Focused Phase II Subsurface Investigation
Elmonica Opportunity Site
17030 SW Baseline Road
Beaverton, Oregon

March 27, 2018

Prepared for

Office of Metro Attorney
600 NE Grand Avenue
Portland, Oregon

LANDAU ASSOCIATES

1500 SW 1st Avenue, Suite 1015
Portland, OR 97201
(503) 542-1080

Focused Phase II Subsurface Investigation
Elmonica Opportunity Site
17030 SW Baseline Road
Beaverton, Oregon

This document was prepared by, or under the direct supervision of, the technical professionals noted below.

Document prepared by: Della M Fawcett — Della Fawcett, RG
Project Manager

Document reviewed by: Kathryn F. Hartley — Kathryn Hartley
Quality Reviewer

Date:	March 27, 2018
Project No.:	13469009.010
File path:	P:\1346\009.010\R\Phase II ESA\Phase II ESA Report\Signature Page.docx
Project Coordinator:	MCS

LANDAU ASSOCIATES

This page intentionally left blank.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDIX

LIST OF ABBREVIATIONS AND ACRONYMS

APEX ..... Apex Laboratories, Inc.
AST ..... aboveground storage tank
bgs ..... below ground surface
BTEX ..... benzene, toluene, ethylbenzene, and xylenes
EPA ..... U.S. Environmental Protection Agency
ESA ..... environmental site assessment
ft ..... foot/feet
LAI ..... Landau Associates, Inc.
Metro ..... Office of Metro Attorney
µg/L ..... micrograms per liter
mg/kg ..... milligrams per kilogram
NWTPH-Dx ..... Northwest diesel-range total petroleum hydrocarbon extended
NWTPH-Gx ..... Northwest gasoline-range total petroleum hydrocarbon extended
PCB ..... polychlorinated biphenyl
PID ..... photoionization detector
UST ..... underground storage tank
VOC ..... volatile organic compound

INTRODUCTION

At the request of the Office of the Metro Attorney (Metro), Landau Associates, Inc. (LAI) conducted a focused subsurface investigation at the property located at 17030 SW Baseline Road in Beaverton, Oregon (subject property; Figure 1). The subject property is currently owned by Setniker Family Revocable Trust and is developed with a closed gasoline service station and an automobile repair shop.

We understand that Metro plans to purchase the subject property and develop with a multilevel residential building with commercial space. Metro has contracted LAI to assist with pre-purchase due diligence, including a Phase I environmental site assessment (ESA) and a focused subsurface investigation, to assess and document current conditions at the subject property that may pose a liability to an owner or operator of the property.

The subsurface investigation included collection and analysis of select soil and groundwater samples. The following sections provide a brief background of the subject property, a description of the field investigation, and the results of soil and groundwater analysis.

BACKGROUND

The subject property was in agricultural and residential use by 1960. The residences on the east side of the subject property were removed by 1970, and the residences on the west side by 2000. An existing building in the northeast corner of the subject property was present by 1960 and was expanded in 1981. The property operated as a gasoline service station until approximately 1993 when the underground storage tanks (USTs) were decommissioned to allow for the expansion of SW Baseline Road. The automotive repair shop remained in operation until the early 2000s.

Results of the Phase I ESA indicated that the following *recognized environmental conditions* are present at the subject property (LAI 2018).

- A release was reported at the subject property in 1993 when five USTs associated with the former gasoline station were removed. The Oregon Department of Environmental Quality (ODEQ) issued a no further action determination for the release; however, based on review of ODEQ files, contamination from the former gasoline fueling station and automotive repair shop could remain at the subject property. ODEQ's files indicate that no groundwater samples were collected to determine if contamination had reached groundwater and migrated. Additionally, no soil samples were collected from the west tank pit fill material, and the source of fill was not documented. Petroleum-contaminated soil was observed north of the west tank pit, in the SW Baseline Road right-of-way, but no sampling was completed at the subject property to evaluate the extent of the contamination. In addition, product lines associated with former USTs could remain on the subject property, and no sampling has been completed along the product lines.

Potential environmental conditions identified at the subject property include the following.

- One empty aboveground storage tank (AST) was located on the south side of the subject property building. The AST is in fair condition and shows no evidence of releases. The AST does not appear to be equipped with secondary containment.
- Historically, the western portion of the subject property was developed with residential and agricultural structures, and heating oil tanks (HOTs) may have been associated with these structures. Evidence of USTs was not observed in the western portion of the subject property, and there are no records of USTs associated with the former structures.

The focused subsurface investigation was completed to evaluate subsurface conditions at the subject property in the areas of the environmental features identified in the Phase I ESA. This report documents the findings of the subsurface investigation and the current/baseline conditions at the subject property prior to its sale.

FIELD INVESTIGATION

The field investigation was conducted on February 14, 2018 and included collection of co-located soil and groundwater samples from eight locations using direct-push drilling and sampling techniques. The sampling locations are shown on Figure 2 and described in Table 1. As indicated in Table 1, borings were advanced in the vicinity of current environmental features (e.g., ASTs, former tank pits, etc.) and along the northern and eastern boundaries of the subject property.

One soil sample was collected from each boring for laboratory analysis. Soil samples generally were collected just above the depth of the groundwater table, which was encountered between 6.6 and 10.9 feet (ft) below ground surface (bgs). In boring B-2, a shallower soil sample was collected from the backfill material that was placed after the USTs were removed from the subject property. At this location, recovery from the initial boring was poor, and two additional attempts were made to collect a fill sample, but both encountered refusal. The shallow sample was collected at a depth of 1 to 2 ft bgs. Soil samples were placed in laboratory-supplied jars and submitted to APEX Laboratories (APEX) of Tigard, Oregon, where they were analyzed for gasoline-range petroleum hydrocarbons by analytical method Northwest gasoline-range total petroleum hydrocarbon extended (NWTPH-Gx), diesel-range petroleum hydrocarbons by analytical method Northwest diesel-range total petroleum hydrocarbon extended (NWTPH-Dx), and heavy oil-range petroleum hydrocarbons; benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8260C; lead by EPA Method 6010; and polychlorinated biphenyls (PCBs) by EPA Method 8082. Initially, the soil sample obtained from boring B-6 was held at the laboratory, pending the results of the upgradient samples, and was subsequently analyzed for gasoline-, diesel-, and oil-range petroleum hydrocarbons, BTEX, and lead. Analytical results for the soil samples are discussed below.

Groundwater grab samples were collected from temporary well screens placed in each of the direct-push borings. The well screens were generally placed at depths ranging from 10 to 15 ft bgs or 15 to 20 ft bgs depending on the depth to water. The groundwater samples were collected directly

into laboratory-supplied containers and submitted to APEX for analysis for gasoline by method NWTPH-Gx, diesel- and heavy oil-range petroleum hydrocarbons by method NWTPH-Dx, BTEX by EPA Method 8260C, and total and dissolved lead by EPA Method 6010. Analytical results for the groundwater samples are discussed below.

INVESTIGATION RESULTS

As noted above, eight soil samples and eight groundwater samples were collected from the subject property. The following sections present the results of the investigation, including physical observations, field-screening results, and laboratory analytical results.

Visual/Physical Observations and Field-Screening Results

Visual and physical observations were documented by LAI personnel during the subsurface explorations. Observations included soil lithology, presence of any sheen on the soil or groundwater, odor, and visible staining. In addition, a photoionization detector (PID) was used to screen select soil samples for the presence of volatile organic compounds (VOCs). These observations are documented on the sample collection forms, copies of which are retained in LAI's files; a brief summary of the field-screening results is included in Table 1. Generally, the soil borings encountered gravels at the surface and brown silts to the total depth of the borings. All borings were advanced to a maximum depth of 20 ft bgs, with the exception of boring B-6, which was advanced to a depth of 15 ft bgs. During drilling, groundwater was encountered at each of the boring locations at depths ranging from 6.6 to 10.9 ft bgs. Organic odor was noted in borings B-1, B-2, B-6, and B-7; a chemical odor was noted in boring B-7; and a sheen and petroleum-like odor were noted in boring B-4. A sheen and petroleum-like odor as well iron oxide staining were noted in boring B-5. VOCs were not detected in the soil samples during screening with the PID.

Analytical Results

Copies of the laboratory analytical reports are provided in Appendix A. The laboratory data were reviewed for quality assurance/quality control purposes and were determined to be acceptable for use. Qualifiers were added to the data as indicated in the data tables. Analytical results for the soil and groundwater samples are provided in Tables 2 and 3, respectively.

To contextualize the results of the laboratory analysis, the soil and groundwater results were compared with the ODEQ Risk-Based Concentrations (RBC) for Petroleum-Contaminated Sites. Consideration was given to the proposed residential development of the subject property, and the RBCs selected for soil were based on the leaching-to-groundwater pathway for residential receptors and vapor intrusion into buildings for residential receptors. The no further action letter provided by ODEQ originally compared soil results to the leaching-to-groundwater pathway for occupational receptors, as it was the mostly likely exposure scenario, and to residential receptors, as it was the most stringent screening level available.

The RBC screening levels for groundwater were selected based on the potential ingestion of tap water for residential receptors and vapor intrusion into buildings for residential receptors. No previous groundwater sampling had been conducted at the subject property, and groundwater is not currently used as a source of drinking water at the subject property. For purposes of comparison, the ingestion-of-tap-water pathway was included, as it is the most stringent RBC screening level for groundwater. The next most stringent RBC screening level is the vapor-intrusion-into-buildings pathway for residential receptors.

Analytical results for soil and groundwater were also compared to RBCs protective of construction workers, given the redevelopment planned for the subject property. None of the analytical results exceeded the RBCs protective of construction workers.

Samples from boring B-6 were held for analysis, pending the results of analysis for samples obtained from upgradient borings B-4 and B-5. After concentrations of petroleum hydrocarbons were detected in the upgradient soil and groundwater samples, samples collected from boring B-6 were analyzed for petroleum hydrocarbons, BTEX, and lead. PCB analysis was not completed due to lack of detections at upgradient locations.

Soil Analytical Results

Analytical results for the soil samples are provided in Table 2 and summarized as follows.

- Gasoline-range total petroleum hydrocarbons were detected in one soil sample (B-5 [9.5–10 bgs]) at a concentration of 52.3 milligrams/kilogram (mg/kg), which is greater than the RBC screening level for leaching to groundwater (31 mg/kg), but below the RBC screening level for vapor intrusion into buildings (94 mg/kg). Gasoline-range total petroleum hydrocarbons were not detected in any of the other soil samples at concentrations greater than the laboratory reporting limit.
- Motor oil-range total petroleum hydrocarbons were detected in two soil samples (B-2 [1–2 ft bgs] and B-5 [9.5–10 ft bgs]) at concentrations of 882 mg/kg and 267 mg/kg, respectively. Diesel-range total petroleum hydrocarbons were detected in one soil sample (B-5 [9.5–10 ft bgs]) at a concentrations of 31.0 mg/kg. The detected concentrations are less than the RBC screening level for leaching to groundwater (9,500 mg/kg) for diesel-range hydrocarbons. No RBCs are listed for the leaching to groundwater pathway for motor oil-range total petroleum hydrocarbons or for the vapor intrusion pathway for diesel- or motor oil-range total petroleum hydrocarbons, as these compounds are not a risk for the pathways. Diesel-range and motor oil-range total petroleum hydrocarbons were not detected in any of the remaining soil samples at concentrations greater than the laboratory reporting limit.
- BTEX was not detected in any of the soil samples at concentrations greater than the laboratory reporting limit.
- Lead was detected in all soil samples at concentrations ranging from 9.14 mg/kg to 15.8 mg/kg. These levels are below the RBC screening level for leaching to groundwater for residential receptors (30 mg/kg). In addition, the background concentration of lead in soils in the Portland Basin is noted at 79 mg/kg, suggesting that all the concentrations detected at the

subject property are within the expected range of natural background concentrations (ODEQ 2018).

- PCBs were not detected in any of the soil samples at concentrations greater than the laboratory reporting limit.
- None of the analytical results for soil exceeded the RBCs protective of construction workers.

In summary, the only compound detected at a concentration greater than the most stringent RBC (for the leaching to groundwater pathway for residential receptors) was gasoline-range total petroleum hydrocarbon in boring B-5, adjacent to the remaining AST. The detected concentration of gasoline-range total petroleum hydrocarbons (52.3 mg/kg) is below the RBC protective of vapor intrusion into buildings for residential receptors, the most likely exposure scenario for the subject property following redevelopment. In addition, the detected concentrations of gasoline- and diesel-range total petroleum hydrocarbons are both below the remaining concentrations for gasoline- and diesel-range total petroleum hydrocarbons noted in the previous no further action letter, suggesting that natural attenuation of remaining contamination is occurring at the subject property.

Groundwater Analytical Results

The analytical results for the groundwater samples are provided in Table 3 and summarized as follows.

- Gasoline-range total petroleum hydrocarbons were detected in three samples (taken from borings B-1, B-4, and B-5) at concentrations of 673 micrograms per liter (µg/L), 180 µg/L, and 1,470 µg/L, respectively. These concentrations are above the most stringent RBC for ingestion of tap water for residential receptors (110 µg/L), but less than the RBC for vapor intrusion into residential buildings.
- Diesel-range total petroleum hydrocarbons were detected in boring B-5 at a concentration of 126 µg/L. This concentration is above the most stringent RBC for ingestion of tap water for residential receptors (100 µg/L). Diesel-range total petroleum hydrocarbons were not detected in any of the other groundwater samples at concentrations greater than the laboratory reporting limit. Motor-oil range total petroleum hydrocarbons were detected in boring B-5 at a concentration of 739 µg/L, which is above the most stringent RBC for ingestion of tap water (300 µg/L). There are no listed RBCs for the vapor intrusion pathway for diesel- or motor oil-range total petroleum hydrocarbons, as these compounds are not considered a risk for this pathway.
- Benzene was detected in boring B-5 at a concentration of 0.206 µg/L, below the most stringent RBC for ingestion of tap water for residential receptors (0.46 µg/L) and the RBC for vapor intrusion into residential buildings. Total xylenes were detected in sample B-6 at a concentration of 1.69 µg/L, below the most stringent RBC for ingestion of tap water for residential receptors (190 µg/L) and the RBC for vapor intrusion into residential buildings. BTEX was not detected in any of the remaining groundwater samples at concentrations greater than the laboratory reporting limit.
- Groundwater samples collected from the subject property were analyzed for total and dissolved lead. As part of the ODEQ Risk-Based Decision Making process (ODEQ 2003), analysis

for lead is suggested when leaded gasoline releases are suspected. Leaded gasoline was banned in 1995. The former USTs at the subject property were decommissioned in 1993, and any gasolines releases at the subject property may have contained lead. Guidance indicates that analysis for dissolved lead is the preferred method for regulated UST releases, and total lead is the preferred method for all other releases. Given the history of the subject property and the presence of an unlisted AST, groundwater samples were analyzed for total and dissolved lead. The analytical results are as follows.

  - Total lead was detected in all samples at concentrations ranging from 25.0 µg/L to 164 µg/L.
  - Dissolved lead was detected in samples taken from borings B-2, B-3, B-4, B-5, and B-8 at concentrations ranging from 0.256 µg/L to 47.3 µg/L. The concentration of 47.3 µg/L was above the most stringent RBC of 15 µg/L.

- Analytical results were also compared with RBCs protective of construction and excavation workers to account for the planned redevelopment of the subject property. None of the analytical results exceeded the RBCs protective of construction and excavation workers.

Detected concentrations of gasoline- and oil-range total petroleum hydrocarbons are above the most stringent RBC for ingestion of tap water, which as previously discussed, is an incomplete pathway for the subject property. When compared to the RBCs for the more likely pathway, vapor intrusion into buildings, the detected concentrations do not exceed the values protective of residential receptors. Additionally, the detected concentrations were limited to borings near or downgradient of the source areas of the east tank pit (borings B-1 and B-4) and the AST (boring B-5), assuming groundwater flow to the southwest. Lack of detected concentrations in groundwater samples from borings B-2, B-3, and B-6 suggest that residual contamination has not migrated to groundwater across the subject property. The highest concentration of dissolved lead was found in a sample obtained from boring B-8, located on the eastern boundary of the subject property.

RECOMMENDATIONS

The soil and groundwater contamination identified at the subject property during this investigation is consistent with the residual contamination from a release reported in 1993 following removal of five USTs. Soil samples collected during this investigation contained lower concentrations of contaminants than those noted in the 2007 no further action letter. This indicates that no new releases have occurred at the subject property, and natural attenuation is occurring.

When the no further action letter was issued in 2007, no groundwater samples had been collected from the subject property. Gasoline-range petroleum hydrocarbons were detected in groundwater samples collected during this investigation. Following receipt of the final laboratory report, LAI discussed the groundwater data with Kevin Dana of ODEQ, who indicated that there are no reporting requirements for the groundwater contamination, as it appears to be related to the 1993 release, which was reported to ODEQ at that time. ODEQ completed an investigation and issued a no further action letter (Dana 2018).

Based on available information, soil or groundwater requiring special handling or disposal could be encountered during excavation at the subject property. Procedures should be in place to address any contamination or potentially hazardous material encountered during excavation or construction. A contaminated-media management plan should be included in the construction specifications for the redevelopment project.

USE OF THIS REPORT

This report has been prepared for the exclusive use of the Office of the Metro Attorney for specific application to the Metro Elmonica Opportunity Site in Beaverton, Oregon. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates, Inc. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by LAI, shall be at the user's sole risk. LAI warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

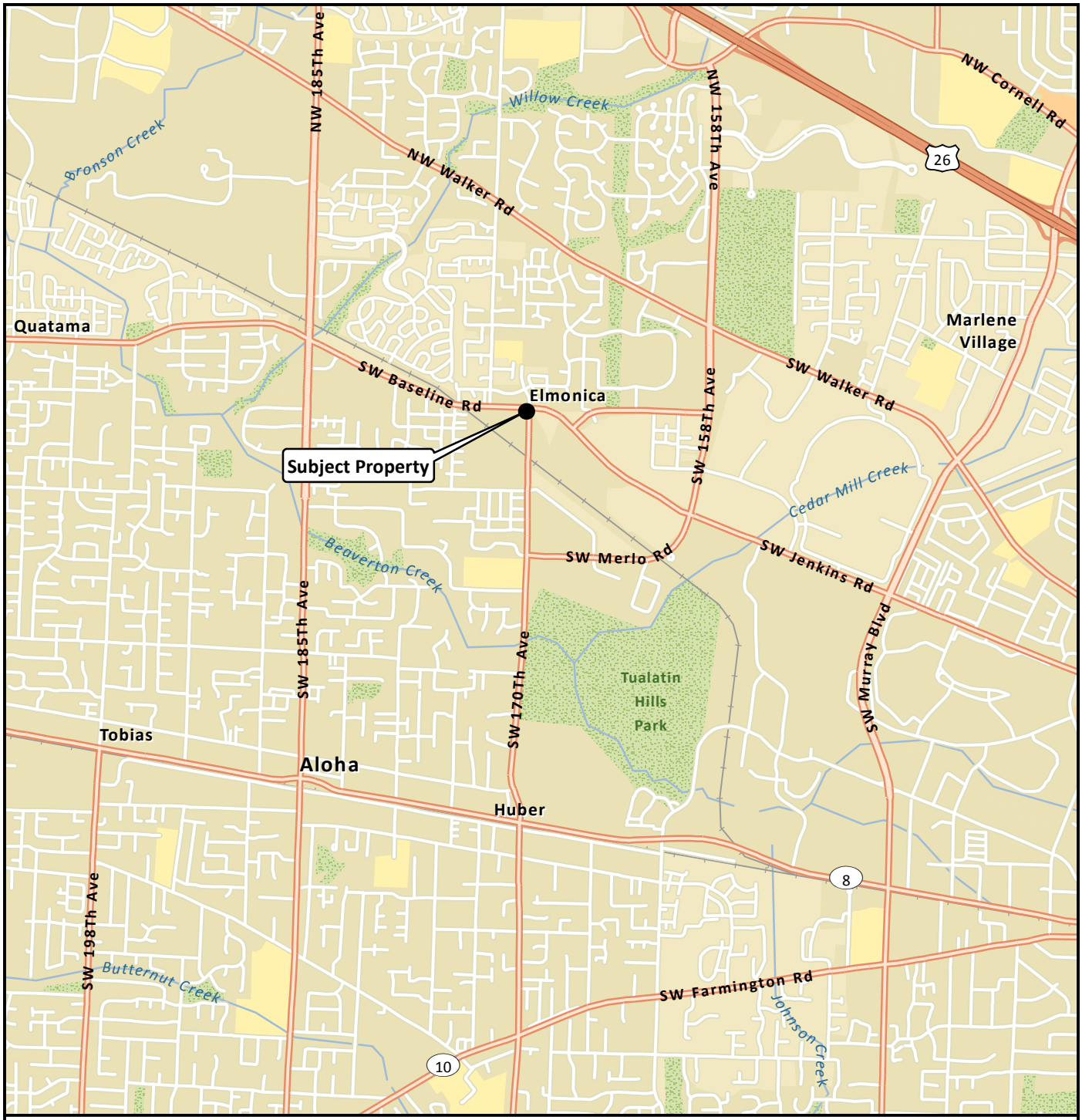
REFERENCES

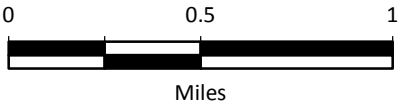
Dana, K. 2018. Phone Conversation between Kevin Dana, Oregon Department of Environmental Quality, and Della Fawcett, Landau Associates, Inc. March 22.

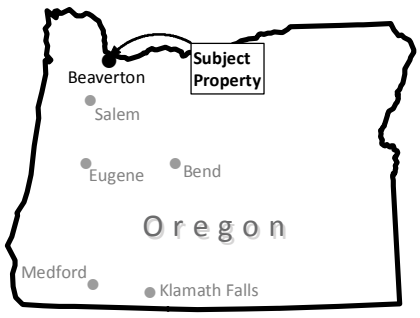
LAI. 2018. Phase I Environmental Site Assessment, Elmonica Opportunity Site, 17030 SW Basline Road, Beaverton, Oregon. February 23.

ODDEQ. 2018. Fact Sheet: Background Levels of Metals in Soils for Cleanups. Last updated January 25. Available at: http://www.oregon.gov/deq/FilterDocs/cu-bkgrmetals.pdf.

ODEQ. 2003. Risk-Based Decision Making for the Remediation of Contaminated Sites. Oregon Department of Environmental Quality. September 22.







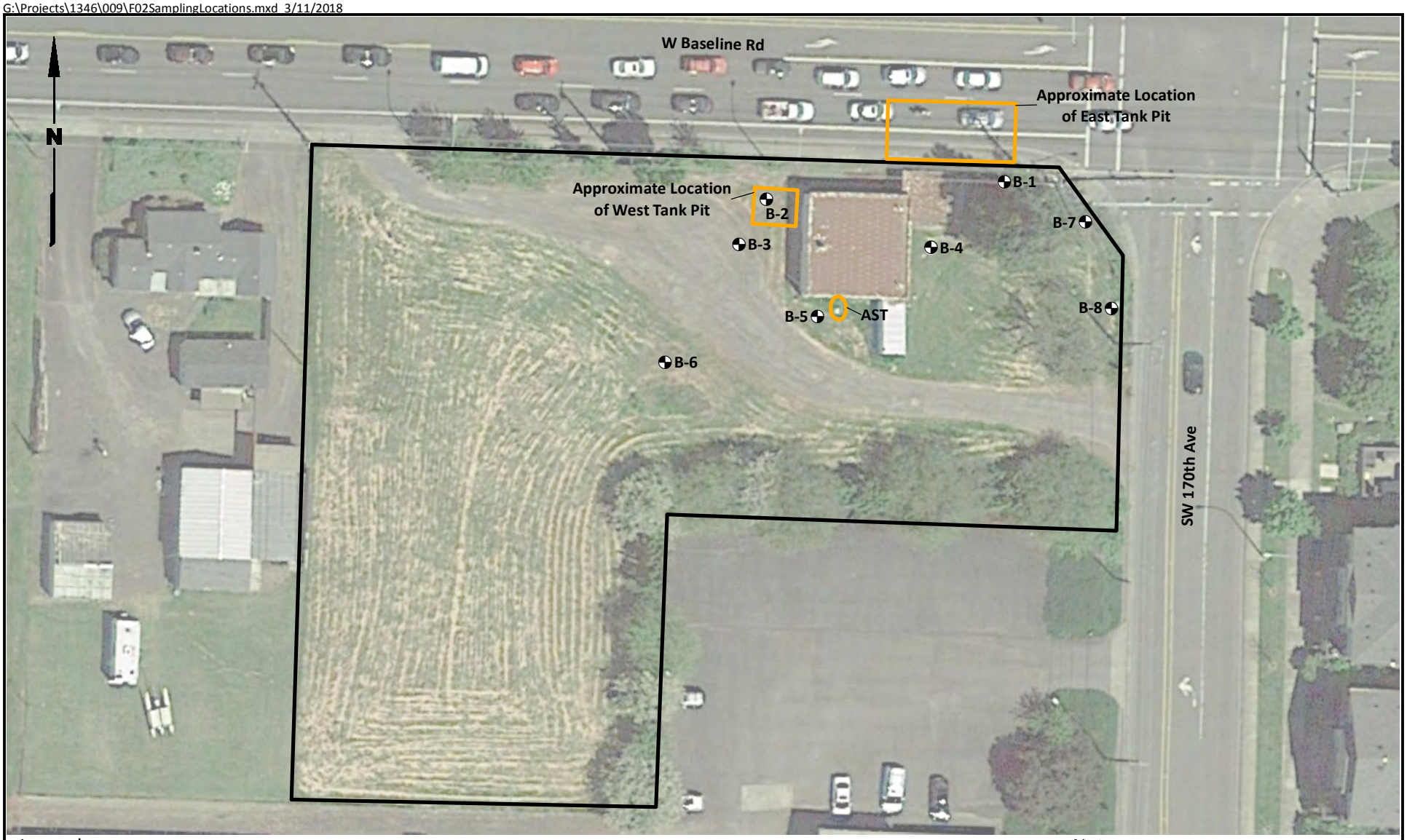
Data Source: Esri 2012

G:\Projects\1346\009\EF01VicMap.mxd 3/11/2018

LANDAU ASSOCIATES

Metro Elmonica Phase II ESA Beaverton, Oregon	**Vicinity Map**	Figure 1

G:\Projects\1346\009\F02SamplingLocations.mxd 3/11/2018



Legend

- Proposed Boring Locations
- Approximate Tank Locations
- Subject Property

0 50 100

Scale in Feet

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro.

LANDAU ASSOCIATES

Metro Elmonica
Phase II ESA
Beaverton, Oregon

Sampling Locations

Figure
2

Table 1
Summary of Sampling Locations
Metro Elmonica Opportunity Site
Beaverton, Oregon

Boring ID	Description/Location	Depth of Exploration (bgs)	Field-Screening Results	Soil Sample Depth (bgs)	Soil Sample Analysis	Depth to Groundwater (bgs)	Groundwater Screen Interval (bgs)	Groundwater Sample Analysis[(a)]
B-1	North side of the subject property, immediately south of the approximate location of the East Tank Pit.	20 ft	Organic odor; highest PID reading = 0.0 ppm	9.5–10 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	9.6 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-2	Within the approximate location of the West Tank Pit, immediately west of the subject property building.	20 ft	Organic odor; highest PID reading = 0.0 ppm	1–2 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	6.6 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-3	Southwest of the approximate location of the West Tank Pit.	20 ft	No evidence of contamination; highest PID reading = 0.0 ppm	6.5–7 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	7.7 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-4	South of the station building office and southwest of boring B-1.	20 ft	Petroleum-like odor and sheen in water sample; highest PID reading = 0.0 ppm	10–10.5 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	9.0 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-5	Southwest of and adjacent to the subject property waste oil AST.	20 ft	Petroleum-like odor and sheen observed at 6–10 ft in soil; iron oxide staining noted; highest PID reading = 0.0 ppm	9.5–10 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	6.7 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-6	Southwest of the station building in the most downgradient location.	15 ft	Organic odor; highest PID reading = 0.0 ppm	10–10.5 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead	10.9 ft	10–15 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-7	Northeast corner of the subject property in the vicinity of the utility pole with potential contamination.	20 ft	Chemical odor at 4 ft, organic odor at 5–10 ft; highest PID reading = 0.0 ppm	10–10.5 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	9.9 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead
B-8	East side of the subject property, near the current power utility pole, adjacent to SW 170th Avenue.	20 ft	No evidence of contamination; highest PID reading = 0.0 ppm	10–10.5 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total lead, PCBs	9.5 ft	15–20 ft	NWTPH-Gx + BTEX, NWTPH-Dx, total & dissolved lead

Notes:

(a) Groundwater samples for lead analysis were field-filtered and analyzed for dissolved metals.

Abbreviations and Acronyms:

AST = aboveground storage tank
bgs = below ground surface
Dx = diesel range
ft = feet
Gx = gasoline range
PID = photoionization detector
TPH = total petroleum hydrocarbons
UST = underground storage tank
VOC = volatile organic compound

Table 2
Soil Analytical Results
Metro Elmonica Opportunity Site
Beaverton, Oregon

Analyte	Risk-Based Concentrations *Leaching to Groundwater* Residential	Risk-Based Concentrations *Vapor Intrusion Into Buildings* Residential	Risk-Based Concentrations *Ingestion, Dermal Contact, and Inhalation* Construction Worker	Sample Location, Sample Depth, Sample Date, Laboratory Sample ID							
				B-1 9.5–10 ft 2/14/2018 A8B0382-05	B-2 1–2 ft 2/14/2018 A8B0382-08	B-3 6.5–7 ft 2/14/2018 A8B0382-09	B-4 10–10.5 ft 2/14/2018 A8B0382-02	B-5 9.5–10 ft 2/14/2018 A8B0382-07	B-6 10–10.5 ft 2/14/2018 A8B0382-01	B-7 10–10.5 ft 2/14/2018 A8B0382-04	B-8 10–10.5 ft 2/14/2018 A8B0382-03
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx, -Dx)											
Gasoline-Range Organics	31	94	9,700	7.50 U	4.94 U	6.80 U	7.18 U	**52.3**	7.58 U	7.13 U	7.29 U
Diesel-Range Hydrocarbons	9,500	>Max	4,600	27.1 U	209 U	25.3 U	26.5 U	**31.0**	26.8 U	26.2 U	26.9 U
Oil-Range Hydrocarbons	>Max	>Max	11,000	54.3 U	**882**	50.6 U	53.1 U	**267**	53.6 U	52.5 U	53.9 U
Volatile Organic Compounds (mg/kg; SW-846 8260C)											
Benzene	0.023	0.16	380	0.015 U	0.00989 U	0.0136 U	0.0144 U	0.0147 U	0.0152 U	0.0143 U	0.0146 U
Ethylbenzene	0.22	1.30	1,700	0.0375 U	0.0247 U	0.0340 U	0.0359 U	0.0368 U	0.0379 U	0.0357 U	0.0365 U
Toluene	150	>Csat	28,000	0.075 U	0.0494 U	0.0680 U	0.0718 U	0.0736 U	0.0758 U	0.0713 U	0.0729 U
Xylenes, Total	24	160	20,000	0.113 U	0.0741 U	0.102 U	0.108 U	0.11 U	0.114 U	0.107 U	0.109 U
Total Metals (mg/kg; SW-846 6020A)											
Lead	30	NV	800	**12.1**	**15.8**	**10.7**	**10.1**	**13.3**	**9.14**	**10.5**	**9.66**
Polychlorinated Biphenyls (mg/kg; SW-846 8082A)											
Aroclor 1016	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Aroclor 1221	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Aroclor 1232	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Aroclor 1242	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Aroclor 1248	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Aroclor 1254	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Aroclor 1260	N/A	N/A	N/A	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U
Total PCBs	0.24	>Csat	4.90	0.0117 U	0.00997 U	0.0120 U	0.0121 U	0.0135 U	--	0.0129 U	0.0132 U

Notes:

Bold text indicates detected analyte

Green shading = detected analyte exceeds most stringent RBC.

>Csat **=** The soil RBC exceeds the limit of three-phase equilibrium partitioning.

>Max **=** The constituent RBC for this pathway is calculated as greater than 1,000,000 mg/kg or 1,000,000 mg/L. Therefore, this substance is deemed not to pose risks in this scenario.

NV = This chemical is considered "nonvolatile" for the purpose of exposure calculations.

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

-- = not analyzed

ft = feet

ID = Identification

mg/kg = milligrams per kilogram

N/A = not applicable

NWTPH-Dx = Northwest diesel-range total petroleum hydrocarbon extended

NWTPH-Gx = Northwest gasoline-range total petroleum hydrocarbon extended

PCB = polychlorinated biphenyl

RBC = risk-based concentration

Table 3
Groundwater Analytical Results
Metro Elmonica Opportunity Site
Beaverton, Oregon

Analyte	Risk-Based Concentrations *Ingestion of Tap water* Residential	Risk-Based Concentrations *Vapor Intrusion into Buildings* Residential	Risk-Based Concentrations *Groundwater in an Excavation* Construction & Excavation Worker	Sample Location, Sample Date, Laboratory Sample ID							
				B-1 2/14/2018 A8B0382-13	B-2 2/14/2018 A8B0382-11	B-3 2/14/2018 A8B0382-10	B-4 2/14/2018 A8B0382-16	B-5 2/14/2018 A8B0382-12	B-6 2/14/2018 A8B0382-17	B-7 2/14/2018 A8B0382-14	B-8 2/14/2018 A8B0382-15
Petroleum Hydrocarbons (µg/L; NWTPH-Gx, -Dx)											
Gasoline-Range Organics	110	22,000	14,000	**673**	100 U	100 U	**180**	**1,470**	100 U	100 U	100 U
Diesel-Range Hydrocarbon[(a)]	100	>S	>S	98.0 U	100 U	99.0 U	100 U	**126** J	106 U	108 U	97.1 U
Oil-Range Hydrocarbons[(a)]	300	>S	>S	196 U	200 U	198 U	200 U	**739**	213 U	215 U	194 U
Volatile Organic Compounds (µg/L; SW-846 8260C)											
Benzene	0.46	210.00	1,800.00	0.200 U	0.200 U	0.200 U	0.200 U	**0.206**	0.200 U	0.200 U	0.200 U
Ethylbenzene	1.5	620.0	4,500.0	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Toluene	1,100	>S	220,000	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Total Xylenes	190	86,000	23,000	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	**1.69**	1.50 U	1.50 U
Metals (µg/L; 6020A/SW-846 7470A)											
Total Lead	15	NV	>S	**81.0**	**25.0**	**86.3**	**164**	**144**	**104**	**108**	**112**
Dissolved Lead	15	NV	>S	0.200 U	**0.622**	**7.32**	**0.256**	**0.522**	0.200 U	0.200 U	**47.3**

Notes/Qualifiers:

(a) To achieve the applicable RBC, results for diesel-range organics and oil-range organics were reported down the method detection limit (MDL), and nondetects are reported as the MDL.

Bold text indicates detected analyte

Green shading = detected analyte exceeds most stringent RBC.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

NV = This chemical is considered "nonvolatile" for the purpose of exposure calculations.

>S = This groundwater RBC exceeds the solubility limit.

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

ID = Identification

MDL = method detection limit

µg/L = micrograms per liter

NWTPH-Dx = Northwest diesel-range total petroleum hydrocarbon extended

NWTPH-Gx = Northwest gasoline-range total petroleum hydrocarbon extended

RBC = risk-based concentration

APPENDIX A

Laboratory Analytical Reports

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Monday, March 12, 2018

Della Fawcett
Landau Associates
1500 SW First Avenue Suite 1015
Portland, OR 97201

RE: Metro Elmonica Opportunity Site / 1346009.010.012

Enclosed are the results of analyses for work order A8B0382, which was received by the laboratory on 2/15/2018 at 8:02:00AM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

AMENDED REPORT

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-6 (10-10.5)	A8B0382-01	Soil	02/14/18 09:00	02/15/18 08:02
B-4 (10-10.5)	A8B0382-02	Soil	02/14/18 09:50	02/15/18 08:02
B-8 (10-10.5)	A8B0382-03	Soil	02/14/18 10:25	02/15/18 08:02
B-7 (10-10.5)	A8B0382-04	Soil	02/14/18 11:30	02/15/18 08:02
B-1 (9.5-10)	A8B0382-05	Soil	02/14/18 12:40	02/15/18 08:02
B-5 (3-3.5)	A8B0382-06	Soil	02/14/18 13:40	02/15/18 08:02
B-5 (9.5-10)	A8B0382-07	Soil	02/14/18 13:45	02/15/18 08:02
B-2 (1-2)	A8B0382-08	Soil	02/14/18 14:55	02/15/18 08:02
B-3 (6.5-7)	A8B0382-09	Soil	02/14/18 15:35	02/15/18 08:02
B-3-20180214	A8B0382-10	Water	02/14/18 16:58	02/15/18 08:02
B-2-20180214	A8B0382-11	Water	02/14/18 16:10	02/15/18 08:02
B-5-20180214	A8B0382-12	Water	02/14/18 15:10	02/15/18 08:02
B-1-20180214	A8B0382-13	Water	02/14/18 14:15	02/15/18 08:02
B-7-20180214	A8B0382-14	Water	02/14/18 13:15	02/15/18 08:02
B-8-20180214	A8B0382-15	Water	02/14/18 12:00	02/15/18 08:02
B-4-20180214	A8B0382-16	Water	02/14/18 10:55	02/15/18 08:02
B-6-20180214	A8B0382-17	Water	02/14/18 09:20	02/15/18 08:02

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL CASE NARRATIVE

Work Order: A8B0382

Amended Report Revision 1:

Reporting to the Method Detection Limits (MDLs)-

This report supersedes all previous reports.

The final report has been amended to report all water samples by method NWTPHDx to the MDL.

Lisa Domenighini
Client Services Manager
3-12-18

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-6 (10-10.5) (A8B0382-01)			**Matrix: Soil**		**Batch: 8020852**			
Diesel	ND	---	26.8	mg/kg dry	1	02/20/18 19:47	NWTPH-Dx	
Oil	ND	---	53.6	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 76 %*	*Limits: 50-150 %*	"	"	"	
B-4 (10-10.5) (A8B0382-02)			**Matrix: Soil**		**Batch: 8020734**			
Diesel	ND	---	26.5	mg/kg dry	1	02/16/18 01:23	NWTPH-Dx	
Oil	ND	---	53.1	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 95 %*	*Limits: 50-150 %*	"	"	"	
B-8 (10-10.5) (A8B0382-03)			**Matrix: Soil**		**Batch: 8020734**			
Diesel	ND	---	26.9	mg/kg dry	1	02/16/18 01:44	NWTPH-Dx	
Oil	ND	---	53.9	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 89 %*	*Limits: 50-150 %*	"	"	"	
B-7 (10-10.5) (A8B0382-04)			**Matrix: Soil**		**Batch: 8020769**			
Diesel	ND	---	26.2	mg/kg dry	1	02/16/18 23:37	NWTPH-Dx	
Oil	ND	---	52.5	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 61 %*	*Limits: 50-150 %*	"	"	"	
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020769**			
Diesel	ND	---	27.1	mg/kg dry	1	02/16/18 23:58	NWTPH-Dx	
Oil	ND	---	54.3	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 72 %*	*Limits: 50-150 %*	"	"	"	
B-5 (9.5-10) (A8B0382-07)			**Matrix: Soil**		**Batch: 8020769**			
Diesel	**31.0**	---	26.7	mg/kg dry	1	02/17/18 00:19	NWTPH-Dx	F-13
Oil	**267**	---	53.5	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 65 %*	*Limits: 50-150 %*	"	"	"	
B-2 (1-2) (A8B0382-08)			**Matrix: Soil**		**Batch: 8020769**			
Diesel	ND	---	209	mg/kg dry	10	02/17/18 00:40	NWTPH-Dx	
Oil	**882**	---	418	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 94 %*	*Limits: 50-150 %*	"	"	"	*S-05*
B-3 (6.5-7) (A8B0382-09)			**Matrix: Soil**		**Batch: 8020769**			
Diesel	ND	---	25.3	mg/kg dry	1	02/17/18 01:22	NWTPH-Dx	
Oil	ND	---	50.6	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 65 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-3-20180214 (A8B0382-10)			**Matrix: Water**		**Batch: 8020736**			
Diesel	ND	0.0990	0.198	mg/L	1	02/15/18 22:42	NWTPH-Dx	
Oil	ND	0.198	0.396	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 99 %*	*Limits: 50-150 %*	"	"	"	
B-2-20180214 (A8B0382-11)			**Matrix: Water**		**Batch: 8020736**			
Diesel	ND	0.100	0.200	mg/L	1	02/15/18 23:05	NWTPH-Dx	
Oil	ND	0.200	0.400	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 96 %*	*Limits: 50-150 %*	"	"	"	
B-5-20180214 (A8B0382-12)			**Matrix: Water**		**Batch: 8020736**			
Diesel	**0.126**	0.0943	0.189	mg/L	1	02/15/18 23:28	NWTPH-Dx	J
Oil	**0.739**	0.189	0.377	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 99 %*	*Limits: 50-150 %*	"	"	"	
B-1-20180214 (A8B0382-13)			**Matrix: Water**		**Batch: 8020736**			
Diesel	ND	0.0980	0.196	mg/L	1	02/15/18 23:50	NWTPH-Dx	
Oil	ND	0.196	0.392	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 95 %*	*Limits: 50-150 %*	"	"	"	
B-7-20180214 (A8B0382-14)			**Matrix: Water**		**Batch: 8020736**			
Diesel	ND	0.108	0.215	mg/L	1	02/16/18 00:13	NWTPH-Dx	
Oil	ND	0.215	0.430	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 101 %*	*Limits: 50-150 %*	"	"	"	
B-8-20180214 (A8B0382-15)			**Matrix: Water**		**Batch: 8020736**			
Diesel	ND	0.0971	0.194	mg/L	1	02/16/18 00:36	NWTPH-Dx	
Oil	ND	0.194	0.388	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 100 %*	*Limits: 50-150 %*	"	"	"	
B-4-20180214 (A8B0382-16)			**Matrix: Water**		**Batch: 8020736**			
Diesel	ND	0.100	0.200	mg/L	1	02/16/18 00:59	NWTPH-Dx	
Oil	ND	0.200	0.400	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 100 %*	*Limits: 50-150 %*	"	"	"	
B-6-20180214 (A8B0382-17)			**Matrix: Water**		**Batch: 8020894**			
Diesel	ND	0.106	0.213	mg/L	1	02/21/18 19:31	NWTPH-Dx	
Oil	ND	0.213	0.426	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 100 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-6 (10-10.5) (A8B0382-01)			**Matrix: Soil**		**Batch: 8020833**			
Gasoline Range Organics	ND	---	7.58	mg/kg dry	50	02/20/18 14:19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*95 %*	*Limits: 50-150 %*	"	"	"	
B-4 (10-10.5) (A8B0382-02)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	ND	---	7.18	mg/kg dry	50	02/15/18 12:49	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*98 %*	*Limits: 50-150 %*	"	"	"	
B-8 (10-10.5) (A8B0382-03)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	ND	---	7.29	mg/kg dry	50	02/15/18 13:42	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*98 %*	*Limits: 50-150 %*	"	"	"	
B-7 (10-10.5) (A8B0382-04)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	ND	---	7.13	mg/kg dry	50	02/15/18 14:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	ND	---	7.50	mg/kg dry	50	02/15/18 14:36	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*98 %*	*Limits: 50-150 %*	"	"	"	
B-5 (9.5-10) (A8B0382-07)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	**52.3**	---	7.36	mg/kg dry	50	02/15/18 15:02	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 109 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*103 %*	*Limits: 50-150 %*	"	"	"	
B-2 (1-2) (A8B0382-08)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	ND	---	4.94	mg/kg dry	50	02/15/18 15:29	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
B-3 (6.5-7) (A8B0382-09)			**Matrix: Soil**		**Batch: 8020706**			
Gasoline Range Organics	ND	---	6.80	mg/kg dry	50	02/15/18 15:56	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-3-20180214 (A8B0382-10)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/15/18 15:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*107 %*	*Limits: 50-150 %*	"	"	"	
B-2-20180214 (A8B0382-11)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/15/18 15:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 110 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
B-5-20180214 (A8B0382-12)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	**1.47**	---	0.100	mg/L	1	02/15/18 16:05	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 106 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*108 %*	*Limits: 50-150 %*	"	"	"	
B-1-20180214 (A8B0382-13)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	**0.673**	---	0.100	mg/L	1	02/15/18 17:02	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 116 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*116 %*	*Limits: 50-150 %*	"	"	"	
B-7-20180214 (A8B0382-14)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/15/18 17:30	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*107 %*	*Limits: 50-150 %*	"	"	"	
B-8-20180214 (A8B0382-15)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/15/18 17:58	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 108 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*108 %*	*Limits: 50-150 %*	"	"	"	
B-4-20180214 (A8B0382-16)			**Matrix: Water**		**Batch: 8020687**			
Gasoline Range Organics	**0.180**	---	0.100	mg/L	1	02/15/18 18:26	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 107 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
B-6-20180214 (A8B0382-17)			**Matrix: Water**		**Batch: 8020830**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	02/20/18 16:39	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 116 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*121 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-6 (10-10.5) (A8B0382-01)			**Matrix: Soil**		**Batch: 8020833**			
Benzene	ND	---	15.2	ug/kg dry	50	02/20/18 14:19	5035A/8260C	
Ethylbenzene	ND	---	37.9	"	"	"	"	
Toluene	ND	---	75.8	"	"	"	"	
Xylenes, total	ND	---	114	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
B-4 (10-10.5) (A8B0382-02)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	14.4	ug/kg dry	50	02/15/18 12:49	5035A/8260C	
Ethylbenzene	ND	---	35.9	"	"	"	"	
Toluene	ND	---	71.8	"	"	"	"	
Xylenes, total	ND	---	108	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
B-8 (10-10.5) (A8B0382-03)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	14.6	ug/kg dry	50	02/15/18 13:42	5035A/8260C	
Ethylbenzene	ND	---	36.5	"	"	"	"	
Toluene	ND	---	72.9	"	"	"	"	
Xylenes, total	ND	---	109	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
B-7 (10-10.5) (A8B0382-04)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	14.3	ug/kg dry	50	02/15/18 14:09	5035A/8260C	
Ethylbenzene	ND	---	35.7	"	"	"	"	
Toluene	ND	---	71.3	"	"	"	"	
Xylenes, total	ND	---	107	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	15.0	ug/kg dry	50	02/15/18 14:36	5035A/8260C	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020706**			
Ethylbenzene	ND	---	37.5	ug/kg dry	50	"	5035A/8260C	
Toluene	ND	---	75.0	"	"	"	"	
Xylenes, total	ND	---	113	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
B-5 (9.5-10) (A8B0382-07)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	14.7	ug/kg dry	50	02/15/18 15:02	5035A/8260C	
Ethylbenzene	ND	---	36.8	"	"	"	"	
Toluene	ND	---	73.6	"	"	"	"	
Xylenes, total	ND	---	110	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
B-2 (1-2) (A8B0382-08)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	9.89	ug/kg dry	50	02/15/18 15:29	5035A/8260C	
Ethylbenzene	ND	---	24.7	"	"	"	"	
Toluene	ND	---	49.4	"	"	"	"	
Xylenes, total	ND	---	74.1	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
B-3 (6.5-7) (A8B0382-09)			**Matrix: Soil**		**Batch: 8020706**			
Benzene	ND	---	13.6	ug/kg dry	50	02/15/18 15:56	5035A/8260C	
Ethylbenzene	ND	---	34.0	"	"	"	"	
Toluene	ND	---	68.0	"	"	"	"	
Xylenes, total	ND	---	102	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
B-3-20180214 (A8B0382-10)			**Matrix: Water**		**Batch: 8020687**			
Benzene	ND	---	0.200	ug/L	1	02/15/18 15:09	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-3-20180214 (A8B0382-10)			**Matrix: Water**		**Batch: 8020687**			
Toluene	ND	---	1.00	ug/L	1	"	EPA 8260C	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
B-2-20180214 (A8B0382-11)			**Matrix: Water**		**Batch: 8020687**			
Benzene	ND	---	0.200	ug/L	1	02/15/18 15:37	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 107 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
B-5-20180214 (A8B0382-12)			**Matrix: Water**		**Batch: 8020687**			
Benzene	**0.206**	---	0.200	ug/L	1	02/15/18 16:05	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
B-1-20180214 (A8B0382-13)			**Matrix: Water**		**Batch: 8020687**			
Benzene	ND	---	0.200	ug/L	1	02/15/18 17:02	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*110 %*	*Limits: 80-120 %*	"	"	"	
B-7-20180214 (A8B0382-14)			**Matrix: Water**		**Batch: 8020687**			
Benzene	ND	---	0.200	ug/L	1	02/15/18 17:30	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-7-20180214 (A8B0382-14)			**Matrix: Water**		**Batch: 8020687**			
Xylenes, total	ND	---	1.50	ug/L	1	"	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
B-8-20180214 (A8B0382-15)			**Matrix: Water**		**Batch: 8020687**			
Benzene	ND	---	0.200	ug/L	1	02/15/18 17:58	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	
B-4-20180214 (A8B0382-16)			**Matrix: Water**		**Batch: 8020687**			
Benzene	ND	---	0.200	ug/L	1	02/15/18 18:26	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*106 %*	*Limits: 80-120 %*	"	"	"	
B-6-20180214 (A8B0382-17)			**Matrix: Water**		**Batch: 8020830**			
Benzene	ND	---	0.200	ug/L	1	02/20/18 16:39	EPA 8260C	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
Xylenes, total	**1.69**	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 119 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-4 (10-10.5) (A8B0382-02)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	12.1	ug/kg dry	1	02/16/18 12:40	EPA 8082A	
Aroclor 1221	ND	---	12.1	"	"	"	"	
Aroclor 1232	ND	---	12.1	"	"	"	"	
Aroclor 1242	ND	---	12.1	"	"	"	"	
Aroclor 1248	ND	---	12.1	"	"	"	"	
Aroclor 1254	ND	---	12.1	"	"	"	"	
Aroclor 1260	ND	---	12.1	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 77 %*	*Limits: 53-120 %*	"	"	"	
B-8 (10-10.5) (A8B0382-03)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	13.2	ug/kg dry	1	02/16/18 13:17	EPA 8082A	
Aroclor 1221	ND	---	13.2	"	"	"	"	
Aroclor 1232	ND	---	13.2	"	"	"	"	
Aroclor 1242	ND	---	13.2	"	"	"	"	
Aroclor 1248	ND	---	13.2	"	"	"	"	
Aroclor 1254	ND	---	13.2	"	"	"	"	
Aroclor 1260	ND	---	13.2	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 83 %*	*Limits: 53-120 %*	"	"	"	
B-7 (10-10.5) (A8B0382-04)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	12.9	ug/kg dry	1	02/16/18 11:27	EPA 8082A	
Aroclor 1221	ND	---	12.9	"	"	"	"	
Aroclor 1232	ND	---	12.9	"	"	"	"	
Aroclor 1242	ND	---	12.9	"	"	"	"	
Aroclor 1248	ND	---	12.9	"	"	"	"	
Aroclor 1254	ND	---	12.9	"	"	"	"	
Aroclor 1260	ND	---	12.9	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 88 %*	*Limits: 53-120 %*	"	"	"	
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	11.7	ug/kg dry	1	02/16/18 12:03	EPA 8082A	
Aroclor 1221	ND	---	11.7	"	"	"	"	
Aroclor 1232	ND	---	11.7	"	"	"	"	
Aroclor 1242	ND	---	11.7	"	"	"	"	
Aroclor 1248	ND	---	11.7	"	"	"	"	
Aroclor 1254	ND	---	11.7	"	"	"	"	
Aroclor 1260	ND	---	11.7	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 81 %*	*Limits: 53-120 %*	1	"	EPA 8082A	
B-5 (9.5-10) (A8B0382-07)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	13.5	ug/kg dry	1	02/16/18 12:40	EPA 8082A	
Aroclor 1221	ND	---	13.5	"	"	"	"	
Aroclor 1232	ND	---	13.5	"	"	"	"	
Aroclor 1242	ND	---	13.5	"	"	"	"	
Aroclor 1248	ND	---	13.5	"	"	"	"	
Aroclor 1254	ND	---	13.5	"	"	"	"	
Aroclor 1260	ND	---	13.5	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 89 %*	*Limits: 53-120 %*	"	"	"	
B-2 (1-2) (A8B0382-08)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	9.97	ug/kg dry	1	02/16/18 13:17	EPA 8082A	
Aroclor 1221	ND	---	9.97	"	"	"	"	
Aroclor 1232	ND	---	9.97	"	"	"	"	
Aroclor 1242	ND	---	9.97	"	"	"	"	
Aroclor 1248	ND	---	9.97	"	"	"	"	
Aroclor 1254	ND	---	9.97	"	"	"	"	
Aroclor 1260	ND	---	9.97	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 100 %*	*Limits: 53-120 %*	"	"	"	
B-3 (6.5-7) (A8B0382-09)			**Matrix: Soil**		**Batch: 8020720**			**C-07**
Aroclor 1016	ND	---	12.0	ug/kg dry	1	02/16/18 09:37	EPA 8082A	
Aroclor 1221	ND	---	12.0	"	"	"	"	
Aroclor 1232	ND	---	12.0	"	"	"	"	
Aroclor 1242	ND	---	12.0	"	"	"	"	
Aroclor 1248	ND	---	12.0	"	"	"	"	
Aroclor 1254	ND	---	12.0	"	"	"	"	
Aroclor 1260	ND	---	12.0	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 88 %*	*Limits: 53-120 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-6 (10-10.5) (A8B0382-01)			**Matrix: Soil**					
Batch: 8020869								
Lead	**9.14**	---	0.295	mg/kg dry	10	02/22/18 20:59	EPA 6020A	
B-4 (10-10.5) (A8B0382-02)			**Matrix: Soil**					
Batch: 8020869								
Lead	**10.1**	---	0.278	mg/kg dry	10	02/22/18 21:03	EPA 6020A	
B-8 (10-10.5) (A8B0382-03)			**Matrix: Soil**					
Batch: 8020869								
Lead	**9.66**	---	0.273	mg/kg dry	10	02/22/18 21:06	EPA 6020A	
B-7 (10-10.5) (A8B0382-04)			**Matrix: Soil**					
Batch: 8020869								
Lead	**10.5**	---	0.271	mg/kg dry	10	02/22/18 21:21	EPA 6020A	
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**					
Batch: 8020869								
Lead	**12.1**	---	0.287	mg/kg dry	10	02/22/18 21:25	EPA 6020A	
B-5 (9.5-10) (A8B0382-07)			**Matrix: Soil**					
Batch: 8020869								
Lead	**13.3**	---	0.279	mg/kg dry	10	02/22/18 21:39	EPA 6020A	
B-2 (1-2) (A8B0382-08)			**Matrix: Soil**					
Batch: 8020869								
Lead	**15.8**	---	0.239	mg/kg dry	10	02/22/18 21:43	EPA 6020A	
B-3 (6.5-7) (A8B0382-09)			**Matrix: Soil**					
Batch: 8020869								
Lead	**10.7**	---	0.258	mg/kg dry	10	02/22/18 21:47	EPA 6020A	
B-3-20180214 (A8B0382-10RE1)			**Matrix: Water**					
Batch: 8020868								
Lead	**86.3**	---	2.00	ug/L	10	02/22/18 14:29	EPA 6020A	
B-2-20180214 (A8B0382-11)			**Matrix: Water**					
Batch: 8020868								
Lead	**25.0**	---	0.200	ug/L	1	02/21/18 21:45	EPA 6020A	
B-5-20180214 (A8B0382-12RE1)			**Matrix: Water**					
Batch: 8020868								
Lead	**144**	---	10.0	ug/L	50	02/22/18 14:33	EPA 6020A	
B-1-20180214 (A8B0382-13RE1)			**Matrix: Water**					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-1-20180214 (A8B0382-13RE1)			**Matrix: Water**					
Batch: 8020868								
Lead	**81.0**	---	2.00	ug/L	10	02/22/18 14:36	EPA 6020A	
B-7-20180214 (A8B0382-14)			**Matrix: Water**					
Batch: 8020871								
Lead	**108**	---	2.00	ug/L	10	02/22/18 18:44	EPA 6020A	
B-8-20180214 (A8B0382-15)			**Matrix: Water**					
Batch: 8020871								
Lead	**112**	---	2.00	ug/L	10	02/22/18 18:47	EPA 6020A	
B-4-20180214 (A8B0382-16)			**Matrix: Water**					
Batch: 8020871								
Lead	**164**	---	2.00	ug/L	10	02/22/18 19:02	EPA 6020A	
B-6-20180214 (A8B0382-17RE1)			**Matrix: Water**					
Batch: 8020868								
Lead	**104**	---	2.00	ug/L	10	02/22/18 14:40	EPA 6020A	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-3-20180214 (A8B0382-10)			**Matrix: Water**					
Batch: 8020882								
Lead	**7.32**	---	0.200	ug/L	1	02/22/18 16:15	EPA 6020A (Diss)	
B-2-20180214 (A8B0382-11)			**Matrix: Water**					
Batch: 8020861								
Lead	**0.622**	---	0.200	ug/L	1	02/21/18 18:02	EPA 6020A (Diss)	
B-5-20180214 (A8B0382-12)			**Matrix: Water**					
Batch: 8020861								
Lead	**0.522**	---	0.200	ug/L	1	02/21/18 18:06	EPA 6020A (Diss)	
B-1-20180214 (A8B0382-13)			**Matrix: Water**					
Batch: 8020861								
Lead	ND	---	0.200	ug/L	1	02/21/18 18:09	EPA 6020A (Diss)	
B-7-20180214 (A8B0382-14)			**Matrix: Water**					
Batch: 8020861								
Lead	ND	---	0.200	ug/L	1	02/21/18 18:13	EPA 6020A (Diss)	
B-8-20180214 (A8B0382-15)			**Matrix: Water**					
Batch: 8020882								
Lead	**47.3**	---	0.200	ug/L	1	02/22/18 16:19	EPA 6020A (Diss)	
B-4-20180214 (A8B0382-16)			**Matrix: Water**					
Batch: 8020861								
Lead	**0.256**	---	0.200	ug/L	1	02/21/18 18:57	EPA 6020A (Diss)	
B-6-20180214 (A8B0382-17)			**Matrix: Water**					
Batch: 8020861								
Lead	ND	---	0.200	ug/L	1	02/21/18 19:00	EPA 6020A (Diss)	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-6 (10-10.5) (A8B0382-01)			**Matrix: Soil**		**Batch: 8020848**			
% Solids	**72.7**	---	1.00	% by Weight	1	02/21/18 07:18	EPA 8000C	
B-4 (10-10.5) (A8B0382-02)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**72.9**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	
B-8 (10-10.5) (A8B0382-03)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**73.2**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	
B-7 (10-10.5) (A8B0382-04)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**73.0**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	
B-1 (9.5-10) (A8B0382-05)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**72.2**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	
B-5 (9.5-10) (A8B0382-07)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**71.6**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	
B-2 (1-2) (A8B0382-08)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**91.6**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	
B-3 (6.5-7) (A8B0382-09)			**Matrix: Soil**		**Batch: 8020730**			
% Solids	**74.6**	---	1.00	% by Weight	1	02/16/18 08:00	EPA 8000C	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020734 - EPA 3546 (Fuels)									Soil			
Blank (8020734-BLK1)					Prepared: 02/15/18 13:36 Analyzed: 02/15/18 21:11							
NWTPH-Dx												
Diesel	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	36.4	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 101 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (8020734-BS1)					Prepared: 02/15/18 13:36 Analyzed: 02/15/18 21:32							
NWTPH-Dx												
Diesel	114	---	20.0	mg/kg wet	1	125	---	91	76-115%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 103 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (8020734-DUP2)					Prepared: 02/15/18 13:40 Analyzed: 02/16/18 02:05							
QC Source Sample: B-8 (10-10.5) (A8B0382-03)												
NWTPH-Dx												
Diesel	ND	---	27.1	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	54.2	"	"	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 88 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Batch 8020736 - EPA 3510C (Fuels/Acid Ext.)									Water			
Blank (8020736-BLK1)					Prepared: 02/15/18 13:46 Analyzed: 02/15/18 21:11							
NWTPH-Dx												
Diesel	ND	0.0909	0.182	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.182	0.364	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (8020736-BS1)					Prepared: 02/15/18 13:46 Analyzed: 02/15/18 21:33							
NWTPH-Dx												
Diesel	1.06	0.100	0.200	mg/L	1	1.25	---	85	58-115%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 103 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS Dup (8020736-BSD1)					Prepared: 02/15/18 13:46 Analyzed: 02/15/18 21:56							Q-19
NWTPH-Dx												
Diesel	1.14	0.100	0.200	mg/L	1	1.25	---	91	58-115%	7	20%	
Surr: o-Terphenyl (Surr)			*Recovery: 103 %*	*Limits: 50-150 %*			*Dilution: 1x*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020769 - EPA 3546 (Fuels)							**Soil**					
Blank (8020769-BLK1)					Prepared: 02/16/18 13:30 Analyzed: 02/16/18 20:49							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 96 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (8020769-BS1)					Prepared: 02/16/18 13:30 Analyzed: 02/16/18 21:09							
NWTPH-Dx												
Diesel	116	---	25.0	mg/kg wet	1	125	---	93	76-115%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020852 - EPA 3546 (Fuels)							**Soil**					
Blank (8020852-BLK1)					Prepared: 02/20/18 13:38 Analyzed: 02/20/18 19:05							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (8020852-BS1)					Prepared: 02/20/18 13:38 Analyzed: 02/20/18 19:26							
NWTPH-Dx												
Diesel	109	---	25.0	mg/kg wet	1	125	---	87	76-115%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 95 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (8020852-DUP1)					Prepared: 02/20/18 13:38 Analyzed: 02/20/18 20:08							
QC Source Sample: B-6 (10-10.5) (A8B0382-01)												
NWTPH-Dx												
Diesel	ND	---	26.8	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	53.7	"	"	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 85 %*	*Limits: 50-150 %*			*Dilution: 1x*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020894 - EPA 3510C (Fuels/Acid Ext.)									**Water**			
Blank (8020894-BLK1)					Prepared: 02/21/18 15:50 Analyzed: 02/21/18 18:22							
NWTPH-Dx												
Diesel	ND	0.100	0.200	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.200	0.400	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 102 %*	*Limits: 50-150 %*		*Dilution: 1x*						
LCS (8020894-BS1)					Prepared: 02/21/18 15:50 Analyzed: 02/21/18 18:45							
NWTPH-Dx												
Diesel	1.17	0.100	0.200	mg/L	1	1.25	---	94	58-115%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 106 %*	*Limits: 50-150 %*		*Dilution: 1x*						
LCS Dup (8020894-BSD1)					Prepared: 02/21/18 15:50 Analyzed: 02/21/18 19:08							Q-19
NWTPH-Dx												
Diesel	1.18	0.100	0.200	mg/L	1	1.25	---	95	58-115%	1	20%	
Surr: o-Terphenyl (Surr)			*Recovery: 106 %*	*Limits: 50-150 %*		*Dilution: 1x*						

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020687 - EPA 5030B									Water			
Blank (8020687-BLK1)					Prepared: 02/15/18 09:31	Analyzed: 02/15/18 11:51						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 110 %*		*Limits: 50-150 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Sur)			*109 %*		*50-150 %*			*"*				
LCS (8020687-BS2)					Prepared: 02/15/18 09:31	Analyzed: 02/15/18 10:27						
NWTPH-Gx (MS)												
Gasoline Range Organics	0.508	---	0.100	mg/L	1	0.500	---	102	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*		*Limits: 50-150 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Sur)			*104 %*		*50-150 %*			*"*				
Duplicate (8020687-DUP1)					Prepared: 02/15/18 11:22	Analyzed: 02/15/18 16:33						
QC Source Sample: B-5-20180214 (A8B0382-12)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**1.39**	---	0.100	mg/L	1	---	1.47	---	---	5	30%	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*		*Limits: 50-150 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Sur)			*107 %*		*50-150 %*			*"*				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020706 - EPA 5035A									Soil			
Blank (8020706-BLK1)					Prepared: 02/15/18 08:30 Analyzed: 02/15/18 11:29							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*97 %*	*50-150 %*			*"*					
LCS (8020706-BS2)					Prepared: 02/15/18 08:30 Analyzed: 02/15/18 11:02							
NWTPH-Gx (MS)												
Gasoline Range Organics	25.3	---	5.00	mg/kg wet	50	25.0	---	101	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*			*"*					
Duplicate (8020706-DUP1)					Prepared: 02/14/18 09:50 Analyzed: 02/15/18 13:16							
QC Source Sample: B-4 (10-10.5) (A8B0382-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	7.46	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 107 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*98 %*	*50-150 %*			*"*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020830 - EPA 5030B									**Water**			
Blank (8020830-BLK1)					Prepared: 02/20/18 09:14 Analyzed: 02/20/18 12:58							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 112 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*117 %*		*50-150 %*				*"*			
LCS (8020830-BS5)					Prepared: 02/20/18 09:14 Analyzed: 02/20/18 12:31							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.485	---	0.100	mg/L	1	0.500	---	97	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*104 %*		*50-150 %*				*"*			

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020833 - EPA 5035A									Soil			
Blank (8020833-BLK1)					Prepared: 02/20/18 10:17 Analyzed: 02/20/18 12:05							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 101 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*94 %*	*50-150 %*			*"*					
LCS (8020833-BS2)					Prepared: 02/20/18 10:17 Analyzed: 02/20/18 11:38							
NWTPH-Gx (MS)												
Gasoline Range Organics	24.6	---	5.00	mg/kg wet	50	25.0	---	98	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*98 %*	*50-150 %*			*"*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020687 - EPA 5030B									Water			
Blank (8020687-BLK1)					Prepared: 02/15/18 09:31 Analyzed: 02/15/18 11:51							
EPA 8260C												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 106 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*100 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*104 %*		*80-120 %*				*"*			
LCS (8020687-BS3)					Prepared: 02/15/18 09:31 Analyzed: 02/15/18 10:55							
EPA 8260C												
Benzene	20.0	---	0.200	ug/L	1	20.0	---	100	80-120%	---	---	
Ethylbenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	
Toluene	19.4	---	1.00	"	"	"	---	97	"	---	---	
Xylenes, total	60.1	---	1.50	"	"	60.0	---	100	"	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*98 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*				*"*			
Duplicate (8020687-DUP1)					Prepared: 02/15/18 11:22 Analyzed: 02/15/18 16:33							
QC Source Sample: B-5-20180214 (A8B0382-12)												
EPA 8260C												
Benzene	**0.201**	---	0.200	ug/L	1	---	0.206	---	---	2	30%	
Ethylbenzene	ND	---	0.500	"	"	---	0.315	---	---	5	30%	
Toluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	1.50	"	"	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*102 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*				*"*			

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020706 - EPA 5035A							**Soil**					
Blank (8020706-BLK1)					Prepared: 02/15/18 08:30 Analyzed: 02/15/18 11:29							
5035A/8260C												
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*102 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*		*"*					
LCS (8020706-BS1)					Prepared: 02/15/18 08:30 Analyzed: 02/15/18 10:35							
5035A/8260C												
Benzene	941	---	10.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Ethylbenzene	969	---	25.0	"	"	"	---	97	"	---	---	
Toluene	972	---	50.0	"	"	"	---	97	"	---	---	
Xylenes, total	2940	---	75.0	"	"	3000	---	98	"	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*101 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*96 %*		*80-120 %*		*"*					
Duplicate (8020706-DUP1)					Prepared: 02/14/18 09:50 Analyzed: 02/15/18 13:16							
QC Source Sample: B-4 (10-10.5) (A8B0382-02)												
5035A/8260C												
Benzene	ND	---	14.9	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	37.3	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	74.6	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	112	"	"	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*100 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*97 %*		*80-120 %*		*"*					
Matrix Spike (8020706-MS1)					Prepared: 02/14/18 15:35 Analyzed: 02/15/18 16:22							
QC Source Sample: B-3 (6.5-7) (A8B0382-09)												
5035A/8260C												
Benzene	1380	---	13.6	ug/kg dry	50	1360	ND	102	77-121%	---	---	
Ethylbenzene	1340	---	34.0	"	"	"	ND	99	76-122%	---	---	
Toluene	1330	---	68.0	"	"	"	ND	98	77-121%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020706 - EPA 5035A							**Soil**					
Matrix Spike (8020706-MS1)					Prepared: 02/14/18 15:35 Analyzed: 02/15/18 16:22							
QC Source Sample: B-3 (6.5-7) (A8B0382-09)												
5035A/8260C												
Xylenes, total	4080	---	102	ug/kg dry	"	4070	ND	100	78-124%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*99 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*96 %*		*80-120 %*		*"*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020830 - EPA 5030B									Water			
Blank (8020830-BLK1)					Prepared: 02/20/18 09:14 Analyzed: 02/20/18 12:58							
EPA 8260C												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 115 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*96 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			
LCS (8020830-BS4)					Prepared: 02/20/18 09:14 Analyzed: 02/20/18 12:04							
EPA 8260C												
Benzene	19.0	---	0.200	ug/L	1	20.0	---	95	80-120%	---	---	
Ethylbenzene	18.5	---	0.500	"	"	"	---	93	"	---	---	
Toluene	18.5	---	1.00	"	"	"	---	93	"	---	---	
Xylenes, total	54.8	---	1.50	"	"	60.0	---	91	"	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*95 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*				*"*			

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260C

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020833 - EPA 5035A												**Soil**
Blank (8020833-BLK1)					Prepared: 02/20/18 10:17 Analyzed: 02/20/18 12:05							
5035A/8260C												
Benzene	ND	---	6.67	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*99 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			
LCS (8020833-BS1)					Prepared: 02/20/18 10:17 Analyzed: 02/20/18 10:44							
5035A/8260C												
Benzene	991	---	10.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Ethylbenzene	1020	---	25.0	"	"	"	---	102	"	---	---	
Toluene	939	---	50.0	"	"	"	---	94	"	---	---	
Xylenes, total	3290	---	75.0	"	"	3000	---	110	"	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*99 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020720 - EPA 3546							Soil					
Blank (8020720-BLK1)					Prepared: 02/15/18 10:20		Analyzed: 02/16/18 08:24					C-07
EPA 8082A												
Aroclor 1016	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	7.69	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	---	7.69	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	---	7.69	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	---	7.69	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	---	7.69	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	---	7.69	"	"	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 94 %*	*Limits: 53-120 %*			*Dilution: 1x*					
LCS (8020720-BS1)					Prepared: 02/15/18 10:20		Analyzed: 02/16/18 08:42					C-07
EPA 8082A												
Aroclor 1016	179	---	10.0	ug/kg wet	1	250	---	71	47-134%	---	---	
Aroclor 1260	190	---	10.0	"	"	"	---	76	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 89 %*	*Limits: 53-120 %*			*Dilution: 1x*					
Matrix Spike (8020720-MS1)					Prepared: 02/15/18 10:20		Analyzed: 02/16/18 10:14					C-07
QC Source Sample: B-3 (6.5-7) (A8B0382-09)												
EPA 8082A												
Aroclor 1016	221	---	12.2	ug/kg dry	1	304	ND	73	47-134%	---	---	
Aroclor 1260	238	---	12.2	"	"	"	ND	78	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 95 %*	*Limits: 53-120 %*			*Dilution: 1x*					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020868 - EPA 3015A									Water			
Blank (8020868-BLK1)					Prepared: 02/21/18 09:53		Analyzed: 02/21/18 20:09					
EPA 6020A												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (8020868-BS1)					Prepared: 02/21/18 09:53		Analyzed: 02/21/18 20:12					
EPA 6020A												
Lead	56.9	---	0.200	ug/L	1	55.6	---	102	80-120%	---	---	
Matrix Spike (8020868-MS3)					Prepared: 02/21/18 09:53		Analyzed: 02/22/18 14:43					
QC Source Sample: B-6-20180214 (A8B0382-17RE1)												
EPA 6020A												
Lead	167	---	2.00	ug/L	10	55.6	104	113	75-125%	---	---	Q-16

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020869 - EPA 3051A							**Soil**					
Blank (8020869-BLK1)					Prepared: 02/21/18 11:08		Analyzed: 02/22/18 20:45					
EPA 6020A												
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
LCS (8020869-BS1)					Prepared: 02/21/18 11:08		Analyzed: 02/22/18 20:48					
EPA 6020A												
Lead	54.1	---	0.200	mg/kg wet	10	50.0	---	108	80-120%	---	---	
Duplicate (8020869-DUP1)					Prepared: 02/21/18 11:08		Analyzed: 02/22/18 21:10					
QC Source Sample: B-8 (10-10.5) (A8B0382-03)												
EPA 6020A												
Lead	**10.5**	---	0.265	mg/kg dry	10	---	9.66	---	---	8	40%	
Matrix Spike (8020869-MS1)					Prepared: 02/21/18 11:08		Analyzed: 02/22/18 21:14					
QC Source Sample: B-8 (10-10.5) (A8B0382-03)												
EPA 6020A												
Lead	84.8	---	0.281	mg/kg dry	10	70.2	9.66	107	75-125%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020871 - EPA 3015A									Water			
Blank (8020871-BLK1)					Prepared: 02/21/18 11:21		Analyzed: 02/22/18 18:33					
EPA 6020A												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (8020871-BS1)					Prepared: 02/21/18 11:21		Analyzed: 02/22/18 18:36					
EPA 6020A												
Lead	56.0	---	0.200	ug/L	1	55.6	---	101	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020861 - Matrix Matched Direct Inject								**Water**				
Blank (8020861-BLK1)					Prepared: 02/21/18 08:48		Analyzed: 02/21/18 17:59					
EPA 6020A (Diss)												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (8020861-BS1)					Prepared: 02/21/18 08:48		Analyzed: 02/21/18 18:20					
EPA 6020A (Diss)												
Lead	55.3	---	0.200	ug/L	1	55.6	---	100	80-120%	---	---	
Duplicate (8020861-DUP1)					Prepared: 02/21/18 08:48		Analyzed: 02/21/18 18:17					
QC Source Sample: B-7-20180214 (A8B0382-14)												
EPA 6020A (Diss)												
Lead	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (8020861-MS1)					Prepared: 02/21/18 08:48		Analyzed: 02/21/18 18:24					
QC Source Sample: B-7-20180214 (A8B0382-14)												
EPA 6020A (Diss)												
Lead	55.4	---	0.200	ug/L	1	55.6	ND	100	75-125%	---	---	
Matrix Spike (8020861-MS2)					Prepared: 02/21/18 08:48		Analyzed: 02/21/18 19:05					
QC Source Sample: B-6-20180214 (A8B0382-17)												
EPA 6020A (Diss)												
Lead	55.5	---	0.200	ug/L	1	55.6	ND	100	75-125%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020882 - EPA 3015A - Dissolved									Water			
Blank (8020882-BLK1)					Prepared: 02/21/18 13:25		Analyzed: 02/22/18 16:04					
EPA 6020A (Diss)												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (8020882-BS1)					Prepared: 02/21/18 13:25		Analyzed: 02/22/18 16:08					
EPA 6020A (Diss)												
Lead	55.6	---	0.200	ug/L	1	55.6	---	100	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020730 - Total Solids (Dry Weight)												**Soil**
Duplicate (8020730-DUP3)					Prepared: 02/15/18 12:37		Analyzed: 02/16/18 08:00					
QC Source Sample: B-1 (9.5-10) (A8B0382-05)												
EPA 8000C												
% Solids	**71.4**	---	1.00	% by Weight	1	---	72.2	---	---	1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020848 - Total Solids (Dry Weight)												**Soil**
Duplicate (8020848-DUP1)					Prepared: 02/20/18 13:13		Analyzed: 02/21/18 07:18					
QC Source Sample: B-6 (10-10.5) (A8B0382-01)												
EPA 8000C												
% Solids	**73.8**	---	1.00	% by Weight	1	---	72.7	---	---	2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020736							
A8B0382-10	Water	NWTPH-Dx	02/14/18 16:58	02/15/18 13:46	1010mL/5mL	1000mL/5mL	0.99
A8B0382-11	Water	NWTPH-Dx	02/14/18 16:10	02/15/18 13:46	1000mL/5mL	1000mL/5mL	1.00
A8B0382-12	Water	NWTPH-Dx	02/14/18 15:10	02/15/18 13:46	1060mL/5mL	1000mL/5mL	0.94
A8B0382-13	Water	NWTPH-Dx	02/14/18 14:15	02/15/18 13:46	1020mL/5mL	1000mL/5mL	0.98
A8B0382-14	Water	NWTPH-Dx	02/14/18 13:15	02/15/18 13:46	930mL/5mL	1000mL/5mL	1.08
A8B0382-15	Water	NWTPH-Dx	02/14/18 12:00	02/15/18 13:46	1030mL/5mL	1000mL/5mL	0.97
A8B0382-16	Water	NWTPH-Dx	02/14/18 10:55	02/15/18 13:46	1000mL/5mL	1000mL/5mL	1.00
Batch: 8020894							
A8B0382-17	Water	NWTPH-Dx	02/14/18 09:20	02/21/18 15:50	940mL/5mL	1000mL/5mL	1.06

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020734							
A8B0382-02	Soil	NWTPH-Dx	02/14/18 09:50	02/15/18 13:40	10.34g/5mL	10g/5mL	0.97
A8B0382-03	Soil	NWTPH-Dx	02/14/18 10:25	02/15/18 13:40	10.15g/5mL	10g/5mL	0.99
Batch: 8020769							
A8B0382-04	Soil	NWTPH-Dx	02/14/18 11:30	02/16/18 13:30	10.45g/5mL	10g/5mL	0.96
A8B0382-05	Soil	NWTPH-Dx	02/14/18 12:40	02/16/18 13:30	10.21g/5mL	10g/5mL	0.98
A8B0382-07	Soil	NWTPH-Dx	02/14/18 13:45	02/16/18 13:31	10.45g/5mL	10g/5mL	0.96
A8B0382-08	Soil	NWTPH-Dx	02/14/18 14:55	02/16/18 13:31	10.46g/5mL	10g/5mL	0.96
A8B0382-09	Soil	NWTPH-Dx	02/14/18 15:35	02/16/18 13:31	10.59g/5mL	10g/5mL	0.94
Batch: 8020852							
A8B0382-01	Soil	NWTPH-Dx	02/14/18 09:00	02/20/18 13:37	10.26g/5mL	10g/5mL	0.98

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020687							
A8B0382-10	Water	NWTPH-Gx (MS)	02/14/18 16:58	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-11	Water	NWTPH-Gx (MS)	02/14/18 16:10	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-12	Water	NWTPH-Gx (MS)	02/14/18 15:10	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-13	Water	NWTPH-Gx (MS)	02/14/18 14:15	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-14	Water	NWTPH-Gx (MS)	02/14/18 13:15	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8B0382-15	Water	NWTPH-Gx (MS)	02/14/18 12:00	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-16	Water	NWTPH-Gx (MS)	02/14/18 10:55	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
Batch: 8020830							
A8B0382-17	Water	NWTPH-Gx (MS)	02/14/18 09:20	02/20/18 12:53	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020706							
A8B0382-02	Soil	NWTPH-Gx (MS)	02/14/18 09:50	02/14/18 09:50	6.44g/5mL	5g/5mL	0.78
A8B0382-03	Soil	NWTPH-Gx (MS)	02/14/18 10:25	02/14/18 10:25	6.26g/5mL	5g/5mL	0.80
A8B0382-04	Soil	NWTPH-Gx (MS)	02/14/18 11:30	02/14/18 11:30	6.49g/5mL	5g/5mL	0.77
A8B0382-05	Soil	NWTPH-Gx (MS)	02/14/18 12:40	02/14/18 12:40	6.21g/5mL	5g/5mL	0.81
A8B0382-07	Soil	NWTPH-Gx (MS)	02/14/18 13:45	02/14/18 13:45	6.5g/5mL	5g/5mL	0.77
A8B0382-08	Soil	NWTPH-Gx (MS)	02/14/18 14:55	02/14/18 14:55	6.09g/5mL	5g/5mL	0.82
A8B0382-09	Soil	NWTPH-Gx (MS)	02/14/18 15:35	02/14/18 15:35	6.57g/5mL	5g/5mL	0.76
Batch: 8020833							
A8B0382-01	Soil	NWTPH-Gx (MS)	02/14/18 09:00	02/14/18 09:00	6.03g/5mL	5g/5mL	0.83

BTEX Compounds by EPA 8260C

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020687							
A8B0382-10	Water	EPA 8260C	02/14/18 16:58	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-11	Water	EPA 8260C	02/14/18 16:10	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-12	Water	EPA 8260C	02/14/18 15:10	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-13	Water	EPA 8260C	02/14/18 14:15	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-14	Water	EPA 8260C	02/14/18 13:15	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-15	Water	EPA 8260C	02/14/18 12:00	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
A8B0382-16	Water	EPA 8260C	02/14/18 10:55	02/15/18 11:24	5mL/5mL	5mL/5mL	1.00
Batch: 8020830							
A8B0382-17	Water	EPA 8260C	02/14/18 09:20	02/20/18 12:53	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020706							

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

SAMPLE PREPARATION INFORMATION

BTEX Compounds by EPA 8260C

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8B0382-02	Soil	5035A/8260C	02/14/18 09:50	02/14/18 09:50	6.44g/5mL	5g/5mL	0.78
A8B0382-03	Soil	5035A/8260C	02/14/18 10:25	02/14/18 10:25	6.26g/5mL	5g/5mL	0.80
A8B0382-04	Soil	5035A/8260C	02/14/18 11:30	02/14/18 11:30	6.49g/5mL	5g/5mL	0.77
A8B0382-05	Soil	5035A/8260C	02/14/18 12:40	02/14/18 12:40	6.21g/5mL	5g/5mL	0.81
A8B0382-07	Soil	5035A/8260C	02/14/18 13:45	02/14/18 13:45	6.5g/5mL	5g/5mL	0.77
A8B0382-08	Soil	5035A/8260C	02/14/18 14:55	02/14/18 14:55	6.09g/5mL	5g/5mL	0.82
A8B0382-09	Soil	5035A/8260C	02/14/18 15:35	02/14/18 15:35	6.57g/5mL	5g/5mL	0.76
Batch: 8020833							
A8B0382-01	Soil	5035A/8260C	02/14/18 09:00	02/14/18 09:00	6.03g/5mL	5g/5mL	0.83

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020720							
A8B0382-02	Soil	EPA 8082A	02/14/18 09:50	02/15/18 10:20	11.38g/5mL	10g/5mL	0.88
A8B0382-03	Soil	EPA 8082A	02/14/18 10:25	02/15/18 10:20	10.38g/5mL	10g/5mL	0.96
A8B0382-04	Soil	EPA 8082A	02/14/18 11:30	02/15/18 10:20	10.65g/5mL	10g/5mL	0.94
A8B0382-05	Soil	EPA 8082A	02/14/18 12:40	02/15/18 10:20	11.85g/5mL	10g/5mL	0.84
A8B0382-07	Soil	EPA 8082A	02/14/18 13:45	02/15/18 10:20	10.38g/5mL	10g/5mL	0.96
A8B0382-08	Soil	EPA 8082A	02/14/18 14:55	02/15/18 10:20	10.95g/5mL	10g/5mL	0.91
A8B0382-09	Soil	EPA 8082A	02/14/18 15:35	02/15/18 10:20	11.17g/5mL	10g/5mL	0.90

Total Metals by EPA 6020 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020868							
A8B0382-10RE1	Water	EPA 6020A	02/14/18 16:58	02/21/18 09:53	45mL/50mL	45mL/50mL	1.00
A8B0382-11	Water	EPA 6020A	02/14/18 16:10	02/21/18 09:53	45mL/50mL	45mL/50mL	1.00
A8B0382-12RE1	Water	EPA 6020A	02/14/18 15:10	02/21/18 09:53	45mL/50mL	45mL/50mL	1.00
A8B0382-13RE1	Water	EPA 6020A	02/14/18 14:15	02/21/18 09:53	45mL/50mL	45mL/50mL	1.00
A8B0382-17RE1	Water	EPA 6020A	02/14/18 09:20	02/21/18 09:53	45mL/50mL	45mL/50mL	1.00
Batch: 8020871							
A8B0382-14	Water	EPA 6020A	02/14/18 13:15	02/21/18 11:21	45mL/50mL	45mL/50mL	1.00
A8B0382-15	Water	EPA 6020A	02/14/18 12:00	02/21/18 11:21	45mL/50mL	45mL/50mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8B0382-16	Water	EPA 6020A	02/14/18 10:55	02/21/18 11:21	45mL/50mL	45mL/50mL	1.00

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020869							
A8B0382-01	Soil	EPA 6020A	02/14/18 09:00	02/21/18 11:08	0.466g/50mL	0.5g/50mL	1.07
A8B0382-02	Soil	EPA 6020A	02/14/18 09:50	02/21/18 11:08	0.494g/50mL	0.5g/50mL	1.01
A8B0382-03	Soil	EPA 6020A	02/14/18 10:25	02/21/18 11:08	0.501g/50mL	0.5g/50mL	1.00
A8B0382-04	Soil	EPA 6020A	02/14/18 11:30	02/21/18 11:08	0.506g/50mL	0.5g/50mL	0.99
A8B0382-05	Soil	EPA 6020A	02/14/18 12:40	02/21/18 11:08	0.483g/50mL	0.5g/50mL	1.04
A8B0382-07	Soil	EPA 6020A	02/14/18 13:45	02/21/18 11:08	0.5g/50mL	0.5g/50mL	1.00
A8B0382-08	Soil	EPA 6020A	02/14/18 14:55	02/21/18 11:08	0.456g/50mL	0.5g/50mL	1.10
A8B0382-09	Soil	EPA 6020A	02/14/18 15:35	02/21/18 11:08	0.519g/50mL	0.5g/50mL	0.96

Dissolved Metals by EPA 6020 (ICPMS)

Prep: EPA 3015A - Dissolved

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020882							
A8B0382-10	Water	EPA 6020A (Diss)	02/14/18 16:58	02/21/18 13:25	45mL/50mL	45mL/50mL	1.00
A8B0382-15	Water	EPA 6020A (Diss)	02/14/18 12:00	02/21/18 13:25	45mL/50mL	45mL/50mL	1.00

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020861							
A8B0382-11	Water	EPA 6020A (Diss)	02/14/18 16:10	02/21/18 08:48	45mL/50mL	45mL/50mL	1.00
A8B0382-12	Water	EPA 6020A (Diss)	02/14/18 15:10	02/21/18 08:48	45mL/50mL	45mL/50mL	1.00
A8B0382-13	Water	EPA 6020A (Diss)	02/14/18 14:15	02/21/18 08:48	45mL/50mL	45mL/50mL	1.00
A8B0382-14	Water	EPA 6020A (Diss)	02/14/18 13:15	02/21/18 08:48	45mL/50mL	45mL/50mL	1.00
A8B0382-16	Water	EPA 6020A (Diss)	02/14/18 10:55	02/21/18 08:48	45mL/50mL	45mL/50mL	1.00
A8B0382-17	Water	EPA 6020A (Diss)	02/14/18 09:20	02/21/18 08:48	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8020730							

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8B0382-02	Soil	EPA 8000C	02/14/18 09:50	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
A8B0382-03	Soil	EPA 8000C	02/14/18 10:25	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
A8B0382-04	Soil	EPA 8000C	02/14/18 11:30	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
A8B0382-05	Soil	EPA 8000C	02/14/18 12:40	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
A8B0382-07	Soil	EPA 8000C	02/14/18 13:45	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
A8B0382-08	Soil	EPA 8000C	02/14/18 14:55	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
A8B0382-09	Soil	EPA 8000C	02/14/18 15:35	02/15/18 12:37	1N/A/1N/A	1N/A/1N/A	NA
Batch: 8020848							
A8B0382-01	Soil	EPA 8000C	02/14/18 09:00	02/20/18 13:13	1N/A/1N/A	1N/A/1N/A	NA

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

Notes and Definitions

Qualifiers:

C-07	Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
F-13	The chromatographic pattern does not resemble the fuel standard used for quantitation
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
Q-16	Reanalysis of an original Batch QC sample.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

APEX LABS — **CHAIN OF CUSTODY** — Lab # A8B0382 — COC 1 of 2

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

PO#

Company: LAI | Project Mgr: Della Fawcett | Project Name: Metro Elmonica | Project # 1346009.010.012

Address: 1500 SW 1st Ave, Portland OR 97201 | Phone: 503-542-1080 | Fax: 503-542-1051 | Email: dFawcett@landauinc.com

Sampled by: Sierra Mott / Grey Nostrand

Site Location: (OR) WA Other: ____

ANALYSIS REQUEST

	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	RCRA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn (TOTAL) (DISS) TCLP	1200-COLS	1200-Z	HOLD
1	B-6 (10-10.5)		2/14/18	900	Soil	3		X	X				X			X				X			X
2	B-4 (10-10.5)			950				X	X				X			X				X			
3	B-8 (10-10.5)			1025				X	X				X			X				X			
4	B-7 (10-10.5)			1130				X	X				X			X				X			
5	B-1 (9.5-10)			1240				X	X				X			X				X			
6	B-5 (3-3.5)			1340				X	X				X			X				X			X
7	B-5 (9.5-10)			1345				X	X				X			X				X			
8	B-2 (1-2)			1455				X	X				X			X				X			
9	B-3 (6.5-7)			1535				X	X				X			X				X			
10	B-3-20180214			1658	Aq	7		X	X				X							X			

Normal Turn Around Time (TAT) = 10 Business Days (YES) NO

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: ____

SPECIAL INSTRUCTIONS: Allow samples to settle and collect aliquot from clear portion. Dissolved metals were field filtered.

SAMPLES ARE HELD FOR 30 DAYS

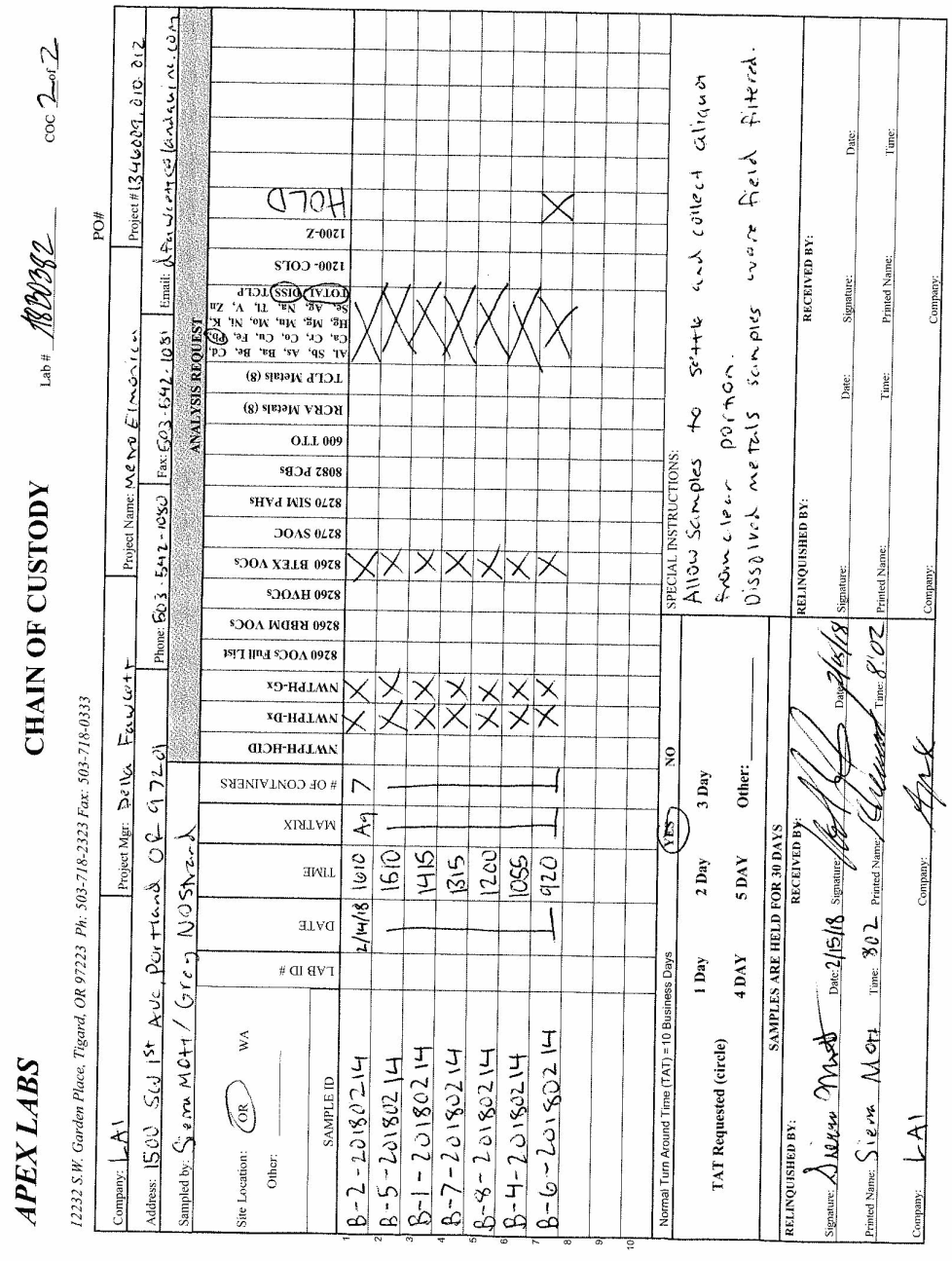
RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date: 2/15/18	Signature: [signature] Date: 2/15/18	Signature: Date:	Signature: Date:
Printed Name: Sierra Mott Time: 802	Printed Name: [signature] Time: 8:02	Printed Name: Time:	Printed Name: Time:
Company: LAI	Company: Apex	Company:	Company:

Apex Labs

AMENDED REPORT

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

AMENDED REPORT

Landau Associates	Project: **Metro Elmonica Opportunity Site**	
1500 SW First Avenue Suite 1015	Project Number: 1346009.010.012	**Reported:**
Portland, OR 97201	Project Manager: Della Fawcett	03/12/18 16:49

APEX LABS COOLER RECEIPT FORM

Client: Landau Element WO#: A8 B0382

Project/Project #: Metro Elmonica / 1346009.010.012

Delivery info:

Date/Time Received: 2/15/18 @ 8:02 By: VAS

Delivered by: Apex___ Client_X_ ESS___ FedEx___ UPS___ Swift___ Senvoy___ SDS___ Other_____

Cooler Inspection Inspected by: VAS : 2/15/18 @ 8:03

Chain of Custody Included? Yes _Y_ No ___ Custody Seals? Yes_____ No_X_

Signed/Dated by Client? Yes _X_ No ___

Signed/Dated by Apex? Yes _X_ No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)							
Received on Ice? (Y/N)							
Temp. Blanks? (Y/N)	1.1	1.6	-0.9				
Ice Type: (Gel/Real/Other)							
Condition:	good	→ Not Frozen					

Cooler out of temp? (Y/N) Possible reason why:_____

If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

Samples Inspection: Inspected by: VAS : 2/15/18 @ 8:10

All Samples Intact? Yes _X_ No ___ Comments:_____

Bottle Labels/COCs agree? Yes ___ No _X_ Comments: Label reads B-5(, logged w/ MeOH was read (VAS ~~B5~~ B-5(3-3.5). T on B-3-20180214,

Containers/Volumes Received Appropriate for Analysis? Yes _X_ No ___ Comments:

Do VOA Vials have Visible Headspace? Yes ___ No _X_ NA ___

Comments Sediment in all water VOAs.

Water Samples: pH Checked and Appropriate (except VOAs): Yes _X_ No___ NA_____

Comments: _____

Additional Information: Label reads 16:38, COC reads 16:58.

Labeled by: VAS Witness: Cooler Inspected by: VAS See Project Contact Form: Y

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager