8	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	109.3	74.2	47.1	88.2	71.1	52.3	85.1	33.8	16.3	85.2	52.8	21.5
LOS by Move:	F	E	D	F	E	D-	F	C-	B	F	D-	C+
HCM2kAvgQ:	410	486	296	139	181	151	165	310	112	222	1205	253
Note: Queue reported is the distance per lane in feet.												

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Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex AM Peak

Intersection #2: Lafayette St/Walsh Ave

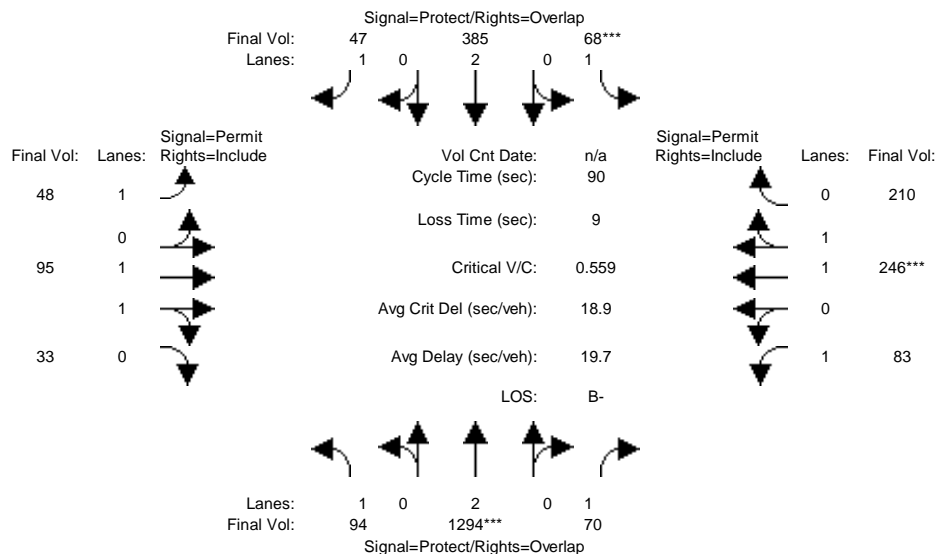


Street Name:	Lafayette St						Walsh Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	178	1416	36	10	365	68	83	8	36	16	10	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	178	1416	36	10	365	68	83	8	36	16	10	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	178	1416	36	10	365	68	83	8	36	16	10	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	178	1416	36	10	365	68	83	8	36	16	10	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1416	36	10	365	68	83	8	36	16	10	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	178	1416	36	10	365	68	83	8	36	16	10	15
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	1.95	0.05	1.00	1.68	0.32	1.00	0.18	0.82	1.00	0.40	0.60
Final Sat.:	1750	3608	92	1750	3119	581	1750	327	1473	1750	720	1080
Capacity Analysis Module:												
Vol/Sat:	0.10	0.39	0.39	0.01	0.12	0.12	0.05	0.02	0.02	0.01	0.01	0.01
Crit Moves:	****			****			****					
Green Time:	33.0	64.0	64.0	7.0	38.0	38.0	10.0	10.0	43.0	10.0	10.0	10.0
Volume/Cap:	0.28	0.55	0.55	0.07	0.28	0.28	0.43	0.22	0.05	0.08	0.13	0.13
Delay/Veh:	21.2	7.0	7.0	39.5	17.5	17.5	44.0	39.0	12.7	36.7	37.3	37.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.2	7.0	7.0	39.5	17.5	17.5	44.0	39.0	12.7	36.7	37.3	37.3
LOS by Move:	C+	A	A	D	B	B	D	D+	B	D+	D+	D+
HCM2kAvgQ:	92	256	256	7	100	100	70	33	17	12	18	18
Note: Queue reported is the distance per lane in feet.												

City of Santa Clara
Vantage Data Center
197021001

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex AM Peak

Intersection #3: Lafayette St/Martin Ave

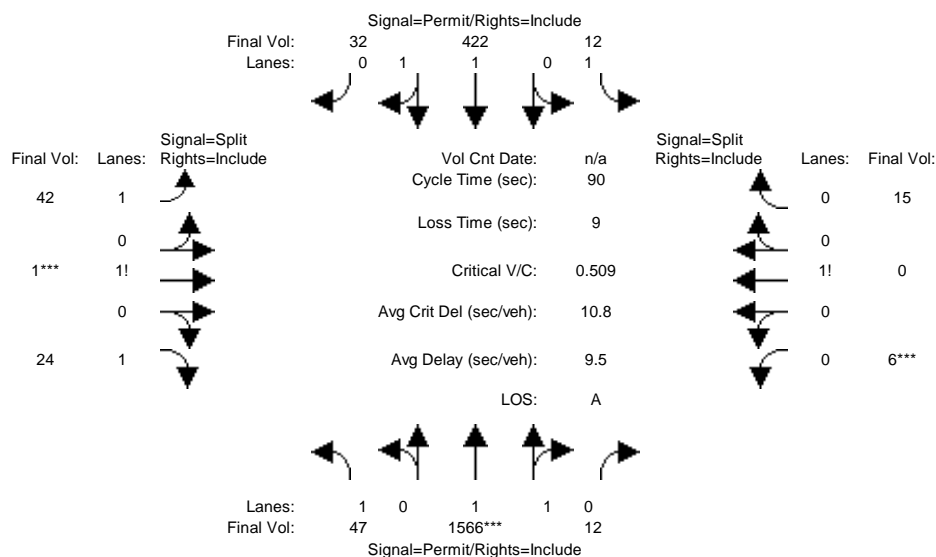


Street Name:	Lafayette St						Martin Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	94	1294	70	68	385	47	48	95	33	83	246	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	1294	70	68	385	47	48	95	33	83	246	210
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	94	1294	70	68	385	47	48	95	33	83	246	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	1294	70	68	385	47	48	95	33	83	246	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	1294	70	68	385	47	48	95	33	83	246	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	94	1294	70	68	385	47	48	95	33	83	246	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.47	0.53	1.00	1.05	0.95
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2745	954	1750	1995	1703
Capacity Analysis Module:												
Vol/Sat:	0.05	0.34	0.04	0.04	0.10	0.03	0.03	0.03	0.03	0.05	0.12	0.12
Crit Moves:	****			****						****		
Green Time:	25.3	54.3	54.3	7.0	36.1	36.1	19.7	19.7	19.7	19.7	19.7	19.7
Volume/Cap:	0.19	0.56	0.07	0.50	0.25	0.07	0.13	0.16	0.16	0.22	0.56	0.56
Delay/Veh:	25.5	11.7	7.5	52.3	18.4	16.8	28.9	28.9	28.9	30.1	34.2	34.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.5	11.7	7.5	52.3	18.4	16.8	28.9	28.9	28.9	30.1	34.2	34.2
LOS by Move:	C	B+	A	D-	B-	B	C	C	C	C	C-	C-
HCM2kAvgQ:	52	272	21	51	88	21	30	38	38	53	161	161
Note: Queue reported is the distance per lane in feet.												

City of Santa Clara
Vantage Data Center
197021001

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Ex AM Peak

Intersection #4: Lafayette St/Mathew St-Memorex Dr

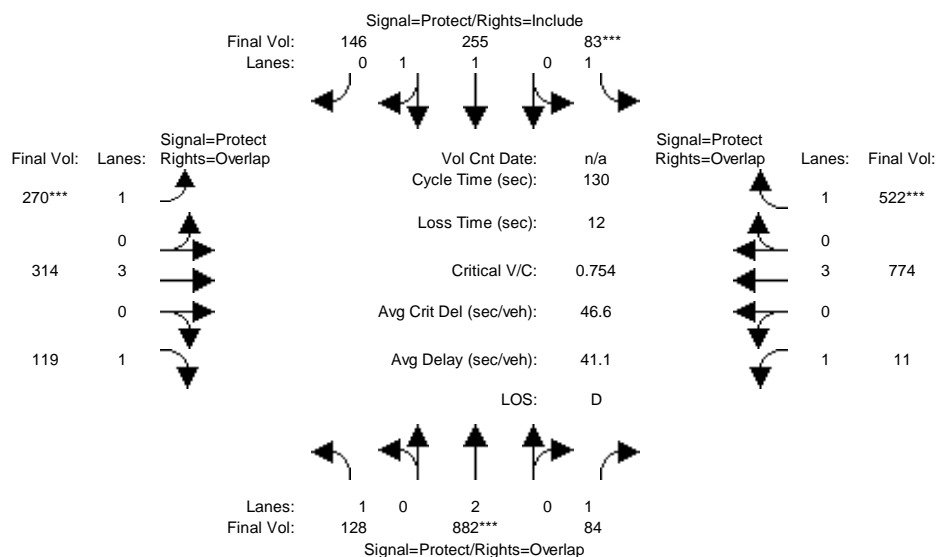


Street Name:	Lafayette St						Mathew St - Memorex Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	47	1566	12	12	422	32	42	1	24	6	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	1566	12	12	422	32	42	1	24	6	0	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	1566	12	12	422	32	42	1	24	6	0	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	1566	12	12	422	32	42	1	24	6	0	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	1566	12	12	422	32	42	1	24	6	0	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	47	1566	12	12	422	32	42	1	24	6	0	15
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.98	0.02	1.00	1.86	0.14	1.62	0.03	1.35	0.29	0.00	0.71
Final Sat.:	1750	3672	28	1750	3439	261	2831	51	2368	500	0	1250
Capacity Analysis Module:												
Vol/Sat:	0.03	0.43	0.43	0.01	0.12	0.12	0.01	0.02	0.01	0.01	0.00	0.01
Crit Moves:	****						****			****		
Green Time:	61.0	61.0	61.0	61.0	61.0	61.0	10.0	10.0	10.0	10.0	0.0	10.0
Volume/Cap:	0.04	0.63	0.63	0.01	0.18	0.18	0.13	0.17	0.09	0.11	0.00	0.11
Delay/Veh:	4.9	9.4	9.4	4.7	5.5	5.5	36.6	37.3	36.2	37.1	0.0	37.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.9	9.4	9.4	4.7	5.5	5.5	36.6	37.3	36.2	37.1	0.0	37.1
LOS by Move:	A	A	A	A	A	A	D+	D+	D+	D+	A	D+
HCM2kAvgQ:	11	317	317	3	61	61	20	26	13	16	0	16
Note: Queue reported is the distance per lane in feet.												

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Intersection #5: Lafayette St/El Camino Real

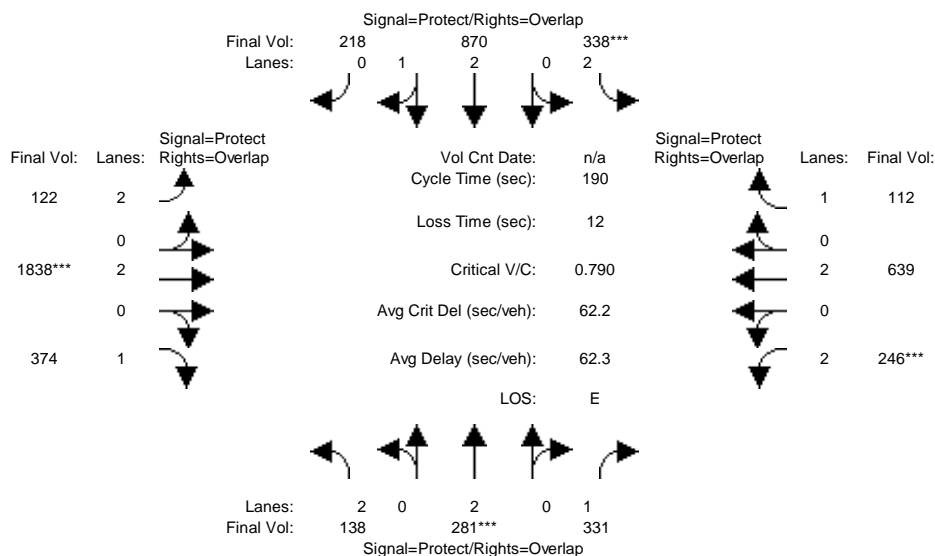


Street Name:	Lafayette St						El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	128	882	84	83	255	146	270	314	119	11	774	522
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	882	84	83	255	146	270	314	119	11	774	522
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	128	882	84	83	255	146	270	314	119	11	774	522
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	128	882	84	83	255	146	270	314	119	11	774	522
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	882	84	83	255	146	270	314	119	11	774	522
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	128	882	84	83	255	146	270	314	119	11	774	522
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.25	0.75	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	2352	1347	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.05	0.05	0.11	0.11	0.15	0.06	0.07	0.01	0.14	0.30
Crit Moves:	****			****			****			****		
Green Time:	19.4	40.0	68.3	8.2	28.8	28.8	26.6	40.4	59.8	28.3	42.1	50.3
Volume/Cap:	0.49	0.75	0.09	0.75	0.49	0.49	0.75	0.18	0.15	0.03	0.42	0.77
Delay/Veh:	52.2	43.4	15.4	85.1	44.7	44.7	57.4	32.7	20.4	40.1	34.5	40.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.2	43.4	15.4	85.1	44.7	44.7	57.4	32.7	20.4	40.1	34.5	40.2
LOS by Move:	D-	D	B	F	D	D	E+	C-	C+	D	C-	D
HCM2kAvgQ:	138	426	44	96	174	174	312	74	72	9	200	521
Note:	Queue reported is the distance per lane in feet.											

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EX PM Peak

Intersection #1: Lafayette St/Central Expy

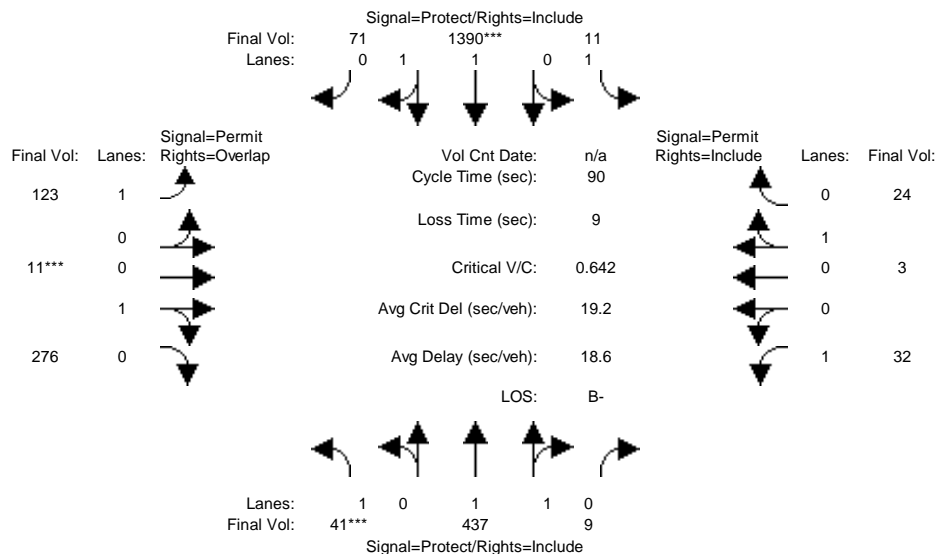


Street Name:	Lafayette St						Central Expy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	18	35	35	23	39	39	19	112	112	21	113	113
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	138	281	331	338	870	218	122	2298	374	246	710	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	281	331	338	870	218	122	2298	374	246	710	112
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	138	281	331	338	870	218	122	2298	374	246	710	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	1.00	1.00	0.90	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	138	281	331	338	870	218	122	1838	374	246	639	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	281	331	338	870	218	122	1838	374	246	639	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	138	281	331	338	870	218	122	1838	374	246	639	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.38	0.62	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	4476	1122	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.07	0.19	0.11	0.19	0.19	0.04	0.48	0.21	0.08	0.17	0.06
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	17.0	32.8	52.4	21.5	37.3	55.2	17.9	105	121.8	19.7	107	128.1
Volume/Cap:	0.49	0.43	0.69	0.95	0.99	0.67	0.41	0.88	0.33	0.75	0.30	0.09
Delay/Veh:	89.3	75.5	69.7	123.4	106	64.5	87.5	44.0	16.8	98.1	23.6	11.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.3	75.5	69.7	123.4	106	64.5	87.5	44.0	16.8	98.1	23.6	11.5
LOS by Move:	F	E-	E	F	F	E	F	D	B	F	C	B+
HCM2kAvgQ:	120	187	490	395	684	505	114	1259	274	260	248	62
Note: Queue reported is the distance per lane in feet.												

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Intersection #2: Lafayette St/Walsh Ave

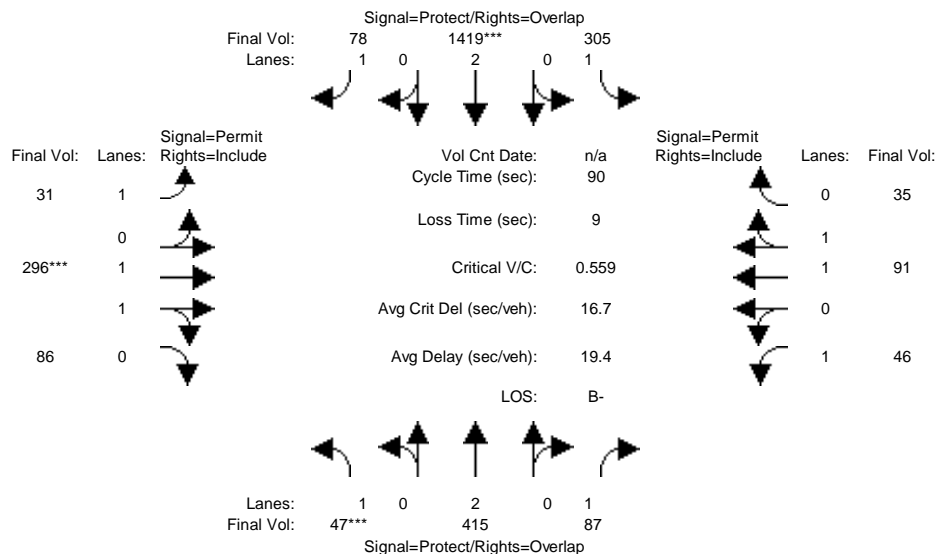


Street Name:	Lafayette St						Walsh Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	41	437	9	11	1390	71	123	11	276	32	3	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	437	9	11	1390	71	123	11	276	32	3	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	437	9	11	1390	71	123	11	276	32	3	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	437	9	11	1390	71	123	11	276	32	3	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	437	9	11	1390	71	123	11	276	32	3	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	41	437	9	11	1390	71	123	11	276	32	3	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	1.96	0.04	1.00	1.90	0.10	1.00	0.04	0.96	1.00	0.11	0.89
Final Sat.:	1750	3625	75	1750	3520	180	1750	69	1731	1750	200	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.12	0.12	0.01	0.39	0.39	0.07	0.16	0.16	0.02	0.02	0.02
Crit Moves:	****			****			****					
Green Time:	7.0	36.3	36.3	23.4	52.7	52.7	21.3	21.3	28.3	21.3	21.3	21.3
Volume/Cap:	0.30	0.30	0.30	0.02	0.67	0.67	0.30	0.67	0.51	0.08	0.06	0.06
Delay/Veh:	44.8	18.7	18.7	24.9	14.5	14.5	30.0	39.5	28.4	27.1	26.9	26.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.8	18.7	18.7	24.9	14.5	14.5	30.0	39.5	28.4	27.1	26.9	26.9
LOS by Move:	D	B-	B-	C	B	B	C	D	C	C	C	C
HCM2kAvgQ:	29	106	106	6	328	328	79	219	180	19	15	15
Note:	Queue reported is the distance per lane in feet.											

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Intersection #3: Lafayette St/Martin Ave

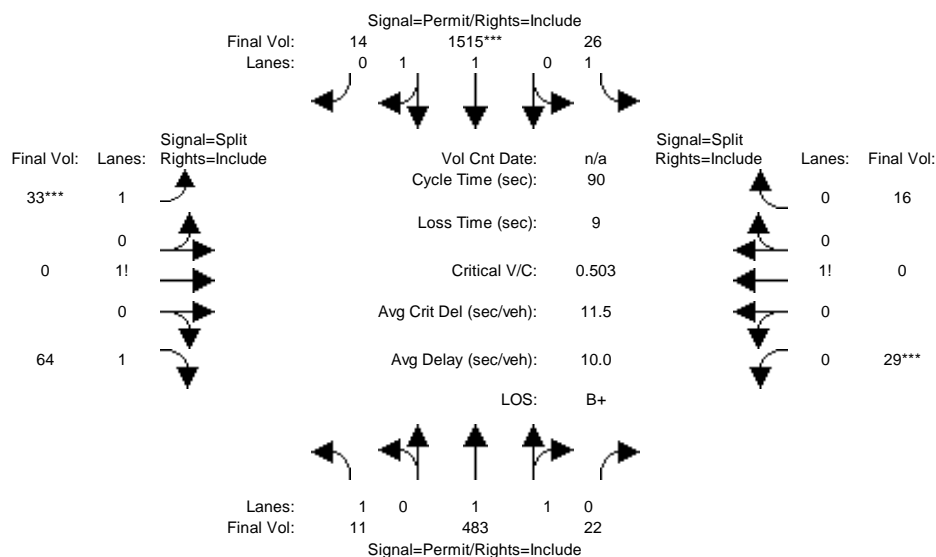


Street Name:	Lafayette St						Martin Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	47	415	87	305	1419	78	31	296	86	46	91	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	415	87	305	1419	78	31	296	86	46	91	35
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	415	87	305	1419	78	31	296	86	46	91	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	415	87	305	1419	78	31	296	86	46	91	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	415	87	305	1419	78	31	296	86	46	91	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	47	415	87	305	1419	78	31	296	86	46	91	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.54	0.46	1.00	1.43	0.57
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2866	833	1750	2671	1027
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.05	0.17	0.37	0.04	0.02	0.10	0.10	0.03	0.03	0.03
Crit Moves:	****			****			****					
Green Time:	7.0	25.3	25.3	39.7	58.0	58.0	16.0	16.0	16.0	16.0	16.0	16.0
Volume/Cap:	0.35	0.39	0.18	0.40	0.58	0.07	0.10	0.58	0.58	0.15	0.19	0.19
Delay/Veh:	46.1	27.2	25.3	18.6	10.1	6.1	31.6	37.6	37.6	32.2	32.1	32.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.1	27.2	25.3	18.6	10.1	6.1	31.6	37.6	37.6	32.2	32.1	32.1
LOS by Move:	D	C	C	B-	B+	A	C	D+	D+	C-	C-	C-
HCM2kAvgQ:	34	116	49	151	282	21	20	145	145	31	40	40
Note:	Queue reported is the distance per lane in feet.											

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Intersection #4: Lafayette St/Mathew St-Memorex Dr

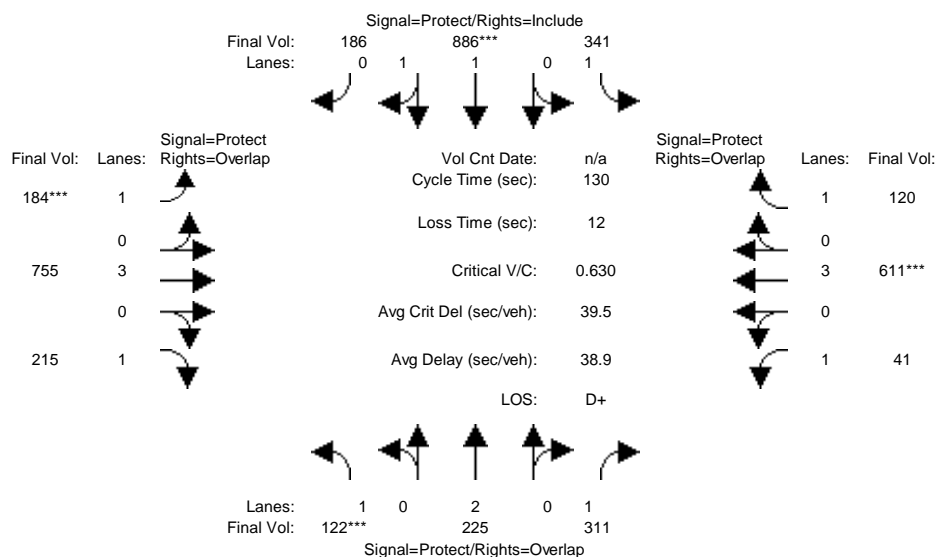


Street Name:	Lafayette St						Mathew St - Memorex Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	11	483	22	26	1515	14	33	0	64	29	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	483	22	26	1515	14	33	0	64	29	0	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	483	22	26	1515	14	33	0	64	29	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	483	22	26	1515	14	33	0	64	29	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	483	22	26	1515	14	33	0	64	29	0	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	483	22	26	1515	14	33	0	64	29	0	16
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92
Lanes:	1.00	1.91	0.09	1.00	1.98	0.02	1.34	0.00	1.66	0.64	0.00	0.36
Final Sat.:	1750	3539	161	1750	3666	34	2345	0	2905	1128	0	622
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.14	0.01	0.41	0.41	0.01	0.00	0.02	0.03	0.00	0.03
Crit Moves:				****			****			****		
Green Time:	61.0	61.0	61.0	61.0	61.0	61.0	10.0	0.0	10.0	10.0	0.0	10.0
Volume/Cap:	0.01	0.20	0.20	0.02	0.61	0.61	0.13	0.00	0.20	0.23	0.00	0.23
Delay/Veh:	4.7	5.6	5.6	4.8	9.1	9.1	36.4	0.0	37.3	39.3	0.0	39.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.7	5.6	5.6	4.8	9.1	9.1	36.4	0.0	37.3	39.3	0.0	39.3
LOS by Move:	A	A	A	A	A	A	D+	A	D+	D	A	D
HCM2kAvgQ:	3	69	69	6	310	310	19	0	30	35	0	35
Note: Queue reported is the distance per lane in feet.												

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EX PM Peak

Intersection #5: Lafayette St/El Camino Real

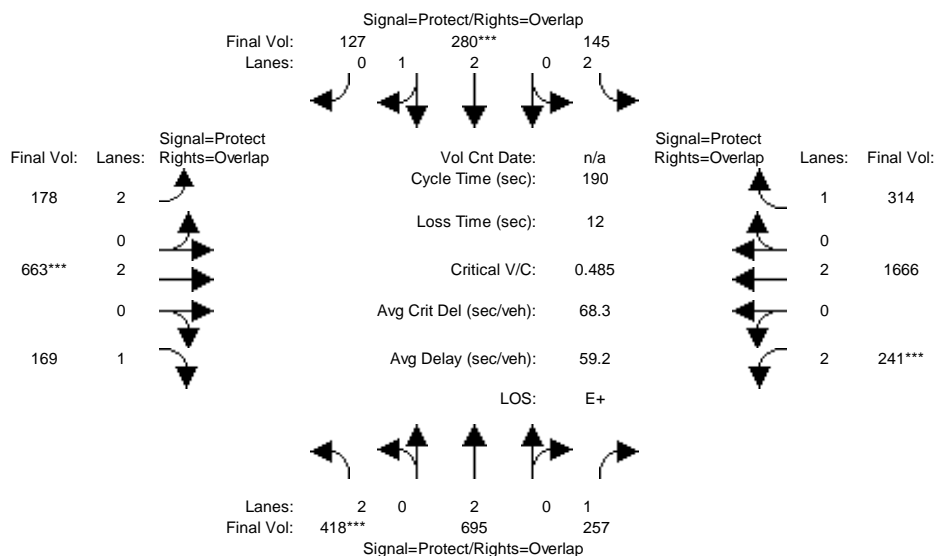


Street Name:	Lafayette St						El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	122	225	311	341	886	186	184	755	215	41	611	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	225	311	341	886	186	184	755	215	41	611	120
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	122	225	311	341	886	186	184	755	215	41	611	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	225	311	341	886	186	184	755	215	41	611	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	225	311	341	886	186	184	755	215	41	611	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	122	225	311	341	886	186	184	755	215	41	611	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.64	0.36	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3058	642	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.06	0.18	0.19	0.29	0.29	0.11	0.13	0.12	0.02	0.11	0.07
Crit Moves:	****				****		****				****	
Green Time:	14.4	32.8	45.4	41.4	59.8	59.8	21.7	31.2	45.5	12.7	22.1	63.5
Volume/Cap:	0.63	0.23	0.51	0.61	0.63	0.63	0.63	0.55	0.35	0.24	0.63	0.14
Delay/Veh:	61.8	38.8	34.1	39.5	27.5	27.5	54.8	43.8	31.6	55.0	51.5	18.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.8	38.8	34.1	39.5	27.5	27.5	54.8	43.8	31.6	55.0	51.5	18.3
LOS by Move:	E	D+	C-	D	C	C	D-	D	C	D-	D-	B-
HCM2kAvgQ:	151	88	266	301	403	403	206	229	169	45	209	69
Note:	Queue reported is the distance per lane in feet.											

City of Santa Clara
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Level Of Service Computation Report
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EX+P AM

Intersection #1: Lafayette St/Central Expy

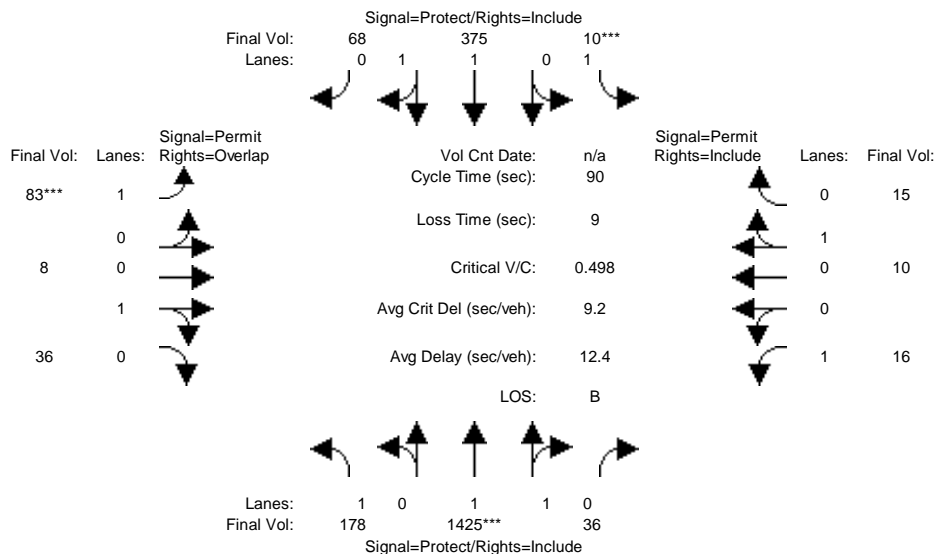


Street Name:	Lafayette St						Central Expy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	29	49	49	19	39	39	23	96	96	26	99	99
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	416	690	254	145	275	127	178	771	167	238	1937	314
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	416	690	254	145	275	127	178	771	167	238	1937	314
Added Vol:	2	5	3	0	5	0	0	0	2	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	418	695	257	145	280	127	178	771	169	241	1937	314
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.00	1.00	0.86	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	418	695	257	145	280	127	178	663	169	241	1666	314
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	418	695	257	145	280	127	178	663	169	241	1666	314
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	418	695	257	145	280	127	178	663	169	241	1666	314
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.03	0.97	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	3850	1746	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.18	0.15	0.05	0.07	0.07	0.06	0.17	0.10	0.08	0.44	0.18
Crit Moves:	****				****			****				
Green Time:	27.3	46.1	70.5	17.9	36.7	58.3	21.6	90.3	117.6	24.5	93.1	111.0
Volume/Cap:	0.92	0.75	0.40	0.49	0.38	0.24	0.50	0.37	0.16	0.59	0.89	0.31
Delay/Veh:	110.2	74.5	47.2	88.2	71.1	52.4	85.1	33.8	16.3	85.4	52.8	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	110.2	74.5	47.2	88.2	71.1	52.4	85.1	33.8	16.3	85.4	52.8	21.5
LOS by Move:	F	E	D	F	E	D-	F	C-	B	F	D-	C+
HCM2kAvgQ:	413	491	300	139	183	153	165	310	113	225	1205	253
Note: Queue reported is the distance per lane in feet.												

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Intersection #2: Lafayette St/Walsh Ave

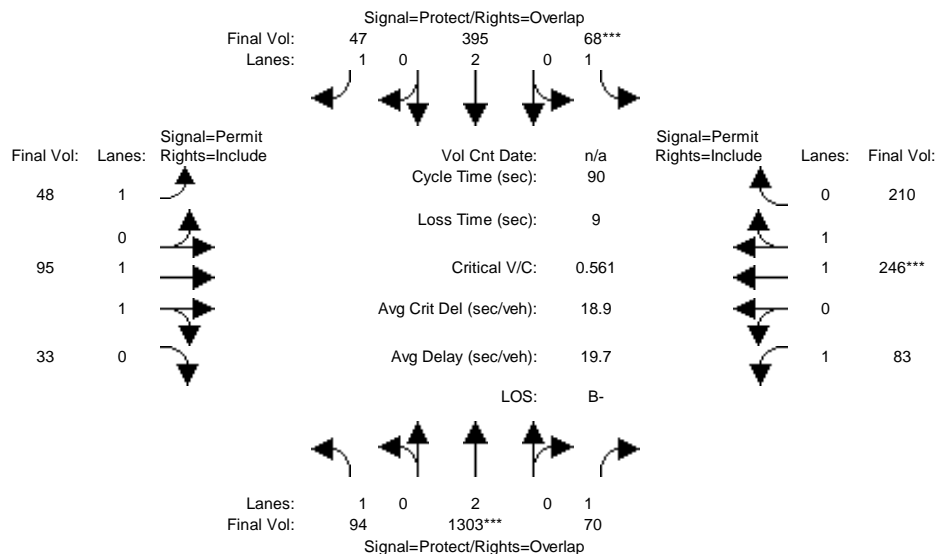


Street Name:	Lafayette St						Walsh Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	178	1416	36	10	365	68	83	8	36	16	10	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	178	1416	36	10	365	68	83	8	36	16	10	15
Added Vol:	0	9	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	178	1425	36	10	375	68	83	8	36	16	10	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	178	1425	36	10	375	68	83	8	36	16	10	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1425	36	10	375	68	83	8	36	16	10	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	178	1425	36	10	375	68	83	8	36	16	10	15
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	1.95	0.05	1.00	1.68	0.32	1.00	0.18	0.82	1.00	0.40	0.60
Final Sat.:	1750	3609	91	1750	3132	568	1750	327	1473	1750	720	1080
Capacity Analysis Module:												
Vol/Sat:	0.10	0.39	0.39	0.01	0.12	0.12	0.05	0.02	0.02	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Green Time:	32.6	64.0	64.0	7.0	38.4	38.4	10.0	10.0	42.6	10.0	10.0	10.0
Volume/Cap:	0.28	0.56	0.56	0.07	0.28	0.28	0.43	0.22	0.05	0.08	0.13	0.13
Delay/Veh:	21.5	7.1	7.1	39.5	17.3	17.3	44.0	39.0	12.9	36.7	37.3	37.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.5	7.1	7.1	39.5	17.3	17.3	44.0	39.0	12.9	36.7	37.3	37.3
LOS by Move:	C+	A	A	D	B	B	D	D+	B	D+	D+	D+
HCM2kAvgQ:	93	258	258	7	102	102	70	33	17	12	18	18
Note:	Queue reported is the distance per lane in feet.											

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Level Of Service Computation Report
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Intersection #3: Lafayette St/Martin Ave

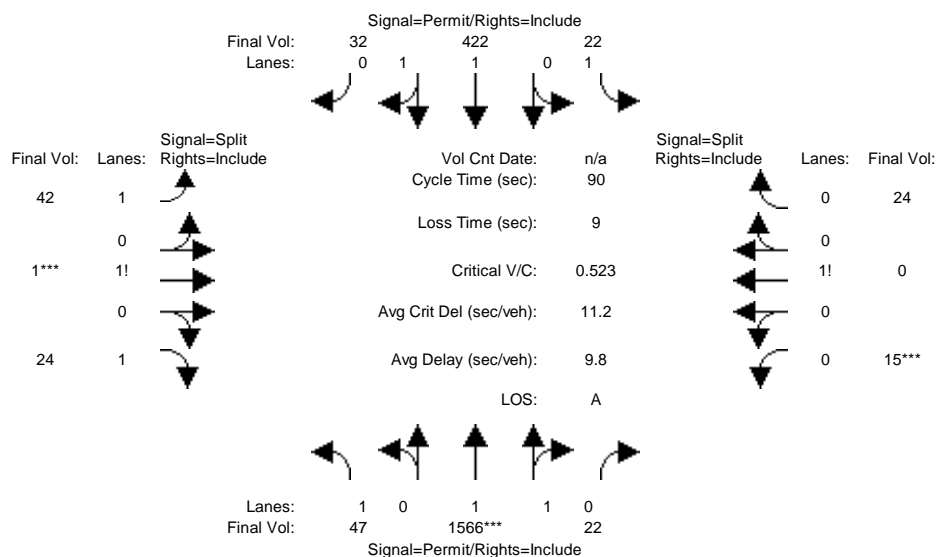


Street Name:	Lafayette St						Martin Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	94	1294	70	68	385	47	48	95	33	83	246	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	1294	70	68	385	47	48	95	33	83	246	210
Added Vol:	0	9	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	94	1303	70	68	395	47	48	95	33	83	246	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	1303	70	68	395	47	48	95	33	83	246	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	1303	70	68	395	47	48	95	33	83	246	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	94	1303	70	68	395	47	48	95	33	83	246	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.47	0.53	1.00	1.05	0.95
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2745	954	1750	1995	1703
Capacity Analysis Module:												
Vol/Sat:	0.05	0.34	0.04	0.04	0.10	0.03	0.03	0.03	0.03	0.05	0.12	0.12
Crit Moves:	****			****						****		
Green Time:	25.3	54.4	54.4	7.0	36.1	36.1	19.6	19.6	19.6	19.6	19.6	19.6
Volume/Cap:	0.19	0.57	0.07	0.50	0.26	0.07	0.13	0.16	0.16	0.22	0.57	0.57
Delay/Veh:	25.4	11.7	7.4	52.3	18.4	16.7	29.0	29.0	29.0	30.2	34.3	34.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.4	11.7	7.4	52.3	18.4	16.7	29.0	29.0	29.0	30.2	34.3	34.3
LOS by Move:	C	B+	A	D-	B-	B	C	C	C	C	C-	C-
HCM2kAvgQ:	52	275	21	51	90	21	30	38	38	53	162	162
Note: Queue reported is the distance per lane in feet.												

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Intersection #4: Lafayette St/Mathew St-Memorex Dr

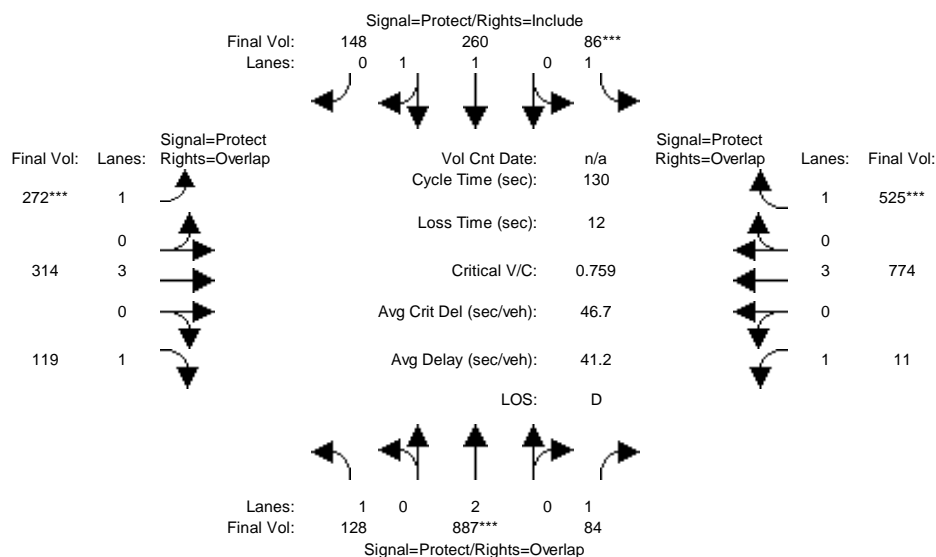


Street Name:	Lafayette St						Mathew St - Memorex Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	47	1566	12	12	422	32	42	1	24	6	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	1566	12	12	422	32	42	1	24	6	0	15
Added Vol:	0	0	10	10	0	0	0	0	0	9	0	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	1566	22	22	422	32	42	1	24	15	0	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	1566	22	22	422	32	42	1	24	15	0	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	1566	22	22	422	32	42	1	24	15	0	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	47	1566	22	22	422	32	42	1	24	15	0	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Lanes:	1.00	1.97	0.03	1.00	1.86	0.14	1.62	0.03	1.35	0.38	0.00	0.62
Final Sat.:	1750	3649	51	1750	3439	261	2831	51	2368	673	0	1077
Capacity Analysis Module:												
Vol/Sat:	0.03	0.43	0.43	0.01	0.12	0.12	0.01	0.02	0.01	0.02	0.00	0.02
Crit Moves:	****						****			****		
Green Time:	61.0	61.0	61.0	61.0	61.0	61.0	10.0	10.0	10.0	10.0	0.0	10.0
Volume/Cap:	0.04	0.63	0.63	0.02	0.18	0.18	0.13	0.17	0.09	0.20	0.00	0.20
Delay/Veh:	4.9	9.4	9.4	4.8	5.5	5.5	36.6	37.3	36.2	38.7	0.0	38.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.9	9.4	9.4	4.8	5.5	5.5	36.6	37.3	36.2	38.7	0.0	38.7
LOS by Move:	A	A	A	A	A	A	D+	D+	D+	D+	A	D+
HCM2kAvgQ:	11	320	320	5	61	61	20	26	13	30	0	30
Note: Queue reported is the distance per lane in feet.												

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Intersection #5: Lafayette St/El Camino Real

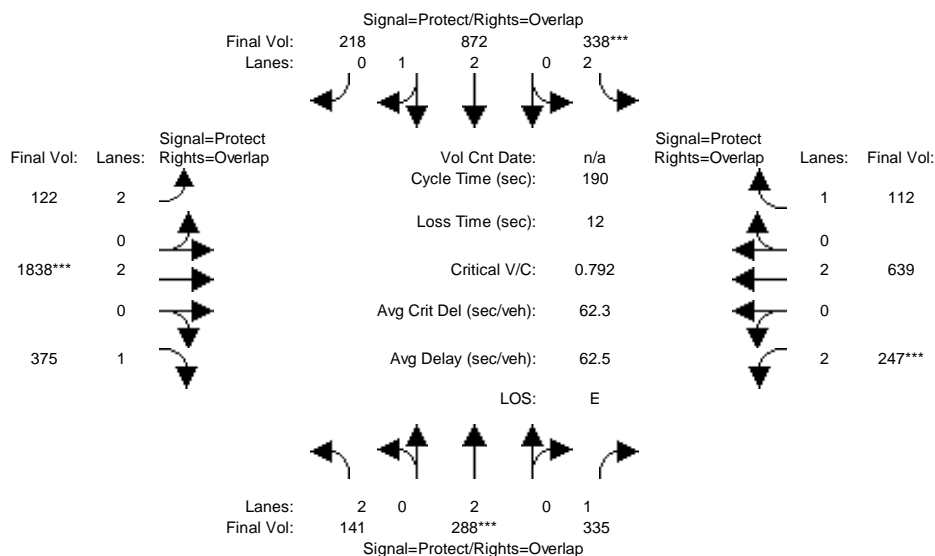


Street Name:	Lafayette St						El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	128	882	84	83	255	146	270	314	119	11	774	522
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	882	84	83	255	146	270	314	119	11	774	522
Added Vol:	0	5	0	3	5	2	2	0	0	0	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	128	887	84	86	260	148	272	314	119	11	774	525
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	128	887	84	86	260	148	272	314	119	11	774	525
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	887	84	86	260	148	272	314	119	11	774	525
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	128	887	84	86	260	148	272	314	119	11	774	525
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.25	0.75	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	2357	1342	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.05	0.05	0.11	0.11	0.16	0.06	0.07	0.01	0.14	0.30
Crit Moves:	****			****			****			****		
Green Time:	19.3	40.0	68.3	8.4	29.1	29.1	26.6	40.5	59.8	28.3	42.2	50.6
Volume/Cap:	0.49	0.76	0.09	0.76	0.49	0.49	0.76	0.18	0.15	0.03	0.42	0.77
Delay/Veh:	52.3	43.6	15.4	85.0	44.5	44.5	57.7	32.7	20.4	40.0	34.5	40.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.3	43.6	15.4	85.0	44.5	44.5	57.7	32.7	20.4	40.0	34.5	40.1
LOS by Move:	D-	D	B	F	D	D	E+	C-	C+	D	C-	D
HCM2kAvgQ:	138	430	44	99	177	177	316	74	72	9	200	523
Note:	Queue reported is the distance per lane in feet.											

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Intersection #1: Lafayette St/Central Expy

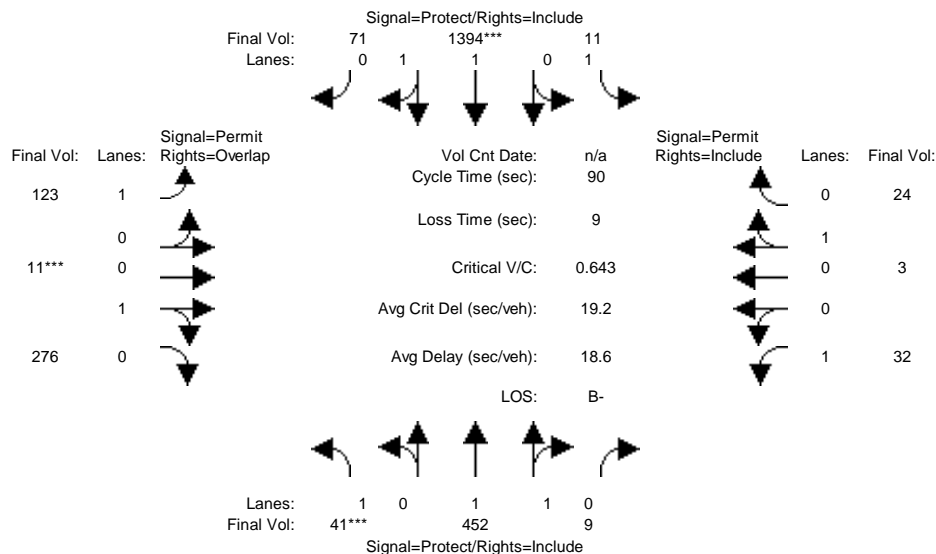


Street Name:	Lafayette St						Central Expy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	18	35	35	23	39	39	19	112	112	21	113	113
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	138	281	331	338	870	218	122	2298	374	246	710	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	281	331	338	870	218	122	2298	374	246	710	112
Added Vol:	3	7	4	0	2	0	0	0	1	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	141	288	335	338	872	218	122	2298	375	247	710	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	1.00	1.00	0.90	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	141	288	335	338	872	218	122	1838	375	247	639	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	141	288	335	338	872	218	122	1838	375	247	639	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	141	288	335	338	872	218	122	1838	375	247	639	112
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	0.99	0.95	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	2.00	1.00	2.00	2.38	0.62	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	3800	1750	3150	4479	1120	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.19	0.11	0.19	0.19	0.04	0.48	0.21	0.08	0.17	0.06
Crit Moves:	****			****			****			****		
Green Time:	17.0	32.8	52.4	21.5	37.3	55.2	17.9	105	121.8	19.7	107	128.1
Volume/Cap:	0.50	0.44	0.69	0.95	0.99	0.67	0.41	0.88	0.33	0.76	0.30	0.09
Delay/Veh:	89.5	75.7	70.2	123.4	106	64.5	87.5	44.0	16.8	98.4	23.6	11.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.5	75.7	70.2	123.4	106	64.5	87.5	44.0	16.8	98.4	23.6	11.5
LOS by Move:	F	E-	E	F	F	E	F	D	B	F	C	B+
HCM2kAvgQ:	123	192	498	395	686	506	114	1259	275	261	248	62
Note: Queue reported is the distance per lane in feet.												

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Intersection #2: Lafayette St/Walsh Ave

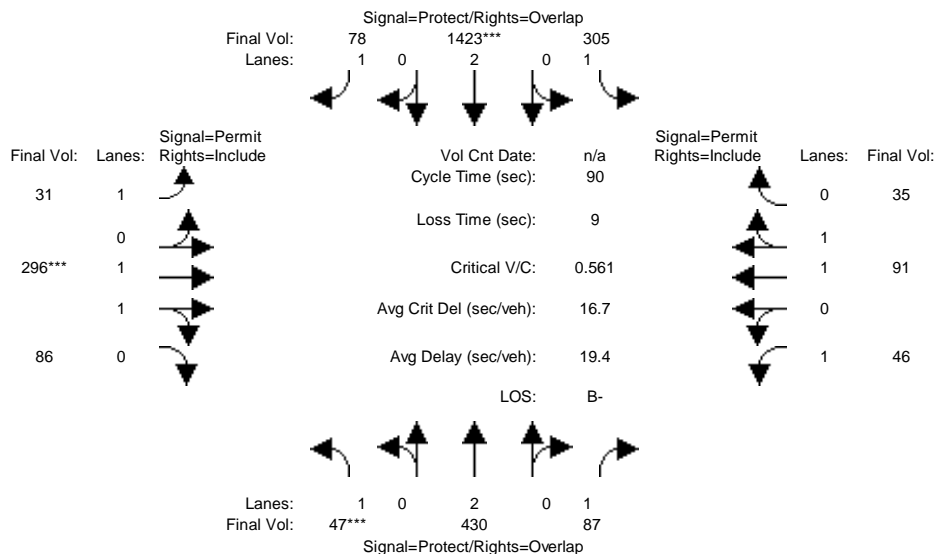


Street Name:	Lafayette St						Walsh Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	41	437	9	11	1390	71	123	11	276	32	3	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	437	9	11	1390	71	123	11	276	32	3	24
Added Vol:	0	15	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	452	9	11	1394	71	123	11	276	32	3	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	452	9	11	1394	71	123	11	276	32	3	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	452	9	11	1394	71	123	11	276	32	3	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	41	452	9	11	1394	71	123	11	276	32	3	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.97	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.95	0.95
Lanes:	1.00	1.96	0.04	1.00	1.90	0.10	1.00	0.04	0.96	1.00	0.11	0.89
Final Sat.:	1750	3628	72	1750	3521	179	1750	69	1731	1750	200	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.12	0.12	0.01	0.40	0.40	0.07	0.16	0.16	0.02	0.02	0.02
Crit Moves:	****			****			****					
Green Time:	7.0	36.8	36.8	23.0	52.8	52.8	21.2	21.2	28.2	21.2	21.2	21.2
Volume/Cap:	0.30	0.30	0.30	0.02	0.68	0.68	0.30	0.68	0.51	0.08	0.06	0.06
Delay/Veh:	44.8	18.5	18.5	25.2	14.5	14.5	30.1	39.6	28.5	27.1	27.0	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.8	18.5	18.5	25.2	14.5	14.5	30.1	39.6	28.5	27.1	27.0	27.0
LOS by Move:	D	B-	B-	C	B	B	C	D	C	C	C	C
HCM2kAvgQ:	29	110	110	6	329	329	79	219	180	19	16	16
Note: Queue reported is the distance per lane in feet.												

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Intersection #3: Lafayette St/Martin Ave

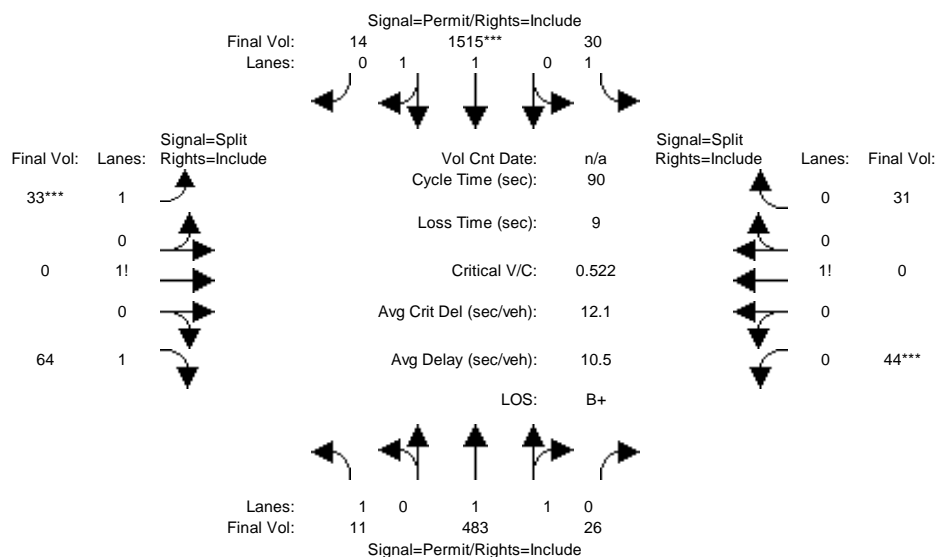


Street Name:	Lafayette St						Martin Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	47	415	87	305	1419	78	31	296	86	46	91	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	415	87	305	1419	78	31	296	86	46	91	35
Added Vol:	0	15	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	430	87	305	1423	78	31	296	86	46	91	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	430	87	305	1423	78	31	296	86	46	91	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	430	87	305	1423	78	31	296	86	46	91	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	47	430	87	305	1423	78	31	296	86	46	91	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	0.98	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.54	0.46	1.00	1.43	0.57
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2866	833	1750	2671	1027
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.05	0.17	0.37	0.04	0.02	0.10	0.10	0.03	0.03	0.03
Crit Moves:	****			****			****					
Green Time:	7.0	25.6	25.6	39.4	58.0	58.0	16.0	16.0	16.0	16.0	16.0	16.0
Volume/Cap:	0.35	0.40	0.17	0.40	0.58	0.07	0.10	0.58	0.58	0.15	0.19	0.19
Delay/Veh:	46.1	27.1	25.0	18.8	10.1	6.1	31.6	37.7	37.7	32.2	32.1	32.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.1	27.1	25.0	18.8	10.1	6.1	31.6	37.7	37.7	32.2	32.1	32.1
LOS by Move:	D	C	C	B-	B+	A	C	D+	D+	C-	C-	C-
HCM2kAvgQ:	34	120	48	152	283	21	20	145	145	31	40	40
Note:	Queue reported is the distance per lane in feet.											

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Intersection #4: Lafayette St/Mathew St-Memorex Dr

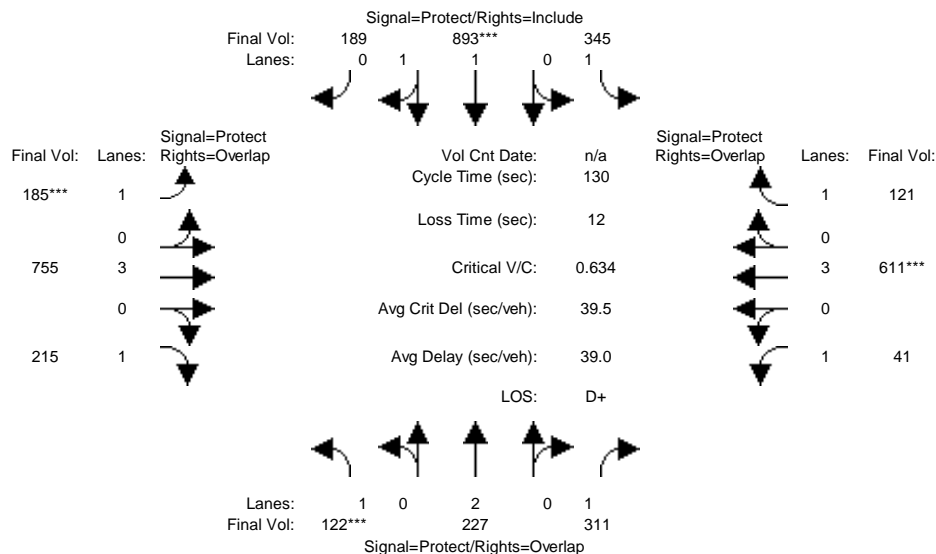


Street Name:	Lafayette St						Mathew St - Memorex Dr					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	11	483	22	26	1515	14	33	0	64	29	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	483	22	26	1515	14	33	0	64	29	0	16
Added Vol:	0	0	4	4	0	0	0	0	0	15	0	15
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	483	26	30	1515	14	33	0	64	44	0	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	483	26	30	1515	14	33	0	64	44	0	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	483	26	30	1515	14	33	0	64	44	0	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	483	26	30	1515	14	33	0	64	44	0	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.97	0.95	0.92	1.00	0.92	0.92	0.92	0.92
Lanes:	1.00	1.90	0.10	1.00	1.98	0.02	1.34	0.00	1.66	0.59	0.00	0.41
Final Sat.:	1750	3511	189	1750	3666	34	2345	0	2905	1027	0	723
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.14	0.02	0.41	0.41	0.01	0.00	0.02	0.04	0.00	0.04
Crit Moves:				****			****			****		
Green Time:	61.0	61.0	61.0	61.0	61.0	61.0	10.0	0.0	10.0	10.0	0.0	10.0
Volume/Cap:	0.01	0.20	0.20	0.03	0.61	0.61	0.13	0.00	0.20	0.39	0.00	0.39
Delay/Veh:	4.7	5.6	5.6	4.8	9.1	9.1	36.4	0.0	37.3	42.8	0.0	42.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	4.7	5.6	5.6	4.8	9.1	9.1	36.4	0.0	37.3	42.8	0.0	42.8
LOS by Move:	A	A	A	A	A	A	D+	A	D+	D	A	D
HCM2kAvgQ:	3	70	70	7	310	310	19	0	30	62	0	62
Note: Queue reported is the distance per lane in feet.												

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Intersection #5: Lafayette St/El Camino Real



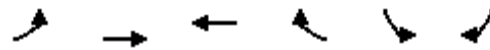
Street Name:	Lafayette St						El Camino Real					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	122	225	311	341	886	186	184	755	215	41	611	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	225	311	341	886	186	184	755	215	41	611	120
Added Vol:	0	2	0	4	7	3	1	0	0	0	0	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	122	227	311	345	893	189	185	755	215	41	611	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	227	311	345	893	189	185	755	215	41	611	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	227	311	345	893	189	185	755	215	41	611	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	122	227	311	345	893	189	185	755	215	41	611	121
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.64	0.36	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3053	646	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.06	0.18	0.20	0.29	0.29	0.11	0.13	0.12	0.02	0.11	0.07
Crit Moves:	****			****			****				****	
Green Time:	14.3	32.6	45.3	41.7	60.0	60.0	21.7	31.1	45.4	12.6	22.0	63.7
Volume/Cap:	0.63	0.24	0.51	0.61	0.63	0.63	0.63	0.55	0.35	0.24	0.63	0.14
Delay/Veh:	62.1	38.9	34.3	39.4	27.4	27.4	55.0	43.9	31.8	55.0	51.6	18.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.1	38.9	34.3	39.4	27.4	27.4	55.0	43.9	31.8	55.0	51.6	18.2
LOS by Move:	E	D+	C-	D	C	C	D-	D	C	D-	D-	B-
HCM2kAvgQ:	152	89	267	305	407	407	208	229	170	45	210	69
Note:	Queue reported is the distance per lane in feet.											




HCM Unsignalized Intersection Capacity Analysis

1: Mathew Street & Center Project Driveway

Existing Plus Project

Timing Plan: AM Peak

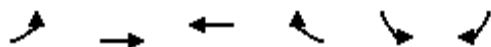





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	0	0	18
Future Volume (Veh/h)	19	0	0	0	0	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	0	0	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				42	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				42	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1623				957	1085
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	21	0	20			
Volume Left	21	0	0			
Volume Right	0	0	20			
cSH	1623	1700	1085			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		7.8				
Intersection Capacity Utilization		13.3%	ICU Level of Service	A		
Analysis Period (min)		15				

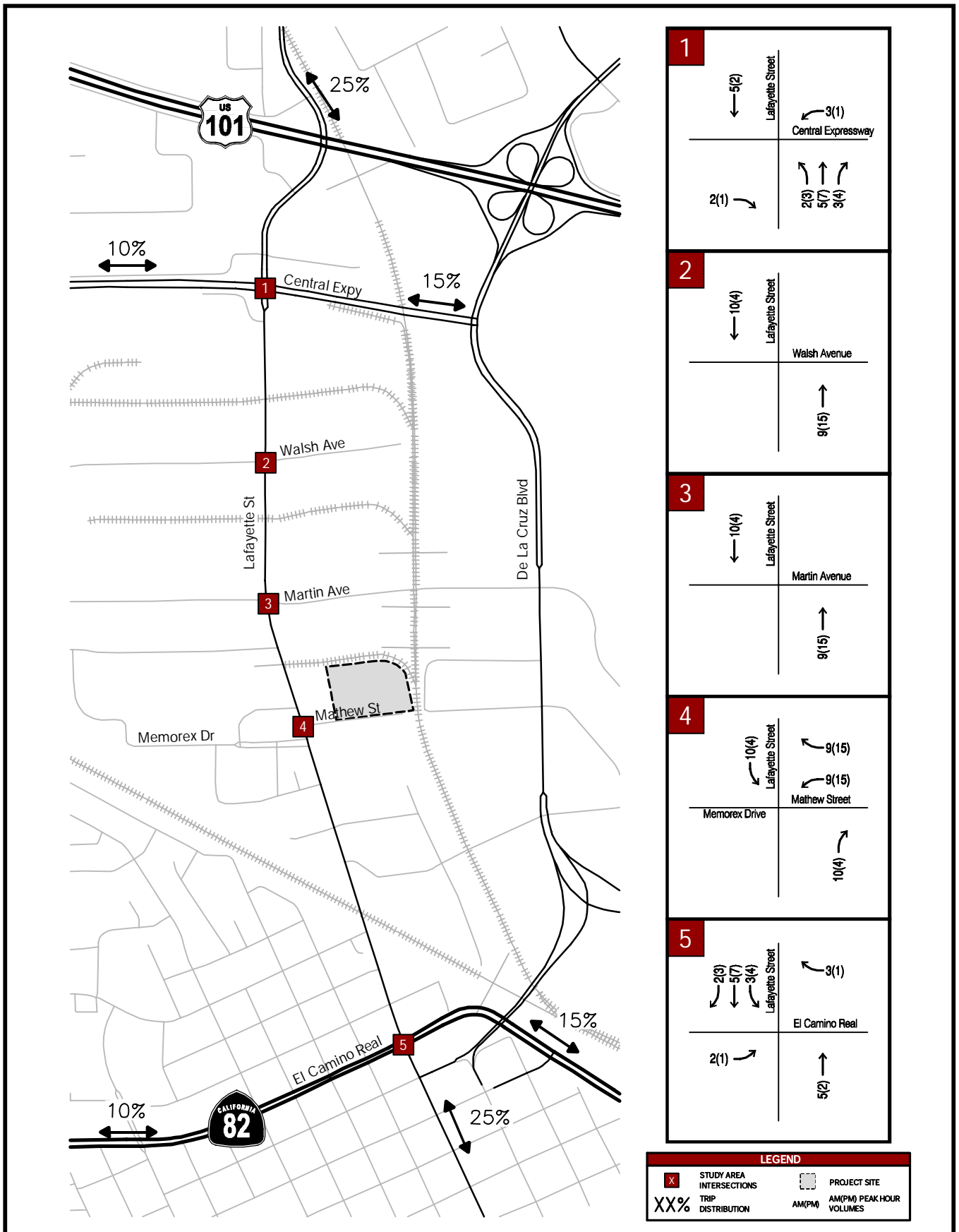
HCM Unsignalized Intersection Capacity Analysis

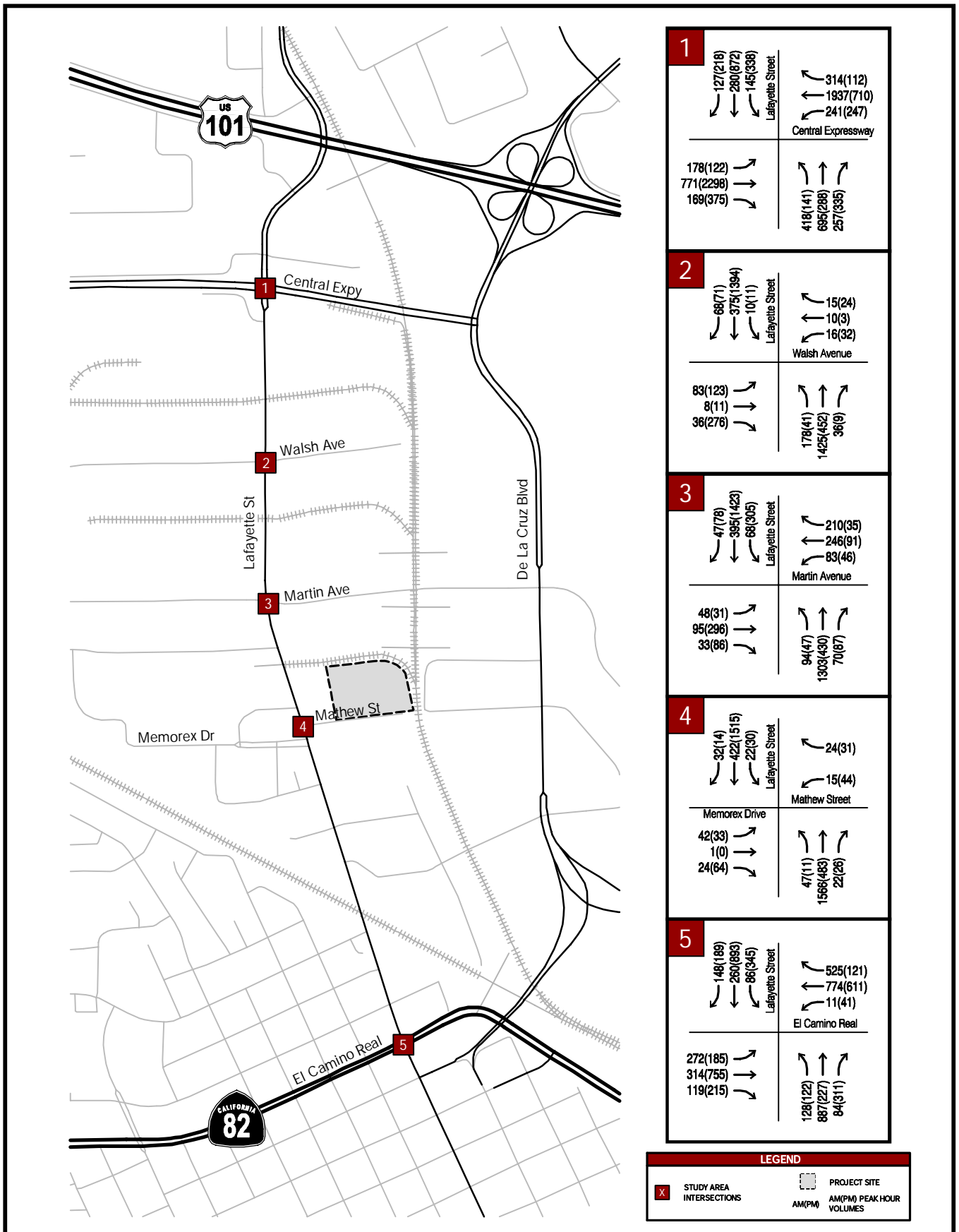
1: Mathew Street & Center Project Driveway

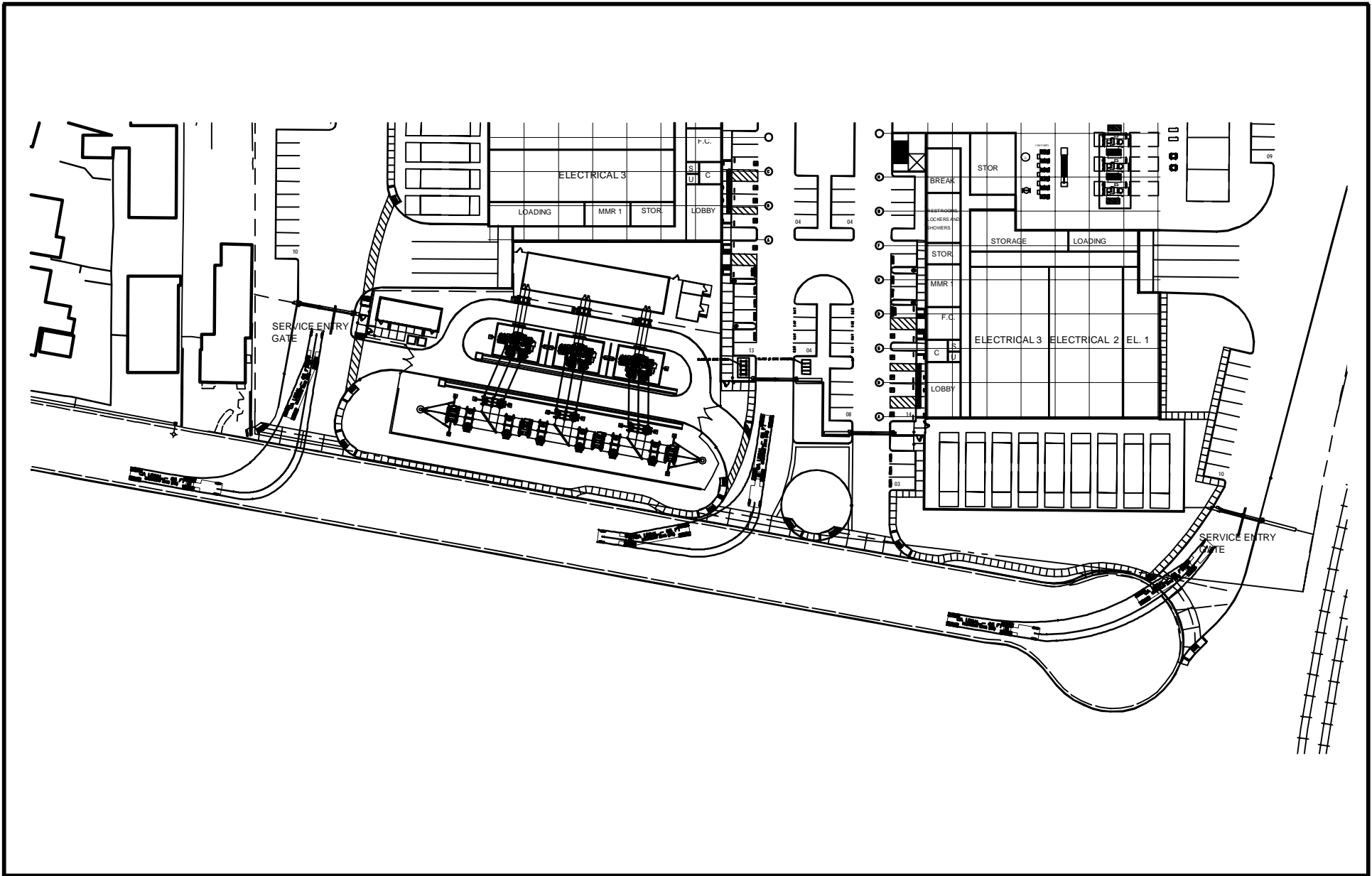
Existing Plus Project
Timing Plan: PM Peak



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	0	0	0	0	29
Future Volume (Veh/h)	8	0	0	0	0	29
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	0	0	0	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				18	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				18	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	97
cM capacity (veh/h)	1623				994	1085
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	9	0	32			
Volume Left	9	0	0			
Volume Right	0	0	32			
cSH	1623	1700	1085			
Volume to Capacity	0.01	0.00	0.03			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	7.2	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	7.2	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		8.2				
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)		15				









*Giving You the Power
to Change the World*

November 3, 2016

Vantage Data Centers
Attn: Justin Thomas, Engineering VP
2565 Walsh Ave.
Santa Clara, CA 95050

Subject:
725 and 651 Mathew, Santa Clara, CA

Dear Justin Thomas,

The City of Santa Clara's Electric Department, Silicon Valley Power (SVP), is the electric utility for this project. Electric service to the above mentioned addresses will be provided in accordance with the Rules and Regulations for the utility as approved by the Santa Clara City Council.

Silicon Valley Power is immediately able to provide 27 MW capacity to the project site upon the completion of an onsite substation by Vantage. To provide an additional 73 MW of power, per Vantage's request, is conditional upon the restructuring of our existing electrical loop referred to as the Southern Loop. SVP is actively pursuing increased capacity in this area due to the growing power needs of existing businesses as well as future planned projects, such as Vantage's. The planning for breaking the loop in two has already begun and project completion is expected to be in the year 2020.

Questions can be directed to Jeevan Valath, Senior Electric Utility Engineer assigned to the Southern Loop restructuring project, at (408) 615-6609.

Thank you,

Kevin Keating,
Division Manager of Electric Engineering

Technical Memorandum



Subject: Sanitary Sewer Capacity Evaluation for the McLaren Data Center Development at 651, 725-795, and 825 Mathew Street (APN: 224-40-001, 224-40-002, and 224-40-011)

Prepared for: Evelyn Liang, City of Santa Clara

Prepared by: Nuria Bertran-Ortiz, P.E. California License No. C68537

Reviewed by: Cathy Greenman, P.E. California License No. C66157

Date: January 20, 2017

At the request of the City of Santa Clara (City), RMC evaluated the potential sanitary sewer capacity impact of the proposed McLaren Data Center development project located at 651, 725-795, and 825 Mathew Street using the City's updated sanitary sewer hydraulic model. This technical memorandum (TM) summarizes the approach, model input, and results of the analysis.

Figure 1 shows the location of the development site and sewer lines that are affected by the additional flow from this development (affected lines in red). Flow from the development would enter the City's sanitary sewer system at manholes S57-32, S57-33, S57-34, and S57-42 along Mathew Street, drain eastward to De La Cruz Boulevard, then northward along De La Cruz Boulevard and Ewert Road to cross under Highway 101 and Guadalupe River, onto W Trimble Road, and finally discharge to the City of San Jose's interceptor system on Zanker Road.

Figure 1: Trunk Sewers Downstream of the Proposed Development Site



1 Approach

To evaluate the potential sewer capacity impact of the proposed development, the following model configurations were used:

- *Sewer network:* The City's most current solution network was used. The network consists of the City's expanded trunk sewer system that was developed as part of the Sanitary Sewer Master Plan Update (2016 Master Plan). The network includes all improvements recommended by the 2016 Master Plan (none of which are downstream of this development).
- *Sanitary sewer load:* The Updated General Plan Phase 3 Loads (aka 2035 Loads) were used for this analysis. The 2035 loads were recently updated for the 2016 Master Plan, which includes updated base loads, updated development assumptions consistent with the City's 2035 General Plan, and projected loads for additional developments that were approved between 2009 (after the completion of the original 2035 Loads) and the completion of the 2016 Master Plan. Developments that have been approved or evaluated since completion of the 2016 Master Plan have also been added to the model. In addition to the wastewater flows generated within the City's service area, the City also receives flow from the Cupertino Sanitary District (CuSD). For planning purposes, the model capped the peak wet weather flow (PWWF) discharge from CuSD at 13.8 mgd, which is the contractual maximum flow rate that CuSD is allowed to discharge into the Santa Clara system.
- *Flow Scenario:* Capacity impacts are typically evaluated under peak wet weather flow (PWWF) to determine if the additional flow from a proposed development would trigger any downstream deficiencies under a design storm event. However, data centers typically experience peak day conditions during the summer when temperatures are highest. As such, this evaluation was based on the development's impact on the system under both peak dry weather flow (PDWF) and PWWF. The PWWF condition used the same 10-year design storm used for the 2016 Master Plan Update.

2 Model Input

The development was added to the model as an individual subcatchment with the following settings:

- *Sanitary Sewer Loads:* The developer has indicated that all existing buildings will be demolished. The site was previously identified as including a large user (Diana Fruit Co. Inc.; existing flow of approximately 0.048 mgd) and some additional non-residential user (existing flow of approximately 0.0006 mgd). As such, the site's existing flow (approximately 0.049 mgd) was removed from the model. It should be noted that the parcel housing the Diana Fruit Co. has an entitlement flow of 0.121 mgd. There are no projected redevelopment plans for these parcels in the City's 2035 General Plan. Instead, the 2035 General Plan assumes the existing heavy industrial uses will remain in place. The 2035 model load therefore included the existing flow from the non-residential user (approximately 0.0006 mgd) plus the entitled flow (approximately 0.121 mgd) for the Diana Fruit Co. parcel (at 651 Mathew Street). The 2035 model load was therefore approximately 0.122 mgd.

The developer provided peak summer and winter anticipated hourly discharge tables and graphs for the data center. The peak day average and maximum instantaneous flows are presented in Table 1, with the peak summer day graph and typical winter day graph shown on Figure 2 and 3, respectively.

Table 1: Sewer Load Estimates Provided by the Developer

Development	Peak Winter Day Discharge		Peak Summer Day Discharge	
	Peak Day Average Flow	Instantaneous Maximum Flow	Peak Day Average Flow	Instantaneous Maximum Flow
McLaren	57.9 gpm (0.083 mgd)	65.6 gpm (0.094 mgd)	93 gpm (0.134 mgd)	144.5 gpm (0.208 mgd)

Figure 2: Peak Summer Day Diurnal Curve

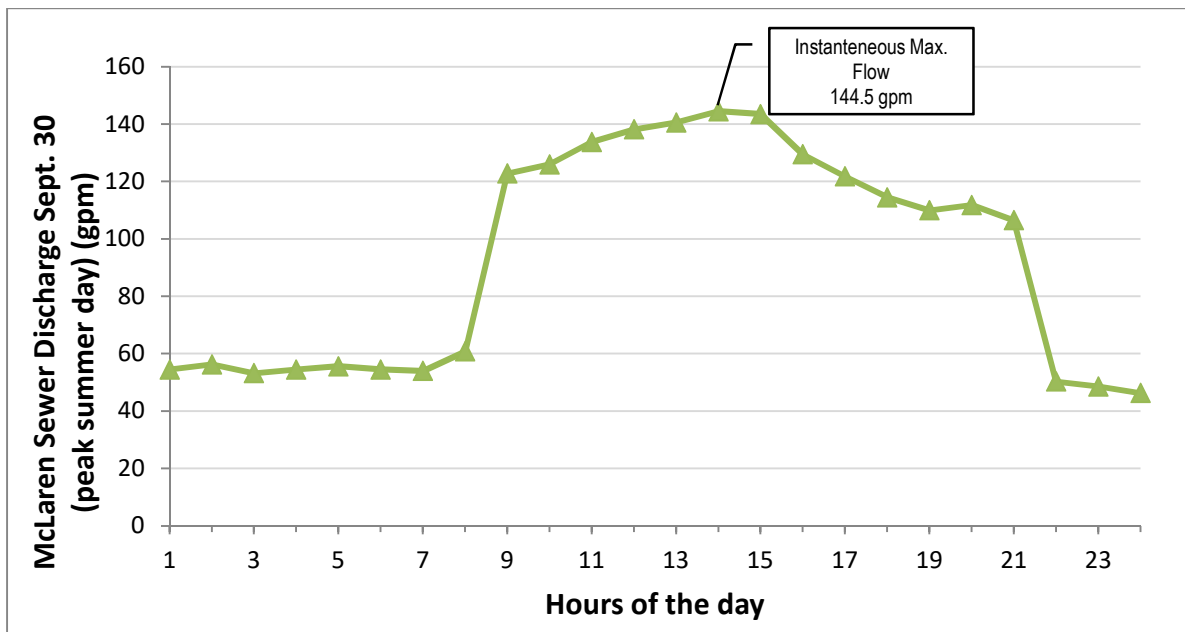
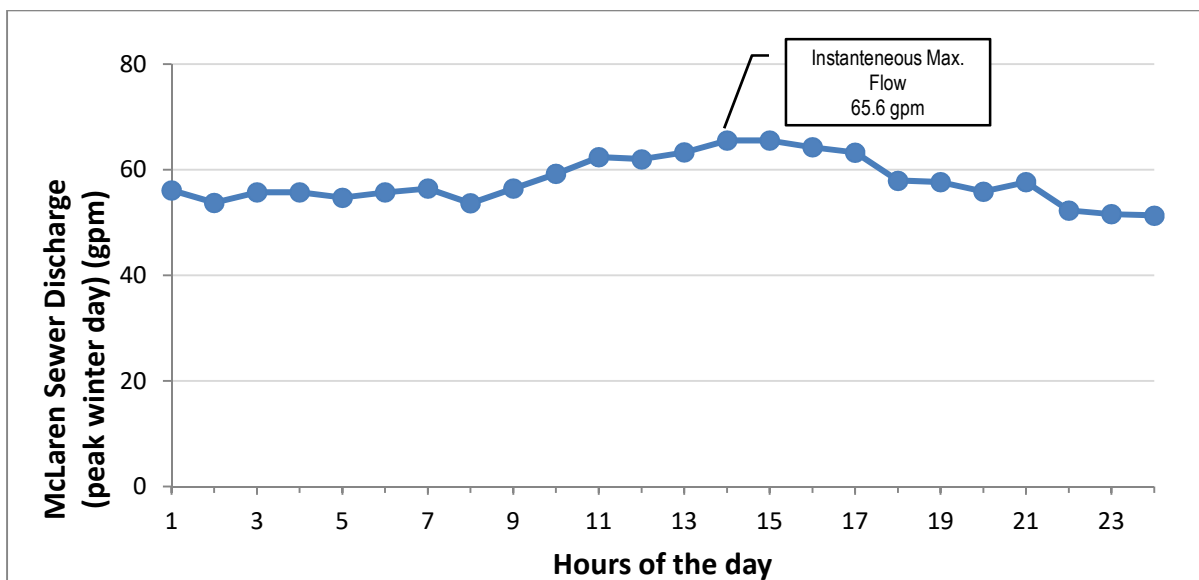


Figure 3: Peak Winter Day Diurnal Curve



The proposed development includes three parcels: 224-40-001 (currently housing the Diana Fruit Co.), 224-40-002 (with a current existing flow of 0.0006 mgd), and 224-40-011 (with a current existing flow of 0 mgd). The developer has proposed to combine parcels 224-40-002 and 224-40-011, and maintain parcel 224-40-001 (Diana Fruit Co.) as a separate parcel. The total proposed development flow (as shown in **Table 1**) will be split equally between these two areas, as shown in **Table 2**.

Table 2: Sewer Load Estimates by Area

Area	Parcel APN	Existing Flow (mgd)	Model Future 2035 Flow (mgd)	Development Peak Day Average Flow (mgd)	
				Winter	Summer
1	224-40-002	0.0006	0.0006	0.0415	0.067
	224-40-011	0	0		
2	224-40-001	0.048 mgd	0.121 ^a	0.0415	0.067
TOTAL:		0.049	0.122	0.083	0.134

^a Entitlement average flow.

The Diana Fruit Co. parcel's entitlement flow (0.121 mgd) is greater than the developer's proposed peak day average flow (both for winter and summer) from this parcel. As a result, Area 2 retained its entitlement flow in the model, while Area 1 was assigned the development flows shown in **Table 2**. The total average flow included in the dry weather model was therefore 0.188 mgd. The total average flow included in the wet weather model was 0.163 mgd. The average flow was loaded to the model, and multipliers (as shown on **Figure 2** and **3**) were applied to produce the variation in flows over a 24-hour period (including the instantaneous maximum).

- *Contributing Area and I/I Parameters:* The I/I contributing area was set to be equal to the parcel area. I/I parameters were set to be the same as an area in the immediate vicinity. The rainfall event used was the same 10-year design event used for the 2016 Master Plan Update.

3 Model Results

Hydraulic profiles of the sewers downstream of the loading manhole under future (2035) PDWF and PWWF conditions were reviewed.

Without the development in PDWF (summer), the model shows that the 15 and 18-inch line downstream of manhole S57-32 in Mathew Street is generally about 30 to 40 percent full. The 24-inch parallel to the 18-inch line (starting at flow split MH S57-38 and ending at MH S58-23) has a higher outgoing invert elevation than the 18-inch sewer and as a result all flow from the flow split manhole is conveyed by the 18-inch sewer. The 24 and 48-inch line along De La Cruz Boulevard is generally 30 to 60 percent full. The 24-inch sewer parallel to the 24-inch along De La Cruz Boulevard (from MH S58-22 to MH S68-20) is 50 to 65 percent full. Further downstream, the 33-inch crossing under Highway 101 and Guadalupe River is approximately 70 percent full while the 48-inch line along Trimble Road is 40 to 50 percent full. The parallel 33-inch crossing under Highway 101 is approximately 50 percent full. No surcharge is predicted.

Without the development in PWWF (winter), the model shows that the 15 and 18-inch line downstream of manhole S57-32 in Mathew Street is generally about 40 to 55 percent full. The 24-inch parallel to the 18-inch line (starting at flow split MH S57-38 and ending at MH S58-23) has a higher outgoing invert elevation than the 18-inch sewer and as a result all flow from the flow split manhole is conveyed by the 18-inch sewer. The 24 and 48-inch line along De La Cruz Boulevard is generally 40 to 75 percent full. The 24-inch sewer parallel to the 24-inch along De La Cruz Boulevard (from MH S58-22 to MH S68-20) is 60 to 80 percent full. Further downstream, the 33-inch crossing under Highway 101 and Guadalupe River is approximately 90 percent full while the 48-inch line along Trimble Road is 40 to 60 percent full. The parallel 33-inch crossing under Highway 101 is approximately 70 percent full. No surcharge is predicted.

With the development in PDWF (summer), the model shows that the 15 and 18-inch line downstream of manhole S57-32 in Mathew Street is generally about 30 to 40 percent full. The 24-inch parallel to the 18-inch line (starting at flow split MH S57-38 and ending at MH S58-23) has a higher outgoing invert elevation than the 18-inch sewer and as a result all flow from the flow split manhole is conveyed by the 18-inch sewer. The 24-inch and 48-inch line along De La Cruz Boulevard is generally 35 to 60 percent full. The 24-inch sewer parallel to the 24-inch along De La Cruz Boulevard (from MH S58-22 to MH S68-20) is 50 to 65 percent full. Further downstream, the 33-inch crossing under Highway 101 and Guadalupe River is approximately 70 percent full while the 48-inch line along Trimble Road is 40 to 50 percent full. The parallel 33-inch crossing under Highway 101 is approximately 50 percent full. No surcharge is predicted. **No capacity improvement is needed. This determination is only valid per the operating condition stated above in the “flow scenario” and the PDWF conditions reviewed.**

With the development in PWWF (winter), the model shows that the 15 and 18-inch line downstream of manhole S57-32 in Mathew Street is generally about 40 to 55 percent full. The 24-inch parallel to the 18-inch line (starting at flow split MH S57-38 and ending at MH S58-23) has a higher outgoing invert elevation than the 18-inch sewer and as a result all flow from the flow split manhole is conveyed by the 18-inch sewer. The 24 and 48-inch line along De La Cruz Boulevard is generally 40 to 75 percent full. The 24-inch sewer parallel to the 24-inch along De La Cruz Boulevard (from MH S58-22 to MH S68-20) is 60 to 80 percent full. Further downstream, the 33-inch crossing under Highway 101 and Guadalupe River is approximately 90 percent full while the 48-inch line along Trimble Road is 40 to 60 percent full. The parallel 33-inch crossing under Highway 101 is approximately 70 percent full. **No capacity improvement is needed. This determination is only valid per the operating condition stated above in the “flow scenario” and the PWWF conditions reviewed.**

McLaren Data Center Project

RESPONSE TO COMMENTS

The McLaren Data Center Initial Study and Mitigated Negative Declaration (IS/MND) was prepared and evaluated in compliance with the requirements of the California Environmental Quality Act (CEQA). The IS/MND was circulated for 20 days from February 16, 2017 to March 8, 2017. No comment letters were received by organizations or individuals during the public comment period. The City received three comment letters from public agencies during the public comment period (attached). The City received one comment letter from a public agency after the close of the public comment period (attached).

Comment Letters Received by the City:

- A. Bay Area Air Quality Management District, dated March 8, 2017
- B. Santa Clara Valley Transportation Authority, dated March 8, 2017
- C. County of Santa Clara Roads & Airports Department, dated March 8, 2017
- D. Santa Clara Valley Water District, dated March 10, 2017

This memo includes responses to public comments on the IS/MND as they relate to the potential environmental impacts of the project under CEQA. Numbered responses correspond to comments in each comment letter. Copies of all of the comment letters are attached.

Comment Letter A: A. Bay Area Air Quality Management District – March 8, 2017

Comment A-1: Bay Area Air Quality Management District (Air District) staff has reviewed the Mitigated Negative Declaration (MND) for the McLaren Data Center Project (Project). As noted in the MND, the project will require an Authority to Construct permit and a Permit to Operate from the Air District.

This Project includes the demolition of approximately 147,600 square feet of existing commercial and industrial buildings and their replacement with two four-story data center buildings with a gross area of 413,000 square feet. The project also includes a number of measures to reduce the air quality and greenhouse gas (GHG) impacts of the project, as listed in Table 3.0-3 of the MND, such as:

- Use of recycled water for the cooling towers and landscaping irrigation;
- Variable frequency drives for project chillers;
- Use of occupancy sensors for lighting;
- Electric vehicle charging for nine parking spaces;
- Post-consumer recycled content in hard floor surfaces, ceiling tiles, and raised access floor tiles; and
- Implementation of a Transportation Demand Management (TDM) program.

The analysis in the Mitigated Negative Declaration (MND) estimates that the Project will increase GHG emissions by 117,896 metric tonnes carbon dioxide equivalent (MTCO₂e) per year. The MND concludes that this GHG impact will be less than significant because the project “would not conflict with the Santa Clara CAP (Climate Action Plan) or other plans, policies or regulations adopted for the purpose of reducing the emissions of GHG” (p. 81). The Air District and the State of California have established a long-term GHG reduction goal of 40% below 1990 levels by 2030. The MND itself notes on page 72 that the project is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed before 2023. Therefore, the MND does not appear to provide the substantial evidence needed to justify a less than significant determination.

Air District staff recommends that the City require that all new land use projects include the most efficient GHG reduction strategies available at the time of project approval and construction. This is needed to ensure that new development projects minimize GHG emissions to the fullest extent possible in order to make progress toward the State’s and Air District’s climate stabilization goals.

The majority of this Project’s GHG emissions are from electricity usage. While Silicon Valley Power has a relatively good mix of electricity from renewable sources, this Project could significantly reduce GHG emissions by purchasing all of its electricity from Santa Clara Green Power, which is available through Silicon Valley Power. The Project could further reduce its GHG impacts by installing solar panels over parking spaces and any roof area not being used for cooling towers or other equipment. Finally, the Project could be required to meet a Power Usage Effectiveness (PUE) of 1.2 or less, which would be both consistent with Measure 2.3 of the City’s Climate Action Plan for extremely large power rack rating data centers and consistent with efficiencies achieved at other datacenters (e.g., Google).

Air District staff is available to assist the City in addressing these comments. For more information, or if you have any questions, please contact Karen Kristiansson, Principal Environmental Planner, at (415) 749-4753 or via email at kkristiansson@baaqmd.gov.

Response A-1: *In response to this comment, the City’s EIR preparer contacted the commenter to discuss the issues raised in the comment letter.¹ Consistent with the points raised in the comment letter, the commenter stated that the MND does not provide substantial evidence to support the conclusion that GHG impacts would be less than significant because the City’s CAP is based on 2020 GHG reduction goals and the project would not be completed until 2023. The commenter also recommended that the project include the most efficient GHG reduction strategies available, such as purchasing electricity from Santa Clara Green Power, installing solar panels, and meeting a Power Usage Effectiveness (PUE) of 1.2 or less. The City’s Climate Action Plan (CAP), adopted in 2013, provides a comprehensive emissions reduction strategy that will allow the City to achieve its fair share of statewide emissions reductions through 2020, consistent with AB 32. As discussed on page 72 of the IS/MND, since the proposed project will not be complete until 2023, it is not eligible to tier from the City’s CAP for purposes of analyzing GHG impacts under CEQA. However, consistency with the CAP framework is still a relevant consideration in the analysis of the project’s GHG impacts because many of the policies will be carried forward by the City to address post-2020 emissions in its next CAP update. Therefore, the GHG analysis appropriately includes a discussion of the project’s consistency with the City CAP, but does not limit the analysis to this single threshold. As discussed on page 72 of the IS/MND, the GHG analysis considers five threshold approaches recommended in the California Supreme Court’s decision in *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 204 (henceforth referred to as the Newhall Ranch decision). Consistency with the City’s CAP (a qualified GHG reduction strategy through 2020) is one of those thresholds; the remaining thresholds are performance-based reductions, numeric “bright-line” thresholds, compliance with regulatory programs, and efficiency-based thresholds. The GHG analysis evaluates the applicability of each of these thresholds to determine which thresholds are applicable to the project. This assessment is based on available threshold concepts recommended by air districts and other lead agencies, as well as recent case law. As stated on page 73, based on this review, the lead agency determined that GHG impacts from the proposed project’s emergency generators would be considered less than significant if emissions are below the BAAQMD’s bright-line threshold of 10,000 metric tons CO₂e per year. GHG impacts from all other project emission sources would be considered less than significant if the project is consistent with the City’s CAP and applicable regulatory programs and policies adopted by ARB or other California agencies (emphasis added). While the comment disputes the applicability of the City’s CAP, it does not acknowledge or raise questions or concerns about the other components of the IS/MND’s GHG analysis.*

The GHG analysis includes a quantitative inventory of the project’s GHG emissions. Based on that estimate, it provides a detailed discussion of the project’s consistency with applicable regulatory programs and policies adopted by ARB or other California agencies, including (but not limited to) the City’s CAP (refer to pages 77-81). As discussed in more detail on page 81 of the IS/MND, policies outlined in the AB 32 Scoping Plan capture much of the state’s framework for reducing GHG emissions. These programs will likely be extended beyond 2020 to address the State’s 2030 GHG reduction goal. Senate Bill 350, which was adopted after preparation of the Assembly Bill 32 Scoping Plan, will also support California’s long-term climate change objectives. Senate Bill 350 extends the State’s Renewables Portfolio Standard (RPS) from 33 percent in 2020 to 50 percent in 2030 and requires a doubling of statewide energy efficiency. In 2015, Silicon Valley Power’s (SVP) power mix included approximately 28.6 percent renewable power and the entire California electrical grid included approximately 21.9 percent renewable power (see Table 4.7-1 in the Initial Study). There is no requirement that the fraction of renewable power increase linearly between 2020 and 2030, so estimating the project’s operational GHG emissions in 2023 to account for the likely increasing renewable power in the supply is

¹ Kirstiansson, Karen. Principal Environmental Planner. Bay Area Air Quality Management District. Personal Communication with Jessica Viramontes, ICF, and Catherine Mukai, Ramboll Environ. March 17, 2017.

speculative. However, because the 2030 RPS is 50 percent in 2030, it is reasonable to assume that GHG emissions generated by project electricity consumption will continue to drop and will be consistent with California's climate goals for 2030 and Senate Bill 350. This point is particularly relevant to the project since the vast majority of its estimated GHG emissions would come from electricity consumption.

The commenter correctly lists some of the project's efficiency measures included in Table 3.0-3 on pages 12 and 13 of the IS/MND, such as providing electric vehicle charging stations and managing building cooling to reduce energy demand. In response to the portion of this comment that suggests the project applicant purchase Santa Clara Green Power from SVP, it is important to note that the project would be a multi-tenant data center with each tenant independently purchasing electricity measured by separate sub-meters. The project applicant has confirmed that for its own offices and building support spaces, the applicant will purchase Santa Clara Green Power. In addition, the applicant will offer the purchase of Santa Clara Green Power as an alternative for its tenants as part of its commitment to reducing GHG from electricity use, but cannot guarantee that every tenant will choose to enroll in the program. To encourage tenant participation in the Santa Clara Green Power program, the project applicant will provide materials to all tenants explaining the benefits of purchasing Green Power. Further, the commenter should note that SVP has an energy portfolio includes a range of renewable resources, compared to other electricity purveyors. As shown in Table 4.7-1 on page 75 of the IS/MND, approximately 28.6 percent of the electricity for which SVP had ownership interest or purchase agreements was eligible as renewable in 2015. Therefore, by electing to construct in Santa Clara with power from SVP, rather than elsewhere in the state, and certainly in another state, the project applicant already has reduced GHG emissions from the proposed data center usage by selecting a provider with an aggressive renewable mix and no energy reliance from coal. This will result in lower GHG emissions.

In response to the portion of this comment that suggests the installation of solar panels to further reduce GHG impacts, the project applicant will either install on-site solar panels on the unoccupied areas of the roofs or will fund the installation of an equivalent amount of off-site solar power at City of Santa Clara facilities for their usage.

The commenter also states that the project could be required to meet a Power Usage Effectiveness (PUE) of 1.2 or less. The project's PUE depends on customer demand and, as such, is more difficult to manage for a multi-tenant data center like the project, as compared to a single-user data center (e.g., Google). As stated on page 77 of the IS/MND, the Uptime Institute² conducted a study in 2014 and concluded that the average data center PUE in that year was 1.7, down from 1.89 in 2011. With a PUE of 1.5, the project would be below the 2014 average PUE (the most recent year for which data is available), resulting in a more efficient than average facility. As stated on page 78 of the IS/MND, Measure 2.3, Data Centers, of the CAP calls for completion of a feasibility study of energy efficient practices for new data center projects with an average rack power rating of 15 kilowatts to achieve a PUE of 1.2 or lower. The proposed project would have an average rack power rating of 8-10 kilowatts. This rating is below the criteria in Measure 2.3 and, therefore, a formal feasibility study of energy efficient practices and achievement of a PUE of 1.2 or lower is not required. Nevertheless, the project includes various features to reduce energy consumption, including lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. If the downward trend in average PUE continues, as it has since 2011, the project's PUE would decrease over time, further reducing GHG emissions.

² Uptime Institute is a nonpartisan advisory organization focused on improving the performance, efficiency, and reliability of business critical infrastructure through innovation, collaboration, and independent certifications. Uptime Institute is recognized globally for the creation and administration of the Tier Standards & Certifications for Data Center Design, Construction, and Operational Sustainability along with its Management & Operations reviews, FORCSS® methodology, and Efficient IT Stamp of Approval.

It should also be noted that, according to the project engineer, the PUE of 1.5 for the proposed project would be the design maximum PUE at design conditions, which is under 100 percent load at the 50-year high temperature. It is highly unlikely that those conditions would ever be reached during the life of the project. Therefore, according to the project engineer, the annual operating PUE would be close to 1.2 and will strive to meet the PUE goal of 1.2. There will be periods of operation during which the PUE will be below 1.2, but over the course of a year, the PUE will fluctuate. Reducing PUE is a goal of the project and operations will be managed to achieve the lowest PUE feasible. Combined, all of these efforts would reduce GHG emissions from the proposed data center operations.

Based on the analysis in the IS/MND and the factors discussed above, the City has determined that substantial evidence is provided in the IS/MND to support the less than significant conclusion for the project's greenhouse gas emissions impacts.

Comment Letter B: Santa Clara Valley Transportation Authority – January 4, 2017

Comment B-1: Santa Clara Valley Transportation Authority (VTA) staff have reviewed the Initial Study for 413,000 square feet of data center uses on the north side of Mathew Street, 300 feet east of Lafayette Street. We have the following comments:

Pedestrian Accommodations

There are no existing sidewalks along the project's Mathew Street frontage; the proposed condition provides an attached sidewalk. VTA recommends that the City work with the applicant to provide a buffer containing street trees or light poles between pedestrians and automobiles. Resources on pedestrian quality of service, such as the Highway Capacity Manual 2010 Pedestrian Level of Service methodology, indicate that such accommodations improve pedestrian perceptions of comfort and safety on a roadway.

Response B-1: *The commenter recommends providing a buffer of street trees or light poles between pedestrians and automobiles along the proposed sidewalk.* The project would include a sidewalk along the Mathew Street frontage. The sidewalk would include street trees, landscaping, and a buffer to the maximum extent allowable based on coordination between the project applicant, the City, and the utility providers.

Comment B-2:

Bicycle Accommodations

VTA supports bicycling as an important transportation mode and thus recommends inclusion of conveniently located bicycle parking for the Project. VTA supports the project sponsor's inclusion of 10 Class I bicycle locker spaces, and six Class II bicycle racks, and recommends that such facilities be required as a Condition of Approval for the project. VTA's Bicycle Technical Guidelines provide guidance for estimating supply, siting and design for bicycle parking facilities. This document may be downloaded from www.vta.org/bikeprogram.

Response B-2: *The commenter expresses support for the inclusion of ten Class I bicycle locker spaces and six Class II bicycle racks and recommends that such facilities be required as a Condition of Approval for the project.* The project will comply with the City's bicycle parking requirements, as stated on page 79 of the Initial Study, which will be enforced through the City's plan check and approval process. The comment does not raise a concern or question about the Initial Study analysis.

Comment B-3:

Transportation Demand Management/Trip Reduction

In order to reduce the number of single occupant vehicle trips generated by the Project, VTA recommends that the City and Project sponsor consider a Transportation Demand Management (TDM) program. VTA notes that such programs can be more effective when they include a vehicle trip reduction target, third-party monitoring of trip generation upon Project completion and a Lead Agency enforcement/penalty structure.

Effective TDM programs that may be applicable to the Project include:

- Bicycle lockers and bicycle racks
- Showers and clothes lockers for bicycle commuters
- Preferentially located carpool parking
- Employee carpool matching services
- Parking for car-sharing vehicles

Response B-3: *The commenter recommends implementing a Transportation Demand Management (TDM) program and lists applicable TDM programs. As stated on page 13 of the Initial Study, the project would include the following elements, or alternative equivalents, in a TDM Program:*

- Pre-tax deductions for employee transit costs;
- Flexible work schedules and opportunities to telecommute;
- Bicycle parking and storage facilities;
- Showers for employees walking, biking, or taking alternative modes of transportation to work;
- Video conferencing software;
- Four electric vehicle charging stations that would serve nine electric vehicle parking spots;
- Preferred carpool/vanpool and electric vehicle parking; and
- On-site food and beverage amenities to reduce off-site traffic trips.

Comment Letter C: County of Santa Clara Roads & Airports Department – March 8, 2017

Comment C-1: County of Santa Clara Roads and Airports Department appreciates the opportunity to review the subject project and is submitting following comment(s):

- Santa Clara County Roads and Airports Encroachment Permit is required prior to any work performed in the County Maintained Road Right of Way. Please contact Permits, (408) 573 -2475 or by email at Permits@rda.sccgov.org for complete application process and timeline.

Response C-1: *The commenter states that the Santa Clara County Roads and Airports Encroachment Permit is required prior to any work performed in the County Maintained Road Right of Way. The project applicant will obtain the Santa Clara County Roads and Airports Encroachment Permit and any other required permits prior to construction.*

Comment Letter D: Santa Clara Valley Water District – March 10, 2017

Comment D-1: Santa Clara Valley Water District (District) staff received the Notice of Availability of a Mitigated Negative Declaration for the McLaren Data Center Project on February 17, 2017.

The District does not have any land rights within the project limits; therefore, in accordance with the Water Resources Protection Ordinance, a District permit is not required.

Please reference District File No. 33516 on any further correspondence regarding this project. If you have any questions or need more information, please contact me at (408) 630-2586.

Response D-1: *The commenter states that a Santa Clara Valley Water District permit is not required for the proposed project.* It is noted that the Santa Clara Valley Water District (SCVWD) does not have any land rights within the project site and, thus, a SCVWD permit is not required for the proposed project.

Conclusion

Based upon review of the comments received during the public circulation period for the McLaren Data Center IS/MND, there is no evidence to indicate that implementation of the project, including proposed mitigation measures, would result in a significant environmental impact under CEQA. Therefore, it is appropriate for the City to adopt the IS/MND for the project.



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

Letter A

March 8, 2017

City of Santa Clara
Planning Division
Yen Han Chen, Associate Planner
1500 Warburton Avenue
Santa Clara, CA 95050

RE: Mitigated Negative Declaration for the McLaren Data Center Project

Dear Mr. Chen,

Bay Area Air Quality Management District (Air District) staff has reviewed the Mitigated Negative Declaration (MND) for the McLaren Data Center Project (Project). As noted in the MND, the project will require an Authority to Construct permit and a Permit to Operate from the Air District.

This Project includes the demolition of approximately 147,600 square feet of existing commercial and industrial buildings and their replacement with two four-story data center buildings with a gross area of 413,000 square feet. The project also includes a number of measures to reduce the air quality and greenhouse gas (GHG) impacts of the project, as listed in Table 3.0-3 of the MND, such as:

- Use of recycled water for the cooling towers and landscaping irrigation;
- Variable frequency drives for project chillers;
- Use of occupancy sensors for lighting;
- Electric vehicle charging for nine parking spaces;
- Post-consumer recycled content in hard floor surfaces, ceiling tiles, and raised access floor tiles; and
- Implementation of a Transportation Demand Management (TDM) program.

The analysis in the Mitigated Negative Declaration (MND) estimates that the Project will increase GHG emissions by 117,896 metric tonnes carbon dioxide equivalent (MTCO₂e) per year. The MND concludes that this GHG impact will be less than significant because the project "would not conflict with the Santa Clara CAP (Climate Action Plan) or other plans, policies or regulations adopted for the purpose of reducing the emissions of GHG" (p. 81). The Air District and the State of California have established a long-term GHG reduction goal of 40% below 1990 levels by 2030. The MND itself notes on page 72 that the project is not eligible to use the CAP to evaluate full-build emissions to determine its significance under CEQA, because the CAP is based on 2020 GHG reduction goals and this project will not be completed before 2023. Therefore, the MND does not appear to provide the substantial evidence needed to justify a less than significant determination.

Air District staff recommends that the City require that all new land use projects include the most efficient GHG reduction strategies available at the time of project approval and construction. This is needed to ensure that new development projects minimize GHG emissions to the fullest extent possible in order to make progress toward the State's and Air District's climate stabilization goals.

ALAMEDA COUNTY
Pauline Russo Cutter
Scott Haggerty
Rebecca Kaplan
Nate Miley

CONTRA COSTA COUNTY
John Gioia
David Hudson
(Vice Chair)
Karen Mitchoff
Mark Ross

MARIN COUNTY
Katie Rice
(Secretary)

NAPA COUNTY
Brad Wagenknecht

SAN FRANCISCO COUNTY
Edwin M. Lee
Hillary Ronen
Jeff Sheehy

SAN MATEO COUNTY
David Canepa
Carole Groom
Doug Kim

SANTA CLARA COUNTY
Margaret Abe-Koga
Cindy Chavez
Liz Kniss
(Chair)
Rod G. Sinks

SOLANO COUNTY
Pete Sanchez
James Spering

SONOMA COUNTY
Teresa Barrett
Shirlee Zane

Jack P. Broadbent
EXECUTIVE OFFICER/APCO

Connect with the
Bay Area Air District:



March 8, 2017

The majority of this Project's GHG emissions are from electricity usage. While Silicon Valley Power has a relatively good mix of electricity from renewable sources, this Project could significantly reduce GHG emissions by purchasing all of its electricity from Santa Clara Green Power, which is available through Silicon Valley Power. The Project could further reduce its GHG impacts by installing solar panels over parking spaces and any roof area not being used for cooling towers or other equipment. Finally, the Project could be required to meet a Power Usage Effectiveness (PUE) of 1.2 or less, which would be both consistent with Measure 2.3 of the City's Climate Action Plan for extremely large power rack rating data centers and consistent with efficiencies achieved at other datacenters (e.g., Google).

A1
Cont.

Air District staff is available to assist the City in addressing these comments. For more information, or if you have any questions, please contact Karen Kristiansson, Principal Environmental Planner, at (415) 749-4753 or via email at kkristiansson@baaqmd.gov.

Sincerely,



for Jean Roggenkamp
Deputy Executive Officer

cc: Director Margaret Abe-Koga
Director Cindy Chavez
Chair Liz Kniss
Director Rod G. Sinks

March 8, 2017

City of Santa Clara
Department of Planning
1500 Warburton Avenue
Santa Clara, CA 95050

Attention: Yen Han Chen

Subject: McLaren Data Center

Dear Mr. Chen:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the Initial Study for 413,000 square feet of data center uses on the north side of Mathew Street, 300 feet east of Lafayette Street. We have the following comments.

Pedestrian Accommodations

B1

There are no existing sidewalks along the project's Mathew Street frontage; the proposed condition provides an attached sidewalk. VTA recommends that the City work with the applicant to provide a buffer containing street trees or light poles between pedestrians and automobiles. Resources on pedestrian quality of service, such as the Highway Capacity Manual 2010 Pedestrian Level of Service methodology, indicate that such accommodations improve pedestrian perceptions of comfort and safety on a roadway.

Bicycle Accommodations

B2

VTA supports bicycling as an important transportation mode and thus recommends inclusion of conveniently located bicycle parking for the Project. VTA supports the project sponsor's inclusion of 10 Class I bicycle locker spaces, and six Class II bicycle racks, and recommends that such facilities be required as a Condition of Approval for the project. VTA's Bicycle Technical Guidelines provide guidance for estimating supply, siting and design for bicycle parking facilities. This document may be downloaded from www.vta.org/bikeprogram.

Transportation Demand Management/Trip Reduction

B3

In order to reduce the number of single occupant vehicle trips generated by the Project, VTA recommends that the City and Project sponsor consider a Transportation Demand Management (TDM) program. VTA notes that such programs can be more effective when they include a vehicle trip reduction target, third-party monitoring of trip generation upon Project completion and a Lead Agency enforcement/penalty structure.

Effective TDM programs that may be applicable to the Project include:

City of Santa Clara

March 8, 2017

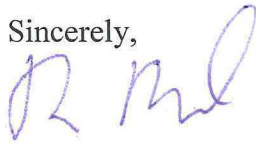
Page 2

B3
Cont.

- Bicycle lockers and bicycle racks
- Showers and clothes lockers for bicycle commuters
- Preferentially located carpool parking
- Employee carpool matching services
- Parking for car-sharing vehicles

Thank you for the opportunity to review this project. If you have any questions, please call me at (408) 321-5784.

Sincerely,



Roy Molseed
Senior Environmental Planner

cc: Patricia Maurice, Caltrans
Brian Ashurst, Caltrans

SC1704

Viramontes, Jessica

From: Bodduna, Aruna <Aruna.Bodduna@rda.sccgov.org>
Sent: Wednesday, March 08, 2017 11:10 AM
To: Yen Chen
Cc: Boyd, David R
Subject: RE: McLaren Data Center MND

Dear Mr. Chen,

County of Santa Clara Roads and Airports Department appreciates the opportunity to review the subject project and is submitting following comment(s):

- Santa Clara County Roads and Airports Encroachment Permit is required prior to any work performed in the County Maintained Road Right of Way. Please contact Permits, (408) 573 -2475 or by email at Permits@rda.sccgov.org for complete application process and timeline.

Thanks,
Aruna

Aruna Bodduna, PE, PMP
Associate Transportation Planner

Planning & Grants
County of Santa Clara Roads & Airports Department
101 Skyport Drive, San Jose, CA 95110
aruna.bodduna@rda.sccgov.org
Phone: 408-573-2462

Letter D

File: 33516
Guadalupe River

March 10, 2017



Ms. Yen Han Chen
City of Santa Clara
Planning Division
1500 Warburton Avenue
Santa Clara, CA 95050

Subject: Notice of Availability of a Mitigated Negative Declaration – McLaren Data Center Project

Dear Ms. Chen:

Santa Clara Valley Water District (District) staff received the Notice of Availability of a Mitigated Negative Declaration for the McLaren Data Center Project on February 17, 2017.

D1 The District does not have any land rights within the project limits; therefore, in accordance with the Water Resources Protection Ordinance, a District permit is not required.

Please reference District File No. 33516 on any further correspondence regarding this project. If you have any questions or need more information, please contact me at (408) 630- 2586.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kathrin A. Turner".

Kathrin A. Turner
Assistant Engineer II
Community Projects Review Unit

cc: U. Chatwani, C. Haggerty, K. Turner, File

MITIGATION MONITORING & REPORTING PROGRAM
McLaren Data Center Project
City File No. PLN2016-12246 / CEQ2016-01023

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
AIR QUALITY				
<p>AIR-1.1: <i>Implement BAAQMD Basic Construction Mitigation Measures to Reduce Construction-Related Emissions.</i> The project applicant shall require all construction contractors to implement the basic construction mitigation measures recommended by BAAQMD, which would reduce fugitive dust emissions to a less-than-significant level. Emission reduction measures shall include, at a minimum, the following measures. Additional measures may be identified by BAAQMD or contractor as appropriate.</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material offsite shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved surfaces shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. • A publicly visible sign shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's 	Project sponsor to provide to City applicable provisions of construction contracts requiring the use of BAAQMD basic construction mitigation measures to reduce construction-related dust and exhaust emissions.	Project sponsor/ project contractor	City Planning & Inspection Division	Prior to issuance of a grading permit

¹ Where the timing of an action is specified as taking place before a permit is issued, that action must be taken with respect to the action underlying the permit, except where otherwise specifically noted.

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
phone number shall also be visible to ensure compliance with applicable regulations.				
BIOLOGICAL RESOURCES				
BIO-1.1: The following measures shall be implemented prior to and during ground disturbance and preliminary grading activities at the project site. <ul style="list-style-type: none"> Avoidance of Nesting Bird Season. To the extent feasible, construction shall be scheduled outside the avian nesting season to avoid impacts on nesting birds (including raptors) protected under the MBTA and CFGC. The nesting season for birds in Santa Clara County generally extends from January 1 through September 1. Pre-construction/Pre-disturbance Surveys for Nesting Birds. If construction activities cannot be scheduled outside of the nesting season noted above, pre-construction surveys for nesting birds shall be completed by a qualified biologist to identify any active nests that could be disturbed during project implementation. Surveys shall be completed no more than 7 days prior to the initiation of ground disturbance and preliminary grading. During this survey, the biologist shall inspect the volunteer shrubs along the eastern perimeter of the project site. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the biologist shall determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50 to 100 feet for other species), to ensure that no nests of species protected by the MBTA and CFGC will be disturbed during project construction. A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Director of Community Development prior to the start of ground disturbance, grading, and/or tree removal activities. 	Project sponsor to provide to City applicable provisions of construction contracts including schedule. If construction will occur in the nesting season, project sponsor to submit to City pre-construction surveys.	Project sponsor/ project contractor/ qualified biologist	City Planning & Inspection Division	Prior to and during ground disturbance and preliminary grading activities.
CULTURAL RESOURCES				
CR-1.1: A qualified archaeologist shall be on site to monitor grading of native soil once all pavement is removed from the project site. The project applicant shall submit the name and qualifications of the selected archeologist to the Director of Community Development prior to the issuance of a grading permit. After monitoring the grading phase, the archaeologist shall make recommendations for further monitoring if it is determined that the site has cultural resources. Recommendations for further	Archaeologist (retained by the project sponsor) to monitor grading and make further recommendations, if necessary. Project	Project sponsor/ qualified archaeologist	Director of Community Development	Prior to issuance of a grading permit

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
monitoring shall be implemented during any remaining ground-disturbing activities. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring shall be required. A letter report summarizing the results of the initial monitoring during site grading and any recommendations for further monitoring shall be provided to the Director of Community Development prior to onset of building construction.	sponsor shall provide name and qualifications of archaeologist prior to issuance of a grading permit.			
CR-1.2: In the event that prehistoric or historic resources are encountered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped, the Director of Community Development shall be notified, and a qualified archaeologist or paleontologist shall examine the find and make appropriate recommendations. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring shall then be submitted to the Director of Community Development.	Archaeologist or paleontologist (retained by the project sponsor) shall make recommendations and report of findings, if necessary.	Project sponsor/qualified archaeologist or paleontologist	Director of Community Development	During construction
CR-1.3: In the event that human remains are discovered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants shall make recommendations regarding proper burial, which shall be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.	County Coroner make determination of remains. If remains are to be Native American, Coroner shall notify NAHC to identify descendants to make recommendations regarding proper burial	Project sponsor/project contractor	County Coroner/NAHC	During construction
CR-2.1: Prior to the start of any subsurface excavations that would extend beyond previously disturbed soils, all construction forepersons and field supervisors shall receive training by a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, who is experienced in teaching non-specialists, to ensure they can recognize fossil materials and shall follow proper notification procedures in the event any are uncovered during construction. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate its significance.	Paleontologist (retained by the project sponsor) shall develop and implement an excavation and salvage plan, if necessary.	Project sponsor/qualified paleontologist	City Planning & Inspection Division	Prior to the start of any subsurface excavations
If a fossil is found and determined by the qualified paleontologist to be significant and avoidance is not feasible, the paleontologist shall develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in these areas shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the				

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall then be deposited in a scientific institution with paleontological collections. A final Paleontological Mitigation Plan Report shall be prepared that outlines the results of the mitigation program. The City shall be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.				
GEOLOGY AND SOILS				
GEO-1.1: All excavation and grading work shall be scheduled in dry weather months, or the construction sites shall be weatherized to withstand or avoid erosion.	Project sponsor to submit to City applicable provisions of construction contracts including applicable requirements.	Project sponsor/ project contractor	City Planning & Inspection Division	During construction
GEO-1.2: Stockpiles and excavated soils shall be covered with secured tarps or plastic sheeting.	Project sponsor to submit to City applicable provisions of construction contracts including applicable requirements.	Project sponsor/ project contractor	City Planning & Inspection Division	During construction
GEO-1.3: Vegetation in disturbed areas shall be replanted as quickly as possible.	Project sponsor to submit to City applicable provisions of construction contracts including applicable requirements.	Project sponsor/ project contractor	City Planning & Inspection Division	During construction
HAZARDS AND HAZARDOUS MATERIALS				
HAZ-1.1: In accordance with federal, state, and local regulations, ACM and ACCM must be removed by a licensed asbestos abatement contractor from the structures prior to renovation/demolition.	Asbestos abatement contractor to remove ACM and ACCM	Project sponsor/ licensed asbestos abatement contractor	City Planning & Inspection Division	Prior to renovation/demolition
HAZ-1.2: Disturbance to unidentified suspect ACMs not mentioned in this report should be avoided until a certified asbestos building inspector can survey and assess the disposition of such materials.	Certified asbestos building inspector to survey and assess the	Project sponsor/ certified	City Planning & Inspection Division	Prior to renovation/demolition

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
	disposition of unidentified suspect ACMs.	asbestos building inspector		
HAZ-1.3: During demolition activities, all building materials containing LBP should be performed by a contractor who has the experience and expertise in LBP abatement, handling, and disposal. Construction work where an employee may be occupationally exposed to lead in any amount must comply with 29 CFR 1926.62 (8 CCR 1532.1 in California). Additionally, lead containing waste must be characterized and profiled for proper disposal according to applicable federal, State and local regulations.	Contractor to perform LBP abatement, handling, and disposal.	Project sponsor/project contractor	City Planning & Inspection Division	During demolition activities
HYDROLOGY AND WATER QUALITY				
HYDRO-1.1: Prior to construction of the project, the City shall require the project applicant and/or contractors for the project to submit a Storm Water Pollution Prevention Plan (SWPPP) and a Notice of Intent (NOI) to the State of California Water Resource Quality Control Board to control the discharge of storm water pollutants including sediments associated with construction activities. Along with these documents, the project applicant may also be required to prepare an Erosion Control Plan. The Erosion Control Plan may include Best Management Practices (BMPs) as specified in the California Storm Water Best Management Practice Handbook (such as silt fences/straw waddles around the perimeter of the site, regular street cleaning, and inlet protection) for reducing impacts on the City's storm drainage system from construction activities. The SWPPP shall include control measures during the construction period for: <ul style="list-style-type: none"> • Soil stabilization practices, • Sediment control practices, • Sediment tracking control practices, • Wind erosion control practices, and • Non-storm water management and waste management and disposal control practices. 	Project sponsor to submit SWPPP and NOI to State of California Water Resource Quality Control Board.	Project sponsor/project contractor	Department of Public Works	Prior to construction
HYDRO-1.2: Prior to issuance of a grading permit, the project applicant and/or contractors shall be required to submit copies of the NOI and Erosion Control Plan (if required) to the Department of Public Works. The project applicant and/or contractors shall also be required to maintain a copy of the most current SWPPP on-site and provide a copy to any City representative or inspector on demand.	Project sponsor to submit NOI and Erosion Control Plan to the Department of Public Works.	Project sponsor/project contractor	Department of Public Works	Prior to issuance of grading permit

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
HYDRO-1.3: The project shall comply with City of Santa Clara ordinances, including erosion- and dust-control during site preparation and grading, and maintaining adjacent streets free of dirt and mud during construction.	Project sponsor to comply with City of Santa Clara ordinances and maintain adjacent streets free of dirt and mud.	Project sponsor/ project contractor	Department of Public Works	During construction
HYDRO-1.4: The project shall comply with the municipal NPDES permit issued to the City of Santa Clara.	Project sponsor to comply with the municipal NPDES permit issued to the City.	Project sponsor/ project contractor	Department of Public Works	During construction
HYDRO-2.1: When the construction phase is complete, a Notice of Termination (NOT) for the General Permit for Construction shall be filed with the RWQCB and the City of Santa Clara. The NOT shall document that all elements of the SWPPP have been executed, construction materials and waste have been properly disposed of, and a post-construction stormwater management plan is in place as described in the SWPPP for the project site.	Project sponsor shall file a NOT with the San Francisco Bay RWQCB and the City.	Project sponsor	Department of Public Works	Upon completion of construction
HYDRO-2.2: All post-construction Treatment Control Measures (TCMs) shall be installed, operated, and maintained by qualified personnel. On-site inlets shall be cleaned out a minimum of once per year, prior to the wet season.	Project sponsor to install, operate, and maintain TCMs and clean out on-site inlets.	Project sponsor/ project contractor	Department of Public Works	During operation
HYDRO-2.3: The property owner/site manager shall keep a maintenance and inspection schedule and record to ensure the TCMs continue to operate effectively for the life of the project. Copies of the schedule and record must be provided to the City upon request and must be made available for inspection on-site at all times.	Project sponsor to keep a maintenance and inspection schedule and record.	Project sponsor/ project contractor	Department of Public Works	During operation
NOISE				
NOI-1.1: The project applicant shall prepare and implement measures to ensure that outdoor mechanical equipment does not generate noise levels in excess of the City's applicable noise standard for the applicable zoning category (i.e. 75 dBA noise standard at the nearest heavy industrial uses, 65 dBA at the nearest commercial land uses, and 55 dBA at the nearest residential land uses). All sound, noise, or vibration measurements shall be taken at the closest point to the noise or vibration source on the adjacent real property, or on any other property, affected by the noise or	Project sponsor to submit report identifying measures that will be implemented to ensure that exterior noise levels from mechanical equipment will comply with the	Project sponsor	Director of Community Development	Prior to issuance of occupancy permit

Mitigation and Avoidance Measures	Action	Implementing Party	Monitoring Party	Timing ¹
<p>vibration. Measures included in this noise control plan that could help to accomplish this standard include, but are not limited to:</p> <ul style="list-style-type: none"> • Installing sound enclosures or barriers around noise-generating mechanical equipment (including but not limited to emergency generators and pumps). The generators may need to be fully enclosed to meet the applicable noise standards. • Reducing the number of generators tested at once. • Utilizing mufflers to reduce noise from mechanical equipment, and • Utilizing quieter equipment (e.g. smaller, quieter generators) that meets this standard. <p>Prior to the issuance of an occupancy permit, the project applicant shall prepare a report, identifying measures that shall be implemented to ensure that exterior noise levels from mechanical equipment comply with the City's noise standards, to the satisfaction of the Director of Community Development.</p>	<p>City's noise standards (i.e. 75 dBA noise standard at the nearest heavy industrial uses, 65 dBA at the nearest commercial land uses, and 55 dBA at the nearest residential land uses).</p>			