Technical Memorandum

TO: Ms. Jennifer Lind, Washington State Department of Ecology

FROM: Stephanie Renando and Piper Roelen, PE, Landau Associates, Inc.; Joan Davenport, City of Yakima

DATE: February 16, 2021

RE: **Pre-Construction Groundwater Monitoring Data Report**
Interim Action – Roadway Project
Closed City of Yakima Landfill Site
Yakima, Washington
1148008.040.046

Landau Associates, Inc. (LAI) prepared the following technical memorandum/data report on behalf of the City of Yakima (City) to describe pre-construction groundwater monitoring and sampling activities requested or required under the Agreed Order (AO; Ecology 2017) and Washington State Department of Ecology (Ecology)-approved Interim Action (IA) Work Plan (IAWP; LAI 2019), and certain other tasks requested or required by Ecology (Ecology 2020); and provide data and results from these activities.

Introduction

This data report presents the results of pre-construction, "baseline" groundwater sampling and analysis at the Closed City of Yakima Landfill Site (Site) located in Yakima, Washington (Figure 1) as required under the AO (Ecology 2017), entered into by the City and Ecology or as otherwise requested by Ecology. The AO requires the completion of an IA, updating the Conceptual Site Model (CSM), completing a Feasibility Study, and a draft Cleanup Action Plan for the Site, in compliance with the Model Toxics Control Act process. The City conducted the baseline sampling in November 2020, prior to commencing roadway construction activities, and as required by the Ecology-approved IAWP that was finalized in July 2019 (LAI 2019).

This data report also includes results of groundwater-surface water interface sampling of the Yakima River that was conducted during the same mobilization as the baseline sampling. In February 2020, Ecology issued an opinion letter acknowledging finalization of the IAWP. In the opinion letter, Ecology also indicated there are two data gaps to be addressed in order to proceed with a cleanup action decision (Ecology 2020). The data gaps indicated were: 1) updating existing groundwater data with two, seasonal (high- and low-water table) sampling events, and 2) to further investigate the quality of groundwater flowing into the Yakima River. Ecology also included a recommendation to the City to address the data gaps prior to updating the CSM.

Monitoring and Sampling Activities

Groundwater monitoring, sampling, and analysis activities were completed in accordance with the Pre-Construction Groundwater Sampling Work Plan (Work Plan) with the following exceptions or modifications (LAI 2020):

- Monitoring well MW-6 was not sampled because there was no measurable water in the well during the groundwater elevation survey.
- Monitoring well MW-17, located within a public roadway, could not be located and is presumed to have been paved over (a large asphalt patch was observed in the area where the well was formerly located), so no monitoring or sampling was conducted at this well.
- Monitoring wells FPP-MW-1, FPP-MW-2, and MW-12 went dry during purging and were allowed to recharge overnight. Samples were collected the following day, but recharge was found to be minimal and the collected sample volumes were limited; therefore, not all proposed laboratory analyses were able to be performed on the samples from these locations.
- Only two of three proposed groundwater-surface water drive-point wells were installed and sampled. A third location was attempted, but the well could not be installed because of the presence of extensive bank armoring along that reach of the Yakima River. The locations of the two drive-point wells that were installed were also modified from their original proposed locations for the same reason.

Monitoring and sampling locations are shown on Figure 2.

Groundwater Monitoring Procedures

Static water levels were measured prior to groundwater sampling at each of the 24 wells listed below.

- FPP-MW-1
- FPP-MW-2
- FPP-MW-3
- TP-MW-1
- TP-MW-2
- MW-7
- MW-8
- MW-9A
- MW-11
- MW-12
- MW-14
- MW-15
- MW-16
- MW-18
- MW-100
- MW-101
- MW-102
- MW-103
- MW-104
- MW-105
- MW-106
- MW-107
- MW-108
- MW-109

The depth to groundwater was measured to the nearest 0.01 feet (ft) from the top of the north side of the polyvinyl chloride (PVC) casing to groundwater using an electric water level indicator. Depth-to-water measurements at each well were converted to groundwater elevations using the surveyed top of elevations measured during the 2015 Supplemental Remedial Investigation (RI; LAI 2015). No liquid-phase product was observed during depth-to-water measurements.

Groundwater Sampling Procedures

After completion of the groundwater elevation monitoring, groundwater samples were collected from the same 24 monitoring wells from which groundwater elevations were collected (listed above). Also as indicated above, monitoring wells MW-17 and MW-6 were not sampled because the well was either dry or not found and assumed to have been paved over.

Consistent with the Work Plan, groundwater samples were analyzed for dissolved metals, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and conventional analytes. Samples were submitted to ALS Environmental laboratory in Everett, Washington. The analytical program (including chemical analysis and laboratory methods) for each monitoring well is summarized in Table 1. Sampling locations are shown on Figure 2.

Quality Assurance

Field and laboratory control samples were used to evaluate data precision, accuracy, representativeness, completeness, and comparability of the analytical results. The quality control samples included collection and analysis of two field duplicates that were collected from monitoring wells FPP-MW-3 and MW-101.

Validation of the analytical data was performed by LAI following the guidelines in the appropriate sections of the US Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review (EPA 1999, 2004), and in accordance with the Work Plan.

Groundwater-Surface Water Sampling Procedures

Two temporary drive-point wells (DPW-1 and DPW-2) were installed into shallow groundwater to allow sample collection at the groundwater-surface water interface (groundwater along the shoreline) of the Yakima River. The temporary drive-point well screens were installed to a depth approximately 1–2 ft below the groundwater table. Drive-point installations required multiple attempts at each location because of the presence of extensive bank armoring (i.e., boulders/rip-rap) below ground surface. The location coordinates of each well were recorded with a Global Positioning System (GPS) unit, and locations are shown on Figure 2.

Groundwater samples were collected from the temporary drive-point wells using the low-flow sampling procedures outlined in the Work Plan. Samples were analyzed for dissolved metals and conventionals. Laboratory analytical methods and chemical analyses for drive-point wells are summarized in Table 1. The stainless-steel drive-point well equipment (casing and screen) was removed after samples were collected.

Waste Management

Investigation-derived waste, including water generated during sampling, and waste/wastewater generated during decontamination of sampling equipment or devices, was collected and placed into 55-gallon steel drums. The drums are currently stored on Site until the water can be characterized in accordance with applicable regulations based on the laboratory analytical results and historical knowledge. LAI will assist the City with coordinating appropriate removal and disposal of the drums.

Results

This section presents the results of the November 2020 sampling event, which consists of groundwater elevation data and groundwater quality data.

Groundwater Monitoring Results

Groundwater elevations calculated using water-level measurements collected from each monitoring well were used to evaluate groundwater flow direction at the Site. The calculated groundwater elevations are presented in Table 2. Groundwater elevation contours were plotted using the calculated groundwater elevations and are shown on Figure 3. The contours indicate the groundwater at the Site generally flows to the southeast, consistent with the groundwater flow direction observed during the RI.

Groundwater Sampling Results

Pre-construction sampling at 24 monitoring wells was completed between November 20 and 24, 2020. Aside from the previously mentioned wells that were dry, not found, or had poor recovery during purging, the sampling was conducted in accordance with the Work Plan.

Groundwater samples with analytical detections above the laboratory reporting limits are summarized in Table 3, along with the applicable Site screening levels established and approved by Ecology during the RI. The cumulative analytical results from the RI and the Pre-Construction events (September 2014 through November 2020) are included in Appendix A (Table A-1). The laboratory analytical reports for the November 2020 groundwater monitoring event are included as Appendix B.

Groundwater-Surface Water Sampling Results

Groundwater-surface water sampling was conducted on November 24, 2020, and the samples were analyzed per the Work Plan. Laboratory analytical results are presented in Table 4 along with the Site screening levels for comparison. Sampling locations are shown on Figure 2, and the laboratory analytical report is included in Appendix B.

Next Steps

Per the Ecology-approved IAWP, post-construction groundwater sampling will be performed after completion of roadway construction (LAI 2019). As indicated in the IAWP, once roadway construction is completed, new groundwater wells will need to be installed and developed to replace certain monitoring wells that were decommissioned to accommodate roadway construction activities. A revised groundwater sampling work plan will be submitted for Ecology approval prior to commencing post-construction sampling activities. Post-construction groundwater sampling will be performed and the results compared to assess and document groundwater quality and potential impacts to groundwater quality as a result of the IA and roadway construction activities.

Monitoring wells MW-101, MW-102, MW-104, and MW-106 were decommissioned immediately following sampling (prior to commencing construction activities). Therefore, except for these wells, the post-construction groundwater quality monitoring event will be performed at all the same wells as during the pre-construction sampling. The number and location of new monitoring wells to be installed will be determined in consultation with Ecology, but at a minimum will include a well to replace monitoring well MW-101 (because of its location with respect to the former plywood plant TPH groundwater plume—proximate to the northwest of the Site). These replacement wells (and any additional replacement wells required by Ecology)[1] will also be sampled during the post-construction monitoring event.

Limitations

This technical memorandum has been prepared for the exclusive use of the City of Yakima and the Washington State Department of Ecology for specific application to the Closed City of Yakima Landfill Site. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of LAI. 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.

[1] Depending on the final inventory of monitoring wells removed because of construction and/or the results of post-construction sample analysis, a final determination of which wells will be replaced will be identified in consultation with Ecology. Similarly, the final list of soil gas probes to be replaced and monitored will be determined in consultation with Ecology based on final roadway design considerations.

LANDAU ASSOCIATES, INC.

Stephanie A. Renando
Project Scientist

Piper Roelen, PE
Principal

SAR/PMR/ljl
[P:\1148\008\R\PRE-CONSTRUCTION GROUNDWATER MONITORING\TECH MEMO JAN_2021\LAI YAKIMA LANDFILL IA ROADWAY PROJ PRE-CONST GW MONI TM_FINAL 021621.DOCX]

Attachments: Figure 1. Vicinity Map
Figure 2. Sampling Locations
Figure 3. Groundwater Contours
Table 1. Sampling Summary, Pre-Construction Groundwater Monitoring
Table 2. Groundwater Elevations, Pre-Construction Groundwater Monitoring
Table 3. Detected Results in Groundwater
Table 4. Groundwater-Surface Water Results
Appendix A. Cumulative Groundwater Analytical Results (2014–2020)
Appendix B. Laboratory Data Reports

References

Ecology. 2017. Agreed Order No. DE 13959, in the Matter of Remedial Action by: OfficeMax Incorporated, Dunollie Enterprises, LLC, LeeLynn, Inc. & Wylie Mt., Inc., and Yakima Resources, LLC, re: Yakima Mill Site (aka Boise Cascade Mill Site, FSID 450). Washington State Department of Ecology. Effective February 17.

Ecology. 2020. Letter: Interim Action Work Plan and Next Steps at the Following Site: Site Name: Interstate 82 Exit 33A Yakima City Landfill; Site Address: 805 North 7th Street, Yakima; Agreed Order: DE 15861; Facility/Site ID No.: 1920; Cleanup Site ID No.: 3853. From Frank P. Winslow, Toxics Cleanup Program, Washington State Department of Ecology, to Joan Davenport, City of Yakima. February 13.

EPA. 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA 540/R-99/008. US Environmental Protection Agency. October.

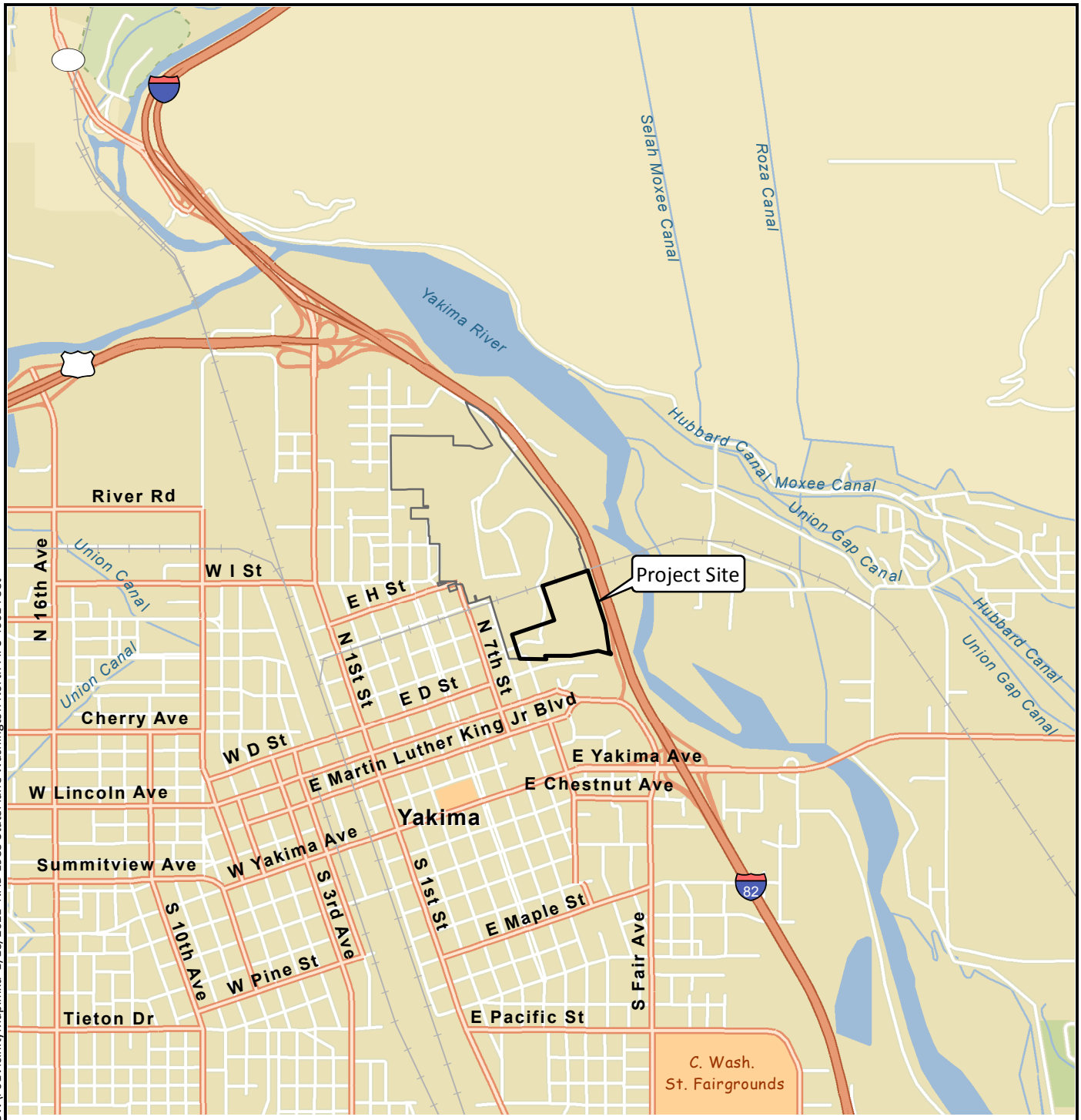
EPA. 2004. Final: USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. US Environmental Protection Agency. October. https://wipp.energy.gov/Library/Information_Repository_A/Supplemental_Information/2019/References/U.S.%20EPA,%202004.%20Inorganic%20Data%20Review.pdf.

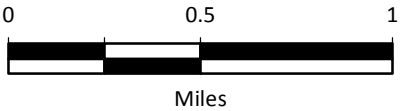
LAI. 2014. Draft: Work Plan, Remedial Investigation, Closed City of Yakima Landfill Site, Yakima, Washington. Landau Associates, Inc. August 11.

LAI. 2015. Agency Review Draft: Supplemental Remedial Investigation Report, Closed City of Yakima Landfill Site, Yakima, Washington. Landau Associates, Inc. September 29.

LAI. 2019. Final (Revision 1): Interim Action Work Plan - Roadway Project, Closed City of Yakima Landfill Site, Yakima, Washington. Landau Associates, Inc. July 29.

LAI. 2020. Work Plan, Pre-Construction Groundwater Sampling, Interim Action – Roadway Project, Closed City of Yakima Landfill Site, Yakima, Washington. Landau Associates, Inc. October 19.





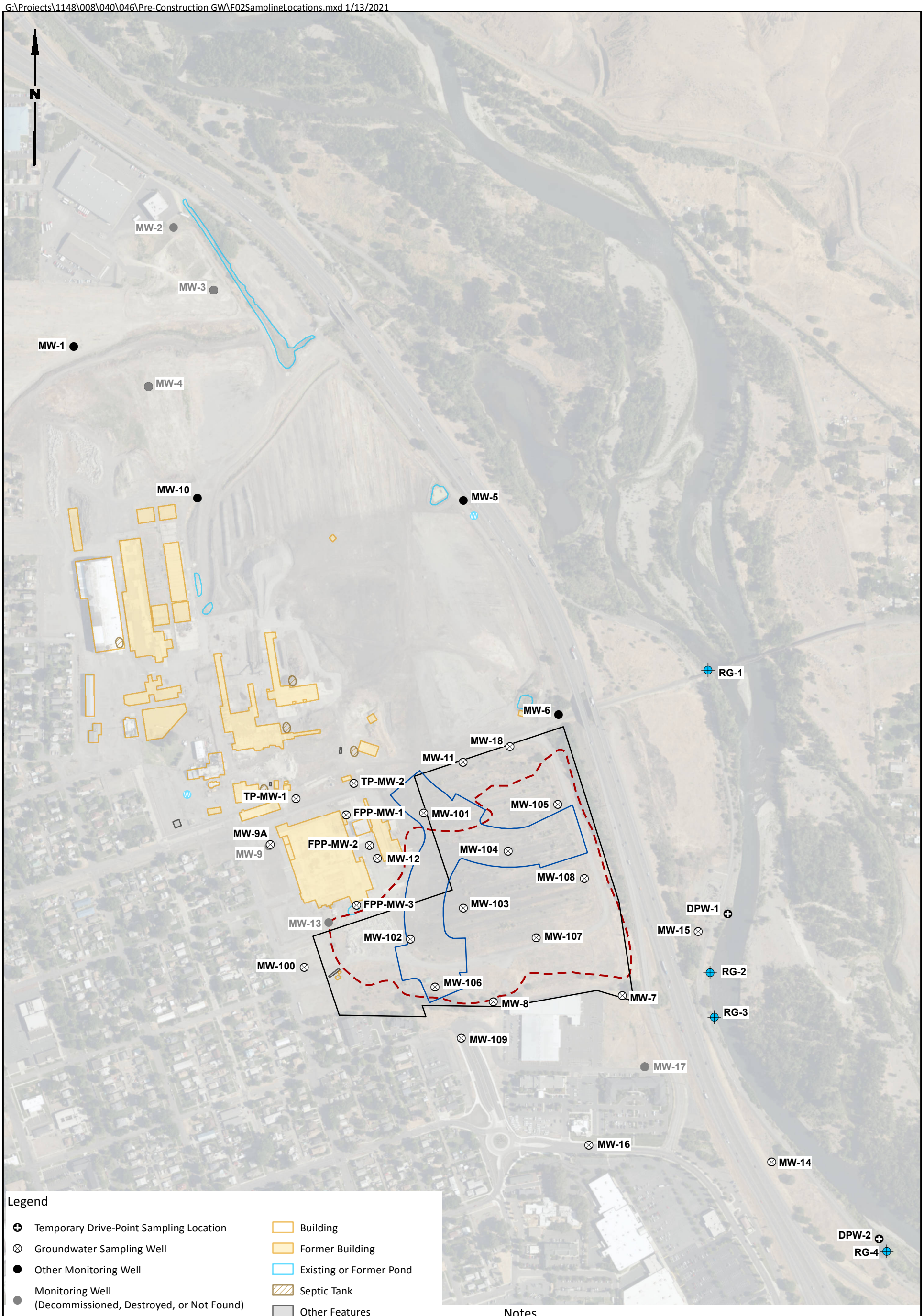
Data Source: Esri.

G:\Projects\1148\008\040\046\Pre-Construction GW\F01VicinityMap.mxd 1/13/2021 NAD 1983 StatePlane Washington North FIPS 4601 Feet

LANDAU ASSOCIATES

Pre-Construction Closed City of Yakima Landfill Site Yakima, Washington	**Vicinity Map**	Figure 1

G:\Projects\1148\008\040\046\Pre-Construction GW\F02SamplingLocations.mxd 1/13/2021



Legend

- Temporary Drive-Point Sampling Location
- Groundwater Sampling Well
- Other Monitoring Well
- Monitoring Well (Decommissioned, Destroyed, or Not Found)
- Water Well (WSDOT)
- River Gauge
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features
- Construction Easement Limits

0 500 1,000

Scale in Feet

Notes

1. Locations of site features and sample locations are approximate.
2. WSDOT = Washington State Department of Transportation.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

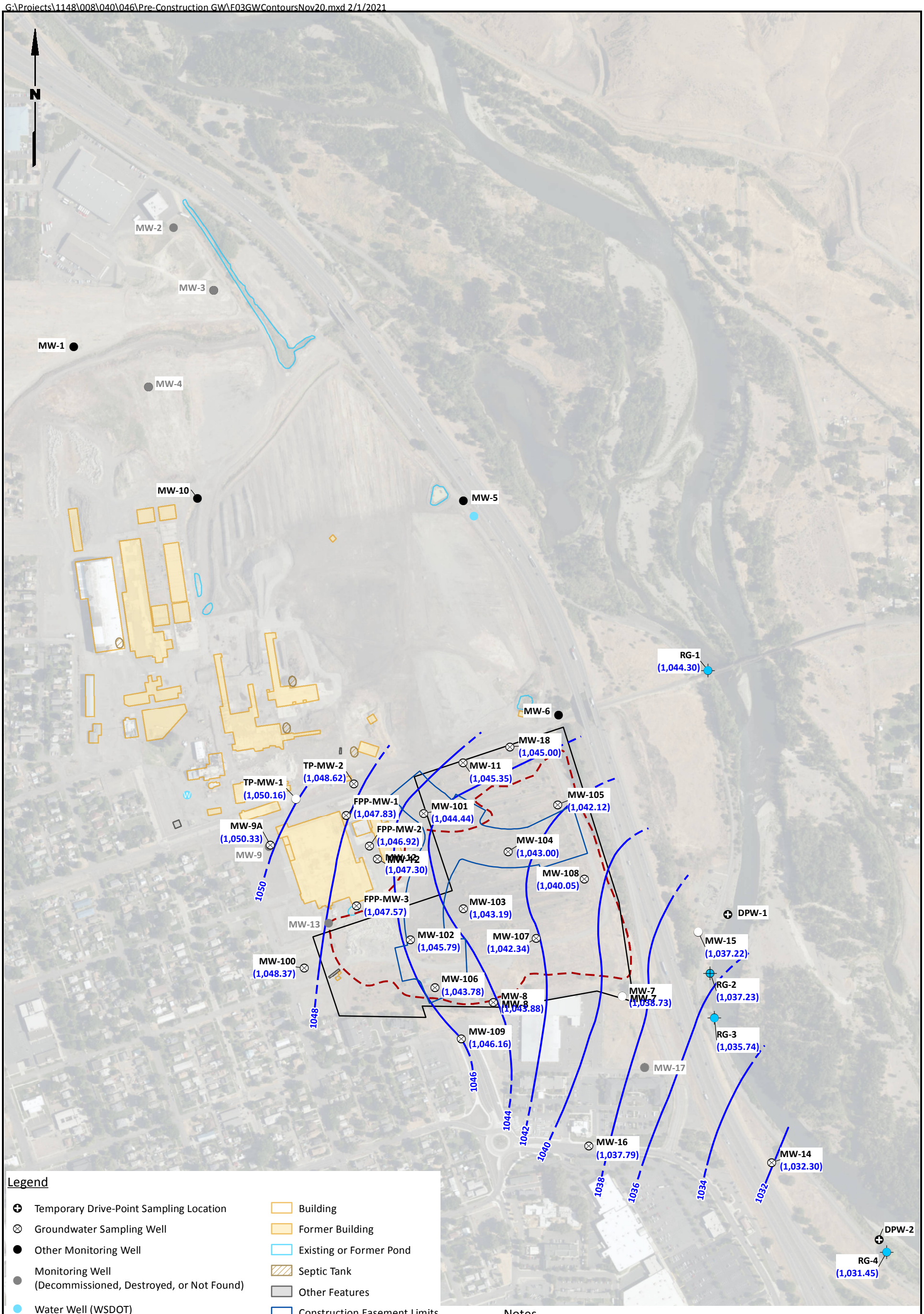
LANDAU ASSOCIATES

Pre-Construction
Closed City of Yakima
Landfill Site
Yakima, Washington

Sampling Locations

Figure
2

G:\Projects\1148\008\040\046\Pre-Construction GW\F03GWContoursNov20.mxd 2/1/2021



Legend

- Temporary Drive-Point Sampling Location
- Groundwater Sampling Well
- Other Monitoring Well
- Monitoring Well (Decommissioned, Destroyed, or Not Found)
- Water Well (WSDOT)
- River Gauge
- Groundwater Contours
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features
- Construction Easement Limits

0 500 1,000

Scale in Feet

Notes

1. Locations of site features and sample locations are approximate.
2. WSDOT = Washington State Department of Transportation.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

LANDAU ASSOCIATES

Pre-Construction
Closed City of Yakima
Landfill Site
Yakima, Washington

Groundwater Contours November 2020

Figure 3

Table 1
Sampling Summary
Pre-Construction Groundwater Monitoring
Closed City of Yakima Landfill Site
Yakima, Washington

Analytes	Method	Notes	Monitoring Wells																									Drive-Points		
			6 (a)	7	8	9A	11	12	14	15	16	17 (a)	18	TP-1	TP-2	FPP-1	FPP-2	FPP-3 DUP2	100	101 DUP1	102	103	104	105	106	107	108	109	DPW-1	DPW-2	DPW-3 (a)
Metals (Total)	EPA 200.8	As, Ba, Cd, Ca, Cr, Fe, Pb, Mg, Mn, K, Se, Ag, Na		X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			
Metals (Dissolved)	EPA 200.8	As, Ba, Cd, Ca, Cr, Fe, Pb, Mg, Mn, K, Se, Ag, Na		X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Mercury (Total)	EPA 7471			X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			
Mercury (Dissolved)	EPA 7470			X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			
Chlorinated Pesticides	EPA 8081 (LL)			X	X	X	X			X			X					X	X	X	X	X	X	X	X	X	X	X			
PCBs	EPA 8082 (LL)			X	X	X	X			X			X					X	X	X	X	X	X	X	X	X	X	X			
VOCs	EPA 8260 SIM/8260C			X	X	X	X			X			X					X	X	X	X	X	X	X	X	X	X	X			
SVOCs	EPA 8270D			X	X	X	X			X			X					X	X	X	X	X	X	X	X	X	X	X			
PAHs	EPA 8720 SIM			X	X	X	X			X			X					X	X	X	X	X	X	X	X	X	X	X			
TPH-Dx	NWTPH-Dx w/SGC							X							X		X			X					X						
TPH-Dx	NWTPH-Dx w/o SGC							X							X		X			X					X						
Inorganic Anions	EPA 300.0	Fluoride, Nitrate, Nitrite, Chloride, Sulfate		X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Alkalinity (as Ca CO3)	SM2320B			X	X	X	X		X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Bicarbonate (HCO3)	SM2320B			X	X	X	X		X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Ammonia (NH3-N)	EPA 350.1			X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			
TOC	SM5310C			X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
TDS	SM2540C			X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	

Acronyms/Abbreviations:

EPA = US Environmental Protection Agency
DPW = Drive point water
DUP = Field duplicate
LL = lower limit
PAHs = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls
SGC = silica gel cleanup
SVOCs = semivolatile organic compounds
SIM = select ion monitoring

TDS = total dissolved solids
TOC = total organic carbon
TPH = total petroleum hydrocarbons
TPH-Dx = diesel-range extended petroleum hydrocarbons
TPH-G = gasoline-range petroleum hydrocarbons
VOCs = volatile organic compounds

Ag = Silver
As = Arsenic
Ba = Barium
Ca = Calcium
Cd = Cadmium
Cr = Chromium
Fe = Iron
Mg = Magnesium
Mn = Manganese
Na = Sodium
Pb = Lead
Se = Selenium

X = collected and analyzed

Table 2
Groundwater Elevations
Pre-Construction Groundwater Monitoring
Closed Yakima Landfill
Yakima, Washington

Monitoring Well	Sampling Date	TOC or Reference Point Elevation (ft)	Depth to Groundwater (ft from TOC)	Groundwater Elevation (ft)	Notes
MW-6	11/20/2020	1059.62	--	NA	Well was dry
MW-7	11/20/2020	1049.13	10.40	1038.73	
MW-8	11/20/2020	1051.72	7.84	1043.88	
MW-9A	11/20/2020	1064.41	14.08	1050.33	
MW-11	11/20/2020	1065.95	20.60	1045.35	
MW-12	11/20/2020	1068.65	21.35	1047.30	
MW-14	11/20/2020	1041.31	9.01	1032.30	
MW-15	11/20/2020	1050.46	13.24	1037.22	
MW-16	11/20/2020	1046.86	9.07	1037.79	
MW-17	11/20/2020	1044.32	--	NA	Well not found; presumed paved over
MW-18	11/20/2020	1063.78	18.78	1045.00	
TP-MW-1	11/20/2020	1068.70	18.54	1050.16	
TP-MW-2	11/20/2020	1066.54	17.92	1048.62	
FPP-MW-1	11/20/2020	1069.03	21.20	1047.83	
FPP-MW-2	11/20/2020	1068.77	21.85	1046.92	
FPP-MW-3	11/20/2020	1066.29	18.72	1047.57	
MW-100	11/20/2020	1065.72	17.35	1048.37	
MW-101	11/20/2020	1066.75	22.31	1044.44	
MW-102	11/20/2020	1064.37	18.58	1045.79	
MW-103	11/20/2020	1065.11	21.92	1043.19	
MW-104	11/20/2020	1061.51	18.51	1043.00	
MW-105	11/20/2020	1059.60	17.48	1042.12	
MW-106	11/20/2020	1059.86	16.08	1043.78	
MW-107	11/20/2020	1061.38	19.04	1042.34	
MW-108	11/20/2020	1059.58	19.53	1040.05	
MW-109	11/20/2020	1061.50	15.34	1046.16	
RG-1	11/20/2020	1047.79	3.49	1044.30	
RG-2	11/20/2020	1039.27	2.04	1037.23	
RG-3	11/20/2020	1037.28	1.54	1035.74	
RG-4	11/20/2020	1033.79	2.34	1031.45	

Notes:

Elevations are NAVD88 datum and provided in US survey feet.

Abbreviations/Acronyms:

ft = feet
LNAPL = light non-aqueous phase liquid
MW = monitoring well
NA = not applicable
RG = river gauge
TOC = top of casing

Table 3
Detected Results in Groundwater
Closed City of Yakima Landfill
Yakima, Washington

Analyte	Screening Level (a)	Targeted ALS QLs (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type												
			TP-MW-1 EV20110151-10 11/23/2020 N	FPP-MW-1 EV20110161-02 11/24/2020 N	TP-MW-2 EV20110151-14 11/23/2020 N	FPP-MW-2 EV20110161-07 11/24/2020 N	FPP-MW-3 EV20110151-13 EV20110161-09 11/23/2020 N	FPP-MW-3-Dup EV20110151-11 EV20110161-08 11/23/2020 FD	MW-7 EV20110151-01 11/23/2020 N	MW-8 EV20110151-04 11/23/2020 N	MW-9A EV20110151-08 11/23/2020 N	MW-11 EV20110151-03 11/23/2020 N	MW-12 EV20110161-01 11/24/2020 N	MW-14 EV20110161-05 11/24/2020 N	MW-15 EV20110161-06 11/24/2020 N
Total Petroleum Hydrocarbons (µg/L; NWTPH-Dx)															
Diesel Range (w/SGC)	500	N/A	--	--	130 U	**690**	--	--	--	--	--	--	**350**	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	**200**	**1,700**	--	--	--	--	--	--	**4,900**	--	--
Oil Range (w/SGC)	500	N/A	--	--	250 U	**2,200**	--	--	--	--	--	--	250 U	--	--
Oil Range (wo/SGC)	500	N/A			250 U	**2,800**	--	--	--	--	--	--	**880**	--	--
Dissolved Metals (µg/L; EPA 200.8/SW-846 7470)															
Arsenic	0.45	0.45	**0.58**	**11**	**2.6**	--	**1.3**	**1.2**	**4.7**	0.45 U	**0.80**	**1.7**	**2.1**	0.45 U	**1.3**
Barium	1,000	N/A	**16**	**90**	**32**	--	**37**	**36**	**56**	**24**	**10**	**48**	**82**	**12**	**24**
Calcium	N/A	N/A	**35,000**	**66,000**	**37,000**	--	**29,000**	**29,000**	**41,000**	**22,000**	**26,000**	**39,000**	**58,000**	**26,000**	**21,000**
Iron	300	N/A	50 U	**38,000 J**	**16,000 J**	--	**10,000 J**	**11,000 J**	**27,000 J**	**340 J**	50 U	**28,000 J**	**6,700 J**	50 U	**6,800 J**
Magnesium	N/A	N/A	**13,000**	**21,000**	**14,000**	--	**13,000**	**13,000**	**15,000**	**11,000**	**9,400**	**14,000**	**23,000**	**10,000**	**8,900**
Manganese	50	N/A	2.0 U	**3,400**	**1,500**	--	**410**	**410**	**2,100**	**390**	2.0 U	**2,000**	**1,100 J**	**240**	**740**
Potassium	N/A	N/A	**4,300**	**8,200**	**5,600**	--	**4,500**	**4,600**	**8,700**	**14,000**	**3,800**	**5,900**	**7,600**	**4,300**	**3,400**
Sodium	20,000	N/A	**16,000**	**63,000**	**20,000**	--	**27,000**	**28,000**	**19,000**	**25,000**	**13,000**	**19,000**	**87,000**	**12,000**	**9,200**
Total Metals (µg/L; EPA 200.8/SW-846 7470)															
Arsenic	0.45	0.45	**0.65**	**17**	**2.9**	--	**1.3**	**1.3**	**5.3**	0.45 U	**0.87**	**1.6**	**1.6**	0.45 U	**3.3**
Barium	1,000	N/A	**16**	**93**	**32**	--	**36**	**36**	**55**	**22**	**10**	**46**	**85**	**11**	**31**
Calcium	N/A	N/A	**35,000**	**67,000**	**38,000**	--	**29,000**	**29,000**	**40,000**	**22,000**	**27,000**	**38,000**	**57,000**	**25,000**	**21,000**
Iron	300	N/A	50 U	**41,000**	**17,000**	--	**10,000**	**10,000**	**29,000**	**500**	50 U	**27,000**	**5,100 J**	50 U	**12,000**
Lead	0.54	N/A	**0.41**	**1.9**	0.28 U	--	0.28 U	0.28 U	0.28 U	0.28 U	**0.31**	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**13,000**	**21,000**	**14,000**	--	**12,000**	**12,000**	**14,000**	**10,000**	**9,200**	**13,000**	**22,000**	**10,000**	**8,700**
Manganese	50	N/A	**16**	**3,600**	**1,500**	--	**420**	**410**	**2,100**	**370**	2.0 U	**1,900**	**870 J**	**250**	**780**
Potassium	N/A	N/A	**4,300**	**8,200**	**5,600**	--	**4,500**	**4,600**	**8,400**	**14,000**	**3,800**	**5,800**	**7,300**	**4,300**	**3,500**
Sodium	20,000	N/A	**16,000**	**63,000**	**19,000**	--	**27,000**	**28,000**	**18,000**	**24,000**	**13,000**	**18,000**	**85,000**	**12,000**	**9,100**
Conventionals (mg/L)															
Total Dissolved Solids (SM2540C)	N/A	N/A	**220**	**530**	**260**	--	**330**	**320**	**330**	**200**	**170**	**310**	--	**200**	**180**
Chloride (EPA 300.0)	230	N/A	**14**	**30**	**12**	--	**15 J**	**12 J**	**26**	**20**	**13**	**31**	--	**15**	**14**
Nitrate as N (EPA 300.0)	10	N/A	**1.2**	**0.041**	0.034 U	--	0.034 U	**0.039**	**0.18**	**0.87**	**3.9**	0.034 U	--	**0.18**	**0.065**
Sulfate (EPA 300.0)	N/A	N/A	**17**	**14**	**1.4**	--	**25**	**23**	1.0 U	**11**	**16**	**1.4**	--	**3.7**	1.0 U
Ammonia (EPA 350.1)	N/A	N/A	0.050 U	**3.0**	**2.0**	--	**0.90**	**1.1**	**3.6**	**0.68**	0.050 U	**0.96**	--	**0.25**	**0.47**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**140**	--	**180**	--	**210**	**200**	**180**	**110**	**90**	**150**	--	**110**	**93**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**140**	--	**180**	--	**210**	**200**	**180**	**110**	**90**	**150**	--	**110**	**93**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**1.1**	--	**4.0**	--	**5.6 J**	**10 J**	**4.8**	**3.7**	**0.66**	**3.4**	--	**1.3**	**2.4**
PCBs (µg/L; SW-846 8082)															
PCB-1232	N/A	N/A	--	--	--	--	0.067 U	0.015 U	**0.073**	0.067 U	0.067 U	0.067 U	--	--	0.015 U
Total PCBs (c)	0.10	N/A	--	--	--	--	ND	ND	**0.073**	ND	ND	ND	--	--	ND
VOCs (µg/L; SW-846 8260 SIM)															
Vinyl Chloride	0.031	0.031	--	--	--	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	--	0.02 U
Chloroform	1.4	N/A	--	--	--	--	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	--	--	0.14 U
1,2,4-Trichlorobenzene	1.5	N/A	--	--	--	--	0.38 U	0.38 U	0.38 U	**0.94**	0.38 U	0.38 U	--	--	0.10 U
SVOCs (µg/L; SW-846 8270)															
2,4-Dichlorophenol	24	N/A	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	2.0 U
PAHs (µg/L; SW-846 8270 SIM)															
Acenaphthene	650	N/A	--	--	--	--	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	0.020 U
Benzo[B]Fluoranthene	0.00730	0.00730	--	--	--	--	**0.012**	**0.012**	**0.008**	0.0068 U	0.0068 U	0.0068 U	--	--	**0.083**
Benzo[K]Fluoranthene	0.0237	0.0237	--	--	--	--	**0.015**	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	--	--	0.013 U
cPAH TEQ (d)	0.10	N/A	--	--	--	--	**0.003**	**0.001**	**0.001**	ND	ND	ND	--	--	**0.008**

Table 3
Detected Results in Groundwater
Closed City of Yakima Landfill
Yakima, Washington

Analyte	Screening Level (a)	Targeted ALS QLs (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type												
			MW-16 EV20110161-03 11/24/2020 N	MW-18 EV20110151-06 11/23/2020 N	MW-100 EV20110151-09 EV20110161-04 11/23/2020 N	MW-101 EV20110139-05 11/20/2020 N	MW-101 EV20110139-06 11/20/2020 FD	MW-102 EV20110139-03 11/20/2020 N	MW-103 EV20110139-02 11/20/2020 N	MW-104 EV20110139-01 11/20/2020 N	MW-105 EV20110139-04 11/20/2020 N	MW-106 EV20110139-07 11/20/2020 N	MW-107 EV20110151-02 11/23/2020 N	MW-108 EV20110151-05 11/23/2020 N	MW-109 EV20110151-07 11/23/2020 N
Total Petroleum Hydrocarbons (µg/L; NWTPH-Dx)															
Diesel Range (w/SGC)	500	N/A	--	--	--	130 U	130 U	--	--	--	--	130 U	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	**140**	130 U	--	--	--	--	**140**	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	250 U	250 U	--	--	--	--	250 U	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	250 U	250 U	--	--	--	--	250 U	--	--	--
Dissolved Metals (µg/L; EPA 200.8/SW-846 7470)															
Arsenic	0.45	0.45	**0.61**	**4.7**	**0.73**	**2.3**	**2.3**	**0.82**	**6.3**	**7.0**	**3.8**	**9.2**	**3.4**	**6.2**	**0.47**
Barium	1,000	N/A	**28**	**55**	**8.8**	**36**	**36**	**34**	**58**	**49**	**41**	**58**	**55**	**53**	**12**
Calcium	N/A	N/A	**57,000**	**76,000**	**24,000**	**36,000**	**35,000**	**31,000**	**45,000**	**38,000**	**26,000**	**33,000**	**43,000**	**38,000**	**25,000**
Iron	300	N/A	50 U	**22,000 J**	50 U	**16,000**	**16,000**	**6,500**	**28,000**	**26,000**	**22,000**	**27,000**	**25,000 J**	**29,000 J**	50 U
Magnesium	N/A	N/A	**15,000**	**33,000**	**8,400**	**13,000**	**13,000**	**13,000**	**17,000**	**14,000**	**9,200**	**11,000**	**15,000**	**14,000**	**9,200**
Manganese	50	N/A	**300**	**4,800**	2 U	**1,600**	**1,600**	**780**	**3,000**	**2,200**	**2,100**	**2,000**	**2,200**	**2,000**	**2.5**
Potassium	N/A	N/A	**13,000**	**8,200**	**3,500**	**5,700**	**5,800**	**4,900**	**5,500**	**6,700**	**6,100**	**8,400**	**6,500**	**7,400**	**4,100**
Sodium	20,000	N/A	**33,000**	**22,000**	**11,000**	**18,000**	**18,000**	**16,000**	**23,000**	**18,000**	**12,000**	**18,000**	**20,000**	**18,000**	**13,000**
Total Metals (µg/L; EPA 200.8/SW-846 7470)															
Arsenic	0.45	0.45	**0.69**	**4.9**	**0.82**	**2.4**	**2.4**	**0.86**	**6.5**	**7.0**	**3.9**	**9.2**	**3.3**	**6.5**	**0.49**
Barium	1,000	N/A	**34**	**57**	**10**	**37**	**36**	**35**	**58**	**49**	**43**	**59**	**53**	**54**	**11.0**
Calcium	N/A	N/A	**58,000**	**79,000**	**24,000**	**36,000**	**37,000**	**31,000**	**46,000**	**38,000**	**27,000**	**33,000**	**42,000**	**39,000**	**26,000**
Iron	300	N/A	**470**	**23,000**	**320**	**16,000**	**17,000**	**6,800**	**28,000**	**25,000**	**22,000**	**27,000**	**25,000**	**30,000**	**76**
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**15,000**	**33,000**	**8,200**	**13,000**	**13,000**	**13,000**	**17,000**	**14,000**	**9,300**	**11,000**	**15,000**	**14,000**	**9,000**
Manganese	50	N/A	**600**	**5,100**	**36**	**1,600**	**1,600**	**820**	**3,000**	**2,200**	**2,100**	**2,000**	**2,200**	**2,100**	**10**
Potassium	N/A	N/A	**13,000**	**8,400**	**3,500**	**5,700**	**5,900**	**5,100**	**5,700**	**6,800**	**6,300**	**8,400**	**6,400**	**7,600**	**4,100**
Sodium	20,000	N/A	**34,000**	**22,000**	**11,000**	**18,000**	**19,000**	**17,000**	**23,000**	**18,000**	**12,000**	**19,000**	**19,000**	**18,000**	**13,000**
Conventionals (mg/L)															
Total Dissolved Solids (SM2540C)	N/A	N/A	**450**	**520**	**190**	**280**	**280**	**240**	**360**	**300**	**220**	**290**	**340**	**330**	**180**
Chloride (EPA 300.0)	230	N/A	**28**	**31**	**12**	**22**	**21**	**19**	**34**	**31**	**24**	**21**	**27**	**25**	**12**
Nitrate as N (EPA 300.0)	10	N/A	**1.2**	**0.28**	**3.8**	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	**3.7**
Sulfate (EPA 300.0)	N/A	N/A	**14**	**9.1**	**13**	**4.7**	**4.7**	**15**	0.26 U	**1.0**	**2.3**	**6.6**	1.0 U	1.0 U	**16**
Ammonia (EPA 350.1)	N/A	N/A	0.050 U	**0.64**	0.050 U	**1.1**	**1.1**	**2.2**	**1.6**	**1.8**	**0.94**	**6.2**	**2.0**	**2.6**	0.050 U
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**200**	**330**	**80**	**170**	**170**	**140**	**210**	**170**	**110**	**180**	**190**	**170**	**89**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**200**	**330**	**80**	**170**	**170**	**140**	**210**	**170**	**110**	**180**	**190**	**170**	**89**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**3.8**	**24**	**0.59**	**3.3**	**3.3**	**1.3**	**4.9**	**3.8**	**4.2**	**4.1**	**3.3**	**4.6**	**0.82**
PCBs (µg/L; SW-846 8082)															
PCB-1232	N/A	N/A	--	0.067 U	0.067 U	0.015 U	0.015 U	0.015 U	0.015 U	**0.053**	0.015 U	0.015 U	0.067 U	**0.068**	0.067 U
Total PCBs (c)	0.10	N/A	--	ND	ND	ND	ND	ND	ND	**0.053**	ND	ND	ND	**0.068**	ND
VOCs (µg/L; SW-846 8260 SIM)															
Vinyl Chloride	0.031	0.031	--	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	**0.033**	0.02 U	0.02 U	**0.056**	0.02 U	0.02 U	0.02 U
Chloroform	1.4	N/A	--	0.29 U	**0.69**	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.29 U	0.29 U	0.29 U
1,2,4-Trichlorobenzene	1.5	N/A	--	0.38 U	0.38 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.38 U	0.38 U	0.38 U
SVOCs (µg/L; SW-846 8270)															
2,4-Dichlorophenol	24	N/A	--	**4.0**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; SW-846 8270 SIM)															
Acenaphthene	650	N/A	--	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**0.030**	0.020 U	0.020 U	0.020 U	0.020 U
Benzo[B]Fluoranthene	0.00730	0.00730	--	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	--	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
cPAH TEQ (d)	0.10	N/A	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Detected Results in Groundwater
Closed City of Yakima Landfill
Yakima, Washington

Notes:
U = Indicates the compound was not detected at the reported concentration.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
Bold = Detected compound.
Green Box = Exceedance of screening level
(a) Screening levels developed using methodology presented in the draft Site work plan (LAI 2014) and subsequent revisions per discussions with Ecology.
(b) Targeted laboratory QL (i.e., laboratory PQL) used for results comparison when the laboratory's standard reporting limit could not meet the screening level.
(c) Total PCBs represents the sum of detected concentrations of the seven individual PCB Aroclors.
(d) cPAH TEQ calculated following the method outlined in WAC 173-340-708(8)(e).

Abbreviations/Acronyms:
-- = not analyzed
µg/L = micrograms per liter
cPAH = carcinogenic polycyclic aromatic hydrocarbons
EPA = US Environmental Protection Agency
FD = field duplicate
ID = Identification
Lab = laboratory
LAI = Landau Associates, Inc.
mg/L = milligrams per liter
N = primary sample
N/A = not applicable
ND = not detected
NWTPH = Northwest Total Petroleum Hydrocarbon
PAHs = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls
PQL = practical quantitation limit
QL = quantitation limit
SIM = selected ion monitoring
SVOCs = semivolatile organic compounds
TEQ = toxicity equivalency
VOCs = volatile organic compounds
w/SGC = with silica gel cleanup
WAC = Washington Administrative Code
wo/SGC = without silica gel cleanup

Table 4
Groundwater-Surface Water Analytical Results
Closed City of Yakima Landfill Site
Yakima, Washington

Analyte	Screening Level (a)	Targeted ALS QLs (b)	Sample ID, Lab ID, Sample Date, Sample Type: DPW-1 EV20110160-01 11/24/2020 N	Sample ID, Lab ID, Sample Date, Sample Type: DPW-2 EV20110160-02 11/24/2020 N
Dissolved Metals (µg/L; EPA 200.8/SW-846 7470)				
Arsenic	0.45	0.45	**1.3**	**1.1**
Barium	1,000	N/A	**23**	**13**
Cadmium	5.0	N/A	1.0 U	1.0 U
Calcium	N/A	N/A	**22,000**	**10,000**
Chromium (c)	57	N/A	2.0 U	2.0 U
Iron	300	N/A	**9,200**	**5,100**
Lead	0.54	N/A	0.28 U	0.28 U
Magnesium	N/A	N/A	**9,200**	**4,400**
Manganese	50	N/A	**910**	**440**
Potassium	N/A	N/A	**2,800**	**1,100**
Selenium	5.0	N/A	4.0 U	4.0 U
Silver	0.32	N/A	0.2 U	0.20 U
Sodium	20,000	N/A	**9,600**	**4,000**
Conventionals (mg/L)				
Total Dissolved Solids (SM2540C)	N/A	N/A	**190**	**110**
Chloride (EPA 300.0)	230	N/A	**18**	**2.8**
Fluoride (EPA 300.0)	0.64	N/A	0.16 U	0.16 U
Nitrate as N (EPA 300.0)	10	N/A	0.034 U	0.034 U
Nitrite as N (EPA 300.0)	1.0	N/A	0.043 U	0.043 U
Sulfate (EPA 300.0)	N/A	N/A	1.0 U	**1.4**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**93**	**54**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**93**	**54**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**1.8**	**0.81**

Notes:

U = Indicates the compound was not detected at the reported concentration.

(a) Groundwater screening levels developed using methodology presented in the draft Site work plan (LAI 2014) and subsequent revisions per discussions with Ecology.

(b) Targeted laboratory QL (i.e., laboratory PQL) used for results comparison when the laboratory's standard reporting limit could not meet the screening level.

(c) Screening level presented is for Chromium III.

Bold = Detected compound. **Green Box = Exceedance of screening level**

Abbreviations/Acronyms:

µg/L = micrograms per liter
ALS = ALS Environmental
EPA = US Environmental Protection Agency
ID = Identification
Lab = laboratory
LAI = Landau Associates, Inc.
mg/L = milligrams per liter
N = primary sample
N/A = not applicable
PQL = practical quantitation limit
QL = quantitation limit

APPENDIX A

Cumulative Groundwater Analytical Results (2014–2020)

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			TP-MW-1 EV14090107-22 9/17/2014 N	TP-MW-1 EV14120162-04 12/19/2014 N	TP-MW-1 EV15030143-01 3/25/2015 N	TP-MW-1 EV15060175-06 6/24/2015 N	TP-MW-1 EV20110151-10 11/23/2020 N	FPP-MW-1 EV14120162-08 12/19/2014 N	FPP-MW-1 EV15030127-11 3/24/2015 N	FPP-MW-1 EV15060188-02 6/25/2015 N	FPP-MW-1 EV20110161-02 11/24/2020 N	TP-MW-2 EV14090107-23 9/17/2014 N	TP-MW-2 EV14120162-03 12/19/2014 N	TP-MW-2 EV15030143-02 3/25/2015 N
Total Petroleum Hydrocarbons (µg/L)														
HCID							--	--			--	--		
Gas Range	N/A	N/A	130 U	130 U	--	--	--	--	--	--	--	--	130 U	--
Diesel Range	N/A	N/A	310 U	310 U	--	--	--	--	--	--	--	--	310 U	--
Oil Range	N/A	N/A	310 U	310 U	--	--			--	--			**>310**	--
NWTPH-G (c)	1,000	N/A	--	--	--	--	--		--	--	--		--	--
NWTPH-Dx							--	--			--	--		
Diesel Range (w/SGC)	500	N/A	--	--	130 U	130 U	--	--	**950**	**3,000**	--	--	**470**	**1,600**
Diesel Range (wo/SGC)	500	N/A	--	--	130 U	130 U	--	--	**3,000**	**8,600**	--	--	**1,500**	**6,200**
Oil Range (w/SGC)	500	N/A	--	--	250 U	250 U	--	--	**620**	**470 J**	--	--	**300**	**570**
Oil Range (wo/SGC)	500	N/A	--	--	250 U	250 U		**1,000 J**	**1,100**	**1,900 J**		--	**450**	**1,700**
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	1.0 U	0.45 U	**0.97**	**0.49**	**0.58**	**2.3**	**2**	**4.1**	**11**	**3.9**	**2.7**	**12**
Barium	1,000	N/A	**8.3**	**5.3**	**18**	**10**	**16**	**99**	**63**	**120**	**90**	**17**	**19**	**120**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**19,000**	**14,000**	**42,000**	**25,000**	**35,000**	**64,000**	**50,000**	**81,000**	**66,000**	**30,000**	**33,000**	**68,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**15**
Chromium (VI) (e)	10	N/A	--	--	'--	'--	--	--	--	'--	--	--	--	--
Iron	300	N/A	50 U	50 U	50 U	50 U	50 U	**43,000**	**32,000**	**53,000**	**38,000 J**	**12,000**	**12,000**	**31,000**
Lead	0.54	N/A	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	**1.7**
Magnesium	N/A	N/A	**6,600**	**4,600**	**16,000**	**8,700**	**13,000**	**19,000**	**14,000**	**25,000**	**21,000**	**10,000**	**12,000**	**18,000**
Manganese	50	N/A	2.0 U	**2.5**	**9.3**	**2.3**	2.0 U	**3,700**	**2,700**	**5,300**	**3,400**	**1,300**	**1,500**	**1,100**
Potassium	N/A	N/A	--	--	**4,200**	**3,300**	**4,300**	--	**6,400**	**7,900**	**8,200**	--	--	**11,000**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	1.0 U	0.20 U	0.20 U	0.20 U	0.2 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Sodium	20,000	N/A	**11,000**	**9,700**	**23,000**	**13,000**	**16,000**	**53,000**	**42,000**	**62,000**	**63,000**	**21,000**	**20,000**	**130,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	1.0 U	0.45 U	**0.56**	0.63 U	**0.65**	**2.3**	**2.6**	**2.8**	**17**	**3.8**	**3.3**	**12**
Barium	1,000	N/A	**9.2**	**6.7**	**18**	**9.6**	**16**	**100**	**73**	**130**	**93**	**18**	**21**	**130**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**20,000**	**13,000**	**43,000**	**22,000**	**35,000**	**65,000**	**53,000**	**89,000**	**67,000**	**30,000**	**32,000**	**75,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**15**
Chromium (VI) (e)	10	N/A	--	--	'--	'--	--	--	'--	'--	--	--	--	--
Iron	300	N/A	50 U	**130**	50 U	50 U	50 U	**43,000**	**35,000**	**57,000**	**41,000**	**12,000**	**12,000**	**34,000**
Lead	0.54	N/A	1.0 U	0.28 U	0.28 U	0.28 U	**0.41**	0.28 U	0.28 U	0.28 U	**1.9**	1.0 U	0.28 U	**2.1**
Magnesium	N/A	N/A	**6,700**	**4,500**	**16,000**	**7,600**	**13,000**	**19,000**	**15,000**	**27,000**	**21,000**	**10,000**	**11,000**	**19,000**
Manganese	50	N/A	**5.8**	**9.7**	**15**	**8.1**	**16**	**3,800**	**2,900**	**5,800**	**3,600**	**1,300**	**1,500**	**1,200**
Potassium	N/A	N/A	--	--	**4,300**	**3,000**	**4,300**	--	**6,700**	**8,700**	**8,200**	--	--	**12,000**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Sodium	20,000	N/A	**11,000**	**9300**	**23,000**	**11,000**	**16,000**	**53,000**	**45,000**	**68,000**	**63,000**	**21,000**	**19,000**	**140,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-1 EV14090107-22 9/17/2014 N	TP-MW-1 EV14120162-04 12/19/2014 N	TP-MW-1 EV15030143-01 3/25/2015 N	TP-MW-1 EV15060175-06 6/24/2015 N	TP-MW-1 EV20110151-10 11/23/2020 N	FPP-MW-1 EV14120162-08 12/19/2014 N	FPP-MW-1 EV15030127-11 3/24/2015 N	FPP-MW-1 EV15060188-02 6/25/2015 N	FPP-MW-1 EV20110161-02 11/24/2020 N	TP-MW-2 EV14090107-23 9/17/2014 N	TP-MW-2 EV14120162-03 12/19/2014 N	TP-MW-2 EV15030143-02 3/25/2015 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	--	**150**	**260**	**150**	**220**	**490**	**320**	**590**	**530**	--	**270**	**1300**
Chloride (EPA-300.0)	230	N/A	**7.2**	**5.5**	**17**	**9.0**	**14**	**44**	**30**	**90**	**30**	**14**	**9.0**	**14**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	**0.34**	**0.21**	0.16 U	0.16 U	**0.29**	**0.27**	0.16 U	1.0 U	**0.20**	**0.47**	**2.4**
Nitrate as N (EPA-300.0)	10	N/A	**1.9 J**	**0.16**	**1.2**	**2.6**	**1.2**	**0.038**	0.034 U	0.034 U	**0.041**	0.034 UJ	0.034 U	0.034 U
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 UJ	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 UJ	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**9.0**	**5.5**	**12**	**12**	**17**	0.26 U	0.26 U	**2.7**	**14**	**6.8**	**1.2**	0.26 U
Ammonia (EPA-350.1)	N/A	N/A	--	0.050 U	0.050 U	0.050 U	0.050 U	**3.6**	**3.1**	**3.6**	**3.0**	--	**0.79**	**12**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	--	**64**	**180**	**100**	**140**	**320**	**260**	**440**	**--**	--	**170**	**470**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	--	**64**	**180**	**100**	**140**	**320**	**260**	**440**	**--**	--	**170**	**470**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	--	**1.9**	**2.2**	**1.2**	**1.1**	**21**	**15**	**28**	**22**	--	**9.6**	**430**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	16.93	14.54	12.49	16.12	16.3	16.54	15.32	23.24	10	16.47	14.60	13.67
Specific Conductivity (µS/cm)	N/A	N/A	443	113	456	203	369.5	768	1004	2200	765	832	283	2127
Dissolved Oxygen (mg/L)	N/A	N/A	8.96	3.85	1.57	5.23	0.76	2.16	0.80	0.58	0.83	2.50	2.73	0.45
pH (S.U.)	6.5 to 8.5	N/A	6.28	6.54	6.61	6.35	6.32	6.38	6.30	6.37	6.52	6.54	6.46	6.24
Oxidation Reduction Potential (mV)	N/A	N/A	48.8	23.5	-36.1	94.1	128.2	-87.3	-136.1	-106.5	-80.9	-78.5	-35.5	-84.2
Turbidity (NTU)	N/A	N/A	8.56	27.0	1.32	0.73	2.55	7.19	11.8	4.82	10.21	6.84	13.8	16.5
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
G-BHC (Lindane)	0.019	0.01	--	--	--	--	--	--	--	--	--	--	--	--
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor Epoxide	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane	0.20	0.20	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I (g)	0.056	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Endrin	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II (g)	0.056	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Endrin Aldehyde (h)	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Endosulfan Sulfate (g)	0.056	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	0.030	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene (i)	0.01	0.01	--	--	--	--	--	--	--	--	--	--	--	--
Toxaphene	0.50	0.50	--	--	--	--	--	--	--	--	--	--	--	--
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1221	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1232	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1242	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1248	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1254	0.005	0.005	--	--	--	--	--	--	--	--	--	--	--	--
PCB-1260	0.014	0.005	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs (j)	0.10	N/A	--	--	--	--	--	--	--	--	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-1 EV14090107-22 9/17/2014 N	TP-MW-1 EV14120162-04 12/19/2014 N	TP-MW-1 EV15030143-01 3/25/2015 N	TP-MW-1 EV15060175-06 6/24/2015 N	TP-MW-1 EV20110151-10 11/23/2020 N	FPP-MW-1 EV14120162-08 12/19/2014 N	FPP-MW-1 EV15030127-11 3/24/2015 N	FPP-MW-1 EV15060188-02 6/25/2015 N	FPP-MW-1 EV20110161-02 11/24/2020 N	TP-MW-2 EV14090107-23 9/17/2014 N	TP-MW-2 EV14120162-03 12/19/2014 N	TP-MW-2 EV15030143-02 3/25/2015 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	11	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	2,400	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	7,200	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	0.057	0.014	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	4.6	0.68	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	0.0572	0.0572	--	--	--	--	--	--	--	--	--	--	--	--
Methyl T-Butyl Ether (MTBE)	20	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Trans-1,2-Dichloroethene	100	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	7.7	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	4,800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Cis-1,2-Dichloroethene	16	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Hexane (k)	480	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	200	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	0.38	0.014	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	1.2	0.028	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	0.080	0.059	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	640	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	640	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Cis-1,3-Dichloropropene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	0.69	0.023	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	0.01	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	100	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	70	N/A	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene (l)	1,600	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100	N/A	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	1,600	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	4.3	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (cumene)	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	0.023	0.023	--	--	--	--	--	--	--	--	--	--	--	--
Bromobenzene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
N-Propyl Benzene	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	80	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
T-Butyl Benzene	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
S-Butyl Benzene	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
P-Isopropyltoluene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,3 Dichlorobenzene	320	N/A	--	--	--	--	--	--	--	--	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-1 EV14090107-22 9/17/2014 N	TP-MW-1 EV14120162-04 12/19/2014 N	TP-MW-1 EV15030143-01 3/25/2015 N	TP-MW-1 EV15060175-06 6/24/2015 N	TP-MW-1 EV20110151-10 11/23/2020 N	FPP-MW-1 EV14120162-08 12/19/2014 N	FPP-MW-1 EV15030127-11 3/24/2015 N	FPP-MW-1 EV15060188-02 6/25/2015 N	FPP-MW-1 EV20110161-02 11/24/2020 N	TP-MW-2 EV14090107-23 9/17/2014 N	TP-MW-2 EV14120162-03 12/19/2014 N	TP-MW-2 EV15030143-02 3/25/2015 N
1,4-Dichlorobenzene	8.1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
N-Butylbenzene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	420	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	0.44	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	0.23	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	1.4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	2.5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	0.50	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Trans-1,3-Dichloropropene	0.34	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.59	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	0.40	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	1.7	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.17	N/A	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	1.5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodimethylamine	1.51	1.51	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	2,400	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Aniline	7.7	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.94	0.94	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	40	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	400	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroisopropyl)Ether	1,400	N/A	--	--	--	--	--	--	--	--	--	--	--	--
3&4-Methylphenol (n)	400	N/A	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-Di-N-Propylamine	2.0	2.0	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	2.0	2.0	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	16	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	8.4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	160	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	64,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	24	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dichlorophenol	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-Methylphenol	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	40	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	1.4	0.90	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	800	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	160	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dimethylphthalate	270,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	1.82	1.82	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	32	N/A	--	--	--	--	--	--	--	--	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-1 EV14090107-22 9/17/2014 N	TP-MW-1 EV14120162-04 12/19/2014 N	TP-MW-1 EV15030143-01 3/25/2015 N	TP-MW-1 EV15060175-06 6/24/2015 N	TP-MW-1 EV20110151-10 11/23/2020 N	FPP-MW-1 EV14120162-08 12/19/2014 N	FPP-MW-1 EV15030127-11 3/24/2015 N	FPP-MW-1 EV15060188-02 6/25/2015 N	FPP-MW-1 EV20110161-02 11/24/2020 N	TP-MW-2 EV14090107-23 9/17/2014 N	TP-MW-2 EV14120162-03 12/19/2014 N	TP-MW-2 EV15030143-02 3/25/2015 N
4-Nitrophenol	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	16	N/A	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	0.78	0.78	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	480	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	13,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl-Phenylether	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	3.3	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene	1.63	1.63	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl-Phenylether	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	N/A	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Butylphthalate	1,600	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzylphthalate	8.3	N/A	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	2.0	2.0	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	--	--	--	--	--	--	--	--	--	--	--	--
Di-N-Octylphthalate	160	N/A	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	**0.029**	--	--	--	--	0.014 U	**0.052**	0.014 U	--	0.020 U	--	--
2-Methylnaphthalene	32	N/A	0.020 U	--	--	--	--	0.020 U	0.02 U	0.020 U	--	0.020 U	--	--
1-Methylnaphthalene	1.5	N/A	0.020 U	--	--	--	--	0.020 U	0.02 U	0.020 U	--	0.020 U	--	--
Acenaphthylene	N/A	N/A	0.020 U	--	--	--	--	0.020 U	0.02 U	0.020 U	--	0.020 U	--	--
Acenaphthene	650	N/A	0.020 U	--	--	--	--	0.014 U	0.014 U	0.014 U	--	0.020 U	--	--
Fluorene	640	N/A	0.020 U	--	--	--	--	**0.013**	0.0090 U	0.0092 U	--	0.020 U	--	--
Pentachlorophenol	0.23	0.23	0.13 U	--	--	--	--	0.12 U	**0.22**	0.12 U	--	0.13 U	--	--
Phenanthrene	N/A	N/A	0.020 U	--	--	--	--	**0.018**	0.013 U	0.014 U	--	0.020 U	--	--
Anthracene	4,800	N/A	0.020 U	--	--	--	--	0.01 U	0.01 U	0.01 U	--	0.020 U	--	--
Fluoranthene	86	N/A	0.020 U	--	--	--	--	0.0093 U	0.0092 U	0.0093 U	--	0.020 U	--	--
Pyrene	480	N/A	0.020 U	--	--	--	--	0.011 U	**0.13**	0.011 U	--	0.020 U	--	--
Benzo[A]Anthracene	0.00940	0.00940	0.020 U	--	--	--	--	0.017 U	0.017 U	0.017 U	--	0.020 U	--	--
Chrysene	0.00940	0.00940	0.020 U	--	--	--	--	0.018 U	0.018 U	0.018 U	--	0.020 U	--	--
Benzo[B]Fluoranthene	0.00730	0.00730	0.020 U	--	--	--	--	0.0068 U	**0.02**	0.0068 U	--	0.020 U	--	--
Benzo[K]Fluoranthene	0.0237	0.0237	0.020 U	--	--	--	--	0.013 U	**0.019**	0.013 U	--	0.020 U	--	--
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	--	--	--	--	0.027 U	0.027 U	0.027 U	--	0.027 U	--	--
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.020 U	--	--	--	--	0.014 U	0.014 U	0.014 U	--	0.020 U	--	--
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	--	--	--	--	0.011 U	0.011 U	0.011 U	--	0.011 U	--	--
Benzo[G,H,I]Perylene	N/A	N/A	0.020 U	--	--	--	--	0.019 U	**0.019**	0.019 U	--	0.020 U	--	--
cPAH TEQ (o)	0.10	N/A	ND	--	--	--	--	ND	**0.0058**	ND	--	ND	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			TP-MW-2 EV15060181-08 6/25/2015 N	TP-MW-2 EV20110151-14 11/23/2020 N	FPP-MW-2 EV14120151-03 EV14120162-14 12/18/2014 N	FPP-MW-2 EV15030154-07 3/26/2015 N	FPP-MW-2 EV15060175-09 6/24/2015 N	FPP-MW-2 EV20110161-07 11/24/2020 N	FPP-MW-3 EV14090091-01 EV14090107-24 9/16/2014 N	FPP-MW-3-Dup EV14090091-10 EV14090107-25 9/16/2014 FD	FPP-MW-3 EV14120151-04 EV14120162-16 12/18/2014 N	FPP-MW-3-Dup EV14120151-09 EV14120162-20 12/18/2014 FD	FPP-MW-3 EV15030154-01 3/26/2015 N	FPP-MW-3-Dup EV15030154-05 3/26/2015 FD
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	--	--	--	--	--	--	130 U	130 U	130 U	130 U	130 U	130 U
Diesel Range	N/A	N/A	--	--	--	--	--	--	310 U	310 U	310 U	310 U	310 U	310 U
Oil Range	N/A	N/A	--	--	--	--	--	--	310 U	310 U	310 U	310 U	310 U	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	**430**	130 U	**220**	**220 J**	**140**	**690**	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	**1,400**	**200**	**670**	**940 J**	**450**	**1,700**	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	**320**	250 U	250 U	**570**	250 U	**2,200**	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	**700**	250 U	**270**	**790**	**250 J**	**2,800**	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**5.5**	**2.6**	**4.2**	**5.9**	**2.5**	--	**1.4**	**1.4**	**0.58**	**0.83**	0.45 UJ	**1.0 J**
Barium	1,000	N/A	**43**	**32**	**33**	**40**	**27**	--	**15**	**15**	**20**	**20**	**16**	**16**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**38,000**	**37,000**	**36,000**	**39,000**	**31,000**	--	**22,000**	**22,000**	**25,000**	**24,000**	**20,000**	**20,000**
Chromium (d)	57	N/A	**3.3**	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	--	--	--	'--	--	10 UJ	10 UJ	--	--	--	'--
Iron	300	N/A	**15,000**	**16,000 J**	**17,000**	**15,000**	**14,000**	--	**7,600**	**7,500**	**7,900**	**8,000**	**6,500**	**6,600**
Lead	0.54	N/A	**0.75**	0.28 U	0.28 U	0.28 U	0.28 U	--	1.0 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**12,000**	**14,000**	**13,000**	**14,000**	**11,000**	--	**8,500**	**8,500**	**9,700**	**9,300**	**7,800**	**7,800**
Manganese	50	N/A	**960**	**1,500**	**1,500**	**1,400**	**1,500**	--	**440**	**440**	**390**	**390**	**320**	**320**
Potassium	N/A	N/A	**6,500**	**5,600**	--	**5,600**	**4,200**	--	--	--	--	--	**3,100**	**3,100**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	1.0 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**59,000**	**20,000**	**36,000**	**42,000**	**32,000**	--	**16,000**	**16,000**	**15,000**	**15,000**	**13,000**	**13,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	--	0.20 U	0.20 U	0.11 U	0.11 U	0.20 U	0.20 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**6.8**	**2.9**	**4.2**	**7.6**	2.5 U	--	**1.2**	**1.7**	0.45 UJ	**1.2 J**	**1.0 J**	0.45 UJ
Barium	1,000	N/A	**55**	**32**	**36**	**44**	**29**	--	**15**	**15**	**20**	**19**	**17**	**17**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**41,000**	**38,000**	**38,000**	**40,000**	**33,000**	--	**22,000**	**22,000**	**25,000**	**24,000**	**20,000**	**20,000**
Chromium (d)	57	N/A	**8.6**	2 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	--	--	--	'--	--	10 UJ	10 UJ	--	--	'--	'--
Iron	300	N/A	**20,000**	**17,000**	**18,000**	**17,000**	**15,000**	--	**7,700**	**7,500**	**7,600**	**8,000**	**6,800**	**6,700**
Lead	0.54	N/A	2.2 U	0.28 U	0.28 U	0.28 U	0.28 U	--	1.0 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**12,000**	**14,000**	**13,000**	**14,000**	**12,000**	--	**8,700**	**8,600**	**9,600**	**9,400**	**8,100**	**7,900**
Manganese	50	N/A	**1,000**	**1,500**	**1,600**	**1,500**	**1,600**	--	**450**	**440**	**390**	**410**	**320**	**320**
Potassium	N/A	N/A	**6,600**	**5,600**	--	**5,800**	**4,400**	--	--	--	--	--	**3,100**	**3,100**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	1.0 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**65,000**	**19,000**	**38,000**	**42,000**	**34,000**	--	**16,000**	**16,000**	**15,000**	**15,000**	**13,000**	**13,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	0.20 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-2 EV15060181-08 6/25/2015 N	TP-MW-2 EV20110151-14 11/23/2020 N	FPP-MW-2 EV14120151-03 EV14120162-14 12/18/2014 N	FPP-MW-2 EV15030154-07 3/26/2015 N	FPP-MW-2 EV15060175-09 6/24/2015 N	FPP-MW-2 EV20110161-07 11/24/2020 N	FFP-MW-3 EV14090091-01 EV14090107-24 9/16/2014 N	FFP-MW-3-Dup EV14090091-10 EV14090107-25 9/16/2014 FD	FPP-MW-3 EV14120151-04 EV14120162-16 12/18/2014 N	FPP-MW-3-Dup EV14120151-09 EV14120162-20 12/18/2014 FD	FPP-MW-3 EV15030154-01 3/26/2015 N	FPP-MW-3-Dup EV15030154-05 3/26/2015 FD
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**520**	**260**	**240**	**280**	**220**	--	**170**	**180**	**140**	**170**	**140**	**130**
Chloride (EPA-300.0)	230	N/A	**10**	**12**	**18**	**15**	**14**	--	**9.7**	**9.2**	**8.7**	**8.7**	**9.2**	**9.2**
Fluoride (EPA-300.0)	0.64	N/A	**0.19**	1.0 U	**0.49**	**0.26**	**0.19**	--	**0.33 J**	0.16 UJ	**0.50 J**	**0.17 J**	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	0.034 U	0.034 U	**0.063**	0.034 U	0.034 U	--	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	--	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**0.99**	**1.4**	0.26 U	**19**	**4.3**	--	**9.7**	**9.5**	**10**	**10**	**5.1**	**4.8**
Ammonia (EPA-350.1)	N/A	N/A	**2.8**	**2.0**	**2.1**	**4.8**	**1.0**	--	**0.43**	**0.52**	**0.27 J**	**0.62 J**	**0.21**	**0.20**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**280**	**180**	**240**	**260**	**200**	--	**120**	**120**	**120**	**120**	**100**	**100**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**280**	**180**	**240**	**260**	**200**	--	**120**	**120**	**120**	**120**	**100**	**100**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**100**	**4.0**	**6.2**	**9.8**	**5.8**	--	**1.8**	**1.8**	**1.4**	**1.2**	**1.2**	**1.3**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	16.44	15.7	15.13	14.05	18.44	--	16.49	16.52	16.50	16.54	15.86	15.98
Specific Conductivity (µS/cm)	N/A	N/A	989	472.7	434	743	369	--	367	385	362	362	554	555
Dissolved Oxygen (mg/L)	N/A	N/A	0.25	0.18	1.11	5.15	3.77	--	1.66	1.69	0.19	0.19	0.43	0.40
pH (S.U.)	6.5 to 8.5	N/A	6.19	6.48	6.47	6.55	6.51	--	6.48	6.50	7 (f)	7 (f)	6.38	6.36
Oxidation Reduction Potential (mV)	N/A	N/A	-68.3	-111.4	-61.1	-58.8	-87.7	--	-133.5	-134.5	-97.2	-97.2	-49.1	-51.3
Turbidity (NTU)	N/A	N/A	29.2	5.83	3.27	9.51	1.47	--	2.84	2.77	2.82	3.00	1.38	2.06
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
G-BHC (Lindane)	0.019	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Heptachlor	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Aldrin	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Heptachlor Epoxide	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Chlordane	0.20	0.20	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Endosulfan I (g)	0.056	N/A	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
4,4'-DDE	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Dieldrin	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Endrin	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
4,4'-DDD	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Endosulfan II (g)	0.056	N/A	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
4,4'-DDT	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Endrin Aldehyde (h)	0.01	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Endosulfan Sulfate (g)	0.056	N/A	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Methoxychlor	0.030	0.01	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Hexachlorobenzene (i)	0.01	0.01	--	--	--	--	--	--	2.0 U	2.0 U	0.010 U	0.010 U	0.010 UJ	0.010 U
Toxaphene	0.50	0.50	--	--	--	--	--	--	0.53 U	0.52 U	0.50 U	0.50 U	0.50 UJ	0.50 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	--	--	--	--	--	--	0.0053 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
PCB-1221	N/A	N/A	--	--	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
PCB-1232	N/A	N/A	--	--	--	--	--	--	0.0053 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
PCB-1242	N/A	N/A	--	--	--	--	--	--	0.0053 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
PCB-1248	N/A	N/A	--	--	--	--	--	--	0.0053 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
PCB-1254	0.005	0.005	--	--	--	--	--	--	0.0053 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
PCB-1260	0.014	0.005	--	--	--	--	--	--	0.0053 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Total PCBs (j)	0.10	N/A	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-2 EV15060181-08 6/25/2015 N	TP-MW-2 EV20110151-14 11/23/2020 N	FPP-MW-2 EV14120151-03 EV14120162-14 12/18/2014 N	FPP-MW-2 EV15030154-07 3/26/2015 N	FPP-MW-2 EV15060175-09 6/24/2015 N	FPP-MW-2 EV20110161-07 11/24/2020 N	FFP-MW-3 EV14090091-01 EV14090107-24 9/16/2014 N	FFP-MW-3-Dup EV14090091-10 EV14090107-25 9/16/2014 FD	FPP-MW-3 EV14120151-04 EV14120162-16 12/18/2014 N	FPP-MW-3-Dup EV14120151-09 EV14120162-20 12/18/2014 FD	FPP-MW-3 EV15030154-01 3/26/2015 N	FPP-MW-3-Dup EV15030154-05 3/26/2015 FD
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	--	--	--	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	--	--	--	--	--	--	2.0 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U
Methylene Chloride	4.6	0.68	--	--	--	--	--	--	5.0 U	5.0 U	0.68 U	0.68 U	0.68 U	0.68 U
Acrylonitrile	0.0572	0.0572	--	--	--	--	--	--	10 U	10 U	0.057 U	0.057 U	0.057 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	--	--	--	--	--	--	--	--	2.0 U	2.0 U	--	--
2,2-Dichloropropane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	--	--	--	--	--	--	2.0 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U
Benzene	1.2	0.028	--	--	--	--	--	--	2.0 U	2.0 U	0.028 U	0.028 U	0.028 U	0.028 U
Dibromomethane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	--	--	--	--	--	--	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	--	--	--	--	--	--	2.0 U	2.0 U	0.023 U	0.023 U	0.023 U	0.023 U
1,2-Dibromoethane (EDB)	0.01	N/A	--	--	--	--	--	--	0.01 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U
Chlorobenzene	100	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	--	--	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	--	--	--	--	--	--	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-2 EV15060181-08 6/25/2015 N	TP-MW-2 EV20110151-14 11/23/2020 N	FPP-MW-2 EV14120151-03 EV14120162-14 12/18/2014 N	FPP-MW-2 EV15030154-07 3/26/2015 N	FPP-MW-2 EV15060175-09 6/24/2015 N	FPP-MW-2 EV20110161-07 11/24/2020 N	FFP-MW-3 EV14090091-01 EV14090107-24 9/16/2014 N	FFP-MW-3-Dup EV14090091-10 EV14090107-25 9/16/2014 FD	FPP-MW-3 EV14120151-04 EV14120162-16 12/18/2014 N	FPP-MW-3-Dup EV14120151-09 EV14120162-20 12/18/2014 FD	FPP-MW-3 EV15030154-01 3/26/2015 N	FPP-MW-3-Dup EV15030154-05 3/26/2015 FD
1,4-Dichlorobenzene	8.1	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	--	--	--	--	--	--	10 U	10 U	0.10 U	0.10 U	0.10 U	0.10 U
Hexachlorobutadiene	0.44	N/A	--	--	--	--	--	--	2.0 U	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U
1,2,3-Trichlorobenzene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	--	--	--	--	--	--	0.20 U	0.20 U	0.031 U	0.031 U	0.031 U	0.031 U
Carbon Tetrachloride	0.23	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.14 U	0.14 U	0.14 U	0.14 U
Trichloroethene (TCE)	2.5	N/A	--	--	--	--	--	--	0.020 U	0.020 U	0.054 U	0.054 U	0.054 U	0.054 U
1,2-Dichloropropane	0.50	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	--	--	--	--	--	--	2.0 U	2.0 U	0.058 U	0.058 U	0.058 U	0.058 U
1,1,2-Trichloroethane	0.59	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	--	--	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	--	--	--	--	--	--	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Phenol	2,400	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	--	--	--	--	--	--	0.94 U	0.94 U	0.87 U	0.87 U	0.89 U	0.89 U
2-Chlorophenol	40	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	--	--	--	--	--	--	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachloroethane	2.0	2.0	--	--	--	--	--	--	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	16	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	--	--	--	--	--	--	2.0 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U
2,6-Dichlorophenol	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	--	--	--	--	--	--	2.0 U	2.0 U	0.83 U	0.83 U	0.85 U	0.85 U
2,4,5-Trichlorophenol	800	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	--	--	--	--	--	--	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U
3-Nitroaniline	N/A	N/A	--	--	--	--	--	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	--	--	--	--	--	--	10 U	10 U	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	TP-MW-2 EV15060181-08 6/25/2015 N	TP-MW-2 EV20110151-14 11/23/2020 N	FPP-MW-2 EV14120151-03 EV14120162-14 12/18/2014 N	FPP-MW-2 EV15030154-07 3/26/2015 N	FPP-MW-2 EV15060175-09 6/24/2015 N	FPP-MW-2 EV20110161-07 11/24/2020 N	FFP-MW-3 EV14090091-01 EV14090107-24 9/16/2014 N	FFP-MW-3-Dup EV14090091-10 EV14090107-25 9/16/2014 FD	FPP-MW-3 EV14120151-04 EV14120162-16 12/18/2014 N	FPP-MW-3-Dup EV14120151-09 EV14120162-20 12/18/2014 FD	FPP-MW-3 EV15030154-01 3/26/2015 N	FPP-MW-3-Dup EV15030154-05 3/26/2015 FD
4-Nitrophenol	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	--	--	--	--	--	--	0.78 U	0.78 U	0.72 U	0.72 U	0.73 U	0.73 U
2,3,4,6-Tetrachlorophenol	480	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	--	--	--	--	--	--	2.0 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U
4-Bromophenyl-Phenylether	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	--	--	--	--	--	--	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	--	--	--	--	--	--	**2.1**	2.0 U	0.75 U	0.75 U	0.76 U	0.76 U
Di-N-Octylphthalate	160	N/A	--	--	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	--	--	0.014 U	0.013 U	0.013 U	--	0.020 U	**0.031**	0.013 U	0.013 U	0.014 UJ	**0.089** J
2-Methylnaphthalene	32	N/A	--	--	0.020 U	0.02 U	0.020 U	--	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.02 U
1-Methylnaphthalene	1.5	N/A	--	--	0.020 U	0.02 U	0.020 U	--	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.02 U
Acenaphthylene	N/A	N/A	--	--	0.020 U	0.02 U	0.020 U	--	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.02 U
Acenaphthene	650	N/A	--	--	0.014 U	0.014 U	0.014 U	--	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U
Fluorene	640	N/A	--	--	0.0092 U	0.0090 U	**0.010**	--	0.020 U	0.020 U	0.0090 U	**0.0097**	0.0092 U	0.0092 U
Pentachlorophenol	0.23	0.23	--	--	0.12 U	0.12 U	0.12 U	--	0.13 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U
Phenanthrene	N/A	N/A	--	--	0.014 U	0.013 U	0.013 U	--	0.020 U	0.020 U	0.013 U	0.013 U	0.014 U	0.014 U
Anthracene	4,800	N/A	--	--	0.01 U	**0.012**	0.01 U	--	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene	86	N/A	--	--	0.0093 U	0.0092 U	0.0092 U	--	0.020 U	0.020 U	0.0092 U	0.0092 U	0.0093 U	0.0093 U
Pyrene	480	N/A	--	--	0.011 U	**0.014**	0.01 U	--	0.020 U	0.020 U	**0.010**	**0.014**	0.011 U	0.011 U
Benzo[A]Anthracene	0.00940	0.00940	--	--	0.017 U	0.017 U	0.017 U	--	0.020 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U
Chrysene	0.00940	0.00940	--	--	0.018 U	0.018 U	0.018 U	--	0.020 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.00730	0.00730	--	--	0.0068 U	**0.011**	0.0068 U	--	0.020 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	--	--	0.013 U	0.013 U	0.013 U	--	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	--	--	0.027 U	0.027 U	0.027 U	--	0.029 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	--	--	0.014 U	0.014 U	0.014 U	--	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	--	--	0.011 U	0.011 U	0.011 U	--	0.012 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	N/A	N/A	--	--	0.019 U	0.019 U	0.019 U	--	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.019 U
cPAH TEQ (o)	0.10	N/A	--	--	ND	**0.0011**	ND	--	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			FPP-MW-3 EV15060175-08 6/24/2015 N	FPP-MW-3-Dup EV15060175-02 6/24/2015 FD	FPP-MW-3 EV20110151-13 EV20110161-09 11/23/2020 N	FPP-MW-3-Dup EV20110151-11 EV20110161-08 11/23/2020 FD	MW-6 EV14090107-01 9/17/2014 N	MW-6 EV14120162-07 12/19/2014 N	MW-6 EV15030127-08 3/24/2015 N	MW-6 EV15060175-07 6/24/2015 N	MW-7 EV14090091-06 EV14090107-02 9/16/2014 N	MW-7 EV14120119-04 EV14120162-25 12/16/2014 N	MW-7 EV15030162-01 3/26/2015 N	MW-7 EV15060188-06 6/25/2015 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	130 U	130 U	--	--	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U
Diesel Range	N/A	N/A	310 U	310 U	--	--	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U
Oil Range	N/A	N/A	310 U	310 U	--	--	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**1.3**	**1.2**	**1.3**	**1.2**	**1.3**	**1.7**	**2.2**	**1.1**	**1.3**	**2.8**	**2.6**	**1.8**
Barium	1,000	N/A	**24**	**24**	**37**	**36**	**44**	**55**	**47**	**29**	**28**	**52**	**52**	**33**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**26,000**	**27,000**	**29,000**	**29,000**	**32,000**	**35,000**	**32,000**	**22,000**	**23,000**	**37,000**	**34,000**	**29,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	'--	--	--	--	--	--	'--	10 U	--	--	'--
Iron	300	N/A	**9,100**	**9,200**	**10,000 J**	**11,000 J**	**3,100**	**23,000**	**23,000**	**8,700**	**6,800**	**23,000**	**17,000**	**11,000**
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**11,000**	**11,000**	**13,000**	**13,000**	**12,000**	**12,000**	**11,000**	**8,000**	**7,900**	**13,000**	**12,000**	**10,000**
Manganese	50	N/A	**500**	**480**	**410**	**410**	**1,300**	**2,300**	**2,200**	**1,200**	**1,600**	**1,900**	**1,400**	**1,400**
Potassium	N/A	N/A	**3,600**	**3,600**	**4,500**	**4,600**	--	--	**9,200**	**7,100**	--	--	**8,700**	**7,800**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**19,000**	**18,000**	**27,000**	**28,000**	**15,000**	**14,000**	**13,000**	**10,000**	**13,000**	**19,000**	**18,000**	**14,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	1.2 U	1.6 U	**1.3**	**1.3**	**1.3**	**2.5**	**1.1**	1.5 U	**1.7**	**2.6**	**2.0**	**1.4**
Barium	1,000	N/A	**23**	**22**	**36**	**36**	**44**	**55**	**50**	**29**	**30**	**49**	**52**	**34**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**27,000**	**25,000**	**29,000**	**29,000**	**33,000**	**34,000**	**32,000**	**22,000**	**23,000**	**37,000**	**33,000**	**29,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	'--	--	--	--	--	--	'--	10 U	--	--	'--
Iron	300	N/A	**9,200**	**8,300**	**10,000**	**10,000**	**2,800**	**24,000**	**23,000**	**8,900**	**7,100**	**22,000**	**17,000**	**11,000**
Lead	0.54	N/A	0.28 U	0.30 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**11,000**	**9,500**	**12,000**	**12,000**	**12,000**	**11,000**	**11,000**	**8,100**	**8,000**	**13,000**	**12,000**	**10,000**
Manganese	50	N/A	**480**	**430**	**420**	**410**	**1,300**	**2,300**	**2,200**	**1,200**	**1,700**	**2,000**	**1,400**	**1,300**
Potassium	N/A	N/A	**3,600**	**3,300**	**4,500**	**4,600**	--	--	**9300**	**7,200**	--	--	**8,500**	**7,900**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**18,000**	**16,000**	**27,000**	**28,000**	**14,000**	**14,000**	**14,000**	**10,000**	**13,000**	**19,000**	**18,000**	**15,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	FPP-MW-3 EV15060175-08 6/24/2015 N	FPP-MW-3-Dup EV15060175-02 6/24/2015 FD	FPP-MW-3 EV20110151-13 EV20110161-09 11/23/2020 N	FPP-MW-3-Dup EV20110151-11 EV20110161-08 11/23/2020 FD	MW-6 EV14090107-01 9/17/2014 N	MW-6 EV14120162-07 12/19/2014 N	MW-6 EV15030127-08 3/24/2015 N	MW-6 EV15060175-07 6/24/2015 N	MW-7 EV14090091-06 EV14090107-02 9/16/2014 N	MW-7 EV14120119-04 EV14120162-25 12/16/2014 N	MW-7 EV15030162-01 3/26/2015 N	MW-7 EV15060188-06 6/25/2015 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**160**	**160**	**330**	**320**	--	**250**	**180**	**130**	**130**	**240**	**210**	**170**
Chloride (EPA-300.0)	230	N/A	**11**	**10**	**15 J**	**12 J**	**20**	**17**	**18**	**9.0**	**12**	**19**	**17**	**14**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	0.16 U	1.0 U	1.0 U	**0.17**	**0.41**	0.16 U	0.16 U	**0.25**	**0.39**	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	0.15 U	0.034 U	0.034 U	**0.039**	**0.36 J**	0.034 U	0.034 U	0.050 U	**0.39**	**0.35**	**4.1**	**0.061**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 UJ	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**4.7**	**4.6**	**25**	**23**	**2.0**	0.26 U	0.26 U	**1.7 J**	**1.8**	0.26 U	**0.67**	**1.1**
Ammonia (EPA-350.1)	N/A	N/A	**0.32**	**0.29**	**0.90**	**1.1**	--	**1.1**	**0.64**	**0.36**	**2.8**	**5.0**	**4.1 J**	**2.9**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**150**	**150**	**210**	**200**	--	**160**	**150**	**110**	**140**	**220**	**170**	**170**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**150**	**150**	**210**	**200**	--	**160**	**150**	**110**	**140**	**220**	**170**	**170**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**2.1**	**2.1**	**5.6 J**	**10 J**	--	**4.7**	**3.8**	**4.3**	**3.2**	**4.2**	**4.1**	**3.8**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	18.43	18.37	15.2	15.2	20.15	15.35	12.29	17.07	18.02	14.20	15.41	19.17
Specific Conductivity (µS/cm)	N/A	N/A	357	344	517	516	762	510	440	211	224	366	520	554
Dissolved Oxygen (mg/L)	N/A	N/A	0.84	0.79	0.89	0.92	1.07	0.30	0.18	0.28	1.40	1.78	0.54	0.49
pH (S.U.)	6.5 to 8.5	N/A	6.71	6.69	6.49	6.48	6.65	7 (f)	6.50	6.34	5.84	6.39	6.20	6.14
Oxidation Reduction Potential (mV)	N/A	N/A	-98.8	-99.3	-34.7	-34.85	-43.75	-76.2	-52.8	-57.9	29.2	-44.1	-34.2	5.2
Turbidity (NTU)	N/A	N/A	0.89	0.84	0.84	0.17	17.75	2.21	3.10	0.54	13.3	4.07	3.05	1.03
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Heptachlor	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Aldrin	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Chlordane	0.20	0.20	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
4,4'-DDE	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Dieldrin	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Endrin	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
4,4'-DDD	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Endosulfan II (g)	0.056	N/A	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
4,4'-DDT	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Methoxychlor	0.030	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorobenzene (i)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	--	--	--	--	2.0 U	0.011 U	0.010 U	0.010 U
Toxaphene	0.50	0.50	0.50 U	0.51 U	0.50 U	0.50 U	--	--	--	--	0.52 U	0.52 U	0.50 U	0.50 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.0050 U	0.0051 U	0.067 U	0.015 U	--	--	--	--	0.0052 U	0.0052 U	0.0050 U	0.0050 U
PCB-1221	N/A	N/A	0.011 U	0.011 U	3.0 U	0.030 U	--	--	--	--	0.011 U	0.011 U	0.010 U	0.010 U
PCB-1232	N/A	N/A	0.0050 U	0.0051 U	0.067 U	0.015 U	--	--	--	--	0.0052 U	0.0052 U	0.0050 U	**0.0097**
PCB-1242	N/A	N/A	0.0050 U	0.0051 U	0.067 U	0.015 U	--	--	--	--	0.0052 U	**0.040**	**0.026**	0.0050 U
PCB-1248	N/A	N/A	0.0050 U	0.0051 U	0.067 U	0.015 U	--	--	--	--	0.0052 U	0.0052 U	0.0050 U	0.0050 U
PCB-1254	0.005	0.005	0.0050 U	0.0051 U	0.067 U	0.015 U	--	--	--	--	0.0052 U	0.0052 U	0.0050 U	0.0050 U
PCB-1260	0.014	0.005	0.0050 U	0.0051 U	0.067 U	0.015 U	--	--	--	--	0.0052 U	0.0052 U	0.0050 U	0.0050 U
Total PCBs (j)	0.10	N/A	ND	ND	ND	ND	--	--	--	--	ND	**0.040**	**0.026**	**0.0097**

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	FPP-MW-3 EV15060175-08 6/24/2015 N	FPP-MW-3-Dup EV15060175-02 6/24/2015 FD	FPP-MW-3 EV20110151-13 EV20110161-09 11/23/2020 N	FPP-MW-3-Dup EV20110151-11 EV20110161-08 11/23/2020 FD	MW-6 EV14090107-01 9/17/2014 N	MW-6 EV14120162-07 12/19/2014 N	MW-6 EV15030127-08 3/24/2015 N	MW-6 EV15060175-07 6/24/2015 N	MW-7 EV14090091-06 EV14090107-02 9/16/2014 N	MW-7 EV14120119-04 EV14120162-25 12/16/2014 N	MW-7 EV15030162-01 3/26/2015 N	MW-7 EV15060188-06 6/25/2015 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	--	--	--	--	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.014 U	0.014 U	0.016 U	0.016 U	--	--	--	--	2.0 U	0.014 U	0.014 U	0.014 U
Methylene Chloride	4.6	0.68	0.68 U	0.68 U	1.0 U	1.0 U	--	--	--	--	5.0 U	0.68 U	0.68 U	0.68 U
Acrylonitrile	0.0572	0.0572	0.057 U	0.057 U	--	--	--	--	--	--	10 U	0.057 U	0.057 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	--	--	--	--	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	2.0 U	2.0 U	6.8 U	6.8 U	--	--	--	--	--	2.0 U	--	2.0 U
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.014 U	0.014 U	0.0035 U	0.0035 U	--	--	--	--	2.0 U	0.014 U	0.014 U	0.014 U
Benzene	1.2	0.028	0.028 U	0.028 U	0.011 U	0.011 U	--	--	--	--	2.0 U	0.028 U	0.028 U	0.028 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.16 U	0.16 U	--	--	--	--	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	--	--	--	--	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	--	--	--	--	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	0.023 U	0.11 U	0.11 U	--	--	--	--	2.0 U	0.023 U	0.023 U	0.023 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.010 U	0.010 U	0.010 U	--	--	--	--	0.01 U	0.010 U	0.010 U	0.010 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.018 U	0.018 U	--	--	--	--	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	FPP-MW-3 EV15060175-08 6/24/2015 N	FPP-MW-3-Dup EV15060175-02 6/24/2015 FD	FPP-MW-3 EV20110151-13 EV20110161-09 11/23/2020 N	FPP-MW-3-Dup EV20110151-11 EV20110161-08 11/23/2020 FD	MW-6 EV14090107-01 9/17/2014 N	MW-6 EV14120162-07 12/19/2014 N	MW-6 EV15030127-08 3/24/2015 N	MW-6 EV15060175-07 6/24/2015 N	MW-7 EV14090091-06 EV14090107-02 9/16/2014 N	MW-7 EV14120119-04 EV14120162-25 12/16/2014 N	MW-7 EV15030162-01 3/26/2015 N	MW-7 EV15060188-06 6/25/2015 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.10 U	0.10 U	0.03 U	0.03 U	--	--	--	--	10 U	0.10 U	0.10 U	0.10 U
Hexachlorobutadiene	0.44	N/A	0.069 U	0.069 U	0.5 U	0.5 U	--	--	--	--	2.0 U	0.069 U	0.069 U	0.069 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.031 U	0.031 U	0.02 U	0.02 U	--	--	--	--	0.20 U	0.031 U	0.031 U	0.031 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.14 U	0.14 U	0.29 U	0.29 U	--	--	--	--	0.10 U	0.14 U	0.14 U	0.14 U
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.054 U	0.026 U	0.026 U	--	--	--	--	0.020 U	0.054 U	0.054 U	0.054 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.17 U	0.17 U	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	0.058 U	0.058 U	0.27 U	0.27 U	--	--	--	--	2.0 U	0.058 U	0.058 U	0.058 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.19 U	0.19 U	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.23 U	0.23 U	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.28 U	0.28 U	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.14 U	0.14 U	--	--	--	--	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.38 U	0.38 U	--	--	--	--	**0.17**	0.10 U	0.10 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.4 U	1.4 U	1.4 U	--	--	--	--	1.5 U	1.4 U	1.5 U	1.4 UJ
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Bis(2-Chloroethyl)Ether	0.94	0.94	0.89 U	0.88 U	0.89 U	0.87 U	--	--	--	--	0.94 U	0.87 U	0.94 U	0.88 UJ
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U	--	--	--	--	2.0 U	1.9 U	2.0 U	1.9 UJ
Hexachloroethane	2.0	2.0	1.9 U	1.9 U	2.0 U	2.0 U	--	--	--	--	2.0 U	1.9 U	2.0 U	1.9 UJ
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	--	--	--	--	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	1.8 U	1.8 U	1.8 U	--	--	--	--	2.0 U	1.8 U	1.9 U	1.8 UJ
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2,4,6-Trichlorophenol	1.4	0.90	0.85 U	0.84 U	0.85 U	0.83 U	--	--	--	--	2.0 U	0.83 U	0.90 U	0.84 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.7 U	1.7 U	1.7 U	--	--	--	--	1.8 U	1.7 U	1.8 U	1.7 UJ
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	--	5.0 U	5.0 U	5.0 U	5.0 UJ
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	--	--	--	--	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	FPP-MW-3 EV15060175-08 6/24/2015 N	FPP-MW-3-Dup EV15060175-02 6/24/2015 FD	FPP-MW-3 EV20110151-13 EV20110161-09 11/23/2020 N	FPP-MW-3-Dup EV20110151-11 EV20110161-08 11/23/2020 FD	MW-6 EV14090107-01 9/17/2014 N	MW-6 EV14120162-07 12/19/2014 N	MW-6 EV15030127-08 3/24/2015 N	MW-6 EV15060175-07 6/24/2015 N	MW-7 EV14090091-06 EV14090107-02 9/16/2014 N	MW-7 EV14120119-04 EV14120162-25 12/16/2014 N	MW-7 EV15030162-01 3/26/2015 N	MW-7 EV15060188-06 6/25/2015 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
2,4-Dinitrotoluene	0.78	0.78	0.73 U	0.73 U	0.73 U	0.72 U	--	--	--	--	0.78 U	0.72 U	0.78 U	0.73 UJ
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Azobenzene	1.63	1.63	1.5 U	1.5 U	1.5 U	1.5 U	--	--	--	--	2.0 U	1.5 U	1.6 U	1.5 UJ
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U	--	--	--	--	2.0 U	1.9 U	2.0 U	1.9 UJ
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.76 U	0.76 U	0.76 U	0.75 U	--	--	--	--	2.0 U	0.75 U	0.81 U	0.75 UJ
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	2.0 U	2.0 U	2.0 U	2.0 UJ
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	0.014 U	0.013 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.013 U	0.013 U	0.013 U
2-Methylnaphthalene	32	N/A	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.020 U	0.02 U	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.020 U	0.02 U	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.020 U	0.02 U	0.020 U
Acenaphthene	650	N/A	0.014 U	0.014 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.014 U	0.014 U	0.014 U
Fluorene	640	N/A	0.0092 U	0.0091 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.0090 U	0.0090 U	0.0091 U
Pentachlorophenol	0.23	0.23	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	--	--	--	0.13 U	0.12 U	0.12 U	0.12 U
Phenanthrene	N/A	N/A	0.014 U	0.013 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.013 U	**0.015**	0.013 U
Anthracene	4,800	N/A	0.01 U	0.01 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.01 U	**0.017**	0.01 U
Fluoranthene	86	N/A	0.0093 U	0.0092 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.0092 U	0.0092 U	0.0092 U
Pyrene	480	N/A	0.011 U	0.011 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	**0.011**	0.01 U	0.011 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	--	--	--	0.020 U	0.017 U	0.017 U	0.017 U
Chrysene	0.00940	0.00940	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	--	--	--	0.020 U	0.018 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.0068 U	**0.012**	**0.012**	0.020 U	--	--	--	0.020 U	0.0068 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.013 U	**0.015**	0.013 U	0.020 U	--	--	--	0.020 U	0.013 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	--	--	--	0.029 U	0.027 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	--	--	--	0.020 U	0.014 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	--	--	--	0.012 U	0.011 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	N/A	N/A	0.019 U	0.019 U	0.020 U	0.020 U	0.020 U	--	--	--	0.020 U	0.019 U	0.019 U	0.019 U
cPAH TEQ (o)	0.10	N/A	ND	ND	**0.003**	**0.001**	ND	--	--	--	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-7 EV20110151-01 11/23/2020 N	MW-8 EV14090091-05 EV14090107-03 9/16/2014 N	MW-8 EV14120162-11 12/19/2014 N	MW-8 EV15030143-06 3/25/2015 N	MW-8 EV15060188-05 6/25/2015 N	MW-8 EV20110151-04 11/23/2020 N	MW-9A EV14090080-01 EV14090107-04 9/15/2014 N	MW-9A EV14120143-01 EV14120162-23 12/17/2014 N	MW-9A EV15030162-02 3/26/2015 N	MW-9A EV15060175-01 6/24/2015 N	MW-9A EV20110151-08 11/23/2020 N	MW-11 EV14090080-03 EV14090107-05 9/15/2014 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	--	130 U	130 U	130 U	130 U	--	130 U	130 U	130 U	130 U	--	130 U
Diesel Range	N/A	N/A	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	310 U
Oil Range	N/A	N/A	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**4.7**	**3.7**	**0.68**	**1.5**	**4.1**	0.45 U	**1.1**	**0.67**	0.45 U	**1.1**	**0.80**	**3.6**
Barium	1,000	N/A	**56**	**77**	**64**	**65**	**54**	**24**	**8.5**	**4.9**	**11**	**8.3**	**10**	**46**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**41,000**	**31,000**	**38,000**	**43,000**	**33,000**	**22,000**	**21,000**	**14,000**	**27,000**	**23,000**	**26,000**	**34,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	10 UJ	--	--	'--	--	10 U	--	--	'--	--	10 U
Iron	300	N/A	**27,000 J**	**14,000**	**7,700**	**5,900**	**24,000**	**340 J**	50 U	50 U	50 U	50 U	50 U	**29,000**
Lead	0.54	N/A	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U
Magnesium	N/A	N/A	**15,000**	**13,000**	**17,000**	**19,000**	**13,000**	**11,000**	**6,600**	**4,600**	**9,100**	**7,600**	**9,400**	**11,000**
Manganese	50	N/A	**2,100**	**1,900**	**2,000**	**2,200**	**1,800**	**390**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2,000**
Potassium	N/A	N/A	**8,700**	--	--	**20,000**	**8,000**	**14,000**	--	--	**3,600**	**3,400**	**3,800**	--
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
Sodium	20,000	N/A	**19,000**	**25,000**	**28,000**	**30,000**	**20,000**	**25,000**	**11,000**	**9,400**	**14,000**	**13,000**	**13,000**	**16,000**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**5.3**	**4.8**	**1.2**	**1.6**	**3.3**	0.45 U	1.0 U	**0.97**	0.45 U	0.86 U	**0.87**	**3.7**
Barium	1,000	N/A	**55**	**98**	**65**	**63**	**54**	**22**	**8.5**	**5.1**	**10**	**8.1**	**10**	**52**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**40,000**	**32,000**	**39,000**	**42,000**	**33,000**	**22,000**	**20,000**	**14,000**	**26,000**	**22,000**	**27,000**	**36,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	10 UJ	--	--	'--	--	10 U	--	--	'--	--	10 U
Iron	300	N/A	**29,000**	**17,000**	**6,300**	**5,200**	**23,000**	**500**	50 U	50 U	50 U	50 U	50 U	**30,000**
Lead	0.54	N/A	0.28 U	**2.1**	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.32 U	**0.31**	1.0 U
Magnesium	N/A	N/A	**14,000**	**14,000**	**18,000**	**19,000**	**13,000**	**10,000**	**6,600**	**4,400**	**8,800**	**6,700**	**9,200**	**12,000**
Manganese	50	N/A	**2,100**	**2,000**	**2,000**	**2,200**	**1,800**	**370**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2,100**
Potassium	N/A	N/A	**8,400**	--	--	**20,000**	**7,700**	**14,000**	--	--	**3,400**	**3,100**	**3,800**	--
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
Sodium	20,000	N/A	**18,000**	**26,000**	**28,000**	**30,000**	**20,000**	**24,000**	**11,000**	**9,000**	**13,000**	**11,000**	**13,000**	**16,000**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-7 EV20110151-01 11/23/2020 N	MW-8 EV14090091-05 EV14090107-03 9/16/2014 N	MW-8 EV14120162-11 12/19/2014 N	MW-8 EV15030143-06 3/25/2015 N	MW-8 EV15060188-05 6/25/2015 N	MW-8 EV20110151-04 11/23/2020 N	MW-9A EV14090080-01 EV14090107-04 9/15/2014 N	MW-9A EV14120143-01 EV14120162-23 12/17/2014 N	MW-9A EV15030162-02 3/26/2015 N	MW-9A EV15060175-01 6/24/2015 N	MW-9A EV20110151-08 11/23/2020 N	MW-11 EV14090080-03 EV14090107-05 9/15/2014 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**330**	**230**	**300**	**290**	**240**	**200**	**170 J**	**100**	**180**	**140**	**170**	**210 J**
Chloride (EPA-300.0)	230	N/A	**26**	**18**	**21**	**24**	**16**	**20**	**8.8**	**6.0**	**12**	**12**	**13**	**16**
Fluoride (EPA-300.0)	0.64	N/A	1.0 U	**0.23**	**0.26**	**0.19**	0.16 U	1.0 U	**0.41**	**0.32**	0.16 U	0.16 U	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	**0.18**	0.034 U	**0.44**	**27**	**0.047**	**0.87**	**3.3**	**0.53**	**2.0**	**4.0**	**3.9**	**0.045**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	1.0 U	**0.41**	**0.82**	**1.2**	0.26 U	**11**	**10**	**6.4**	**11**	**12**	**16**	0.26 U
Ammonia (EPA-350.1)	N/A	N/A	**3.6**	**8.4**	**8.9**	**11**	**4.4**	**0.68**	**0.060**	0.050 U	0.050 U	0.050 U	0.050 U	**1.3**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**180**	**250**	**260**	**260**	**200**	**110**	**88**	**67**	**110**	**85**	**90**	**190**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**180**	**250**	**260**	**260**	**200**	**110**	**88**	**67**	**110**	**85**	**90**	**190**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**4.8**	**8.0**	**4.5**	**3.8**	**4.3**	**3.7**	**1.6**	**1.0**	**0.83**	**1.3**	**0.66**	**5.0**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	14.3	17.93	15.88	14.45	17.3	16.6	16.96	15.26	14.97	16.53	15.6	16.50
Specific Conductivity (µS/cm)	N/A	N/A	396.4	495	698	734	449	268.8	248	131	332	199	300.5	384
Dissolved Oxygen (mg/L)	N/A	N/A	0.53	0.50	0.34	0.10	0.14	1.09	6.20	4.60	3.15	8.85	7.00	0.68
pH (S.U.)	6.5 to 8.5	N/A	6.35	5.95	7 (f)	6.46	6.51	6.07	9.76	9.10	6.40	6.46	6.52	5.46
Oxidation Reduction Potential (mV)	N/A	N/A	11.6	-64.6	-13.0	-76.9	-109.8	46.0	-259.3	39.7	-8.9	74.9	93.2	53.8
Turbidity (NTU)	N/A	N/A	157.0	45.6	2.46	1.69	4.77	8.28	7.15	0.49	1.18	0.40	1.77	6.51
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Heptachlor	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Aldrin	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Chlordane	0.20	0.20	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
4,4'-DDE	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Dieldrin	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Endrin	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
4,4'-DDD	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Endosulfan II (g)	0.056	N/A	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	**0.012**	0.010 U	0.010 U	0.012 U
4,4'-DDT	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Methoxychlor	0.030	0.01	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorobenzene (i)	0.01	0.01	0.010 U	2.0 U	0.011 U	0.011 U	0.010 U	0.010 U	2.0 U	0.010 U	0.011 U	0.010 U	0.010 U	2.0 U
Toxaphene	0.50	0.50	0.50 U	0.51 U	0.53 U	0.52 U	0.50 U	0.50 U	0.50 U	0.50 U	0.51 U	0.50 U	0.50 U	0.51 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.067 U	0.022 U	0.0053 U	0.0052 U	0.0050 U	0.067 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.067 U	0.0051 U
PCB-1221	N/A	N/A	0.067 U	0.017 U	0.011 U	0.023 U	0.010 U	0.067 U	0.01 U	0.010 U	0.011 U	0.014 U	0.067 U	0.011 U
PCB-1232	N/A	N/A	**0.073**	0.047 U	0.0053 U	0.026 U	0.0050 U	0.067 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.067 U	0.0051 U
PCB-1242	N/A	N/A	0.067 U	0.028 U	**0.010**	0.011 U	0.0050 U	0.067 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.067 U	0.0051 U
PCB-1248	N/A	N/A	0.067 U	0.012 U	0.0053 U	0.0064 U	**0.020**	0.067 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.067 U	0.0051 U
PCB-1254	0.005	0.005	0.067 U	0.017 U	0.0053 U	0.0052 U	0.0050 U	0.067 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.067 U	0.0051 U
PCB-1260	0.014	0.005	0.067 U	0.0051 U	0.0053 U	0.0052 U	0.0050 U	0.067 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.067 U	0.0051 U
Total PCBs (j)	0.10	N/A	**0.073**	ND	**0.010**	ND	**0.020**	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-7 EV20110151-01 11/23/2020 N	MW-8 EV14090091-05 EV14090107-03 9/16/2014 N	MW-8 EV14120162-11 12/19/2014 N	MW-8 EV15030143-06 3/25/2015 N	MW-8 EV15060188-05 6/25/2015 N	MW-8 EV20110151-04 11/23/2020 N	MW-9A EV14090080-01 EV14090107-04 9/15/2014 N	MW-9A EV14120143-01 EV14120162-23 12/17/2014 N	MW-9A EV15030162-02 3/26/2015 N	MW-9A EV15060175-01 6/24/2015 N	MW-9A EV20110151-08 11/23/2020 N	MW-11 EV14090080-03 EV14090107-05 9/15/2014 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.016 U	2.0 U	0.014 U	0.014 U	0.014 U	0.016 U	2.0 U	0.014 U	0.014 U	0.014 U	0.016 U	2.0 U
Methylene Chloride	4.6	0.68	1.0 U	5.0 U	0.68 U	0.68 U	0.68 U	1.0 U	5.0 U	0.68 U	0.68 U	0.68 U	1.0 U	5.0 U
Acrylonitrile	0.0572	0.0572	--	10 U	0.057 U	0.057 U	0.057 U	--	10 U	0.057 U	0.057 U	0.057 U	--	10 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	6.8 U	--	2.0 U	--	2.0 U	6.8 U	--	2.0 U	--	2.0 U	6.8 U	--
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.0035 U	2.0 U	0.014 U	0.014 U	0.014 U	0.0035 U	2.0 U	0.014 U	0.014 U	0.014 U	0.0035 U	2.0 U
Benzene	1.2	0.028	0.011 U	2.0 U	0.028 U	0.028 U	0.028 U	0.011 U	2.0 U	0.028 U	0.028 U	0.028 U	0.011 U	2.0 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.16 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.11 U	2.0 U	0.023 U	0.023 U	0.023 U	0.11 U	2.0 U	0.023 U	0.023 U	0.023 U	0.11 U	2.0 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.018 U	0.023 U	0.023 U	0.023 U	0.023 U	0.018 U	0.023 U	0.023 U	0.023 U	0.023 U	0.018 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-7 EV20110151-01 11/23/2020 N	MW-8 EV14090091-05 EV14090107-03 9/16/2014 N	MW-8 EV14120162-11 12/19/2014 N	MW-8 EV15030143-06 3/25/2015 N	MW-8 EV15060188-05 6/25/2015 N	MW-8 EV20110151-04 11/23/2020 N	MW-9A EV14090080-01 EV14090107-04 9/15/2014 N	MW-9A EV14120143-01 EV14120162-23 12/17/2014 N	MW-9A EV15030162-02 3/26/2015 N	MW-9A EV15060175-01 6/24/2015 N	MW-9A EV20110151-08 11/23/2020 N	MW-11 EV14090080-03 EV14090107-05 9/15/2014 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.03 U	10 U	0.10 U	0.10 U	0.10 U	0.03 U	10 U	0.10 U	0.10 U	0.10 U	0.03 U	10 U
Hexachlorobutadiene	0.44	N/A	0.5 U	2.0 U	0.069 U	0.069 U	0.069 U	0.5 U	2.0 U	0.069 U	0.069 U	0.069 U	0.5 U	2.0 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.29 U	0.10 U	0.14 U	0.14 U	0.14 U	0.29 U	**1.7**	**22**	**2.5**	0.14 U	0.29 U	0.10 U
Trichloroethene (TCE)	2.5	N/A	0.026 U	0.020 U	0.054 U	0.054 U	0.054 U	0.026 U	0.020 U	0.054 U	0.054 U	0.054 U	0.026 U	0.020 U
1,2-Dichloropropane	0.50	N/A	0.17 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	0.27 U	2.0 U	0.058 U	0.058 U	0.058 U	0.27 U	2.0 U	0.058 U	0.058 U	0.058 U	0.27 U	2.0 U
1,1,2-Trichloroethane	0.59	N/A	0.19 U	0.10 U	0.10 U	0.10 U	0.10 U	0.19 U	0.10 U	0.10 U	0.10 U	0.10 U	0.19 U	0.10 U
Dibromochloromethane	0.40	N/A	0.23 U	0.10 U	0.10 U	0.10 U	0.10 U	0.23 U	0.10 U	0.10 U	0.10 U	0.10 U	0.23 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.28 U	0.10 U	0.10 U	0.10 U	0.10 U	0.28 U	0.10 U	0.10 U	0.10 U	0.10 U	0.28 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.14 U	0.10 U	0.10 U	0.10 U	0.10 U	0.14 U	0.10 U	0.10 U	0.10 U	0.10 U	0.14 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.38 U	0.10 U	0.10 U	0.10 U	0.10 U	**0.94**	0.10 U	0.10 U	0.10 U	0.10 U	0.38 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.4 U	1.5 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.89 U	0.94 U	0.87 U	0.87 U	0.88 U	0.87 U	0.94 U	0.87 U	0.94 U	0.87 U	0.87 U	0.94 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	1.9 U	2.0 U
Hexachloroethane	2.0	2.0	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	2.0 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.9 U	1.8 U	1.8 U	2.0 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	0.85 U	2.0 U	0.83 U	0.83 U	0.84 U	0.83 U	2.0 U	0.83 U	0.90 U	0.83 U	0.83 U	2.0 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-7 EV20110151-01 11/23/2020 N	MW-8 EV14090091-05 EV14090107-03 9/16/2014 N	MW-8 EV14120162-11 12/19/2014 N	MW-8 EV15030143-06 3/25/2015 N	MW-8 EV15060188-05 6/25/2015 N	MW-8 EV20110151-04 11/23/2020 N	MW-9A EV14090080-01 EV14090107-04 9/15/2014 N	MW-9A EV14120143-01 EV14120162-23 12/17/2014 N	MW-9A EV15030162-02 3/26/2015 N	MW-9A EV15060175-01 6/24/2015 N	MW-9A EV20110151-08 11/23/2020 N	MW-11 EV14090080-03 EV14090107-05 9/15/2014 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.73 U	0.78 U	0.72 U	0.72 U	0.73 U	0.72 U	0.78 U	0.72 U	0.78 U	0.72 U	0.72 U	0.78 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U	1.5 U	1.6 U	1.5 U	1.5 U	2.0 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	1.9 U	2.0 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.76 U	**10**	**49**	0.75 U	0.75 U	0.75 U	2.0 U	0.75 U	0.81 U	0.75 U	0.75 U	2.0 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U
2-Methylnaphthalene	32	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
Acenaphthene	650	N/A	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U
Fluorene	640	N/A	0.020 U	0.020 U	0.0090 U	**0.0096**	0.0091 U	0.020 U	0.020 U	**0.0092**	0.0090 U	0.0090 U	0.0200 U	0.020 U
Pentachlorophenol	0.23	0.23	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U
Phenanthrene	N/A	N/A	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U
Anthracene	4,800	N/A	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U
Fluoranthene	86	N/A	0.020 U	0.020 U	0.0092 U	0.0092 U	0.0092 U	0.020 U	0.020 U	0.0092 U	0.0092 U	0.0092 U	0.020 U	0.020 U
Pyrene	480	N/A	0.020 U	0.020 U	0.01 U	0.01 U	0.011 U	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U
Chrysene	0.00940	0.00940	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U
Benzo[B]Fluoranthene	0.00730	0.00730	**0.0080**	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U
Benzo[G,H,I]Perylene	N/A	N/A	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U
cPAH TEQ (o)	0.10	N/A	**0.001**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-11 EV14120162-09 12/19/2014 N	MW-11 EV15030154-02 3/26/2015 N	MW-11 EV15060175-10 6/24/2015 N	MW-11 EV20110151-03 11/23/2020 N	MW-12 EV14090080-05 EV14090107-06 9/15/2014 N	MW-12 EV14120151-01 EV14120162-17 12/18/2014 N	MW-12 EV15030143-03 3/25/2015 N	MW-12 EV15060181-02 6/25/2015 N	MW-12 EV20110161-01 11/24/2020 N	MW-14 EV14090107-07 9/17/2014 N	MW-14 EV14120151-06 EV14120162-19 12/18/2014 N	MW-14 EV15030127-01 3/23/2015 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	130 U	130 U	130 U	--	130 U	130	--	--	--	130 U	130 U	130 U
Diesel Range	N/A	N/A	310 U	310 U	310 U	--	**>310**	310	--	--	--	310 U	310 U	310 U
Oil Range	N/A	N/A	310 U	310 U	310 U	--	310 U	**>310**	--	--	--	310 U	310 U	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	**1,200**	**390 J**	**310 J**	**360**	**350**	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	**3,700**	**990 J**	130 U	**940**	**4,900**	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--	**370**	**980**	**650**	**250**	250 U	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--	**1,400**	**1,100**	**3,100**	**560**	**880**	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**4.1**	**3.7**	**2.5**	**1.7**	**1.2**	0.45 U	**2.3**	0.45 U	**2.1**	1.0 U	0.45 U	0.45 U
Barium	1,000	N/A	**54**	**49**	**51**	**48**	**59**	**47**	**69**	**70**	**82**	**6.0**	**4.9**	**3.4**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**38,000**	**35,000**	**37,000**	**39,000**	**40,000**	**40,000**	**65,000**	**57,000**	**58,000**	**13,000**	**13,000**	**11,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	--	'--	--	10 U	--	--	'--	--	--	--	--
Iron	300	N/A	**32,000**	**29,000**	**31,000**	**28,000 J**	**13,000**	**11,000**	**3,100**	**21,000**	**6,700 J**	50 U	50 U	50 U
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**13,000**	**12,000**	**13,000**	**14,000**	**13,000**	**14,000**	**23,000**	**20,000**	**23,000**	**4,500**	**4,600**	**3,900**
Manganese	50	N/A	**1,900**	**1,700**	**2,000**	**2,000**	**1,800**	**1,700**	**2,500**	**2,800**	**1,100 J**	2.0 U	**2.9**	2.0 U
Potassium	N/A	N/A	--	**5,600**	**5,500**	**5,900**	--	--	**6,900**	**5,700**	**7,600**	--	--	**1,300**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Sodium	20,000	N/A	**19,000**	**18,000**	**18,000**	**19,000**	**69,000**	**43,000**	**77,000**	**57,000**	**87,000**	**5,700**	**5,100**	**6,200**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**3.9**	**4.6**	**2.8**	**1.6**	**1.3**	0.45 U	**1.1**	0.45 U	**1.6**	1.0 U	0.45 U	0.45 U
Barium	1,000	N/A	**52**	**49**	**50**	**46**	**70**	**45**	**69**	**74**	**85**	**5.7**	**5.0**	**4.3**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**38,000**	**35,000**	**37,000**	**38,000**	**45,000**	**39,000**	**65,000**	**59,000**	**57,000**	**13,000**	**13,000**	**11,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	--	'--	--	10 U	--	--	'--	--	--	--	--
Iron	300	N/A	**31,000**	**29,000**	**31,000**	**27,000**	**14,000**	**10,000**	**1,600**	**22,000**	**5,100 J**	50 U	50 U	**70**
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**13,000**	**12,000**	**13,000**	**13,000**	**15,000**	**14,000**	**23,000**	**21,000**	**22,000**	**4,500**	**4,800**	**3,900**
Manganese	50	N/A	**1,900**	**1,700**	**1,800**	**1,900**	**2,100**	**1,700**	**2,300**	**2,800**	**870 J**	**5.6**	**3.8**	**3.7**
Potassium	N/A	N/A	--	**5,600**	**5,400**	**5,800**	--	--	**7,000**	**5,900**	**7,300**	--	--	**1,300**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Sodium	20,000	N/A	**19,000**	**18,000**	**18,000**	**18,000**	**80,000**	**44,000**	**79,000**	**60,000**	**85,000**	**5,800**	**5,400**	**6,300**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-11 EV14120162-09 12/19/2014 N	MW-11 EV15030154-02 3/26/2015 N	MW-11 EV15060175-10 6/24/2015 N	MW-11 EV20110151-03 11/23/2020 N	MW-12 EV14090080-05 EV14090107-06 9/15/2014 N	MW-12 EV14120151-01 EV14120162-17 12/18/2014 N	MW-12 EV15030143-03 3/25/2015 N	MW-12 EV15060181-02 6/25/2015 N	MW-12 EV20110161-01 11/24/2020 N	MW-14 EV14090107-07 9/17/2014 N	MW-14 EV14120151-06 EV14120162-19 12/18/2014 N	MW-14 EV15030127-01 3/23/2015 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**240**	**220**	**250**	**310**	**370 J**	**290**	**520**	**340**	--	--	**72**	**66**
Chloride (EPA-300.0)	230	N/A	**20**	**20**	**18**	**31**	**18**	**18**	**18**	**15**	--	**4.5**	**3.7**	**4.8**
Fluoride (EPA-300.0)	0.64	N/A	**0.22**	0.16 U	0.16 U	1.0 U	**0.44**	**0.39**	**0.48**	**0.29**	--	0.16 U	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	**0.041**	**0.23**	0.034 U	--	**0.20 J**	**0.22**	**0.49**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	--	0.043 UJ	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**0.29**	0.26 U	0.50 U	**1.4**	**18**	**0.35**	**45**	**11**	--	**3.0**	**3.3**	**4.5**
Ammonia (EPA-350.1)	N/A	N/A	**1.3**	**0.97**	**0.91**	**0.96**	**1.5**	**1.4**	**1.0**	**1.0**	--	--	0.050 U	0.050 U
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**180**	**170**	**180**	**150**	**350**	**260**	**380**	**380**	--	--	**58**	**47**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**180**	**170**	**180**	**150**	**350**	**260**	**380**	**380**	--	--	**58**	**47**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**4.0**	**4.1**	**5.2**	**3.4**	**16**	**7.0**	**13**	**12**	--	--	**0.72**	**0.77**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	15.30	15.63	16.34	16.4	19.81	16.54	14.14	17.81	--	17.46	9.93	7.25
Specific Conductivity (µS/cm)	N/A	N/A	558	533	399	510.2	1251	683	1719	1352	--	305	131	166
Dissolved Oxygen (mg/L)	N/A	N/A	0.31	0.34	0.84	0.24	1.09	0.35	1.28	1.19	--	1.10	3.84	9.10
pH (S.U.)	6.5 to 8.5	N/A	7 (f)	6.33	6.32	6.43	7.23	7 (f)	6.17	6.03	--	6.59	6 (f)	7.05
Oxidation Reduction Potential (mV)	N/A	N/A	-61.7	53.7	-69.2	-111.60	-353.33	-71.7	-50.3	-59.0	--	-84.2	37.7	134.3
Turbidity (NTU)	N/A	N/A	3.44	0.86	1.20	4.52	4.20	4.28	10.7	2.27	--	7.06	1.93	1.16
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
G-BHC (Lindane)	0.019	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Heptachlor	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Aldrin	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Heptachlor Epoxide	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.018 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Chlordane	0.20	0.20	0.010 U	0.010 UJ	0.010 U	0.010 U	0.047 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Endosulfan I (g)	0.056	N/A	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
4,4'-DDE	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Dieldrin	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Endrin	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
4,4'-DDD	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Endosulfan II (g)	0.056	N/A	0.017 U	**0.011 J**	**0.014**	0.010 U	0.056 U	0.011 U	0.011 U	0.010 U	--	--	--	--
4,4'-DDT	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.13 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.071 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.010 UJ	0.010 U	0.010 U	0.023 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Methoxychlor	0.030	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	0.040 U	0.011 U	0.017 U	0.010 U	--	--	--	--
Hexachlorobenzene (i)	0.01	0.01	0.010 U	0.010 UJ	0.010 U	0.010 U	2.0 U	0.011 U	0.011 U	0.010 U	--	--	--	--
Toxaphene	0.50	0.50	0.50 U	0.50 UJ	0.50 U	0.50 U	2.5 U	0.52 U	0.53 U	0.50 U	--	--	--	--
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0064 U	0.0051 U	0.0053 U	0.0050 U	--	--	--	0.0050 U
PCB-1221	N/A	N/A	0.010 U	0.010 U	0.010 U	0.067 U	0.011 U	0.011 U	0.011 U	0.010 U	--	--	--	0.010 U
PCB-1232	N/A	N/A	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0056 U	0.0051 U	0.0053 U	0.0050 U	--	--	--	0.0050 U
PCB-1242	N/A	N/A	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0053 U	0.0050 U	--	--	--	0.0050 U
PCB-1248	N/A	N/A	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0073 U	0.0050 U	--	--	--	0.0050 U
PCB-1254	0.005	0.005	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0053 U	0.0050 U	--	--	--	0.0050 U
PCB-1260	0.014	0.005	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0053 U	0.0050 U	--	--	--	0.0050 U
Total PCBs (j)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-11 EV14120162-09 12/19/2014 N	MW-11 EV15030154-02 3/26/2015 N	MW-11 EV15060175-10 6/24/2015 N	MW-11 EV20110151-03 11/23/2020 N	MW-12 EV14090080-05 EV14090107-06 9/15/2014 N	MW-12 EV14120151-01 EV14120162-17 12/18/2014 N	MW-12 EV15030143-03 3/25/2015 N	MW-12 EV15060181-02 6/25/2015 N	MW-12 EV20110161-01 11/24/2020 N	MW-14 EV14090107-07 9/17/2014 N	MW-14 EV14120151-06 EV14120162-19 12/18/2014 N	MW-14 EV15030127-01 3/23/2015 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	--	--	--	--
1,1-Dichloroethene	0.057	0.014	0.014 U	0.014 U	0.014 U	0.016 U	2.0 U	0.014 U	0.014 U	0.014 U	--	--	--	--
Methylene Chloride	4.6	0.68	0.68 U	0.68 U	0.68 U	1.0 U	5.0 U	0.68 U	0.68 U	0.68 U	--	--	--	--
Acrylonitrile	0.0572	0.0572	0.057 U	0.057 U	0.057 U	--	10 U	0.057 U	0.057 U	0.057 U	--	--	--	--
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Hexane (k)	480	N/A	2.0 U	--	2.0 U	6.8 U	--	2.0 U	--	2.0 U	--	--	--	--
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dichloroethane	0.38	0.014	0.014 U	0.014 U	0.014 U	0.0035 U	2.0 U	0.014 U	0.014 U	0.014 U	--	--	--	--
Benzene	1.2	0.028	0.028 U	0.028 U	0.028 U	0.011 U	2.0 U	0.028 U	0.028 U	0.028 U	--	--	--	--
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.16 U	0.059 U	0.059 U	0.059 U	0.059 U	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	0.023 U	0.023 U	0.11 U	2.0 U	0.023 U	0.023 U	0.023 U	--	--	--	--
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	--	--	--	--
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	--	--	--	--
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.018 U	0.023 U	0.023 U	0.023 U	0.023 U	--	--	--	--
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-11 EV14120162-09 12/19/2014 N	MW-11 EV15030154-02 3/26/2015 N	MW-11 EV15060175-10 6/24/2015 N	MW-11 EV20110151-03 11/23/2020 N	MW-12 EV14090080-05 EV14090107-06 9/15/2014 N	MW-12 EV14120151-01 EV14120162-17 12/18/2014 N	MW-12 EV15030143-03 3/25/2015 N	MW-12 EV15060181-02 6/25/2015 N	MW-12 EV20110161-01 11/24/2020 N	MW-14 EV14090107-07 9/17/2014 N	MW-14 EV14120151-06 EV14120162-19 12/18/2014 N	MW-14 EV15030127-01 3/23/2015 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.10 U	0.10 U	0.10 U	0.03 U	10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
Hexachlorobutadiene	0.44	N/A	0.069 U	0.069 U	0.069 U	0.5 U	2.0 U	0.069 U	0.069 U	0.069 U	--	--	--	--
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U	--	--	--	--
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
Chloroform	1.4	N/A	0.14 U	0.14 U	0.14 U	0.29 U	0.10 U	0.14 U	0.14 U	0.14 U	--	--	--	--
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.054 U	0.054 U	0.026 U	0.020 U	0.054 U	0.054 U	0.054 U	--	--	--	--
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.10 U	0.17 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
Trans-1,3-Dichloropropene	0.34	N/A	0.058 U	0.058 U	0.058 U	0.27 U	2.0 U	0.058 U	0.058 U	0.058 U	--	--	--	--
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.10 U	0.19 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.10 U	0.23 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.10 U	0.28 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.10 U	0.14 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.10 U	0.38 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.0 U	--	--	--	--
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	--	--	--	--
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.0 U	--	--	--	--
Bis(2-Chloroethyl)Ether	0.94	0.94	0.87 U	0.87 U	0.89 U	0.87 U	0.94 U	0.87 U	0.96 U	0.89 U	--	--	--	--
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	2.1 U	1.9 U	--	--	--	--
Hexachloroethane	2.0	2.0	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	2.1 U	1.9 U	--	--	--	--
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.9 U	1.8 U	--	--	--	--
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.0 U	--	--	--	--
2,4,6-Trichlorophenol	1.4	0.90	0.83 U	0.83 U	0.85 U	0.83 U	2.0 U	0.83 U	0.92 U	0.85 U	--	--	--	--
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.9 U	1.7 U	--	--	--	--
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	--
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-11 EV14120162-09 12/19/2014 N	MW-11 EV15030154-02 3/26/2015 N	MW-11 EV15060175-10 6/24/2015 N	MW-11 EV20110151-03 11/23/2020 N	MW-12 EV14090080-05 EV14090107-06 9/15/2014 N	MW-12 EV14120151-01 EV14120162-17 12/18/2014 N	MW-12 EV15030143-03 3/25/2015 N	MW-12 EV15060181-02 6/25/2015 N	MW-12 EV20110161-01 11/24/2020 N	MW-14 EV14090107-07 9/17/2014 N	MW-14 EV14120151-06 EV14120162-19 12/18/2014 N	MW-14 EV15030127-01 3/23/2015 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.0 U	--	--	--	--
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2,4-Dinitrotoluene	0.78	0.78	0.72 U	0.72 U	0.73 U	0.72 U	0.78 U	0.72 U	0.80 U	0.73 U	--	--	--	--
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.0 U	--	--	--	--
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.1 U	2.0 U	--	--	--	--
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**4.3**	--	--	--	--
Azobenzene	1.63	1.63	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U	1.5 U	1.7 U	1.5 U	--	--	--	--
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	2.1 U	1.9 U	--	--	--	--
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	**53**	0.75 U	0.76 U	0.75 U	2.0 U	0.75 U	0.83 U	0.76 U	--	--	--	--
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	0.013 U	0.013 U	0.014 U	0.020 U	**0.034**	**0.11**	0.015 U	0.014 U	--	**0.024**	--	--
2-Methylnaphthalene	32	N/A	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	--	0.020 U	--	--
1-Methylnaphthalene	1.5	N/A	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	--	0.020 U	--	--
Acenaphthylene	N/A	N/A	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	--	0.020 U	--	--
Acenaphthene	650	N/A	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	**0.017**	0.015 U	0.014 U	--	0.020 U	--	--
Fluorene	640	N/A	0.0090 U	0.0090 U	0.0092 U	0.020 U	0.020 U	0.0090 U	0.01 U	0.0092 U	--	0.020 U	--	--
Pentachlorophenol	0.23	0.23	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	--	0.13 U	--	--
Phenanthrene	N/A	N/A	0.013 U	0.013 U	0.014 U	0.020 U	0.020 U	0.013 U	0.015 U	0.014 U	--	0.020 U	--	--
Anthracene	4,800	N/A	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U	0.01 U	0.011 U	**0.013**	--	0.020 U	--	--
Fluoranthene	86	N/A	0.0092 U	0.0092 U	0.0093 U	0.020 U	0.020 U	0.0092 U	0.01 U	0.0093 U	--	0.020 U	--	--
Pyrene	480	N/A	0.01 U	0.01 U	0.011 U	0.020 U	0.020 U	**0.015**	0.012 U	0.011 U	--	0.020 U	--	--
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.018 U	0.017 U	--	0.020 U	--	--
Chrysene	0.00940	0.00940	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.02 U	0.018 U	--	0.020 U	--	--
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0074 U	0.0068 U	--	0.020 U	--	--
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.014 U	0.013 U	--	0.020 U	--	--
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.030 U	0.027 U	--	0.029 U	--	--
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.015 U	0.014 U	--	0.020 U	--	--
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	--	0.012 U	--	--
Benzo[G,H,I]Perylene	N/A	N/A	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.019 U	0.02 U	0.019 U	--	0.020 U	--	--
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-14 EV15060161-01 6/23/2015 N	MW-14 EV20110161-05 11/24/2020 N	MW-15 EV14090107-08 9/17/2014 N	MW-15 EV14120151-05 EV14120162-15 12/18/2014 N	MW-15 EV15030127-02 3/23/2015 N	MW-15 EV15060161-02 6/23/2015 N	MW-15 EV20110161-06 11/24/2020 N	MW-16 EV14090107-09 9/17/2014 N	MW-16 EV14120151-07 EV14120162-21 12/18/2014 N	MW-16 EV15030127-03 3/23/2015 N	MW-16 EV15060175-03 6/24/2015 N	MW-16 EV20110161-03 11/24/2020 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	130 U	--	130 U	130 U	130 U	130 U	--	130 U	130 U	130 U	130 U	--
Diesel Range	N/A	N/A	310 U	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--
Oil Range	N/A	N/A	310 U	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	0.45 U	0.45 U	**1.1**	0.45 U	0.45 U	**0.93**	**1.3**	1.0 U	0.45 U	0.45 U	0.45 U	**0.61**
Barium	1,000	N/A	**6.1**	**12**	**23**	**28**	**21**	**18**	**24**	**45**	**19**	**22**	**47**	**28**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**14,000**	**26,000**	**20,000**	**24,000**	**20,000**	**17,000**	**21,000**	**87,000**	**41,000**	**50,000**	**95,000**	**57,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	**2.1**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	--	10 U	--	--	'--	--	--	--	--	'--	--
Iron	300	N/A	50 U	50 U	**6,300**	**5,500**	**2,700**	**5,100**	**6,800 J**	50 U	50 U	50 U	50 U	50 U
Lead	0.54	N/A	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**5,000**	**10,000**	**7,900**	**9,600**	**7,800**	**6,900**	**8,900**	**12,000**	**11,000**	**15,000**	**18,000**	**15,000**
Manganese	50	N/A	2.0 U	**240**	**890**	**850**	**560**	**630**	**740**	**110**	**210**	**630**	**140**	**300**
Potassium	N/A	N/A	**1,700**	**4,300**	--	--	**3,000**	**2,800**	**3,400**	--	--	**10,000**	**18,000**	**13,000**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**5,900**	**12,000**	**8,900**	**10,000**	**8,900**	**8,400**	**9200**	**36,000**	**20,000**	**20,000**	**42,000**	**33,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	0.45 U	0.45 U	**1.3**	0.45 U	**0.85**	**0.91**	**3.3**	1.0 U	**0.97**	0.45 U	0.94 U	**0.69**
Barium	1,000	N/A	**6.5**	**11**	**25**	**28**	**21**	**18**	**31**	**47**	**21**	**22**	**47**	**34**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**14,000**	**25,000**	**21,000**	**23,000**	**20,000**	**17,000**	**21,000**	**89,000**	**42,000**	**50,000**	**90,000**	**58,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	--	10 U	--	--	'--	--	--	--	--	'--	--
Iron	300	N/A	50 U	50 U	**7,900**	**6,400**	**3,600**	**5,500**	**12,000**	**320**	**190**	**170**	**470**	**470**
Lead	0.54	N/A	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.36 U	0.28 U
Magnesium	N/A	N/A	**4,800**	**10,000**	**8,500**	**9,000**	**7,900**	**6,700**	**8,700**	**13,000**	**11,000**	**16,000**	**16,000**	**15,000**
Manganese	50	N/A	**2.6**	**250**	**910**	**830**	**590**	**630**	**780**	**120**	**190**	**630**	**140**	**600**
Potassium	N/A	N/A	**1,700**	**4,300**	--	--	**3,100**	**2,700**	**3,500**	--	--	**10,000**	**16,000**	**13,000**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**5,700**	**12,000**	**9,500**	**9,900**	**9,100**	**8,200**	**9,100**	**38,000**	**20,000**	**20,000**	**38,000**	**34,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-14 EV15060161-01 6/23/2015 N	MW-14 EV20110161-05 11/24/2020 N	MW-15 EV14090107-08 9/17/2014 N	MW-15 EV14120151-05 EV14120162-15 12/18/2014 N	MW-15 EV15030127-02 3/23/2015 N	MW-15 EV15060161-02 6/23/2015 N	MW-15 EV20110161-06 11/24/2020 N	MW-16 EV14090107-09 9/17/2014 N	MW-16 EV14120151-07 EV14120162-21 12/18/2014 N	MW-16 EV15030127-03 3/23/2015 N	MW-16 EV15060175-03 6/24/2015 N	MW-16 EV20110161-03 11/24/2020 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**140**	**200**	**180**	**160**	**130**	**140**	**180**	--	**230**	**580**	**510**	**450**
Chloride (EPA-300.0)	230	N/A	**6.2**	**15**	**12**	**13**	**10**	**7.2**	**14**	**22**	**20**	**20**	**21**	**28**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	**0.37**	0.16 U	0.16 U	1.0 U
Nitrate as N (EPA-300.0)	10	N/A	**0.25**	**0.18**	0.034 U	0.034 U	**0.063**	0.034 U	**0.065**	**2.8 J**	**0.13**	**2.7**	**2.9**	**1.2**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 UJ	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**3.8**	**3.7**	**1.2**	**0.90**	**1.9**	**3.2**	1.0 U	**170**	**15**	**6.2**	**160**	**14**
Ammonia (EPA-350.1)	N/A	N/A	0.050 U	**0.25**	**3.0**	**0.63**	**0.093**	**0.22**	**0.47**	--	0.050 U	**0.20**	0.050 U	0.050 U
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**63**	**110**	**110**	**110**	**90**	**88**	**93**	--	**190**	**210**	**250**	**200**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**63**	**110**	**110**	**110**	**90**	**88**	**93**	--	**190**	**210**	**250**	**200**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**0.88**	**1.3**	**2.7**	**1.9**	**1.6**	**2.8**	**2.4**	--	**2.0**	**2.4**	**3.5**	**3.8**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	13.96	14.8	17.34	15.51	16.57	17.22	13.5	21.10	15.39	14.34	19.94	12.0
Specific Conductivity (µS/cm)	N/A	N/A	111	230.6	209	217	239	184	204.2	745	347	499	791	544
Dissolved Oxygen (mg/L)	N/A	N/A	2.44	0.47	0.31	0.81	0.59	0.91	0.64	0.43	0.61	0.39	1.44	0.91
pH (S.U.)	6.5 to 8.5	N/A	6.63	6.18	5.44	6.32	5.79	6.3	6.91	5.58	6.51	6.06	6.21	6.74
Oxidation Reduction Potential (mV)	N/A	N/A	39.1	44.1	39.6	-4.8	24.9	-24.8	-51.4	97.4	27.3	38.9	186.0	42.1
Turbidity (NTU)	N/A	N/A	0.50	2.68	23.7	79	10.87	42.6	128.7	11.6	13.24	8.26	20.4	13.68
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
G-BHC (Lindane)	0.019	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Heptachlor	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Aldrin	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Heptachlor Epoxide	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Chlordane	0.20	0.20	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Endosulfan I (g)	0.056	N/A	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
4,4'-DDE	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Dieldrin	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Endrin	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
4,4'-DDD	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Endosulfan II (g)	0.056	N/A	--	--	0.012 U	0.011 U	**0.017**	0.010 U	0.010 U	--	--	--	--	--
4,4'-DDT	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Endrin Aldehyde (h)	0.01	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Endosulfan Sulfate (g)	0.056	N/A	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Methoxychlor	0.030	0.01	--	--	0.01 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Hexachlorobenzene (i)	0.01	0.01	--	--	2.0 U	0.011 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Toxaphene	0.50	0.50	--	--	0.50 U	0.52 U	0.50 U	0.50 U	0.50 U	--	--	--	--	--
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.0050 U	--	0.0050 U	0.0051 U	0.0050 U	0.0050 U	0.015 U	--	--	0.0050 U	0.0050 U	--
PCB-1221	N/A	N/A	0.010 U	--	0.01 U	0.011 U	0.010 U	0.010 U	0.030 U	--	--	0.010 U	0.010 U	--
PCB-1232	N/A	N/A	0.0050 U	--	0.0050 U	0.0051 U	0.0050 U	0.0050 U	0.015 U	--	--	0.0065 U	0.0050 U	--
PCB-1242	N/A	N/A	0.0050 U	--	0.0050 U	0.0051 U	0.0050 U	**0.0063**	0.015 U	--	--	0.0050 U	0.0050 U	--
PCB-1248	N/A	N/A	0.0050 U	--	0.0050 U	0.0051 U	0.0050 U	0.0050 U	0.015 U	--	--	0.0050 U	0.0050 U	--
PCB-1254	0.005	0.005	0.0050 U	--	0.0050 U	0.0051 U	0.0050 U	0.0050 U	0.015 U	--	--	0.0050 U	0.0050 U	--
PCB-1260	0.014	0.005	0.0050 U	--	0.0050 U	0.0051 U	0.0050 U	0.0050 U	0.015 U	--	--	0.0050 U	0.0050 U	--
Total PCBs (j)	0.10	N/A	ND	--	ND	ND	ND	**0.0063**	ND	--	--	ND	ND	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-14 EV15060161-01 6/23/2015 N	MW-14 EV20110161-05 11/24/2020 N	MW-15 EV14090107-08 9/17/2014 N	MW-15 EV14120151-05 EV14120162-15 12/18/2014 N	MW-15 EV15030127-02 3/23/2015 N	MW-15 EV15060161-02 6/23/2015 N	MW-15 EV20110161-06 11/24/2020 N	MW-16 EV14090107-09 9/17/2014 N	MW-16 EV14120151-07 EV14120162-21 12/18/2014 N	MW-16 EV15030127-03 3/23/2015 N	MW-16 EV15060175-03 6/24/2015 N	MW-16 EV20110161-03 11/24/2020 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Chloromethane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Bromomethane	11	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Chloroethane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Trichlorofluoromethane	2,400	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Carbon Disulfide	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Acetone	7,200	N/A	--	--	25 U	25 U	25 U	25 U	25 U	--	--	--	--	--
1,1-Dichloroethene	0.057	0.014	--	--	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	--	--	--	--	--
Methylene Chloride	4.6	0.68	--	--	5.0 U	0.68 U	0.68 U	0.68 U	0.68 U	--	--	--	--	--
Acrylonitrile	0.0572	0.0572	--	--	10 U	0.057 U	0.057 U	0.057 U	--	--	--	--	--	--
Methyl T-Butyl Ether (MTBE)	20	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Trans-1,2-Dichloroethene	100	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,1-Dichloroethane	7.7	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Butanone (MEK)	4,800	N/A	--	--	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--
Cis-1,2-Dichloroethene	16	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Hexane (k)	480	N/A	--	--	--	2.0 U	--	2.0 U	6.8 U	--	--	--	--	--
2,2-Dichloropropane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Bromochloromethane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,1,1-Trichloroethane	200	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,1-Dichloropropene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,2-Dichloroethane	0.38	0.014	--	--	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	--	--	--	--	--
Benzene	1.2	0.028	--	--	2.0 U	0.028 U	0.028 U	0.028 U	0.028 U	--	--	--	--	--
Dibromomethane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Bromodichloromethane	0.080	0.059	--	--	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	640	N/A	--	--	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--
Toluene	640	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Cis-1,3-Dichloropropene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Hexanone	N/A	N/A	--	--	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--
1,3-Dichloropropane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Tetrachloroethene (PCE)	0.69	0.023	--	--	2.0 U	0.023 U	0.023 U	0.023 U	0.023 U	--	--	--	--	--
1,2-Dibromoethane (EDB)	0.01	N/A	--	--	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--
Chlorobenzene	100	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Ethylbenzene	70	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
m,p-Xylene (l)	1,600	N/A	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	--	--	--	--	--
Styrene	100	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
o-Xylene	1,600	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Bromoform	4.3	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Isopropylbenzene (cumene)	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,2,3-Trichloropropane	0.023	0.023	--	--	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	--	--	--	--	--
Bromobenzene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
N-Propyl Benzene	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Chlorotoluene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,3,5-Trimethylbenzene	80	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
4-Chlorotoluene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
T-Butyl Benzene	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,2,4-Trimethylbenzene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
S-Butyl Benzene	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
P-Isopropyltoluene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,3 Dichlorobenzene	320	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-14 EV15060161-01 6/23/2015 N	MW-14 EV20110161-05 11/24/2020 N	MW-15 EV14090107-08 9/17/2014 N	MW-15 EV14120151-05 EV14120162-15 12/18/2014 N	MW-15 EV15030127-02 3/23/2015 N	MW-15 EV15060161-02 6/23/2015 N	MW-15 EV20110161-06 11/24/2020 N	MW-16 EV14090107-09 9/17/2014 N	MW-16 EV14120151-07 EV14120162-21 12/18/2014 N	MW-16 EV15030127-03 3/23/2015 N	MW-16 EV15060175-03 6/24/2015 N	MW-16 EV20110161-03 11/24/2020 N
1,4-Dichlorobenzene	8.1	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
N-Butylbenzene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,2-Dichlorobenzene	420	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	--	--	10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
Hexachlorobutadiene	0.44	N/A	--	--	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U	--	--	--	--	--
1,2,3-Trichlorobenzene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	--	--	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	--	--	--	--	--
Carbon Tetrachloride	0.23	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
Chloroform	1.4	N/A	--	--	0.10 U	0.14 U	0.14 U	0.14 U	0.14 U	--	--	--	--	--
Trichloroethene (TCE)	2.5	N/A	--	--	0.020 U	0.054 U	0.054 U	0.054 U	0.054 U	--	--	--	--	--
1,2-Dichloropropane	0.50	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
Trans-1,3-Dichloropropene	0.34	N/A	--	--	2.0 U	0.058 U	0.058 U	0.058 U	0.10 U	--	--	--	--	--
1,1,2-Trichloroethane	0.59	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
Dibromochloromethane	0.40	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
1,1,1,2-Tetrachloroethane	1.7	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.17	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
1,2,4-Trichlorobenzene	1.5	N/A	--	--	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--	--	--	--
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
N-Nitrosodimethylamine	1.51	1.51	--	--	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	--	--	--	--	--
Phenol	2,400	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Aniline	7.7	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Bis(2-Chloroethyl)Ether	0.94	0.94	--	--	0.94 U	0.87 U	0.89 U	0.89 U	0.87 U	--	--	--	--	--
2-Chlorophenol	40	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Benzyl Alcohol	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Methylphenol	400	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Bis(2-Chloroisopropyl)Ether	1,400	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
3&4-Methylphenol (n)	400	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
N-Nitroso-Di-N-Propylamine	2.0	2.0	--	--	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	--	--	--	--	--
Hexachloroethane	2.0	2.0	--	--	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	--	--	--	--	--
Nitrobenzene	16	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Isophorone	8.4	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Nitrophenol	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2,4-Dimethylphenol	160	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Benzoic Acid	64,000	N/A	--	--	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--
Bis(2-Chloroethoxy)Methane	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2,4-Dichlorophenol	24	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	--	--	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	--	--	--	--	--
2,6-Dichlorophenol	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
4-Chloro-3-Methylphenol	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Hexachlorocyclopentadiene	40	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2,4,6-Trichlorophenol	1.4	0.90	--	--	2.0 U	0.83 U	0.85 U	0.85 U	0.83 U	--	--	--	--	--
2,4,5-Trichlorophenol	800	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Chloronaphthalene	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2-Nitroaniline	160	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Dimethylphthalate	270,000	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2,6-Dinitrotoluene	1.82	1.82	--	--	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	--	--	--	--	--
3-Nitroaniline	N/A	N/A	--	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	--	--
2,4-Dinitrophenol	32	N/A	--	--	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-14 EV15060161-01 6/23/2015 N	MW-14 EV20110161-05 11/24/2020 N	MW-15 EV14090107-08 9/17/2014 N	MW-15 EV14120151-05 EV14120162-15 12/18/2014 N	MW-15 EV15030127-02 3/23/2015 N	MW-15 EV15060161-02 6/23/2015 N	MW-15 EV20110161-06 11/24/2020 N	MW-16 EV14090107-09 9/17/2014 N	MW-16 EV14120151-07 EV14120162-21 12/18/2014 N	MW-16 EV15030127-03 3/23/2015 N	MW-16 EV15060175-03 6/24/2015 N	MW-16 EV20110161-03 11/24/2020 N
4-Nitrophenol	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Dibenzofuran	16	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
2,4-Dinitrotoluene	0.78	0.78	--	--	0.78 U	0.72 U	0.73 U	0.73 U	0.72 U	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	480	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Diethylphthalate	13,000	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
4-Chlorophenyl-Phenylether	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
4-Nitroaniline	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
N-Nitrosodiphenylamine	3.3	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Azobenzene	1.63	1.63	--	--	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	--	--	--	--	--
4-Bromophenyl-Phenylether	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Carbazole	N/A	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Di-N-Butylphthalate	1,600	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
Butylbenzylphthalate	8.3	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
3,3'-Dichlorobenzidine	2.0	2.0	--	--	**13**	1.9 U	1.9 U	1.9 U	1.9 U	--	--	--	--	--
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	--	--	2.0 U	0.75 U	0.76 U	0.76 U	0.75 U	--	--	--	--	--
Di-N-Octylphthalate	160	N/A	--	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--	--
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	--	--	0.020 U	**0.037**	0.014 U	**0.016**	0.020 U	**0.051**	--	--	--	--
2-Methylnaphthalene	32	N/A	--	--	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	--	--	--	--
1-Methylnaphthalene	1.5	N/A	--	--	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Acenaphthylene	N/A	N/A	--	--	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Acenaphthene	650	N/A	--	--	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	--	--	--	--
Fluorene	640	N/A	--	--	0.020 U	0.0090 U	0.0092 U	0.0092 U	0.020 U	0.020 U	--	--	--	--
Pentachlorophenol	0.23	0.23	--	--	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	--	--	--	--
Phenanthrene	N/A	N/A	--	--	0.020 U	0.013 U	0.014 U	0.014 U	0.020 U	0.020 U	--	--	--	--
Anthracene	4,800	N/A	--	--	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U	--	--	--	--
Fluoranthene	86	N/A	--	--	0.020 U	0.0092 U	0.0093 U	0.0093 U	0.020 U	0.020 U	--	--	--	--
Pyrene	480	N/A	--	--	0.020 U	**0.028**	0.011 U	0.011 U	0.020 U	0.020 U	--	--	--	--
Benzo[A]Anthracene	0.00940	0.00940	--	--	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	--	--	--	--
Chrysene	0.00940	0.00940	--	--	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	--	--	--	--
Benzo[B]Fluoranthene	0.00730	0.00730	--	--	0.020 U	0.0068 U	0.0068 U	0.0068 U	**0.083**	0.020 U	--	--	--	--
Benzo[K]Fluoranthene	0.0237	0.0237	--	--	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	--	--	--	--
Benzo[A]Pyrene	0.0104	0.0104	--	--	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	--	--	--	--
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	--	--	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	--	--	--	--
Dibenz[A,H]Anthracene	0.0127	0.0127	--	--	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	--	--	--	--
Benzo[G,H,I]Perylene	N/A	N/A	--	--	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	--	--	--	--
cPAH TEQ (o)	0.10	N/A	--	--	ND	ND	ND	ND	**0.008**	ND	--	--	--	--

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-17 EV14090107-10 9/17/2014 N	MW-17 EV14120151-08 EV14120162-18 12/18/2014 N	MW-17 EV15030127-04 3/23/2015 N	MW-17 EV15060175-05 6/24/2015 N	MW-18 EV14090080-02 EV14090107-11 9/15/2014 N	MW-18 EV14120162-02 12/19/2014 N	MW-18 EV15030154-03 3/26/2015 N	MW-18 EV15060181-07 6/25/2015 N	MW-18 EV20110151-06 11/23/2020 N	MW-100 EV14090091-09 EV14090107-12 9/16/2014 N	MW-100 EV14120143-03 EV14120162-22 12/17/2014 N	MW-100 EV15030127-05 3/23/2015 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	--	130 U	130 U	130 U
Diesel Range	N/A	N/A	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U
Oil Range	N/A	N/A	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**2.6**	**1.4**	**1.6**	**2.0**	**8.0**	**7.3**	**6.8**	**7.7**	**4.7**	1.0 U	0.45 U	**0.61**
Barium	1,000	N/A	**55**	**72**	**68**	**68**	**36**	**37**	**38**	**40**	**55**	**8.2**	**5.9**	**6.5**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**34,000**	**43,000**	**45,000**	**44,000**	**47,000**	**42,000**	**44,000**	**51,000**	**76,000**	**22,000**	**28,000**	**32,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	10 U	--	--	'--	10 U	--	--	'--	--	10 U	--	--
Iron	300	N/A	**16,000**	**21,000**	**20,000**	**22,000**	**41,000**	**37,000**	**38,000**	**44,000**	**22,000 J**	50 U	50 U	50 U
Lead	0.54	N/A	1.0 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**11,000**	**15,000**	**16,000**	**16,000**	**19,000**	**16,000**	**17,000**	**21,000**	**33,000**	**9,400**	**9,000**	**9,700**
Manganese	50	N/A	**2,000**	**2,100**	**2,200**	**2,200**	**4,400**	**3,300**	**3,400**	**4,600**	**4,800**	**190**	**230**	**110**
Potassium	N/A	N/A	--	--	**9,500**	**9,400**	--	--	**3700**	**3300**	**8,200**	--	--	**3,800**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	1.0 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Sodium	20,000	N/A	**22,000**	**25,000**	**25,000**	**24,000**	**14,000**	**15,000**	**15,000**	**14,000**	**22,000**	**20,000**	**11,000**	**12,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**2.4**	**1.8**	**2.6**	2.1 U	**8.0**	**7.5**	**6.8**	**7.7**	**4.9**	1.0 U	**0.88**	**0.86**
Barium	1,000	N/A	**57**	**74**	**69**	**65**	**39**	**42**	**39**	**41**	**57**	**11**	**8.2**	**6.8**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**34,000**	**46,000**	**47,000**	**41,000**	**50,000**	**46,000**	**45,000**	**53,000**	**79,000**	**22,000**	**29,000**	**33,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	10 U	--	--	'--	10 U	--	--	'--	--	10 U	--	--
Iron	300	N/A	**17,000**	**22,000**	**21,000**	**21,000**	**44,000**	**40,000**	**39,000**	**46,000**	**23,000**	**400**	**260**	**110**
Lead	0.54	N/A	1.0 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**12,000**	**16,000**	**17,000**	**14,000**	**20,000**	**17,000**	**17,000**	**22,000**	**33,000**	**9,900**	**9,000**	**9,900**
Manganese	50	N/A	**2,000**	**2,300**	**2,200**	**2,000**	**4,700**	**3,600**	**3,500**	**4,900**	**5,100**	**200**	**320**	**110**
Potassium	N/A	N/A	--	--	**9,800**	**8,600**	--	--	**3,700**	**3,300**	**8,400**	--	--	**3,900**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	1.0 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U
Sodium	20,000	N/A	**23,000**	**27,000**	**26,000**	**21,000**	**15,000**	**15,000**	**15,000**	**15,000**	**22,000**	**21,000**	**11,000**	**12,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-17 EV14090107-10 9/17/2014 N	MW-17 EV14120151-08 EV14120162-18 12/18/2014 N	MW-17 EV15030127-04 3/23/2015 N	MW-17 EV15060175-05 6/24/2015 N	MW-18 EV14090080-02 EV14090107-11 9/15/2014 N	MW-18 EV14120162-02 12/19/2014 N	MW-18 EV15030154-03 3/26/2015 N	MW-18 EV15060181-07 6/25/2015 N	MW-18 EV20110151-06 11/23/2020 N	MW-100 EV14090091-09 EV14090107-12 9/16/2014 N	MW-100 EV14120143-03 EV14120162-22 12/17/2014 N	MW-100 EV15030127-05 3/23/2015 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**280**	**250**	**280**	**270**	**310 J**	**250**	**260**	**310**	**520**	**230**	**150**	**180**
Chloride (EPA-300.0)	230	N/A	**10**	**20**	**18**	**18**	**19**	**18**	**19**	**16**	**31**	**12**	**10**	**11**
Fluoride (EPA-300.0)	0.64	N/A	**0.21**	0.16 U	**0.17**	0.16 U	**0.19**	0.16 U	0.16 U	0.16 U	1.0 U	**0.37**	**0.31**	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	**0.054**	**0.072**	**0.23**	0.036 U	0.034 U	**0.047**	0.034 U	0.034 U	**0.28**	**1.1**	**1.3**	**1.2**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	**0.15**	**0.60**	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**3.5**	0.26 U	**0.35**	0.70 U	**0.36**	0.26 U	0.26 U	0.26 U	**9.1**	**14**	**12**	**10**
Ammonia (EPA-350.1)	N/A	N/A	**3.1**	**3.0**	**2.6**	**2.8**	**1.2**	**0.65**	**0.53**	**0.50**	**0.64**	**0.21**	**0.056**	0.050 U
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**210**	**230**	**240**	**240**	**260**	**220**	**210**	**260**	**330**	**130**	**120**	**120**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**210**	**230**	**240**	**240**	**260**	**220**	**210**	**260**	**330**	**130**	**120**	**120**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**4.3**	**4.2**	**4.0**	**4.1**	**8.2**	**5.7**	**6.0**	**8.6**	**24**	**1.6**	**1.0**	**0.88**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	19.97	16.14	14.67	20.16	17.30	15.44	16.21	17.40	15.30	18.02	15.50	14.18
Specific Conductivity (µS/cm)	N/A	N/A	1005	656	969	509	617	680	723	1223	971	269	227	536
Dissolved Oxygen (mg/L)	N/A	N/A	0.66	0.37	0.12	0.89	1.43	0.19	0.06	0.45	0.38	0.38	12.35	1.24
pH (S.U.)	6.5 to 8.5	N/A	6.66	7 (f)	6.45	6.53	6.37	7 (f)	6.44	6.41	6.39	6.13	6.93	6.93
Oxidation Reduction Potential (mV)	N/A	N/A	-125.6	-91.7	-70.1	-82.6	-29.2	-99.1	-83.5	-108.2	-54.9	-6.7	7.5	92.6
Turbidity (NTU)	N/A	N/A	32.79	4.66	5.79	6.27	12.20	1.77	1.91	2.57	21.91	20.0	12.33	12.2
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Heptachlor	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Aldrin	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Chlordane	0.20	0.20	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
4,4'-DDE	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Dieldrin	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Endrin	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
4,4'-DDD	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Endosulfan II (g)	0.056	N/A	0.010 U	0.010 U	0.0099 U	0.010 U	0.022 U	0.019 U	**0.016 J**	**0.036**	0.010 U	0.012 U	**0.014**	**0.017**
4,4'-DDT	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Methoxychlor	0.030	0.01	0.010 U	0.010 U	0.0099 U	0.010 U	0.01 U	0.010 U	0.010 UJ	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorobenzene (i)	0.01	0.01	2.0 U	0.010 U	0.0099 U	0.010 U	2.0 U	0.010 U	0.010 UJ	0.010 U	0.010 U	2.0 U	0.010 U	0.011 U
Toxaphene	0.50	0.50	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.51 U	0.50 U	0.51 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.0069 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0050 U	0.0051 U
PCB-1221	N/A	N/A	0.013 U	0.010 U	0.010 U	0.016 U	0.01 U	0.010 U	0.010 U	0.010 U	0.067 U	0.011 U	0.010 U	0.011 U
PCB-1232	N/A	N/A	0.0086 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0050 U	0.0051 U
PCB-1242	N/A	N/A	0.0062 U	**0.0082**	**0.012**	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0050 U	0.0051 U
PCB-1248	N/A	N/A	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0050 U	0.0051 U
PCB-1254	0.005	0.005	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0050 U	0.0051 U
PCB-1260	0.014	0.005	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0050 U	0.0051 U
Total PCBs (j)	0.10	N/A	ND	**0.0082**	**0.012**	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-17 EV14090107-10 9/17/2014 N	MW-17 EV14120151-08 EV14120162-18 12/18/2014 N	MW-17 EV15030127-04 3/23/2015 N	MW-17 EV15060175-05 6/24/2015 N	MW-18 EV14090080-02 EV14090107-11 9/15/2014 N	MW-18 EV14120162-02 12/19/2014 N	MW-18 EV15030154-03 3/26/2015 N	MW-18 EV15060181-07 6/25/2015 N	MW-18 EV20110151-06 11/23/2020 N	MW-100 EV14090091-09 EV14090107-12 9/16/2014 N	MW-100 EV14120143-03 EV14120162-22 12/17/2014 N	MW-100 EV15030127-05 3/23/2015 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	2.0 U	0.014 U	0.014 U	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.016 U	2.0 U	0.014 U	0.014 U
Methylene Chloride	4.6	0.68	5.0 U	0.68 U	0.68 U	0.68 U	5.0 U	0.68 U	0.68 U	0.68 U	1.0 U	5.0 U	0.68 U	0.68 U
Acrylonitrile	0.0572	0.0572	10 U	0.057 U	0.057 U	0.057 U	10 U	0.057 U	0.057 U	0.057 U	--	10 U	0.057 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	--	2.0 U	--	2.0 U	--	2.0 U	--	2.0 U	6.8 U	--	2.0 U	--
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	2.0 U	0.014 U	0.014 U	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.0035 U	2.0 U	0.014 U	0.014 U
Benzene	1.2	0.028	2.0 U	0.028 U	0.028 U	0.028 U	2.0 U	0.028 U	0.028 U	0.028 U	0.011 U	2.0 U	0.028 U	0.028 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	2.0 U	0.023 U	0.023 U	0.023 U	2.0 U	0.023 U	0.023 U	0.023 U	0.11 U	2.0 U	0.023 U	0.023 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.01 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.018 U	0.023 U	0.023 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-17 EV14090107-10 9/17/2014 N	MW-17 EV14120151-08 EV14120162-18 12/18/2014 N	MW-17 EV15030127-04 3/23/2015 N	MW-17 EV15060175-05 6/24/2015 N	MW-18 EV14090080-02 EV14090107-11 9/15/2014 N	MW-18 EV14120162-02 12/19/2014 N	MW-18 EV15030154-03 3/26/2015 N	MW-18 EV15060181-07 6/25/2015 N	MW-18 EV20110151-06 11/23/2020 N	MW-100 EV14090091-09 EV14090107-12 9/16/2014 N	MW-100 EV14120143-03 EV14120162-22 12/17/2014 N	MW-100 EV15030127-05 3/23/2015 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	10 U	0.10 U	0.10 U	0.10 U	10 U	0.10 U	0.10 U	0.10 U	0.03 U	10 U	0.10 U	0.10 U
Hexachlorobutadiene	0.44	N/A	2.0 U	0.069 U	0.069 U	0.069 U	2.0 U	0.069 U	0.069 U	0.069 U	0.5 U	2.0 U	0.069 U	0.069 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.20 U	0.031 U	0.031 U	0.031 U	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U	0.031 U	0.031 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.10 U	0.14 U	0.14 U	0.14 U	0.10 U	0.14 U	0.14 U	0.14 U	0.29 U	**1.2**	**1.2**	**1.1**
Trichloroethene (TCE)	2.5	N/A	0.020 U	0.054 U	0.054 U	0.054 U	0.020 U	0.054 U	0.054 U	0.054 U	0.026 U	0.020 U	0.054 U	0.054 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	2.0 U	0.058 U	0.058 U	0.058 U	2.0 U	0.058 U	0.058 U	0.058 U	0.27 U	2.0 U	0.058 U	0.058 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.19 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.23 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.28 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.14 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.38 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.5 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.94 U	0.87 U	0.87 U	0.88 U	0.94 U	0.87 U	0.87 U	0.88 U	0.87 U	0.94 U	0.89 U	0.87 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
Hexachloroethane	2.0	2.0	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**4.0**	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	2.0 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.8 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	2.0 U	0.83 U	0.83 U	0.84 U	2.0 U	0.83 U	0.83 U	0.84 U	0.83 U	2.0 U	0.85 U	0.83 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.8 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-17 EV14090107-10 9/17/2014 N	MW-17 EV14120151-08 EV14120162-18 12/18/2014 N	MW-17 EV15030127-04 3/23/2015 N	MW-17 EV15060175-05 6/24/2015 N	MW-18 EV14090080-02 EV14090107-11 9/15/2014 N	MW-18 EV14120162-02 12/19/2014 N	MW-18 EV15030154-03 3/26/2015 N	MW-18 EV15060181-07 6/25/2015 N	MW-18 EV20110151-06 11/23/2020 N	MW-100 EV14090091-09 EV14090107-12 9/16/2014 N	MW-100 EV14120143-03 EV14120162-22 12/17/2014 N	MW-100 EV15030127-05 3/23/2015 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.78 U	0.72 U	0.72 U	0.73 U	0.78 U	0.72 U	0.72 U	0.73 U	0.72 U	0.78 U	0.73 U	0.72 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	**2.1**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	2.0 U	1.5 U	1.5 U	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U	1.5 U	1.5 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	2.0 U	0.75 U	0.75 U	0.75 U	2.0 U	**32**	0.75 U	0.76 U	0.75 U	2.0 U	0.76 U	0.75 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	**0.025**	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	**0.014**	0.013 U	0.020 U	0.020 U	0.014 U	**0.02**
2-Methylnaphthalene	32	N/A	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U
Acenaphthylene	N/A	N/A	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U
Acenaphthene	650	N/A	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	**0.019**	0.020 U	0.020 U	0.014 U	0.014 U
Fluorene	640	N/A	0.020 U	**0.010**	**0.014**	0.0091 U	0.020 U	**0.012**	0.0090 U	0.0091 U	0.020 U	0.020 U	0.0092 U	0.0090 U
Pentachlorophenol	0.23	0.23	0.13 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U
Phenanthrene	N/A	N/A	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	**0.015**	0.013 U	0.013 U	0.020 U	0.020 U	0.014 U	0.013 U
Anthracene	4,800	N/A	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	**0.015**	0.01 U	0.01 U	0.020 U	0.020 U	0.01 U	0.01 U
Fluoranthene	86	N/A	0.020 U	0.0092 U	0.0092 U	0.0092 U	0.020 U	0.0092 U	0.0092 U	0.0092 U	0.020 U	0.020 U	0.0093 U	0.0092 U
Pyrene	480	N/A	0.020 U	**0.016**	0.01 U	0.011 U	0.020 U	0.01 U	0.01 U	0.011 U	0.020 U	0.020 U	0.011 U	0.01 U
Benzo[A]Anthracene	0.00940	0.00940	0.020 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U
Chrysene	0.00940	0.00940	0.020 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	N/A	N/A	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-100 EV15060175-04 6/24/2015 N	MW-100 EV20110151-09 EV20110161-04 11/23/2020 N	MW-101 EV14090107-13 9/17/2014 N	MW-101 EV14120151-02 EV14120162-13 12/18/2014 N	MW-101 EV15030143-04 3/25/2015 N	MW-101 EV15060181-05 6/25/2015 N	MW-101 EV20110139-05 11/20/2020 N	MW-101 EV20110139-06 11/20/2020 FD	MW-102 EV14090091-02 EV14090107-14 9/16/2014 N	MW-102 EV14120162-05 12/19/2014 N	MW-102 EV15030154-06 3/26/2015 N	MW-102 EV15060181-04 6/25/2015 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	130 U	--	130 U	130 U	'--	'--	--	--	130 U	130 U	130 U	130 U
Diesel Range	N/A	N/A	310 U	--	**>310**	310 U	'--	'--	--	--	310 U	310 U	310 U	310 U
Oil Range	N/A	N/A	310 U	--	**>310**	**>310** U	'--	'--	--	--	310 U	310 U	310 U	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	**520**	**140**	130 U	130 U	130 U	130 U	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	**1,800**	**450**	**350**	**450** J	**140**	130 U	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	**360**	250 U	250 U	250 U	250 U	250 U	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	**1,500**	**410**	250 U	**280**	250 U	250 U	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**1.2**	**0.73**	**2.9**	**1.5**	**4.2**	**2.1**	**2.3**	**2.3**	**1.3**	0.45 U	0.45 U	0.45 U
Barium	1,000	N/A	**5.7**	**8.8**	**74**	**51**	**36**	**49**	**36**	**36**	**21**	**27**	**31**	**30**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**27,000**	**24,000**	**65,000**	**48,000**	**38,000**	**41,000**	**36,000**	**35,000**	**22,000**	**26,000**	**28,000**	**27,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	--	10 U	--	--	'--	--	--	10 U	--	--	'--
Iron	300	N/A	50 U	50 U	**19,000**	**23,000**	**21,000**	**16,000**	**16,000**	**16,000**	**4,200**	**5,400**	**6,400**	**6,000**
Lead	0.54	N/A	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**8,300**	**8,400**	**20,000**	**15,000**	**13,000**	**12,000**	**13,000**	**13,000**	**8,300**	**9,900**	**11,000**	**11,000**
Manganese	50	N/A	**46**	2 U	**3,000**	**2,000**	**1,600**	**1,900**	**1,600**	**1,600**	**710**	**720**	**860**	**800**
Potassium	N/A	N/A	**3,400**	**3,500**	--	--	**5,900**	**9,100**	**5,700**	**5,800**	--	--	**4,900**	**4,700**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**10,000**	**11,000**	**29,000**	**22,000**	**20,000**	**19,000**	**18,000**	**18,000**	**14,000**	**16,000**	**16,000**	**16,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	0.76 U	**0.82**	**3.1**	**1.6**	**2.7**	2.5 U	**2.4**	**2.4**	1.0 U	0.45 U	0.45 U	0.45 U
Barium	1,000	N/A	**7.3**	**10**	**93**	**50**	**37**	**56**	**37**	**36**	**22**	**27**	**32**	**31**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**25,000**	**24,000**	**71,000**	**47,000**	**39,000**	**44,000**	**36,000**	**37,000**	**22,000**	**25,000**	**27,000**	**27,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	**2.6**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	'--	--	10 U	--	--	'--	--	--	10 U	--	--	'--
Iron	300	N/A	**100**	**320**	**23,000**	**22,000**	**21,000**	**17,000**	**16,000**	**17,000**	**4,700**	**5,300**	**6,800**	**6,100**
Lead	0.54	N/A	0.35 U	0.28 U	**1.5**	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	**0.46**	0.28 U
Magnesium	N/A	N/A	**7,400**	**8,200**	**22,000**	**15,000**	**14,000**	**13,000**	**13,000**	**13,000**	**8,900**	**9,300**	**11,000**	**11,000**
Manganese	50	N/A	**190**	**36**	**3,200**	**2,000**	**1,700**	**1,800**	**1,600**	**1,600**	**740**	**710**	**850**	**800**
Potassium	N/A	N/A	**3,200**	**3,500**	--	--	**6,100**	**9,700**	**5,700**	**5,900**	--	--	**4,700**	**4,700**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**9,100**	**11,000**	**31,000**	**21,000**	**20,000**	**21,000**	**18,000**	**19,000**	**15,000**	**14,000**	**16,000**	**16,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-100 EV15060175-04 6/24/2015 N	MW-100 EV20110151-09 EV20110161-04 11/23/2020 N	MW-101 EV14090107-13 9/17/2014 N	MW-101 EV14120151-02 EV14120162-13 12/18/2014 N	MW-101 EV15030143-04 3/25/2015 N	MW-101 EV15060181-05 6/25/2015 N	MW-101 EV20110139-05 11/20/2020 N	MW-101 EV20110139-06 11/20/2020 FD	MW-102 EV14090091-02 EV14090107-14 9/16/2014 N	MW-102 EV14120162-05 12/19/2014 N	MW-102 EV15030154-06 3/26/2015 N	MW-102 EV15060181-04 6/25/2015 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**180**	**190**	**430**	**260**	**260**	**270**	**280**	**280**	**190**	**190**	**170**	**200**
Chloride (EPA-300.0)	230	N/A	**9.7**	**12**	**20**	**12**	**11**	**10**	**22**	**21**	**11**	**11**	**13**	**11**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	0.16 U	**0.71**	**0.19**	**0.17**	**0.18**	0.16 U	0.16 U	**0.26**	**0.28**	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	**3.2**	**3.8**	**3.5**	0.034 U	**0.045**	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**17**	**13**	0.26 U	0.26 U	0.26 U	0.26 U	**4.7**	**4.7**	**13**	**10**	**9.0**	**12**
Ammonia (EPA-350.1)	N/A	N/A	0.050 U	0.050 U	**1.8**	**1.7**	**1.0**	**0.75**	**1.1**	**1.1**	**2.5**	**2.2**	**2.4**	**2.3**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**98**	**80**	**360**	**230**	**190**	**210**	**170**	**170**	**130**	**130**	**150**	**140**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**98**	**80**	**360**	**230**	**190**	**210**	**170**	**170**	**130**	**130**	**150**	**140**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**1.3**	**0.59**	**33**	**8.6**	**6.4**	**10**	**3.3**	**3.3**	**1.9**	**1.5**	**2.0**	**1.7**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	15.93	15.8	17.17	13.34	15.54	17.32	15.5		15.79	14.90	16.19	16.43
Specific Conductivity (µS/cm)	N/A	N/A	201	212.4	714	397	534	457	412.5		319	363	411	492
Dissolved Oxygen (mg/L)	N/A	N/A	3.61	4.74	0.36	2.81	0.09	0.30	0.16		0.62	0.25	0.10	0.47
pH (S.U.)	6.5 to 8.5	N/A	6.68	6.51	6.02	6.40	6.42	6.32	6.55		5.93	7 (f)	6.60	6.27
Oxidation Reduction Potential (mV)	N/A	N/A	82.7	56.5	-2.7	-26.3	-63.5	-70.8	-114		-178.8	-65.0	-96.0	-52.5
Turbidity (NTU)	N/A	N/A	2.61	7.35	34	13.76	4.15	5.22	3.46		97.45	3.24	1.61	0.87
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Heptachlor	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Aldrin	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Chlordane	0.20	0.20	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
4,4'-DDE	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Dieldrin	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Endrin	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
4,4'-DDD	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Endosulfan II (g)	0.056	N/A	0.010 U	0.010 U	0.040 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	**0.019**	0.010 U
4,4'-DDT	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Methoxychlor	0.030	0.01	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Hexachlorobenzene (i)	0.01	0.01	0.010 U	0.010 U	2.0 U	0.011 U	0.011 U	0.010 U	0.011 U	0.011 U	2.0 U	0.010 U	0.011 U	0.010 U
Toxaphene	0.50	0.50	0.50 U	0.50 U	0.51 U	0.52 U	0.51 U	0.50 U	0.50 U	0.50 U	0.51 U	0.50 U	0.51 U	0.50 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.0050 U	0.067 U	0.0051 U	0.0052 U	0.0051 U	0.0050	0.015 U	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U
PCB-1221	N/A	N/A	0.010 U	0.067 U	0.011 U	0.011 U	0.014 U	0.010	0.030 U	0.030 U	0.011 U	0.010 U	0.011 U	0.010 U
PCB-1232	N/A	N/A	0.0050 U	0.067 U	0.0051 U	0.0052 U	0.0056 U	0.0050	0.015 U	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U
PCB-1242	N/A	N/A	0.0050 U	0.067 U	0.0051 U	0.0052 U	0.0051 U	0.0050	0.015 U	0.015 U	**0.009**	0.005 U	0.005 U	0.005 U
PCB-1248	N/A	N/A	0.0050 U	0.067 U	0.0051 U	0.0052 U	0.0051 U	0.0050	0.015 U	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U
PCB-1254	0.005	0.005	0.0050 U	0.067 U	0.0051 U	0.0052 U	0.0051 U	0.0050	0.015 U	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U
PCB-1260	0.014	0.005	0.0050 U	0.067 U	0.0051 U	0.0052 U	0.0051 U	0.0050	0.015 U	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U
Total PCBs (j)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	**0.0085**	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-100 EV15060175-04 6/24/2015 N	MW-100 EV20110151-09 EV20110161-04 11/23/2020 N	MW-101 EV14090107-13 9/17/2014 N	MW-101 EV14120151-02 EV14120162-13 12/18/2014 N	MW-101 EV15030143-04 3/25/2015 N	MW-101 EV15060181-05 6/25/2015 N	MW-101 EV20110139-05 11/20/2020 N	MW-101 EV20110139-06 11/20/2020 FD	MW-102 EV14090091-02 EV14090107-14 9/16/2014 N	MW-102 EV14120162-05 12/19/2014 N	MW-102 EV15030154-06 3/26/2015 N	MW-102 EV15060181-04 6/25/2015 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.014 U	0.016 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U
Methylene Chloride	4.6	0.68	0.68 U	1 U	5.0 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	5.0 U	0.68 U	0.68 U	0.68 U
Acrylonitrile	0.0572	0.0572	0.057 U	--	10 U	0.057 U	0.057 U	0.057 U	--	--	10 U	0.057 U	0.057 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	2.0 U	6.8 U	--	2.0 U	--	2.0 U	6.8 U	6.8 U	--	2.0 U	--	2.0 U
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.014 U	0.0035 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U
Benzene	1.2	0.028	0.028 U	0.011 U	2.0 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	2.0 U	0.028 U	0.028 U	0.028 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.16 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	0.11 U	2.0 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	2.0 U	0.023 U	0.023 U	0.023 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.018 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-100 EV15060175-04 6/24/2015 N	MW-100 EV20110151-09 EV20110161-04 11/23/2020 N	MW-101 EV14090107-13 9/17/2014 N	MW-101 EV14120151-02 EV14120162-13 12/18/2014 N	MW-101 EV15030143-04 3/25/2015 N	MW-101 EV15060181-05 6/25/2015 N	MW-101 EV20110139-05 11/20/2020 N	MW-101 EV20110139-06 11/20/2020 FD	MW-102 EV14090091-02 EV14090107-14 9/16/2014 N	MW-102 EV14120162-05 12/19/2014 N	MW-102 EV15030154-06 3/26/2015 N	MW-102 EV15060181-04 6/25/2015 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.10 U	0.03 U	10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	10 U	0.10 U	0.10 U	0.10 U
Hexachlorobutadiene	0.44	N/A	0.069 U	0.5 U	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	2.0 U	0.069 U	0.069 U	0.069 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.031 U	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.14 U	**0.69**	0.10 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.10 U	0.14 U	0.14 U	0.14 U
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.026 U	0.020 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.020 U	0.054 U	0.054 U	0.054 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.17 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	0.058 U	0.27 U	2.0 U	0.058 U	0.058 U	0.058 U	0.1 U	0.1 U	2.0 U	0.058 U	0.058 U	0.058 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.19 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40	N/A	0.10 U	0.23 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.28 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.14 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.38 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.87 U	0.87 U	0.94 U	0.89 U	0.87 U	0.88 U	0.87 U	0.87 U	0.94 U	0.87 U	0.87 U	0.89 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	**110**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U
Hexachloroethane	2.0	2.0	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	0.83 U	0.83 U	2.0 U	0.85 U	0.83 U	0.84 U	0.83 U	0.83 U	2.0 UJ	0.83 U	0.83 U	0.85 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-100 EV15060175-04 6/24/2015 N	MW-100 EV20110151-09 EV20110161-04 11/23/2020 N	MW-101 EV14090107-13 9/17/2014 N	MW-101 EV14120151-02 EV14120162-13 12/18/2014 N	MW-101 EV15030143-04 3/25/2015 N	MW-101 EV15060181-05 6/25/2015 N	MW-101 EV20110139-05 11/20/2020 N	MW-101 EV20110139-06 11/20/2020 FD	MW-102 EV14090091-02 EV14090107-14 9/16/2014 N	MW-102 EV14120162-05 12/19/2014 N	MW-102 EV15030154-06 3/26/2015 N	MW-102 EV15060181-04 6/25/2015 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.72 U	0.72 U	0.78 U	0.73 U	0.72 U	0.73 U	0.72 U	0.72 U	0.78 U	0.72 U	0.72 U	0.73 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	1.5 U	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.75 U	0.75 U	2.0 U	**30**	0.75 U	0.75 U	0.75 U	0.75 U	2.0 U	**26**	0.75 U	0.76 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	0.013 U	0.020 U	**0.060**	**0.014**	**0.13**	0.013 U	0.020 U	0.020 U	0.020 U	**0.015**	**0.015**	0.014 U
2-Methylnaphthalene	32	N/A	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	**0.029**	**0.028**	**0.061**	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**0.038**	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U
Acenaphthene	650	N/A	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U
Fluorene	640	N/A	0.0090 U	0.0200 U	0.020 U	0.0092 U	0.0090 U	0.0091 U	0.020 U	0.020 U	0.020 U	0.0090 U	0.0090 U	0.0092 U
Pentachlorophenol	0.23	0.23	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U
Phenanthrene	N/A	N/A	0.013 U	0.020 U	0.020 U	0.014 U	0.013 U	0.013 U	0.020 U	0.020 U	0.020 U	0.013 U	0.013 U	0.014 U
Anthracene	4,800	N/A	0.01 U	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U
Fluoranthene	86	N/A	0.0092 U	0.020 U	0.020 U	0.0093 U	0.0092 U	0.0092 U	0.020 U	0.020 U	0.020 U	0.0092 U	0.0092 U	0.0093 U
Pyrene	480	N/A	0.01 U	0.020 U	0.020 U	0.011 U	0.01 U	0.011 U	0.020 U	0.020 U	0.020 U	0.01 U	0.01 U	0.011 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U
Chrysene	0.00940	0.00940	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	N/A	N/A	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-102 EV20110139-03 11/20/2020 N	MW-103 EV14090091-03 EV14090107-15 9/16/2014 N	MW-103 EV14120162-06 12/19/2014 N	MW-103 EV15030143-09 3/24/2015 N	MW-103 EV15060188-04 6/25/2015 N	MW-103 EV20110139-02 11/20/2020 N	MW-104 EV14090091-04 EV14090107-16 9/16/2014 N	MW-104 EV14120119-02 EV14120162-26 12/16/2014 N	MW-104 EV15030143-10 3/24/2015 N	MW-104 EV15060175-11 6/24/2015 N	MW-104 EV20110139-01 11/20/2020 N	MW-105 EV14090080-04 EV14090107-17 9/15/2014 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	--	130 U	130 U	130 U	130 U	--	130 U	130 U	130 U	130 U	--	130 U
Diesel Range	N/A	N/A	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	310 U
Oil Range	N/A	N/A	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**0.82**	**3.8**	**4.9**	**7.3**	**6.1**	**6.3**	**5.7**	**5.4**	**6.4**	**5.8**	**7.0**	**3.7**
Barium	1,000	N/A	**34**	**50**	**55**	**59**	**52**	**58**	**49**	**48**	**51**	**51**	**49**	**54**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**31,000**	**35,000**	**43,000**	**45,000**	**40,000**	**45,000**	**36,000**	**37,000**	**38,000**	**38,000**	**38,000**	**29,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	10 U	--	--	'--	--	10 U	--	--	'--	--	10 U
Iron	300	N/A	**6,500**	**22,000**	**29,000**	**28,000**	**26,000**	**28,000**	**26,000**	**27,000**	**28,000**	**27,000**	**26,000**	**20,000**
Lead	0.54	N/A	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U
Magnesium	N/A	N/A	**13,000**	**12,000**	**15,000**	**16,000**	**14,000**	**17,000**	**12,000**	**13,000**	**14,000**	**13,000**	**14,000**	**9,100**
Manganese	50	N/A	**780**	**2,500**	**2,900**	**2,900**	**2,900**	**3,000**	**2,300**	**2,100**	**2,100**	**2,100**	**2,200**	**2,700**
Potassium	N/A	N/A	**4,900**	--	--	**5,900**	**5,500**	**5,500**	--	--	**6,800**	**6,600**	**6,700**	--
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
Sodium	20,000	N/A	**16,000**	**22,000**	**23,000**	**23,000**	**22,000**	**23,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**28,000**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**0.86**	**3.5**	**5.3**	**6.0**	**6.6**	**6.5**	**5.8**	**4.8**	**6.7**	**6.2**	**7.0**	**3.7**
Barium	1,000	N/A	**35**	**53**	**58**	**61**	**52**	**58**	**51**	**56**	**51**	**52**	**49**	**60**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**31,000**	**36,000**	**43,000**	**45,000**	**39,000**	**46,000**	**36,000**	**37,000**	**38,000**	**39,000**	**38,000**	**29,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	10 U	--	--	'--	--	10 U	--	--	'--	--	10 U
Iron	300	N/A	**6,800**	**22,000**	**29,000**	**28,000**	**26,000**	**28,000**	**27,000**	**27,000**	**28,000**	**29,000**	**25,000**	**20,000**
Lead	0.54	N/A	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	**1.0**	**1.7**	0.28 U	0.28 U	0.28 U	1.0 U
Magnesium	N/A	N/A	**13,000**	**13,000**	**15,000**	**16,000**	**14,000**	**17,000**	**13,000**	**13,000**	**14,000**	**14,000**	**14,000**	**9,600**
Manganese	50	N/A	**820**	**2,500**	**2,900**	**2,900**	**2,900**	**3,000**	**2,400**	**2,000**	**2,100**	**2,100**	**2,200**	**2,700**
Potassium	N/A	N/A	**5,100**	--	--	**5,900**	**5,400**	**5,700**	--	--	**6,800**	**6,700**	**6,800**	--
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
Sodium	20,000	N/A	**17,000**	**23,000**	**23,000**	**23,000**	**22,000**	**23,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**35,000**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-102 EV20110139-03 11/20/2020 N	MW-103 EV14090091-03 EV14090107-15 9/16/2014 N	MW-103 EV14120162-06 12/19/2014 N	MW-103 EV15030143-09 3/24/2015 N	MW-103 EV15060188-04 6/25/2015 N	MW-103 EV20110139-02 11/20/2020 N	MW-104 EV14090091-04 EV14090107-16 9/16/2014 N	MW-104 EV14120119-02 EV14120162-26 12/16/2014 N	MW-104 EV15030143-10 3/24/2015 N	MW-104 EV15060175-11 6/24/2015 N	MW-104 EV20110139-01 11/20/2020 N	MW-105 EV14090080-04 EV14090107-17 9/15/2014 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**240**	**230**	**300**	**240**	**240**	**360**	**220**	**250**	**210**	**160**	**300**	**900**
Chloride (EPA-300.0)	230	N/A	**19**	**19**	**24**	**19**	**19**	**34**	**18**	**18**	**15**	**16**	**31**	**18**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	**0.24**	**0.46**	0.16 U	0.16 U	0.16 U	**0.19**	**0.26**	0.16 U	0.16 U	0.16 U	**0.22**
Nitrate as N (EPA-300.0)	10	N/A	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	**0.036**	0.034 U	0.034 U	0.034 U	0.034 U	**0.081**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**15**	**0.30**	**0.29**	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	**17**	0.26 U	**1.0**	**2.5**
Ammonia (EPA-350.1)	N/A	N/A	**2.2**	**3.1**	**2.0**	**2.0**	**2.0**	**1.6**	**2.0**	**2.1**	**1.7**	**1.7**	**1.8**	**0.13**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**140**	**220**	**210**	**220**	**220**	**210**	**200**	**200**	**180**	**200**	**170**	**220**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**140**	**220**	**210**	**220**	**220**	**210**	**200**	**200**	**180**	**200**	**170**	**220**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**1.3**	**4.0**	**4.3**	**4.1**	**4.9**	**4.9**	**4.9**	**4.1**	**4.2**	**5.0**	**3.8**	**6.2**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	15.2	16.51	14.87	14.43	18.97	16.3	16.86	14.51	15.48	16.57	16	17.87
Specific Conductivity (µS/cm)	N/A	N/A	320.5	521	634	571	809	438.6	501	368	570	378	379.9	422
Dissolved Oxygen (mg/L)	N/A	N/A	1.51	1.03	0.28	0.52	0.44	2.5	0.93	18.65	0.10	0.23	0.96	0.56
pH (S.U.)	6.5 to 8.5	N/A	6.16	7.26	7 (f)	5.64	6.34	6.61	7.62	6.43	6.36	6.38	6.52	5.34
Oxidation Reduction Potential (mV)	N/A	N/A	19.5	-333.9	-85.6	-95.9	-76.9	-19.0	-377.5	-83.3	-93.1	-83.9	-31.8	-15.7
Turbidity (NTU)	N/A	N/A	12.36	17.37	3.42	1.72	6.45	17.19	18.34	6.69	1.45	0.61	3.30	15.4
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Heptachlor	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Aldrin	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Chlordane	0.20	0.20	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
4,4'-DDE	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Dieldrin	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endrin	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
4,4'-DDD	0.01	0.01	0.010 U	**0.15**	**0.12**	**0.065**	**0.084**	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endosulfan II (g)	0.056	N/A	0.010 U	0.017 U	0.019 U	**0.068**	**0.039**	0.010 U	0.011 U	0.011 U	**0.011**	0.010 U	0.010 U	0.014 U
4,4'-DDT	0.01	0.01	0.010 U	**0.090**	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Methoxychlor	0.030	0.01	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobenzene (i)	0.01	0.01	0.011 U	2.0 U	0.010 U	0.010 U	0.011 U	0.011 U	2.0 U	0.011 U	0.010 U	0.010 U	0.011 U	2.0 U
Toxaphene	0.50	0.50	0.50 U	0.51 U	0.50 U	0.50 U	0.52 U	0.50 U	0.52 U	0.52 U	0.50 U	0.50 U	0.50 U	0.52 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.015 U	0.005 U	0.005 U	0.009 U	0.005 U	0.015 U	0.0052 U	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0052 U
PCB-1221	N/A	N/A	0.030 U	0.011 U	0.010 U	0.010 U	0.011 U	0.030 U	0.011 U	0.011 U	0.010 U	0.010 U	0.030 U	0.011 U
PCB-1232	N/A	N/A	0.015 U	0.005 U	0.005 U	0.012 U	**0.007**	0.015 U	0.0052 U	0.0052 U	0.0050 U	**0.042**	**0.053**	0.0052 U
PCB-1242	N/A	N/A	0.015 U	**0.022**	**0.008**	0.009 U	0.005 U	0.015 U	**0.027**	**0.040**	**0.025**	0.0050 U	0.015 U	**0.031**
PCB-1248	N/A	N/A	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.015 U	0.0052 U	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0052 U
PCB-1254	0.005	0.005	0.015 U	0.007 U	0.006 U	0.005 U	0.005 U	0.015 U	0.0052 U	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0052 U
PCB-1260	0.014	0.005	0.015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.015 U	0.0052 U	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0052 U
Total PCBs (j)	0.10	N/A	ND	**0.022**	**0.0080**	ND	**0.0071**	ND	**0.027**	**0.040**	**0.025**	**0.042**	**0.053**	**0.031**

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-102 EV20110139-03 11/20/2020 N	MW-103 EV14090091-03 EV14090107-15 9/16/2014 N	MW-103 EV14120162-06 12/19/2014 N	MW-103 EV15030143-09 3/24/2015 N	MW-103 EV15060188-04 6/25/2015 N	MW-103 EV20110139-02 11/20/2020 N	MW-104 EV14090091-04 EV14090107-16 9/16/2014 N	MW-104 EV14120119-02 EV14120162-26 12/16/2014 N	MW-104 EV15030143-10 3/24/2015 N	MW-104 EV15060175-11 6/24/2015 N	MW-104 EV20110139-01 11/20/2020 N	MW-105 EV14090080-04 EV14090107-17 9/15/2014 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U
Methylene Chloride	4.6	0.68	0.68 U	5.0 U	0.68 U	0.68 U	0.68 U	0.68 U	5.0 U	0.68 U	0.68 U	0.68 U	0.68 U	5.0 U
Acrylonitrile	0.0572	0.0572	--	10 U	0.057 U	0.057 U	0.057 U	--	10 U	0.057 U	0.057 U	0.057 U	--	10 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	6.8 U	--	2.0 U	--	2.0 U	6.8 U	--	2.0 U	--	2.0 U	6.8 U	--
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U
Benzene	1.2	0.028	0.028 U	2.0 U	0.028 U	0.028 U	0.028 U	0.028 U	2.0 U	0.028 U	0.028 U	0.028 U	0.028 U	2.0 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	2.0 U	0.023 U	0.023 U	0.023 U	0.023 U	2.0 U	0.023 U	0.023 U	0.023 U	0.023 U	2.0 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-102 EV20110139-03 11/20/2020 N	MW-103 EV14090091-03 EV14090107-15 9/16/2014 N	MW-103 EV14120162-06 12/19/2014 N	MW-103 EV15030143-09 3/24/2015 N	MW-103 EV15060188-04 6/25/2015 N	MW-103 EV20110139-02 11/20/2020 N	MW-104 EV14090091-04 EV14090107-16 9/16/2014 N	MW-104 EV14120119-02 EV14120162-26 12/16/2014 N	MW-104 EV15030143-10 3/24/2015 N	MW-104 EV15060175-11 6/24/2015 N	MW-104 EV20110139-01 11/20/2020 N	MW-105 EV14090080-04 EV14090107-17 9/15/2014 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.10 U	10 U	0.10 U	0.10 U	0.10 U	0.10 U	10 U	0.10 U	0.10 U	0.10 U	0.10 U	10 U
Hexachlorobutadiene	0.44	N/A	0.069 U	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U	2.0 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U	**0.033**	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.14 U	0.10 U	0.14 U	0.14 U	0.14 U	0.14 U	0.10 U	0.14 U	0.14 U	0.14 U	0.14 U	0.10 U
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.020 U	0.054 U	0.054 U	0.054 U	0.054 U	0.020 U	0.054 U	0.054 U	0.054 U	0.054 U	0.020 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	0.1 U	2.0 U	0.058 U	0.058 U	0.058 U	0.1 U	2.0 U	0.058 U	0.058 U	0.058 U	0.1 U	2.0 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.87 U	0.94 U	0.87 U	0.89 U	0.89 U	0.89 U	0.94 U	0.87 U	0.87 U	0.88 U	0.89 U	0.94 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U
Hexachloroethane	2.0	2.0	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	0.83 U	2.0 U	0.83 U	0.85 U	0.85 U	0.85 U	2.0 U	0.83 U	0.83 U	0.84 U	0.85 U	2.0 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-102 EV20110139-03 11/20/2020 N	MW-103 EV14090091-03 EV14090107-15 9/16/2014 N	MW-103 EV14120162-06 12/19/2014 N	MW-103 EV15030143-09 3/24/2015 N	MW-103 EV15060188-04 6/25/2015 N	MW-103 EV20110139-02 11/20/2020 N	MW-104 EV14090091-04 EV14090107-16 9/16/2014 N	MW-104 EV14120119-02 EV14120162-26 12/16/2014 N	MW-104 EV15030143-10 3/24/2015 N	MW-104 EV15060175-11 6/24/2015 N	MW-104 EV20110139-01 11/20/2020 N	MW-105 EV14090080-04 EV14090107-17 9/15/2014 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.72 U	0.78 U	0.72 U	0.73 U	0.74 U	0.73 U	0.78 U	0.72 U	0.72 U	0.73 U	0.73 U	0.78 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	1.5 U	2.0 U	1.5 U	1.5 U	1.6 U	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.75 U	2.0 U	**38**	0.76 U	0.77 U	0.76 U	2.0 U	0.75 U	0.75 U	0.75 U	0.76 U	2.0 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	0.020 U	**0.042**	**0.020**	0.014 U	0.014 U	0.020 U	**0.039**	0.013 U	**0.017**	0.013 U	0.020 U	**0.034**
2-Methylnaphthalene	32	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
Acenaphthene	650	N/A	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	**0.097**
Fluorene	640	N/A	0.020 U	0.020 U	0.0090 U	0.0092 U	0.0093 U	0.020 U	0.020 U	0.0090 U	0.0090 U	0.0091 U	0.020 U	0.020 U
Pentachlorophenol	0.23	0.23	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U
Phenanthrene	N/A	N/A	0.020 U	0.020 U	0.013 U	0.014 U	0.014 U	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U
Anthracene	4,800	N/A	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U	**0.010**	**0.012**	0.01 U	0.020 U	0.020 U
Fluoranthene	86	N/A	0.020 U	0.020 U	0.0092 U	0.0093 U	0.0094 U	0.020 U	0.020 U	0.0092 U	0.0092 U	0.0092 U	0.020 U	0.020 U
Pyrene	480	N/A	0.020 U	0.020 U	0.01 U	0.011 U	0.011 U	0.020 U	0.020 U	0.01 U	0.01 U	0.011 U	0.020 U	0.020 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U
Chrysene	0.00940	0.00940	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0069 U	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U
Benzo[G,H,I]Perylene	N/A	N/A	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-105 EV14120119-01 EV14120162-27 12/16/2014 N	MW-105 EV15030143-08 3/24/2015 N	MW-105 EV15060181-06 6/25/2015 N	MW-105 EV20110139-04 11/20/2020 N	MW-106 EV14090091-07 EV14090107-18 9/16/2014 N	MW-106-Dup EV14090091-11 EV14090107-26 9/16/2014 FD	MW-106 EV14120162-10 12/19/2014 N	MW-106-Dup EV14120162-12 12/19/2014 FD	MW-106 EV15030127-09 3/24/2015 N	MW-106-Dup EV15030127-10 3/24/2015 FD	MW-106 EV15060181-01 6/25/2015 N	MW-106-Dup EV15060181-03 6/25/2015 FD
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	130 U	130 U	130 U	--	130 U	130 U	130 U	130 U	--	--	--	--
Diesel Range	N/A	N/A	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	--	--	--
Oil Range	N/A	N/A	310 U	310 U	310 U	--	310 U	310 U	**>310**	**>310**	--	--	--	--
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	--	--	--	--	--	--	**170**	**190**	130 U	130 U	130 U	130 U
Diesel Range (wo/SGC)	500	N/A	--	--	--	--	--	--	**670**	**640**	**180**	**200**	**160**	**180**
Oil Range (w/SGC)	500	N/A	--	--	--	--	--	--	250 U	250 U	250 U	250 U	250 U	250 U
Oil Range (wo/SGC)	500	N/A	--	--	--	--	--	--	**300**	**310**	250 U	250 U	250 U	250 U
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**4.2**	**4.6**	**2.8**	**3.8**	**5.7**	**5.3**	**8.4**	**7.9**	**8.7**	**8.5**	**6.7 J**	**8.3 J**
Barium	1,000	N/A	**62**	**66**	**32**	**41**	**45**	**45**	**140**	**140**	**97**	**97**	**62**	**61**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**37,000**	**40,000**	**21,000**	**26,000**	**28,000**	**29,000**	**76,000**	**77,000**	**46,000**	**46,000**	**32,000**	**33,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	--	'--	--	10 U	10 UJ	--	--	--	--	'--	'--
Iron	300	N/A	**30,000**	**32,000**	**17,000**	**22,000**	**7,000**	**6,900**	**56,000**	**56,000**	**40,000**	**40,000**	**28,000**	**28,000**
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**12,000**	**13,000**	**6,500**	**9,200**	**11,000**	**11,000**	**23,000**	**23,000**	**14,000**	**14,000**	**9,700**	**9,700**
Manganese	50	N/A	**2,900**	**3,000**	**1,700**	**2,100**	**2,000**	**1,900**	**5,700**	**5,600**	**2,900**	**2,900**	**2,100**	**2,100**
Potassium	N/A	N/A	--	**7,700**	**5,400**	**6,100**	--	--	--	--	**12,000**	**12,000**	**9,800**	**9,900**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**16,000**	**17,000**	**11,000**	**12,000**	**57,000**	**62,000**	**30,000**	**30,000**	**22,000**	**22,000**	**19,000**	**19,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**3.9**	**4.8**	**3.2**	**3.9**	**5.2**	**5.1**	**7.9**	**8**	**7.2**	**8.8**	**7.0**	**6.6**
Barium	1,000	N/A	**64**	**67**	**34**	**43**	**46**	**45**	**140**	**140**	**98**	**100**	**64**	**63**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**38,000**	**41,000**	**22,000**	**27,000**	**27,000**	**28,000**	**75,000**	**76,000**	**47,000**	**47,000**	**32,000**	**32,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	--	'--	--	10 U	10 UJ	--	--	--	--	'--	'--
Iron	300	N/A	**31,000**	**32,000**	**17,000**	**22,000**	**7,300**	**6,800**	**57,000**	**55,000**	**41,000**	**41,000**	**28,000**	**29,000**
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**12,000**	**13,000**	**6,800**	**9,300**	**10,000**	**11,000**	**23,000**	**23,000**	**14,000**	**14,000**	**9,600**	**9,500**
Manganese	50	N/A	**2,900**	**3,000**	**1,700**	**2,100**	**1,800**	**1,800**	**5,500**	**5,400**	**2,800**	**2,900**	**1,900**	**1,900**
Potassium	N/A	N/A	--	**7,800**	**5,500**	**6,300**	--	--	--	--	**13,000**	**13,000**	**9,900**	**9,900**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.2 U	1.0 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**17,000**	**17,000**	**11,000**	**12,000**	**64,000**	**65,000**	**30,000**	**31,000**	**23,000**	**23,000**	**20,000**	**20,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-105 EV14120119-01 EV14120162-27 12/16/2014 N	MW-105 EV15030143-08 3/24/2015 N	MW-105 EV15060181-06 6/25/2015 N	MW-105 EV20110139-04 11/20/2020 N	MW-106 EV14090091-07 EV14090107-18 9/16/2014 N	MW-106-Dup EV14090091-11 EV14090107-26 9/16/2014 FD	MW-106 EV14120162-10 12/19/2014 N	MW-106-Dup EV14120162-12 12/19/2014 FD	MW-106 EV15030127-09 3/24/2015 N	MW-106-Dup EV15030127-10 3/24/2015 FD	MW-106 EV15060181-01 6/25/2015 N	MW-106-Dup EV15060181-03 6/25/2015 FD
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**220**	**230**	**240**	**220**	**320**	**320**	**460**	**490**	**290**	**270**	**200 J**	**250 J**
Chloride (EPA-300.0)	230	N/A	**17**	**19**	**5.9**	**24**	**18**	**18**	**17**	**19**	**18**	**18**	**12**	**12**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	0.16 U	0.16 U	0.16 U	**0.51**	**0.37**	**0.26**	**0.24**	**0.17**	**0.25**	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	0.034 U	0.034 U	0.034 U	0.034 U	**0.043 J**	**0.12 J**	0.034 U	0.034 U	0.034 U	0.034 U	**0.088** J	0.034 UJ
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	0.26 U	0.26 U	**1.6**	**2.3**	**20**	**20**	**0.29**	**0.31**	0.26 U	**0.33**	**2.9**	**3.0**
Ammonia (EPA-350.1)	N/A	N/A	**1.7**	**1.0**	**0.89**	**0.94**	**5.3**	**5.6**	**9.0**	**9.0**	**10**	**10**	**8.4**	**8.4**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**190**	**180**	**110**	**110**	**280**	**280**	**400**	**400**	**250**	**260**	**190**	**200**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**190**	**180**	**110**	**110**	**280**	**280**	**400**	**400**	**250**	**260**	**190**	**200**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**5.3**	**5.2**	**5.9**	**4.2**	**5.8**	**5.8**	**11**	**11**	**6.8**	**6.7**	**4.1**	**4.2**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	14.57	15.94	16.33	15.6	19.57	19.72	19.42	19.42	19.49	19.49	19.90	19.90
Specific Conductivity (µS/cm)	N/A	N/A	363	598	245	336.5	640	637	1219	1216	859	859	481	482
Dissolved Oxygen (mg/L)	N/A	N/A	1.16	0.10	0.16	0.30	0.55	0.50	0.24	0.25	0.16	0.16	0.49	0.54
pH (S.U.)	6.5 to 8.5	N/A	6.38	6.42	6.43	6.5	5.90	5.96	7 (f)	7 (f)	6.29	6.29	6.49	6.44
Oxidation Reduction Potential (mV)	N/A	N/A	-85.6	-92.1	-94.6	-140.5	6.3	-3.0	-102.2	-102.5	68.4	68.4	-119.8	-119.5
Turbidity (NTU)	N/A	N/A	6.82	0.73	0.87	2.09	14.7	13.5	2.23	3.01	1.08	1.08	4.21	3.78
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
G-BHC (Lindane)	0.019	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Heptachlor	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Aldrin	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Heptachlor Epoxide	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Chlordane	0.20	0.20	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Endosulfan I (g)	0.056	N/A	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
4,4'-DDE	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Dieldrin	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Endrin	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
4,4'-DDD	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Endosulfan II (g)	0.056	N/A	0.011 U	0.010 U	**0.012**	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
4,4'-DDT	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Endrin Aldehyde (h)	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Endosulfan Sulfate (g)	0.056	N/A	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Methoxychlor	0.030	0.01	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Hexachlorobenzene (i)	0.01	0.01	0.011 U	0.010 U	0.010 U	0.010 U	2.0 U	2.0 U	0.010 U	0.010 U	0.010 U	0.010 U	0.0099 U	0.010 U
Toxaphene	0.50	0.50	0.52 U	0.50 U	0.50 U	0.50 U	0.51 U	0.52 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U	0.013 U	0.015 U	0.0050 U	0.0050 U
PCB-1221	N/A	N/A	0.011 U	0.010 U	0.010 U	0.030 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.068 U	0.010 U	0.010 U
PCB-1232	N/A	N/A	0.0052 U	0.0050 U	**0.013**	0.015 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U	0.036 U	0.072 U	**0.022** J	**0.0095** J
PCB-1242	N/A	N/A	**0.015**	**0.014**	0.0050 U	0.015 U	**0.035**	**0.036**	**0.023** J	**0.017** J	0.022 U	0.023 U	0.0050 U	0.0050 U
PCB-1248	N/A	N/A	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.019 U	0.0050 U	0.0050 U
PCB-1254	0.005	0.005	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
PCB-1260	0.014	0.005	0.0052 U	0.0050 U	0.0050 U	0.015 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Total PCBs (j)	0.10	N/A	**0.015**	**0.032**	**0.013**	ND	**0.035**	**0.036**	**0.023** J	**0.017** J	ND	ND	**0.022**	**0.0095** J

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-105 EV14120119-01 EV14120162-27 12/16/2014 N	MW-105 EV15030143-08 3/24/2015 N	MW-105 EV15060181-06 6/25/2015 N	MW-105 EV20110139-04 11/20/2020 N	MW-106 EV14090091-07 EV14090107-18 9/16/2014 N	MW-106-Dup EV14090091-11 EV14090107-26 9/16/2014 FD	MW-106 EV14120162-10 12/19/2014 N	MW-106-Dup EV14120162-12 12/19/2014 FD	MW-106 EV15030127-09 3/24/2015 N	MW-106-Dup EV15030127-10 3/24/2015 FD	MW-106 EV15060181-01 6/25/2015 N	MW-106-Dup EV15060181-03 6/25/2015 FD
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Methylene Chloride	4.6	0.68	0.68 U	0.68 U	0.68 U	0.68 U	5.0 U	5.0 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Acrylonitrile	0.0572	0.0572	0.057 U	0.057 U	0.057 U	--	10 U	10 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	2.0 U	--	2.0 U	6.8 U	--	--	2.0 U	2.0 U	--	--	2.0 U	2.0 U
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.014 U	0.014 U	0.014 U	0.014 U	2.0 U	2.0 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Benzene	1.2	0.028	0.028 U	0.028 U	0.028 U	0.028 U	2.0 U	2.0 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	0.023 U	0.023 U	0.023 U	2.0 U	2.0 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.8**	**3.0**	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-105 EV14120119-01 EV14120162-27 12/16/2014 N	MW-105 EV15030143-08 3/24/2015 N	MW-105 EV15060181-06 6/25/2015 N	MW-105 EV20110139-04 11/20/2020 N	MW-106 EV14090091-07 EV14090107-18 9/16/2014 N	MW-106-Dup EV14090091-11 EV14090107-26 9/16/2014 FD	MW-106 EV14120162-10 12/19/2014 N	MW-106-Dup EV14120162-12 12/19/2014 FD	MW-106 EV15030127-09 3/24/2015 N	MW-106-Dup EV15030127-10 3/24/2015 FD	MW-106 EV15060181-01 6/25/2015 N	MW-106-Dup EV15060181-03 6/25/2015 FD
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.10 U	0.10 U	0.10 U	0.10 U	10 U	10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Hexachlorobutadiene	0.44	N/A	0.069 U	0.069 U	0.069 U	0.069 U	2.0 U	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U	0.20 U	**0.38**	**0.39**	0.031 U	0.031 U	0.031 U	0.031 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.14 U	0.14 U	0.14 U	0.14 U	0.10 U	0.10 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.054 U	0.054 U	0.054 U	0.020 U	0.020 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	0.058 U	0.058 U	0.058 U	0.1 U	2.0 U	2.0 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 UJ	1.4 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.87 U	0.87 U	0.87 U	0.87 U	0.94 U	0.94 U	0.87 U	0.87 U	0.87 U	0.87 U	0.88 UJ	0.88 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 UJ	1.9 U
Hexachloroethane	2.0	2.0	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 UJ	1.9 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 UJ	1.8 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	0.83 U	0.83 U	0.83 U	0.83 U	2.0 U	2.0 U	0.83 U	0.83 U	0.83 U	0.83 U	0.84 U	0.84 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-105 EV14120119-01 EV14120162-27 12/16/2014 N	MW-105 EV15030143-08 3/24/2015 N	MW-105 EV15060181-06 6/25/2015 N	MW-105 EV20110139-04 11/20/2020 N	MW-106 EV14090091-07 EV14090107-18 9/16/2014 N	MW-106-Dup EV14090091-11 EV14090107-26 9/16/2014 FD	MW-106 EV14120162-10 12/19/2014 N	MW-106-Dup EV14120162-12 12/19/2014 FD	MW-106 EV15030127-09 3/24/2015 N	MW-106-Dup EV15030127-10 3/24/2015 FD	MW-106 EV15060181-01 6/25/2015 N	MW-106-Dup EV15060181-03 6/25/2015 FD
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.72 U	0.72 U	0.72 U	0.72 U	0.78 U	0.78 U	0.72 U	0.72 U	0.72 U	0.72 U	0.73 UJ	0.73 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**4.2**	**3.6**	2.0 U	2.0 U	2.0 UJ	**5.8 J**
Azobenzene	1.63	1.63	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 UJ	1.5 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 UJ	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.75 U	0.75 U	0.75 U	0.75 U	2.0 U	2.0 U	**60** J	**81 J**	0.75 U	0.75 U	0.75 UJ	0.75 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	**0.082**	0.013 U	0.013 U	0.020 U	**0.064**	**0.074**	0.013 U	0.013 U	**0.080** J	**0.039** J	**0.059** J	**0.013** J
2-Methylnaphthalene	32	N/A	0.020 U	0.02 U	0.020 U	0.020 U	**0.055** J	**0.079** J	**0.052**	**0.045**	0.02 U	0.02 U	0.020 U	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.02 U	0.020 U	0.020 U	**0.080** J	**0.12** J	**0.22**	**0.19**	**0.066**	**0.063**	0.020 U	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.02 U	0.020 U	0.020 U
Acenaphthene	650	N/A	**0.16**	**0.12**	**0.10**	**0.030**	**0.042**	**0.056**	**0.13** J	**0.10** J	**0.13** J	**0.10** J	**0.034**	**0.031**
Fluorene	640	N/A	0.0090 U	0.0090 U	0.0090 U	0.020 U	0.020 U	0.020 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0091 U	0.0091 U
Pentachlorophenol	0.23	0.23	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Phenanthrene	N/A	N/A	0.013 U	0.013 U	0.013 U	0.020 U	**0.030**	**0.031**	0.013 U	**0.025**	**0.023**	**0.02**	**0.013**	0.013 U
Anthracene	4,800	N/A	**0.010**	**0.012**	0.01 U	0.020 U	0.020 U	**0.036**	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.015**
Fluoranthene	86	N/A	**0.018**	**0.02**	**0.018**	0.020 U	0.020 U	0.020 U	**0.010**	**0.012**	0.0092 U	0.0092 U	0.0092 U	0.0092 U
Pyrene	480	N/A	**0.015**	**0.017**	**0.035**	0.020 U	0.020 U	0.020 U	0.01 U	**0.011**	**0.015**	0.01 U	0.011 U	0.011 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Chrysene	0.00940	0.00940	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	N/A	N/A	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type											
			MW-106 EV20110139-07 11/20/2020 N	MW-107 EV14090107-19 9/17/2014 N	MW-107 EV14120119-05 EV14120162-24 12/16/2014 N	MW-107 EV15030154-04 3/26/2015 N	MW-107 EV15060188-03 6/25/2015 N	MW-107 EV20110151-02 11/23/2020 N	MW-108 EV14090107-20 9/17/2014 N	MW-108 EV14120119-03 EV14120162-28 12/16/2014 N	MW-108 EV15030143-05 3/25/2015 N	MW-108 EV15060188-01 6/25/2015 N	MW-108 EV20110151-05 11/23/2020 N	MW-109 EV14090091-08 EV14090107-21 9/16/2014 N
Total Petroleum Hydrocarbons (µg/L)														
HCID														
Gas Range	N/A	N/A	--	130 U	130 U	130 U	130 U	--	130 U	130 U	130 U	130 U	--	130 U
Diesel Range	N/A	N/A	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	310 U
Oil Range	N/A	N/A	--	310 U	310 U	310 U	310 U	--	310 U	310 U	310 U	310 U	--	310 U
NWTPH-G (c)	1,000	N/A	--	--	--	--	--	--	--	--	--	--	--	--
NWTPH-Dx														
Diesel Range (w/SGC)	500	N/A	130 U	--	--	--	--	--	--	--	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	**140**	--	--	--	--	--	--	--	--	--	--	--
Oil Range (w/SGC)	500	N/A	250 U	--	--	--	--	--	--	--	--	--	--	--
Oil Range (wo/SGC)	500	N/A	250 U	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**9.2**	**3.6**	**2.7**	**3.3**	**4.1**	**3.4**	**4.8**	**5.1**	**6.6**	**5.2**	**6.2**	1.0 U
Barium	1,000	N/A	**58**	**62**	**56**	**60**	**56**	**55**	**53**	**59**	**60**	**53**	**53**	**11**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**33,000**	**38,000**	**36,000**	**39,000**	**35,000**	**43,000**	**36,000**	**40,000**	**43,000**	**37,000**	**38,000**	**26,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	10 U	--	--	'--	--	10 U	--	--	'--	--	10 U
Iron	300	N/A	**27,000**	**24,000**	**22,000**	**24,000**	**22,000**	**25,000 J**	**29,000**	**32,000**	**35,000**	**31,000**	**29,000 J**	50 U
Lead	0.54	N/A	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U
Magnesium	N/A	N/A	**11,000**	**13,000**	**13,000**	**13,000**	**12,000**	**15,000**	**12,000**	**14,000**	**15,000**	**13,000**	**14,000**	**9,900**
Manganese	50	N/A	**2,000**	**2,400**	**1,900**	**1,900**	**2,000**	**2,200**	**2,300**	**2,200**	**2,400**	**2,200**	**2,000**	**860**
Potassium	N/A	N/A	**8,400**	--	--	**7,400**	**6,700**	**6,500**	--	--	**7,700**	**6,900**	**7,400**	--
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.2 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
Sodium	20,000	N/A	**18,000**	**21,000**	**20,000**	**21,000**	**18,000**	**20,000**	**16,000**	**18,000**	**18,000**	**16,000**	**18,000**	**14,000**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)														
Arsenic	0.45	0.45	**9.2**	**3.5**	**3.4**	**2.5**	**3.5**	**3.3**	**4.5**	**4.8**	**6.6**	**3.9**	**6.5**	1.0 U
Barium	1,000	N/A	**59**	**63**	**60**	**62**	**57**	**53**	**53**	**55**	**61**	**53**	**54**	**13**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**33,000**	**39,000**	**38,000**	**39,000**	**36,000**	**42,000**	**37,000**	**39,000**	**44,000**	**38,000**	**39,000**	**27,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	10 U	--	--	'--	--	10 U	--	--	'--	--	10 U
Iron	300	N/A	**27,000**	**24,000**	**24,000**	**24,000**	**23,000**	**25,000**	**29,000**	**30,000**	**35,000**	**31,000**	**30,000**	**280**
Lead	0.54	N/A	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	0.28 U	0.28 U	1.0 U
Magnesium	N/A	N/A	**11,000**	**14,000**	**13,000**	**13,000**	**13,000**	**15,000**	**13,000**	**14,000**	**16,000**	**13,000**	**14,000**	**10,000**
Manganese	50	N/A	**2,000**	**2,400**	**2,000**	**2,000**	**2,100**	**2,200**	**2,400**	**2,100**	**2,400**	**2,100**	**2,100**	**890**
Potassium	N/A	N/A	**8,400**	--	--	**7,400**	**6,900**	**6,400**	--	--	**7,800**	**7,000**	**7,600**	--
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	0.20 U	0.20 U	1.0 U
Sodium	20,000	N/A	**19,000**	**22,000**	**21,000**	**21,000**	**19,000**	**19,000**	**17,000**	**18,000**	**18,000**	**16,000**	**18,000**	**15,000**
Mercury	0.11	0.11	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.11 U	0.11 U	0.20 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-106 EV20110139-07 11/20/2020 N	MW-107 EV14090107-19 9/17/2014 N	MW-107 EV14120119-05 EV14120162-24 12/16/2014 N	MW-107 EV15030154-04 3/26/2015 N	MW-107 EV15060188-03 6/25/2015 N	MW-107 EV20110151-02 11/23/2020 N	MW-108 EV14090107-20 9/17/2014 N	MW-108 EV14120119-03 EV14120162-28 12/16/2014 N	MW-108 EV15030143-05 3/25/2015 N	MW-108 EV15060188-01 6/25/2015 N	MW-108 EV20110151-05 11/23/2020 N	MW-109 EV14090091-08 EV14090107-21 9/16/2014 N
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	N/A	N/A	**290**	**180**	**280**	**220**	**240**	**340**	**260**	**300**	**260**	**220**	**330**	**200**
Chloride (EPA-300.0)	230	N/A	**21**	**32**	**18**	**19**	**19**	**27**	**19**	**18**	**17**	**18**	**25**	**10**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	0.16 U	**0.22**	0.16 U	0.16 U	1.0 U	**0.23**	**0.25**	0.16 U	0.16 U	1.0 U	**0.28**
Nitrate as N (EPA-300.0)	10	N/A	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	**0.059**	0.034 U	0.034 U	0.034 U	0.034 U	**0.94**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	**0.14**
Sulfate (EPA-300.0)	N/A	N/A	**6.6**	0.26 U	0.26 U	0.26 U	0.26 U	1.0 U	0.26 U	0.26 U	0.26 U	0.26 U	1.0 U	**13**
Ammonia (EPA-350.1)	N/A	N/A	**6.2**	**4.0**	**3.6**	**3.6**	**3.3**	**2.0**	**3.0**	**2.8**	**2.7**	**2.6**	**2.6**	**0.18**
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**180**	**220**	**200**	**200**	**200**	**190**	**210**	**210**	**220**	**200**	**170**	**130**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**180**	**220**	**200**	**200**	**200**	**190**	**210**	**210**	**220**	**200**	**170**	**130**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**4.1**	**4.6**	**3.5**	**4.1**	**3.8**	**3.3**	**5.2**	**4.7**	**4.8**	**5.3**	**4.6**	**1.1**
FIELD PARAMETERS														
Temperature (°C)	N/A	N/A	18.40	15.46	14.71	16.77	16.89	14.2	15.96	14.58	15.86	17.16	15.3	18.46
Specific Conductivity (µS/cm)	N/A	N/A	467.3	1115	362	1158	439	418.7	415	384	639	466	409.5	270
Dissolved Oxygen (mg/L)	N/A	N/A	0.44	1.12	0.69	0.30	0.14	1.32	0.57	1.61	0.10	0.18	0.51	0.90
pH (S.U.)	6.5 to 8.5	N/A	6.00	5.81	6.28	5.68	6.34	6.57	5.46	6.26	6.35	6.28	6.49	5.73
Oxidation Reduction Potential (mV)	N/A	N/A	26.5	-46.4	-85.9	-82.0	-88.7	-66.2	84.6	-80.3	74.2	-862	-77.7	18.3
Turbidity (NTU)	N/A	N/A	4.81	3.7	4.65	0.59	0.95	0.48	16.4	6.79	0.39	1.11	0.10	61.8
PESTICIDES (µg/L; EPA-8081)														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Heptachlor	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Aldrin	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Chlordane	0.20	0.20	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
4,4'-DDE	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Dieldrin	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endrin	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
4,4'-DDD	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endosulfan II (g)	0.056	N/A	0.010 U	0.013 U	0.010 U	**0.026**	**0.019**	0.010 U	0.011 U	0.011 U	0.010 U	**0.011**	0.010 U	0.018 U
4,4'-DDT	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Methoxychlor	0.030	0.01	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobenzene (i)	0.01	0.01	0.010 U	2.0 U	0.010 U	0.010 U	0.010 U	0.010 U	2.0 U	0.011 U	0.010 U	0.010 U	0.010 U	2.0 U
Toxaphene	0.50	0.50	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.51 U	0.52 U	0.50 U	0.50 U	0.50 U	0.52 U
PCBs (µg/L; EPA-8082)														
PCB-1016	0.005	0.005	0.015 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0050 U	0.0050 U	0.067 U	0.0052 U
PCB-1221	N/A	N/A	0.030 U	0.01 U	0.010 U	0.010 U	0.010 U	0.067 U	0.011 U	0.011 U	0.010 U	0.010 U	0.067 U	0.011 U
PCB-1232	N/A	N/A	0.015 U	0.0050 U	0.0050 U	0.0050 U	**0.017**	0.067 U	0.0051 U	0.0051 U	0.0050 U	**0.018**	**0.068**	0.0052 U
PCB-1242	N/A	N/A	0.015 U	**0.021**	**0.018**	**0.0092**	0.0050 U	0.067 U	**0.035**	**0.034**	**0.0099**	0.0050 U	0.067 U	0.0052 U
PCB-1248	N/A	N/A	0.015 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0050 U	0.0050 U	0.067 U	0.0052 U
PCB-1254	0.005	0.005	0.015 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0050 U	0.0050 U	0.067 U	0.0052 U
PCB-1260	0.014	0.005	0.015 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.067 U	0.0051 U	0.0051 U	0.0050 U	0.0050 U	0.067 U	0.0052 U
Total PCBs (j)	0.10	N/A	ND	**0.021**	**0.018**	**0.0092**	**0.017**	ND	**0.035**	**0.034**	**0.0099**	**0.018**	**0.068**	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-106 EV20110139-07 11/20/2020 N	MW-107 EV14090107-19 9/17/2014 N	MW-107 EV14120119-05 EV14120162-24 12/16/2014 N	MW-107 EV15030154-04 3/26/2015 N	MW-107 EV15060188-03 6/25/2015 N	MW-107 EV20110151-02 11/23/2020 N	MW-108 EV14090107-20 9/17/2014 N	MW-108 EV14120119-03 EV14120162-28 12/16/2014 N	MW-108 EV15030143-05 3/25/2015 N	MW-108 EV15060188-01 6/25/2015 N	MW-108 EV20110151-05 11/23/2020 N	MW-109 EV14090091-08 EV14090107-21 9/16/2014 N
VOCs (µg/L; EPA-8260)														
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.016 U	2.0 U	0.014 U	0.014 U	0.014 U	0.016 U	2.0 U
Methylene Chloride	4.6	0.68	0.68 U	5.0 U	0.68 U	0.68 U	0.68 U	1.0 U	5.0 U	0.68 U	0.68 U	0.68 U	1.0 U	5.0 U
Acrylonitrile	0.0572	0.0572	--	10 U	0.057 U	0.057 U	0.057 U	--	10 U	0.057 U	0.057 U	0.057 U	--	10 U
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	6.8 U	--	2.0 U	--	2.0 U	6.8 U	--	2.0 U	--	2.0 U	6.8 U	--
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.014 U	2.0 U	0.014 U	0.014 U	0.014 U	0.0035 U	2.0 U	0.014 U	0.014 U	0.014 U	0.0035 U	2.0 U
Benzene	1.2	0.028	0.028 U	2.0 U	0.028 U	0.028 U	0.028 U	0.011 U	2.0 U	0.028 U	0.028 U	0.028 U	0.011 U	2.0 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16 U	0.059 U	0.059 U	0.059 U	0.059 U	0.16 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	2.0 U	0.023 U	0.023 U	0.023 U	0.11 U	2.0 U	0.023 U	0.023 U	0.023 U	0.11 U	2.0 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.01 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.01 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.018 U	0.023 U	0.023 U	0.023 U	0.023 U	0.018 U	0.023 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-106 EV20110139-07 11/20/2020 N	MW-107 EV14090107-19 9/17/2014 N	MW-107 EV14120119-05 EV14120162-24 12/16/2014 N	MW-107 EV15030154-04 3/26/2015 N	MW-107 EV15060188-03 6/25/2015 N	MW-107 EV20110151-02 11/23/2020 N	MW-108 EV14090107-20 9/17/2014 N	MW-108 EV14120119-03 EV14120162-28 12/16/2014 N	MW-108 EV15030143-05 3/25/2015 N	MW-108 EV15060188-01 6/25/2015 N	MW-108 EV20110151-05 11/23/2020 N	MW-109 EV14090091-08 EV14090107-21 9/16/2014 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.1 U	10 U	0.10 U	0.10 U	0.10 U	0.03 U	10 U	0.10 U	0.10 U	0.10 U	0.03 U	10 U
Hexachlorobutadiene	0.44	N/A	0.069 U	2.0 U	0.069 U	0.069 U	0.069 U	0.5 U	2.0 U	0.069 U	0.069 U	0.069 U	0.5 U	2.0 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))														
Vinyl Chloride	0.031	0.031	**0.056**	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U	0.031 U	0.031 U	0.031 U	0.02 U	0.20 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.14 U	0.10 U	0.14 U	0.14 U	0.14 U	0.29 U	0.10 U	0.14 U	0.14 U	0.14 U	0.29 U	**0.57**
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.020 U	0.054 U	0.054 U	0.054 U	0.026 U	0.020 U	0.054 U	0.054 U	0.054 U	0.026 U	0.020 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17 U	0.10 U
Trans-1,3-Dichloropropene	0.34	N/A	0.10 U	2.0 U	0.058 U	0.058 U	0.058 U	0.27 U	2.0 U	0.058 U	0.058 U	0.058 U	0.27 U	2.0 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.19 U	0.10 U	0.10 U	0.10 U	0.10 U	0.19 U	0.10 U
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.23 U	0.10 U	0.10 U	0.10 U	0.10 U	0.23 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.28 U	0.10 U	0.10 U	0.10 U	0.10 U	0.28 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.14 U	0.10 U	0.10 U	0.10 U	0.10 U	0.14 U	0.10 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.38 U	0.10 U	0.10 U	0.10 U	0.10 U	0.38 U	0.10 U
SVOCs (µg/L; EPA-8270)														
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.87 U	0.94 U	0.87 U	0.89 U	0.87 U	0.87 U	0.94 U	0.87 U	0.87 U	0.87 U	0.89 U	0.94 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U
Hexachloroethane	2.0	2.0	2.00 U	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U	1.9 U	2.0 U	2.0 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.8 U	2.0 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	0.83 U	2.0 U	0.83 U	0.85 U	0.83 U	0.83 U	2.0 U	0.83 U	0.83 U	0.83 U	0.85 U	2.0 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-106 EV20110139-07 11/20/2020 N	MW-107 EV14090107-19 9/17/2014 N	MW-107 EV14120119-05 EV14120162-24 12/16/2014 N	MW-107 EV15030154-04 3/26/2015 N	MW-107 EV15060188-03 6/25/2015 N	MW-107 EV20110151-02 11/23/2020 N	MW-108 EV14090107-20 9/17/2014 N	MW-108 EV14120119-03 EV14120162-28 12/16/2014 N	MW-108 EV15030143-05 3/25/2015 N	MW-108 EV15060188-01 6/25/2015 N	MW-108 EV20110151-05 11/23/2020 N	MW-109 EV14090091-08 EV14090107-21 9/16/2014 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.72 U	0.78 U	0.72 U	0.73 U	0.72 U	0.72 U	0.78 U	0.72 U	0.72 U	0.72 U	0.73 U	0.78 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U	1.5 U	1.5 U	1.5 U	1.5 U	2.0 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.75 U	2.0 U	0.75 U	0.76 U	0.75 U	0.75 U	2.0 U	0.75 U	0.75 U	0.75 U	0.76 U	2.0 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)														
Naphthalene	160	N/A	0.020 U	0.020 U	**0.060**	0.014 U	0.013 U	0.020 U	0.020 U	**0.053**	**0.016**	0.013 U	0.020 U	0.020 U
2-Methylnaphthalene	32	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U
Acenaphthene	650	N/A	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.014 U	0.020 U	0.020 U
Fluorene	640	N/A	0.020 U	0.020 U	0.0090 U	**0.017**	0.0090 U	0.020 U	0.020 U	**0.018**	**0.016**	0.0090 U	0.020 U	0.020 U
Pentachlorophenol	0.23	0.23	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U
Phenanthrene	N/A	N/A	0.020 U	0.020 U	**0.015**	**0.015**	0.013 U	0.020 U	0.020 U	0.013 U	0.013 U	0.013 U	0.020 U	0.020 U
Anthracene	4,800	N/A	0.020 U	0.020 U	**0.015**	**0.016**	**0.011**	0.020 U	0.020 U	**0.013**	**0.011**	0.01 U	0.020 U	0.020 U
Fluoranthene	86	N/A	0.020 U	0.020 U	0.0092 U	0.0093 U	0.0092 U	0.020 U	0.020 U	0.0092 U	0.0092 U	0.0092 U	0.020 U	0.020 U
Pyrene	480	N/A	0.020 U	0.020 U	0.01 U	0.011 U	0.01 U	0.020 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U	0.017 U	0.017 U	0.017 U	0.017 U	0.020 U
Chrysene	0.00940	0.00940	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.020 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U	0.013 U	0.013 U	0.013 U	0.013 U	0.020 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U	0.027 U	0.027 U	0.027 U	0.027 U	0.029 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U	0.014 U	0.014 U	0.014 U	0.014 U	0.020 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U
Benzo[G,H,I]Perylene	N/A	N/A	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U	0.019 U	0.020 U	0.020 U
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	Sample ID, Lab Sample ID, Sample Date, Sample Type			
			MW-109 EV14120162-01 12/19/2014 N	MW-109 EV15030127-06 3/23/2015 N	MW-109 EV15060161-03 6/23/2015 N	MW-109 EV20110151-07 11/23/2020 N
Total Petroleum Hydrocarbons (µg/L)						
HCID						
Gas Range	N/A	N/A	130 U	130 U	130 U	--
Diesel Range	N/A	N/A	310 U	310 U	310 U	--
Oil Range	N/A	N/A	310 U	310 U	310 U	--
NWTPH-G (c)	1,000	N/A	--	--	--	--
NWTPH-Dx						
Diesel Range (w/SGC)	500	N/A	--	--	--	--
Diesel Range (wo/SGC)	500	N/A	--	--	--	--
Oil Range (w/SGC)	500	N/A	--	--	--	--
Oil Range (wo/SGC)	500	N/A	--	--	--	--
Dissolved Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)						
Arsenic	0.45	0.45	0.45 U	0.45 U	0.45 U	**0.47**
Barium	1,000	N/A	**11**	**11**	**9.1**	**12**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**28,000**	**31,000**	**25,000**	**25,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	--	'--	--
Iron	300	N/A	50 U	**92**	50 U	50 U
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**9,500**	**11,000**	**8,800**	**9,200**
Manganese	50	N/A	**110**	**390**	**57**	**2.5**
Potassium	N/A	N/A	--	**4,800**	**3,800**	**4,100**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**13,000**	**14,000**	**12,000**	**13,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U
Total Metals (µg/L; EPA-200.8/EPA-7470/EPA-7196)						
Arsenic	0.45	0.45	0.45 U	**0.51**	0.45 U	**0.49**
Barium	1,000	N/A	**11**	**12**	**9.0**	**11.0**
Cadmium	5.0	N/A	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	N/A	N/A	**29,000**	**32,000**	**25,000**	**26,000**
Chromium (d)	57	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10	N/A	--	--	'--	--
Iron	300	N/A	**92**	**150**	50 U	**76**
Lead	0.54	N/A	0.28 U	0.28 U	0.28 U	0.28 U
Magnesium	N/A	N/A	**9,600**	**11,000**	**8,400**	**9,000**
Manganese	50	N/A	**150**	**400**	**58**	**10**
Potassium	N/A	N/A	--	**4,800**	**3,700**	**4,100**
Selenium	5.0	N/A	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32	N/A	0.20 U	0.20 U	0.20 U	0.20 U
Sodium	20,000	N/A	**13,000**	**14,000**	**12,000**	**13,000**
Mercury	0.11	0.11	0.11 U	0.11 U	0.11 U	0.11 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-109 EV14120162-01 12/19/2014 N	MW-109 EV15030127-06 3/23/2015 N	MW-109 EV15060161-03 6/23/2015 N	MW-109 EV20110151-07 11/23/2020 N
CONVENTIONALS (mg/L)						
Total Dissolved Solids (SM2540C)	N/A	N/A	**140**	**170**	**210**	**180**
Chloride (EPA-300.0)	230	N/A	**9.5**	**11**	**11**	**12**
Fluoride (EPA-300.0)	0.64	N/A	0.16 U	0.16 U	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10	N/A	**0.29**	**0.50**	**1.7**	**3.7**
Nitrite as N (EPA-300.0)	1.0	N/A	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	N/A	N/A	**16**	**7.6**	**14**	**16**
Ammonia (EPA-350.1)	N/A	N/A	**0.15**	**0.29**	**0.056**	0.050 U
Alkalinity as CaCO3, Total (SM2320B)	N/A	N/A	**110**	**140**	**110**	**89**
Bicarbonate as CaCO3 (SM2320B)	N/A	N/A	**110**	**140**	**110**	**89**
Total Organic Carbon (TOC) (SM5310C)	N/A	N/A	**1.2**	**1.4**	**0.97**	**0.82**
FIELD PARAMETERS						
Temperature (°C)	N/A	N/A	15.21	15.43	15.87	13.4
Specific Conductivity (µS/cm)	N/A	N/A	213	341	207	211.9
Dissolved Oxygen (mg/L)	N/A	N/A	2.57	2.08	4.46	4.56
pH (S.U.)	6.5 to 8.5	N/A	6.59	6.00	6.48	6.55
Oxidation Reduction Potential (mV)	N/A	N/A	16.0	51.1	66.8	79.8
Turbidity (NTU)	N/A	N/A	9.20	16.05	1.65	40.99
PESTICIDES (µg/L; EPA-8081)						
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
G-BHC (Lindane)	0.019	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Heptachlor	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Aldrin	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Heptachlor Epoxide	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Chlordane	0.20	0.20	0.010 U	0.0099 U	0.011 U	0.01 U
Endosulfan I (g)	0.056	N/A	0.010 U	0.0099 U	0.011 U	0.01 U
4,4'-DDE	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Dieldrin	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Endrin	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
4,4'-DDD	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Endosulfan II (g)	0.056	N/A	0.021 U	**0.029**	**0.013**	0.01 U
4,4'-DDT	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Endrin Aldehyde (h)	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Endosulfan Sulfate (g)	0.056	N/A	0.010 U	0.0099 U	0.011 U	0.01 U
Methoxychlor	0.030	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Hexachlorobenzene (i)	0.01	0.01	0.010 U	0.0099 U	0.011 U	0.01 U
Toxaphene	0.50	0.50	0.50 U	0.50 U	0.52 U	0.5 U
PCBs (µg/L; EPA-8082)						
PCB-1016	0.005	0.005	0.0050 U	0.0050 U	0.0052 U	0.067 U
PCB-1221	N/A	N/A	0.010 U	0.010 U	0.011 U	0.067 U
PCB-1232	N/A	N/A	0.0050 U	0.0050 U	0.0052 U	0.067 U
PCB-1242	N/A	N/A	0.0050 U	0.0050 U	0.0052 U	0.067 U
PCB-1248	N/A	N/A	0.0050 U	0.0050 U	0.0052 U	0.067 U
PCB-1254	0.005	0.005	0.0050 U	0.0050 U	0.0052 U	0.067 U
PCB-1260	0.014	0.005	0.0050 U	0.0050 U	0.0052 U	0.067 U
Total PCBs (j)	0.10	N/A	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-109 EV14120162-01 12/19/2014 N	MW-109 EV15030127-06 3/23/2015 N	MW-109 EV15060161-03 6/23/2015 N	MW-109 EV20110151-07 11/23/2020 N
VOCs (µg/L; EPA-8260)						
Dichlorodifluoromethane	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200	N/A	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	0.014 U	0.014 U	0.014 U	0.016 U
Methylene Chloride	4.6	0.68	0.68 U	0.68 U	0.68 U	1.0 U
Acrylonitrile	0.0572	0.0572	0.057 U	0.057 U	0.057 U	--
Methyl T-Butyl Ether (MTBE)	20	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800	N/A	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480	N/A	2.0 U	--	2.0 U	6.8 U
2,2-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	0.014 U	0.014 U	0.014 U	0.0035 U
Benzene	1.2	0.028	0.028 U	0.028 U	0.028 U	0.011 U
Dibromomethane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.16 U
4-Methyl-2-Pentanone (MIBK)	640	N/A	10 U	10 U	10 U	10 U
Toluene	640	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	N/A	N/A	10 U	10 U	10 U	10 U
1,3-Dichloropropane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	0.023 U	0.023 U	0.023 U	0.11 U
1,2-Dibromoethane (EDB)	0.01	N/A	0.010 U	0.010 U	0.010 U	0.010 U
Chlorobenzene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70	N/A	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600	N/A	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100	N/A	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.018 U
Bromobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80	N/A	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320	N/A	2.0 U	2.0 U	2.0 U	2.0 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-109 EV14120162-01 12/19/2014 N	MW-109 EV15030127-06 3/23/2015 N	MW-109 EV15060161-03 6/23/2015 N	MW-109 EV20110151-07 11/23/2020 N
1,4-Dichlorobenzene	8.1	N/A	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420	N/A	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	0.10 U	0.10 U	0.10 U	0.03 U
Hexachlorobutadiene	0.44	N/A	0.069 U	0.069 U	0.069 U	0.5 U
1,2,3-Trichlorobenzene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
VOCs (µg/L; EPA-8260 SIM (m))						
Vinyl Chloride	0.031	0.031	0.031 U	0.031 U	0.031 U	0.02 U
Carbon Tetrachloride	0.23	N/A	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4	N/A	0.14 U	0.14 U	0.14 U	0.29 U
Trichloroethene (TCE)	2.5	N/A	0.054 U	0.054 U	0.054 U	0.026 U
1,2-Dichloropropane	0.50	N/A	0.10 U	0.10 U	0.10 U	0.17 U
Trans-1,3-Dichloropropene	0.34	N/A	0.058 U	0.058 U	0.058 U	0.27 U
1,1,2-Trichloroethane	0.59	N/A	0.10 U	0.10 U	0.10 U	0.19 U
Dibromochloromethane	0.40	N/A	0.10 U	0.10 U	0.10 U	0.23 U
1,1,1,2-Tetrachloroethane	1.7	N/A	0.10 U	0.10 U	0.10 U	0.28 U
1,1,2,2-Tetrachloroethane	0.17	N/A	0.10 U	0.10 U	0.10 U	0.14 U
1,2,4-Trichlorobenzene	1.5	N/A	0.10 U	0.10 U	0.10 U	0.38 U
SVOCs (µg/L; EPA-8270)						
Pyridine	8.0	N/A	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.4 U	1.4 U	1.4 U	1.4 U
Phenol	2,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.89 U	0.89 U	0.87 U	0.89 U
2-Chlorophenol	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400	N/A	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400	N/A	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U
Hexachloroethane	2.0	2.0	1.9 U	1.9 U	1.9 U	2.0 U
Nitrobenzene	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000	N/A	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24	N/A	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	1.8 U	1.8 U	1.8 U	1.8 U
2,6-Dichlorophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	0.85 U	0.85 U	0.83 U	0.85 U
2,4,5-Trichlorophenol	800	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.7 U	1.7 U	1.7 U	1.7 U
3-Nitroaniline	N/A	N/A	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32	N/A	10 U	10 U	10 U	10 U

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Analyte	Screening Level (a)	Targeted ALS QLS (b)	MW-109 EV14120162-01 12/19/2014 N	MW-109 EV15030127-06 3/23/2015 N	MW-109 EV15060161-03 6/23/2015 N	MW-109 EV20110151-07 11/23/2020 N
4-Nitrophenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16	N/A	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.73 U	0.73 U	0.72 U	0.73 U
2,3,4,6-Tetrachlorophenol	480	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000	N/A	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	1.5 U	1.5 U	1.5 U	1.5 U
4-Bromophenyl-Phenylether	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	N/A	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate	1,600	N/A	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3	N/A	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	1.9 U	1.9 U	1.9 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	0.76 U	0.76 U	0.75 U	0.76 U
Di-N-Octylphthalate	160	N/A	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L; EPA-8270 SIM)						
Naphthalene	160	N/A	0.014 U	**0.030**	**0.11**	0.020 U
2-Methylnaphthalene	32	N/A	0.020 U	0.02 U	**0.11**	0.020 U
1-Methylnaphthalene	1.5	N/A	0.020 U	0.02 U	**0.036**	0.020 U
Acenaphthylene	N/A	N/A	0.020 U	0.02 U	0.020 U	0.020 U
Acenaphthene	650	N/A	0.014 U	0.014 U	0.014 U	0.020 U
Fluorene	640	N/A	0.0092 U	0.0092 U	0.0090 U	0.020 U
Pentachlorophenol	0.23	0.23	0.12 U	0.12 U	0.12 U	0.12 U
Phenanthrene	N/A	N/A	0.014 U	0.014 U	0.013 U	0.020 U
Anthracene	4,800	N/A	**0.012**	0.01 U	0.01 U	0.020 U
Fluoranthene	86	N/A	0.0093 U	0.0093 U	0.0092 U	0.020 U
Pyrene	480	N/A	0.011 U	0.011 U	0.01 U	0.020 U
Benzo[A]Anthracene	0.00940	0.00940	0.017 U	0.017 U	0.017 U	0.017 U
Chrysene	0.00940	0.00940	0.018 U	0.018 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.00730	0.00730	0.0068 U	0.0068 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.0237	0.0237	0.013 U	0.013 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.027 U	0.027 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.0164	0.0164	0.014 U	0.014 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.011 U	0.011 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	N/A	N/A	0.019 U	0.019 U	0.019 U	0.020 U
cPAH TEQ (o)	0.10	N/A	ND	ND	ND	ND

Table A-1
Cumulative Groundwater Analytical Results (2014-2020)
Closed City of Yakima Landfill

Notes:
U = Indicates the compound was not detected at the reported concentration.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
Bold = Detected compound.
Green Box = Exceedance of screening level
(a) Screening levels developed using methodology presented in the draft Site work plan (LAI 2014) and subsequent revisions per discussions with Ecology.
(b) Targeted laboratory QL (i.e., laboratory PQL) used for results comparison when the laboratory's standard reporting limit could not meet the screening level.
(c) Screening level is 1,000 µg/L when benzene is not detectable, 800 µg/L when benzene is present.
(d) Screening level presented is for Chromium III.
(e) Hexavalent chromium was not analyzed at all locations during the September sampling event; based on the September results and holding time requirements, hexavalent chromium was not sampled for during the December sampling event.
(f) pH strips used to measure pH value, due to field meter issues.
(g) Endosulfan isomers compared to screening level based on total Endosulfan criteria.
(h) Endrin isomers compared to screening level based on total Endrin criteria.
(i) Hexachlorobenzene analyzed by EPA Method 8270 for September sampling event.
(j) Total PCBs represents the sum of detected concentrations of the seven individual PCB Aroclors.
(k) Hexane was not analyzed for during the September sampling event due to issues at the laboratory.
(l) m,p-xylene results compared to m-or p-xylene screening levels (both individual compounds have the same screening level).
(m) Compounds analyzed by EPA Method 8260 for September sampling event.
(n) 3&4-Methylphenol compared to 3-Methylphenol screening level (the more conservative value of the two individual compound screening levels).
(o) cPAH TEQ calculated following the method outlined in WAC 173-340-708(8)(e).

Abbreviations/Acronyms:
-- = not analyzed
µg/L = micrograms per liter
µS/cm = microsiemens per cimeter
°C = degrees Celsius
cPAH = carcinogenic polycyclic aromatic hydrocarbons
EPA = US Environmental Protection Agency
LAI = Landau Associates, Inc.
mg/L = milligrams per liter
mV = millivolts
N/A = not applicable
ND = not detected
NS = not sampled
NTU = nephelometric turbidity units
PAHs = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls
PQL = practical quantitation limit
QL = quantitation limit
SGC = silica gel cleanup.
S.U. = standard units
SVOCs = semivolatile organic compounds
TEQ = toxicity equivalency
VOCs = volatile organic compounds
w/SGC = with silica gel cleanup
WAC = Washington Administrative Code
wo/SGC = without silica gel cleanup

APPENDIX B

Laboratory Data Reports

January 14, 2021

Ms. Stephanie Renando
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Renando,

On November 21st, 8 samples were received by our laboratory and assigned our laboratory project number EV20110139. The project was identified as your Yakima Landfill / #1148008.040.046. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS JOB#:	EV20110139
		ALS SAMPLE#:	EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/23/2020	JMK
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/24/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.89	1	UG/L	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,6-Trichlorophenol	EPA-8270	U	0.85	1	UG/L	11/24/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/24/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.73	1	UG/L	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Chrysene	EPA-8270	U	0.75	1	UG/L	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.76	1	UG/L	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	**0.053**	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**300**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**31**	0.46	5	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	**1.0**	0.26	1	MG/L	11/21/2020	RAL
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**7.0**	0.45	1	UG/L	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**49**	1.0	1	UG/L	12/01/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**38000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**25000**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**14000**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**2200**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**6800**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**18000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**7.0**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**49**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**38000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**26000**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**14000**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2200**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**6700**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**18000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**170**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**170**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**1.8**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.8**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**109**	11/30/2020	DLC
Toluene-d8	EPA-8260	**98.3**	11/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	**109**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**119**	11/23/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**106**	11/23/2020	JMK
2-Fluorophenol	EPA-8270	**40.3**	11/24/2020	JMK
Phenol-d5	EPA-8270	**19.7**	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:26:00 PM
CLIENT SAMPLE ID	MW-104-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	EPA-8270	**69.6**	11/24/2020	JMK
2-Fluorobiphenyl	EPA-8270	**64.2**	11/24/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**106**	11/24/2020	JMK
Terphenyl-d14	EPA-8270	**95.9**	11/24/2020	JMK
DCB	EPA-8082	**41.0**	12/11/2020	CAS
TCMX	EPA-8081	**57.4**	11/30/2020	JMK
DCB	EPA-8081	**50.6**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	**0.033**	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/23/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/24/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.89	1	UG/L	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.85	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/24/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.73	1	UG/L	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Chrysene	EPA-8270	U	0.75	1	UG/L	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.76	1	UG/L	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**360**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**34**	0.46	5	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	U	0.26	1	MG/L	11/21/2020	RAL
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**6.5**	0.45	1	UG/L	12/01/2020	RAL
Barium	EPA-200.8	**58**	1.0	1	UG/L	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**46000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**28000**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**17000**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**3000**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**5700**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**23000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**6.3**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**58**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**45000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**28000**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**17000**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**3000**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**5500**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**23000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**210**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**210**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**1.6**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**4.9**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**109**	11/30/2020	DLC
Toluene-d8	EPA-8260	**97.7**	11/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	**110**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**128**	11/23/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**101**	11/23/2020	JMK
2-Fluorophenol	EPA-8270	**43.0**	11/24/2020	JMK
Phenol-d5	EPA-8270	**20.1**	11/24/2020	JMK
Nitrobenzene-d5	EPA-8270	**72.9**	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 12:48:00 PM
CLIENT SAMPLE ID	MW-103-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**69.4**	11/24/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**104**	11/24/2020	JMK
Terphenyl-d14	EPA-8270	**92.2**	11/24/2020	JMK
DCB	EPA-8082	**49.0**	12/11/2020	CAS
TCMX	EPA-8081	**63.5**	11/30/2020	JMK
DCB	EPA-8081	**61.6**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/23/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/24/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/24/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**240**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**19**	0.092	1	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	**15**	0.26	1	MG/L	11/21/2020	RAL
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**0.86**	0.45	1	UG/L	12/01/2020	RAL
Barium	EPA-200.8	**35**	1.0	1	UG/L	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**31000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**6800**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**13000**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**820**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**5100**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**17000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**0.82**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**34**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**31000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**6500**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**780**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**4900**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**140**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**140**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**2.2**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**1.3**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**109**	11/30/2020	DLC
Toluene-d8	EPA-8260	**99.1**	11/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	**111**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**120**	11/23/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**101**	11/23/2020	JMK
2-Fluorophenol	EPA-8270	**39.0**	11/24/2020	JMK
Phenol-d5	EPA-8270	**16.6**	11/24/2020	JMK
Nitrobenzene-d5	EPA-8270	**56.8**	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:20:00 PM
CLIENT SAMPLE ID	MW-102-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**66.2**	11/24/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**93.6**	11/24/2020	JMK
Terphenyl-d14	EPA-8270	**91.3**	11/24/2020	JMK
DCB	EPA-8082	**66.0**	12/11/2020	CAS
TCMX	EPA-8081	**71.0**	11/30/2020	JMK
DCB	EPA-8081	**66.0**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	**0.030**	0.020	1	UG/L	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/23/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/24/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/24/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**220**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**24**	0.46	5	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	**2.3**	0.26	1	MG/L	11/21/2020	RAL
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**3.9**	0.45	1	UG/L	12/01/2020	RAL
Barium	EPA-200.8	**43**	1.0	1	UG/L	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**27000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**22000**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**9300**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**2100**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**6300**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**12000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**3.8**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**41**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**26000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**22000**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**9200**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2100**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**6100**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**12000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**110**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**110**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**0.94**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**4.2**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**110**	11/30/2020	DLC
Toluene-d8	EPA-8260	**97.4**	11/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	**108**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**116**	11/23/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**98.4**	11/23/2020	JMK
2-Fluorophenol	EPA-8270	**42.1**	11/24/2020	JMK
Phenol-d5	EPA-8270	**19.5**	11/24/2020	JMK
Nitrobenzene-d5	EPA-8270	**71.0**	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 1:00:00 PM
CLIENT SAMPLE ID	MW-105-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**62.5**	11/24/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**99.0**	11/24/2020	JMK
Terphenyl-d14	EPA-8270	**97.2**	11/24/2020	JMK
DCB	EPA-8082	**19.0**	12/11/2020	CAS
TCMX	EPA-8081	**70.3**	11/30/2020	JMK
DCB	EPA-8081	**43.9**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	**140**	130	1	UG/L	12/02/2020	JNF
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	250	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	12/02/2020	JNF
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/23/2020	JMK
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/24/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/24/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/24/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**280**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**22**	0.46	5	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	**4.7**	0.26	1	MG/L	11/21/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS JOB#:	EV20110139
		ALS SAMPLE#:	EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**2.4**	0.45	1	UG/L	12/01/2020	RAL
Barium	EPA-200.8	**37**	1.0	1	UG/L	12/01/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**36000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**16000**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**13000**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**1600**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**5700**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**18000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**2.3**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**36**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**36000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**1600**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**5700**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**18000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**170**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**170**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**1.1**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.3**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**85.6**	12/02/2020	JNF
C25	NWTPH-DX w/ SGA	**90.7**	12/02/2020	JNF
1,2-Dichloroethane-d4	EPA-8260	**111**	11/30/2020	DLC
Toluene-d8	EPA-8260	**97.7**	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:10:00 PM
CLIENT SAMPLE ID	MW-101-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
4-Bromofluorobenzene	EPA-8260	**110**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**120**	11/23/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**95.3**	11/23/2020	JMK
2-Fluorophenol	EPA-8270	**43.4**	11/24/2020	JMK
Phenol-d5	EPA-8270	**19.8**	11/24/2020	JMK
Nitrobenzene-d5	EPA-8270	**76.0**	11/24/2020	JMK
2-Fluorobiphenyl	EPA-8270	**74.6**	11/24/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**104**	11/24/2020	JMK
Terphenyl-d14	EPA-8270	**98.4**	11/24/2020	JMK
DCB	EPA-8082	**72.0**	12/11/2020	CAS
TCMX	EPA-8081	**68.0**	11/30/2020	JMK
DCB	EPA-8081	**69.5**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	130	1	UG/L	12/02/2020	JNF
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	250	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	12/02/2020	JNF
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/23/2020	JMK
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/23/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/24/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/24/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/24/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/24/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/24/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**280**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**21**	0.46	5	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	**4.7**	0.26	1	MG/L	11/21/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**2.4**	0.45	1	UG/L	12/01/2020	RAL
Barium	EPA-200.8	**36**	1.0	1	UG/L	12/01/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**37000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**17000**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**13000**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**1600**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**5900**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**19000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**2.3**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**36**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**35000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**1600**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**5800**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**18000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**170**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**170**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**1.1**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.3**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**99.2**	12/02/2020	JNF
C25	NWTPH-DX w/ SGA	**103**	12/02/2020	JNF
1,2-Dichloroethane-d4	EPA-8260	**110**	11/30/2020	DLC
Toluene-d8	EPA-8260	**98.0**	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 8:00:00 AM
CLIENT SAMPLE ID	Dup-1-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
4-Bromofluorobenzene	EPA-8260	**110**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**111**	11/23/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**90.2**	11/23/2020	JMK
2-Fluorophenol	EPA-8270	**40.0**	11/24/2020	JMK
Phenol-d5	EPA-8270	**18.5**	11/24/2020	JMK
Nitrobenzene-d5	EPA-8270	**72.8**	11/24/2020	JMK
2-Fluorobiphenyl	EPA-8270	**70.6**	11/24/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**102**	11/24/2020	JMK
Terphenyl-d14	EPA-8270	**95.6**	11/24/2020	JMK
DCB	EPA-8082	**49.0**	12/11/2020	CAS
TCMX	EPA-8081	**59.8**	11/30/2020	JMK
DCB	EPA-8081	**66.9**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	**140**	130	1	UG/L	12/02/2020	JNF
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	250	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	12/02/2020	JNF
Vinyl Chloride	EPA-8260 SIM	**0.056**	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/26/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/26/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/26/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/26/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/26/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/26/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/26/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/26/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/26/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/11/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/11/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.011	1	UG/L	11/30/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	11/30/2020	JMK
Total Dissolved Solids	SM2540C	**290**	50	1	MG/L	11/23/2020	KLS
Chloride	EPA-300.0	**21**	0.46	5	MG/L	11/21/2020	RAL
Fluoride	EPA-300.0	U	0.16	1	MG/L	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/21/2020	RAL
Sulfate	EPA-300.0	**6.6**	0.26	1	MG/L	11/21/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	11/28/2020	RAL
Arsenic	EPA-200.8	**9.2**	0.45	1	UG/L	12/01/2020	RAL
Barium	EPA-200.8	**59**	1.0	1	UG/L	12/01/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium	EPA-200.8	**33000**	50	1	UG/L	12/01/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron	EPA-200.8	**27000**	50	1	UG/L	12/01/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium	EPA-200.8	**11000**	50	1	UG/L	12/01/2020	RAL
Manganese	EPA-200.8	**2000**	2.0	1	UG/L	12/01/2020	RAL
Potassium	EPA-200.8	**8400**	50	1	UG/L	12/01/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium	EPA-200.8	**19000**	50	1	UG/L	12/01/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**9.2**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**58**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**33000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**27000**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2000**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**8400**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**18000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**180**	15	1	MG/L	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	**180**	15	1	MG/L	12/03/2020	CAS
Ammonia as N	EPA-350.1	**6.2**	0.050	1	MG/L	12/03/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**4.1**	0.50	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**96.6**	12/02/2020	JNF
C25	NWTPH-DX w/ SGA	**97.6**	12/02/2020	JNF
1,2-Dichloroethane-d4	EPA-8260	**111**	11/30/2020	DLC
Toluene-d8	EPA-8260	**98.0**	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020 2:50:00 PM
CLIENT SAMPLE ID	MW-106-112020	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
4-Bromofluorobenzene	EPA-8260	**112**	11/30/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**120**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**78.7**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**38.7**	11/26/2020	JMK
Phenol-d5	EPA-8270	**13.4**	11/26/2020	JMK
Nitrobenzene-d5	EPA-8270	**78.6**	11/26/2020	JMK
2-Fluorobiphenyl	EPA-8270	**76.3**	11/26/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**94.7**	11/26/2020	JMK
Terphenyl-d14	EPA-8270	**94.2**	11/26/2020	JMK
DCB	EPA-8082	**48.0**	12/11/2020	CAS
TCMX	EPA-8081	**72.1**	11/30/2020	JMK
DCB	EPA-8081	**53.1**	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020
CLIENT SAMPLE ID	Trip Blanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	11/30/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	11/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	11/30/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	11/30/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110139 EV20110139-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/21/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/20/2020
CLIENT SAMPLE ID	Trip Blanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/30/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	11/30/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	11/30/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/30/2020	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**112**	11/30/2020	DLC
Toluene-d8	EPA-8260	**97.6**	11/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	**111**	11/30/2020	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110139
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-112420W - Batch 160142 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	11/29/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	11/29/2020	JNF

U - Analyte analyzed for but not detected at level above reporting limit.

MB-113020W - Batch 160228 - Water by EPA-8260 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	UG/L	0.020	11/30/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	UG/L	0.10	11/30/2020	DLC
Chloroform	EPA-8260 SIM	U	UG/L	0.29	11/30/2020	DLC
Trichloroethene	EPA-8260 SIM	U	UG/L	0.026	11/30/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	UG/L	0.17	11/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	UG/L	0.27	11/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	UG/L	0.19	11/30/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	UG/L	0.23	11/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	UG/L	0.28	11/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	UG/L	0.14	11/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	UG/L	0.38	11/30/2020	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-113020W - Batch 160228 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Acetone	EPA-8260	U	UG/L	25	11/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	0.016	11/30/2020	DLC
Methylene Chloride	EPA-8260	U	UG/L	1.0	11/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
2-Butanone	EPA-8260	U	UG/L	10	11/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Hexane	EPA-8260	U	UG/L	6.8	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/14/2021 EV20110139 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-113020W - Batch 160228 - Water by EPA-8260

2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	0.0035	11/30/2020	DLC
Benzene	EPA-8260	U	UG/L	0.011	11/30/2020	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Bromodichloromethane	EPA-8260	U	UG/L	0.16	11/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	11/30/2020	DLC
Toluene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
2-Hexanone	EPA-8260	U	UG/L	10	11/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	0.11	11/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	11/30/2020	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	11/30/2020	DLC
Styrene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Bromoform	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	0.018	11/30/2020	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	0.027	11/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	0.50	11/30/2020	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110139
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-113020W - Batch 160228 - Water by EPA-8260

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112320W - Batch 160014 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Fluorene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	UG/L	0.016	11/23/2020	JMK
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.0031	11/23/2020	JMK
Chrysene	EPA-8270 SIM	U	UG/L	0.0062	11/23/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.0091	11/23/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.015	11/23/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.0069	11/23/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.0055	11/23/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.011	11/23/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	11/23/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160283 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	UG/L	0.016	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	**0.017**	UG/L	0.0031	11/25/2020	JMK
Chrysene	EPA-8270 SIM	**0.017**	UG/L	0.0062	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112520W - Batch 160283 - Water by EPA-8270 SIM

Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.0091	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.015	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.0069	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.0055	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.011	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112320W - Batch 160015 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	UG/L	1.5	11/24/2020	JMK
Phenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Aniline	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/L	0.94	11/24/2020	JMK
2-Chlorophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzyl Alcohol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2-Methylphenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
3&4-Methylphenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Hexachloroethane	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Nitrobenzene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Isophorone	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2-Nitrophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzoic Acid	EPA-8270	U	UG/L	10	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Naphthalene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
4-Chloroaniline	EPA-8270	U	UG/L	1.9	11/24/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Hexachlorobutadiene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
1-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112320W - Batch 160015 - Water by EPA-8270

Hexachlorocyclopentadiene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	UG/L	0.90	11/24/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2-Chloronaphthalene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2-Nitroaniline	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Acenaphthylene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Dimethylphthalate	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	UG/L	1.8	11/24/2020	JMK
Acenaphthene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
3-Nitroaniline	EPA-8270	U	UG/L	5.0	11/24/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	UG/L	10	11/24/2020	JMK
4-Nitrophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Dibenzofuran	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	UG/L	0.78	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Diethylphthalate	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Fluorene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
4-Nitroaniline	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Azobenzene	EPA-8270	U	UG/L	1.6	11/24/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Hexachlorobenzene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Pentachlorophenol	EPA-8270	U	UG/L	5.0	11/24/2020	JMK
Phenanthrene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Anthracene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Carbazole	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Fluoranthene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Pyrene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Butylbenzylphthalate	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Chrysene	EPA-8270	U	UG/L	0.80	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	0.81	11/24/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/14/2021 EV20110139 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-112320W - Batch 160015 - Water by EPA-8270

Dibenz[A,H]Anthracene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	UG/L	2.0	11/24/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160204 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	UG/L	1.5	11/25/2020	JMK
Phenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Aniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/L	0.94	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Isophorone	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	UG/L	10	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Naphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	UG/L	1.9	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	UG/L	0.90	11/25/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/14/2021 EV20110139 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-112520W - Batch 160204 - Water by EPA-8270

2-Nitroaniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	UG/L	1.8	11/25/2020	JMK
Acenaphthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	UG/L	5.0	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	UG/L	10	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	UG/L	0.78	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Fluorene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Azobenzene	EPA-8270	U	UG/L	1.6	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	UG/L	5.0	11/25/2020	JMK
Phenanthrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Carbazole	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Chrysene	EPA-8270	U	UG/L	0.80	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	0.81	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110139
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MBLK-R374761 - Batch R374761 - Water by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	UG/L	0.015	12/11/2020	CAS
PCB-1221	EPA-8082	U	UG/L	0.030	12/11/2020	CAS
PCB-1232	EPA-8082	U	UG/L	0.015	12/11/2020	CAS
PCB-1242	EPA-8082	U	UG/L	0.015	12/11/2020	CAS
PCB-1248	EPA-8082	U	UG/L	0.015	12/11/2020	CAS
PCB-1254	EPA-8082	U	UG/L	0.015	12/11/2020	CAS
PCB-1260	EPA-8082	U	UG/L	0.015	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112420W - Batch 159074 - Water by EPA-8081

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
A-BHC	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
G-BHC	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
B-BHC	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Heptachlor	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
D-BHC	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Aldrin	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Heptachlor Epoxide	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Chlordane	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Endosulfan I	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
4,4'-DDE	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Dieldrin	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Endrin	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
4,4'-DDD	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Endosulfan II	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
4,4'-DDT	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Endrin Aldehyde	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Endosulfan Sulfate	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Methoxychlor	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Hexachlorobenzene	EPA-8081	U	UG/L	0.010	11/30/2020	JMK
Toxaphene	EPA-8081	U	UG/L	0.50	11/30/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R373252 - Batch R373252 - Water by SM2540C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	U	MG/L	50	11/23/2020	KLS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MBLK-R373252 - Batch R373252 - Water by SM2540C

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374230 - Batch R374230 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.092	11/21/2020	RAL
Fluoride	EPA-300.0	U	MG/L	0.16	11/21/2020	RAL
Nitrate as N	EPA-300.0	U	MG/L	0.034	11/21/2020	RAL
Nitrite as N	EPA-300.0	U	MG/L	0.043	11/21/2020	RAL
Sulfate	EPA-300.0	U	MG/L	0.26	11/21/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R373722 - Batch R373722 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.11	11/28/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R373722 - Batch R373722 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.11	11/28/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-113020W - Batch 160342 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	0.15	12/01/2020	RAL
Barium	EPA-200.8	U	UG/L	1.0	12/01/2020	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	12/01/2020	RAL
Calcium	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Chromium	EPA-200.8	U	UG/L	2.0	12/01/2020	RAL
Iron	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Lead	EPA-200.8	U	UG/L	0.11	12/01/2020	RAL
Magnesium	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Manganese	EPA-200.8	U	UG/L	2.0	12/01/2020	RAL
Potassium	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Selenium	EPA-200.8	U	UG/L	4.0	12/01/2020	RAL
Silver	EPA-200.8	U	UG/L	0.050	12/01/2020	RAL
Sodium	EPA-200.8	U	UG/L	50	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-113020W - Batch 160342 - Water by EPA-200.8

U - Analyte analyzed for but not detected at level above reporting limit.

MB-113020W - Batch 160345 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	0.15	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	0.11	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	UG/L	4.0	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	UG/L	0.050	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374767 - Batch R374767 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	15	12/03/2020	CAS
Bicarbonate as CaCO3	SM2320B	U	MG/L	15	12/03/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374783 - Batch R374783 - Water by EPA-350.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Ammonia as N	EPA-350.1	U	MG/L	0.050	12/03/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374789 - Batch R374789 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	12/04/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 160142 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**92.7**			67	125.2	11/29/2020	JNF
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**97.3**	**5**		67	125.2	11/29/2020	JNF

ALS Test Batch ID: 160228 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride - BS	EPA-8260 SIM	**126**			50	150	11/30/2020	DLC
Vinyl Chloride - BSD	EPA-8260 SIM	**116**	**8**		50	150	11/30/2020	DLC
Carbon Tetrachloride - BS	EPA-8260 SIM	**119**			50	150	11/30/2020	DLC
Carbon Tetrachloride - BSD	EPA-8260 SIM	**111**	**7**		50	150	11/30/2020	DLC
Chloroform - BS	EPA-8260 SIM	**129**			50	150	11/30/2020	DLC
Chloroform - BSD	EPA-8260 SIM	**122**	**6**		50	150	11/30/2020	DLC
Trichloroethene - BS	EPA-8260 SIM	**131**			74.4	141	11/30/2020	DLC
Trichloroethene - BSD	EPA-8260 SIM	**126**	**4**		74.4	141	11/30/2020	DLC
1,2-Dichloropropane - BS	EPA-8260 SIM	**110**			50	150	11/30/2020	DLC
1,2-Dichloropropane - BSD	EPA-8260 SIM	**105**	**5**		50	150	11/30/2020	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260 SIM	**114**			50	150	11/30/2020	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260 SIM	**111**	**2**		50	150	11/30/2020	DLC
1,1,2-Trichloroethane - BS	EPA-8260 SIM	**106**			50	150	11/30/2020	DLC
1,1,2-Trichloroethane - BSD	EPA-8260 SIM	**104**	**2**		50	150	11/30/2020	DLC
Dibromochloromethane - BS	EPA-8260 SIM	**93.7**			50	150	11/30/2020	DLC
Dibromochloromethane - BSD	EPA-8260 SIM	**91.3**	**3**		50	150	11/30/2020	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260 SIM	**105**			50	150	11/30/2020	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260 SIM	**100**	**4**		50	150	11/30/2020	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260 SIM	**92.0**			50	150	11/30/2020	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260 SIM	**91.0**	**1**		50	150	11/30/2020	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260 SIM	**103**			50	150	11/30/2020	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260 SIM	**104**	**1**		50	150	11/30/2020	DLC

SQ1 - Spike outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.

ALS Test Batch ID: 160228 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**136**			50	150	11/30/2020	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**126**	**8**		50	150	11/30/2020	DLC
Chloromethane - BS	EPA-8260	**120**			50	150	11/30/2020	DLC
Chloromethane - BSD	EPA-8260	**111**	**8**		50	150	11/30/2020	DLC
Bromomethane - BS	EPA-8260	**120**			50	150	11/30/2020	DLC
Bromomethane - BSD	EPA-8260	**113**	**6**		50	150	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloroethane - BS	EPA-8260	**111**			50	150	11/30/2020	DLC
Chloroethane - BSD	EPA-8260	**103**	**7**		50	150	11/30/2020	DLC
Trichlorofluoromethane - BS	EPA-8260	**127**			50	150	11/30/2020	DLC
Trichlorofluoromethane - BSD	EPA-8260	**118**	**7**		50	150	11/30/2020	DLC
Carbon Disulfide - BS	EPA-8260	**113**			50	150	11/30/2020	DLC
Carbon Disulfide - BSD	EPA-8260	**105**	**7**		50	150	11/30/2020	DLC
Acetone - BS	EPA-8260	**256**		SQ1	50	150	11/30/2020	DLC
Acetone - BSD	EPA-8260	**247**	**4**	SQ1	50	150	11/30/2020	DLC
1,1-Dichloroethene - BS	EPA-8260	**114**			72.5	136	11/30/2020	DLC
1,1-Dichloroethene - BSD	EPA-8260	**106**	**7**		72.5	136	11/30/2020	DLC
Methylene Chloride - BS	EPA-8260	**97.3**			50	150	11/30/2020	DLC
Methylene Chloride - BSD	EPA-8260	**93.7**	**4**		50	150	11/30/2020	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**108**			50	150	11/30/2020	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**105**	**3**		50	150	11/30/2020	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**110**			50	150	11/30/2020	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**103**	**7**		50	150	11/30/2020	DLC
1,1-Dichloroethane - BS	EPA-8260	**109**			50	150	11/30/2020	DLC
1,1-Dichloroethane - BSD	EPA-8260	**102**	**6**		50	150	11/30/2020	DLC
2-Butanone - BS	EPA-8260	**182**		SQ1	50	150	11/30/2020	DLC
2-Butanone - BSD	EPA-8260	**178**	**3**	SQ1	50	150	11/30/2020	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**108**			50	150	11/30/2020	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**102**	**6**		50	150	11/30/2020	DLC
Hexane - BS	EPA-8260	**127**			50	150	11/30/2020	DLC
Hexane - BSD	EPA-8260	**116**	**9**		50	150	11/30/2020	DLC
2,2-Dichloropropane - BS	EPA-8260	**132**			50	150	11/30/2020	DLC
2,2-Dichloropropane - BSD	EPA-8260	**121**	**8**		50	150	11/30/2020	DLC
Bromochloromethane - BS	EPA-8260	**108**			50	150	11/30/2020	DLC
Bromochloromethane - BSD	EPA-8260	**103**	**5**		50	150	11/30/2020	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**115**			50	150	11/30/2020	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**108**	**7**		50	150	11/30/2020	DLC
1,1-Dichloropropene - BS	EPA-8260	**117**			50	150	11/30/2020	DLC
1,1-Dichloropropene - BSD	EPA-8260	**110**	**7**		50	150	11/30/2020	DLC
1,2-Dichloroethane - BS	EPA-8260	**110**			50	150	11/30/2020	DLC
1,2-Dichloroethane - BSD	EPA-8260	**107**	**3**		50	150	11/30/2020	DLC
Benzene - BS	EPA-8260	**119**			74.7	143	11/30/2020	DLC
Benzene - BSD	EPA-8260	**113**	**5**		74.7	143	11/30/2020	DLC
Dibromomethane - BS	EPA-8260	**110**			50	150	11/30/2020	DLC
Dibromomethane - BSD	EPA-8260	**106**	**3**		50	150	11/30/2020	DLC
Bromodichloromethane - BS	EPA-8260	**104**			50	150	11/30/2020	DLC
Bromodichloromethane - BSD	EPA-8260	**99.7**	**4**		50	150	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Methyl-2-Pentanone - BS	EPA-8260	**114**			50	150	11/30/2020	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**112**	**2**		50	150	11/30/2020	DLC
Toluene - BS	EPA-8260	**111**			71.7	139	11/30/2020	DLC
Toluene - BSD	EPA-8260	**105**	**6**		71.7	139	11/30/2020	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**117**			50	150	11/30/2020	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**113**	**4**		50	150	11/30/2020	DLC
2-Hexanone - BS	EPA-8260	**153**		SQ1	50	150	11/30/2020	DLC
2-Hexanone - BSD	EPA-8260	**153**	**0**	SQ1	50	150	11/30/2020	DLC
1,3-Dichloropropane - BS	EPA-8260	**106**			50	150	11/30/2020	DLC
1,3-Dichloropropane - BSD	EPA-8260	**104**	**2**		50	150	11/30/2020	DLC
Tetrachloroethylene - BS	EPA-8260	**199**		SQ1	50	150	11/30/2020	DLC
Tetrachloroethylene - BSD	EPA-8260	**189**	**5**	SQ1	50	150	11/30/2020	DLC
1,2-Dibromoethane - BS	EPA-8260	**109**			50	150	11/30/2020	DLC
1,2-Dibromoethane - BSD	EPA-8260	**107**	**2**		50	150	11/30/2020	DLC
Chlorobenzene - BS	EPA-8260	**105**			73	131	11/30/2020	DLC
Chlorobenzene - BSD	EPA-8260	**101**	**4**		73	131	11/30/2020	DLC
Ethylbenzene - BS	EPA-8260	**105**			50	150	11/30/2020	DLC
Ethylbenzene - BSD	EPA-8260	**100**	**5**		50	150	11/30/2020	DLC
m,p-Xylene - BS	EPA-8260	**114**			50	150	11/30/2020	DLC
m,p-Xylene - BSD	EPA-8260	**108**	**5**		50	150	11/30/2020	DLC
Styrene - BS	EPA-8260	**108**			50	150	11/30/2020	DLC
Styrene - BSD	EPA-8260	**104**	**4**		50	150	11/30/2020	DLC
o-Xylene - BS	EPA-8260	**112**			50	150	11/30/2020	DLC
o-Xylene - BSD	EPA-8260	**107**	**4**		50	150	11/30/2020	DLC
Bromoform - BS	EPA-8260	**99.8**			50	150	11/30/2020	DLC
Bromoform - BSD	EPA-8260	**98.0**	**2**		50	150	11/30/2020	DLC
Isopropylbenzene - BS	EPA-8260	**108**			50	150	11/30/2020	DLC
Isopropylbenzene - BSD	EPA-8260	**103**	**5**		50	150	11/30/2020	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**99.0**			50	150	11/30/2020	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**101**	**2**		50	150	11/30/2020	DLC
Bromobenzene - BS	EPA-8260	**102**			50	150	11/30/2020	DLC
Bromobenzene - BSD	EPA-8260	**100**	**2**		50	150	11/30/2020	DLC
N-Propyl Benzene - BS	EPA-8260	**111**			50	150	11/30/2020	DLC
N-Propyl Benzene - BSD	EPA-8260	**108**	**2**		50	150	11/30/2020	DLC
2-Chlorotoluene - BS	EPA-8260	**109**			50	150	11/30/2020	DLC
2-Chlorotoluene - BSD	EPA-8260	**107**	**2**		50	150	11/30/2020	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**111**			50	150	11/30/2020	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**108**	**3**		50	150	11/30/2020	DLC
4-Chlorotoluene - BS	EPA-8260	**110**			50	150	11/30/2020	DLC
4-Chlorotoluene - BSD	EPA-8260	**108**	**2**		50	150	11/30/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
T-Butyl Benzene - BS	EPA-8260	**101**			50	150	11/30/2020	DLC
T-Butyl Benzene - BSD	EPA-8260	**97.4**	**4**		50	150	11/30/2020	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**113**			50	150	11/30/2020	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**111**	**1**		50	150	11/30/2020	DLC
S-Butyl Benzene - BS	EPA-8260	**109**			50	150	11/30/2020	DLC
S-Butyl Benzene - BSD	EPA-8260	**106**	**3**		50	150	11/30/2020	DLC
P-Isopropyltoluene - BS	EPA-8260	**109**			50	150	11/30/2020	DLC
P-Isopropyltoluene - BSD	EPA-8260	**105**	**3**		50	150	11/30/2020	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**106**			50	150	11/30/2020	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**105**	**1**		50	150	11/30/2020	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**106**			50	150	11/30/2020	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**105**	**1**		50	150	11/30/2020	DLC
N-Butylbenzene - BS	EPA-8260	**117**			50	150	11/30/2020	DLC
N-Butylbenzene - BSD	EPA-8260	**115**	**2**		50	150	11/30/2020	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**105**			50	150	11/30/2020	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**104**	**1**		50	150	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**106**			50	150	11/30/2020	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**108**	**2**		50	150	11/30/2020	DLC
Hexachlorobutadiene - BS	EPA-8260	**106**			50	150	11/30/2020	DLC
Hexachlorobutadiene - BSD	EPA-8260	**102**	**4**		50	150	11/30/2020	DLC
Naphthalene - BS	EPA-8260	**97.0**			50	150	11/30/2020	DLC
Naphthalene - BSD	EPA-8260	**106**	**9**		50	150	11/30/2020	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**100**			50	150	11/30/2020	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**103**	**2**		50	150	11/30/2020	DLC

SQ1 - Spike outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.

ALS Test Batch ID: 160015 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**37.5**			20	150	11/24/2020	JMK
Pyridine - BSD	EPA-8270	**38.5**	**2**		20	150	11/24/2020	JMK
N-Nitrosodimethylamine - BS	EPA-8270	**72.8**			20	150	11/24/2020	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	**72.4**	**1**		20	150	11/24/2020	JMK
Phenol - BS	EPA-8270	**24.0**			5	84	11/24/2020	JMK
Phenol - BSD	EPA-8270	**26.9**	**11**		5	84	11/24/2020	JMK
Aniline - BS	EPA-8270	**28.1**			20	150	11/24/2020	JMK
Aniline - BSD	EPA-8270	**26.1**	**8**		20	150	11/24/2020	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**90.4**			20	150	11/24/2020	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**90.1**	**0**		20	150	11/24/2020	JMK
2-Chlorophenol - BS	EPA-8270	**79.4**			45	111	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Chlorophenol - BSD	EPA-8270	**77.1**	**3**		45	111	11/24/2020	JMK
1,3-Dichlorobenzene - BS	EPA-8270	**63.7**			20	150	11/24/2020	JMK
1,3-Dichlorobenzene - BSD	EPA-8270	**62.1**	**2**		20	150	11/24/2020	JMK
1,4-Dichlorobenzene - BS	EPA-8270	**66.2**			27.1	114	11/24/2020	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	**65.8**	**1**		27.1	114	11/24/2020	JMK
Benzyl Alcohol - BS	EPA-8270	**62.8**			20	150	11/24/2020	JMK
Benzyl Alcohol - BSD	EPA-8270	**59.5**	**5**		20	150	11/24/2020	JMK
1,2-Dichlorobenzene - BS	EPA-8270	**68.6**			20	150	11/24/2020	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	**66.8**	**3**		20	150	11/24/2020	JMK
2-Methylphenol - BS	EPA-8270	**66.1**			20	150	11/24/2020	JMK
2-Methylphenol - BSD	EPA-8270	**63.8**	**4**		20	150	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**91.7**			20	150	11/24/2020	JMK
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**88.7**	**3**		20	150	11/24/2020	JMK
3&4-Methylphenol - BS	EPA-8270	**57.8**			20	150	11/24/2020	JMK
3&4-Methylphenol - BSD	EPA-8270	**55.3**	**4**		20	150	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**88.5**			42.2	119	11/24/2020	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**77.7**	**13**		42.2	119	11/24/2020	JMK
Hexachloroethane - BS	EPA-8270	**66.8**			20	150	11/24/2020	JMK
Hexachloroethane - BSD	EPA-8270	**67.3**	**1**		20	150	11/24/2020	JMK
Nitrobenzene - BS	EPA-8270	**100**			20	150	11/24/2020	JMK
Nitrobenzene - BSD	EPA-8270	**98.4**	**2**		20	150	11/24/2020	JMK
Isophorone - BS	EPA-8270	**83.4**			20	150	11/24/2020	JMK
Isophorone - BSD	EPA-8270	**86.2**	**3**		20	150	11/24/2020	JMK
2-Nitrophenol - BS	EPA-8270	**99.0**			20	150	11/24/2020	JMK
2-Nitrophenol - BSD	EPA-8270	**95.7**	**3**		20	150	11/24/2020	JMK
2,4-Dimethylphenol - BS	EPA-8270	**81.3**			20	150	11/24/2020	JMK
2,4-Dimethylphenol - BSD	EPA-8270	**77.8**	**4**		20	150	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**86.6**			20	150	11/24/2020	JMK
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**84.7**	**2**		20	150	11/24/2020	JMK
2,4-Dichlorophenol - BS	EPA-8270	**86.4**			20	150	11/24/2020	JMK
2,4-Dichlorophenol - BSD	EPA-8270	**84.5**	**2**		20	150	11/24/2020	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	**71.6**			29.4	120	11/24/2020	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	**70.1**	**2**		29.4	120	11/24/2020	JMK
Naphthalene - BS	EPA-8270	**81.6**			20	150	11/24/2020	JMK
Naphthalene - BSD	EPA-8270	**80.0**	**2**		20	150	11/24/2020	JMK
4-Chloroaniline - BS	EPA-8270	**56.0**			20	150	11/24/2020	JMK
4-Chloroaniline - BSD	EPA-8270	**59.6**	**6**		20	150	11/24/2020	JMK
Hexachlorobutadiene - BS	EPA-8270	**73.9**			20	150	11/24/2020	JMK
Hexachlorobutadiene - BSD	EPA-8270	**72.5**	**2**		20	150	11/24/2020	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	**91.9**			44	113	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Chloro-3-Methylphenol - BSD	EPA-8270	**90.1**	**2**		44	113	11/24/2020	JMK
2-Methylnaphthalene - BS	EPA-8270	**79.9**			20	150	11/24/2020	JMK
2-Methylnaphthalene - BSD	EPA-8270	**78.2**	**2**		20	150	11/24/2020	JMK
1-Methylnaphthalene - BS	EPA-8270	**78.7**			20	150	11/24/2020	JMK
1-Methylnaphthalene - BSD	EPA-8270	**77.2**	**2**		20	150	11/24/2020	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	**58.3**			20	150	11/24/2020	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	**54.8**	**6**		20	150	11/24/2020	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	**91.1**			20	150	11/24/2020	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	**90.5**	**1**		20	150	11/24/2020	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	**91.0**			20	150	11/24/2020	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	**91.2**	**0**		20	150	11/24/2020	JMK
2-Chloronaphthalene - BS	EPA-8270	**90.7**			20	150	11/24/2020	JMK
2-Chloronaphthalene - BSD	EPA-8270	**89.0**	**2**		20	150	11/24/2020	JMK
2-Nitroaniline - BS	EPA-8270	**103**			20	150	11/24/2020	JMK
2-Nitroaniline - BSD	EPA-8270	**106**	**3**		20	150	11/24/2020	JMK
Acenaphthylene - BS	EPA-8270	**78.9**			20	150	11/24/2020	JMK
Acenaphthylene - BSD	EPA-8270	**79.0**	**0**		20	150	11/24/2020	JMK
Dimethylphthalate - BS	EPA-8270	**101**			20	150	11/24/2020	JMK
Dimethylphthalate - BSD	EPA-8270	**102**	**1**		20	150	11/24/2020	JMK
2,6-Dinitrotoluene - BS	EPA-8270	**96.8**			20	150	11/24/2020	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	**97.8**	**1**		20	150	11/24/2020	JMK
Acenaphthene - BS	EPA-8270	**87.8**			41	107	11/24/2020	JMK
Acenaphthene - BSD	EPA-8270	**87.0**	**1**		41	107	11/24/2020	JMK
3-Nitroaniline - BS	EPA-8270	**36.1**			20	150	11/24/2020	JMK
3-Nitroaniline - BSD	EPA-8270	**43.9**	**19**		20	150	11/24/2020	JMK
2,4-Dinitrophenol - BS	EPA-8270	**97.4**			20	150	11/24/2020	JMK
2,4-Dinitrophenol - BSD	EPA-8270	**98.2**	**1**		20	150	11/24/2020	JMK
4-Nitrophenol - BS	EPA-8270	**16.3**			5	63	11/24/2020	JMK
4-Nitrophenol - BSD	EPA-8270	**15.4**	**6**		5	63	11/24/2020	JMK
Dibenzofuran - BS	EPA-8270	**94.0**			20	150	11/24/2020	JMK
Dibenzofuran - BSD	EPA-8270	**95.1**	**1**		20	150	11/24/2020	JMK
2,4-Dinitrotoluene - BS	EPA-8270	**93.4**			53.1	136	11/24/2020	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	**93.8**	**0**		53.1	136	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**86.3**			20	150	11/24/2020	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**86.4**	**0**		20	150	11/24/2020	JMK
Diethylphthalate - BS	EPA-8270	**105**			20	150	11/24/2020	JMK
Diethylphthalate - BSD	EPA-8270	**106**	**2**		20	150	11/24/2020	JMK
Fluorene - BS	EPA-8270	**97.9**			20	150	11/24/2020	JMK
Fluorene - BSD	EPA-8270	**98.3**	**0**		20	150	11/24/2020	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	**95.9**			20	150	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**93.4**	**3**		20	150	11/24/2020	JMK
4-Nitroaniline - BS	EPA-8270	**94.3**			20	150	11/24/2020	JMK
4-Nitroaniline - BSD	EPA-8270	**96.6**	**2**		20	150	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**106**			20	150	11/24/2020	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**110**	**4**		20	150	11/24/2020	JMK
Azobenzene - BS	EPA-8270	**112**			20	150	11/24/2020	JMK
Azobenzene - BSD	EPA-8270	**115**	**2**		20	150	11/24/2020	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	**102**			20	150	11/24/2020	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	**103**	**2**		20	150	11/24/2020	JMK
Hexachlorobenzene - BS	EPA-8270	**103**			20	150	11/24/2020	JMK
Hexachlorobenzene - BSD	EPA-8270	**107**	**3**		20	150	11/24/2020	JMK
Pentachlorophenol - BS	EPA-8270	**77.7**			33	124	11/24/2020	JMK
Pentachlorophenol - BSD	EPA-8270	**78.6**	**1**		33	124	11/24/2020	JMK
Phenanthrene - BS	EPA-8270	**94.7**			20	150	11/24/2020	JMK
Phenanthrene - BSD	EPA-8270	**96.4**	**2**		20	150	11/24/2020	JMK
Anthracene - BS	EPA-8270	**93.2**			20	150	11/24/2020	JMK
Anthracene - BSD	EPA-8270	**95.4**	**2**		20	150	11/24/2020	JMK
Carbazole - BS	EPA-8270	**108**			20	150	11/24/2020	JMK
Carbazole - BSD	EPA-8270	**109**	**1**		20	150	11/24/2020	JMK
Di-N-Butylphthalate - BS	EPA-8270	**94.1**			20	150	11/24/2020	JMK
Di-N-Butylphthalate - BSD	EPA-8270	**98.1**	**4**		20	150	11/24/2020	JMK
Fluoranthene - BS	EPA-8270	**93.8**			20	150	11/24/2020	JMK
Fluoranthene - BSD	EPA-8270	**94.6**	**1**		20	150	11/24/2020	JMK
Pyrene - BS	EPA-8270	**83.9**			18	136	11/24/2020	JMK
Pyrene - BSD	EPA-8270	**87.5**	**4**		18	136	11/24/2020	JMK
Butylbenzylphthalate - BS	EPA-8270	**71.4**			20	150	11/24/2020	JMK
Butylbenzylphthalate - BSD	EPA-8270	**74.9**	**5**		20	150	11/24/2020	JMK
Benzo[A]Anthracene - BS	EPA-8270	**87.1**			20	150	11/24/2020	JMK
Benzo[A]Anthracene - BSD	EPA-8270	**88.8**	**2**		20	150	11/24/2020	JMK
Chrysene - BS	EPA-8270	**88.0**			20	150	11/24/2020	JMK
Chrysene - BSD	EPA-8270	**90.0**	**2**		20	150	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**77.1**			20	150	11/24/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**80.1**	**4**		20	150	11/24/2020	JMK
Di-N-Octylphthalate - BS	EPA-8270	**80.1**			20	150	11/24/2020	JMK
Di-N-Octylphthalate - BSD	EPA-8270	**81.3**	**1**		20	150	11/24/2020	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	**85.9**			20	150	11/24/2020	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	**84.1**	**2**		20	150	11/24/2020	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	**93.2**			20	150	11/24/2020	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	**100**	**8**		20	150	11/24/2020	JMK
Benzo[A]Pyrene - BS	EPA-8270	**90.0**			20	150	11/24/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Pyrene - BSD	EPA-8270	**91.9**	**2**		20	150	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**101**			20	150	11/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**102**	**1**		20	150	11/24/2020	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	**102**			20	150	11/24/2020	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	**104**	**1**		20	150	11/24/2020	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	**102**			20	150	11/24/2020	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	**105**	**2**		20	150	11/24/2020	JMK

ALS Test Batch ID: 160204 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**40.3**			20	150	11/25/2020	JMK
Pyridine - BSD	EPA-8270	**39.7**	**1**		20	150	11/25/2020	JMK
N-Nitrosodimethylamine - BS	EPA-8270	**55.2**			20	150	11/25/2020	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	**58.7**	**6**		20	150	11/25/2020	JMK
Phenol - BS	EPA-8270	**20.6**			5	84	11/25/2020	JMK
Phenol - BSD	EPA-8270	**22.9**	**11**		5	84	11/25/2020	JMK
Aniline - BS	EPA-8270	**24.7**			20	150	11/25/2020	JMK
Aniline - BSD	EPA-8270	**27.9**	**12**		20	150	11/25/2020	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**87.5**			20	150	11/25/2020	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**95.7**	**9**		20	150	11/25/2020	JMK
2-Chlorophenol - BS	EPA-8270	**56.6**			45	111	11/25/2020	JMK
2-Chlorophenol - BSD	EPA-8270	**75.6**	**29**	SR1	45	111	11/25/2020	JMK
1,3-Dichlorobenzene - BS	EPA-8270	**42.6**			20	150	11/25/2020	JMK
1,3-Dichlorobenzene - BSD	EPA-8270	**58.3**	**31**	SR1	20	150	11/25/2020	JMK
1,4-Dichlorobenzene - BS	EPA-8270	**45.9**			27.1	114	11/25/2020	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	**59.9**	**26**	SR1	27.1	114	11/25/2020	JMK
Benzyl Alcohol - BS	EPA-8270	**47.8**			20	150	11/25/2020	JMK
Benzyl Alcohol - BSD	EPA-8270	**65.1**	**31**	SR1	20	150	11/25/2020	JMK
1,2-Dichlorobenzene - BS	EPA-8270	**46.8**			20	150	11/25/2020	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	**61.4**	**27**		20	150	11/25/2020	JMK
2-Methylphenol - BS	EPA-8270	**49.6**			20	150	11/25/2020	JMK
2-Methylphenol - BSD	EPA-8270	**64.1**	**25**		20	150	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**79.8**			20	150	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**102**	**24**		20	150	11/25/2020	JMK
3&4-Methylphenol - BS	EPA-8270	**42.0**			20	150	11/25/2020	JMK
3&4-Methylphenol - BSD	EPA-8270	**55.4**	**27**		20	150	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**59.8**			42.2	119	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**85.8**	**36**	SR1	42.2	119	11/25/2020	JMK
Hexachloroethane - BS	EPA-8270	**53.3**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Hexachloroethane - BSD	EPA-8270	**70.2**	**27**		20	150	11/25/2020	JMK
Nitrobenzene - BS	EPA-8270	**77.6**			20	150	11/25/2020	JMK
Nitrobenzene - BSD	EPA-8270	**100**	**26**		20	150	11/25/2020	JMK
Isophorone - BS	EPA-8270	**64.2**			20	150	11/25/2020	JMK
Isophorone - BSD	EPA-8270	**82.7**	**25**		20	150	11/25/2020	JMK
2-Nitrophenol - BS	EPA-8270	**73.5**			20	150	11/25/2020	JMK
2-Nitrophenol - BSD	EPA-8270	**94.6**	**25**		20	150	11/25/2020	JMK
2,4-Dimethylphenol - BS	EPA-8270	**57.7**			20	150	11/25/2020	JMK
2,4-Dimethylphenol - BSD	EPA-8270	**73.6**	**24**		20	150	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**64.4**			20	150	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**84.2**	**27**		20	150	11/25/2020	JMK
2,4-Dichlorophenol - BS	EPA-8270	**61.4**			20	150	11/25/2020	JMK
2,4-Dichlorophenol - BSD	EPA-8270	**81.9**	**29**		20	150	11/25/2020	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	**48.3**			29.4	120	11/25/2020	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	**63.1**	**27**	SR1	29.4	120	11/25/2020	JMK
Naphthalene - BS	EPA-8270	**56.4**			20	150	11/25/2020	JMK
Naphthalene - BSD	EPA-8270	**72.3**	**25**		20	150	11/25/2020	JMK
4-Chloroaniline - BS	EPA-8270	**38.5**			20	150	11/25/2020	JMK
4-Chloroaniline - BSD	EPA-8270	**60.6**	**45**	SR1	20	150	11/25/2020	JMK
Hexachlorobutadiene - BS	EPA-8270	**52.1**			20	150	11/25/2020	JMK
Hexachlorobutadiene - BSD	EPA-8270	**67.7**	**26**		20	150	11/25/2020	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	**66.6**			44	113	11/25/2020	JMK
4-Chloro-3-Methylphenol - BSD	EPA-8270	**90.1**	**30**	SR1	44	113	11/25/2020	JMK
2-Methylnaphthalene - BS	EPA-8270	**55.2**			20	150	11/25/2020	JMK
2-Methylnaphthalene - BSD	EPA-8270	**72.1**	**27**		20	150	11/25/2020	JMK
1-Methylnaphthalene - BS	EPA-8270	**54.8**			20	150	11/25/2020	JMK
1-Methylnaphthalene - BSD	EPA-8270	**72.4**	**28**		20	150	11/25/2020	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	**34.4**			20	150	11/25/2020	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	**53.2**	**43**	SR1	20	150	11/25/2020	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	**65.4**			20	150	11/25/2020	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	**86.1**	**27**		20	150	11/25/2020	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	**68.5**			20	150	11/25/2020	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	**85.3**	**22**		20	150	11/25/2020	JMK
2-Chloronaphthalene - BS	EPA-8270	**63.3**			20	150	11/25/2020	JMK
2-Chloronaphthalene - BSD	EPA-8270	**78.7**	**22**		20	150	11/25/2020	JMK
2-Nitroaniline - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
2-Nitroaniline - BSD	EPA-8270	**107**	**26**		20	150	11/25/2020	JMK
Acenaphthylene - BS	EPA-8270	**56.8**			20	150	11/25/2020	JMK
Acenaphthylene - BSD	EPA-8270	**72.4**	**24**		20	150	11/25/2020	JMK
Dimethylphthalate - BS	EPA-8270	**79.2**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dimethylphthalate - BSD	EPA-8270	**97.7**	**21**		20	150	11/25/2020	JMK
2,6-Dinitrotoluene - BS	EPA-8270	**75.1**			20	150	11/25/2020	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	**92.5**	**21**		20	150	11/25/2020	JMK
Acenaphthene - BS	EPA-8270	**64.5**			41	107	11/25/2020	JMK
Acenaphthene - BSD	EPA-8270	**81.8**	**24**	SR1	41	107	11/25/2020	JMK
3-Nitroaniline - BS	EPA-8270	**30.8**			20	150	11/25/2020	JMK
3-Nitroaniline - BSD	EPA-8270	**60.4**	**65**	SR1	20	150	11/25/2020	JMK
2,4-Dinitrophenol - BS	EPA-8270	**20.1**			20	150	11/25/2020	JMK
2,4-Dinitrophenol - BSD	EPA-8270	**98.8**	**132**	SR1	20	150	11/25/2020	JMK
4-Nitrophenol - BS	EPA-8270	**8.22**			5	63	11/25/2020	JMK
4-Nitrophenol - BSD	EPA-8270	**14.8**	**57**	SR1	5	63	11/25/2020	JMK
Dibenzofuran - BS	EPA-8270	**69.8**			20	150	11/25/2020	JMK
Dibenzofuran - BSD	EPA-8270	**88.3**	**23**		20	150	11/25/2020	JMK
2,4-Dinitrotoluene - BS	EPA-8270	**71.5**			53.1	136	11/25/2020	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	**91.6**	**25**	SR1	53.1	136	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**64.0**			20	150	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**85.9**	**29**		20	150	11/25/2020	JMK
Diethylphthalate - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
Diethylphthalate - BSD	EPA-8270	**101**	**20**		20	150	11/25/2020	JMK
Fluorene - BS	EPA-8270	**73.0**			20	150	11/25/2020	JMK
Fluorene - BSD	EPA-8270	**92.0**	**23**		20	150	11/25/2020	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	**71.4**			20	150	11/25/2020	JMK
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**90.4**	**24**		20	150	11/25/2020	JMK
4-Nitroaniline - BS	EPA-8270	**56.4**			20	150	11/25/2020	JMK
4-Nitroaniline - BSD	EPA-8270	**77.6**	**32**	SR1	20	150	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**74.5**			20	150	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**108**	**37**	SR1	20	150	11/25/2020	JMK
Azobenzene - BS	EPA-8270	**91.6**			20	150	11/25/2020	JMK
Azobenzene - BSD	EPA-8270	**113**	**21**		20	150	11/25/2020	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	**79.0**			20	150	11/25/2020	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	**98.5**	**22**		20	150	11/25/2020	JMK
Hexachlorobenzene - BS	EPA-8270	**78.7**			20	150	11/25/2020	JMK
Hexachlorobenzene - BSD	EPA-8270	**97.9**	**22**		20	150	11/25/2020	JMK
Pentachlorophenol - BS	EPA-8270	**57.8**			33	124	11/25/2020	JMK
Pentachlorophenol - BSD	EPA-8270	**77.1**	**29**		33	124	11/25/2020	JMK
Phenanthrene - BS	EPA-8270	**71.0**			20	150	11/25/2020	JMK
Phenanthrene - BSD	EPA-8270	**90.8**	**24**		20	150	11/25/2020	JMK
Anthracene - BS	EPA-8270	**68.3**			20	150	11/25/2020	JMK
Anthracene - BSD	EPA-8270	**87.5**	**25**		20	150	11/25/2020	JMK
Carbazole - BS	EPA-8270	**73.5**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Carbazole - BSD	EPA-8270	**99.3**	**30**		20	150	11/25/2020	JMK
Di-N-Butylphthalate - BS	EPA-8270	**71.5**			20	150	11/25/2020	JMK
Di-N-Butylphthalate - BSD	EPA-8270	**90.5**	**23**		20	150	11/25/2020	JMK
Fluoranthene - BS	EPA-8270	**69.9**			20	150	11/25/2020	JMK
Fluoranthene - BSD	EPA-8270	**89.1**	**24**		20	150	11/25/2020	JMK
Pyrene - BS	EPA-8270	**62.6**			18	136	11/25/2020	JMK
Pyrene - BSD	EPA-8270	**77.0**	**21**	SR1	18	136	11/25/2020	JMK
Butylbenzylphthalate - BS	EPA-8270	**59.8**			20	150	11/25/2020	JMK
Butylbenzylphthalate - BSD	EPA-8270	**76.0**	**24**		20	150	11/25/2020	JMK
Benzo[A]Anthracene - BS	EPA-8270	**64.5**			20	150	11/25/2020	JMK
Benzo[A]Anthracene - BSD	EPA-8270	**83.3**	**25**		20	150	11/25/2020	JMK
Chrysene - BS	EPA-8270	**68.7**			20	150	11/25/2020	JMK
Chrysene - BSD	EPA-8270	**84.6**	**21**		20	150	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**61.3**			20	150	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**78.7**	**25**		20	150	11/25/2020	JMK
Di-N-Octylphthalate - BS	EPA-8270	**62.9**			20	150	11/25/2020	JMK
Di-N-Octylphthalate - BSD	EPA-8270	**80.8**	**25**		20	150	11/25/2020	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	**67.0**			20	150	11/25/2020	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	**81.0**	**19**		20	150	11/25/2020	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	**72.6**			20	150	11/25/2020	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	**95.8**	**28**		20	150	11/25/2020	JMK
Benzo[A]Pyrene - BS	EPA-8270	**69.6**			20	150	11/25/2020	JMK
Benzo[A]Pyrene - BSD	EPA-8270	**88.8**	**24**		20	150	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**80.2**			20	150	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**103**	**25**		20	150	11/25/2020	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	**82.8**			20	150	11/25/2020	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	**106**	**25**		20	150	11/25/2020	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	**104**	**23**		20	150	11/25/2020	JMK

SR1 - RPD outside of control limits.

ALS Test Batch ID: R374761 - Water by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**114**			44	152	12/11/2020	CAS
PCB-1260 - BS	EPA-8082	**110**			44	152	12/11/2020	CAS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 159074 - Water by EPA-8081

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
A-BHC - BS	EPA-8081	**66.8**			50	150	11/30/2020	JMK
A-BHC - BSD	EPA-8081	**73.6**	**10**		50	150	11/30/2020	JMK
G-BHC - BS	EPA-8081	**71.1**			50	158	11/30/2020	JMK
G-BHC - BSD	EPA-8081	**78.3**	**10**		50	158	11/30/2020	JMK
B-BHC - BS	EPA-8081	**66.6**			50	150	11/30/2020	JMK
B-BHC - BSD	EPA-8081	**73.4**	**10**		50	150	11/30/2020	JMK
Heptachlor - BS	EPA-8081	**61.5**			50	134	11/30/2020	JMK
Heptachlor - BSD	EPA-8081	**66.6**	**8**		50	134	11/30/2020	JMK
D-BHC - BS	EPA-8081	**64.9**			50	150	11/30/2020	JMK
D-BHC - BSD	EPA-8081	**71.4**	**10**		50	150	11/30/2020	JMK
Aldrin - BS	EPA-8081	**51.7**			50	137	11/30/2020	JMK
Aldrin - BSD	EPA-8081	**54.8**	**6**		50	137	11/30/2020	JMK
Heptachlor Epoxide - BS	EPA-8081	**67.6**			50	150	11/30/2020	JMK
Heptachlor Epoxide - BSD	EPA-8081	**73.2**	**8**		50	150	11/30/2020	JMK
Chlordane - BS	EPA-8081	**65.4**			50	150	11/30/2020	JMK
Chlordane - BSD	EPA-8081	**68.5**	**5**		50	150	11/30/2020	JMK
Endosulfan I - BS	EPA-8081	**68.6**			50	150	11/30/2020	JMK
Endosulfan I - BSD	EPA-8081	**74.3**	**8**		50	150	11/30/2020	JMK
4,4'-DDE - BS	EPA-8081	**69.3**			50	150	11/30/2020	JMK
4,4'-DDE - BSD	EPA-8081	**70.2**	**1**		50	150	11/30/2020	JMK
Dieldrin - BS	EPA-8081	**69.4**			50	137	11/30/2020	JMK
Dieldrin - BSD	EPA-8081	**74.1**	**7**		50	137	11/30/2020	JMK
Endrin - BS	EPA-8081	**74.8**			50	134	11/30/2020	JMK
Endrin - BSD	EPA-8081	**80.4**	**7**		50	134	11/30/2020	JMK
4,4'-DDD - BS	EPA-8081	**76.0**			50	150	11/30/2020	JMK
4,4'-DDD - BSD	EPA-8081	**78.2**	**3**		50	150	11/30/2020	JMK
Endosulfan II - BS	EPA-8081	**71.9**			50	150	11/30/2020	JMK
Endosulfan II - BSD	EPA-8081	**77.5**	**7**		50	150	11/30/2020	JMK
4,4'-DDT - BS	EPA-8081	**87.4**			59	149	11/30/2020	JMK
4,4'-DDT - BSD	EPA-8081	**89.3**	**2**		59	149	11/30/2020	JMK
Endrin Aldehyde - BS	EPA-8081	**76.6**			50	150	11/30/2020	JMK
Endrin Aldehyde - BSD	EPA-8081	**83.3**	**8**		50	150	11/30/2020	JMK
Endosulfan Sulfate - BS	EPA-8081	**73.0**			50	150	11/30/2020	JMK
Endosulfan Sulfate - BSD	EPA-8081	**78.7**	**8**		50	150	11/30/2020	JMK
Methoxychlor - BS	EPA-8081	**89.5**			50	150	11/30/2020	JMK
Methoxychlor - BSD	EPA-8081	**93.2**	**4**		50	150	11/30/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110139
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R373252 - Water by SM2540C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids - BS	SM2540C	**97.8**			85	115	11/23/2020	KLS

ALS Test Batch ID: R374230 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**102**			80	120	11/21/2020	RAL
Chloride - BSD	EPA-300.0	**100**	**1**		80	120	11/21/2020	RAL
Fluoride - BS	EPA-300.0	**97.5**			80	120	11/21/2020	RAL
Fluoride - BSD	EPA-300.0	**96.5**	**1**		80	120	11/21/2020	RAL
Nitrate as N - BS	EPA-300.0	**102**			80	120	11/21/2020	RAL
Nitrate as N - BSD	EPA-300.0	**104**	**2**		80	120	11/21/2020	RAL
Nitrite as N - BS	EPA-300.0	**99.0**			80	120	11/21/2020	RAL
Nitrite as N - BSD	EPA-300.0	**95.5**	**4**		80	120	11/21/2020	RAL
Sulfate - BS	EPA-300.0	**97.0**			80	120	11/21/2020	RAL
Sulfate - BSD	EPA-300.0	**100**	**3**		80	120	11/21/2020	RAL

ALS Test Batch ID: R373722 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-245.1	**116**			80.6	118	11/28/2020	RAL
Mercury - BSD	EPA-245.1	**114**	**2**		80.6	118	11/28/2020	RAL

ALS Test Batch ID: R373722 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved) - BS	EPA-245.1	**116**			80.6	118	11/28/2020	RAL
Mercury (Dissolved) - BSD	EPA-245.1	**114**	**2**		80.6	118	11/28/2020	RAL

ALS Test Batch ID: 160342 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-200.8	**95.1**			89.1	110	12/01/2020	RAL
Arsenic - BSD	EPA-200.8	**94.6**	**1**		89.1	110	12/01/2020	RAL
Barium - BS	EPA-200.8	**95.3**			88.5	108	12/01/2020	RAL
Barium - BSD	EPA-200.8	**94.5**	**1**		88.5	108	12/01/2020	RAL
Cadmium - BS	EPA-200.8	**99.0**			89.4	110	12/01/2020	RAL
Cadmium - BSD	EPA-200.8	**98.3**	**1**		89.4	110	12/01/2020	RAL
Calcium - BS	EPA-200.8	**87.6**			80	120	12/01/2020	RAL
Calcium - BSD	EPA-200.8	**87.7**	**0**		80	120	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chromium - BS	EPA-200.8	**97.0**			88.3	110.2	12/01/2020	RAL
Chromium - BSD	EPA-200.8	**98.8**	**2**		88.3	110.2	12/01/2020	RAL
Iron - BS	EPA-200.8	**96.5**			80	120	12/01/2020	RAL
Iron - BSD	EPA-200.8	**96.7**	**0**		80	120	12/01/2020	RAL
Lead - BS	EPA-200.8	**97.1**			87.5	107	12/01/2020	RAL
Lead - BSD	EPA-200.8	**96.8**	**0**		87.5	107	12/01/2020	RAL
Magnesium - BS	EPA-200.8	**97.4**			80	120	12/01/2020	RAL
Magnesium - BSD	EPA-200.8	**95.4**	**2**		80	120	12/01/2020	RAL
Manganese - BS	EPA-200.8	**96.3**			82.2	110	12/01/2020	RAL
Manganese - BSD	EPA-200.8	**96.8**	**0**		82.2	110	12/01/2020	RAL
Potassium - BS	EPA-200.8	**95.8**			80	120	12/01/2020	RAL
Potassium - BSD	EPA-200.8	**95.5**	**0**		80	120	12/01/2020	RAL
Selenium - BS	EPA-200.8	**96.3**			90.2	113	12/01/2020	RAL
Selenium - BSD	EPA-200.8	**96.1**	**0**		90.2	113	12/01/2020	RAL
Silver - BS	EPA-200.8	**93.5**			80	120	12/01/2020	RAL
Silver - BSD	EPA-200.8	**92.8**	**1**		80	120	12/01/2020	RAL
Sodium - BS	EPA-200.8	**97.3**			80	105	12/01/2020	RAL
Sodium - BSD	EPA-200.8	**97.7**	**0**		80	105	12/01/2020	RAL

ALS Test Batch ID: 160345 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved) - BS	EPA-200.8	**95.1**			89.1	110	12/01/2020	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	**94.6**	**1**		89.1	110	12/01/2020	RAL
Barium (Dissolved) - BS	EPA-200.8	**95.3**			88.5	108	12/01/2020	RAL
Barium (Dissolved) - BSD	EPA-200.8	**94.5**	**1**		88.5	108	12/01/2020	RAL
Cadmium (Dissolved) - BS	EPA-200.8	**99.0**			89.4	110	12/01/2020	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	**98.3**	**1**		89.4	110	12/01/2020	RAL
Calcium (Dissolved) - BS	EPA-200.8	**87.6**			80	120	12/01/2020	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**87.7**	**0**		80	120	12/01/2020	RAL
Chromium (Dissolved) - BS	EPA-200.8	**97.0**			86.2	107	12/01/2020	RAL
Chromium (Dissolved) - BSD	EPA-200.8	**98.8**	**2**		86.2	107	12/01/2020	RAL
Iron (Dissolved) - BS	EPA-200.8	**96.5**			80	120	12/01/2020	RAL
Iron (Dissolved) - BSD	EPA-200.8	**96.7**	**0**		80	120	12/01/2020	RAL
Lead (Dissolved) - BS	EPA-200.8	**97.1**			87.5	107	12/01/2020	RAL
Lead (Dissolved) - BSD	EPA-200.8	**96.8**	**0**		87.5	107	12/01/2020	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**97.4**			80	120	12/01/2020	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**95.4**	**2**		80	120	12/01/2020	RAL
Manganese (Dissolved) - BS	EPA-200.8	**96.3**			82.2	110	12/01/2020	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**96.8**	**0**		82.2	110	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110139
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Potassium (Dissolved) - BS	EPA-200.8	**95.8**			80	120	12/01/2020	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**95.5**	**0**		80	120	12/01/2020	RAL
Selenium (Dissolved) - BS	EPA-200.8	**96.3**			90.2	113	12/01/2020	RAL
Selenium (Dissolved) - BSD	EPA-200.8	**96.1**	**0**		90.2	113	12/01/2020	RAL
Silver (Dissolved) - BS	EPA-200.8	**93.5**			80	120	12/01/2020	RAL
Silver (Dissolved) - BSD	EPA-200.8	**92.8**	**1**		80	120	12/01/2020	RAL
Sodium (Dissolved) - BS	EPA-200.8	**97.3**			80	105	12/01/2020	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**97.7**	**0**		80	105	12/01/2020	RAL

ALS Test Batch ID: R374767 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**99.0**			1	200	12/03/2020	CAS
Bicarbonate as CaCO3 - BS	SM2320B	**99.0**			1	200	12/03/2020	CAS

ALS Test Batch ID: R374783 - Water by EPA-350.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Ammonia as N - BS	EPA-350.1	**98.9**			80	120	12/03/2020	CAS

ALS Test Batch ID: R374789 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**100**			80	120	12/04/2020	CAS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV20110139

LANDAU ASSOCIATES

Chain-of-Custody Record

X Seattle/Edmonds (425) 778-0907	☐ Spokane (509) 327-9737	Date 11/20/20	Turnaround Time:
☐ Tacoma (253) 926-2493	☐ Portland (503) 542-1080	Page ___ of ___	(Standard) circled
	☐		Accelerated

Project Name: Yakima Landfill Project No. 1148008.040.046

Project Location/Event: Yakima, WA / Pre-Construction Sampling

Sampler's Name: S. Renando, B. McManus, S. Kostka

Project Contact: S. Renando

Send Results To: S. Renando, P. Roelen, D. Jorgenson

Special Handling Requirements:

Shipment Method: Deliver

Stored on ice: (Yes) / No

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	① T&D Metals (EPA 200.8/7470/71)		② Chlorinated Pests (EPA 8081)	PCB (EPA 8082 LL)	③ VOCs (8260D)	SVOCs (EPA 8270D)	PAHs (EPA 8270 SIM)	NWTPH-Dx (w/ & w/o SG)	⑥ Inorganic Ions (EPA 300.0)	④ Alkalinity/Bicarbonate	Ammonia (350.1)	⑤ TOC/TDS
1	MW-104-112020	11/20/20	1426	AQ	11	X		X	X	X	X	X		X	X	X	X
2	MW-103-112020	11/20/20	1248	AQ	11	X		X	X	X	X	X		X	X	X	X
3	MW-102-201120	11/20/20	1320	AQ	12	X		X	X	X	X	X		X	X	X	X
4	MW-105-20201120	11/20/20	1300	AQ	11	X		X	X	X	X	X		X	X	X	X
5	MW-101-20201120	11/20/20	1410	AQ	12	X		X	X	X	X	X	X	X	X	X	X
6	Dup-1-20201120	11/20/20	800	AQ	12	X		X	X	X	X	X	X	X	X	X	X
7	MW-106-201120	11/20/20	1450	AQ	12	X		X	X	X	X	X	X	X	X	X	X
8	Trip Blanks	—	—	AQ	2					X							

Observations/Comments

__ Allow water samples to settle, collect aliquot from clear portion ☐

X NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☒ & Without

X Dissolved metal samples were field filtered

Other
① - As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag & Hg, K
② - Low level
③ - SIM
④ - SM 2320B
⑤ - SM5310C / SM2540C
⑥ - Fluoride, Nitrate as N, Nitrite as N, Chloride, Sulfate

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Stephanie Renando	Printed Name Rick Bagan	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/21/20 Time 804	Date 11/21/20 Time 8:05	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV20110139

Project: Yakima Landfill

Received Date: 11/21/20 Received Time: 8:05 By: RD

Type of shipping container: Cooler X 4 Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Mail ____ Courier ____ Hand Delivered X
FedEx Express ____

	Yes	No	N/A
Were custody seals on outside of shipping container?	____	X	____
If yes, how many? ____ Where? ____			
Custody seal date: ____ Seal name: ____			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	____	____
Did all bottles have labels?	X	____	____
Did all bottle labels and tags agree with Chain of Custody?	X	____	____
Were samples received within hold time?	X	____	____
Did all bottles arrive in good condition (unbroken, etc.)?	X	____	____
Was sufficient amount of sample sent for the tests indicated?	X	____	____
Was correct preservation added to samples?	X	____	____

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	X	____	____
Bubbles present in sample #: None			

Temperature of cooler upon receipt: 2.6 / 3.6 / 1.9 / 1.6 All on Ice (Cold) Cool Ambient N/A

Explain any discrepancies: There is one extra ½L Amber on Sample # 102

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____

Outcome of call: ____

January 14, 2021

Ms. Stephanie Renando
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Renando,

On November 24th, 15 samples were received by our laboratory and assigned our laboratory project number EV20110151. The project was identified as your Yakima Landfill / #1148008.040.046. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS JOB#:	EV20110151
		ALS SAMPLE#:	EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	**0.0080**	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.89	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,6-Trichlorophenol	EPA-8270	U	0.85	1	UG/L	11/25/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.73	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.76	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	**0.073**	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**330**	50	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**26**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**0.18**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	U	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**5.3**	0.45	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**55**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**40000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**29000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**14000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**2100**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**8400**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**18000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**4.7**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**56**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**41000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**27000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**15000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2100**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**8700**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**19000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**180**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**180**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**3.6**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**4.8**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/03/2020	DLC
Toluene-d8	EPA-8260	**99.2**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**104**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**127**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**87.4**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**33.7**	11/25/2020	JMK
Phenol-d5	EPA-8270	**16.4**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:45:00 AM
CLIENT SAMPLE ID	MW-7-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	EPA-8270	**67.4**	11/25/2020	JMK
2-Fluorobiphenyl	EPA-8270	**61.5**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**89.4**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**90.2**	11/25/2020	JMK
DCB	EPA-8082	**49.0**	12/09/2020	CAS
TCMX	EPA-8081	**60.4**	12/01/2020	JMK
DCB	EPA-8081	**52.1**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**340**	50	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**27**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	U	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**3.3**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**53**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**42000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**25000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**15000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**2200**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**6400**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**19000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**3.4**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**55**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**43000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**25000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**15000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2200**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**6500**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**20000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**190**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**190**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**2.0**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.3**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	12/03/2020	DLC
Toluene-d8	EPA-8260	**98.7**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**103**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**142**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**91.6**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**38.8**	11/25/2020	JMK
Phenol-d5	EPA-8270	**14.3**	11/25/2020	JMK
Nitrobenzene-d5	EPA-8270	**76.3**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:16:00 AM
CLIENT SAMPLE ID	MW-107-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**70.8**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**92.4**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**86.4**	11/25/2020	JMK
DCB	EPA-8082	**40.0**	12/09/2020	CAS
TCMX	EPA-8081	**66.0**	12/01/2020	JMK
DCB	EPA-8081	**41.6**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**310**	50	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**31**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**1.4**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**1.6**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**46**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**38000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**27000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**13000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**1900**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**5800**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**18000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**1.7**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**48**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**39000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**28000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**14000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2000**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**5900**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**19000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**150**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**150**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**0.96**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.4**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/03/2020	DLC
Toluene-d8	EPA-8260	**98.9**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**104**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**93.4**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**59.7**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**37.1**	11/25/2020	JMK
Phenol-d5	EPA-8270	**16.3**	11/25/2020	JMK
Nitrobenzene-d5	EPA-8270	**72.6**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS JOB#:	EV20110151
		ALS SAMPLE#:	EV20110151-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 10:25:00 AM
CLIENT SAMPLE ID	MW-11-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**65.0**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**83.7**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**86.1**	11/25/2020	JMK
DCB	EPA-8082	**43.0**	12/09/2020	CAS
TCMX	EPA-8081	**56.4**	12/01/2020	JMK
DCB	EPA-8081	**43.9**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	**0.94**	0.38	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**200**	50	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**20**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**0.87**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**11**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	U	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**22**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**22000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**500**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**10000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**370**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**14000**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**24000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	U	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**24**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**22000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**340**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**390**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**14000**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**25000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**110**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**110**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**0.68**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.7**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/03/2020	DLC
Toluene-d8	EPA-8260	**99.4**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**103**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**115**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**74.8**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**38.5**	11/25/2020	JMK
Phenol-d5	EPA-8270	**16.6**	11/25/2020	JMK
Nitrobenzene-d5	EPA-8270	**74.0**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS JOB#:	EV20110151
		ALS SAMPLE#:	EV20110151-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:45:00 AM
CLIENT SAMPLE ID	MW-8-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**63.2**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**84.8**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**89.1**	11/25/2020	JMK
DCB	EPA-8082	**69.0**	12/09/2020	CAS
TCMX	EPA-8081	**66.0**	12/01/2020	JMK
DCB	EPA-8081	**76.3**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.89	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.85	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.73	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.76	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	**0.068**	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**330**	50	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**25**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	U	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**6.5**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**54**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**39000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**30000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**14000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**2100**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**7600**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**18000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**6.2**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**53**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**38000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**29000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**14000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2000**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**7400**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**18000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**170**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**170**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**2.6**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**4.6**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	12/03/2020	DLC
Toluene-d8	EPA-8260	**99.7**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**105**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**117**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**75.4**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**36.5**	11/25/2020	JMK
Phenol-d5	EPA-8270	**13.8**	11/25/2020	JMK
Nitrobenzene-d5	EPA-8270	**74.6**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:26:00 AM
CLIENT SAMPLE ID	MW-108-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**75.4**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**92.9**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**92.7**	11/25/2020	JMK
DCB	EPA-8082	**33.0**	12/09/2020	CAS
TCMX	EPA-8081	**66.6**	12/01/2020	JMK
DCB	EPA-8081	**41.7**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	**4.0**	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**520**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**31**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**0.28**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	**0.15**	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**9.1**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**4.9**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**57**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**79000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**23000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**33000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**5100**	10	5	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**8400**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**22000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**4.7**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**55**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**76000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**22000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**33000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**4800**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**8200**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**22000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**330**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**330**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**0.64**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**24**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/03/2020	DLC
Toluene-d8	EPA-8260	**99.5**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**101**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**117**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**74.5**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**36.8**	11/25/2020	JMK
Phenol-d5	EPA-8270	**18.2**	11/25/2020	JMK
Nitrobenzene-d5	EPA-8270	**78.7**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 11:25:00 AM
CLIENT SAMPLE ID	MW-18-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**71.7**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**94.3**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**86.6**	11/25/2020	JMK
DCB	EPA-8082	**72.0**	12/09/2020	CAS
TCMX	EPA-8081	**68.2**	12/01/2020	JMK
DCB	EPA-8081	**78.8**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/04/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/04/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/04/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/04/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/04/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/04/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/04/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/04/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/04/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/04/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/04/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/04/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/04/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/04/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/04/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/04/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/04/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/04/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/04/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/04/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/04/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/04/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/04/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/25/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.89	1	UG/L	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.85	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.73	1	UG/L	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Chrysene	EPA-8270	U	0.75	1	UG/L	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.76	1	UG/L	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/25/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**180**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**12**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**3.7**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**16**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**0.49**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**11**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**26000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**76**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**9000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**10**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**4100**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**13000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**0.47**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**12**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**25000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**9200**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**2.5**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**4100**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**89**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**89**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	U	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**0.82**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/04/2020	DLC
Toluene-d8	EPA-8260	**100**	12/04/2020	DLC
4-Bromofluorobenzene	EPA-8260	**105**	12/04/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**122**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**79.5**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**35.7**	11/25/2020	JMK
Phenol-d5	EPA-8270	**14.8**	11/25/2020	JMK
Nitrobenzene-d5	EPA-8270	**71.0**	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:46:00 PM
CLIENT SAMPLE ID	MW-109-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**71.6**	11/25/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**85.7**	11/25/2020	JMK
Terphenyl-d14	EPA-8270	**85.0**	11/25/2020	JMK
DCB	EPA-8082	**96.0**	12/09/2020	CAS
TCMX	EPA-8081	**76.0**	12/01/2020	JMK
DCB	EPA-8081	**74.8**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/04/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/04/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/04/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/04/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/04/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/04/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/04/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/04/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/04/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/04/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/04/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/04/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/04/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/04/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/04/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/04/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/04/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/04/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/04/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/04/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/04/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/04/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/04/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	12/01/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	12/01/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	12/01/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/01/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	12/01/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	12/01/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/01/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/01/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	12/01/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	12/01/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/01/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	12/01/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	12/01/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	12/01/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/01/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**170**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**13**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**3.9**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**16**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**0.87**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**10**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**27000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	U	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	**0.31**	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**9200**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**3800**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**13000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**0.80**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**10**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**26000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**9400**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**3800**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**90**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**90**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	U	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**0.66**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**103**	12/04/2020	DLC
Toluene-d8	EPA-8260	**99.8**	12/04/2020	DLC
4-Bromofluorobenzene	EPA-8260	**102**	12/04/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**80.0**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**52.6**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**35.8**	12/01/2020	JMK
Phenol-d5	EPA-8270	**12.7**	12/01/2020	JMK
Nitrobenzene-d5	EPA-8270	**59.0**	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 12:45:00 PM
CLIENT SAMPLE ID	MW-9A-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**66.4**	12/01/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**81.2**	12/01/2020	JMK
Terphenyl-d14	EPA-8270	**91.0**	12/01/2020	JMK
DCB	EPA-8082	**104**	12/09/2020	CAS
TCMX	EPA-8081	**77.3**	12/01/2020	JMK
DCB	EPA-8081	**62.4**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 1:07:00 PM
CLIENT SAMPLE ID	MW-100-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/04/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/04/2020	DLC
Chloroform	EPA-8260 SIM	**0.69**	0.29	1	UG/L	12/04/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/04/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/04/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/04/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/04/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/04/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/04/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/04/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/04/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/04/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/04/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/04/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/04/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/04/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/04/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/04/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 1:07:00 PM
CLIENT SAMPLE ID	MW-100-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/04/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/04/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/04/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/04/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/04/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 1:07:00 PM
CLIENT SAMPLE ID	MW-100-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/26/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/26/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/26/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 1:07:00 PM
CLIENT SAMPLE ID	MW-100-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/26/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/26/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/26/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/26/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/26/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 1:07:00 PM
CLIENT SAMPLE ID	MW-100-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
Total Dissolved Solids	SM2540C	**190**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**12**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**3.8**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**13**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**0.82**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**10**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**24000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**320**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**8200**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**36**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**3500**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**11000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**0.73**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**8.8**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**24000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**8400**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 1:07:00 PM
CLIENT SAMPLE ID	MW-100-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Potassium (Dissolved)	EPA-200.8	**3500**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**80**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**80**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	U	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**0.59**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	12/04/2020	DLC
Toluene-d8	EPA-8260	**98.8**	12/04/2020	DLC
4-Bromofluorobenzene	EPA-8260	**103**	12/04/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**119**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**80.8**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**38.2**	11/26/2020	JMK
Phenol-d5	EPA-8270	**17.3**	11/26/2020	JMK
Nitrobenzene-d5	EPA-8270	**76.0**	11/26/2020	JMK
2-Fluorobiphenyl	EPA-8270	**75.9**	11/26/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**86.2**	11/26/2020	JMK
Terphenyl-d14	EPA-8270	**91.4**	11/26/2020	JMK
DCB	EPA-8082	**88.0**	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-10
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:00:00 PM
CLIENT SAMPLE ID	TP-MW-1-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	**220**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**14**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**1.2**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**17**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**0.65**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**16**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**35000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	U	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	**0.41**	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**13000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**16**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**4300**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**16000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**0.58**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**16**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**35000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**4300**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**140**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**140**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	U	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**1.1**	0.50	1	MG/L	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-11
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:10:00 PM
CLIENT SAMPLE ID	DUP-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/04/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/04/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/04/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/04/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/04/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/04/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/04/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/04/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/04/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/04/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/04/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/04/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/04/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/04/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/04/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/04/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/04/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/04/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-11
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:10:00 PM
CLIENT SAMPLE ID	DUP-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/04/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/04/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/04/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/04/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/04/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-11
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:10:00 PM
CLIENT SAMPLE ID	DUP-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	**0.012**	0.0068	1	UG/L	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/25/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/26/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/26/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/26/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-11
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:10:00 PM
CLIENT SAMPLE ID	DUP-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/26/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/26/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/26/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/26/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/26/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-11
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:10:00 PM
CLIENT SAMPLE ID	DUP-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**320**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**12**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	**0.039**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**23**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**1.3**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**36**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**29000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**10000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**12000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**410**	2.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-11
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:10:00 PM
CLIENT SAMPLE ID	DUP-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Potassium	EPA-200.8	**4600**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**28000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**1.2**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**36**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**29000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**11000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**410**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**4600**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**28000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**200**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**200**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**1.1**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**10**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	12/04/2020	DLC
Toluene-d8	EPA-8260	**98.6**	12/04/2020	DLC
4-Bromofluorobenzene	EPA-8260	**102**	12/04/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**116**	11/25/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**72.4**	11/25/2020	JMK
2-Fluorophenol	EPA-8270	**38.5**	11/26/2020	JMK
Phenol-d5	EPA-8270	**18.2**	11/26/2020	JMK
Nitrobenzene-d5	EPA-8270	**75.2**	11/26/2020	JMK
2-Fluorobiphenyl	EPA-8270	**67.2**	11/26/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**86.1**	11/26/2020	JMK
Terphenyl-d14	EPA-8270	**88.0**	11/26/2020	JMK
TCMX	EPA-8081	**55.2**	12/01/2020	JMK
DCB	EPA-8081	**63.9**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/04/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/04/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/04/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/04/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/04/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/04/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/04/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/04/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/04/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/04/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/04/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/04/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/04/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/04/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/04/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/04/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/04/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/04/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/04/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/04/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/04/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/04/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/04/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	12/01/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	12/01/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	**0.012**	0.0068	1	UG/L	12/01/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	**0.015**	0.013	1	UG/L	12/01/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	12/01/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	12/01/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	12/01/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/26/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.89	1	UG/L	11/26/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/26/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.85	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/26/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.73	1	UG/L	11/26/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/26/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Chrysene	EPA-8270	U	0.75	1	UG/L	11/26/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.76	1	UG/L	11/26/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
PCB-1016	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	3.0	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.067	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**330**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**15**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**25**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**1.3**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**36**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**29000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**10000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**12000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**420**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**4500**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**27000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**1.3**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**37**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**29000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**410**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**4500**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**27000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**210**	3.0	1	MG/L	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	**210**	3.0	1	MG/L	12/04/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/04/2020	DLC
Toluene-d8	EPA-8260	**99.7**	12/04/2020	DLC
4-Bromofluorobenzene	EPA-8260	**104**	12/04/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**88.8**	12/01/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**75.5**	12/01/2020	JMK
2-Fluorophenol	EPA-8270	**39.0**	11/26/2020	JMK
Phenol-d5	EPA-8270	**18.3**	11/26/2020	JMK
Nitrobenzene-d5	EPA-8270	**75.8**	11/26/2020	JMK
2-Fluorobiphenyl	EPA-8270	**58.8**	11/26/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**91.5**	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-13
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:57:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**88.3**	11/26/2020	JMK
DCB	EPA-8082	**77.0**	12/09/2020	CAS
TCMX	EPA-8081	**56.2**	12/01/2020	JMK
DCB	EPA-8081	**57.4**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-14
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:45:00 PM
CLIENT SAMPLE ID	TP-MW-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	**200**	130	1	UG/L	12/02/2020	JNF
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	12/09/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	250	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	12/09/2020	JNF
Total Dissolved Solids	SM2540C	**260**	25	1	MG/L	11/24/2020	KLS
Chloride	EPA-300.0	**12**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/05/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**1.4**	1.0	1	MG/L	12/01/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/02/2020	RAL
Arsenic	EPA-200.8	**2.9**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**32**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**38000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**17000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**14000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**1500**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**5600**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**19000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**2.6**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**32**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**37000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**16000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**14000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**1500**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**5600**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**20000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**180**	3.0	1	MG/L	12/04/2020	CAS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS JOB#:	EV20110151
		ALS SAMPLE#:	EV20110151-14
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020 2:45:00 PM
CLIENT SAMPLE ID	TP-MW-2-112320	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bicarbonate as CaCO3	SM2320B	**180**	3.0	1	MG/L	12/04/2020	CAS
Ammonia as N	EPA-350.1	**2.0**	0.050	1	MG/L	12/08/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**4.0**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**88.1**	12/02/2020	JNF
C25	NWTPH-DX w/ SGA	**97.1**	12/09/2020	JNF

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-15
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020
CLIENT SAMPLE ID	Trip Blanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/04/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/04/2020	DLC
Chloroform	EPA-8260 SIM	U	0.29	1	UG/L	12/04/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.026	1	UG/L	12/04/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.17	1	UG/L	12/04/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.27	1	UG/L	12/04/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.19	1	UG/L	12/04/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.23	1	UG/L	12/04/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.28	1	UG/L	12/04/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.14	1	UG/L	12/04/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.38	1	UG/L	12/04/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/04/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.016	1	UG/L	12/04/2020	DLC
Methylene Chloride	EPA-8260	U	1.0	1	UG/L	12/04/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/04/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.0035	1	UG/L	12/04/2020	DLC
Benzene	EPA-8260	U	0.011	1	UG/L	12/04/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromodichloromethane	EPA-8260	U	0.16	1	UG/L	12/04/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/04/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110151 EV20110151-15
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/24/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/23/2020
CLIENT SAMPLE ID	Trip Blanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.11	1	UG/L	12/04/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/04/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/04/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.018	1	UG/L	12/04/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.027	1	UG/L	12/04/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.50	1	UG/L	12/04/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/04/2020	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	12/04/2020	DLC
Toluene-d8	EPA-8260	**100**	12/04/2020	DLC
4-Bromofluorobenzene	EPA-8260	**103**	12/04/2020	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110151
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-112420W - Batch 160142 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	11/29/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	11/29/2020	JNF

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120320W2 - Batch 160411 - Water by EPA-8260 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	UG/L	0.020	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	UG/L	0.10	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	UG/L	0.29	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	UG/L	0.026	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	UG/L	0.17	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	UG/L	0.27	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	UG/L	0.19	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	UG/L	0.23	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	UG/L	0.28	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	UG/L	0.14	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	UG/L	0.38	12/03/2020	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120320W2 - Batch 160411 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Acetone	EPA-8260	U	UG/L	25	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	0.016	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	UG/L	1.0	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
2-Butanone	EPA-8260	U	UG/L	10	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Hexane	EPA-8260	U	UG/L	6.8	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/14/2021 EV20110151 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-120320W2 - Batch 160411 - Water by EPA-8260

2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	0.0035	12/03/2020	DLC
Benzene	EPA-8260	U	UG/L	0.011	12/03/2020	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	UG/L	0.16	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	12/03/2020	DLC
Toluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
2-Hexanone	EPA-8260	U	UG/L	10	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	0.11	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	12/03/2020	DLC
Styrene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromoform	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	0.018	12/03/2020	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	0.027	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	0.50	12/03/2020	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/14/2021 EV20110151 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-120320W2 - Batch 160411 - Water by EPA-8260

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160283 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	UG/L	0.016	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	**0.017**	UG/L	0.0031	11/25/2020	JMK
Chrysene	EPA-8270 SIM	**0.017**	UG/L	0.0062	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.0091	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.015	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.0069	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.0055	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.011	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160204 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	UG/L	1.5	11/25/2020	JMK
Phenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Aniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/L	0.94	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112520W - Batch 160204 - Water by EPA-8270

N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Isophorone	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	UG/L	10	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Naphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	UG/L	1.9	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	UG/L	0.90	11/25/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	UG/L	1.8	11/25/2020	JMK
Acenaphthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	UG/L	5.0	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	UG/L	10	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	UG/L	0.78	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Fluorene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Azobenzene	EPA-8270	U	UG/L	1.6	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112520W - Batch 160204 - Water by EPA-8270

Pentachlorophenol	EPA-8270	U	UG/L	5.0	11/25/2020	JMK
Phenanthrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Carbazole	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Chrysene	EPA-8270	U	UG/L	0.80	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	0.81	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374917 - Batch R374917 - Water by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	UG/L	0.067	12/09/2020	CAS
PCB-1221	EPA-8082	U	UG/L	0.067	12/09/2020	CAS
PCB-1232	EPA-8082	U	UG/L	0.067	12/09/2020	CAS
PCB-1242	EPA-8082	U	UG/L	0.067	12/09/2020	CAS
PCB-1248	EPA-8082	U	UG/L	0.067	12/09/2020	CAS
PCB-1254	EPA-8082	U	UG/L	0.067	12/09/2020	CAS
PCB-1260	EPA-8082	U	UG/L	0.067	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160255 - Water by EPA-8081

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
A-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
G-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
B-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Heptachlor	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
D-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112520W - Batch 160255 - Water by EPA-8081

Aldrin	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Chlordane	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endosulfan I	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Dieldrin	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endrin	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endosulfan II	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Methoxychlor	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Toxaphene	EPA-8081	U	UG/L	0.50	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374253 - Batch R374253 - Water by SM2540C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	U	MG/L	25	11/24/2020	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374255 - Batch R374255 - Water by SM2540C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	U	MG/L	50	11/24/2020	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374360 - Batch R374360 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Fluoride	EPA-300.0	U	MG/L	0.16	12/05/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374795 - Batch R374795 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Nitrate as N	EPA-300.0	U	MG/L	0.034	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	MG/L	0.043	11/25/2020	ARI2

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110151
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MBLK-R374795 - Batch R374795 - Water by EPA-300.0

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374797 - Batch R374797 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfate	EPA-300.0	U	MG/L	1.0	12/01/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374799 - Batch R374799 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.50	11/30/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374287 - Batch R374287 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.11	12/01/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374671 - Batch R374671 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.11	12/02/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120720W - Batch 160493 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	0.15	12/08/2020	RAL
Barium	EPA-200.8	U	UG/L	1.0	12/08/2020	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	12/08/2020	RAL
Calcium	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Chromium	EPA-200.8	U	UG/L	2.0	12/08/2020	RAL
Iron	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Lead	EPA-200.8	U	UG/L	0.11	12/08/2020	RAL
Magnesium	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Manganese	EPA-200.8	U	UG/L	2.0	12/08/2020	RAL
Potassium	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Selenium	EPA-200.8	U	UG/L	4.0	12/08/2020	RAL
Silver	EPA-200.8	U	UG/L	0.050	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-120720W - Batch 160493 - Water by EPA-200.8

Sodium	EPA-200.8	U	UG/L	50	12/08/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120520W - Batch 160487 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	0.15	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	0.11	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	UG/L	4.0	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	UG/L	0.050	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374923 - Batch R374923 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	12/04/2020	CAS
Bicarbonate as CaCO3	SM2320B	U	MG/L	9.0	12/04/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374927 - Batch R374927 - Water by EPA-350.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Ammonia as N	EPA-350.1	U	MG/L	0.050	12/08/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374931 - Batch R374931 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 160142 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**92.7**			67	125.2	11/29/2020	JNF
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**97.3**	**5**		67	125.2	11/29/2020	JNF

ALS Test Batch ID: 160411 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride - BS	EPA-8260 SIM	**122**			50	150	12/03/2020	DLC
Vinyl Chloride - BSD	EPA-8260 SIM	**112**	**9**		50	150	12/03/2020	DLC
Carbon Tetrachloride - BS	EPA-8260 SIM	**113**			50	150	12/03/2020	DLC
Carbon Tetrachloride - BSD	EPA-8260 SIM	**104**	**8**		50	150	12/03/2020	DLC
Chloroform - BS	EPA-8260 SIM	**105**			50	150	12/03/2020	DLC
Chloroform - BSD	EPA-8260 SIM	**97.5**	**7**		50	150	12/03/2020	DLC
Trichloroethene - BS	EPA-8260 SIM	**112**			74.4	141	12/03/2020	DLC
Trichloroethene - BSD	EPA-8260 SIM	**104**	**7**		74.4	141	12/03/2020	DLC
1,2-Dichloropropane - BS	EPA-8260 SIM	**112**			50	150	12/03/2020	DLC
1,2-Dichloropropane - BSD	EPA-8260 SIM	**104**	**7**		50	150	12/03/2020	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260 SIM	**112**			50	150	12/03/2020	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260 SIM	**106**	**5**		50	150	12/03/2020	DLC
1,1,2-Trichloroethane - BS	EPA-8260 SIM	**110**			50	150	12/03/2020	DLC
1,1,2-Trichloroethane - BSD	EPA-8260 SIM	**105**	**5**		50	150	12/03/2020	DLC
Dibromochloromethane - BS	EPA-8260 SIM	**115**			50	150	12/03/2020	DLC
Dibromochloromethane - BSD	EPA-8260 SIM	**110**	**5**		50	150	12/03/2020	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260 SIM	**115**			50	150	12/03/2020	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260 SIM	**108**	**6**		50	150	12/03/2020	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260 SIM	**106**			50	150	12/03/2020	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260 SIM	**103**	**3**		50	150	12/03/2020	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260 SIM	**104**			50	150	12/03/2020	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260 SIM	**101**	**2**		50	150	12/03/2020	DLC

ALS Test Batch ID: 160411 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**133**			50	150	12/03/2020	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**122**	**9**		50	150	12/03/2020	DLC
Chloromethane - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
Chloromethane - BSD	EPA-8260	**104**	**10**		50	150	12/03/2020	DLC
Bromomethane - BS	EPA-8260	**112**			50	150	12/03/2020	DLC
Bromomethane - BSD	EPA-8260	**102**	**9**		50	150	12/03/2020	DLC
Chloroethane - BS	EPA-8260	**114**			50	150	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloroethane - BSD	EPA-8260	**105**	**9**		50	150	12/03/2020	DLC
Trichlorofluoromethane - BS	EPA-8260	**128**			50	150	12/03/2020	DLC
Trichlorofluoromethane - BSD	EPA-8260	**118**	**8**		50	150	12/03/2020	DLC
Carbon Disulfide - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
Carbon Disulfide - BSD	EPA-8260	**104**	**8**		50	150	12/03/2020	DLC
Acetone - BS	EPA-8260	**68.6**			50	150	12/03/2020	DLC
Acetone - BSD	EPA-8260	**60.5**	**13**		50	150	12/03/2020	DLC
1,1-Dichloroethene - BS	EPA-8260	**118**			72.5	136	12/03/2020	DLC
1,1-Dichloroethene - BSD	EPA-8260	**109**	**8**		72.5	136	12/03/2020	DLC
Methylene Chloride - BS	EPA-8260	**106**			50	150	12/03/2020	DLC
Methylene Chloride - BSD	EPA-8260	**102**	**3**		50	150	12/03/2020	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**108**	**5**		50	150	12/03/2020	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**105**	**8**		50	150	12/03/2020	DLC
1,1-Dichloroethane - BS	EPA-8260	**112**			50	150	12/03/2020	DLC
1,1-Dichloroethane - BSD	EPA-8260	**104**	**8**		50	150	12/03/2020	DLC
2-Butanone - BS	EPA-8260	**79.6**			50	150	12/03/2020	DLC
2-Butanone - BSD	EPA-8260	**73.4**	**8**		50	150	12/03/2020	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**112**			50	150	12/03/2020	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**105**	**7**		50	150	12/03/2020	DLC
Hexane - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
Hexane - BSD	EPA-8260	**105**	**9**		50	150	12/03/2020	DLC
2,2-Dichloropropane - BS	EPA-8260	**106**			50	150	12/03/2020	DLC
2,2-Dichloropropane - BSD	EPA-8260	**96.9**	**9**		50	150	12/03/2020	DLC
Bromochloromethane - BS	EPA-8260	**107**			50	150	12/03/2020	DLC
Bromochloromethane - BSD	EPA-8260	**101**	**6**		50	150	12/03/2020	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**120**			50	150	12/03/2020	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**110**	**8**		50	150	12/03/2020	DLC
1,1-Dichloropropene - BS	EPA-8260	**117**			50	150	12/03/2020	DLC
1,1-Dichloropropene - BSD	EPA-8260	**108**	**8**		50	150	12/03/2020	DLC
1,2-Dichloroethane - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
1,2-Dichloroethane - BSD	EPA-8260	**108**	**6**		50	150	12/03/2020	DLC
Benzene - BS	EPA-8260	**111**			74.7	143	12/03/2020	DLC
Benzene - BSD	EPA-8260	**104**	**7**		74.7	143	12/03/2020	DLC
Dibromomethane - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
Dibromomethane - BSD	EPA-8260	**108**	**5**		50	150	12/03/2020	DLC
Bromodichloromethane - BS	EPA-8260	**116**			50	150	12/03/2020	DLC
Bromodichloromethane - BSD	EPA-8260	**108**	**6**		50	150	12/03/2020	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**113**			50	150	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Methyl-2-Pentanone - BSD	EPA-8260	**108**	**4**		50	150	12/03/2020	DLC
Toluene - BS	EPA-8260	**116**			71.7	139	12/03/2020	DLC
Toluene - BSD	EPA-8260	**108**	**7**		71.7	139	12/03/2020	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**104**			50	150	12/03/2020	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**97.8**	**6**		50	150	12/03/2020	DLC
2-Hexanone - BS	EPA-8260	**99.2**			50	150	12/03/2020	DLC
2-Hexanone - BSD	EPA-8260	**95.6**	**4**		50	150	12/03/2020	DLC
1,3-Dichloropropane - BS	EPA-8260	**111**			50	150	12/03/2020	DLC
1,3-Dichloropropane - BSD	EPA-8260	**106**	**5**		50	150	12/03/2020	DLC
Tetrachloroethylene - BS	EPA-8260	**98.9**			50	150	12/03/2020	DLC
Tetrachloroethylene - BSD	EPA-8260	**89.0**	**11**		50	150	12/03/2020	DLC
1,2-Dibromoethane - BS	EPA-8260	**105**			50	150	12/03/2020	DLC
1,2-Dibromoethane - BSD	EPA-8260	**101**	**4**		50	150	12/03/2020	DLC
Chlorobenzene - BS	EPA-8260	**114**			73	131	12/03/2020	DLC
Chlorobenzene - BSD	EPA-8260	**107**	**7**		73	131	12/03/2020	DLC
Ethylbenzene - BS	EPA-8260	**116**			50	150	12/03/2020	DLC
Ethylbenzene - BSD	EPA-8260	**109**	**7**		50	150	12/03/2020	DLC
m,p-Xylene - BS	EPA-8260	**118**			50	150	12/03/2020	DLC
m,p-Xylene - BSD	EPA-8260	**110**	**7**		50	150	12/03/2020	DLC
Styrene - BS	EPA-8260	**108**			50	150	12/03/2020	DLC
Styrene - BSD	EPA-8260	**101**	**6**		50	150	12/03/2020	DLC
o-Xylene - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
o-Xylene - BSD	EPA-8260	**103**	**7**		50	150	12/03/2020	DLC
Bromoform - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
Bromoform - BSD	EPA-8260	**110**	**4**		50	150	12/03/2020	DLC
Isopropylbenzene - BS	EPA-8260	**118**			50	150	12/03/2020	DLC
Isopropylbenzene - BSD	EPA-8260	**110**	**7**		50	150	12/03/2020	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**105**			50	150	12/03/2020	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**101**	**4**		50	150	12/03/2020	DLC
Bromobenzene - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
Bromobenzene - BSD	EPA-8260	**105**	**5**		50	150	12/03/2020	DLC
N-Propyl Benzene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
N-Propyl Benzene - BSD	EPA-8260	**107**	**7**		50	150	12/03/2020	DLC
2-Chlorotoluene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
2-Chlorotoluene - BSD	EPA-8260	**107**	**7**		50	150	12/03/2020	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**107**			50	150	12/03/2020	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**99.6**	**7**		50	150	12/03/2020	DLC
4-Chlorotoluene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
4-Chlorotoluene - BSD	EPA-8260	**107**	**6**		50	150	12/03/2020	DLC
T-Butyl Benzene - BS	EPA-8260	**111**			50	150	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
T-Butyl Benzene - BSD	EPA-8260	**104**	**6**		50	150	12/03/2020	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**104**			50	150	12/03/2020	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**97.5**	**7**		50	150	12/03/2020	DLC
S-Butyl Benzene - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
S-Butyl Benzene - BSD	EPA-8260	**106**	**7**		50	150	12/03/2020	DLC
P-Isopropyltoluene - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
P-Isopropyltoluene - BSD	EPA-8260	**108**	**6**		50	150	12/03/2020	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**107**	**6**		50	150	12/03/2020	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**108**	**5**		50	150	12/03/2020	DLC
N-Butylbenzene - BS	EPA-8260	**105**			50	150	12/03/2020	DLC
N-Butylbenzene - BSD	EPA-8260	**98.0**	**6**		50	150	12/03/2020	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**107**	**5**		50	150	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**105**			50	150	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**102**	**3**		50	150	12/03/2020	DLC
Hexachlorobutadiene - BS	EPA-8260	**117**			50	150	12/03/2020	DLC
Hexachlorobutadiene - BSD	EPA-8260	**110**	**6**		50	150	12/03/2020	DLC
Naphthalene - BS	EPA-8260	**99.0**			50	150	12/03/2020	DLC
Naphthalene - BSD	EPA-8260	**102**	**3**		50	150	12/03/2020	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**104**			50	150	12/03/2020	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**103**	**1**		50	150	12/03/2020	DLC

ALS Test Batch ID: 160204 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**40.3**			20	150	11/25/2020	JMK
Pyridine - BSD	EPA-8270	**39.7**	**1**		20	150	11/25/2020	JMK
N-Nitrosodimethylamine - BS	EPA-8270	**55.2**			20	150	11/25/2020	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	**58.7**	**6**		20	150	11/25/2020	JMK
Phenol - BS	EPA-8270	**20.6**			5	84	11/25/2020	JMK
Phenol - BSD	EPA-8270	**22.9**	**11**		5	84	11/25/2020	JMK
Aniline - BS	EPA-8270	**24.7**			20	150	11/25/2020	JMK
Aniline - BSD	EPA-8270	**27.9**	**12**		20	150	11/25/2020	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**87.5**			20	150	11/25/2020	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**95.7**	**9**		20	150	11/25/2020	JMK
2-Chlorophenol - BS	EPA-8270	**56.6**			45	111	11/25/2020	JMK
2-Chlorophenol - BSD	EPA-8270	**75.6**	**29**	SR1	45	111	11/25/2020	JMK
1,3-Dichlorobenzene - BS	EPA-8270	**42.6**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,3-Dichlorobenzene - BSD	EPA-8270	**58.3**	**31**	SR1	20	150	11/25/2020	JMK
1,4-Dichlorobenzene - BS	EPA-8270	**45.9**			27.1	114	11/25/2020	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	**59.9**	**26**	SR1	27.1	114	11/25/2020	JMK
Benzyl Alcohol - BS	EPA-8270	**47.8**			20	150	11/25/2020	JMK
Benzyl Alcohol - BSD	EPA-8270	**65.1**	**31**	SR1	20	150	11/25/2020	JMK
1,2-Dichlorobenzene - BS	EPA-8270	**46.8**			20	150	11/25/2020	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	**61.4**	**27**		20	150	11/25/2020	JMK
2-Methylphenol - BS	EPA-8270	**49.6**			20	150	11/25/2020	JMK
2-Methylphenol - BSD	EPA-8270	**64.1**	**25**		20	150	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**79.8**			20	150	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**102**	**24**		20	150	11/25/2020	JMK
3&4-Methylphenol - BS	EPA-8270	**42.0**			20	150	11/25/2020	JMK
3&4-Methylphenol - BSD	EPA-8270	**55.4**	**27**		20	150	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**59.8**			42.2	119	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**85.8**	**36**	SR1	42.2	119	11/25/2020	JMK
Hexachloroethane - BS	EPA-8270	**53.3**			20	150	11/25/2020	JMK
Hexachloroethane - BSD	EPA-8270	**70.2**	**27**		20	150	11/25/2020	JMK
Nitrobenzene - BS	EPA-8270	**77.6**			20	150	11/25/2020	JMK
Nitrobenzene - BSD	EPA-8270	**100**	**26**		20	150	11/25/2020	JMK
Isophorone - BS	EPA-8270	**64.2**			20	150	11/25/2020	JMK
Isophorone - BSD	EPA-8270	**82.7**	**25**		20	150	11/25/2020	JMK
2-Nitrophenol - BS	EPA-8270	**73.5**			20	150	11/25/2020	JMK
2-Nitrophenol - BSD	EPA-8270	**94.6**	**25**		20	150	11/25/2020	JMK
2,4-Dimethylphenol - BS	EPA-8270	**57.7**			20	150	11/25/2020	JMK
2,4-Dimethylphenol - BSD	EPA-8270	**73.6**	**24**		20	150	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**64.4**			20	150	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**84.2**	**27**		20	150	11/25/2020	JMK
2,4-Dichlorophenol - BS	EPA-8270	**61.4**			20	150	11/25/2020	JMK
2,4-Dichlorophenol - BSD	EPA-8270	**81.9**	**29**		20	150	11/25/2020	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	**48.3**			29.4	120	11/25/2020	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	**63.1**	**27**	SR1	29.4	120	11/25/2020	JMK
Naphthalene - BS	EPA-8270	**56.4**			20	150	11/25/2020	JMK
Naphthalene - BSD	EPA-8270	**72.3**	**25**		20	150	11/25/2020	JMK
4-Chloroaniline - BS	EPA-8270	**38.5**			20	150	11/25/2020	JMK
4-Chloroaniline - BSD	EPA-8270	**60.6**	**45**	SR1	20	150	11/25/2020	JMK
Hexachlorobutadiene - BS	EPA-8270	**52.1**			20	150	11/25/2020	JMK
Hexachlorobutadiene - BSD	EPA-8270	**67.7**	**26**		20	150	11/25/2020	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	**66.6**			44	113	11/25/2020	JMK
4-Chloro-3-Methylphenol - BSD	EPA-8270	**90.1**	**30**	SR1	44	113	11/25/2020	JMK
2-Methylnaphthalene - BS	EPA-8270	**55.2**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Methylnaphthalene - BSD	EPA-8270	**72.1**	**27**		20	150	11/25/2020	JMK
1-Methylnaphthalene - BS	EPA-8270	**54.8**			20	150	11/25/2020	JMK
1-Methylnaphthalene - BSD	EPA-8270	**72.4**	**28**		20	150	11/25/2020	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	**34.4**			20	150	11/25/2020	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	**53.2**	**43**	SR1	20	150	11/25/2020	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	**65.4**			20	150	11/25/2020	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	**86.1**	**27**		20	150	11/25/2020	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	**68.5**			20	150	11/25/2020	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	**85.3**	**22**		20	150	11/25/2020	JMK
2-Chloronaphthalene - BS	EPA-8270	**63.3**			20	150	11/25/2020	JMK
2-Chloronaphthalene - BSD	EPA-8270	**78.7**	**22**		20	150	11/25/2020	JMK
2-Nitroaniline - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
2-Nitroaniline - BSD	EPA-8270	**107**	**26**		20	150	11/25/2020	JMK
Acenaphthylene - BS	EPA-8270	**56.8**			20	150	11/25/2020	JMK
Acenaphthylene - BSD	EPA-8270	**72.4**	**24**		20	150	11/25/2020	JMK
Dimethylphthalate - BS	EPA-8270	**79.2**			20	150	11/25/2020	JMK
Dimethylphthalate - BSD	EPA-8270	**97.7**	**21**		20	150	11/25/2020	JMK
2,6-Dinitrotoluene - BS	EPA-8270	**75.1**			20	150	11/25/2020	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	**92.5**	**21**		20	150	11/25/2020	JMK
Acenaphthene - BS	EPA-8270	**64.5**			41	107	11/25/2020	JMK
Acenaphthene - BSD	EPA-8270	**81.8**	**24**	SR1	41	107	11/25/2020	JMK
3-Nitroaniline - BS	EPA-8270	**30.8**			20	150	11/25/2020	JMK
3-Nitroaniline - BSD	EPA-8270	**60.4**	**65**	SR1	20	150	11/25/2020	JMK
2,4-Dinitrophenol - BS	EPA-8270	**20.1**			20	150	11/25/2020	JMK
2,4-Dinitrophenol - BSD	EPA-8270	**98.8**	**132**	SR1	20	150	11/25/2020	JMK
4-Nitrophenol - BS	EPA-8270	**8.22**			5	63	11/25/2020	JMK
4-Nitrophenol - BSD	EPA-8270	**14.8**	**57**	SR1	5	63	11/25/2020	JMK
Dibenzofuran - BS	EPA-8270	**69.8**			20	150	11/25/2020	JMK
Dibenzofuran - BSD	EPA-8270	**88.3**	**23**		20	150	11/25/2020	JMK
2,4-Dinitrotoluene - BS	EPA-8270	**71.5**			53.1	136	11/25/2020	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	**91.6**	**25**	SR1	53.1	136	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**64.0**			20	150	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**85.9**	**29**		20	150	11/25/2020	JMK
Diethylphthalate - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
Diethylphthalate - BSD	EPA-8270	**101**	**20**		20	150	11/25/2020	JMK
Fluorene - BS	EPA-8270	**73.0**			20	150	11/25/2020	JMK
Fluorene - BSD	EPA-8270	**92.0**	**23**		20	150	11/25/2020	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	**71.4**			20	150	11/25/2020	JMK
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**90.4**	**24**		20	150	11/25/2020	JMK
4-Nitroaniline - BS	EPA-8270	**56.4**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline - BSD	EPA-8270	**77.6**	**32**	SR1	20	150	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**74.5**			20	150	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**108**	**37**	SR1	20	150	11/25/2020	JMK
Azobenzene - BS	EPA-8270	**91.6**			20	150	11/25/2020	JMK
Azobenzene - BSD	EPA-8270	**113**	**21**		20	150	11/25/2020	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	**79.0**			20	150	11/25/2020	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	**98.5**	**22**		20	150	11/25/2020	JMK
Hexachlorobenzene - BS	EPA-8270	**78.7**			20	150	11/25/2020	JMK
Hexachlorobenzene - BSD	EPA-8270	**97.9**	**22**		20	150	11/25/2020	JMK
Pentachlorophenol - BS	EPA-8270	**57.8**			33	124	11/25/2020	JMK
Pentachlorophenol - BSD	EPA-8270	**77.1**	**29**		33	124	11/25/2020	JMK
Phenanthrene - BS	EPA-8270	**71.0**			20	150	11/25/2020	JMK
Phenanthrene - BSD	EPA-8270	**90.8**	**24**		20	150	11/25/2020	JMK
Anthracene - BS	EPA-8270	**68.3**			20	150	11/25/2020	JMK
Anthracene - BSD	EPA-8270	**87.5**	**25**		20	150	11/25/2020	JMK
Carbazole - BS	EPA-8270	**73.5**			20	150	11/25/2020	JMK
Carbazole - BSD	EPA-8270	**99.3**	**30**		20	150	11/25/2020	JMK
Di-N-Butylphthalate - BS	EPA-8270	**71.5**			20	150	11/25/2020	JMK
Di-N-Butylphthalate - BSD	EPA-8270	**90.5**	**23**		20	150	11/25/2020	JMK
Fluoranthene - BS	EPA-8270	**69.9**			20	150	11/25/2020	JMK
Fluoranthene - BSD	EPA-8270	**89.1**	**24**		20	150	11/25/2020	JMK
Pyrene - BS	EPA-8270	**62.6**			18	136	11/25/2020	JMK
Pyrene - BSD	EPA-8270	**77.0**	**21**	SR1	18	136	11/25/2020	JMK
Butylbenzylphthalate - BS	EPA-8270	**59.8**			20	150	11/25/2020	JMK
Butylbenzylphthalate - BSD	EPA-8270	**76.0**	**24**		20	150	11/25/2020	JMK
Benzo[A]Anthracene - BS	EPA-8270	**64.5**			20	150	11/25/2020	JMK
Benzo[A]Anthracene - BSD	EPA-8270	**83.3**	**25**		20	150	11/25/2020	JMK
Chrysene - BS	EPA-8270	**68.7**			20	150	11/25/2020	JMK
Chrysene - BSD	EPA-8270	**84.6**	**21**		20	150	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**61.3**			20	150	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**78.7**	**25**		20	150	11/25/2020	JMK
Di-N-Octylphthalate - BS	EPA-8270	**62.9**			20	150	11/25/2020	JMK
Di-N-Octylphthalate - BSD	EPA-8270	**80.8**	**25**		20	150	11/25/2020	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	**67.0**			20	150	11/25/2020	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	**81.0**	**19**		20	150	11/25/2020	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	**72.6**			20	150	11/25/2020	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	**95.8**	**28**		20	150	11/25/2020	JMK
Benzo[A]Pyrene - BS	EPA-8270	**69.6**			20	150	11/25/2020	JMK
Benzo[A]Pyrene - BSD	EPA-8270	**88.8**	**24**		20	150	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**80.2**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**103**	**25**		20	150	11/25/2020	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	**82.8**			20	150	11/25/2020	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	**106**	**25**		20	150	11/25/2020	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	**104**	**23**		20	150	11/25/2020	JMK

SR1 - RPD outside of control limits.

ALS Test Batch ID: R374917 - Water by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**117**			44	152	12/09/2020	CAS
PCB-1260 - BS	EPA-8082	**126**			44	152	12/09/2020	CAS

ALS Test Batch ID: 160255 - Water by EPA-8081

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
A-BHC - BS	EPA-8081	**68.4**			50	150	12/01/2020	JMK
A-BHC - BSD	EPA-8081	**74.2**	**8**		50	150	12/01/2020	JMK
G-BHC - BS	EPA-8081	**73.4**			50	158	12/01/2020	JMK
G-BHC - BSD	EPA-8081	**79.6**	**8**		50	158	12/01/2020	JMK
B-BHC - BS	EPA-8081	**68.9**			50	150	12/01/2020	JMK
B-BHC - BSD	EPA-8081	**74.7**	**8**		50	150	12/01/2020	JMK
Heptachlor - BS	EPA-8081	**62.9**			50	134	12/01/2020	JMK
Heptachlor - BSD	EPA-8081	**67.4**	**7**		50	134	12/01/2020	JMK
D-BHC - BS	EPA-8081	**66.6**			50	150	12/01/2020	JMK
D-BHC - BSD	EPA-8081	**72.0**	**8**		50	150	12/01/2020	JMK
Aldrin - BS	EPA-8081	**53.3**			50	137	12/01/2020	JMK
Aldrin - BSD	EPA-8081	**55.8**	**5**		50	137	12/01/2020	JMK
Heptachlor Epoxide - BS	EPA-8081	**69.0**			50	150	12/01/2020	JMK
Heptachlor Epoxide - BSD	EPA-8081	**73.9**	**7**		50	150	12/01/2020	JMK
Chlordane - BS	EPA-8081	**66.4**			50	150	12/01/2020	JMK
Chlordane - BSD	EPA-8081	**69.4**	**4**		50	150	12/01/2020	JMK
Endosulfan I - BS	EPA-8081	**68.7**			50	150	12/01/2020	JMK
Endosulfan I - BSD	EPA-8081	**74.9**	**9**		50	150	12/01/2020	JMK
4,4'-DDE - BS	EPA-8081	**69.9**			50	150	12/01/2020	JMK
4,4'-DDE - BSD	EPA-8081	**71.1**	**2**		50	150	12/01/2020	JMK
Dieldrin - BS	EPA-8081	**70.0**			50	137	12/01/2020	JMK
Dieldrin - BSD	EPA-8081	**74.6**	**6**		50	137	12/01/2020	JMK
Endrin - BS	EPA-8081	**75.2**			50	134	12/01/2020	JMK
Endrin - BSD	EPA-8081	**80.7**	**7**		50	134	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4,4'-DDD - BS	EPA-8081	**76.6**			50	150	12/01/2020	JMK
4,4'-DDD - BSD	EPA-8081	**79.1**	**3**		50	150	12/01/2020	JMK
Endosulfan II - BS	EPA-8081	**72.6**			50	150	12/01/2020	JMK
Endosulfan II - BSD	EPA-8081	**78.3**	**7**		50	150	12/01/2020	JMK
4,4'-DDT - BS	EPA-8081	**89.0**			59	149	12/01/2020	JMK
4,4'-DDT - BSD	EPA-8081	**90.6**	**2**		59	149	12/01/2020	JMK
Endrin Aldehyde - BS	EPA-8081	**77.5**			50	150	12/01/2020	JMK
Endrin Aldehyde - BSD	EPA-8081	**84.0**	**8**		50	150	12/01/2020	JMK
Endosulfan Sulfate - BS	EPA-8081	**74.3**			50	150	12/01/2020	JMK
Endosulfan Sulfate - BSD	EPA-8081	**79.4**	**7**		50	150	12/01/2020	JMK
Methoxychlor - BS	EPA-8081	**90.7**			50	150	12/01/2020	JMK
Methoxychlor - BSD	EPA-8081	**94.0**	**4**		50	150	12/01/2020	JMK

ALS Test Batch ID: R374253 - Water by SM2540C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids - BS	SM2540C	**109**			85	115	11/24/2020	KLS

ALS Test Batch ID: R374255 - Water by SM2540C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids - BS	SM2540C	**112**			85	115	11/24/2020	KLS

ALS Test Batch ID: R374360 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Fluoride - BS	EPA-300.0	**105**			80	120	12/05/2020	RAL
Fluoride - BSD	EPA-300.0	**105**	**0**		80	120	12/05/2020	RAL

ALS Test Batch ID: R374795 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Nitrate as N - BS	EPA-300.0	**95.3**			80	120	11/25/2020	ARI2
Nitrite as N - BS	EPA-300.0	**100**			80	120	11/25/2020	ARI2

ALS Test Batch ID: R374797 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfate - BS	EPA-300.0	**98.8**			80	120	12/01/2020	ARI2

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R374799 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**93.7**			80	120	11/30/2020	ARI2

ALS Test Batch ID: R374287 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-245.1	**103**			80.6	118	12/01/2020	RAL
Mercury - BSD	EPA-245.1	**102**	**0**		80.6	118	12/01/2020	RAL

ALS Test Batch ID: R374671 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved) - BS	EPA-245.1	**110**			80.6	118	12/02/2020	RAL
Mercury (Dissolved) - BSD	EPA-245.1	**111**	**1**		80.6	118	12/02/2020	RAL

ALS Test Batch ID: 160493 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-200.8	**101**			89.1	110	12/08/2020	RAL
Arsenic - BSD	EPA-200.8	**99.5**	**1**		89.1	110	12/08/2020	RAL
Barium - BS	EPA-200.8	**100**			88.5	108	12/08/2020	RAL
Barium - BSD	EPA-200.8	**99.3**	**1**		88.5	108	12/08/2020	RAL
Cadmium - BS	EPA-200.8	**105**			89.4	110	12/08/2020	RAL
Cadmium - BSD	EPA-200.8	**103**	**1**		89.4	110	12/08/2020	RAL
Calcium - BS	EPA-200.8	**94.0**			80	120	12/08/2020	RAL
Calcium - BSD	EPA-200.8	**93.9**	**0**		80	120	12/08/2020	RAL
Chromium - BS	EPA-200.8	**104**			88.3	110.2	12/08/2020	RAL
Chromium - BSD	EPA-200.8	**103**	**1**		88.3	110.2	12/08/2020	RAL
Iron - BS	EPA-200.8	**103**			80	120	12/08/2020	RAL
Iron - BSD	EPA-200.8	**102**	**1**		80	120	12/08/2020	RAL
Lead - BS	EPA-200.8	**100**			87.5	107	12/08/2020	RAL
Lead - BSD	EPA-200.8	**102**	**1**		87.5	107	12/08/2020	RAL
Magnesium - BS	EPA-200.8	**101**			80	120	12/08/2020	RAL
Magnesium - BSD	EPA-200.8	**99.9**	**1**		80	120	12/08/2020	RAL
Manganese - BS	EPA-200.8	**96.0**			82.2	110	12/08/2020	RAL
Manganese - BSD	EPA-200.8	**99.0**	**3**		82.2	110	12/08/2020	RAL
Potassium - BS	EPA-200.8	**101**			80	120	12/08/2020	RAL
Potassium - BSD	EPA-200.8	**101**	**0**		80	120	12/08/2020	RAL
Selenium - BS	EPA-200.8	**100**			90.2	113	12/08/2020	RAL
Selenium - BSD	EPA-200.8	**99.5**	**1**		90.2	113	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110151
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Silver - BS	EPA-200.8	**106**			80	120	12/08/2020	RAL
Silver - BSD	EPA-200.8	**105**	**1**		80	120	12/08/2020	RAL
Sodium - BS	EPA-200.8	**100**			80	105	12/08/2020	RAL
Sodium - BSD	EPA-200.8	**99.1**	**1**		80	105	12/08/2020	RAL

ALS Test Batch ID: 160487 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved) - BS	EPA-200.8	**99.6**			89.1	110	12/07/2020	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	**103**	**4**		89.1	110	12/07/2020	RAL
Barium (Dissolved) - BS	EPA-200.8	**102**			88.5	108	12/07/2020	RAL
Barium (Dissolved) - BSD	EPA-200.8	**105**	**3**		88.5	108	12/07/2020	RAL
Cadmium (Dissolved) - BS	EPA-200.8	**104**			89.4	110	12/07/2020	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	**108**	**4**	SR1	89.4	110	12/07/2020	RAL
Calcium (Dissolved) - BS	EPA-200.8	**94.5**			80	120	12/07/2020	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**98.4**	**4**		80	120	12/07/2020	RAL
Chromium (Dissolved) - BS	EPA-200.8	**103**			86.2	107	12/07/2020	RAL
Chromium (Dissolved) - BSD	EPA-200.8	**107**	**3**	SR1	86.2	107	12/07/2020	RAL
Iron (Dissolved) - BS	EPA-200.8	**103**			80	120	12/07/2020	RAL
Iron (Dissolved) - BSD	EPA-200.8	**107**	**4**	SR1	80	120	12/07/2020	RAL
Lead (Dissolved) - BS	EPA-200.8	**102**			87.5	107	12/07/2020	RAL
Lead (Dissolved) - BSD	EPA-200.8	**107**	**4**	SR1	87.5	107	12/07/2020	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**104**			80	120	12/07/2020	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**106**	**2**		80	120	12/07/2020	RAL
Manganese (Dissolved) - BS	EPA-200.8	**99.7**			82.2	110	12/07/2020	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**102**	**2**		82.2	110	12/07/2020	RAL
Potassium (Dissolved) - BS	EPA-200.8	**103**			80	120	12/07/2020	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**106**	**3**		80	120	12/07/2020	RAL
Selenium (Dissolved) - BS	EPA-200.8	**103**			90.2	113	12/07/2020	RAL
Selenium (Dissolved) - BSD	EPA-200.8	**107**	**4**		90.2	113	12/07/2020	RAL
Silver (Dissolved) - BS	EPA-200.8	**102**			80	120	12/07/2020	RAL
Silver (Dissolved) - BSD	EPA-200.8	**105**	**3**	SR1	80	120	12/07/2020	RAL
Sodium (Dissolved) - BS	EPA-200.8	**101**			80	105	12/07/2020	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**104**	**3**		80	105	12/07/2020	RAL

SR1 - RPD outside of control limits.

ALS Test Batch ID: R374923 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**99.0**			1	200	12/04/2020	CAS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/14/2021
		ALS SDG#:	EV20110151
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Bicarbonate as CaCO3 - BS	SM2320B	**99.0**			1	200	12/04/2020	CAS

ALS Test Batch ID: R374927 - Water by EPA-350.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Ammonia as N - BS	EPA-350.1	**102**			80	120	12/08/2020	CAS

ALS Test Batch ID: R374931 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**99.6**			80	120	12/11/2020	CAS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV2011015 1

Chain-of-Custody Record

LANDAU ASSOCIATES

☑ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ _____

Date 11/23/20
Page 1 of 1

Turnaround Time: (Standard) / Accelerated

Project Name Yakima Landfill Project No. 148008.040.046
Project Location/Event Yakima, WA / Pre-Construction Sampling
Sampler's Name B. McManus, S. Kostka, J. Newcomb
Project Contact S. Renando
Send Results To S. Renando, P. Roelen, D. Jorgensen

Special Handling Requirements:

Shipment Method: FedEx
Stored on ice: (Yes) / No

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	① TAL Metals (EPA 200.8/6020A)	② Chlorinated Pesticides (EPA 8081)	PCBs (EPA 8082)	③ VOCs (8260D)	SVOCs (EPA 8270D)	PAHs (EPA 8270D SIM)	NWTPH-Dx (w/ and w/out Silica)	④ Inorganic Ions (EPA 300.0)	⑤ Alkalinity/Bicarbonate	Ammonia (350.1)	⑥ TOC/TDS
1	MW-7-112320	11/23/20	1045	AQ	11	X	X	X	X	X	X		X	X	X	X
2	MW-107-112320	11/23/20	1016	AQ	11	X	X	X	X	X	X		X	X	X	X
3	MW-11-~~112320~~ 112320	11/23/20	1025	AQ	11	X	X	X	X	X	X		X	X	X	X
4	MW-8-112320	11/23/20	1145	AQ	11	X	X	X	X	X	X		X	X	X	X
5	MW-108-112320 112320	11/23/20	1126	AQ	11	X	X	X	X	X	X		X	X	X	X
6	MW-18-~~112320~~ 112320	11/23/20	1125	AQ	11	X	X	X	X	X	X		X	X	X	X
7	MW-109-112320 112320	11/23/20	1246	AQ	11	X	X	X	X	X	X		X	X	X	X
8	MW-9A-~~112320~~ 112320	11/23/20	1245	AQ	11	X	X	X	X	X	X		X	X	X	X
9	MW-100-112320	11/23/20	1307	AQ	11	X	~~X~~ NO3a	X	X	X	X		X	X	X	X
10	TP-MW-1-~~112320~~ 112320	11/23/20	1400	AQ	5	X	~~X~~ NO3a						X	X	X	X
11	DUP-2-112320	11/23/20	1410	AQ	11	X	X	~~X~~ NO3a	X	X	X		X	X	X	X
12	FPP-MW-1-112320*	11/23/20	1421	AQ	3					X	X					
13	FPP-MW-3-112320	11/23/20	1457	AQ	11	X	X	X	X	X	X		X	X	~~X~~ NO3	X FAS only
14	TP-MW-2-~~112320~~ 112320	11/23/20	1445	AQ	6	X						X	X	X	X	X
15	Trip Blanks	—	—	AQ	2				X							

Observations/Comments

☐ Allow water samples to settle, collect aliquot from clear portion
☑ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☒
☐ Dissolved metal samples were field filtered

Other
① As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag, Hg, K
② Low level
③ SIM
④ Fluoride, Nitrate as N, Nitrite as N, chloride, sulfate
⑤ SM 2320B
⑥ SM 5310C / SM 2540C

* On hold

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Jered Newcomb	Printed Name Rick Bagan	Printed Name	Printed Name
Company LAI	Company ALS	Company	Company
Date 11/23/20 Time 16:00	Date 11/24/20 Time 9:30	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV20110151

Project: Yakima Landfill

Received Date: 11-24-20 Received Time: 9:30 By: RB

Type of shipping container: Cooler X 6 Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Mail ____ Courier ____ Hand Delivered ____
FedEx Express X

	Yes	No	N/A
Were custody seals on outside of shipping container?	X		
If yes, how many? 1 Where? Top			
Custody seal date: 11/23/20 Seal name: ____			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X		
Did all bottles have labels?	X		
Did all bottle labels and tags agree with Chain of Custody?	X		
Were samples received within hold time?	X		
Did all bottles arrive in good condition (unbroken, etc.)?	X		
Was sufficient amount of sample sent for the tests indicated?	X		
Was correct preservation added to samples?	X		

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	X		
Bubbles present in sample #: None			

Temperature of cooler upon receipt: 2.3 0.8 / 1.1 2.3 / 1.9 1.6 Cold Cool Ambient N/A

Explain any discrepancies: all on Ice

Was client contacted? Yes Who was called? Stephanie By whom? RB Date: 11/24/20

Outcome of call: Will try to resample

January 14, 2021

Ms. Stephanie Renando
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Renando,

On November 25th, 2 samples were received by our laboratory and assigned our laboratory project number EV20110160. The project was identified as your Yakima Landfill / #1148008.040.046. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110160 EV20110160-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 10:47:00 AM
CLIENT SAMPLE ID	DPW-1-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	**190**	50	1	MG/L	11/25/2020	KLS
Chloride	EPA-300.0	**18**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/06/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	U	1.0	1	MG/L	12/07/2020	ARI2
Arsenic (Dissolved)	EPA-200.8	**1.3**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**23**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**22000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**9200**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**9200**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**910**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**2800**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**9600**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**93**	0	1	MG/L	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	**93**	0	1	MG/L	12/07/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**1.8**	0.50	1	MG/L	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/14/2021 EV20110160 EV20110160-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 1:23:00 PM
CLIENT SAMPLE ID	DPW-2-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	**110**	50	1	MG/L	11/25/2020	KLS
Chloride	EPA-300.0	**2.8**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/06/2020	RAL
Nitrate as N	EPA-300.0	U	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**1.4**	1.0	1	MG/L	12/07/2020	ARI2
Arsenic (Dissolved)	EPA-200.8	**1.1**	0.45	1	UG/L	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	**13**	1.0	1	UG/L	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	**5100**	50	1	UG/L	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/01/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**4400**	50	1	UG/L	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	**440**	2.0	1	UG/L	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	**1100**	50	1	UG/L	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	**4000**	50	1	UG/L	12/01/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**54**	0	1	MG/L	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	**54**	0	1	MG/L	12/07/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**0.81**	0.50	1	MG/L	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

DATE: 1/14/2021
ALS SDG#: EV20110160
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R373457 - Batch R373457 - Water by SM2540C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	U	MG/L	50	11/25/2020	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374606 - Batch R374606 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Fluoride	EPA-300.0	U	MG/L	0.16	12/06/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374717 - Batch R374717 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Nitrate as N	EPA-300.0	U	MG/L	0.034	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	MG/L	0.043	11/25/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374720 - Batch R374720 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfate	EPA-300.0	U	MG/L	1.0	12/07/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374721 - Batch R374721 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.50	11/30/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120120W - Batch 160347 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	0.15	12/01/2020	RAL
Barium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/01/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/01/2020	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	12/01/2020	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	0.11	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

DATE: 1/14/2021
ALS SDG#: EV20110160
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-120120W - Batch 160347 - Water by EPA-200.8

Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	12/01/2020	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	UG/L	4.0	12/01/2020	RAL
Silver (Dissolved)	EPA-200.8	U	UG/L	0.050	12/01/2020	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	12/01/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374607 - Batch R374607 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	U	MG/L	9.0	12/07/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374609 - Batch R374609 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110160
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R373457 - Water by SM2540C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids - BS	SM2540C	**94.8**			85	115	11/25/2020	KLS

ALS Test Batch ID: R374606 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Fluoride - BS	EPA-300.0	**106**			80	120	12/06/2020	RAL
Fluoride - BSD	EPA-300.0	**106**	**0**		80	120	12/06/2020	RAL

ALS Test Batch ID: R374717 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Nitrate as N - BS	EPA-300.0	**95.3**			80	120	11/25/2020	ARI2
Nitrite as N - BS	EPA-300.0	**100**			80	120	11/25/2020	ARI2

ALS Test Batch ID: R374720 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfate - BS	EPA-300.0	**102**			80	120	12/07/2020	ARI2

ALS Test Batch ID: R374721 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**93.7**			80	120	11/30/2020	ARI2

ALS Test Batch ID: 160347 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved) - BS	EPA-200.8	**94.2**			89.1	110	12/01/2020	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	**95.5**	**1**		89.1	110	12/01/2020	RAL
Barium (Dissolved) - BS	EPA-200.8	**97.7**			88.5	108	12/01/2020	RAL
Barium (Dissolved) - BSD	EPA-200.8	**96.9**	**1**		88.5	108	12/01/2020	RAL
Cadmium (Dissolved) - BS	EPA-200.8	**101**			89.4	110	12/01/2020	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	**102**	**1**		89.4	110	12/01/2020	RAL
Calcium (Dissolved) - BS	EPA-200.8	**87.9**			80	120	12/01/2020	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**90.2**	**3**		80	120	12/01/2020	RAL
Chromium (Dissolved) - BS	EPA-200.8	**98.1**			86.2	107	12/01/2020	RAL
Chromium (Dissolved) - BSD	EPA-200.8	**102**	**4**	SR1	86.2	107	12/01/2020	RAL
Iron (Dissolved) - BS	EPA-200.8	**96.9**			80	120	12/01/2020	RAL
Iron (Dissolved) - BSD	EPA-200.8	**98.3**	**1**		80	120	12/01/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/14/2021
ALS SDG#: EV20110160
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Lead (Dissolved) - BS	EPA-200.8	**97.4**			87.5	107	12/01/2020	RAL
Lead (Dissolved) - BSD	EPA-200.8	**98.7**	**1**		87.5	107	12/01/2020	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**98.6**			80	120	12/01/2020	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**99.6**	**1**		80	120	12/01/2020	RAL
Manganese (Dissolved) - BS	EPA-200.8	**101**			82.2	110	12/01/2020	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**98.8**	**2**		82.2	110	12/01/2020	RAL
Potassium (Dissolved) - BS	EPA-200.8	**95.4**			80	120	12/01/2020	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**96.8**	**1**		80	120	12/01/2020	RAL
Selenium (Dissolved) - BS	EPA-200.8	**95.5**			90.2	113	12/01/2020	RAL
Selenium (Dissolved) - BSD	EPA-200.8	**97.1**	**2**		90.2	113	12/01/2020	RAL
Silver (Dissolved) - BS	EPA-200.8	**96.7**			80	120	12/01/2020	RAL
Silver (Dissolved) - BSD	EPA-200.8	**97.2**	**0**		80	120	12/01/2020	RAL
Sodium (Dissolved) - BS	EPA-200.8	**99.4**			80	105	12/01/2020	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**100**	**1**		80	105	12/01/2020	RAL

SR1 - RPD outside of control limits.

ALS Test Batch ID: R374607 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**101**			90	110	12/07/2020	CAS
Bicarbonate as CaCO3 - BS	SM2320B	**101**			85	115	12/07/2020	CAS

ALS Test Batch ID: R374609 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**99.6**			83	117	12/09/2020	CAS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV2011O160

LANDAU ASSOCIATES Chain-of-Custody Record

☑ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ _____

Date 11/25/20
Page 1 of 1

Turnaround Time:
(Standard) / Accelerated

Project Name Yakima LF Project No. 1148008.040.046
Project Location/Event Yakima, WA / Pre-Construction Sampling
Sampler's Name B. McManus, S. Kostka, J. Newcomb
Project Contact S. Renando
Send Results To S. Renando, P. Roelen, D. Jorgensen

Special Handling Requirements:

Shipment Method: Drop OFF
Stored on ice: (Yes) / No

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	① Total Metals (EPA 200.8 / EPA 7471)	② Dissolved Metals (EPA 200.8)	Dissolved Hg (EPA 7470)	③ Chlorinated Pests (EPA 8081 LL)	PCBs (EPA 8082 LL)	VOCs (EPA 8260D SIM)	SVOCs (EPA 8270 D)	PAHs (EPA 8270 D SIM)	NWTPH-Dx (w/ SGC and w/o SGC)	④ Inorganic Ions (EPA 300.0)	⑤ Alkalinity/Bicarbonate	Ammonia (NH3-N) (EPA 350.1)	⑥ TOC / TDS	Observations/Comments
1 *	DPW-1-112420	11/24/20	1047	AQ	12		X							X	X				
2 *	DPW-2-112420	11/24/20	1323	AQ	12		X							X	X				
	~~Trip Blanks~~	—	—	~~AQ~~	~~2~~	BXM													

Allow water samples to settle, collect aliquot from clear portion ☐
✓ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☑ - and Without
✓ Dissolved metal samples were field filtered

Other
① As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag, Hg, K
② As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag, K
③ Low Level
④ Fluoride, Nitrate, Nitrite, Chloride, Sulfate
⑤ SM 2320B
⑥ SM5310C / SM2540C

* Included extra volume for potential follow ups

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature Shawn Robinson	Signature	Signature
Printed Name Brittany McManus	Printed Name Shawn Robinson	Printed Name	Printed Name
Company Landau Associates, Inc.	Company ALS	Company	Company
Date 11/25/20 Time 756	Date 11/25/20 Time 0756	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV2011016O

Project: Yakima L.F 1148008 040.046

Received Date: 11/25/20 Received Time: 0756 By: [illegible]

Type of shipping container: Cooler X Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Mail ____ Courier ____ Hand Delivered X
FedEx Express ____

	Yes	No	N/A
Were custody seals on outside of shipping container?	____	X	____
If yes, how many? ____ Where? ____			
Custody seal date: ____ Seal name: ____			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	____	____
Did all bottles have labels?	X	____	____
Did all bottle labels and tags agree with Chain of Custody?	X	____	____
Were samples received within hold time?	X	____	____
Did all bottles arrive in good condition (unbroken, etc.)?	X	____	____
Was sufficient amount of sample sent for the tests indicated?	X	____	____
Was correct preservation added to samples?	X	____	____

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	X	____	____
Bubbles present in sample #: None			

Temperature of cooler upon receipt: 3.4°C on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ____

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____

Outcome of call: ____

January 13, 2021

Ms. Stephanie Renando
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Renando,

On November 25th, 9 samples were received by our laboratory and assigned our laboratory project number EV20110161. The project was identified as your Yakima Landfill / #1148008.040.046. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/13/2021
		ALS JOB#:	EV20110161
		ALS SAMPLE#:	EV20110161-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 7:50:00 AM
CLIENT SAMPLE ID	MW-12-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	**4900**	260	2	UG/L	12/08/2020	JNF
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	**350**	130	1	UG/L	12/10/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	**880**	500	2	UG/L	12/08/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	12/10/2020	JNF
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Arsenic	EPA-200.8	**1.6**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**85**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**57000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**5100**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**22000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**870**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**7300**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**85000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**2.1**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**82**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**58000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**6700**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**23000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**1100**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**7600**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**87000**	50	1	UG/L	12/07/2020	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25 2X Dilution	NWTPH-DX	**102**	12/08/2020	JNF
C25	NWTPH-DX w/ SGA	**110**	12/10/2020	JNF

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-01
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 7:50:00 AM
CLIENT SAMPLE ID	MW-12-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and an unidentified oil range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-02
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 8:11:00 AM
CLIENT SAMPLE ID	FPP-MW-1-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	**530**	50	1	MG/L	11/25/2020	KLS
Chloride	EPA-300.0	**30**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/06/2020	RAL
Nitrate as N	EPA-300.0	**0.041**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**14**	1.0	1	MG/L	12/07/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Arsenic	EPA-200.8	**17**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**93**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**67000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**41000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	**1.9**	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**21000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**3600**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**8200**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**63000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**11**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**90**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**66000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**38000**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**21000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**3400**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**8200**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**63000**	50	1	UG/L	12/07/2020	RAL
Ammonia as N	EPA-350.1	**3.0**	0.050	1	MG/L	12/14/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**22**	0.50	1	MG/L	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-03
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 10:31:00 AM
CLIENT SAMPLE ID	MW-16-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	**450**	50	1	MG/L	11/25/2020	KLS
Chloride	EPA-300.0	**28**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	1.0	1	MG/L	12/06/2020	RAL
Nitrate as N	EPA-300.0	**1.2**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**14**	1.0	1	MG/L	12/07/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Arsenic	EPA-200.8	**0.69**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**34**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**58000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**470**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**15000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**600**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**13000**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**34000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**0.61**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**28**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**57000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**15000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**300**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**13000**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**33000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**200**	3.0	1	MG/L	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	**200**	3.0	1	MG/L	12/07/2020	CAS
Ammonia as N	EPA-350.1	U	0.050	1	MG/L	12/14/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**3.8**	0.50	1	MG/L	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-04
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 11:41:00 AM
CLIENT SAMPLE ID	MW-100-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TCMX	EPA-8081	**77.4**	12/01/2020	JMK
DCB	EPA-8081	**76.8**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-05
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 1:55:00 PM
CLIENT SAMPLE ID	MW-14-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	**200**	50	1	MG/L	11/25/2020	KLS
Chloride	EPA-300.0	**15**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/06/2020	RAL
Nitrate as N	EPA-300.0	**0.18**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	**3.7**	1.0	1	MG/L	12/07/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Arsenic	EPA-200.8	U	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**11**	1.0	1	UG/L	12/08/2020	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**25000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	U	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**10000**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**250**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**4300**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**12000**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	U	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**12**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**26000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**10000**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**240**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**4300**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**12000**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**110**	3.0	1	MG/L	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	**110**	3.0	1	MG/L	12/07/2020	CAS
Ammonia as N	EPA-350.1	**0.25**	0.050	1	MG/L	12/14/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**1.3**	0.50	1	MG/L	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	0.020	1	UG/L	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	0.14	1	UG/L	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	0.054	1	UG/L	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	0.10	1	UG/L	12/03/2020	DLC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Acetone	EPA-8260	U	25	1	UG/L	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	0.014	1	UG/L	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	0.68	1	UG/L	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Hexane	EPA-8260	U	6.8	1	UG/L	12/03/2020	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	0.014	1	UG/L	12/03/2020	DLC
Benzene	EPA-8260	U	0.028	1	UG/L	12/03/2020	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	0.059	1	UG/L	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.023	1	UG/L	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2020	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.023	1	UG/L	12/03/2020	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.10	1	UG/L	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	0.069	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2020	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	0.12	1	UG/L	12/01/2020	JMK
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	0.017	1	UG/L	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chrysene	EPA-8270 SIM	U	0.018	1	UG/L	12/01/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	**0.0083**	0.0068	1	UG/L	12/01/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.013	1	UG/L	12/01/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	0.027	1	UG/L	12/01/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.014	1	UG/L	12/01/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.011	1	UG/L	12/01/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	12/01/2020	JMK
Pyridine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	1.4	1	UG/L	11/26/2020	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.87	1	UG/L	11/26/2020	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	UG/L	11/26/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.83	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	1.7	1	UG/L	11/26/2020	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/26/2020	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.72	1	UG/L	11/26/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Azobenzene	EPA-8270	U	1.5	1	UG/L	11/26/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/26/2020	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	1.9	1	UG/L	11/26/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Chrysene	EPA-8270	U	0.74	1	UG/L	11/26/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.75	1	UG/L	11/26/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/26/2020	JMK
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
A-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
G-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
B-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
D-BHC	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Aldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Chlordane	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	0.010	1	UG/L	12/01/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	UG/L	12/01/2020	JMK
Total Dissolved Solids	SM2540C	**180**	50	1	MG/L	11/25/2020	KLS
Chloride	EPA-300.0	**14**	0.50	1	MG/L	11/30/2020	ARI2
Fluoride	EPA-300.0	U	0.16	1	MG/L	12/06/2020	RAL
Nitrate as N	EPA-300.0	**0.065**	0.034	1	MG/L	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	0.043	1	MG/L	11/25/2020	ARI2
Sulfate	EPA-300.0	U	1.0	1	MG/L	12/07/2020	ARI2
Mercury	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Mercury (Dissolved)	EPA-245.1	U	0.11	1	UG/L	12/01/2020	RAL
Arsenic	EPA-200.8	**3.3**	0.45	1	UG/L	12/08/2020	RAL
Barium	EPA-200.8	**31**	1.0	1	UG/L	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Cadmium	EPA-200.8	U	1.0	1	UG/L	12/08/2020	RAL
Calcium	EPA-200.8	**21000**	50	1	UG/L	12/08/2020	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	12/08/2020	RAL
Iron	EPA-200.8	**12000**	50	1	UG/L	12/08/2020	RAL
Lead	EPA-200.8	U	0.28	1	UG/L	12/08/2020	RAL
Magnesium	EPA-200.8	**8700**	50	1	UG/L	12/08/2020	RAL
Manganese	EPA-200.8	**780**	2.0	1	UG/L	12/08/2020	RAL
Potassium	EPA-200.8	**3500**	50	1	UG/L	12/08/2020	RAL
Selenium	EPA-200.8	U	4.0	1	UG/L	12/08/2020	RAL
Silver	EPA-200.8	U	0.20	1	UG/L	12/08/2020	RAL
Sodium	EPA-200.8	**9100**	50	1	UG/L	12/08/2020	RAL
Arsenic (Dissolved)	EPA-200.8	**1.3**	0.45	1	UG/L	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	**24**	1.0	1	UG/L	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	**21000**	50	1	UG/L	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	**6800**	50	1	UG/L	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	0.28	1	UG/L	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	**8900**	50	1	UG/L	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	**740**	2.0	1	UG/L	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	**3400**	50	1	UG/L	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	4.0	1	UG/L	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	0.20	1	UG/L	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	**9200**	50	1	UG/L	12/07/2020	RAL
Alkalinity as CaCO3, Total	SM2320B	**93**	3.0	1	MG/L	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	**93**	3.0	1	MG/L	12/07/2020	CAS
Ammonia as N	EPA-350.1	**0.47**	0.050	1	MG/L	12/14/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**2.4**	0.50	1	MG/L	12/11/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**103**	12/03/2020	DLC
Toluene-d8	EPA-8260	**99.6**	12/03/2020	DLC
4-Bromofluorobenzene	EPA-8260	**102**	12/03/2020	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**111**	12/01/2020	JMK
Terphenyl-d14	EPA-8270 SIM	**86.1**	12/01/2020	JMK
2-Fluorophenol	EPA-8270	**42.8**	11/26/2020	JMK
Phenol-d5	EPA-8270	**18.8**	11/26/2020	JMK
Nitrobenzene-d5	EPA-8270	**81.5**	11/26/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-06
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 2:11:00 PM
CLIENT SAMPLE ID	MW-15-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl	EPA-8270	**69.7**	11/26/2020	JMK
2,4,6-Tribromophenol	EPA-8270	**94.2**	11/26/2020	JMK
Terphenyl-d14	EPA-8270	**98.0**	11/26/2020	JMK
DCB	EPA-8082	**47.0**	12/09/2020	CAS
TCMX	EPA-8081	**67.9**	12/01/2020	JMK
DCB	EPA-8081	**61.4**	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-07
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 12:51:00 PM
CLIENT SAMPLE ID	FPP-MW-2-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	**1700**	130	1	UG/L	12/02/2020	JNF
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	**690**	130	1	UG/L	12/10/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	**2800**	250	1	UG/L	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	**2200**	250	1	UG/L	12/10/2020	JNF

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**94.3**	12/02/2020	JNF
C25	NWTPH-DX w/ SGA	**89.7**	12/10/2020	JNF

Chromatogram indicates that it is likely that sample contains light oil/lube oil.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-08
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 8:00:00 AM
CLIENT SAMPLE ID	DUP-2-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1221	EPA-8082	U	0.030	1	UG/L	12/09/2020	CAS
PCB-1232	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1242	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1248	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1254	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS
PCB-1260	EPA-8082	U	0.015	1	UG/L	12/09/2020	CAS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
DCB	EPA-8082	**71.0**	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	1/13/2021 EV20110161 EV20110161-09
CLIENT CONTACT:	Stephanie Renando	DATE RECEIVED:	11/25/2020
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046	COLLECTION DATE:	11/24/2020 12:01:00 PM
CLIENT SAMPLE ID	FPP-MW-3-112420	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Ammonia as N	EPA-350.1	**0.90**	0.050	1	MG/L	12/14/2020	CAS
Total Organic Carbon (TOC)	SM5310C	**5.6**	0.50	1	MG/L	12/11/2020	CAS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/13/2021
		ALS SDG#:	EV20110161
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-120120W - Batch 160395 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	12/02/2020	JNF
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	12/02/2020	JNF

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120320W - Batch 160378 - Water by EPA-8260 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride	EPA-8260 SIM	U	UG/L	0.020	12/03/2020	DLC
Carbon Tetrachloride	EPA-8260 SIM	U	UG/L	0.10	12/03/2020	DLC
Chloroform	EPA-8260 SIM	U	UG/L	0.29	12/03/2020	DLC
Trichloroethene	EPA-8260 SIM	U	UG/L	0.026	12/03/2020	DLC
1,2-Dichloropropane	EPA-8260 SIM	U	UG/L	0.17	12/03/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260 SIM	U	UG/L	0.27	12/03/2020	DLC
1,1,2-Trichloroethane	EPA-8260 SIM	U	UG/L	0.19	12/03/2020	DLC
Dibromochloromethane	EPA-8260 SIM	U	UG/L	0.23	12/03/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260 SIM	U	UG/L	0.28	12/03/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260 SIM	U	UG/L	0.14	12/03/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260 SIM	U	UG/L	0.38	12/03/2020	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120320W - Batch 160378 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Acetone	EPA-8260	U	UG/L	25	12/03/2020	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	0.016	12/03/2020	DLC
Methylene Chloride	EPA-8260	U	UG/L	1.0	12/03/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
2-Butanone	EPA-8260	U	UG/L	10	12/03/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Hexane	EPA-8260	U	UG/L	6.8	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-120320W - Batch 160378 - Water by EPA-8260

2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	0.0035	12/03/2020	DLC
Benzene	EPA-8260	U	UG/L	0.011	12/03/2020	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromodichloromethane	EPA-8260	U	UG/L	0.16	12/03/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	12/03/2020	DLC
Toluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
2-Hexanone	EPA-8260	U	UG/L	10	12/03/2020	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	0.11	12/03/2020	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	12/03/2020	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	12/03/2020	DLC
Styrene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Bromoform	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	0.018	12/03/2020	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	0.027	12/03/2020	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	0.50	12/03/2020	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/13/2021 EV20110161 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-120320W - Batch 160378 - Water by EPA-8260

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160283 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Fluorene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Pentachlorophenol	EPA-8270 SIM	U	UG/L	0.016	11/25/2020	JMK
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	**0.017**	UG/L	0.0031	11/25/2020	JMK
Chrysene	EPA-8270 SIM	**0.017**	UG/L	0.0062	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.0091	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.015	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.0069	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.0055	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.011	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	11/25/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160204 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	UG/L	1.5	11/25/2020	JMK
Phenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Aniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/L	0.94	11/25/2020	JMK
2-Chlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzyl Alcohol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3&4-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112520W - Batch 160204 - Water by EPA-8270

N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachloroethane	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Nitrobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Isophorone	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Nitrophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzoic Acid	EPA-8270	U	UG/L	10	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Naphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chloroaniline	EPA-8270	U	UG/L	1.9	11/25/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorobutadiene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
1-Methylnaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	UG/L	0.90	11/25/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Chloronaphthalene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2-Nitroaniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Acenaphthylene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dimethylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	UG/L	1.8	11/25/2020	JMK
Acenaphthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3-Nitroaniline	EPA-8270	U	UG/L	5.0	11/25/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	UG/L	10	11/25/2020	JMK
4-Nitrophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dibenzofuran	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	UG/L	0.78	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Diethylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Fluorene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4-Nitroaniline	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Azobenzene	EPA-8270	U	UG/L	1.6	11/25/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Hexachlorobenzene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY BLANK RESULTS

MB-112520W - Batch 160204 - Water by EPA-8270

Pentachlorophenol	EPA-8270	U	UG/L	5.0	11/25/2020	JMK
Phenanthrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Carbazole	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Butylbenzylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Chrysene	EPA-8270	U	UG/L	0.80	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	0.81	11/25/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	UG/L	2.0	11/25/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374756 - Batch R374756 - Water by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	UG/L	0.015	12/09/2020	CAS
PCB-1221	EPA-8082	U	UG/L	0.030	12/09/2020	CAS
PCB-1232	EPA-8082	U	UG/L	0.015	12/09/2020	CAS
PCB-1242	EPA-8082	U	UG/L	0.015	12/09/2020	CAS
PCB-1248	EPA-8082	U	UG/L	0.015	12/09/2020	CAS
PCB-1254	EPA-8082	U	UG/L	0.015	12/09/2020	CAS
PCB-1260	EPA-8082	U	UG/L	0.015	12/09/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112520W - Batch 160255 - Water by EPA-8081

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
A-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
G-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
B-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Heptachlor	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
D-BHC	EPA-8081	U	UG/L	0.010	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/13/2021 EV20110161 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-112520W - Batch 160255 - Water by EPA-8081

Aldrin	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Heptachlor Epoxide	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Chlordane	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endosulfan I	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
4,4'-DDE	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Dieldrin	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endrin	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
4,4'-DDD	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endosulfan II	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
4,4'-DDT	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endrin Aldehyde	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Endosulfan Sulfate	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Methoxychlor	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Hexachlorobenzene	EPA-8081	U	UG/L	0.010	12/01/2020	JMK
Toxaphene	EPA-8081	U	UG/L	0.50	12/01/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R373457 - Batch R373457 - Water by SM2540C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids	SM2540C	U	MG/L	50	11/25/2020	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374483 - Batch R374483 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Fluoride	EPA-300.0	U	MG/L	0.16	12/06/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374745 - Batch R374745 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Nitrate as N	EPA-300.0	U	MG/L	0.034	11/25/2020	ARI2
Nitrite as N	EPA-300.0	U	MG/L	0.043	11/25/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374746 - Batch R374746 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Sulfate	EPA-300.0	U	MG/L	1.0	12/07/2020	ARI2

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/13/2021 EV20110161 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MBLK-R374746 - Batch R374746 - Water by EPA-300.0

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374747 - Batch R374747 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chloride	EPA-300.0	U	MG/L	0.50	11/30/2020	ARI2

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374287 - Batch R374287 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.11	12/01/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374482 - Batch R374482 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.11	12/01/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-120720W - Batch 160493 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	0.15	12/08/2020	RAL
Barium	EPA-200.8	U	UG/L	1.0	12/08/2020	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	12/08/2020	RAL
Calcium	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Chromium	EPA-200.8	U	UG/L	2.0	12/08/2020	RAL
Iron	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Lead	EPA-200.8	U	UG/L	0.11	12/08/2020	RAL
Magnesium	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Manganese	EPA-200.8	U	UG/L	2.0	12/08/2020	RAL
Potassium	EPA-200.8	U	UG/L	50	12/08/2020	RAL
Selenium	EPA-200.8	U	UG/L	4.0	12/08/2020	RAL
Silver	EPA-200.8	U	UG/L	0.050	12/08/2020	RAL
Sodium	EPA-200.8	U	UG/L	50	12/08/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/13/2021
		ALS SDG#:	EV20110161
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY BLANK RESULTS

MB-120520W - Batch 160487 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	0.15	12/07/2020	RAL
Barium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/07/2020	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/07/2020	RAL
Calcium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	12/07/2020	RAL
Iron (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	0.11	12/07/2020	RAL
Magnesium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	12/07/2020	RAL
Potassium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL
Selenium (Dissolved)	EPA-200.8	U	UG/L	4.0	12/07/2020	RAL
Silver (Dissolved)	EPA-200.8	U	UG/L	0.050	12/07/2020	RAL
Sodium (Dissolved)	EPA-200.8	U	UG/L	50	12/07/2020	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374753 - Batch R374753 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	9.0	12/07/2020	CAS
Bicarbonate as CaCO3	SM2320B	U	MG/L	9.0	12/07/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374748 - Batch R374748 - Water by EPA-350.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Ammonia as N	EPA-350.1	U	MG/L	0.050	12/14/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R374751 - Batch R374751 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	12/11/2020	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 160395 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**89.0**			67	125.2	12/02/2020	JNF
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**99.5**	**11**		67	125.2	12/02/2020	JNF

ALS Test Batch ID: 160378 - Water by EPA-8260 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Vinyl Chloride - BS	EPA-8260 SIM	**122**			50	150	12/03/2020	DLC
Vinyl Chloride - BSD	EPA-8260 SIM	**119**	**2**		50	150	12/03/2020	DLC
Carbon Tetrachloride - BS	EPA-8260 SIM	**112**			50	150	12/03/2020	DLC
Carbon Tetrachloride - BSD	EPA-8260 SIM	**110**	**1**		50	150	12/03/2020	DLC
Chloroform - BS	EPA-8260 SIM	**104**			50	150	12/03/2020	DLC
Chloroform - BSD	EPA-8260 SIM	**103**	**1**		50	150	12/03/2020	DLC
Trichloroethene - BS	EPA-8260 SIM	**110**			74.4	141	12/03/2020	DLC
Trichloroethene - BSD	EPA-8260 SIM	**110**	**0**		74.4	141	12/03/2020	DLC
1,2-Dichloropropane - BS	EPA-8260 SIM	**107**			50	150	12/03/2020	DLC
1,2-Dichloropropane - BSD	EPA-8260 SIM	**108**	**0**		50	150	12/03/2020	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260 SIM	**111**			50	150	12/03/2020	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260 SIM	**112**	**2**		50	150	12/03/2020	DLC
1,1,2-Trichloroethane - BS	EPA-8260 SIM	**104**			50	150	12/03/2020	DLC
1,1,2-Trichloroethane - BSD	EPA-8260 SIM	**107**	**3**		50	150	12/03/2020	DLC
Dibromochloromethane - BS	EPA-8260 SIM	**109**			50	150	12/03/2020	DLC
Dibromochloromethane - BSD	EPA-8260 SIM	**111**	**2**		50	150	12/03/2020	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260 SIM	**109**			50	150	12/03/2020	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260 SIM	**110**	**1**		50	150	12/03/2020	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260 SIM	**103**			50	150	12/03/2020	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260 SIM	**107**	**4**		50	150	12/03/2020	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260 SIM	**102**			50	150	12/03/2020	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260 SIM	**107**	**5**		50	150	12/03/2020	DLC

ALS Test Batch ID: 160378 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**132**			50	150	12/03/2020	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**131**	**1**		50	150	12/03/2020	DLC
Chloromethane - BS	EPA-8260	**116**			50	150	12/03/2020	DLC
Chloromethane - BSD	EPA-8260	**112**	**3**		50	150	12/03/2020	DLC
Bromomethane - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
Bromomethane - BSD	EPA-8260	**108**	**5**		50	150	12/03/2020	DLC
Chloroethane - BS	EPA-8260	**115**			50	150	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloroethane - BSD	EPA-8260	**112**	**2**		50	150	12/03/2020	DLC
Trichlorofluoromethane - BS	EPA-8260	**126**			50	150	12/03/2020	DLC
Trichlorofluoromethane - BSD	EPA-8260	**125**	**1**		50	150	12/03/2020	DLC
Carbon Disulfide - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
Carbon Disulfide - BSD	EPA-8260	**113**	**1**		50	150	12/03/2020	DLC
Acetone - BS	EPA-8260	**95.8**			50	150	12/03/2020	DLC
Acetone - BSD	EPA-8260	**107**	**11**		50	150	12/03/2020	DLC
1,1-Dichloroethene - BS	EPA-8260	**119**			72.5	136	12/03/2020	DLC
1,1-Dichloroethene - BSD	EPA-8260	**117**	**1**		72.5	136	12/03/2020	DLC
Methylene Chloride - BS	EPA-8260	**100**			50	150	12/03/2020	DLC
Methylene Chloride - BSD	EPA-8260	**103**	**3**		50	150	12/03/2020	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**109**			50	150	12/03/2020	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**110**	**1**		50	150	12/03/2020	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**113**			50	150	12/03/2020	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**112**	**1**		50	150	12/03/2020	DLC
1,1-Dichloroethane - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
1,1-Dichloroethane - BSD	EPA-8260	**109**	**1**		50	150	12/03/2020	DLC
2-Butanone - BS	EPA-8260	**99.2**			50	150	12/03/2020	DLC
2-Butanone - BSD	EPA-8260	**107**	**8**		50	150	12/03/2020	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**109**	**1**		50	150	12/03/2020	DLC
Hexane - BS	EPA-8260	**130**			50	150	12/03/2020	DLC
Hexane - BSD	EPA-8260	**129**	**0**		50	150	12/03/2020	DLC
2,2-Dichloropropane - BS	EPA-8260	**137**			50	150	12/03/2020	DLC
2,2-Dichloropropane - BSD	EPA-8260	**132**	**3**		50	150	12/03/2020	DLC
Bromochloromethane - BS	EPA-8260	**105**			50	150	12/03/2020	DLC
Bromochloromethane - BSD	EPA-8260	**105**	**0**		50	150	12/03/2020	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**118**			50	150	12/03/2020	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**116**	**1**		50	150	12/03/2020	DLC
1,1-Dichloropropene - BS	EPA-8260	**118**			50	150	12/03/2020	DLC
1,1-Dichloropropene - BSD	EPA-8260	**116**	**1**		50	150	12/03/2020	DLC
1,2-Dichloroethane - BS	EPA-8260	**109**			50	150	12/03/2020	DLC
1,2-Dichloroethane - BSD	EPA-8260	**110**	**1**		50	150	12/03/2020	DLC
Benzene - BS	EPA-8260	**109**			74.7	143	12/03/2020	DLC
Benzene - BSD	EPA-8260	**109**	**0**		74.7	143	12/03/2020	DLC
Dibromomethane - BS	EPA-8260	**107**			50	150	12/03/2020	DLC
Dibromomethane - BSD	EPA-8260	**109**	**2**		50	150	12/03/2020	DLC
Bromodichloromethane - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
Bromodichloromethane - BSD	EPA-8260	**111**	**1**		50	150	12/03/2020	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**108**			50	150	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Methyl-2-Pentanone - BSD	EPA-8260	**111**	**2**		50	150	12/03/2020	DLC
Toluene - BS	EPA-8260	**113**			71.7	139	12/03/2020	DLC
Toluene - BSD	EPA-8260	**113**	**0**		71.7	139	12/03/2020	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**104**			50	150	12/03/2020	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**105**	**1**		50	150	12/03/2020	DLC
2-Hexanone - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
2-Hexanone - BSD	EPA-8260	**121**	**10**		50	150	12/03/2020	DLC
1,3-Dichloropropane - BS	EPA-8260	**106**			50	150	12/03/2020	DLC
1,3-Dichloropropane - BSD	EPA-8260	**108**	**2**		50	150	12/03/2020	DLC
Tetrachloroethylene - BS	EPA-8260	**83.7**			50	150	12/03/2020	DLC
Tetrachloroethylene - BSD	EPA-8260	**87.4**	**4**		50	150	12/03/2020	DLC
1,2-Dibromoethane - BS	EPA-8260	**99.2**			50	150	12/03/2020	DLC
1,2-Dibromoethane - BSD	EPA-8260	**102**	**3**		50	150	12/03/2020	DLC
Chlorobenzene - BS	EPA-8260	**110**			73	131	12/03/2020	DLC
Chlorobenzene - BSD	EPA-8260	**111**	**1**		73	131	12/03/2020	DLC
Ethylbenzene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
Ethylbenzene - BSD	EPA-8260	**115**	**1**		50	150	12/03/2020	DLC
m,p-Xylene - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
m,p-Xylene - BSD	EPA-8260	**116**	**1**		50	150	12/03/2020	DLC
Styrene - BS	EPA-8260	**103**			50	150	12/03/2020	DLC
Styrene - BSD	EPA-8260	**105**	**2**		50	150	12/03/2020	DLC
o-Xylene - BS	EPA-8260	**107**			50	150	12/03/2020	DLC
o-Xylene - BSD	EPA-8260	**108**	**1**		50	150	12/03/2020	DLC
Bromoform - BS	EPA-8260	**107**			50	150	12/03/2020	DLC
Bromoform - BSD	EPA-8260	**110**	**3**		50	150	12/03/2020	DLC
Isopropylbenzene - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
Isopropylbenzene - BSD	EPA-8260	**116**	**1**		50	150	12/03/2020	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**99.7**			50	150	12/03/2020	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**103**	**3**		50	150	12/03/2020	DLC
Bromobenzene - BS	EPA-8260	**105**			50	150	12/03/2020	DLC
Bromobenzene - BSD	EPA-8260	**109**	**3**		50	150	12/03/2020	DLC
N-Propyl Benzene - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
N-Propyl Benzene - BSD	EPA-8260	**117**	**2**		50	150	12/03/2020	DLC
2-Chlorotoluene - BS	EPA-8260	**112**			50	150	12/03/2020	DLC
2-Chlorotoluene - BSD	EPA-8260	**114**	**2**		50	150	12/03/2020	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**106**			50	150	12/03/2020	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**107**	**2**		50	150	12/03/2020	DLC
4-Chlorotoluene - BS	EPA-8260	**112**			50	150	12/03/2020	DLC
4-Chlorotoluene - BSD	EPA-8260	**115**	**2**		50	150	12/03/2020	DLC
T-Butyl Benzene - BS	EPA-8260	**117**			50	150	12/03/2020	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
T-Butyl Benzene - BSD	EPA-8260	**119**	**2**		50	150	12/03/2020	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**102**			50	150	12/03/2020	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**105**	**3**		50	150	12/03/2020	DLC
S-Butyl Benzene - BS	EPA-8260	**114**			50	150	12/03/2020	DLC
S-Butyl Benzene - BSD	EPA-8260	**116**	**2**		50	150	12/03/2020	DLC
P-Isopropyltoluene - BS	EPA-8260	**115**			50	150	12/03/2020	DLC
P-Isopropyltoluene - BSD	EPA-8260	**118**	**2**		50	150	12/03/2020	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**110**			50	150	12/03/2020	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**113**	**3**		50	150	12/03/2020	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**109**			50	150	12/03/2020	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**113**	**3**		50	150	12/03/2020	DLC
N-Butylbenzene - BS	EPA-8260	**107**			50	150	12/03/2020	DLC
N-Butylbenzene - BSD	EPA-8260	**110**	**3**		50	150	12/03/2020	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**108**			50	150	12/03/2020	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**112**	**4**		50	150	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**98.7**			50	150	12/03/2020	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**103**	**4**		50	150	12/03/2020	DLC
Hexachlorobutadiene - BS	EPA-8260	**119**			50	150	12/03/2020	DLC
Hexachlorobutadiene - BSD	EPA-8260	**122**	**3**		50	150	12/03/2020	DLC
Naphthalene - BS	EPA-8260	**95.8**			50	150	12/03/2020	DLC
Naphthalene - BSD	EPA-8260	**105**	**9**		50	150	12/03/2020	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**101**			50	150	12/03/2020	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**107**	**5**		50	150	12/03/2020	DLC

ALS Test Batch ID: 160204 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**40.3**			20	150	11/25/2020	JMK
Pyridine - BSD	EPA-8270	**39.7**	**1**		20	150	11/25/2020	JMK
N-Nitrosodimethylamine - BS	EPA-8270	**55.2**			20	150	11/25/2020	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	**58.7**	**6**		20	150	11/25/2020	JMK
Phenol - BS	EPA-8270	**20.6**			5	84	11/25/2020	JMK
Phenol - BSD	EPA-8270	**22.9**	**11**		5	84	11/25/2020	JMK
Aniline - BS	EPA-8270	**24.7**			20	150	11/25/2020	JMK
Aniline - BSD	EPA-8270	**27.9**	**12**		20	150	11/25/2020	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**87.5**			20	150	11/25/2020	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**95.7**	**9**		20	150	11/25/2020	JMK
2-Chlorophenol - BS	EPA-8270	**56.6**			45	111	11/25/2020	JMK
2-Chlorophenol - BSD	EPA-8270	**75.6**	**29**	SR1	45	111	11/25/2020	JMK
1,3-Dichlorobenzene - BS	EPA-8270	**42.6**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,3-Dichlorobenzene - BSD	EPA-8270	**58.3**	**31**	SR1	20	150	11/25/2020	JMK
1,4-Dichlorobenzene - BS	EPA-8270	**45.9**			27.1	114	11/25/2020	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	**59.9**	**26**	SR1	27.1	114	11/25/2020	JMK
Benzyl Alcohol - BS	EPA-8270	**47.8**			20	150	11/25/2020	JMK
Benzyl Alcohol - BSD	EPA-8270	**65.1**	**31**	SR1	20	150	11/25/2020	JMK
1,2-Dichlorobenzene - BS	EPA-8270	**46.8**			20	150	11/25/2020	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	**61.4**	**27**		20	150	11/25/2020	JMK
2-Methylphenol - BS	EPA-8270	**49.6**			20	150	11/25/2020	JMK
2-Methylphenol - BSD	EPA-8270	**64.1**	**25**		20	150	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**79.8**			20	150	11/25/2020	JMK
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**102**	**24**		20	150	11/25/2020	JMK
3&4-Methylphenol - BS	EPA-8270	**42.0**			20	150	11/25/2020	JMK
3&4-Methylphenol - BSD	EPA-8270	**55.4**	**27**		20	150	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**59.8**			42.2	119	11/25/2020	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**85.8**	**36**	SR1	42.2	119	11/25/2020	JMK
Hexachloroethane - BS	EPA-8270	**53.3**			20	150	11/25/2020	JMK
Hexachloroethane - BSD	EPA-8270	**70.2**	**27**		20	150	11/25/2020	JMK
Nitrobenzene - BS	EPA-8270	**77.6**			20	150	11/25/2020	JMK
Nitrobenzene - BSD	EPA-8270	**100**	**26**		20	150	11/25/2020	JMK
Isophorone - BS	EPA-8270	**64.2**			20	150	11/25/2020	JMK
Isophorone - BSD	EPA-8270	**82.7**	**25**		20	150	11/25/2020	JMK
2-Nitrophenol - BS	EPA-8270	**73.5**			20	150	11/25/2020	JMK
2-Nitrophenol - BSD	EPA-8270	**94.6**	**25**		20	150	11/25/2020	JMK
2,4-Dimethylphenol - BS	EPA-8270	**57.7**			20	150	11/25/2020	JMK
2,4-Dimethylphenol - BSD	EPA-8270	**73.6**	**24**		20	150	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**64.4**			20	150	11/25/2020	JMK
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**84.2**	**27**		20	150	11/25/2020	JMK
2,4-Dichlorophenol - BS	EPA-8270	**61.4**			20	150	11/25/2020	JMK
2,4-Dichlorophenol - BSD	EPA-8270	**81.9**	**29**		20	150	11/25/2020	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	**48.3**			29.4	120	11/25/2020	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	**63.1**	**27**	SR1	29.4	120	11/25/2020	JMK
Naphthalene - BS	EPA-8270	**56.4**			20	150	11/25/2020	JMK
Naphthalene - BSD	EPA-8270	**72.3**	**25**		20	150	11/25/2020	JMK
4-Chloroaniline - BS	EPA-8270	**38.5**			20	150	11/25/2020	JMK
4-Chloroaniline - BSD	EPA-8270	**60.6**	**45**	SR1	20	150	11/25/2020	JMK
Hexachlorobutadiene - BS	EPA-8270	**52.1**			20	150	11/25/2020	JMK
Hexachlorobutadiene - BSD	EPA-8270	**67.7**	**26**		20	150	11/25/2020	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	**66.6**			44	113	11/25/2020	JMK
4-Chloro-3-Methylphenol - BSD	EPA-8270	**90.1**	**30**	SR1	44	113	11/25/2020	JMK
2-Methylnaphthalene - BS	EPA-8270	**55.2**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Methylnaphthalene - BSD	EPA-8270	**72.1**	**27**		20	150	11/25/2020	JMK
1-Methylnaphthalene - BS	EPA-8270	**54.8**			20	150	11/25/2020	JMK
1-Methylnaphthalene - BSD	EPA-8270	**72.4**	**28**		20	150	11/25/2020	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	**34.4**			20	150	11/25/2020	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	**53.2**	**43**	SR1	20	150	11/25/2020	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	**65.4**			20	150	11/25/2020	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	**86.1**	**27**		20	150	11/25/2020	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	**68.5**			20	150	11/25/2020	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	**85.3**	**22**		20	150	11/25/2020	JMK
2-Chloronaphthalene - BS	EPA-8270	**63.3**			20	150	11/25/2020	JMK
2-Chloronaphthalene - BSD	EPA-8270	**78.7**	**22**		20	150	11/25/2020	JMK
2-Nitroaniline - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
2-Nitroaniline - BSD	EPA-8270	**107**	**26**		20	150	11/25/2020	JMK
Acenaphthylene - BS	EPA-8270	**56.8**			20	150	11/25/2020	JMK
Acenaphthylene - BSD	EPA-8270	**72.4**	**24**		20	150	11/25/2020	JMK
Dimethylphthalate - BS	EPA-8270	**79.2**			20	150	11/25/2020	JMK
Dimethylphthalate - BSD	EPA-8270	**97.7**	**21**		20	150	11/25/2020	JMK
2,6-Dinitrotoluene - BS	EPA-8270	**75.1**			20	150	11/25/2020	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	**92.5**	**21**		20	150	11/25/2020	JMK
Acenaphthene - BS	EPA-8270	**64.5**			41	107	11/25/2020	JMK
Acenaphthene - BSD	EPA-8270	**81.8**	**24**	SR1	41	107	11/25/2020	JMK
3-Nitroaniline - BS	EPA-8270	**30.8**			20	150	11/25/2020	JMK
3-Nitroaniline - BSD	EPA-8270	**60.4**	**65**	SR1	20	150	11/25/2020	JMK
2,4-Dinitrophenol - BS	EPA-8270	**20.1**			20	150	11/25/2020	JMK
2,4-Dinitrophenol - BSD	EPA-8270	**98.8**	**132**	SR1	20	150	11/25/2020	JMK
4-Nitrophenol - BS	EPA-8270	**8.22**			5	63	11/25/2020	JMK
4-Nitrophenol - BSD	EPA-8270	**14.8**	**57**	SR1	5	63	11/25/2020	JMK
Dibenzofuran - BS	EPA-8270	**69.8**			20	150	11/25/2020	JMK
Dibenzofuran - BSD	EPA-8270	**88.3**	**23**		20	150	11/25/2020	JMK
2,4-Dinitrotoluene - BS	EPA-8270	**71.5**			53.1	136	11/25/2020	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	**91.6**	**25**	SR1	53.1	136	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**64.0**			20	150	11/25/2020	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**85.9**	**29**		20	150	11/25/2020	JMK
Diethylphthalate - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
Diethylphthalate - BSD	EPA-8270	**101**	**20**		20	150	11/25/2020	JMK
Fluorene - BS	EPA-8270	**73.0**			20	150	11/25/2020	JMK
Fluorene - BSD	EPA-8270	**92.0**	**23**		20	150	11/25/2020	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	**71.4**			20	150	11/25/2020	JMK
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**90.4**	**24**		20	150	11/25/2020	JMK
4-Nitroaniline - BS	EPA-8270	**56.4**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline - BSD	EPA-8270	**77.6**	**32**	SR1	20	150	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**74.5**			20	150	11/25/2020	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**108**	**37**	SR1	20	150	11/25/2020	JMK
Azobenzene - BS	EPA-8270	**91.6**			20	150	11/25/2020	JMK
Azobenzene - BSD	EPA-8270	**113**	**21**		20	150	11/25/2020	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	**79.0**			20	150	11/25/2020	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	**98.5**	**22**		20	150	11/25/2020	JMK
Hexachlorobenzene - BS	EPA-8270	**78.7**			20	150	11/25/2020	JMK
Hexachlorobenzene - BSD	EPA-8270	**97.9**	**22**		20	150	11/25/2020	JMK
Pentachlorophenol - BS	EPA-8270	**57.8**			33	124	11/25/2020	JMK
Pentachlorophenol - BSD	EPA-8270	**77.1**	**29**		33	124	11/25/2020	JMK
Phenanthrene - BS	EPA-8270	**71.0**			20	150	11/25/2020	JMK
Phenanthrene - BSD	EPA-8270	**90.8**	**24**		20	150	11/25/2020	JMK
Anthracene - BS	EPA-8270	**68.3**			20	150	11/25/2020	JMK
Anthracene - BSD	EPA-8270	**87.5**	**25**		20	150	11/25/2020	JMK
Carbazole - BS	EPA-8270	**73.5**			20	150	11/25/2020	JMK
Carbazole - BSD	EPA-8270	**99.3**	**30**		20	150	11/25/2020	JMK
Di-N-Butylphthalate - BS	EPA-8270	**71.5**			20	150	11/25/2020	JMK
Di-N-Butylphthalate - BSD	EPA-8270	**90.5**	**23**		20	150	11/25/2020	JMK
Fluoranthene - BS	EPA-8270	**69.9**			20	150	11/25/2020	JMK
Fluoranthene - BSD	EPA-8270	**89.1**	**24**		20	150	11/25/2020	JMK
Pyrene - BS	EPA-8270	**62.6**			18	136	11/25/2020	JMK
Pyrene - BSD	EPA-8270	**77.0**	**21**	SR1	18	136	11/25/2020	JMK
Butylbenzylphthalate - BS	EPA-8270	**59.8**			20	150	11/25/2020	JMK
Butylbenzylphthalate - BSD	EPA-8270	**76.0**	**24**		20	150	11/25/2020	JMK
Benzo[A]Anthracene - BS	EPA-8270	**64.5**			20	150	11/25/2020	JMK
Benzo[A]Anthracene - BSD	EPA-8270	**83.3**	**25**		20	150	11/25/2020	JMK
Chrysene - BS	EPA-8270	**68.7**			20	150	11/25/2020	JMK
Chrysene - BSD	EPA-8270	**84.6**	**21**		20	150	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**61.3**			20	150	11/25/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**78.7**	**25**		20	150	11/25/2020	JMK
Di-N-Octylphthalate - BS	EPA-8270	**62.9**			20	150	11/25/2020	JMK
Di-N-Octylphthalate - BSD	EPA-8270	**80.8**	**25**		20	150	11/25/2020	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	**67.0**			20	150	11/25/2020	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	**81.0**	**19**		20	150	11/25/2020	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	**72.6**			20	150	11/25/2020	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	**95.8**	**28**		20	150	11/25/2020	JMK
Benzo[A]Pyrene - BS	EPA-8270	**69.6**			20	150	11/25/2020	JMK
Benzo[A]Pyrene - BSD	EPA-8270	**88.8**	**24**		20	150	11/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**80.2**			20	150	11/25/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	1/13/2021 EV20110161 C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**103**	**25**		20	150	11/25/2020	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	**82.8**			20	150	11/25/2020	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	**106**	**25**		20	150	11/25/2020	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	**82.5**			20	150	11/25/2020	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	**104**	**23**		20	150	11/25/2020	JMK

SR1 - RPD outside of control limits.

ALS Test Batch ID: R374756 - Water by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**117**			44	152	12/09/2020	CAS
PCB-1260 - BS	EPA-8082	**126**			44	152	12/09/2020	CAS

ALS Test Batch ID: 160255 - Water by EPA-8081

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
A-BHC - BS	EPA-8081	**68.4**			50	150	12/01/2020	JMK
A-BHC - BSD	EPA-8081	**74.2**	**8**		50	150	12/01/2020	JMK
G-BHC - BS	EPA-8081	**73.4**			50	158	12/01/2020	JMK
G-BHC - BSD	EPA-8081	**79.6**	**8**		50	158	12/01/2020	JMK
B-BHC - BS	EPA-8081	**68.9**			50	150	12/01/2020	JMK
B-BHC - BSD	EPA-8081	**74.7**	**8**		50	150	12/01/2020	JMK
Heptachlor - BS	EPA-8081	**62.9**			50	134	12/01/2020	JMK
Heptachlor - BSD	EPA-8081	**67.4**	**7**		50	134	12/01/2020	JMK
D-BHC - BS	EPA-8081	**66.6**			50	150	12/01/2020	JMK
D-BHC - BSD	EPA-8081	**72.0**	**8**		50	150	12/01/2020	JMK
Aldrin - BS	EPA-8081	**53.3**			50	137	12/01/2020	JMK
Aldrin - BSD	EPA-8081	**55.8**	**5**		50	137	12/01/2020	JMK
Heptachlor Epoxide - BS	EPA-8081	**69.0**			50	150	12/01/2020	JMK
Heptachlor Epoxide - BSD	EPA-8081	**73.9**	**7**		50	150	12/01/2020	JMK
Chlordane - BS	EPA-8081	**66.4**			50	150	12/01/2020	JMK
Chlordane - BSD	EPA-8081	**69.4**	**4**		50	150	12/01/2020	JMK
Endosulfan I - BS	EPA-8081	**68.7**			50	150	12/01/2020	JMK
Endosulfan I - BSD	EPA-8081	**74.9**	**9**		50	150	12/01/2020	JMK
4,4'-DDE - BS	EPA-8081	**69.9**			50	150	12/01/2020	JMK
4,4'-DDE - BSD	EPA-8081	**71.1**	**2**		50	150	12/01/2020	JMK
Dieldrin - BS	EPA-8081	**70.0**			50	137	12/01/2020	JMK
Dieldrin - BSD	EPA-8081	**74.6**	**6**		50	137	12/01/2020	JMK
Endrin - BS	EPA-8081	**75.2**			50	134	12/01/2020	JMK
Endrin - BSD	EPA-8081	**80.7**	**7**		50	134	12/01/2020	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4,4'-DDD - BS	EPA-8081	**76.6**			50	150	12/01/2020	JMK
4,4'-DDD - BSD	EPA-8081	**79.1**	**3**		50	150	12/01/2020	JMK
Endosulfan II - BS	EPA-8081	**72.6**			50	150	12/01/2020	JMK
Endosulfan II - BSD	EPA-8081	**78.3**	**7**		50	150	12/01/2020	JMK
4,4'-DDT - BS	EPA-8081	**89.0**			59	149	12/01/2020	JMK
4,4'-DDT - BSD	EPA-8081	**90.6**	**2**		59	149	12/01/2020	JMK
Endrin Aldehyde - BS	EPA-8081	**77.5**			50	150	12/01/2020	JMK
Endrin Aldehyde - BSD	EPA-8081	**84.0**	**8**		50	150	12/01/2020	JMK
Endosulfan Sulfate - BS	EPA-8081	**74.3**			50	150	12/01/2020	JMK
Endosulfan Sulfate - BSD	EPA-8081	**79.4**	**7**		50	150	12/01/2020	JMK
Methoxychlor - BS	EPA-8081	**90.7**			50	150	12/01/2020	JMK
Methoxychlor - BSD	EPA-8081	**94.0**	**4**		50	150	12/01/2020	JMK

ALS Test Batch ID: R373457 - Water by SM2540C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Dissolved Solids - BS	SM2540C	**94.8**			85	115	11/25/2020	KLS

ALS Test Batch ID: R374483 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Fluoride - BS	EPA-300.0	**106**			80	120	12/06/2020	RAL
Fluoride - BSD	EPA-300.0	**106**	**0**		80	120	12/06/2020	RAL

ALS Test Batch ID: R374745 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Nitrate as N - BS	EPA-300.0	**95.4**			80	120	11/25/2020	ARI2
Nitrite as N - BS	EPA-300.0	**100**			80	120	11/25/2020	ARI2

ALS Test Batch ID: R374746 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfate - BS	EPA-300.0	**102**			80	120	12/07/2020	ARI2

ALS Test Batch ID: R374747 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloride - BS	EPA-300.0	**93.7**			80	120	11/30/2020	ARI2

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/13/2021
		ALS SDG#:	EV20110161
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R374287 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-245.1	**103**			80.6	118	12/01/2020	RAL
Mercury - BSD	EPA-245.1	**102**	**0**		80.6	118	12/01/2020	RAL

ALS Test Batch ID: R374482 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved) - BS	EPA-245.1	**110**			80.6	118	12/01/2020	RAL
Mercury (Dissolved) - BSD	EPA-245.1	**111**	**1**		80.6	118	12/01/2020	RAL

ALS Test Batch ID: 160493 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-200.8	**101**			89.1	110	12/08/2020	RAL
Arsenic - BSD	EPA-200.8	**99.5**	**1**		89.1	110	12/08/2020	RAL
Barium - BS	EPA-200.8	**100**			88.5	108	12/08/2020	RAL
Barium - BSD	EPA-200.8	**99.3**	**1**		88.5	108	12/08/2020	RAL
Cadmium - BS	EPA-200.8	**105**			89.4	110	12/08/2020	RAL
Cadmium - BSD	EPA-200.8	**103**	**1**		89.4	110	12/08/2020	RAL
Calcium - BS	EPA-200.8	**94.0**			80	120	12/08/2020	RAL
Calcium - BSD	EPA-200.8	**93.9**	**0**		80	120	12/08/2020	RAL
Chromium - BS	EPA-200.8	**104**			88.3	110.2	12/08/2020	RAL
Chromium - BSD	EPA-200.8	**103**	**1**		88.3	110.2	12/08/2020	RAL
Iron - BS	EPA-200.8	**103**			80	120	12/08/2020	RAL
Iron - BSD	EPA-200.8	**102**	**1**		80	120	12/08/2020	RAL
Lead - BS	EPA-200.8	**100**			87.5	107	12/08/2020	RAL
Lead - BSD	EPA-200.8	**102**	**1**		87.5	107	12/08/2020	RAL
Magnesium - BS	EPA-200.8	**101**			80	120	12/08/2020	RAL
Magnesium - BSD	EPA-200.8	**99.9**	**1**		80	120	12/08/2020	RAL
Manganese - BS	EPA-200.8	**96.0**			82.2	110	12/08/2020	RAL
Manganese - BSD	EPA-200.8	**99.0**	**3**		82.2	110	12/08/2020	RAL
Potassium - BS	EPA-200.8	**101**			80	120	12/08/2020	RAL
Potassium - BSD	EPA-200.8	**101**	**0**		80	120	12/08/2020	RAL
Selenium - BS	EPA-200.8	**100**			90.2	113	12/08/2020	RAL
Selenium - BSD	EPA-200.8	**99.5**	**1**		90.2	113	12/08/2020	RAL
Silver - BS	EPA-200.8	**106**			80	120	12/08/2020	RAL
Silver - BSD	EPA-200.8	**105**	**1**		80	120	12/08/2020	RAL
Sodium - BS	EPA-200.8	**100**			80	105	12/08/2020	RAL
Sodium - BSD	EPA-200.8	**99.1**	**1**		80	105	12/08/2020	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 1/13/2021
ALS SDG#: EV20110161
WDOE ACCREDITATION: C601

CLIENT CONTACT: Stephanie Renando
CLIENT PROJECT: Yakima Landfill / #1148008.040.046

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 160487 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved) - BS	EPA-200.8	**99.6**			89.1	110	12/07/2020	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	**103**	**4**		89.1	110	12/07/2020	RAL
Barium (Dissolved) - BS	EPA-200.8	**102**			88.5	108	12/07/2020	RAL
Barium (Dissolved) - BSD	EPA-200.8	**105**	**3**		88.5	108	12/07/2020	RAL
Cadmium (Dissolved) - BS	EPA-200.8	**104**			89.4	110	12/07/2020	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	**108**	**4**	SR1	89.4	110	12/07/2020	RAL
Calcium (Dissolved) - BS	EPA-200.8	**94.5**			80	120	12/07/2020	RAL
Calcium (Dissolved) - BSD	EPA-200.8	**98.4**	**4**		80	120	12/07/2020	RAL
Chromium (Dissolved) - BS	EPA-200.8	**103**			86.2	107	12/07/2020	RAL
Chromium (Dissolved) - BSD	EPA-200.8	**107**	**3**	SR1	86.2	107	12/07/2020	RAL
Iron (Dissolved) - BS	EPA-200.8	**103**			80	120	12/07/2020	RAL
Iron (Dissolved) - BSD	EPA-200.8	**107**	**4**	SR1	80	120	12/07/2020	RAL
Lead (Dissolved) - BS	EPA-200.8	**102**			87.5	107	12/07/2020	RAL
Lead (Dissolved) - BSD	EPA-200.8	**107**	**4**	SR1	87.5	107	12/07/2020	RAL
Magnesium (Dissolved) - BS	EPA-200.8	**104**			80	120	12/07/2020	RAL
Magnesium (Dissolved) - BSD	EPA-200.8	**106**	**2**		80	120	12/07/2020	RAL
Manganese (Dissolved) - BS	EPA-200.8	**99.7**			82.2	110	12/07/2020	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**102**	**2**		82.2	110	12/07/2020	RAL
Potassium (Dissolved) - BS	EPA-200.8	**103**			80	120	12/07/2020	RAL
Potassium (Dissolved) - BSD	EPA-200.8	**106**	**3**		80	120	12/07/2020	RAL
Selenium (Dissolved) - BS	EPA-200.8	**103**			90.2	113	12/07/2020	RAL
Selenium (Dissolved) - BSD	EPA-200.8	**107**	**4**		90.2	113	12/07/2020	RAL
Silver (Dissolved) - BS	EPA-200.8	**102**			80	120	12/07/2020	RAL
Silver (Dissolved) - BSD	EPA-200.8	**105**	**3**	SR1	80	120	12/07/2020	RAL
Sodium (Dissolved) - BS	EPA-200.8	**101**			80	105	12/07/2020	RAL
Sodium (Dissolved) - BSD	EPA-200.8	**104**	**3**		80	105	12/07/2020	RAL

SR1 - RPD outside of control limits.

ALS Test Batch ID: R374753 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**101**			1	200	12/07/2020	CAS
Bicarbonate as CaCO3 - BS	SM2320B	**101**			1	200	12/07/2020	CAS

ALS Test Batch ID: R374748 - Water by EPA-350.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Ammonia as N - BS	EPA-350.1	**98.5**			80	120	12/14/2020	CAS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	1/13/2021
		ALS SDG#:	EV20110161
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Stephanie Renando		
CLIENT PROJECT:	Yakima Landfill / #1148008.040.046		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R374751 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**99.6**			80	120	12/11/2020	CAS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV2011016

Chain-of-Custody Record

LANDAU ASSOCIATES

☑ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ _____

Date 11/24/20
Page 1 of 1

Turnaround Time:
Standard _____
Accelerated _____

Project Name Yakima Landfill
Project No. 1148008.040.046
Project Location/Event Yakima, WA / Pre-Construction Sampling
Sampler's Name B. McManus, S. Kostka, J. Newcomb
Project Contact S. Renando
Send Results To S. Renando, P. Roelen, D. Jorgensen

Special Handling Requirements: _____
Shipment Method: Drop OFF
Stored on ice: (Yes) / No

Testing Parameters

	Sample I.D.	Date	Time	Matrix	No. of Containers	① Total Metals (EPA 200.8/6010C)	② Chlorinated Pests (EPA 8081)	PCBs (EPA 8082)	③ VOCs (8260 D)	SVOCs (EPA 8270 D)	PAHs (EPA 8270 D SIM)	NWTPH-Dx (w and without SGC)	④ Inorganic Ions (EPA 300.0)	⑤ Alkalinity / Bicarbonate	Ammonia (350.1)	⑥ TOC / TDS	Observations/Comments
1	MW-12-112420	11/24/20	750	AQ	3	X					X						
2	FPP-MW-1-112420	11/24/20	811	AQ	4	X						X		X	X		
A	~~DPW-1-112420~~	~~11/24/20~~	~~1047~~	~~AQ~~	~~12~~	X						X	X		X		BXM
3	MW-16-112420	11/24/20	1031	AQ	5	X						X	X	X	X		
4 B	MW-100-112420	11/24/20	1141	AQ	1		X	✓		~~X~~ BXM	~~X~~ BXM						
A	~~DPW-2-112420~~	~~11/24/20~~	~~1323~~	~~AQ~~	~~12~~	X						X	X		X		BXM
5	MW-14-112420	11/24/20	~~1~~ 1355	AQ	5	X						X	X	X	X		✓ Dissolved metal samples were field filtered
6	MW-15-112420	11/24/20	1411	AQ	11	X	X	X	X	X	X		X	X	X	X	
7	~~BA~~ FPP-MW-2-112420	11/24/20	1251	AQ	1							X					
	~~MW-100~~		~~114~~														BXM
8	DUP-2-112420	11/24/20	800	AQ	2			X	~~X~~ BXM								
9	FPP-MW-3-112420	11/24/20	1201	AQ	2				~~X~~ BXM						X	X	MS/MSD
	~~Trip Blanks~~			AQ	2				~~X~~ BXM								

Other
① As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag, Hg, K
② Low Level
③ SIM
④ Fluoride, Nitrate as N, Nitrite as N, Chloride, sulfate
⑤ SM 2320B
⑥ SM 5310 C / SM2540C

[A] ~~Included extra volume for potential follow ups For Metals only run dissolved metals.~~ BXM
[B] Replacement bottle for broken bottle. Run analysis still needed

Allow water samples to settle, collect aliquot from clear portion ☐
✓ NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☑
- and without

Relinquished by	Received by	Relinquished by	Received by Lab said mark just pests.
Signature [signature]	Signature Shawn Robinson	Signature	Signature
Printed Name Brittany McManus	Printed Name Shawn Robinson	Printed Name	Printed Name
Company Landau Associates, Inc.	Company ALS	Company	Company
Date 11/25/20 Time 756	Date 11/25/20 Time 0756	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV2011016/

Project: Yakima Landfill - 1148008.040.046

Received Date: 11/25/20 Received Time: 0756 By: SL

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier ___ Hand Delivered X
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container?	___	X	___
If yes, how many? ___ Where? ___			
Custody seal date: ___ Seal name: ___			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	X	___	___

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	X	___	___
Bubbles present in sample #: None			

Temperature of cooler upon receipt: 2.2°C, 2.9°C, 3.4°C all on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___